

# *Realizing the Potential:* Expanding Housing Opportunities Near Transit



Reconnecting America's Center for  
Transit-Oriented Development

April 2007

## *About this Report*

**REALIZING THE POTENTIAL: Expanding Housing Opportunities Near Transit** was written by Reconnecting America's Center for Transit-Oriented Development. The Center for TOD is the only national nonprofit effort dedicated to providing best practices, research and tools to support market-based transit-oriented development. We partner with both the public and private sectors to strategize about ways to encourage the development of high-performing TOD projects around transit stations and to build transit systems that maximize the development potential. The Center for TOD is a partnership of the national nonprofit Reconnecting America, the Center for Neighborhood Technology, and Strategic Economics, an urban economics firm in Berkeley.

To read the full report -- including detailed case studies of efforts to promote mixed-income TOD in Boston, Charlotte, Denver, Minneapolis and Portland -- visit [www.reconnectingamerica.org](http://www.reconnectingamerica.org).

### **Acknowledgements**

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### **Notice**

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U.S. Department  
of Transportation  
**Federal Transit  
Administration**

APR 11 2007



Dear Colleague:

It is with great pleasure that we introduce this report on the potential for accommodating housing – including affordable housing – near public transportation.

The average American family spends more than half of their income on housing and transportation. There is increasing awareness that while a growing number of families are moving further out to suburban or even exurban locations to find affordable housing, the rising cost of transportation reduces much of their cost savings. As a result, demand for housing near transit, so that transportation costs are contained, is expected to grow significantly over the next 20 years.

The non-profit research organization, Reconnecting America's Center for Transit-Oriented Development, has examined five transit corridors in Boston, Charlotte, Denver, Minneapolis-St. Paul, and Portland (Oregon). Their findings show that we face a significant challenge in the coming years. How do we make room for the households of tomorrow at a scale and affordability necessary to meet the demand? The five corridors in this report showed that while programs and incentives exist to encourage construction of affordable housing near transit, more needs to be done to truly meet the demand.

The report suggests that to better respond to this challenge we need to:

- Coordinate housing plans with local transportation plans, so that affordable housing is served by high quality public transportation;
- Housing investments must take place in the context of other development, such as retail and commercial, so that more daily trips can be made on foot and by transit; and
- The private development market must become a partner in achieving the goal of better connections between housing – including affordable housing – and public transportation.

We hope you will read this report with an eye to discovering opportunities in your own communities to create attractive, vibrant neighborhoods that both lower transportation costs and increase affordable housing options for all of their residents.

James S. Simpson  
Administrator  
Federal Transit Administration

Sincerely,

Darlene F. Williams  
Assistant Secretary for Policy  
Development and Research  
U.S. Department of Housing and  
Urban Development

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## **Executive Summary**

The housing market in the U.S. has been changing as American households get older, smaller and more diverse in terms of size, age and ethnicity, and traffic makes long commutes to the suburbs less and less appealing. Meantime, both housing and transportation costs are on the increase. One in three American households now spend more than 30 percent of income on housing, and one in seven households spend more than 50 percent. While finding a cheaper house in the suburbs used to be a strategy that resulted in savings, rising transportation costs are straining the ability of households to achieve affordable cost of living strategies.

These trends are happening concurrent with a resurgence of interest in public transportation: The American Public Transportation Association says transit ridership is up 25 percent since 1995. Meantime there has been a transit building boom across the country, with more than 700 new stations under development for a total of more than 4,000 stations. Add to this the fact that urban neighborhoods, especially downtowns, have been recognized as an important new market for infill housing and mixed-use development. The result is an opportunity unprecedented in recent history for making it possible for families to reduce household expenditures by choosing to live in neighborhoods with lower transportation costs because they are located near transit.

Location matters a great deal. While the average family spends roughly 19 percent of the household budget on transportation, households with good access to transit spend just 9 percent. This savings can be critical for lower-income households that need to make every dollar count because transportation costs as a percentage of the total household budget varies greatly according to income: Transportation costs consume an average of 9 percent of the household budget for high-income families, but for very-low-income families transportation costs can consume 55 percent or more of the budget.

But as the market for transit-oriented development heats up and these neighborhoods prove popular with renters and buyers, there is an increasing need and challenge to ensure that development includes housing for all income levels. This is due in part to the fact that cities and transit agencies have a limited understanding of the importance of development near stations. Few tools exist to specifically direct affordable housing to neighborhoods with transit service. Existing planning and zoning often limits the development potential of station areas. Moreover, there isn't much available land or many ready-to-go development sites. The result is that this kind of infill development is time-consuming and expensive to build, which often forces developers to build to the high end of the housing market.

### **Obstacles to building mixed-income TOD housing**

- Land prices around stations are high or increase because of speculation once a new transit line is announced.

- Affordable housing developers don't have the capital to acquire land before the prices go up and then hold it until it's ready to develop.
- Funding for building new affordable housing is limited.
- Mixed-income and mixed-use projects require complex financing structures.
- Sites for TOD projects often require land assembly and rezoning, which can lead to lengthy acquisition and permitting processes, which increase development costs.
- Parking requirements for TOD are unnecessarily high, which also drives up costs.
- Community opposition to density and affordable housing is hard to overcome.

One way to ease these pressures and keep rents and home prices down is to grow the overall supply of transit-oriented development. If more mixed-income housing is built near transit, gentrification pressures in highly desirable neighborhoods could lessen. Otherwise this will be an enormous missed opportunity to use the market to help address the nation's growing affordability crisis by tackling the escalating cost of both housing and transportation at the same time. This strategy provides the additional benefit of addressing the problem of traffic congestion, and expanding access to jobs, educational opportunities and prosperity.

In order to better understand how these opportunities and challenges are playing out in different regions, and the effectiveness of strategies to ensure there is mixed-income housing near transit, this report examines five case study regions: Boston, Charlotte, Denver, Portland and the Twin Cities. Advancing the state of the practice of linking mixed-income housing to transit investments requires greater creativity and commitment by all levels of government. The funding strategies and tools that have been developed in the case study regions, and the leadership that has emerged, is encouraging. But there is so much potential demand for housing near transit, and so few developable sites, that cities and regions need to be proactive in order to accommodate income diversity in TOD. This will help ensure that as this country moves through the ups and downs of real estate market cycles people of diverse incomes will be able to take advantage of the public investment in transit

## **Proactive Strategies for Mixed-Income Housing near Transit**

The five case studies demonstrate that while there are challenges to providing mixed-income housing near transit, proactive strategies can serve as a catalyst for the market and help ensure that housing near transit serves a mix of incomes. These strategies can be broadly characterized into five categories of action:

- A. Identify and utilize TOD opportunities in the region and along transit corridors.
  - Target a significant percentage of regional growth into transit corridors.
  - Assess the potential for TOD and the station areas where displacement of existing low-income residents could occur.
  - Utilize publicly-owned properties along transit corridors for mixed-income housing.

- B. Provide incentives that help catalyze the market for mixed-income TOD.
  - Create incentives for local jurisdictions to build at transit-appropriate densities.
  - Facilitate the use of value capture tools for affordable housing and TOD.
  - Create TOD land acquisition/land banking funds.
  - Modify low-income housing tax credits to offer greater incentives for locating near transit.
  
- C. Remove regulatory barriers to higher density, mixed-use development.
  - Removing barriers, such as outdated zoning, parking requirements, or building codes helps reduce the cost of TOD.
  - Encourage proactive station area planning and zoning to support increased intensity and mix of uses that help to achieve the community vision.
  
- D. Coordinate housing and transportation plans and investments.
  - Coordinate long-range housing and transportation plans.
  - Target funding to support the creation and preservation of affordable housing in transit corridors.
  
- E. Improve local technical capacity, partnerships and data collection.
  - Create the capacity within housing and transportation agencies to facilitate TOD.
  - Utilize FTA's Joint Development policy to emphasize construction of housing in transit zones.
  - Monitor and track data on development activity, demographic trends and property values at both the corridor and station area levels.
  - Encourage public-private partnerships.

In addition, there are three primary areas for further action specific to the Federal government:

- HUD and FTA will examine existing policy and funding programs at each agency in order to improve the coordination and facilitation of affordable housing and transportation investments.
- HUD and FTA will establish an interagency working group that is responsible for continuing collaboration between the two agencies to maximize the opportunities for coordinated HUD and FTA actions. A primary function of this group will be to develop a five-year research and action plan to support these collaborative efforts.
- HUD and FTA will continue to study the relationships between housing markets and transit investments: This study is the first in many years to examine the linkages between the market, transit investments, travel patterns and development trends. More analysis is needed to establish performance measures and determine the efficacy of strategies being implemented in communities that are creating mixed-income housing near transit

# Chapter 1: Realizing Housing and Transportation's Important Inter-Connections

Increasing housing costs are challenging many American households. According to the U.S. Census Bureau, the burden of housing costs in nearly every part of the country grew sharply between 2000 and 2005.<sup>1</sup> Affordability pressures in a growing number of large U.S. metro areas are exceeding household incomes by a factor of four or more.<sup>2</sup>

The generally accepted definition of affordability is for a household to pay no more than 30 percent of its annual income on housing. Families who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care. An estimated 12 million renter and homeowner households now pay more than 50 percent of their annual incomes for housing, and a family with one full-time worker earning the minimum wage cannot afford the local fair-market rent for a two-bedroom apartment anywhere in the United States.<sup>3</sup>

Next to housing, transportation is the second highest household cost, comprising almost 20 percent of annual household expenditures. Households who use transit more, tend to have lower overall transportation costs.<sup>4</sup> Increased access to transit, frustration over growing traffic congestion, and rising transportation costs are helping to increase transit ridership nationally. More than 9.7 billion trips were made by public transportation in 2005. Since 1995, public transportation use has increased 25 percent. There are 3,349 mass transit stations in the U.S. today, and many regions from coast to coast are building or planning to build new rail systems or expand existing systems. Over 700 new stations are currently under development.<sup>5</sup>

Accompanying the increase in transit ridership is a growing desire for housing near transit that has spurred a new real estate trend - transit-oriented development (TOD). A 2004 survey by the National Association of Realtors reported that 60 percent of potential homebuyers would prefer to live in more mixed-use, walkable neighborhoods.<sup>6</sup> TOD is more than simply a project next to a transit station – it includes the whole district surrounding the station, which may be comprised of several distinct components and a mix of uses, the streetscape and walking environment, and integrated design, land use and activity that support transportation choice.

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<sup>1</sup> US Census Bureau, *2005 American Community Survey, Selected Characteristics*.

<sup>2</sup> Joint Center for Housing Studies, *The State of the Nation's Housing 2006*. Harvard Joint Center for Housing: 2006.

<sup>3</sup> U.S. Department of Housing and Urban Development, Homes and Communities Web site: <http://www.hud.gov/offices/cpd/affordablehousing/index.cfm>

<sup>4</sup> Scott Bernstein, Carrie Makarewicz and Kevin McCarty, "Driven to Spend: Pumping Dollars out of our Households and Communities", Center for Neighborhood Technology and the Surface Transportation Policy Project, 2005

<sup>5</sup> American Public Transportation Association, *2005 Public Transportation Fact Book*.

<sup>6</sup> National Association of Realtors. *2004 American Community Survey: National Survey on Communities*. Smart Growth America: Washington, DC, October 2004.



Transit-oriented development fosters greater use of a transit system by supporting housing and/or commercial development within walking distance of transit stations, offering a diversity of land uses and pedestrian-oriented design. Where such development has occurred, residents use transit five times as often as those who drive to the station and non-auto mode shares are substantially higher than in neighborhoods where every trip must be made by car.<sup>7</sup>

## ***Demand for Housing near Transit Comes from All Income Levels***

Roughly six million American households currently live within a half-mile of an existing fixed-guideway transit stop. A conservative estimate is that by 2030, nearly a quarter of those seeking housing, or over 16 million households, will express a demand for living near fixed-guideway transit.<sup>8</sup> The types of households who tend to seek out TOD – singles, couples without children, the elderly and low income minority households – are also the types of households that are projected to grow the most over the next 25 years.

Accommodating this market demand will require substantial effort on the part of local governments, transit agencies and developers to reframe zoning and other local regulations, identify properties near transit stations for development, and define new housing and mixed-use products.

A particular challenge facing local communities is to ensure that housing built within walking distance of transit is available to households of all income levels. Neighborhoods near transit provide housing to a greater share of their region's lower-income households. Almost half of the projected 16 million National households desiring to live near transit will come from households with incomes below 50 percent of the area median income (AMI).<sup>9</sup> These households are particularly relevant as the need for affordable housing near affordable transportation service is critical to reducing the overall cost burden on low-income household budgets. Considerable demand will also come from singles and couples without children with annual incomes of \$60,000 to \$125,000.<sup>10</sup>

An economic range of housing choices in TODs – “mixed-income TOD” – is crucial to realizing the full potential of the transit investments being made to provide greater transportation access and housing choice to a full array of home owners and renters. The creation and preservation of mixed-income housing near transit can help local

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<sup>7</sup> Hollie M. Lund, Robert Cervero, Richard W. Willson, *Travel Characteristics of Transit-Oriented Development in California*. Caltrans Transportation Grant "Statewide Planning Studies:" 2004

<sup>8</sup> Center for Transit-Oriented Development, *Hidden in Plain Sight: Capturing the Demand for Housing Near Transit*, CTOD: April, 2005 (2030 update, forthcoming Spring 2007).

<sup>9</sup> Center for Neighborhood Technology (CNT) and the Center for Transit-Oriented Development, *Preserving and Promoting Diverse Transit-Oriented Neighborhoods*. CNT: November 2006.

<sup>10</sup> For more information on CTOD's methodology for estimating future demand near transit, see: Center for Transit Oriented Development, *Hidden in Plain Sight: Capturing the Demand for Housing Near Transit*, April 2005.

communities respond to the growing demand for housing near transit while also providing economic and environmental benefits to households, cities, and regions.

Development of housing adjacent to transit presents opportunities to meaningfully address the nation's continued need for affordable housing and at the same time to expand access to jobs, educational opportunities and prosperity for a range of income groups. By offering: (1) *affordable housing*, (2) *a stable and reliable base of transit riders*, (3) *broader access to opportunity* and (4) *protection from displacement*, mixed-income TOD holds the potential to address the problems of worsening traffic congestion, the need for affordable housing in metropolitan areas and the growing gap between lower income and wealthier residents.

Several factors make it hard to deliver mixed-income housing adjacent to transit. Lack of ready-to-develop land, high land costs near transit, absence of TOD-supportive land use and rigid parking requirements, and lengthy entitlement processes for development all combine to push private sector developers to the high end of the housing market where there is more margin to absorb the time, uncertainty and cost of risk inherent in TOD.

Without a more focused concentration on making it easier for development to occur near transit and creating tools and incentives for affordable housing, there is the potential for TOD development to be unaffordable to lower income households, to displace existing residents or to upset the balance of what are presently diverse mixed-income neighborhoods.

## ***Study Purpose***

This report is jointly sponsored by the U.S. Department of Housing and Urban Development, Office of Policy Research and Development (HUD) and the U.S. Department of Transportation, Federal Transit Administration (FTA). HUD is participating in the research to support its mission of increasing the availability and effectiveness of affordable and mixed-income housing. FTA is participating in this research to support its mission to provide mobility to economically disadvantaged and transit-dependent populations.

FTA and HUD undertook this particular research in part to follow-on from a previous report, "Hidden in Plain Sight: Capturing the Demand for Housing Near Transit." That report indicated that demographic shifts and urban development would increase the demand for housing near transit over the next 20 years. Since affordable housing meets its objectives more effectively when it is well-served by public transit, this follow-on study sought to identify the factors that help, or hinder, the co-location of affordable and mixed income housing with public transit, in the larger context of a new product in the development market – Transit-Oriented Development, or TOD.

FTA and HUD initiated a cooperative agreement with Reconnecting America's Center for Transit-Oriented Development (CTOD) to research this subject by studying five case study cities. It is HUD and FTA's intent for these case studies to

provide examples and lessons learned to assist State and local governments as they plan and make local decisions about housing and transportation. It is our belief that by encouraging coordinated planning of affordable and mixed-income housing and public transit investments we can achieve multiple goals of improving transit service to economically disadvantaged persons while enhancing their ability to find affordable housing that does not raise their cost of travel.

This study seeks to identify how to strengthen the interplay between affordable housing and TOD, with an emphasis on demand by different household types and income levels. It provides a set of recommendations to Federal, State and local policy makers and practitioners for enhanced coordination of housing goals with transit investments. The majority of the report focuses on the different approaches being developed and implemented in five metropolitan areas of the United States: Boston, Charlotte, Denver, Minneapolis-St. Paul and Portland, Oregon. Each of these regions represents a different phase of development, transit technology, and regulatory frameworks for addressing housing and TOD.

Appendix A of this report provides a matrix of general affordable housing and transit-oriented development tools being used by many local communities. They include local, regional, State and Federal incentives, policies and programs such as waiving of development fees for affordable housing near transit, density bonuses in exchange for providing a certain number or percentage of affordable housing units, and provision of public resources for affordable housing.

While there are significant variations between the case study regions, similarities remain. Each region is characterized as a “hot housing market” in that rising home prices are outpacing increases in household incomes and affordability pressures are confronting both low- and middle-income households. And, all regions are seeking to make increased investments in fixed-guideway transit and promoting transit-oriented development either directly through public agencies or in partnership with the private sector.

Chapter Two describes the growing demand for housing near transit, and the potential to focus a segment of the growing TOD market to create housing for households at all levels of the economic spectrum. Creating “mixed-income housing near transit” can be a tool for addressing regional affordable housing and transit ridership goals. Chapter Three provides an overview of the five selected regions, describing key housing and transportation trends including housing costs, transit usage and transit system size.

Chapters Four through Eight each discuss one of the case study regions. These chapters provide greater detail on regional housing and transit trends, with a particular focus on the selected transit corridor for each case study: demographic composition, land use characteristics, transit status, and the redevelopment potential that exists for providing and retaining housing. Local, regional and State-level policies and tools for promoting transit-oriented development and affordable housing, unique to each region, are described in terms of their application along the

corridor. Appendix B provides information on the methodology used in this study for determining underutilized parcels and capacity for new housing within each transit corridor.

Key findings and recommendations from the case studies are summarized in Chapter Nine, with overall recommendations for local, regional, State and Federal partners discussed in Chapter Ten.

## Chapter 2: Location Matters to the Cost of Living

Between 2000 and 2005, the burden of housing costs increased for families in almost every American community. Housing costs increased not only in hot housing markets along the east and west coasts, but also in the Midwest and in suburbs nationwide.<sup>11</sup>

Nationally, for every dollar a working family saves on housing, it spends 77 cents more on transportation.<sup>12</sup> For households at all income levels, the ability to save money on transportation means more income to spend on other important needs like housing, health care, food, education or even leisure.

Research conducted over the past decade shows conclusively that transportation is not only one of the two top costs of living for American households, but that for working families, those earning \$50,000 or less, transportation now costs more than housing in most metropolitan areas. This cost is highly dependent on the character of the location of housing.<sup>13</sup>

One recent study found that in the nation's 28 largest metropolitan areas, working families are spending about 57 percent of their incomes on the combined costs of housing and transportation, with roughly 29 percent of income going to transportation.<sup>14</sup> While a number of households choose, or are forced to live in more distant suburbs where housing costs are lower, this data suggests that what they gain in cheaper housing is lost to higher transportation costs. The ability to help reduce transportation costs, and therefore lower the overall cost of living is an important policy objective that can be advanced with successful TOD.<sup>15</sup>

While the average American family spends roughly 19 percent just on transportation, households with access to good transit service spend only 9 percent.<sup>16</sup> The following

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<sup>11</sup> US Census Bureau, *2005 American Community Survey*, Selected Housing Characteristics, 2005.

<sup>12</sup> Barbara J. Lipman, *Something's Gotta Give: Working Families and the Cost of Housing*, Center for Housing Policy; April 2005.

<sup>13</sup> Barbara J. Lipman, *A Heavy Load: The Combined Housing and Transportation Burdens of Working Families*, Center for Housing Policy; October 2006.

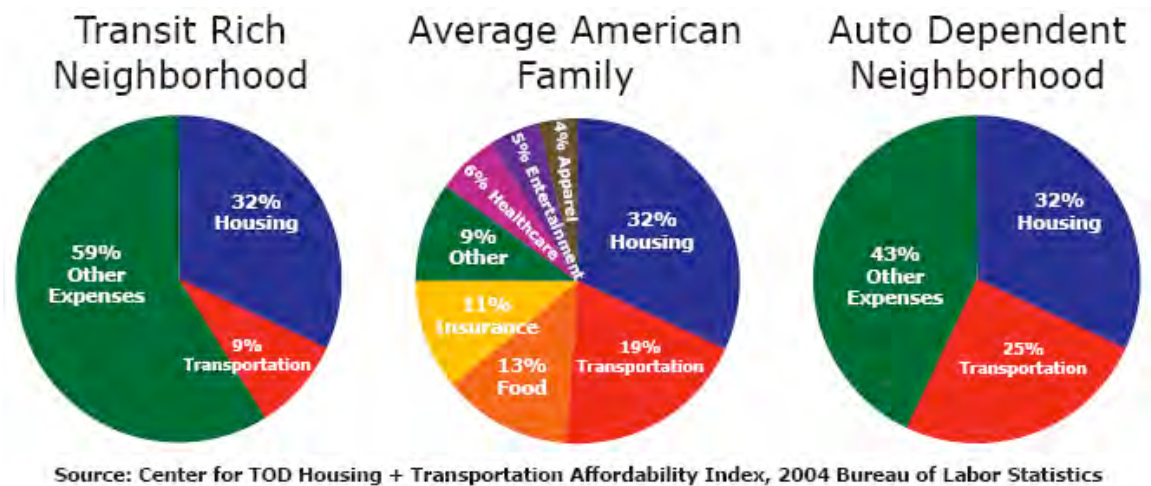
<sup>14</sup> Ibid.

<sup>15</sup> The Center for Neighborhood Technology and the Center for Transit-Oriented Development developed a new tool, the Affordability Index, to estimate and map the combined costs of housing and transportation at the Census tract level. The Index is based on the observation that as people obtain access to information regarding local transportation choices, they (a) take those choices when it increases convenience, and (b) they advocate for expanding choices. In the short term, the maps of the Index show that choice increases within the vicinity of mass transit and therefore there is increased consumer value at those locations. For homebuyers and home owners, a recent study by the National Association of Homebuilders corroborates this, with a typical value premium of 12 percent within walking distance of mass transit. By supporting this kind of focused consumer choice, consumers will benefit directly by avoiding locations that bring with them the high cost of driving, and communities and transit operators will benefit by accelerating and helping shape cost-saving land use patterns and transit patronage.

<sup>16</sup> Avoiding the ownership of one car would preserve on average \$300 per month on automobile ownership costs, or 10 percent of disposable income. This savings can mean the difference between qualifying for a mortgage and not, especially for households making \$50,000 or less.

pie charts shown in **Figure 2.1** use results from the Housing and Transportation Affordability Index<sup>17</sup> to illustrate how transportation costs can vary based on access to quality transit service and land use characteristics.<sup>18</sup> Transit Rich Neighborhoods are those with frequent, quality transit service, walkable neighborhoods, higher densities and more mixed-use development. Auto dependent neighborhoods include households that own more than one car and live in areas with less transit service.

**Figure 2.1 Holding Housing Costs Constant, Location Matters to Transportation Costs**



### ***Growing Housing Affordability Pressures***

One in three American households now spend more than 30 percent of income on housing, and one in seven now spends more than 50 percent.<sup>19</sup> A greater proportion of homeowners in transit zones spend more than 30 percent of their income on housing; 41 percent in transit zones versus 36 percent in their regions.<sup>20</sup> This combination of higher home values and lower-incomes near transit results in more limited affordable homeownership opportunities in these neighborhoods. Affordable housing options and supports will be necessary to help low- and moderate-income households live near transit and have affordable transportation access to jobs throughout the region.

<sup>17</sup> Center for Transit-Oriented Development and Center for Neighborhood Technology, *The Affordability Index: A New Tool for Measuring the True Affordability of a Housing Choice*. Brookings Institution, Urban Markets Initiative, Market Innovation Brief: January 2006 (referenced above in footnote 5).

<sup>18</sup> Expenditures shown in Figure 2.1 are based on an analysis of the 2003 Community Expenditure Survey microsample data from the Bureau of Labor Statistics.

<sup>19</sup> Joint Center for Housing Studies, *The State of the Nation's Housing 2006*. Harvard Joint Center for Housing: 2006.

<sup>20</sup> The Center for Neighborhood Technology (CNT) and Center for Transit-Oriented Development, *Preserving and Promoting Diverse Transit-Oriented Neighborhoods*. CNT: November 2006.

Government at all levels is struggling to respond, with limited resources. There are some important successes to note in many communities. The City of New York recently announced the creation of a fund to acquire lands and provide predevelopment financing to help ensure affordability throughout the city. A number of cities have created Affordable Housing Trust Funds, using money from new development to help provide new units or subsidize affordable rents. Twenty-eight states already link allocation of at least a portion of their Low-Income Housing Tax Credit programs to proximity to transit.<sup>21</sup>

In 2006, HUD's *Home Investment Partnerships Program (HOME)* posted record performance with substantial increases in the number of families assisted and affordable homes produced. *HOME* is the largest Federal block grant to State and local governments designed exclusively to produce affordable housing for low-income families. In 2006, more than 143,000 households benefited from hundreds of local programs that HOME supports, a 42 percent increase over the previous year.<sup>22</sup>

### ***Demand for Housing near Transit is Diverse and Growing***

The demand for households wanting to live near transit is projected to more than double in the next 25 years. Creating more housing choice near transit is needed both in the suburbs and in central cities to meet this demand, and to increase the supply so that new TOD housing is affordable.

In recent years, many in the development community have become enamored with TOD, including large developers and homebuilders like Trammell Crow, KB Homes, and Toll Brothers, Inc.<sup>23</sup> New mixed-use projects are cropping up next to subways, light rail, commuter rail and bus rapid transit stations in over 40 regions throughout the US. For this study, discussions about development response along the selected case study corridors is limited to October 31, 2006, as it became difficult for the research team to keep pace with the new development proposals that are continually being submitted.

One of the trends underlying the large TOD market potential is a significant demographic shift. America is an aging and more diverse country than it used to be, and the types of amenities and the quality of life that TOD promises, primarily a mixture of uses available within walking distance to transit, seem to appeal to active adults and those that wish to not drive, cannot drive or cannot afford to drive. The American Association of Retired People (AARP), for example, reports that 71 percent of older households want to live within walking distance of transit – otherwise it's hard to maintain an active lifestyle without relying on others to get around.

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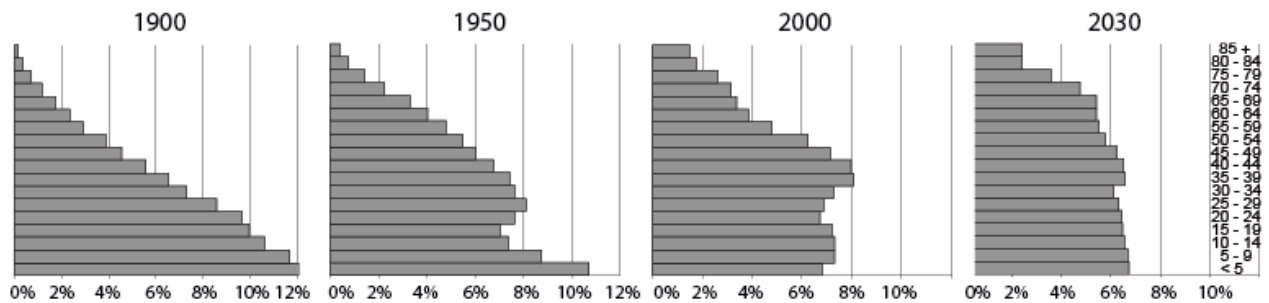
<sup>21</sup> The Low Income Housing Tax Credit national database is available at <http://www.huduser.org/datasets/lihtc.html>

<sup>22</sup> US Department of Housing and Urban Development, 2006.

<sup>23</sup> The Urban Land Institute and Price Waterhouse Cooper together publish an annual report on "Emerging Trends in Real Estate." The past several years have included proximity to transit, urban infill and specifically TOD as among the top attributes attracting developers.

Shown in **Figure 2.2**, next page, American households are getting older and smaller. Married couples with children made up the vast majority of households a century ago. Single adults will soon comprise the new majority. Average household size has fallen in the U.S. by nearly one full person from 3.52 in 1950, to 2.60 in 2005.<sup>24</sup> As household size and formation has shifted, the housing market has responded with increased production in smaller, attached housing units.

Figure 2.2: National Population Distribution by Age



Sources: Census 1900-2000, Woods and Poole 2030 Projections

The shifting demographics of new homebuyers and renters correspond with demographic groups that have historically demonstrated a preference for urban neighborhoods near transit. Currently, households living within transit-served neighborhoods (those within a half-mile of a fixed-guideway station, referred to commonly as transit zones) are more racially and economically diverse than their surrounding neighborhoods and overall regions. Today, nearly 60 percent of residents living near transit are minorities.<sup>25</sup> Almost half the U.S. population is expected to be non-white by 2050, and almost a third of that growth due to immigration. Traditionally, foreign-born residents have tended to use transit more than native residents.<sup>26</sup>

In addition to demographic trends already noted, almost two-thirds of households in transit zones are renters, compared to one-third nationally. One-person households account for the largest percentage of household type in transit zones, at 35 percent, versus 26 percent nationally.<sup>27</sup> Four-plus person households account for 23 percent of households in transit zones.<sup>28</sup>

<sup>24</sup> Robert Puentes and David Warren, “One Fifth of America, a Comprehensive Guide to America’s First Suburbs.” Brookings Institution: 2006.

<sup>25</sup> Center for Neighborhood Technology (CNT) and the Center for Transit-Oriented Development (CTOD), *Preserving and Promoting Diverse Transit-Oriented Neighborhoods*. CNT: November 2006.

<sup>26</sup> Robert Puentes, “A Review of New Urban Demographics and Impacts on Transportation,” Brookings Institution for the Eno Foundation: December 2006.

<sup>27</sup> Center for Neighborhood Technology (CNT) and the Center for Transit-Oriented Development (CTOD), *Preserving and Promoting Diverse Transit-Oriented Neighborhoods*. CNT: November 2006.

<sup>28</sup> Ibid.



Many developers understand that the combination of new housing options, transit connectivity and placemaking work in the marketplace and create lasting value. Some transit agencies are also getting on-board, as they recognize that walk-and-riders are less expensive to attract and are more reliable patrons. Some local and regional governments are putting in place plans and zoning to facilitate TOD.

### ***Making the Case for Mixed-Income Housing near Transit***

Ensuring that a portion of new housing is provided to lower-income families is important, as is the need to retain affordable housing near quality transit service. Increased job connectivity, affordable housing options, and other supports will be necessary to help low- and moderate-income households live near transit and its access to jobs in order to increase their earnings while keeping their housing and transportation costs low. This may not need to be accomplished at each and every transit zone, but should be tracked at the corridor and system-wide scales to ensure transit in each region has adequate access by all income levels.

For low-income residents, many who rely on transit to get them to jobs, schools, shopping and services, transportation and housing costs are a heavy burden. Table 2.1 shows that housing accounts for a higher proportion of household costs for low-income families.

Equally stunning, transportation costs vary widely from only nine percent for high-income households (who may be spending a higher dollar amount on transportation but a lower percentage of their overall income) to 55 percent for extremely low-income households. In **Table 2.1**, the lowest income households can manage either housing or transportation costs, but not both and will seek to reduce costs to those that can be met through strategies such as living in shared, overcrowded, or substandard housing, owning older cars, reducing number of trips, or sharing an automobile.

**Table 2.1: An Unequal Burden**

<b>Annual Household Income</b>	<b>&lt;\$20,000</b>	<b>\$20,000 to \$34,999</b>	<b>\$35,000 to \$49,999</b>	<b>\$50,000 to \$74,999</b>	<b>\$75,000 to \$99,000</b>	<b>\$100,000 to \$250,000</b>
Housing	59%	33%	25%	21%	18%	14%
Transportation	55%	34%	25%	18%	13%	9%
<b>Combined Housing and Transportation</b>	<b>100%+</b>	<b>67%</b>	<b>50%</b>	<b>39%</b>	<b>31%</b>	<b>23%</b>

*Note: The percentage above 100% of income by households earning less than \$20,000 can be explained in part by households living in subsidized housing or sharing household costs with others that have not reported their income as part of the household's total income on the Census form. In other cases, the percentage greater than 100% may be a factor of "under spending" on transportation relative to what the transportation model would predict given the characteristics of the tract and typical household needs for transportation.*

Source: Center for Neighborhood Technology and Virginia Tech, 2006.<sup>29</sup>

Data indicates that transit is an important tool for providing affordable transportation to households, allowing residents to live with fewer cars. In three-quarters of transit zones, regardless of average household income, households have one car or less. In some small transit systems, fully 100 percent of transit zones house a majority of households with one car or less. This low rate of auto ownership is true for higher-income households in transit zones as well as lower-income ones.

Transit-oriented development can serve as an effective building block for tackling affordability and mobility challenges. While linking land use and transit may not solve all congestion problems, TOD linked with high-quality transit service can provide additional transportation capacity for regions. Locating daily services such as dry cleaners, groceries, daycare, post offices, shopping and health care facilities near transit provides opportunities to reduce or avoid making separate automobile trips. Such a strategy can also help to reduce or avoid public costs associated with having to provide new infrastructure to accommodate new growth in a non-transit, urbanized area.<sup>30</sup>

Likewise, a transit system that links a series of walkable, mixed-use neighborhoods also provides affordability and convenience for residents. If residents are able to walk for some daily trips, take transit to work and use their car less, they can reduce the portion of their household budget going to transportation-related expenses, the second largest household expense after housing. This is particularly important for low-income households who carry a heavy cost-of-living burden.

### ***Benefits and Challenges of Mixed-Income TOD***

Mixed-income TOD presents opportunities to meaningfully address the nation's growing affordability crisis by tackling housing and transportation costs together, while simultaneously expanding access via transit to jobs and educational opportunities for the range of income groups living in our metropolitan regions. Helping to ensure that TOD provides housing opportunities to a wide range of households is also important in preventing the displacement of current communities. As previously noted, neighborhoods near transit are already very diverse, and tend to have a higher proportion of low-income households than their regional averages.

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<sup>29</sup> Center for Neighborhood Technology and Virginia Tech, "Housing and Transportation Cost Trade-Offs and Burdens of Working Households in 28 Metro Areas," a White Paper prepared for the Center for Housing Policy, 2006. The expenditure percentages are based on weighted average numbers for households for each income level in each tract for the 28 metropolitan areas analyzed. Transportation costs are calculated based on several data sources including the Census 2000, Census Transportation Planning Package 2000, and local transit data. A description of these sources and the model is provided in *The Affordability Index: A New Tool for Measuring the True Affordability of a Housing Choice*. Brookings Institution, Urban Markets Initiative, Market Innovation Brief: January 2006

<sup>30</sup> Several recent studies have examined the potential benefit of transit to reduce other public costs. Todd Litman, *Evaluating Public Transit Benefits and Costs*. Victoria Policy Institute, 2006; Robert Burchell et al., *The Costs of Sprawl – 2000 (TCRP Report 74)* Transportation Research Board, 2002.

Housing stock in neighborhoods near transit is smaller, older and mostly multifamily.

Preserving and strengthening this diversity is a goal that can be accomplished through thoughtful TOD policy that engages the full community, residents and private sector developers and business leaders, in partnership with transit agencies, local and regional governments to better coordinate transportation and housing. However, significant obstacles to TOD and to affordable housing exist today, and must be addressed before progress can be made.

### ***Current Barriers to Mixed Income Housing Adjacent to Transit***

1. ***Land prices are high.*** In most regions investing in new fixed guideway transit systems, developers already pay a premium on land at many planned and existing TOD sites. This presents a formidable obstacle to providing housing products at affordable prices. The higher the cost of the land, the more expensive is the resulting development. In cases where the transit project has not yet been built, land prices are often being driven up by speculative pressures.
2. ***Affordable housing developers do not have the capital to land bank.*** Acquiring and holding land, also known as land banking, requires considerable capital, especially when it may be five to 10 years before a rail station is built. This presents steep holding costs for any developer, particularly nonprofit developers that are most likely to produce below-market-rate housing. Many traditional funding sources, including CDBG, HOME and other Federal housing funds, cannot be used to purchase land. Increasingly transit properties are reluctant to purchase excess land for future joint development when building new transit lines out of concern over increased project costs that may reflect negatively on their project rating for Federal funding.
3. ***Transit improvements can cause displacement of existing, low-income residents.*** Investments near new or enhanced transit stations in existing low-income neighborhoods can displace the very residents they are designed to serve because increased accessibility to regional jobs and services via transit tend to attract a new, more affluent population. This is particularly true in those transit zones where a majority of residents may be renters or long-term owners on fixed incomes, and home-ownership programs are limited or do not exist.<sup>31</sup>
4. ***Affordable housing subsidy funding is limited.*** State and Federal public subsidy funding for affordable housing has dwindled dramatically in the past decade, especially for affordable rental housing and projects serving households at less than 50 percent of AMI. Whereas there are some successful Federal HOPE VI projects that incorporated access to transit and mixed-income housing, this funding source no longer exists. Created in 1992, it sought to replace severely

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<sup>31</sup> Rising property values result in higher taxes, which families on fixed incomes often cannot afford. This forces them to sell, and move into more affordable housing often farther away from transit.

distressed public housing through breaking up concentrated poverty and using innovative urban neighborhood design.

5. ***Mixed-income and mixed-use projects require complex financing structures.*** Financing is less plentiful for housing projects in which some units are affordable and others are market rate. Underwriting criteria for housing projects do not take into account lower transportation costs in TODs. Different finance structures also relate to different uses: commercial, retail or residential with some degree of cross subsidy often required between uses. At transit sites, this can make an already difficult project – in which land may need to be held for several years without a return – even more challenging.
6. ***TOD sites frequently require rezoning and land assembly.*** This can lead to lengthy acquisition and permitting processes, which increase development costs. When developers are saddled with these costs, it can be much more difficult to also include place making features and affordable housing in transit-oriented development. It is interesting to note that a higher level of scrutiny, or a higher standard, may be applied to TOD projects to try and address region-wide affordability issues. Traditional development projects are not typically held to a similar standard, but it is worth looking at how any kind of new development regardless of location can provide a greater range of housing opportunities.
7. ***Parking requirements are unnecessarily high at TODs.*** Given high land prices at TOD sites, coupled with the average cost of providing a structured parking space (over \$20,000 per space), parking requirements can significantly affect the financial feasibility of TOD projects. Zoning requirements that assume all tenants will have cars add a great deal to the cost of building TOD housing. Research indicates that TOD residents of all income levels own fewer cars and thus need fewer dedicated parking spaces.
8. ***Community opposition to density and affordable housing is difficult to overcome.*** Residents of established communities may be particularly resistant to changes that are perceived as negatively impacting their property values or community character. Initial resistance and development delays can be expected with higher density projects, particularly without an inclusive, community planning process at the outset.

One way to help alleviate the pressures of price escalation is to increase the supply of TOD overall.<sup>32</sup> If more mixed-income neighborhoods are built, displacement of lower-income residents will hopefully lessen and new housing opportunities may emerge. But if supply constraints persist and the TOD market responds solely with high-end market-rate housing, this will be an enormous missed opportunity for proponents of both TOD and mixed-income housing. However, this is a delicate balancing act, highly dependent on market conditions. If too much TOD is built in a particular region, oversupplying retail, commercial, or residential space, this may lower the rates of return on the development to an unsustainable level. An

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<sup>32</sup> A comprehensive set of mixed-income tools is described in an August 2006 report by Doug Shoemaker for the Center for Transit Oriented Development and is available at <http://www.reconnectingamerica.org/pdfs/Tools%20for%20Mixed%20Income%20TOD.pdf>

understanding of local market conditions for different types of uses is important to determining what the market can bear and hopefully supplementing the economy, not undermining or diluting it.

The next chapter provides an overview of the five case study regions, highlighting regional housing and transportation dynamics.

## **Chapter 3: Overview of Selected Case Study Regions**

This report focuses on different opportunities for, and approaches, to creating mixed-income, transit supportive neighborhoods in five metropolitan areas: Boston, Massachusetts; Charlotte, North Carolina; Denver, Colorado; Minneapolis, Minnesota; and Portland, Oregon.

Each case study region presents a unique mix of characteristics related to: phase of development, land use opportunity, transit technologies, and regulatory frameworks for addressing housing and TOD.

While significant variations exist between the regions, similarities remain. Each of these regions is characterized as a tight housing market where rising prices are outpacing increases in household incomes, making homeownership for low- and middle-income earners increasingly out of reach. Each of these regions is also seeking to make further investments in transit and each is eager to promote transit-oriented development, either directly through public agencies or in partnership with the private sector.

### ***Overview of Regional Trends***

Five metropolitan regions were selected based on their transit technologies (e.g. Light Rail, Heavy Rail, Streetcar), the age of their systems, and the state of their housing market. Consideration of the housing markets includes housing prices, presence of programs and/or policies that support affordable housing in the region, or affordable housing projects or developers actively working to build affordable housing near transit.

One objective of this study is to evaluate how effectively these five regions are working to implement policies and/or provide incentives to capture the projected TOD demand. A different set of challenges and opportunities exist for a region like Boston, with well-established densely populated urban neighborhoods developed along one of the nation's earliest transit systems; than exist in Denver, a region in the midst of building a new regional transit system to serve its fast growing auto-dependent suburban communities. This study provides snapshots in time of TOD around the country, and although the regions selected are not representative of all the TOD models in the United States they provide some insight into the diversity of approaches and site-specific challenges that exist.

**Table 3.1. Comparison of Selected Case Study Regions**

Transit Region	Number of Households in 2000 Region (Transit Zones)	Year Regional Rail Service Began	System Size in 2005 (stations)	2000 Median Income Region (Transit Zones)	Increase in Median Home Values <sup>+</sup> 2000-2005 <sup>33</sup> adjusted	Households paying 35% or more for Housing <sup>34</sup>	Percentage of Region's Housing built 2000 or later	2030 Demand for TOD from Households earning <\$50K	Projected Household TOD Demand in 2030 <sup>35</sup>
Boston	1,785,552 (413,528)	1855	Extensive (288)	\$51,727 (\$48,306)	81%	38%	3.9%	47% 509,219	1,072,309
Charlotte	575,293 (3,777)	2007	Small Exp. (10)	\$46,120 (\$40,715)	8%	35%	17.2%	62% 54,101	87,097
Denver	939,971 (17,373)	1994	Small (24)	\$51,760 (\$31,839)	18%	38%	12.6%	54% 83,594	155,076
Twin Cities	1,136,615 (17,870)	2004	Small Expanding (17)	\$54,317 (\$30,613*)	48%	38%	10.1%	49% 54,187	110,906
Portland	741,776 (73,911)	1986	Large (108)	\$47,061 (\$34,899)	22%	40%	10.5%	51% 156,802	308,644
U.S.**	N/a	n/a	n/a	\$41,994	24%	21%	8.4%	51% 8,165,322	16,007,245

<sup>+</sup>for owned housing units with a mortgage

\*\* Total TOD demand applies to 41 transit regions only

Source: Center for Transit-Oriented Development, 2000 Census Bureau Data and National TOD database

**Table 3.1** summarizes how the five regions compare to one another and to all transit regions in terms of number of households, income, housing costs, and potential future demand for housing near transit which is projected to increase significantly.

- **Population.** The number of households in the region range from a high of 1.8 million in Boston to 575,000 in Charlotte. The number of households in the relevant transit zones (provide details) similarly range from a high of more than 410,000 in Boston to a low of less than 4,000 in Charlotte.
- **Age and size of system.** There is a wide range in the age and size of the rail transit system in each city. Boston is the only one of the case study cities that has a traditional, pre-20<sup>th</sup> century system. Its 288-station system was begun in 1855, followed by Portland, whose 108 stations were initiated much more recently (1986), followed by much smaller systems that are relatively recent (Minneapolis with 17 stations, begun in 2004) to Charlotte, which is beginning a new 10-station system in 2007.
- **Income and demographics.** Median income in the transit zones studied is generally lower than median income for the regions as a whole, in some cases significantly lower. In Minneapolis and Denver, the median income for the transit zones was \$30,600 and \$31,800, respectively.

<sup>33</sup> U.S.Census Bureau, *2005 American Community Survey*, Selected Household Characteristics. 2005.

<sup>34</sup> Ibid.

<sup>35</sup> Center for Transit-Oriented Development, *Hidden In Plain Sight: Capturing the Demand for Housing Near Transit*. Reconnecting America: April 2005 (2030 update, forthcoming Spring 2007).

- **Housing prices.** House prices increased substantially in two of the five case study sites between 2000 and 2005; 81 percent in Boston and 48 percent in the Twin Cities. The remaining sites experienced more moderate price increases of less than 25 percent, with Charlotte increasing by just 8 percent over this period.

The case studies provide detailed information on the efforts at the corridor level to capture the demand for TOD, and place the corridor within the larger city and regional housing and transportation contexts.

- In Portland, where relatively strong local and regional land use and transportation coordination exists, a flexible development framework has emerged that has resulted in billions of dollars in new investment along its streetcar system.
- In Massachusetts, statewide concern over escalating housing prices viewed as negatively affecting job growth and retention has led the State to taking an incentive-based approach to increasing housing production, particularly in areas already served by transit.
- In Charlotte, a fast growing metropolitan region, the local government has stepped forward to provide leadership and investment and to create a strategy for reinvigorating its city and channeling future growth along transit corridors.
- Denver and the Twin Cities, while different from one another, are rediscovering the power of transit to shape development and provide people with much needed transportation options by linking key regional destinations.

Map 1 on the following page provides a visual representation of existing and proposed transit lines in each of the case study regions.



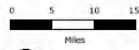
# Map 1: Snapshot of Five Case Study Regions

## 2030 Regional System Expansion Comparison

June, 2006

### Legend

- Existing and proposed Light Rail Transit
- Existing and proposed Bus Rapid Transit
- Existing Heavy Rail
- Existing and proposed Commuter Rail
- Existing and proposed Streetcar
- Proposed Fixed Guideway, Unknown Technology
- Urbanized Area



FTA/HUD  
Washington, DC

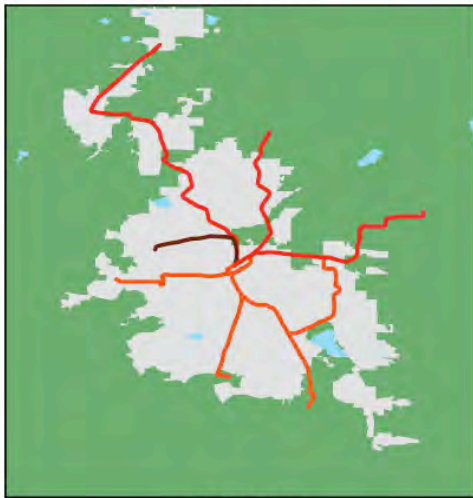
Reconnecting America  
Oakland, CA



Boston



Charlotte



Denver



Twin Cities



Portland

## Housing and Transportation Costs

Among the case study regions, transportation and housing costs vary significantly by income and region. Housing costs are unaffordable to all households earning less than \$35,000 in each of the five case study regions.<sup>36</sup> For each of the regions though, the average housing cost for all households is less than 30 percent, because their income level is close to, or higher than the national average.

While there is no recognized standard of transportation affordability, on average American households spend roughly 19 percent of household income on transportation, the second highest expenditure behind housing.<sup>37</sup> Transportation cost burdens are much greater for lower-income families in each of the case study regions.

Using a transportation model developed for a previous study, on average, households within the 28 largest metropolitan areas spend 48 percent on these two expenditures.<sup>38</sup> The Twin Cities region (Minneapolis, MN MSA) has among the lowest housing and transportation costs (44 percent, reflecting lower housing costs throughout the region), whereas Boston and Portland are on the higher end for both categories (47 percent and 50 percent, respectively, with the highest housing costs among the five case study regions). More information on local housing and transportation trends for each of the case study regions is described in **Table 3.2** on the next page.

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<sup>36</sup> HUD considers housing to be affordable if it accounts for roughly 30 percent or less of a household's monthly budget. Housing costs include mortgage payments, operating costs and utilities for homeowners and contract rent and utilities for renters.

<sup>37</sup> Transportation costs include the cost of owning and operating a vehicle and the cost of public transit.

<sup>38</sup> Combined housing and transportation cost information provided by the Center for Neighborhood Technology from a recent report *A Heavy Load: The Combined Housing and Transportation Burdens of Working Families* published by the Center for Housing Policy in October, 2006. The study examined combined housing and transportation costs for 28 metropolitan areas, of which Charlotte was not included.

**Table 3.2. Comparison of Housing & Transportation Costs<sup>39</sup>**

HOUSEHOLD INCOME							
REGIONS	<\$20,000	\$20,000 to <35,000	\$35,000 to <50,000	\$50,000 to <\$75,000	\$75,000 to <\$99,000	\$100,000 to <\$250,000	Avg. All HHS
<b>Housing Costs as a Percentage of Income</b>							
Boston, MA CMSA	56%	33%	25%	21%	18%	14%	28%
Denver, CO CMSA	59%	33%	25%	21%	18%	14%	27%
Minneapolis, MN MSA	54%	30%	23%	19%	16%	13%	25%
Portland, OR CMSA	59%	32%	25%	20%	17%	14%	28%
Charlotte*	47%	33%	25%	19%	18%	17%	27%
<b>Average</b>	<b>58%</b>	<b>31%</b>	<b>24%</b>	<b>20%</b>	<b>17%</b>	<b>14%</b>	<b>27%</b>
<b>Transportation Costs as a Percentage of Income</b>							
Boston, MA CMSA	59%	35%	25%	18%	14%	9%	19%
Denver, CO CMSA	55%	34%	25%	18%	13%	9%	19%
Minneapolis, MN MSA	58%	35%	26%	19%	14%	9%	19%
Portland, OR CMSA	60%	37%	27%	20%	14%	10%	22%
Charlotte, NC	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>28 Metro Average</b>	<b>56%</b>	<b>34%</b>	<b>24%</b>	<b>18%</b>	<b>13%</b>	<b>8%</b>	<b>20%</b>
<b>Housing + Transportation Costs as a Percentage of Income</b>							
Boston, MA CMSA	100%+	68%	50%	39%	31%	23%	47%
Denver, CO CMSA	100%+	67%	50%	39%	31%	23%	46%
Minneapolis, MN MSA	100%+	65%	49%	38%	30%	22%	44%
Portland, OR CMSA	100%	69%	51%	40%	32%	23%	50%
Charlotte, NC	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>28 Metro Average</b>	<b>100%<sup>[1]</sup></b>	<b>66%</b>	<b>49%</b>	<b>38%</b>	<b>30%</b>	<b>22%</b>	<b>48%</b>

\*Charlotte housing numbers were calculated using Census SF3, the other four regions were based on PUMS 5% data

1. The percentage above 100% of income by households earning less than \$20,000 can be explained in part by households living in subsidized housing or sharing household costs with others that have not reported their income as part of the household's total income on the Census form. In other cases, the percentage greater than 100% may be a factor of "under spending" on transportation relative to what the transportation model would predict given the characteristics of the tract and typical household needs for transportation

Source: Center for Neighborhood Technology, 2006

The following sections discuss in more detail the specific transportation and housing characteristics in each of the selected case study regions.

<sup>39</sup> The expenditure percentages are based on weighted average numbers for households for each income level in each tract for the 28 metropolitan areas analyzed. Transportation costs are calculated based on several data sources including the Census 2000, Census Transportation Planning Package 2000, and local transit data. A description of these sources and the model is provided in *The Affordability Index: A New Tool for Measuring the True Affordability of a Housing Choice*. Brookings Institution, Urban Markets Initiative, Market Innovation Brief: January 2006

## **Greater Boston Metropolitan Area, Massachusetts**

The Boston region is a hot housing market with roughly 50 percent single-family homes (a relatively low percentage) and one of the highest priced housing markets in the country. According to the U.S. Census Bureau, from 2000 to 2005, median home values increased by 81 percent to \$394,800. And in 2005, 38 percent of households were paying at least a third of their income for housing. Only 3.9 percent of the 2005 housing stock was built in the last six years, compared to 8.4 percent nationally, and more than 17 percent in fast growing markets like Charlotte and Atlanta.

The Boston transit region, covering the consolidated metropolitan statistical area, contained nearly 1.8 million households in 2000. By 2030, the region is expected to grow by 23 percent to 2.8 million households, with 38 percent of the households expected to want housing near transit.

The regional transit authority, the Massachusetts Bay Transportation Authority (MBTA), operates 20 fixed rail routes, serves over 250 stations, and was America's first transit system. Despite the extensive system size, slightly less than 10 percent of residents commute to work by transit, more than double the national average of 4.6 percent but well below the average of 35 percent for metropolitan areas over 5 million. Planning and transportation for the Boston region are carried out by the Boston Metropolitan Planning Organization, composed of seven agencies, seven municipalities and a public advisory committee, but given the limitations on Home Rule, the State plays a significant role in funding and planning for both transportation and housing.

<b>Boston</b>	
Stations Existing	288
Stations 2030	303
System Size	Extensive
Transit Technologies	Commuter Rail, Heavy Rail, Light Rail, BRT
2000 TZ HH	413,529
2030 TZ HH Demand	1,072,309
Market	Strong City/Suburb



## **Charlotte – Mecklenburg County, North Carolina**

The Charlotte region is a rapidly growing, moderately priced, and sprawling housing market. Sixty-six percent of the homes were single-family detached in 2005, and over 17 percent had been built in 2000 or later.

Rapid growth is likely to keep home values from rising at the same pace as the nation. From 2000 to 2005, the region's home prices increased by only eight percent to \$150,900 compared to a 24 percent national increase during that same time period. The Charlotte transit region was home to a half million households in 2000 and is expected to grow by 57 percent to 848,539 households, with 10.3 percent of the households expected to want housing near transit.

The City and Mecklenburg County share jurisdiction, providing a certain level of coordination between these two public agencies. Additionally, the regional transit agency is managed by the City, allowing for improved coordination of land use and transit service. The future rail transit network calls for five new rapid transit lines with a modern streetcar serving the central city. Currently though, there is a relative lack of transit options serving the region, and only one percent of residents currently commute to work by transit throughout the region, with higher percentages using transit within certain central city neighborhoods. With the investment in its first light rail line, the South Corridor, the City hopes to increase transit's share of trips and help focus a percentage of new development within transit corridors.

### **Charlotte**

Stations	10
Stations 2030	80
System Size	Small
Transit Technologies	Light Rail
2000 TZ HH	3,780
2030 TZ HH Demand	87,097
Market	Strong City/Suburb



## **Denver Metropolitan Area, Colorado**

The Denver region is a moderately growing housing market. Sixty percent of the homes were single family detached in 2005, similar to the national figure, and 12.6 percent had been built in 2000 or later, slightly above the national figure of 11 percent. The growth in units is consistent with population growth occurring in the region but has put some pressure on housing prices.

From 2000 to 2005, prices rose by 18 percent to \$239,500, which is higher than some markets but still lower than the national increase in housing prices. Housing prices in Denver, though, were already well above the national average of \$167,500.

The Denver transit region was home to nearly one million households in 2000 and is expected to grow by 57 percent to 1.5 million households in 2030, with 10.2 percent of the households expected to want housing near transit.

In November 2004, voters in the Denver Metropolitan Region passed the “FasTracks” ballot measure. The half-cent sales tax revenues will fund the construction of five new transit lines in 15 years, representing a \$4.7 billion regional infrastructure investment. This ballot measure gathered political support, in part, on two arguments: (1) that the region needs transportation alternatives to diminish congestion and remain economically competitive and (2) to shape future growth around walkable, mixed-use neighborhoods served by transit. In 2000, five percent of work trips in the region were made on transit, but Denver also had one of the highest rates of pedestrian trips in the nation at 11.2 percent.

### **Denver**

Stations Existing	24
Stations 2030	87
System Size	Small-Medium
Transit Technologies	Light Rail
2000 TZ HH	17,372
2030 TZ HH Demand	155,076
Market	Strong City/Suburb



## ***The Twin Cities Metropolitan Area, Minnesota***

Minneapolis is the largest city in a seven-county region commonly referred to as the Twin Cities. It is experiencing a hot, rapidly growing and sprawling housing market. Regionally, 62 percent of the homes were single family detached in 2005, slightly above the national figure, and 10.1 percent had been built in 2000 or later.

The slower than average new housing unit growth does not appear to be keeping pace with the population growth, which is leading to a large increase in housing prices – rising almost 50 percent from 2000 to 2005 to \$235,900, double the increase nationally. The Twin Cities transit region was home to more than 1.1 million households in 2000 and is expected to grow by 50 percent to 1.7 million households in 2030, with 6.5 percent of those households expected to want housing near transit.

The seven-county regional transit service is provided by Metro Transit, which is overseen by the Metropolitan Council, the regional metropolitan planning organization (MPO) and one of the first MPOs in the nation to take a more comprehensive approach to regional growth needs including transportation, water resources, wastewater, and parks.

This case study focuses on the Hiawatha Light Rail Line, the first of a series of planned rapid transit projects in the Twin Cities region over the next 25 years. Completed in 2004, ridership in 2006 already exceeded projected 2025 projections by 7,000 daily riders, or almost 30 percent. Regionally, four percent of residents commute to work by transit and an additional three percent walk or bike.

### **Twin Cities**

Stations Existing	17
Stations 2030	23*
System Size	Small
Transit Technologies	Light Rail
2000 TZ HH	17,874
2030 TZ HH Demand	110,906
Market	Strong City/Suburb



\* Does not include Central Corridor

## **Portland Metropolitan Area, Oregon**

The Portland region is a “hot” and moderately growing housing market; 10.5 percent of housing units have been built since 2000 and 63 percent are single family detached. The moderate housing unit growth combined with the increasing attractiveness and higher median incomes of the region have put pressure on housing prices. Between 2000 to 2005 prices rose by 22 percent to \$228,400 which is higher than the national average value, but a slower rate of growth than experienced nationally. The Portland transit region was home to 741,776 households in 2000 and is expected to grow by 54 percent to 1.15 million households in 2030, with 27 percent of the households expected to want housing near transit.

The City of Portland, Metro (the regional government), and TriMet (the regional transit agency) often are cited for their innovative and comprehensive approaches to promoting transit-oriented development and transportation alternatives, including having the first *modern* streetcar alignment to begin operation in the United States since World War II. TriMet plays an active role in acquiring land and establishing criteria to address housing and mixed-use development through its joint development authority.

A medium- sized metropolitan area, Portland’s regional transit usage is six percent and higher than the national average of 4.7 percent. An additional four percent of work trips are made by biking or walking, well above the national average of 2.4 percent, indicating that the Portland region is succeeding in providing people with usable mobility options.

### **Portland**

Stations Existing	108
Stations 2030	145
System Size	Extensive
Transit Technologies	Light Rail, Streetcar
2000 TZ HH	73,911
2030 TZ HH Demand	308,644
Market	Strong City/Suburb





## **Focusing in on Corridor-Level Investments**

To better understand the dynamics at play in each region, to see how policies are being used, and to see how land use, demographics and market forces influence TOD development opportunity and affordability, this report focuses on a specific transit corridor within each region.

### ***Corridor Typology: Distinguishing Functions***

Transit corridors function very differently depending on the types of activities that are located at various stops along the line. This preliminary Corridor Typology begins to assess how five different corridors may provide lessons and inform ridership potential, development opportunities, and the likelihood that new development will stimulate gentrification or displacement.

- ***Urban Commuter Corridor***

The commuter corridor's primary function is to serve workers traveling from neighborhoods within the urbanized areas of a region to downtown jobs. Urban Commuter Corridors are often sited in abandoned or existing freight rail rights-of-way and in some cases, commuter service is shared with freight service. Service is provided through diesel commuter cars, electrified commuter cars and/or express bus.

Connections to other transit lines from Urban Commuter Corridors are often minimal and service frequency of these lines is often with 20 to 30 minute headways. A number of the nation's larger metropolitan areas contain active commuter corridors, including Boston, Chicago, the San Francisco Bay Area, Washington, DC, and New York-New Jersey. Boston's Fairmount/Indigo Line is an example of the Urban Commuter Corridor.

- ***District Circulator***

The primary purpose of the District Circulator is to provide additional mobility from business districts to areas that might be just beyond a reasonable walking distance or to stimulate revitalization of underutilized areas near downtowns. Commercial and mixed-uses are dominant along the alignment. District circulators were once provided by streetcars, but now the function is served primarily by buses, with stops every two to three blocks. Portland's modern streetcar, described in this study, has stops every two to three blocks.

Streets along the line are very walkable and mixed and commercial uses are dominant. District circulators in the form of streetcar lines exist in Portland, Oregon, Tampa, Florida, and Kenosha, Wisconsin, among other places.

- ***Planned Growth Corridor***

The primary purposes of the planned growth corridor are to promote economic development and to provide congestion mitigation. Using any number of fixed guideway technologies, the route chosen is often on an existing abandoned right-of-

way or along an arterial street. The stations are often served by feeder bus service and transit use along the corridor before construction is low, while auto usage is high.

The distinguishing feature of Planned Growth Corridors is the substantial amount of outdated industrial or commercial uses on either side of the transit facility. Large underutilized parcels provide the potential for new transit-oriented development over time.

The Westside Max in Portland and Charlotte's South Corridor are examples of this type of corridor.

- ***Destination Connection Corridor***

Destination Connection Corridors promote connectivity in a busy multi-destination area. Light and heavy rail, as well as bus rapid transit (BRT), serve an arterial street or former rail right-of-way with short headways to promote connectivity. The mix of job centers and other high-ridership destinations at stops along the corridor helps make this type of transit particularly effective. Feeder transit service is also frequent, to provide connectivity from nearby neighborhoods to transit-served job centers.

Destination Connection Corridors can be seen in Minneapolis along the Hiawatha Line, in Houston along the Main Street Line and will characterize the West Corridor in Denver.

## **Overview of Selected Case Study Corridors**

Each of the regions and selected corridors is described in more detail in the following chapters, with comparative analysis of the development opportunities, land use patterns and strategies for promoting TOD and housing described in Chapter Nine. Following is a brief overview of the dynamics at play in each of the selected corridors regarding transit and development.

### ***Boston – Fairmount/Indigo Line***

The Fairmount/Indigo corridor is a nine-mile commuter rail line that runs through established densely populated low and mixed income communities. One of the city's oldest commuter rail lines (it originally opened in 1855), the number of stations was cut down from 11 to five in the 1970s as the corridor's demographics changed. White residents moved out, neighborhoods became less dense and the population shifted to a largely minority community. The MBTA has begun a program to upgrade the existing stations and infrastructure on the line and to plan for four new stations. Local community development corporations (CDCs) are engaged in trying to get ahead of the market by working with the MBTA, Commonwealth and City to purchase properties for development/ redevelopment in order to maintain affordable housing and create jobs. The Commuter Rail line feeds into the larger T system, and one preliminary forecast indicates substantial ridership increases on both the Fairmount Line and the overall transit system from service and station

improvements. Housing and land prices continue to escalate throughout the region, with the cost per unit approaching \$400,000. Rising home prices are being pointed to as one of the reasons for the region and state's population decline in recent years. In response, the Commonwealth has taken strong measures to try and counter this trend.<sup>40</sup>

### ***Charlotte -- South Corridor/Blue Line***

The South Corridor, also known as the Blue Line, is anticipated to begin operation in 2007 with 15 stations. The light rail line will connect Charlotte's Uptown neighborhood to suburban Pineville. As one of the fastest growing metropolitan areas in the nation, the City has approved a comprehensive land use plan to try and manage this growth and tie new developments to transit. Current housing stock along the line can be characterized as fairly low-density, serving largely working class to lower-income, auto-dependent neighborhoods. The South End area has experienced significant housing revitalization efforts in recent years and will be a corridor to watch in determining the ability of land use measures and transit investment to respond to market pressures.

### ***Denver -- West Corridor***

The West Corridor is currently in the final design phase and will be the second FasTracks line to start operating when completed in 2013. The light rail line ties together several sub-regional centers, including Downtown Denver, a County administrative complex and the Decatur/Federal Center. Significant opportunity exists for reinvestment in established housing stock, which could help stabilize the low-income neighborhoods along the corridor. Brickyards, junkyards and a power plant pose environmental justice issues along the corridor that need to be addressed. Two of the planned station areas have distressed public housing sites within a 1/2-mile distance. Fear of gentrification is common among current residents. Several stations present the opportunity to coordinate intensification of employment uses with workforce and public housing.

### ***Twin Cities -- Hiawatha Corridor***

The 12-mile Hiawatha light rail line began operation in December 2004 with 17 stations. The line connects the central business district to suburban Bloomington, home of the Mall of America and the Minneapolis-St Paul International Airport. Significant TOD has started to occur along the line, concentrated mostly in the downtown area although smaller scale projects are beginning in older, established neighborhoods. The corridor is an emerging and changing market with its older urban communities offering some of the region's most affordable housing, and a mix of income and household types. The City of Minneapolis is completing a multi-year rezoning and station area planning effort at each of the stations within its jurisdiction. Local neighborhood organizations and community development

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<sup>40</sup> Efforts by the Commonwealth of Massachusetts to support TOD and affordable housing are described in Chapter Four of this report.

corporations are active in the corridor, trying to ensure that development meets community goals including affordable housing and also to try and address some local barriers to infill development.

### ***Portland – Streetcar from Pearl District to Waterfront***

In 2001, Portland completed the first phase of its new modern streetcar line. Two additional extensions, to Portland State University and down to the Waterfront, have since been added, comprising 6 miles of streetcar service, and more extensions are being planned. Approximately \$2.3 billion in private development has occurred within two blocks of the line, a substantial return on the \$52 million project. Once an old, underutilized industrial parcel of land with rail yards located near the Willamette River and adjoining the Central Business District, the Pearl District is now home to a new type of urban living with a vibrant mix of high density condominiums, parks and services. Developers worked with the City and TriMet to negotiate both infrastructure investment assistance and affordable housing goals. While the streetcar's economic development impact has been well documented, there has been little research on the effectiveness of the strategies used to promote mixed income housing.

The next chapter discusses in detail efforts that are underway in Boston to increase service within the Fairmount/Indigo Line, and strategies to preserve and create mixed-income and affordable housing in the corridor.

## Chapter 4: Boston’s Fairmount/Indigo Line Corridor

A View Down the Fairmount/Indigo Line Today, Facing Downtown Boston



Photo Courtesy of Goody Clancy

### ***Corridor Snapshot***

Transit Technology	Currently Commuter Rail, Future Rapid Transit
Route Distance & Number of Stops	9 Miles, 5 Existing Stops, 4-6 Proposed
Year Service Began	Line originated in 1850s, Current Service 1986, Future Expansion Date Uncertain
Current Average Daily Ridership	2,400
Projected 2025 Ridership w/Proposed Additional Stops	8,010
Residents Within 1/2 Mile Radius	Population—88,881, Households—30,169
Residential Density	18 Dwelling Units per Acre
Median Income, 1999	Corridor (1/2 mile radius of stops)-\$35,252 Region—\$52,792

## **I. Introduction**

The Boston metropolitan region is home to nearly three million people and covers roughly 1,400 square miles. Made up of 101 cities and towns it is a sprawling region. Nearly half of all households lived more than 20 miles from the central business district in 2000, and nearly one in five households lived more than 40 miles away, the highest percentage among the nation's top 100 metropolitan areas.<sup>41</sup> Yet, the region is well served by transit, having one of the oldest and most extensive transit networks in the country. Eighty percent of the city's jobs; 56 percent of the city's homes; and, 51 percent of the city's schools are located within one-quarter mile of a commuter rail, bus or subway stop.<sup>42</sup>

The Fairmount/Indigo Line provides commuter rail service through diverse, predominately lower-income urban neighborhoods. Almost half of the households in the corridor do not own a car.<sup>43</sup> Much of the impetus for transit service improvements and affordable housing production has come from community-based development organizations active in housing and economic development along the corridor. Potential future re-development in the corridor will also involve the City of Boston, the regional transit agency, and the strong involvement of the State. The corridor provides important lessons on how local groups can lead the development process, while highlighting the need to address fragmented opportunity sites and the funding constraints of small, independent actors. The corridor also highlights the potential benefits that state-level involvement in coordination and technical assistance can bring to the TOD process. Figure B1 summarizes the key actors and observations regarding the opportunity for mixed-income housing within the Fairmount/Indigo Line Corridor.

Given the extensive size of the transit system serving the Boston metropolitan region, a large number of households (22 percent) already live within one half-mile of a fixed guideway station. By 2030, the projected demand for housing near transit is expected to almost double from 396,087 in 2000 to 733,686 by 2030.<sup>44</sup> A quarter of households living near transit in 2000 earned less than \$20,000 per year while a slightly higher percentage earned more than \$75,000 per year, indicating a range of household types living within transit zones similar to the distribution of incomes across households throughout the metropolitan region.<sup>45</sup>

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<sup>41</sup> Joint Center for Housing Studies, *The State of the Nation's Housing 2005*. Harvard Joint Center for Housing: 2005.

<sup>42</sup> Pollock, Stephanie, *On the Right Track: Meeting Greater Boston's Transit and Land Use Challenges*. Urban Land Institute Boston District Council: May 2006.

<sup>43</sup> Fairmount/Indigo Line CDC Collaborative, "Boston's Newest Smart Growth Corridor: A Collaborative Vision for the Fairmount/Indigo Line." Goody Clancy: February 2006.

<sup>44</sup> Center for Transit Oriented Development, *Hidden In Plain Sight: Capturing the Demand for Housing Near Transit*. Reconnecting America: April 2005; 2030 update forthcoming

<sup>45</sup> Ibid.

**Figure B1: Regional Actors and Highlights**

Key Actors	<ul style="list-style-type: none"> <li>• Community Development Corporations (CDCs) take a large role in affordable housing production.</li> <li>• State government plays an important role in coordinating TOD activities between transit agency, City of Boston, and individual developers.</li> <li>• City of Boston has not taken proactive approach to planning in the corridor.</li> <li>• Massachusetts Bay Transportation Authority (MBTA) has limited ability to proactively partner in TOD given its current financial crisis.</li> </ul>
Key Tools	<ul style="list-style-type: none"> <li>• State TOD Planning Manager coordinates between public and private sector and various levels of government and provides technical assistance on TOD implementation.</li> <li>• State rewards cities for implementation of TOD districts with financial incentives through smart growth housing laws (Chapters 40R and 40S).</li> <li>• State TOD Infrastructure and Housing Support program provides capital funding for development projects within <math>\frac{1}{4}</math> mile of transit stations.</li> </ul>
Obstacles to Mixed-Income TOD	<ul style="list-style-type: none"> <li>• Large number of small, fragmented TOD sites in corridor limits affordable housing opportunities.</li> <li>• Lack of comprehensive planning efforts at local level limits potential for coordinated planning.</li> <li>• State home rule restrictions limit local government ability to leverage TOD opportunities.</li> </ul>
Lessons for Other Corridors	<ul style="list-style-type: none"> <li>• State-level programs can improve intergovernmental coordination and provide funding sources for TOD.</li> <li>• CDCs can provide important capacity for developing affordable housing and generating community support for improved transit service, but require technical expertise and organizational capacity to be effective.</li> <li>• TOD-specific Affordable Housing Funds can increase the number of funding sources necessary to develop an affordable housing project, while TOD-specific scoring criteria for larger funding sources can prioritize affordable housing projects near transit.</li> </ul>

## ***II. Fairmount/Indigo Line – An Opportunity to Improve Transit Service and Serve Multiple Urban Neighborhoods***

The Massachusetts Bay Transportation Authority (MBTA, or often simply the “T”) is the primary regional transit provider and the Commonwealth’s second largest landowner. Since 2004 transit planning and construction have been done jointly with the Commonwealth’s Executive Office of Transportation (EOT), which is also responsible for coordinating planning across transportation modes. The MBTA currently faces a severe financial crisis. A debt load of \$8 billion has resulted in debt service payments being more than a quarter of the agency’s operating budget and sparked a series of fare increases that have negatively impacted ridership. Although budgetary needs and its enabling legislation severely limit the MBTA’s opportunities to develop a sustainable long-range real estate portfolio, there is an active TOD effort at the MBTA.

The MBTA operates 20 fixed rail routes and serves over 250 stations (see **Map B1: Boston Regional Transit**, following page) making it one of the nation’s most extensive transit systems. The Fairmount commuter rail line has only five stations and the lowest number of daily riders out of the 11 commuter rail lines in the MBTA system, yet it travels through nine miles of densely populated urban neighborhoods.

The line, which connects residential neighborhoods with the central business district, dates back to the 1850s. It originally included more stations and frequent service than exist in the current service configuration which has been in place since 1986. Headways during peak commuting hours are every 30 minutes and every hour during the non-peak. The corridor is also served by a number of bus lines providing connections to the larger region, but with significant travel times and no direct service to downtown.

Unlike other commuter rail lines, the Fairmount Line is entirely within the City of Boston. Several of the stops are unmarked, lack listings of service times, and require any potential passenger to find the elevated station and wait to flag down a ride on a passing commuter car.

Community advocates are working with the City and MBTA to upgrade the Fairmount Line to rapid transit status and rename it the Indigo Line.<sup>46</sup> They hope to add as many as five new stations and increase service frequencies along the nine-mile route. Recent funding, however, will only allow for four due to concerns about headways and running times. The cost of constructing four new stations is estimated to be approximately \$100 million.<sup>47</sup> The MBTA has recently indicated that this line

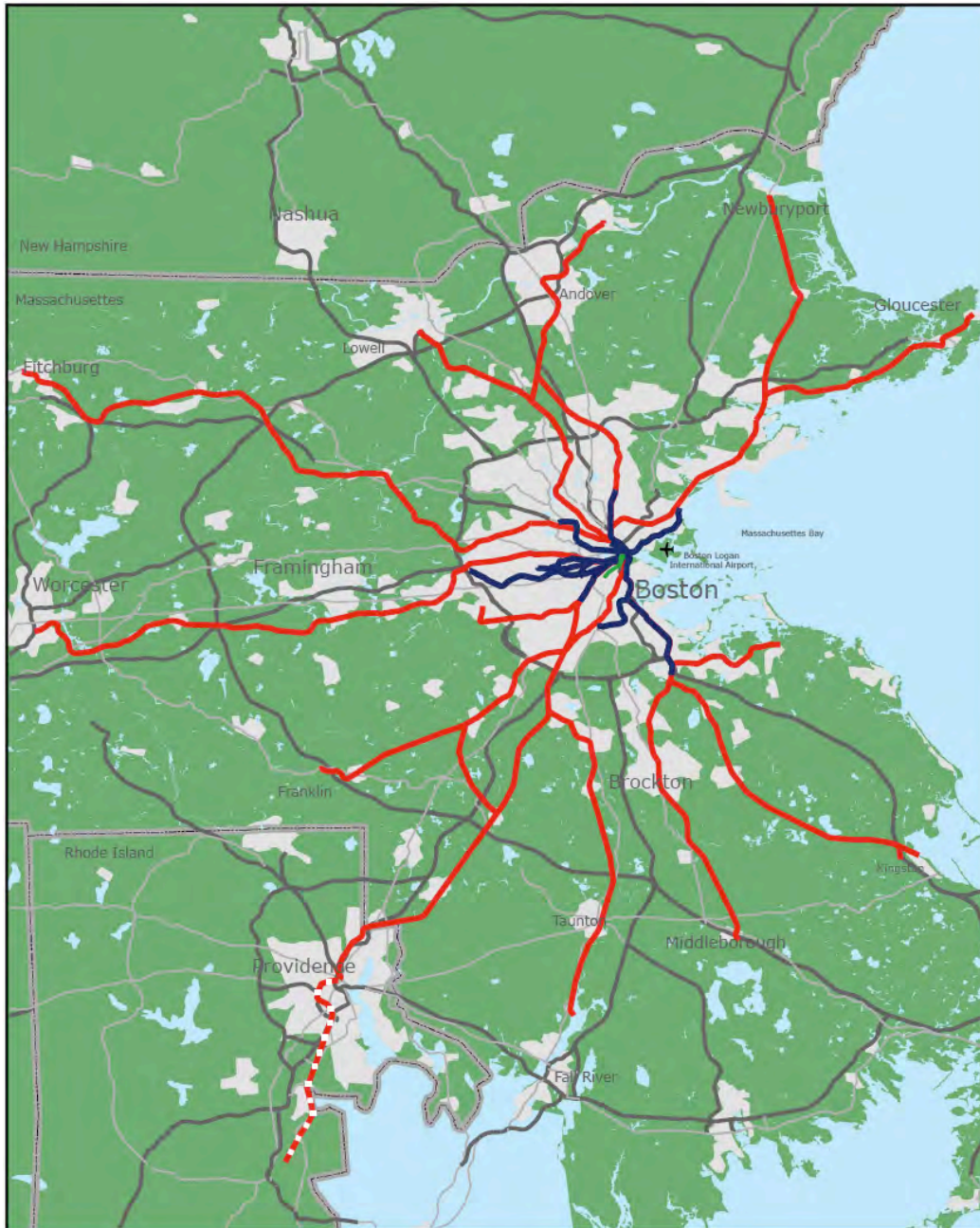
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<sup>46</sup> For the purposes of this report, the authors refer to the Fairmount Line when discussing the current commuter corridor, including existing level of service and number of stations. The Fairmount/Indigo Line is used when referring to future plans for increased level of service and stations.

<sup>47</sup> Fairmount/Indigo Line CDC Collaborative, “Boston’s Newest Smart Growth Corridor: A Collaborative Vision for the Fairmount/Indigo Line.” Goody Clancy, KKO Associates and Byrne McKinney: February 2006.



will remain a commuter line because of its access to the South Station. Funding was approved on November 17<sup>th</sup>, 2006 but still needs to be appropriated by the state.



## Map B1 Boston Regional Transit

SEPTEMBER 2006



- Legend
- Heavy Rail (T Subway)
  - Commuter Rail
  - - - South County Commuter Rail Expansion (PE)
  - Silver Line Bus Rapid Transit (BRT)
  - Highway
  - Major Road
  - Urbanized Area

PE: Preliminary Engineering  
Source: Center for TOD + MBTA

Of the more than 163,000 people in the service areas of the Fairmount Line, 63 percent are people of color and in the section of the corridor between Upham's Corner and Morton Street – currently without stations, but slated for infill stations as part of the Indigo Line – 91 percent of the population are people of color who are highly transit-dependent, with almost half of the households not owning a car.<sup>48</sup> The corridor has not seen a large amount of new development, but new market-rate condominiums and houses are being constructed and selling at upwards of \$350,000, outside of the price range of most of the current corridor residents.<sup>49</sup>

### *III. Regional TOD Housing Market Will Continue to Grow*

The local housing market exhibits great variation across the Boston metropolitan region, with some neighborhoods having extremely high median home values while others suffer from decades of underinvestment. As to be expected from an older industrial northeast city, the majority of housing stock (60 percent) was built prior to 1940.<sup>50</sup>

Of the 253,532 housing units available in the region in 2005, almost 92 percent were occupied, indicating a very robust housing market with low levels of available vacant units. The long-term regional housing production shortage has kept vacancy rates low and prices high. In the past five years the median household price in the Boston region climbed dramatically from \$190,600 to \$420,400<sup>51</sup>. This movement might help to explain the change in household expenditure on housing. In 2000, roughly 26 percent of households in the Boston region spent 30 percent or more of their income on owner-occupied housing, while 40 percent of renters did the same. In 2005 those numbers were up, with 34 percent of household owners and 51 percent of renters spending more than 30 percent of their income on housing<sup>52</sup>. The dramatically increasing housing cost for both owners and renters makes Boston one of the most expensive housing markets nationally. Lower-priced neighborhoods where market-rate prices were affordable are quickly disappearing, leaving low- and moderate-income renters and homebuyers with dwindling options other than publicly assisted housing and leaving the city.

Over the past five years, the City and Commonwealth have stepped forward to provide new funding and policy tools to address the housing crisis. The City of Boston has in its development pipeline more than 40 projects near T stations that could produce more than 9,000 new housing units. At this time an estimated 4,700 units of housing are being planned or are already under construction in 22 station area development projects involving MBTA surplus land. Throughout the region, an

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<sup>48</sup> Fairmount/Indigo Line CDC Collaborative, *Ibid.*

<sup>49</sup> *Ibid.*

<sup>50</sup> US Census Bureau, 2005 American Community Survey, Selected Housing Characteristics.

<sup>51</sup> US Census Bureau, 2005 American Community Survey, Selected Housing Characteristics.

<sup>52</sup> *Ibid.*

additional 40 such projects, possibly producing as many as 15,000 additional housing units, are planned, under construction or recently completed.<sup>53</sup>

Buildings along the Fairmount Line



*Photo Courtesy of Goody Clancy*

### ***Corridor Serves Diverse Neighborhoods Currently with Limited Transit Access***

The Fairmount Line is a commuter corridor that connects Downtown Boston south to the neighborhoods of Dorchester Bay and Mattapan with the neighborhoods and industrial areas of Hyde Park. The line currently has only five stations, bypassing many dense, urban neighborhoods and the South Bay Shopping Center, a regional shopping center just beyond Boston's central city, south of Interstate 93.

The existing and proposed station areas along the line contain the highest number of residents of any of the case study corridors, 88,881 people, and include some of the most densely populated parts of Boston. Although 36 percent of local residents travel by transit, peak hour service runs only every half hour and off-peak only every hour; there is no evening or weekend service. The corridor is served by local buses but there is no direct bus service from the Fairmount Line neighborhoods to Downtown. Based on recent surveys by local coalitions and community development corporations, the average current bus and transit commute for residents in these lower income neighborhoods is 1 hour, 15 minutes.<sup>54</sup>

Preliminary ridership projections done in 2002 indicate a substantial ridership increase resulting from service improvements and additional stations. A conservative estimate found 8,010 proposed daily trips from adding five new stations and improving frequency. At 1,900 projected boardings, a new Four Corners station

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<sup>53</sup> Fairmount/Indigo Line CDC Collaborative, "Boston's Newest Smart Growth Corridor: A Collaborative Vision for the Fairmount/Indigo Line." Goody Clancy, KKO Associates and Byrne McKinney: February 2006.

<sup>54</sup> Data from Dorchester Bay Economic Development Corporation, Jeanne Dubois, November 21, 2006.

would be the highest ridership station in the entire commuter rail system, outside of North Station, South Station and Back Bay. Even if no additional service improvements are made, a new station at Four Corners would achieve a ridership (1,350) that would rank it as the 9th highest performing station in the entire system.<sup>55</sup>

Four neighborhood economic and community development corporations (CDCs) have come together to collaborate on redevelopment, affordable housing and improving the corridor's transit service. Known collectively as the Fairmount/Indigo Line CDC collaborative, these groups have developed an impressive vision and station area redevelopment plan for the neighborhoods of Dorchester Bay (North Dorchester), Codman Square, Mattapan and Hyde Park.<sup>56</sup> Additionally, each is acquiring property in neighborhoods near the alignment to provide more entry-level jobs, neighborhood services and permanently affordable housing to the low-income residents living in the corridor.

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<sup>55</sup> KKO and Associates produced its *Fairmount Line Feasibility Study* for the MBTA Planning Department in October, 2002. The Report identifies six improvement packages, ranging from basic "State of Good Repair" improvements to modest expansion of service, including improved peak and off-peak headways, as well as increased span and days of service, and five new stations, identified as "Improvement Package Five." While Improvement Package Five falls short of the rapid transit-like levels of service called for by neighborhood groups and area CDC's envisioning and advocating for "Indigo Line" service in the corridor, KKO's analysis nevertheless flags strong ridership potential along the line.

<sup>56</sup> Ibid.

# Map B2

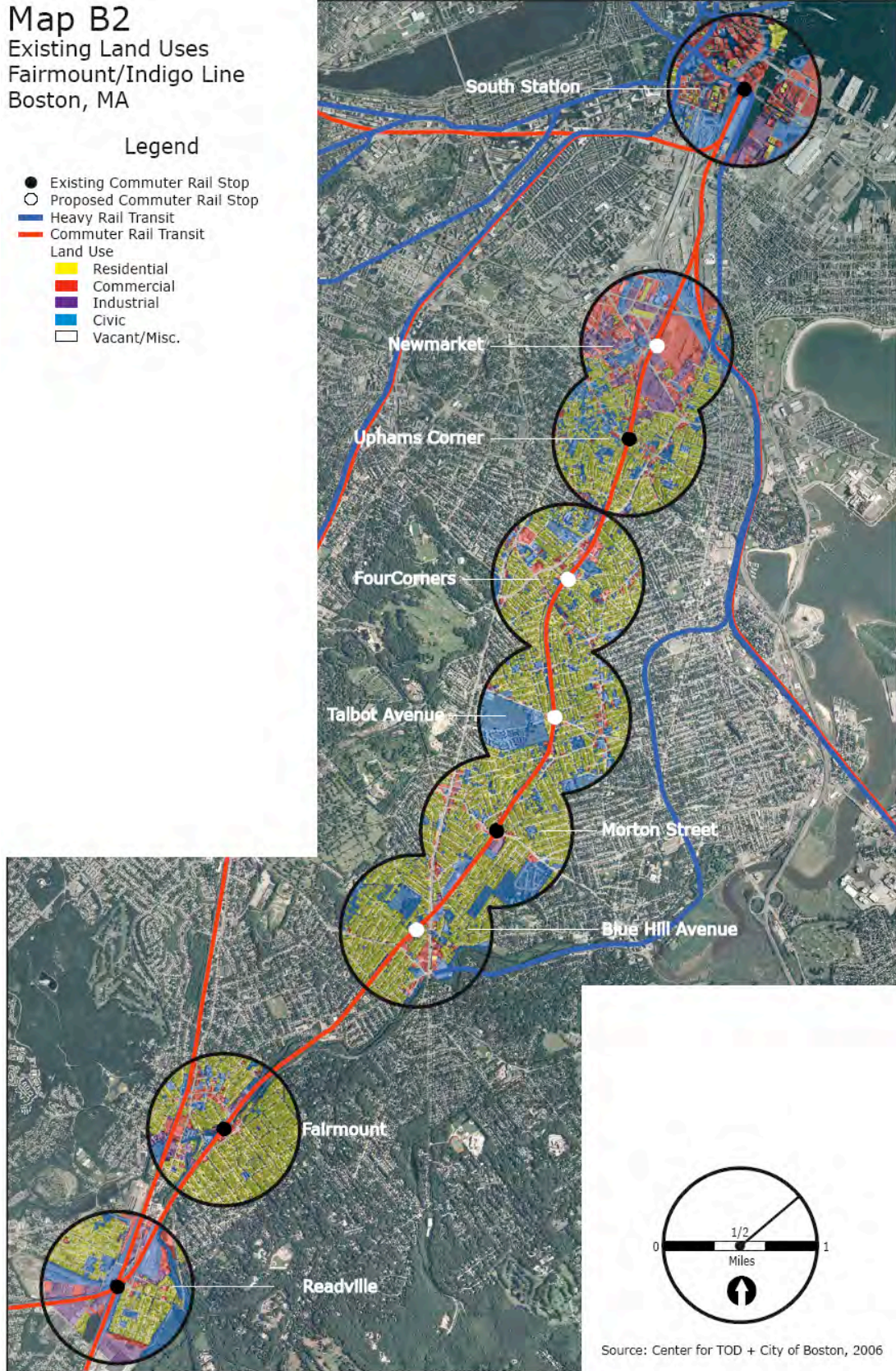
## Existing Land Uses

### Fairmount/Indigo Line

#### Boston, MA

### Legend

- Existing Commuter Rail Stop
- Proposed Commuter Rail Stop
- Heavy Rail Transit
- Commuter Rail Transit
- Land Use
- Residential
- Commercial
- Industrial
- Civic
- Vacant/Misc.



## **IV. Assessing the Development Potential and Existing Characteristics Along the Fairmount/Indigo Line**

### **Corridor is Defined by Distinct Land Use Patterns**

The corridor contains three primary land use patterns (see **Map B2: Existing Land Uses**, previous page). South Station, the existing downtown station, and the proposed station at Newmarket are predominantly commercial in character, possess a good amount of infrastructure and contain some civic and industrial uses. The Downtown contains a high concentration of commercial office uses (2.07 FAR) and gives the corridor over-all the highest commercial floor area ratio (FAR) among the case study corridors (see **Table B1**, below).<sup>57</sup>

**TABLE B1: Land Uses & Density, Fairmount Line, Boston, 2005**

<b>LAND USES</b>	<b>Housing</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Mixed Use</b>	<b>Civic</b>
Within 1/2 mile radius of stops	<b>47%</b>	<b>15%</b>	<b>8%</b>	<b>1%</b>	<b>30%</b>
<b>DENSITY/INTENSITY</b>	<b>Housing (DUA)*</b>	<b>Commercial (FAR)^</b>	<b>Industrial (FAR)^</b>		
	<b>18.23</b>	<b>2.07</b>	<b>0.82</b>		

Source: Center for TOD, Strategic Economics, City of Boston, 2006

All seven of the existing and proposed station areas from Uphams Corner to Fairmount are residential with a fine-grained parcelization pattern typical of older urban neighborhoods.<sup>58</sup> Moving out from the urban core, the residential station areas through Blue Hill Avenue are built at a medium density (on average, 16 to 25 dwelling units per acre or DUA), while the residential portions of the two most southern station areas, Fairmount and Readville, are at the upper end of low density development (on average, 9 to 10 dwelling units per acre) and primarily consist of single family detached homes. The seven middle stations have a number of small and large parklands mixed into the urban fabric, as well as neighborhood-serving retail along arterials and at key intersections not necessarily adjacent to the stations. Readville, the last existing station on the line, has a significant amount of larger parcel industrial development separated from the residential neighborhoods by highway interchanges.

Overall, almost half of the total land uses in the corridor are residential, while only 15 percent are commercial, the lowest percentage of the case study corridors, despite

<sup>57</sup> Floor area ratio refers to the proportion of total built area on a property to the total lot area. For example, a surface parking lot would have an FAR of 0.0, while a three story building that covered half the total lot area would have an FAR of 1.5.

<sup>58</sup> The Fairmount/Indigo Line CDC Collaborative is advocating for additional stations beyond the four proposed stations shown on Maps B2 through B6. MBTA is, thus far, moving forward with planning and financing for only the four new stations shown.

the high intensity commercial FAR in the downtown. The over-all residential density of the corridor is 18 dwelling units per acre, comparable to the neighborhoods along the Hiawatha line in Minneapolis. The degree of civic uses is relatively high at 30 percent. The land use types and densities are typical of older, urban and first ring suburban neighborhoods and represent a distinct, historic development pattern.

**Table B2**, on the next page, summarizes the existing land uses, demographics and development efforts that are occurring along the Fairmount/Indigo Line. Adjacent stations with similar land use, zoning and demographic characteristics have been grouped. Since 2001, approximately 31 residential development projects, nine commercial and four civic or institutional projects have been built, are currently under construction, are planned, or are proposed within a half mile of the four existing and four proposed stations (not including South Station).<sup>59</sup> If development activity for the downtown stations in the other case study corridors is similarly excluded, the Fairmount Line has had amongst the highest level of development activity, on par with the Hiawatha Line in Minneapolis, despite the lack of transit expansion on the line since 1986.

Those station areas closest to downtown are seeing the greatest amount of development activity. Existing land uses already support a mix of activity. Community development corporations (CDCs) are working to preserve and create affordable housing and employment opportunities around the proposed station areas. To date, new housing projects are being developed at densities similar to the surrounding neighborhood. The CDCs, through a corridor visioning effort are hoping to increase densities at sites closest to the existing and proposed stations. These efforts are described in more detail later in this chapter on page 49.

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<sup>59</sup> Development data for Downtown was not available as part of the Fairmount Line from the Boston Redevelopment Agency, which does not consider South Station to be part of the Fairmount Line, as it is a hub for multiple transit lines. A major mixed-use air-rights development project is planned for this station.

**Table B2: Existing Land Uses & New Development, Fairmont/Indigo Line (1986, Proposed Expansion), Boston**

Station Areas (1/2 mile Radius, see Map B2)	Existing Land Uses <sup>1</sup>	Key Demographic Indicators, 2000	Current Zoning	Recent, Planned and Proposed Development <sup>2</sup>	Land Use Planning Efforts
South Station	DT Commercial Infrastructure Industrial DT Residential	Median HH Income: \$50,500 % Owner-Occupied: 23% Average HH Size: 1.82	DT Commercial Infrastructure Industrial DT Residential	N/A	7 different district planning projects in progress.
New Market Station (proposed)	Community Retail Infrastructure Industrial High Density Res (very diverse)	Median HH Income: \$32,000 % Owner-Occupied 28% Average HH Size 2.58	Community Retail Infrastructure Industrial High & DT Density Res	12 total projects: 1 affordable residential 1 market-rate residential 1 mixed-income mixed-use res. 1 hotel 1 retail 2 industrial 3 institutional 2 mixed-use office	Dorchester Rezoning (2002): Neighborhood-wide rezoning project intended to encourage more dense development. Affected New Market, Uphams Corner, Four Corners and Talbot Avenue Stations.  CDC Collaborative-led Smart Growth Vision for 4 existing and 6 proposed stations published February, 2006. Primarily concepts for key in-fill/redevelopment sites near stations.
<u>Dorchester</u> Upham's Corner Four Corners (proposed) Talbot Avenue (proposed)	Medium Density Res Civic (parks) Corridor Retail	Median HH Income: \$30 - 32,000 % Owner-Occupied 27 - 32% Average HH Size 3.07 - 3.11	Medium Density Res Civic Local Commercial	22 total projects: 12 affordable residential 3 market-rate residential 4 market-rate mixed-use residential 1 retail 1 institutional 1 mixed-use office	
<u>Mattapan</u> Morton Street Blue Hill Ave (proposed)	Medium Density Res Civic (parks) Corridor Retail Industrial	Median HH Income: \$34 - 38,000 % Owner-Occupied 34 - 41% Average HH Size 2.8 - 3.08	Med. & Low Density Res Civic Local Commercial	4 total projects: 2 market-rate residential 1 market-rate mixed-use residential 1 retail	Mattapan Economic Development Initiative: Economic development project to encourage job growth, add mixed-use higher density structures and improve the existing streetscape. Largely aimed at parcels outside of station area.
<u>Hyde Park</u> Fairmont Readville	Low & Medium Density Residential Infrastructure Industrial Local Commercial	Median HH Income: \$42 - 50,000 % Owner-Occupied 52 - 59% Average HH Size 2.34 - 2.53	Low & Med. Density Res Industrial High Density Res Local Commercial	6 total projects: 1 affordable residential 2 market-rate residential 3 mixed-income mixed-use res.	

<sup>1</sup> Density designations as follows: DT = >50DUA, high density = 26 - 50DUA, medium density = 10 - 25DUA, & low density = .5 - 9DUA.

<sup>2</sup> Known completion dates for projects date as far back as 2001; project information was provided by the Boston Redevelopment Agency and completion dates were not available for all projects.



## ***Underutilized Land Opportunities are Fragmented, Small Parcels***

A critical factor in determining a corridor's ability to evolve into a more transit-supportive environment is the amount and type of underutilized or redevelopable land in proximity to stations. Given the built-out nature of the Fairmount Corridor and finely parcelized development pattern of the historic neighborhoods, only 345 acres of underutilized land exist along the corridor. (See **Map B3**, next page.) This is the lowest amount of identified underutilized land among the case study corridors.

Most of the redevelopment opportunity in the corridor is found in small in-fill sites that are challenging to develop from a financial feasibility perspective and will not, in gross, significantly alter the character of the station areas. A number of these scattered, small parcels are publicly owned, yielding the potential for the city to play a lead role in their redevelopment or negotiating redevelopment opportunities at adjacent sites through land assembly strategies.<sup>60</sup> At 16 to 25 dwelling units per acre, much of the urban fabric surrounding the stations can already be considered transit-supportive, does not need significant public infrastructure improvements and has an existing population that already uses transit for over a third of all trips.

A significant question for redevelopment is to what degree station areas could function as centers of neighborhood commercial and social activity. Some of the existing stations (i.e. Morton Street) are in the heart of, or immediately adjacent, to local-serving retail nodes or strips. In general, neighborhoods can support a finite amount of local-serving retail, depending on their density and walkability.<sup>61</sup> Planning and approval of new development should consider the total amount of retail that can reasonably be supported, and strategic ways in which new, in-fill mixed use development around the stations can support and connect with existing retail, rather than undercutting it.

The largest potential redevelopment opportunities may exist around the proposed Newmarket station and downtown South Station, and in an underutilized industrial or low intensity commercial land around the Readville station. This analysis does not take into account the possibility of environmental contamination which does impact redevelopment potential, but that can be surmounted with the assistance of brownfield redevelopment liability and financing tools, in which Massachusetts is a leader.

Given the nature of the identified underutilized sites, their redevelopment potential is somewhat limited. However, through engagement of public and private stakeholders

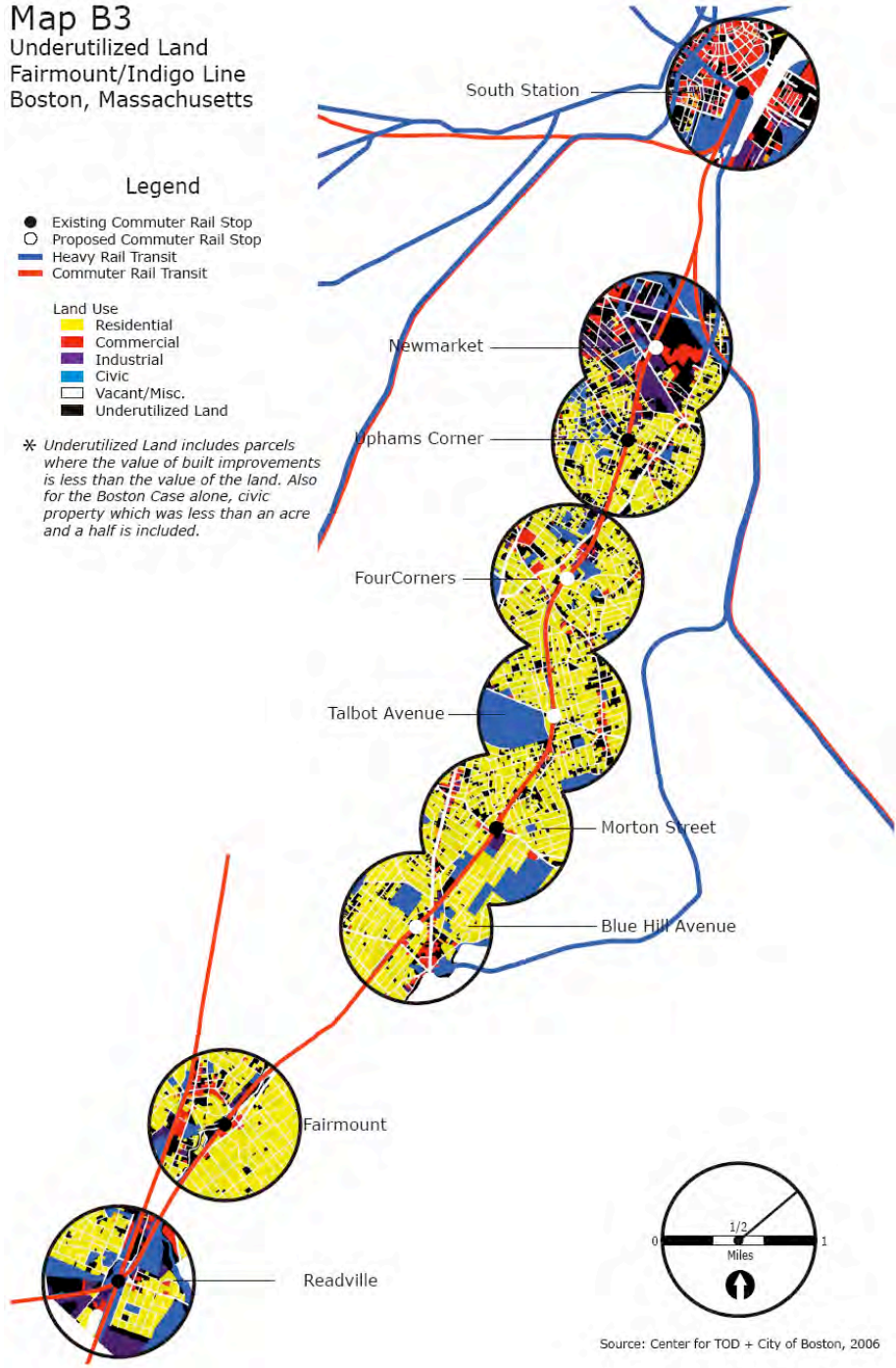
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<sup>60</sup> In general, parcels owned by civic organizations (i.e. cities) were excluded from the underutilization analysis because most are open space or uses that will not change in the near future. However, in Boston, there appear to be many small (i.e. under 1 acres) sites that are owned by the city, but are currently vacant.

<sup>61</sup> Some of the existing retail districts are specialty retail nodes, i.e. Codman Square with its Caribbean wares, which have potential for more growth as their markets extend beyond the immediate neighborhood.

these sites should not be overlooked, but rather, would benefit from a strategy to identify those that may be best suited for redevelopment. Assuming that half of the 345 underutilized acres were suitable for redevelopment, and that the average corridor housing density of 18 units per acre was applied to these sites, between 3,000 and 6,000 new housing units could potentially be located within the corridor.<sup>62</sup>

**Map B3**  
Underutilized Land  
Fairmount/Indigo Line  
Boston, Massachusetts



<sup>62</sup> This estimate is consistent with the range identified by the Fairmount/Indigo Line Collaborative.

**Corridor Demographics Highlight Diverse, Transit-Supportive Communities**

The corridor as a whole had a median household income of approximately \$35,000 in 1999, in comparison with the regional median of \$53,000 (see **Table B3**, below). While only 32 percent of units are owner-occupied, as compared with 59 percent for the region, this differential is actually less than in most of the other case study corridors. The corridor also has relatively high transit use, with 33 percent of residents using transit to commute versus only 9 percent for the overall region.

**TABLE B3: Demographics & Journey to Work, Corridor & Region, Fairmount Line, Boston, Massachusetts 2000**

DEMOGRAPHIC CHARACTERISTICS	Population	Households	Average HH Size	Median HH Income	Median Age	% Hsg Units Owner-Occupied
Fairmount Line (within 1/2 mile of stops)	88,881	30,169	2.85	\$35,252	31	31.9%
Region	5,819,100	2,221,499	2.54	\$52,792	36	59.1%
<b>JOURNEY TO WORK</b>	<b>Car Alone</b>	<b>Car Pool</b>	<b>Transit</b>	<b>Walk/ Bike</b>		
Fairmount Line (within 1/2 mile of stops)	0.48	0.14	0.33	0.03		
Region	0.74	0.08	0.09	0.04		

Source: Center for TOD, Strategic Economics, US Census 2000

The Fairmount Line has a larger average household size than the region as a whole and the largest average household size among the case corridors. This is a critical difference and relates to the greater ethnic diversity and greater maturity of the neighborhoods along the line, in comparison with the other corridors. In general, these areas can be described as predominantly working class, majority non-white, family neighborhoods providing some of the last affordable housing within the City of Boston. This points to both the need for more extensive efforts to ensure long-term affordability and helps explain the intensive organization around planning for and building mixed-income housing in the corridors.

**Map B4**, on the following page, overlays new planned, proposed and recently built development with the median household income of each station area.<sup>63</sup> A higher percentage of middle-income households live at both ends of the line in Downtown and Readville, where median household income is 80 percent or more of the regional median. The three-mile segment of the Fairmount Line between Uphams Corner and Morton Street, contains the largest concentration of low-income households, with median incomes at only 30 to 60 percent of the regional median. This area, which is likely home to many transit-dependent households, is currently bypassed entirely by the Fairmount Line but the CDC Collaborative proposes adding three new stations here.

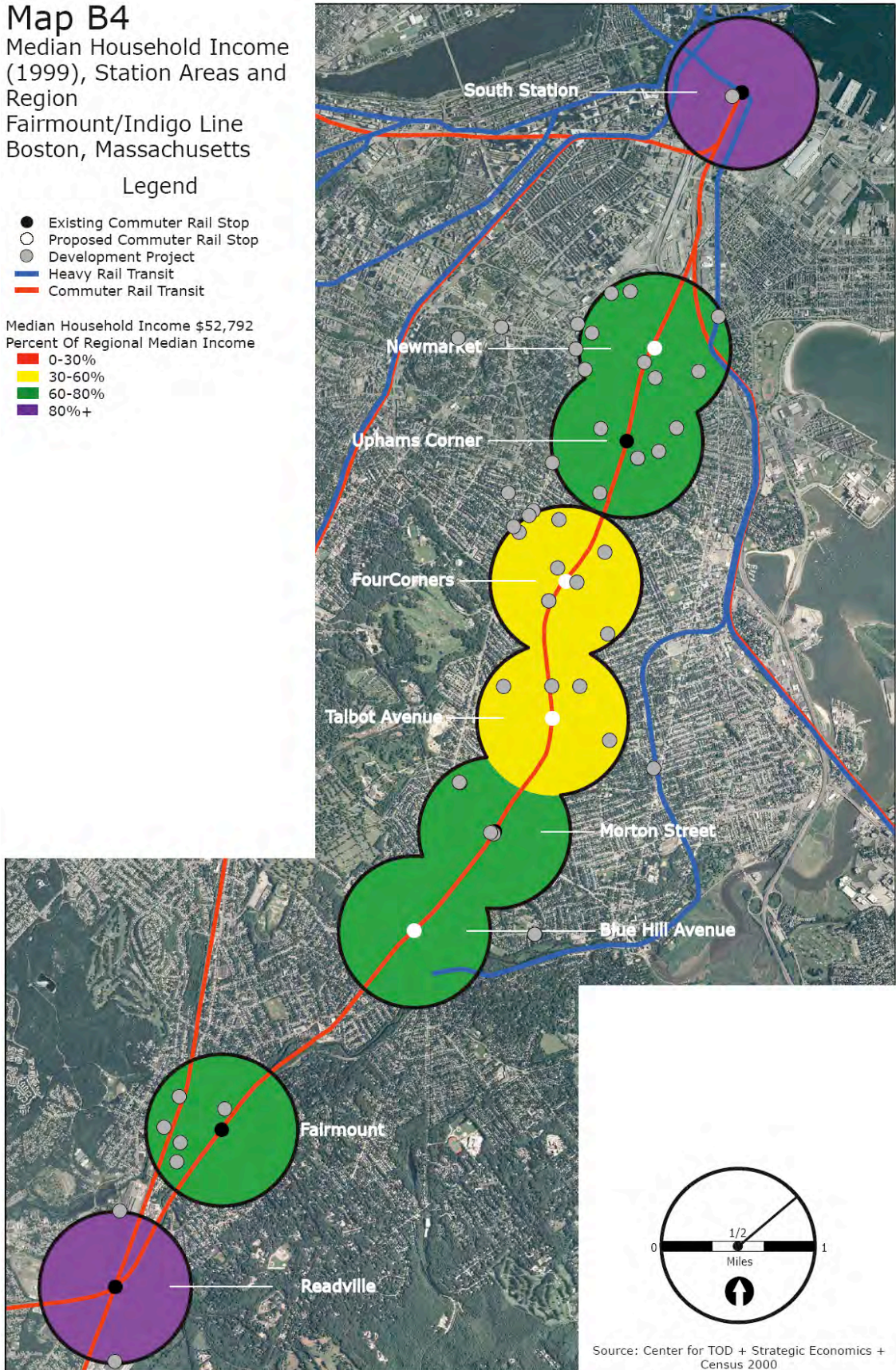
<sup>63</sup> New development activity around South Station was not available in conjunction with the Fairmount Line, as it is regarded by the City as a hub rather than part of the line. However we know of one major air rights development project planned for South Station which includes an expansion of the MBTA bus terminal, a 40 story office tower, boutique hotel, incidental retail, and housing.

# Map B4

Median Household Income (1999), Station Areas and Region  
Fairmount/Indigo Line  
Boston, Massachusetts

## Legend

- Existing Commuter Rail Stop
  - Proposed Commuter Rail Stop
  - Development Project
  - Heavy Rail Transit
  - Commuter Rail Transit
- Median Household Income \$52,792  
Percent Of Regional Median Income
- 0-30%
  - 30-60%
  - 60-80%
  - 80%+



Source: Center for TOD + Strategic Economics + Census 2000

## ***Reactive Land Use and Zoning Impedes Collaboration between City and Neighborhoods***

Stricter home rule restrictions in Massachusetts than in other states limit local decision-making power and discourage regional cooperation.<sup>64</sup> Massachusetts explicitly denies local governments home rule authority over taxing or borrowing. It also limits towns and cities from imposing impact fees or enacting a range of affordable housing regulations proven successful in other areas. Specific local impacts are responses to community input within the permitting process and because cities and towns lack adequate control over their own affairs, they often resist efforts at larger regional strategies for housing, transportation, the environment and other matters that have a regional scope. Consequently the Commonwealth plays a critical role in setting policy and providing funding tools for towns and cities.

In general, land use and zoning in the corridor are consistent with the current densities and intensities of existing development. In 2002, the City of Boston updated zoning in Dorchester, including the Newmarket through Talbot Avenue station areas and, in the Downtown area, seven different district planning efforts are currently in progress.

A number of local developers and practitioners are concerned by the frequent disregard for existing zoning regulations in favor of development proposals viewed favorably by the Boston Redevelopment Agency. Interviews suggest that variances, conditional use permits and spot re-zonings occur regularly in response to development proposals and that concerted planning efforts often do not result in changes in zoning that would guide and regulate future development. Although community members have become wary of participating in planning processes, preferring to wait until actual projects are proposed to weigh in, community input has effectively informed development through the permitting process.

The inability of local government agencies and the Boston Redevelopment Authority (BRA) to rezone and consistently implement station area plans through the entirety of the development process is a challenge for developers and local communities. A large amount of redevelopment is happening though through BRA support to local CDCs who are leading neighborhood-focused corridor planning and redevelopment. **Map B5**, next page, identifies a number of recent and proposed development projects along the corridor. Development activity is particularly strong between the New Market and Talbot stations, where local CDCs have the most development capacity. The BRA's strategy is empowering the non-profit and affordable developers to direct long-term development that will meet shared community goals. While not all of these new developments are being done by CDCs, the Fairmount/Indigo Line CDC Collaborative has developed a powerful vision for corridor transformation that is being used to make the case for improved transit service in the corridor, and to shape station area redevelopment.

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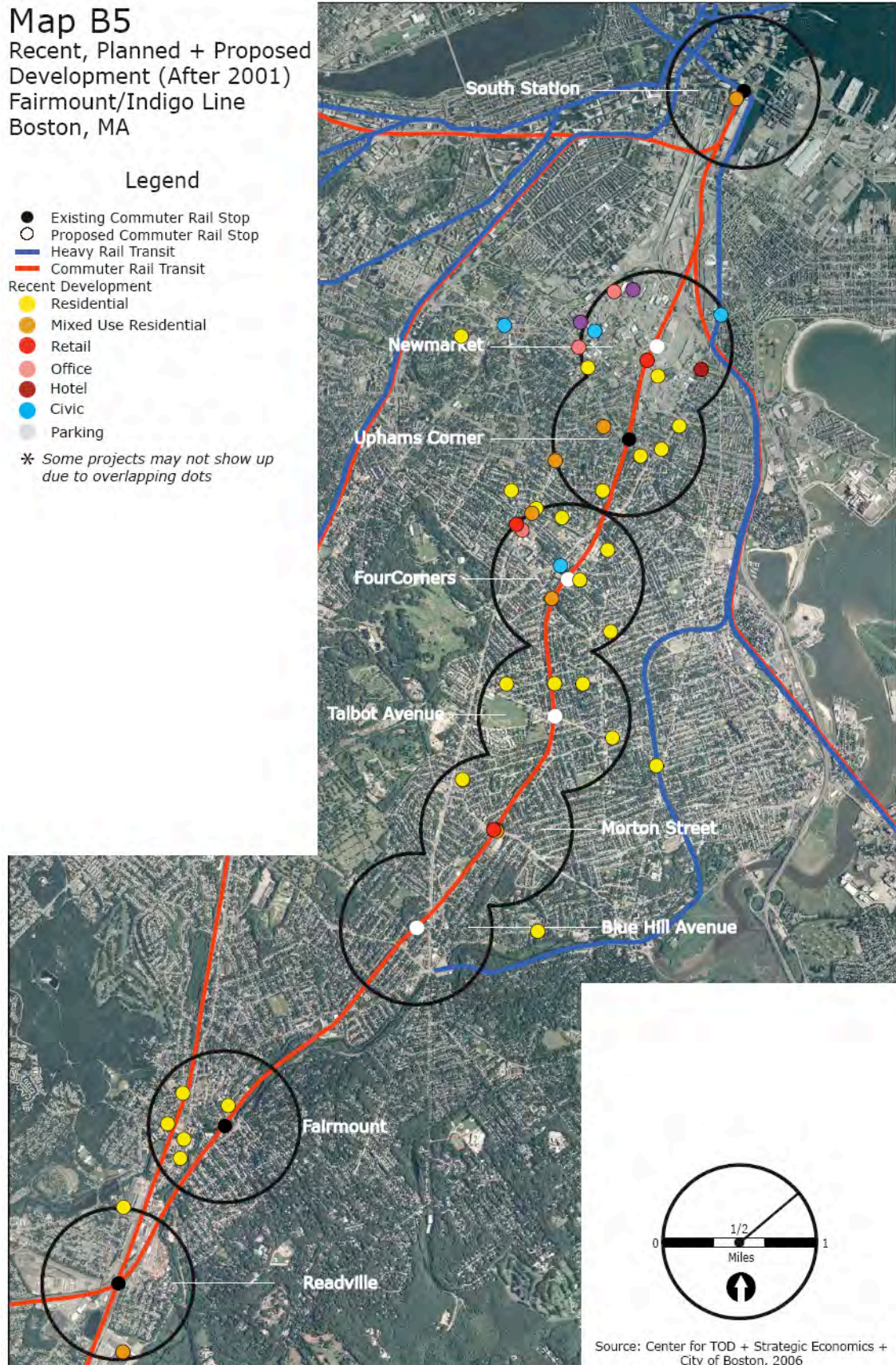
<sup>64</sup> Rappaport Institute for Greater Boston, *Dispelling the Myth of Home Rule: Local Power in Greater Boston*. Kennedy School of Government, Harvard: 2004.

# Map B5

Recent, Planned + Proposed Development (After 2001)  
Fairmount/Indigo Line  
Boston, MA

## Legend

- Existing Commuter Rail Stop
- Proposed Commuter Rail Stop
- Heavy Rail Transit
- Commuter Rail Transit
- Recent Development
- Residential
- Mixed Use Residential
- Retail
- Office
- Hotel
- Civic
- Parking
- \* Some projects may not show up due to overlapping dots



## ***V. CDCs Lead Affordable Housing Development Activity in Corridor***

The majority of residential activity in the corridor, 18 out of 31 projects, has been affordable or mixed-income development built by the very active community development corporations (CDCs) working in the corridor, as well as other non-profit affordable housing developers. **Map B6**, next page, illustrates the location of recent residential development projects. Additionally, four of the recently built or planned projects have been civic, which means that half of all development activity has not been driven by traditional market forces. In general, the Fairmount Corridor has not been a target area for market-rate in-fill urban housing in Boston over the last market growth cycle. The general slackening of the market at the most recent end of this cycle has benefited local non-profits looking to secure land for future projects.

Dudley Village is one of the most recent efforts underway to provide affordable housing within the corridor. Dorchester Bay Economic Development Corporation received approval from the Boston Redevelopment Authority for their mixed-use residential development that includes 50 units in three to four story structures, plus 6,400 square feet of retail space, a management office, a computer center for the residential tenants and parking for approximately 66 spaces. The units, which will all be affordable rentals to households earning up to 60 percent of area median income, will be created on five separate parcels located on East Cottage and Dudley Streets in Roxbury. Part of the land used for this project were former Department of Neighborhood Development parcels. Dudley Street Neighborhood Initiative (DSNI), a community land trust, has partnered with DBEDC on Dudley Village and on other projects. DNI is allowed to use eminent domain on vacant land within its service area and has transformed 500 of 1,300 vacant parcels within the corridor area into affordable housing and other community amenities such as parks and community gardens.<sup>65</sup>

## ***Fairmount/Indigo Line Envisioned as "Boston's Newest Smart Growth Corridor"***

With support from The Boston Foundation and with the BRA and Mayor's office, the Fairmount/Indigo Line CDC Collaborative created its own Smart Growth Corridor Vision.<sup>66</sup> The Collaborative includes all four CDCs active along the corridor.

The *Smart Growth Corridor Vision*, drafted by the Collaborative through significant community input working with a team of urban designers and planners, outlines development concepts for key in-fill parcels around existing and proposed stations along the Fairmount/Indigo Line. The Collaborative is using the Vision document as a community organizing tool to develop consensus on the appropriate development vision

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<sup>65</sup> Information on this project is available through the Boston Redevelopment Authority (<http://www.ci.boston.ma.us/bra/press/PressDisplay.asp?pressID=269>) and Dorchester Bay Economic Development Corporation (<http://www.dbedc.com/>).

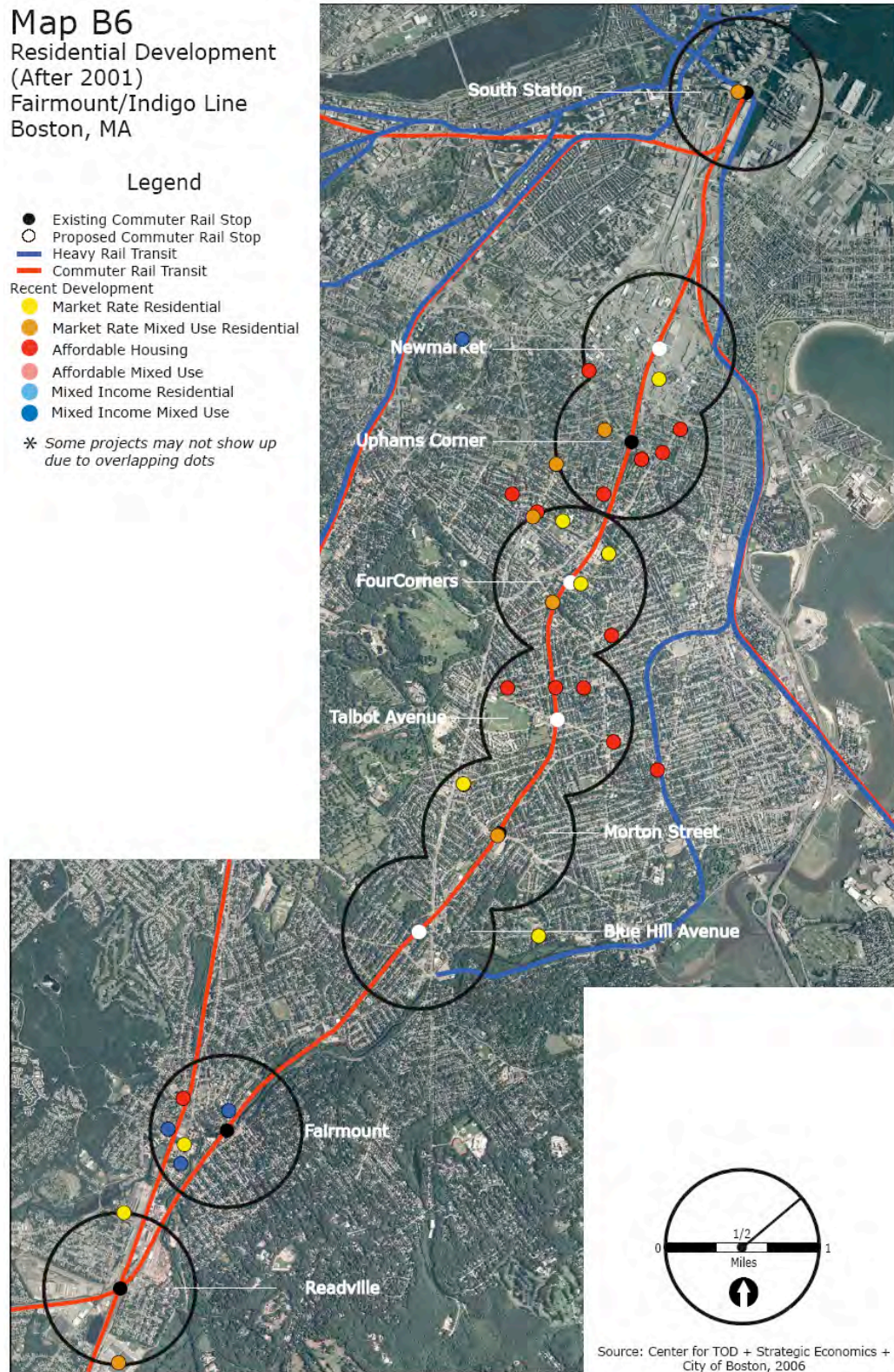
<sup>66</sup>The Fairmount/Indigo Line CDC Collaborative, *Boston's Newest Smart Growth Corridor*. Goody Clancy, KKO Associates and Byrne McKinney: February 2006.

for the corridor for each current and future stop as well as integrating jobs and green space opportunities along the whole corridor.

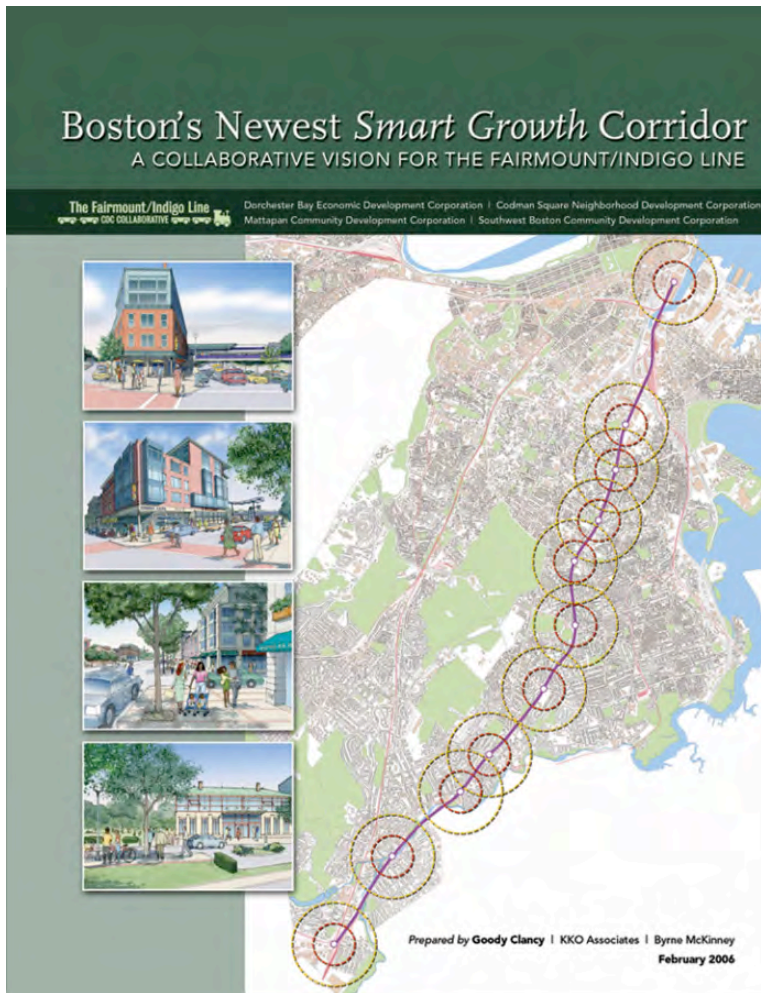
**Map B6**  
 Residential Development  
 (After 2001)  
 Fairmount/Indigo Line  
 Boston, MA

**Legend**

- Existing Commuter Rail Stop
  - Proposed Commuter Rail Stop
  - Heavy Rail Transit
  - Commuter Rail Transit
  - Recent Development
  - Market Rate Residential
  - Market Rate Mixed Use Residential
  - Affordable Housing
  - Affordable Mixed Use
  - Mixed Income Residential
  - Mixed Income Mixed Use
- \* Some projects may not show up due to overlapping dots







The locally agreed upon Vision has become a tool for implementation via individual development projects and re-zonings that each participating organization will undertake. Ensuring affordable housing is a key goal. The Collaborative anticipates that 1,200 to 1,400 low- to moderate-income multi-family housing units can be built near current and future stops along the line.<sup>67</sup> Preservation of Section 8 affordable housing units set to expire in 2009 is also a priority for the collaborative. More than 2,200 expiring-use units are located just in the Readville and Fairmount station areas.<sup>68</sup>

While the various local CDCs have been tremendously successful in moving affordable, mixed-income residential and mixed-use projects forward in the corridor, this approach can be undermined by potential development proposals not in keeping with the Smart Growth Vision, particularly since it is not an official City-approved plan. While the Collaborative feels that the community is sufficiently organized to keep inappropriate development from moving forward, a religious organization has recently acquired one of

<sup>67</sup> Fairmount/Indigo Line CDC Collaborative, “Boston’s Newest Smart Growth Corridor: A Collaborative Vision for the Fairmount/Indigo Line.” Goody Clancy, KKO Associates and Byrne McKinney: February 2006.

<sup>68</sup> Ibid.

the key in-fill parcels at the proposed Columbia Road Station and is moving forward with entitlements to build a church in this location.<sup>69</sup> Another church acquired a key 50,000 square foot commercial building in Uphams Corner, further destabilizing economic development initiatives at that station.

Fairmount Line Grade Crossing



*Photo Courtesy of Goody Clancy*

The accomplishments of corridor's CDCs, including their successful grass roots organizing and receiving over \$43 million in state funding commitments for four of the proposed stations, suggest that local government may not be the sole or even primary resource for achieving mixed-income communities. Federal agencies offering sources of transit and affordable housing funds may want to consider ways of more directly incorporating this type of local CDC into planning for transit investments and transit-oriented development. While these organizations know a great deal about the needs of their communities, they sometimes lack adequate venture capital to buy, assemble, and hold sites, as well as some organizational capacity to overcome specific barriers to TOD, such as infrastructure costs and restrictive local land use and development policies. These groups may require outside technical assistance to ensure implementation of their community-based development efforts.

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<sup>69</sup> The Columbia Road Station is one of the two additional stations proposed by the CDC Collaborative that have not been sanctioned by MBTA. It would be located between Uphams Corner and Four Corners.

## **VI. State-Level Commitment Expands Local Housing Opportunities**

Increasing housing production and preserving neighborhood stability are two explicit goals shared by the City and Commonwealth. In 2002, private development in the state was producing homes at a rate of 17,500 per year; in the past three years that rate has increased to 24,000 homes per year. In the same time period, the ratio of multi-family to single-family homes has doubled. The City has also made a strong commitment to producing more new units of housing, and preserving existing affordable housing. From 2000-2003, almost 8,000 units of new housing, of which over 2,000 were affordable, were constructed. Another 5,000 households were protected from displacement through City efforts to prevent subsidized housing from becoming market-rate.<sup>70</sup> A bevy of tools and funding sources have been developed by the City and State to achieve these results (see **Table B4** on pages 53-54 for a summary of these tools and funds, also described below).

The Commonwealth has emerged as a strong partner in redirecting resources and policies to promote greater use of existing infrastructure resources. One important new tool can be found in Massachusetts's new smart growth housing laws, Chapters 40R and 40S. Under Chapter 40R, cities and towns are encouraged to establish compact smart growth districts and rewarded with incentives ranging from \$10,000 to \$600,000 plus \$3,000 per home built. Under Chapter 40S, cities and towns get reimbursed for the unfunded cost of educating new school-age children resulting from housing growth. Both tools, while still relatively new, may become powerful incentives for overcoming exclusionary zoning obstacles and creating new housing choice.

Given the projected doubling of demand for housing near transit, coupled with a strong statewide desire to preserve open space and create more housing, the Commonwealth is strongly advocating transit-oriented development as part of its toolkit. Through the TOD Infrastructure and Housing Support Program more than \$30 million in infrastructure grants have been authorized to facilitate TOD and more towns have taken steps to modify zoning, conserve open space, and diversify their housing stock using \$2.1 million in smart growth grants and technical assistance.<sup>71</sup> One of the Fairmount CDCs was an early winner of the maximum \$2 million grant under this program. Even the Massachusetts Department of Transportation is supporting TOD through funding and revising road design standards. The state's 20-year transportation plan commits fully half of future funding to transit and requires zoning reform in all new corridors.

The MBTA, given its extensive inventory of land and air rights next to and above transit stations, is also pursuing TOD opportunities. The MBTA has examined realigning operations as stations are rehabilitated to include TOD opportunities. Examples of these types of projects include Jackson Square in Jamaica Plain, Ashmont Station in Dorchester's Peabody Square, the North Station Superstation at Canal St in the Bulfinch

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<sup>70</sup> Mayor Menino, *Leading the Way II: A Report on Boston's Housing Strategy FY 2004-07*.

<sup>71</sup> Douglas I. Foy, "Turning the corner on housing crisis," *The Boston Globe*, January 18, 2006.

Triangle, and the Mattapan Trolley Station in Mattapan Square. With the exception of Ashmont Station which is a 100 percent affordable housing project, these projects are typically mixed-income/mixed-use developments and are often collaborations between CDCs and for-profit developers.

The agency does not have the mission or funds available to partner with local neighborhood non-profits that may want to pursue TOD collaboratively with the transit agency. Its finances and statutory regulations require that it sell or lease property for the highest obtainable financial return consistent with its long-term operational needs. Despite its financial obstacles, the MBTA is showing leadership. It has entered into a Memorandum of Agreement with the Commonwealth and the BRA to encourage affordable and mixed-income housing on targeted properties owned by the MBTA. Strategies such as providing affordable and mixed-income housing and local-serving retail and community uses to transit-dependent populations are encouraged and enabled by the MBTA's deference to local permitting processes and its responsiveness to community desires. In addition, prior to publicly offering significant TOD sites, the MBTA together with the BRA and/or other local community organizations typically runs a series of pre-development public meetings and charrettes to obtain community input for development guidelines to assist bidders in preparing proposals sensitive to community concerns.

Together with MassHousing, local communities are provided technical assistance and resources to help plan and develop potential TOD sites. The Fairmount/Indigo Line CDC Collaborative has benefited from this assistance. The BRA's quick, zero percent deposits for the CDC property acquisitions has also been a brilliant and extremely helpful tool for the CDCs.

MassHousing, through the Priority Development Fund provides over \$100 million for mixed-income housing, with specific funds set aside for affordable housing located near transit stations. The creation of a TOD Planning Manager, funded by the Office of Commonwealth Development and the MBTA indicates the priority that Commonwealth places on improving the coordination between housing, development, and transit. Nationally, Massachusetts stands out as a leader in promoting TOD and mixed-income communities.<sup>72</sup> A greater degree of coordination between agencies and development/transportation policies exists in Boston than in any of the four other case study regions. The active engagement and success of local community development cooperatives at tackling affordable housing and economic redevelopment in very low-income neighborhoods also stands out as exemplary. Missing from the story thus far, however, is a shared partnership by cities and towns to provide their own sets of tools and incentives for creating TOD and mixed-income communities. This reflects, in part, the unique home rule restrictions, but also suggests a much stronger effort to do more to revise zoning and regulatory barriers that are within the control of local government which currently make compact, mixed-use development extremely difficult and time consuming.

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<sup>72</sup> Cambridge Systematics and Mohaddes Myer Associates, *The Role of State DOTs in Support of Transit Oriented Development: Requested by AASHTO*. April 2006.

**TABLE B4: TOD & Affordable Housing Policy, Financing & Funding Tools, Fairmount/Indigo Line, Boston, Massachusetts**

Tool	Intended Funding Agent/ Implementing Agent	For use by:	Policy	Funding/Financing	Affordable Housing	Mixed Income (MI)	TOD	Description	Example
TOD Planning Manager	City, Transit agency	City, Transit agency					X	An employee funded by the Office of Commonwealth Development and the Massachusetts Bay Transportation Authority (MBTA) to serve as TOD planning manager. An intermediary between the private sector, City, State and Transit Agency. Works with private developers to understand their needs and address their concerns. Provides education about TOD and helps developers find funding sources.	Tad Read
Linkage Program	City, Developer	CDCs, Developer		X	X	X		The linkage program is meant to balance large-scale commercial development with needed residential construction. Linkage is a fee (\$7.87 per square foot for housing programs and \$1.57 for jobs programs) exacted from all new large-scale commercial real estate development exceeding 100,000 square feet. The linkage requirement can be fulfilled with a cash payment or through direct creation of housing or a job-training program. The housing is to be built within a mile and a half of the commercial development that generated the funds.	Dudley Village Housing Project is a mixed-use development containing 50 new affordable rental housing units, 7,700 square feet of commercial space, a computer center for the residents, outdoor play space, and bicycle storage. Linkage fees were used to build the affordable units.
Chapter 40R: Smart Growth Incentive Zoning	State	Municipality		X	X	X	X	Passed into law in 2004, it provides for direct payments to municipalities that adopt smart growth overlay zoning districts in downtowns, commercial centers, and around transit stations and issue building permits in these areas to create new opportunities for housing. The Zoning Incentive Payment is based on the number of net additional housing units allowed by newly adopted zoning. Density bonus payments are tied to the issuance of building permits for new housing units. A payment of \$3,000 is made to the municipality for each new unit that is permitted.	On May 20, 2006, the Town of Plymouth approved at Town Meeting a Chapter 40R District for Cordage Park, which will allow for the development of 675 units of housing, 50,000 square feet of retail, and 600,000 square feet of office uses next to Plymouth Station on the Plymouth/Kingston Commuter Rail Line.
Chapter 40B: Comprehensive Permit Law	State / Local Government	Developer	X		X			Encourages the development of affordable housing in communities that currently lack economic diversity. Allows developers to apply for expedited permit review process. Allows an appeal of a local government decision about permits. Allows developers to build affordable housing at greater densities than is allowed under local zoning.	From 2002-2006, 30% of all new housing construction in the state and 80% of all low and moderate income housing outside of larger cities was built under 40B. Construction of 30,000 affordable units over the past 35 years
Chapter 40S: School Cost Insurance Policy	State	Municipalities	X	X				Designed to cover the unfunded costs of educating any school-age children who move into Chapter 40R Smart Growth Zoning districts. Qualifying communities will be reimbursed for the net cost of educating students living in new housing in smart growth districts	No funding for schools from 40S yet
Chapter 90E	State	DOT	X				X	"The [transportation] commissioner shall make all reasonable provisions for the accommodation of bicycle and pedestrian traffic in the planning, design, and construction, reconstruction or maintenance of any project undertaken by the department."	Resulted in a new statewide "Project Development Guide", which takes a "complete streets" approach to street design, with attention paid to pedestrians, cyclists and transit-users.

**TABLE B4: TOD & Affordable Housing Policy, Financing & Funding Tools, Fairmount/Indigo Line, Boston, Massachusetts (continued)**

Tool	Intended Funding Agent/ Implementing Agent	For use by:	Policy	Funding/Financing	Affordable Housing	Mixed Income (MI)	TOD	Description	Example
Commercial Area Transit Node Housing Program (CATNHP)	State	Municipality, CDC and developer		X	X	X	X	Bond program to support first-time homebuyer housing through new construction or acquisition and rehabilitation. Only residential projects, 25 units or more, within neighborhood commercial areas and in proximity to public transit nodes. At least 51% of the units in the project must be affordable.	Developers used CATNHP funds for the Ashmont TOD, a mixed-use development including 116 new housing units, 74 affordable rental units, 42 market rate for-sale condominiums, and 10,000 sq ft of retail space.
Smart Growth Technical Assistance	State	Developer, Municipality, Community Organization			X	X	X	The TOD Planning Manager at the Office of Commonwealth Development provides technical assistance for local communities to facilitate access to State resources, such as the Priority Development Fund, the Chapter 40R, and surplus MBTA Property to help catalyze TOD.	In the City of Attleboro, the Technical Assistance Grant is being used for planning, urban design, financial feasibility analyses, and traffic studies for 26 acres of land between Ten Mile River and the downtown Attleboro Commuter Rail station to allow for 300 to 500 housing units as well as 35,000 square feet of retail development.
TOD Infrastructure & Housing Support Program (TOD Bond Program)	State	Developer		X	X	X	X	Multi-year funding to finance pedestrian improvements, bicycle facilities, housing projects, and parking facilities in mixed use developments located within 1/4 mile of a transit station. The TOD Bond Program is designed so that projects located in an existing or proposed Chapter 40R Smart Growth Overlay District receive more points in the scoring system. At least 25% of the units in housing projects must be affordable to households earning up to 80% of the area median income.	Dudley Village Housing Project is a mixed-use development containing 50 new affordable rental housing units, 7,700 square feet of commercial space, a computer center for the residents, outdoor play space, and bicycle storage.
Massachusetts Affordable Housing Trust Fund	State / Local Government	Developer		X	X	X		A flexible funding source that can be used to produce and preserve rental and ownership units for households with incomes of up to 110% of the area median income, adjusted for household size. It can also be used to provide down payment assistance for homeownership.	The Affordable Housing Trust Fund has provided funding for 5,527 units of housing, 4,542 of which qualify as affordable. Twenty-four percent of the units serve families and individuals with extremely low incomes, those who make less than 30% of the area median.
Priority Development Fund: Capital Grants and Planning Assistance Grants	State / Local Government	Developer, Municipality, CDCs		X	X	X	X	\$100 million of state funding including \$75 million for mixed income communities throughout the state where at least 20% is affordable. \$3 million for comprehensive planning for communities looking to develop affordable housing plans. \$22 million to fund the development of new affordable rental housing located near transit stations. And grants of up to \$50,000 per project for financial assistance for planning, education, outreach, financial feasibility analyses and other planning activities related to increasing housing production through planning and zoning changes.	Cordovan at Haverhill Station, involves the conversion of a mostly vacant historical property into 146 1- and 2-bedroom rental units of which 85 are market rate and 61 are affordable

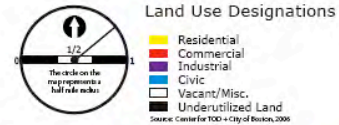
Source: Center for Transit Oriented Development, 2006

\* An overview of general federal, state, regional and local tools used in a number of the case study regions is included in Appendix B.

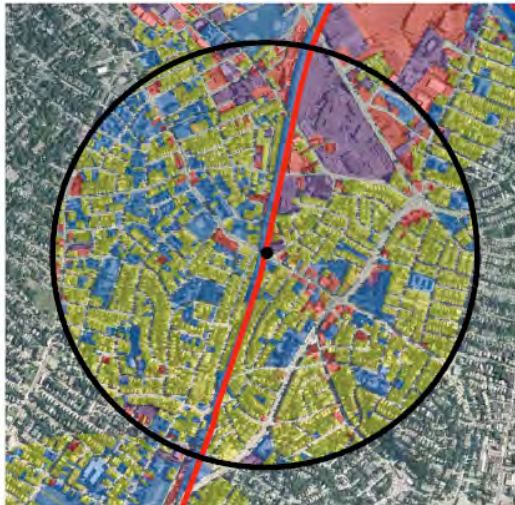
## VII. TOD and Housing at the Station Area Level: Upham's Corner Exemplifies Development Opportunities and Process

Map B7

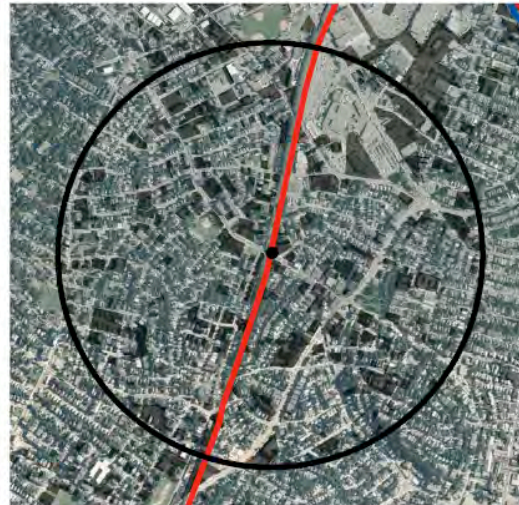
Uphams Corner Station Transit Zone  
Fairmount/Indigo Line  
Boston, Massachusetts



Land Use



Underutilized Land



Uphams Corner is one of the five existing stations on the Fairmount Corridor and the MBTA has begun improvements to the station to make it more functional, accessible and visible to the surrounding community. Within the half-mile transit zone (TZ), substantial redevelopment has already begun. Land use and household characteristics in this transit zone indicate that a variety of factors may be influencing the development potential in this area. While a majority of the land use is residential (shown in yellow on above map), it does also contain some of the corridor's larger industrial lands and is located near a commercial district that has been the focus of targeted redevelopment funds. Recently, a key commercial building in this station area has been acquired by a church.

Table B5: Uphams Corner

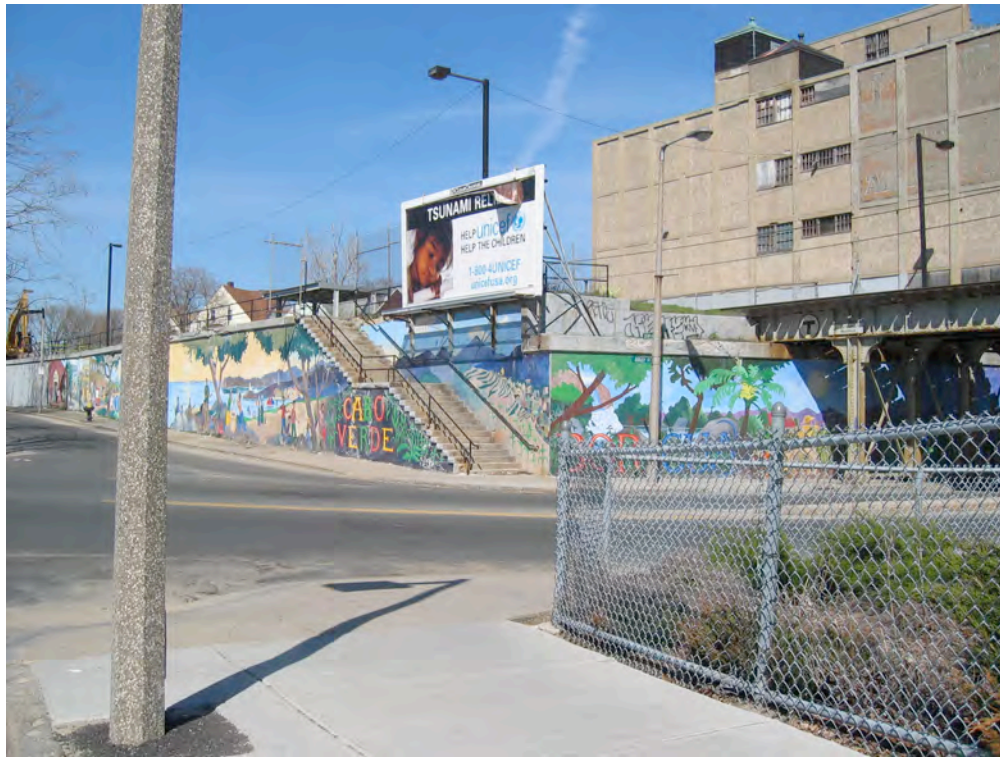
Demographics		Housing Unit Type	
TZ Population	2221	Median Year Built	1947
Share of Corridor Population	10.5%	Owner Occupied	478
Households	1155	Renter Occupied	677
The Market		Journey to Work	
Housing Units	1,234	Car Alone	0.74
Share of Corridor Housing Units	12.1%	Transit	0.10
Residential Acreage	175.25	Walk/Bike	0.04
Residential Density	7.04		
Gross Housing Units per Acre	2.47		
Median HH Income 1999	\$50,337		

Source: 2000 US Census

As shown in **Table B5**, the station area density is relatively high compared to the rest of the corridor and dominated more by renters than homeowners. The median household income of \$50,337 is significantly higher than the overall corridor median of \$35,252.

The Dorchester Bay Economic Development Corporation (DBEDC) has been active in the neighborhood both in building and redeveloping almost 1000 units of affordable housing and six economic development projects including new retail and commercial properties.<sup>73</sup> The vision for this station area is to serve as a transit-oriented urban village with compact, high-density residential and commercial development within walking distance of high-quality transit.<sup>74</sup> DBEDC's Dudley Village development is a \$15.5 million mixed-use project under construction that will create 50 new rental units and 70 new mixed-income housing units. The CDC also has another 103 housing units under construction in this area, and has acquired three new properties for both housing development and industrial businesses.

### Uphams Corner Station Today



*Photo Courtesy of Goody Clancy*

<sup>73</sup> Data from Dorchester Bay Economic Development Corporation, Jeanne Dubois, November 21, 2006.

<sup>74</sup> The Fairmount/Indigo Line CDC Collaborative, *Boston's Newest Smart Growth Corridor*. Goody Clancy, KKO Associates and Byrne McKinney: February 2006.



## ***VIII. Opportunities, Obstacles & Lessons: Partnerships are Essential to Coordinated Development***

The Fairmount/Indigo Commuter Rail Line illustrates a number of major opportunities and obstacles to creating successful transit-oriented, income-diverse new development. The corridor contains densely populated, historic neighborhoods with a high percentage of low-income and minority households. Improved transit service and investment can substantially improve the quality of life and development potential. Ensuring that improved transportation and housing choices exist in the future to serve the needs of the many low-income, transit-dependent households will depend on the ability of local CDCs, City, and state partners work together.

### ***Major Opportunities for Mixed- Income Housing Near Transit***

- **Extensive Transit Network Creates Significant Regional Accessibility**  
As noted in a recent report, “MBTA’s regional transit system may be one of greater Boston’s least acknowledged regional assets.”<sup>75</sup> The region has excellent transit coverage, and improvements to the Fairmount Line to provide more frequent service and a greater number of stations would further enhance the overall accessibility of the neighborhoods along the corridor. This is a substantial opportunity for residents and businesses located in the corridor, and also suggests a need to ensure that benefits accrued from this accessibility are realized by those currently living in the corridor.
- **Strong Local Community Development Organizations (CDCs) provide Leadership and Proven Success**  
The corridor has several well-established, high capacity CDCs who are leading the charge to improve transit service and to create permanently affordable and mixed-income housing projects in the station areas. The successful engagement of these CDCs stands out in terms of their ability to secure funding, leverage assets, and engage the community in developing a locally-defined vision for future growth and preservation of housing and economic development. CDCs can be a powerful, non-governmental partner in addressing affordable housing issues and leveraging investments to maintain and improve neighborhood stability.
- **Corridor Not Yet Focus of Market-rate Development Activity**  
The Fairmount corridor was not a center of market-rate TOD activity in the last housing development cycle. The current softening of the housing market has meant that affordable housing developers are succeeding at securing some land in the corridor for future projects. If successful in improving transit service, however, the market may substantially improve, creating new challenges and opportunities.
- **Existence of a Transit-Supportive Urban Fabric**  
Because the corridor was originally built as a series of streetcar-oriented neighborhoods, there is a fine-grained parcelization pattern, relatively dense

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<sup>75</sup> Stephanie Pollock, *On the Right Track: Meeting Greater Boston’s Transit and Land Use Challenges*. Urban Land Institute Boston District Council: May 2006.

development and existing sidewalks. Already, 35 percent of household work trips in the corridor are via transit, with substantially higher percentages in the predominately low-income neighborhoods. However, there public infrastructure investments are needed to improve public safety and the pedestrian environment in this corridor. These include sidewalk, streetscape and lighting improvements as well as larger community crime and safety enhancements that are needed to address concerns and fears of existing and potential residents, business owners, employers and employees.

## **Obstacles**

- **Limited, Fragmented Redevelopment Opportunity Sites throughout Corridor**

The majority of existing underutilized land is contained on numerous small infill parcels, many of which may require environmental remediation. A few pockets of larger redevelopment opportunity sites exist along the corridor, but the potential for substantial redevelopment is limited. The Fairmount CDC Collaborative anticipates that 1,200 to 1,400 low- to moderate- and mixed-income multi-family housing units can be built near current and future stops along the line. Overall, the new stations could stimulate the creation of 3,000 to 6,000 new housing units along the Fairmount/Indigo Line. This is far short of the projected overall demand for housing near transit in the region, but would provide an important and much needed new supply of affordable housing.

- **Home Rule Restrictions Encourage Reactive Development Regulation at the Local Level**

A number of those interviewed described the regulatory environment in the City of Boston as largely reactive. Frustration was voiced concerning the intensive planning efforts that have occurred over the years with little implementation of new zoning or improvements to regulatory barriers identified by these processes. It is difficult to ensure that all proposed development projects will leverage new transit investment without proactive zoning in place that mandates transit-supportive land uses. Focusing on redevelopment at the individual project level has the effect of creating uncertainty for developers about the scale and amount of development that may be permitted, adding time and cost to projects and inhibiting the affordability of some projects. However, the state restrictions on home rule decision-making negates some of the potential benefits of proactive station area planning by limiting the use of value capture tools such as impact fees and taxation, as well as limiting local borrowing capacity that can help stimulate development activity.

- **Significant Affordable Housing Needs Must Be Addressed Through Preservation and New Units**

The Fairmount/Indigo Line corridor includes some of Boston's most densely populated, low-income neighborhoods. Several station areas have households with incomes at only 30 to 60 percent of the regional median. Preservation of Section 8 affordable housing units set to expire in 2009 is also a priority for the collaborative.

More than 2,200 expiring-use units are located just in the Readville and Fairmount station areas. There is a significant need, and challenge, in preserving existing affordable housing units, though some may need to be rehabbed or renovated to provide decent, safe, affordable housing located near transit. New units are also needed to meet the current unmet and growing need for low- to moderate-income housing. Costs of new construction begin at \$350,000 per unit, presenting a substantial cost challenge particularly for non-profit developers.

- **Transit Funding Crisis Impacts MBTA's Ability to Partner**

The MBTA faces a \$100 million shortfall that severely impacts its ability to provide funds to help leverage TOD and to invest in capital improvements. Additionally, the current fiscal crisis needs to be considered in determining the use and return on MBTA-owned land that could be sold or leased. The MBTA has passed a fare increase following a series of fare raises over the last six years. Strategies to resolve the MBTA's fiscal crisis are being pursued at the state level, but their absence adversely limits the ability of the agency to be a financial partner with local communities. While the MBTA's transportation mission does not include directly funding and developing housing, which is the mission of MassHousing, it strives in other ways to be an effective partner with local communities and MassHousing to produce affordable and mixed-income TOD projects near transit.

- **Industrial Contamination of a Number of Sites Inhibits Redevelopment**

The precious few larger redevelopment sites in the corridor have supported industrial uses for a very long time and are likely to have significant histories of various types of contamination. A large number of sites are also publicly owned (primarily by the City of Boston). Environmental clean-up may also be needed at these sites to allow for redevelopment. The city will need to assess the existence and extent of contamination in deciding the cost and potential for clean-up and re-use.

## ***Lessons from the Corridor for Other Places***

- **The State can be a Powerful TOD Partner**

While a number of policies and funding sources exist to support TOD and mixed-income housing within the greater Boston region, the Commonwealth plays a major role in providing incentives to encourage zoning and regulatory changes to promote TOD and affordable housing, and funds to address related infrastructure needs, including educating new school-age residents and infrastructure investments. The degree of state involvement is unmatched among the case study regions, and exhibits a significant financial commitment and government leadership. Creating a statewide TOD framework encourages greater regional coordination and helps to level the playing field between central cities and suburban jurisdictions, all of which are served by transit, and provides opportunities for creating mixed-income TOD.

The strong state brownfield infrastructure, and the progressive state brownfield legislation of 1998, provided both a \$30 million assessment and remediation fund as well as liability protection for non-responsible parties, additional covenants-not-to-

sue tools, and ability for even non-profits to access assumable tax credits for their redevelopment projects. That fund has recently been recapitalized and has been enthusiastically utilized by non-profit, public, and for-profit developers. In this area, Massachusetts is a real national leader, which bodes well for future TOD.

- **CDCs Currently Leading Redevelopment of Small Sites**

Non-profit developers with a local community base and access to outside funding and government support can play a critical role in redeveloping smaller sites. These groups also possess important community legitimacy that can be extremely helpful in addressing community concern over density, traffic impacts, and affordable housing – critical elements of successful mixed-income TOD. CDCs also have long experience in grassroots organizing that leads to more positive vision and consensus thus shortening zoning delays. Ensuring that public resources can be easily used by CDCs, and private for-profit developers, is an important element of public-private partnerships. A number of CDCs nationally are pursuing TOD, but some of them require some degree of technical assistance with the complex planning and funding process entailed in this type of development. While the availability of a variety of funds to support TOD and mixed-income housing are to be commended, navigating the complex and sometimes competing requirements for reporting, use, and timing of these funds can add significant cost to a project and may be a burden preventing more small CDCs from fully engaging in TOD development.

- **Include Local CDCs, Neighborhood Organizations in Planning for Transit Investment & TOD**

Local governments and transit agencies may not be the primary resources for stimulating affordable or mixed-income development in a transit corridor. In mature, working class urban neighborhoods, local community development organizations can be potential sources for leadership in integrating housing for different income levels, can help frame community benefits, and can help discourage displacement. As noted by one CDC leader, the expertise and passion for many CDCs is providing housing for those left out of traditional markets but that are essential to creating diverse, TOD communities. The Fairmount/Indigo CDC Collaborative gained development and planning capacity through years of activity. Efforts to actively engage CDCs in local housing and transportation plans can yield results in other localities. Financial and technical support to CDCs from foundations and the public sector can be used to build local organizational capacity and TOD expertise particularly focused on affordable housing and community building.

- **Reduce Burdens Created by TOD-Specific Affordable Housing Funds**

An extensive menu of TOD and affordable housing funding sources exist in Massachusetts, but for the most part these funds are specialized pots of funding from existing affordable housing streams. For affordable housing organizations this requires assembling multiple funding sources for a single development project. Because sources have different requirements and timeframes, this increases the complexity and overhead costs of financing projects. Before creating small, specialized funding streams, local, regional, and state government should consider how best to make these funds flexible and easily accessible with limited application

and reporting requirements. Consideration should also be given to the efficacy of adding TOD-related scoring criteria to existing housing funds, which may be a more effective and efficient means to target funding resources to housing within transit corridors, in contrast to creating new, separate funding.

In the next chapter, Charlotte's mixed-income TOD experience will be examined, focusing on the South Corridor/Blue Line that is anticipated to open in late 2007.

## Chapter 5: Charlotte's South Corridor/Blue Line

### The Charlotte Trolley



Photo Courtesy of Jon Bell

### **Corridor Snapshot**

Transit Technology	Light Rail
Route Distance & Number of Stops	9.6 miles, 15 Stations
Year Service Will Begin	2007
Daily Ridership	9,100 (2007 opening day estimate)
Residents Within 1/2 Mile Radius	Population—21,063, Households—9,406
Residential Density	6.7 Dwelling Units per Residential Acre
Median Income, 1999	Corridor (1/2 mile radius of stops)—\$39,388 Region—\$46,119

### **I. Introduction**

Charlotte has embarked on an ambitious transit expansion program to address issues of regional growth. As the largest city in North Carolina, Charlotte sits in Mecklenburg County at the center of a large and growing nine-county region. Regional growth has been extremely rapid over the last 20 years, and the total regional population increased 42 percent since 1990. The South Corridor, also known as the Blue Line, is set to open in late 2007 as the first light rail corridor in the region (see **Map C1: Charlotte Regional Transit**). It connects the thriving central business district with a mix of commercial and industrial uses flanked by residential neighborhoods, with a high level of underutilized land and development opportunity.

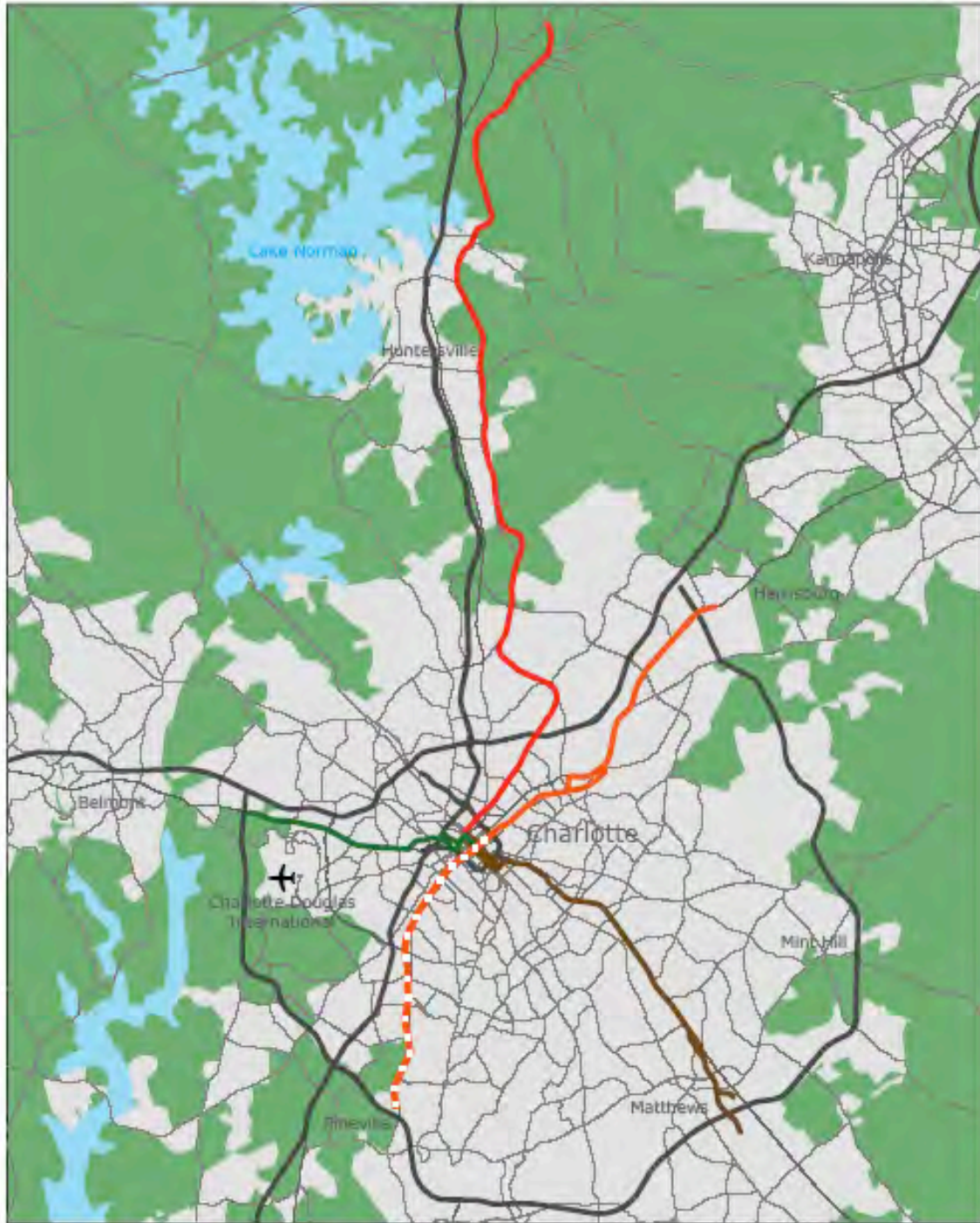
The unique government structure, with transit planning and operations housed within city government, allows for a high degree of coordination between land use and transit planning. This planning coordination has led to transit-oriented overlay districts either adopted or in process for the entire corridor. Development activity thus far is focused on the central business district and the adjacent South End neighborhood, but interest is beginning to spread farther south along the line. Future demand for housing near transit is projected to increase from 3,677 households to 64,144 households by 2030 as the region builds its transit network and focuses new development within these corridors.<sup>76</sup>

The corridor’s demographics resemble that of the larger region, with most residents earning at least 60 percent of the area median income. Affordable housing is located near the transit corridor, but is not yet a priority policy issue for providing or retaining *within* the corridor. The city has recently adopted new affordable housing policies but still need to adjust these programs to better match the requirements of state funding sources. Figure C1 summarizes the key actors and observations described in greater detail in the following pages of this chapter.

Figure C1: Regional Actors and Highlights

Key Actors	<ul style="list-style-type: none"> <li>• City of Charlotte including the Charlotte Area Transit System (CATS) is responsible for transit planning and operations, as well as land use and affordable housing planning.</li> <li>• The North Carolina Department of Transportation controls all roadways within the state.</li> <li>• Mecklenburg County is involved includes the city of Charlotte.</li> </ul>
Key Tools	<ul style="list-style-type: none"> <li>• The City of Charlotte Housing Trust Fund finances affordable housing development.</li> <li>• South Corridor Land Acquisition Fund helps secure and assemble land around stations to accelerate development opportunities.</li> <li>• City and CATS TOD Coordinators help facilitate development and coordinate infrastructure improvements around stations.</li> </ul>
Obstacles to Mixed-Income TOD	<ul style="list-style-type: none"> <li>• Community discomfort with affordable housing creates a significant challenge to the development of mixed-income neighborhoods.</li> <li>• The South Corridor stations require substantial infrastructure improvements in order to create transit-supportive neighborhoods.</li> </ul>
Lessons for Other Corridors	<ul style="list-style-type: none"> <li>• Transitioning underutilized industrial and commercial lands to TOD requires substantial infrastructure investments and a coordinated approach to implementation.</li> <li>• Public sector needs to partner with the development community (both for-profit and non-profit) to implement TOD.</li> <li>• Coordinated transit and land use planning and implementation tools allow the public sector to respond to market conditions.</li> </ul>

<sup>76</sup> Center for Transit Oriented Development, *Hidden In Plain Sight: Capturing the Demand for Housing Near Transit*. Reconnecting America: April 2005, 2030 update forthcoming.



## Map C1 Charlotte Regional Transit

September, 2006



### Legend

- - - South Corridor/Blue Line Light Rail Transit (FD)
- Southeast Corridor (Proposed LRT or BRT)
- West Corridor (Proposed BRT or Streetcar)
- Northeast Corridor Light Rail (Proposed)
- North Corridor Commuter Rail (Proposed)
- Major Freeways
- Urban Areas

LRT: Light Rail transit  
 FD: Final Design  
 BRT: Bus Rapid Transit  
 Source: Center for TOD + CATS



## ***II. Charlotte Initiates Transit Network to Respond to Growth***

Charlotte's future rail transit network calls for five new fixed-guideway transit lines with a modern streetcar also serving the central city. After a one-half percent dedicated transit sales tax increase in 1998, the locally preferred alternative was chosen for the 9.6 mile South Corridor in 1999. The South Corridor, or Blue Line, will use standard size light rail vehicles running in dedicated right-of-way with electric overhead wires. The federal New Starts funding process was initiated in 2000 and the line is planned to open in 2007 with 15 stations connecting the downtown to suburban neighborhoods and an estimated 9,100 daily riders.

The corridor builds upon the success of a local two-mile vintage trolley line completed in 2004. The trolley's popularity and catalytic role in generating market interest in the historic South End district set the stage for stronger regional transit support. In the next 30 years, regional plans will expand the fixed-guideway system to 80 stations from the 10 existing trolley stations.

The Charlotte Trolley in the South End District



*Photo Courtesy of Peter Ehrlich*

The South Corridor's alignment follows a former Norfolk Southern railroad right-of-way from Uptown (Charlotte's central business district) south until South Boulevard, a major arterial, which the line then follows until it terminates at I-485, Charlotte's outer beltway. Four light rail stations and several historic trolley stops are located in Uptown. Just southwest of Uptown, across I-277, lies the South End district, a dynamic area of neighborhoods, an historic industrial district, retail and office space. It will be served by three light rail stops, in addition to the existing six trolley stops. The remaining eight station areas to the south have less diversity of land use, with significant swathes of industrial and commercial lands, adjacent to suburban, single-family detached residential neighborhoods. As a whole, the corridor is the least dense and most car-dependent of all of the case study corridors. However, it also has the greatest potential for change, given the significant amount of underutilized large-lot industrial and commercial land in the corridor coupled with continued population growth for the region overall.

### ***III. Housing Market Accelerating Along South Corridor***

Charlotte's growing population is exerting pressure for more housing throughout the region. Like many southeastern cities that have experienced rapid growth in the past 25 years, Charlotte's development is lower-density and auto-dependent. The lack of existing transit options or compact, walkable urban neighborhoods means that in 2000, only one percent of regional households lived within a one-half mile radius of the future South Corridor transit stations.

Prior to the construction of the South Corridor, the City was already focusing affordable housing in areas served by bus transit and was involved in several exemplary HOPE VI projects. While the City is taking a proactive role in trying to provide housing for households at a range of incomes, the need remains significant. In 2004 the City had a net unmet demand of 11,272 affordable housing units for priority needs households, including both rental and owner housing units. The greatest unmet demand is for rental housing for the lowest income households.<sup>77</sup>

New market rate housing along the South Corridor is occurring at a rapid pace. The recent flurry of development activity is closely associated with the construction of the new light rail line. Interest by developers is accelerating as the completion of the line draws near. The City is encouraging high-density housing around the new 15 light rail stations, and developers have responded by announcing plans to invest nearly \$1 billion in transit-oriented projects.<sup>78</sup> Over the past five years, Uptown (the central business district) has seen a substantial amount of high- and mid-rise residential development, with 3,350 units in 14 condominium towers currently planned or under construction. Despite on-going suburban office development, Uptown remains the economic heart of the region, with 55,000 jobs and the Charlotte Convention Center.

### ***IV. Assessing the Development Potential and Existing Characteristics Along the South Corridor***

#### ***Vibrant Downtown Market Connected to Lower-Density Neighborhoods***

Exhibiting higher auto use and lower densities than the other case study corridors, the City of Charlotte seeks to use new transit investment in concert with transit-supportive land use policies to attract choice transit riders and steer growth into existing urban areas. The primary function of the South Corridor is to mitigate congestion while also promoting a change in development patterns by providing more compact, transit-accessible housing options to this part of the growing market segment.

Apart from the downtown station areas, the South Corridor contains primarily commercial and industrial land uses, including a number of large size parcels and outdated uses in underutilized properties (see **Map C2**). The potential for transformation

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<sup>77</sup> City of Charlotte, FY2006-2010 Consolidated Plan.

<sup>78</sup> For the purposes of this study, we are reporting on development as of October 31, 2006.

of these areas is substantial. The land uses presently around the stations allow for expanded redevelopment opportunities at significantly higher densities than the more typical suburban development patterns that currently exist.

Uptown is comprised of several different subareas. The central business district is focused on two main cross streets, Trade and Tryon Streets, to the west of the future South Corridor line, while the areas to the east of the line are primarily residential. On the south side of the I-277 freeway, development becomes less intense, but still fairly diverse, urban, and walkable in character. The South End station areas are flanked by two historic residential neighborhoods to the east and west, with a fairly extensive commercial district running along South Boulevard one block from the line. This area also contains Charlotte’s original industrial district with many historic warehouse buildings, some of which have already been converted to commercial and residential uses. The City is focused on improving the existing urban fabric to create a vibrant, diverse and pedestrian-oriented district, in part, by attracting high quality transit-oriented development to the area. The South End is emerging as one of the most active centers of real estate development activity in the Charlotte region.

South of the main Uptown and South End stations is the New Bern Station. From this point south, the station areas are primarily large lot, low intensity industrial and commercial development, with a wide swath of suburban single-family residential development running along the eastern edge of the station areas until the I-485 terminus.<sup>79</sup>

The number and size of industrial parcels surrounding the stations south of Uptown gives the corridor as a whole a strikingly high proportion of industrial land uses (29 percent), more than twice that of any of the other case study corridors. (See **Table C1** below.) The share of commercial land uses (36 percent) is consistent with the other corridors, but the low level of intensity (0.40 FAR) is in keeping with the strip mall nature of most of the retail and office uses beyond the South End. The density and street pattern of the residential areas is suburban in character with the lowest number of units per residential

**TABLE C1: Land Uses & Density, South Corridor, Charlotte, 2005**

<b>LAND USES</b>	<b>Housing</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Mixed Use</b>	<b>Civic</b>
Within 1/2 mile radius of stops	<b>35%</b>	<b>36%</b>	<b>29%</b>	<b>n/a</b>	<b>n/a</b>
<b>DENSITY/INTENSITY</b>	<b>Housing (DUA)*</b>	<b>Commercial (FAR)^</b>	<b>Industrial (FAR)^</b>		
	<b>6.76</b>	<b>0.40</b>	<b>0.37</b>		

Source: Center for TOD, Strategic Economics, Mecklenburg County, 2006

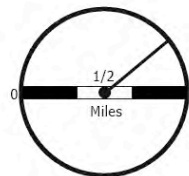
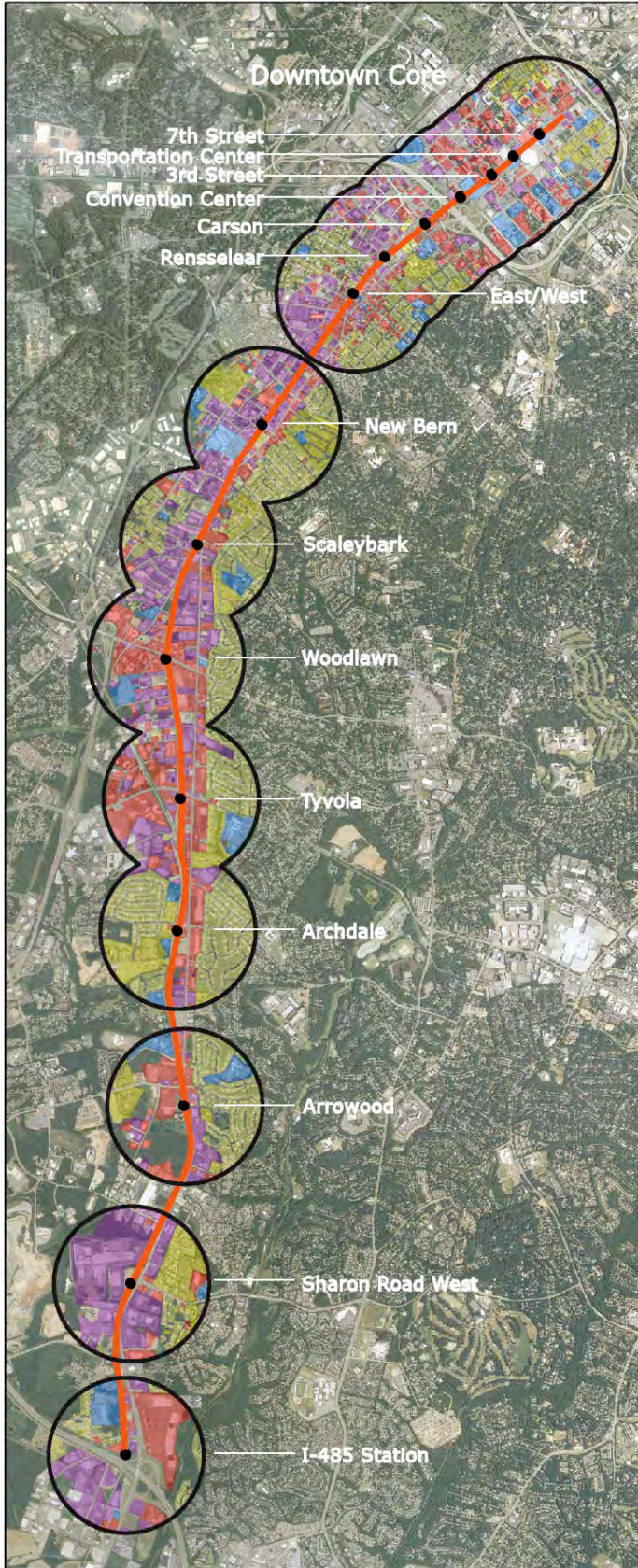
<sup>79</sup> The 12<sup>th</sup> station out, Archdale is somewhat exceptional with a large residential neighborhood to the west, as well as the east.

# Map C2

Existing Land Use  
South Corridor/Blue Line  
Charlotte, NC

## Legend

- Proposed Light Rail Stop
  - Light Rail Transit (Under Construction)
- Land Use
- Residential
  - Commercial
  - Industrial
  - Civic
  - Vacant/Misc.



Source: Center for TOD+ Mecklenburg County, 2006

acre of all the studied corridors (6.7 DUA) and a disconnected road network. There are very few civic land uses along the line compared to the other case study corridors and very few major destinations with the exception of downtown. The land use character of the corridor shows potential for extensive redevelopment. Some of the sites within the industrial and commercial land use categories are completely vacant or strip commercial.

### ***Significant Quantity of Underutilized Land Requires Long-Term Planning***

Possibly the most important factor determining a corridor's ability to evolve into a more transit-supportive environment is the amount and type of underutilized or re-developable land in proximity to stations. **Map C3**, on the next page, shows in black the extent of parcels with less than a 1:1 land improvement to land value ratio.<sup>80</sup>

While there are some key opportunity sites in Uptown (largely surface parking lots), the stations areas with the greatest amount of underutilized land, and therefore redevelopment potential, are those south of the East/West Station. These stations have high concentrations of underutilized industrial and commercial properties. In total, 1,277 acres of land were identified as underutilized throughout the corridor. This degree of opportunity is significant.

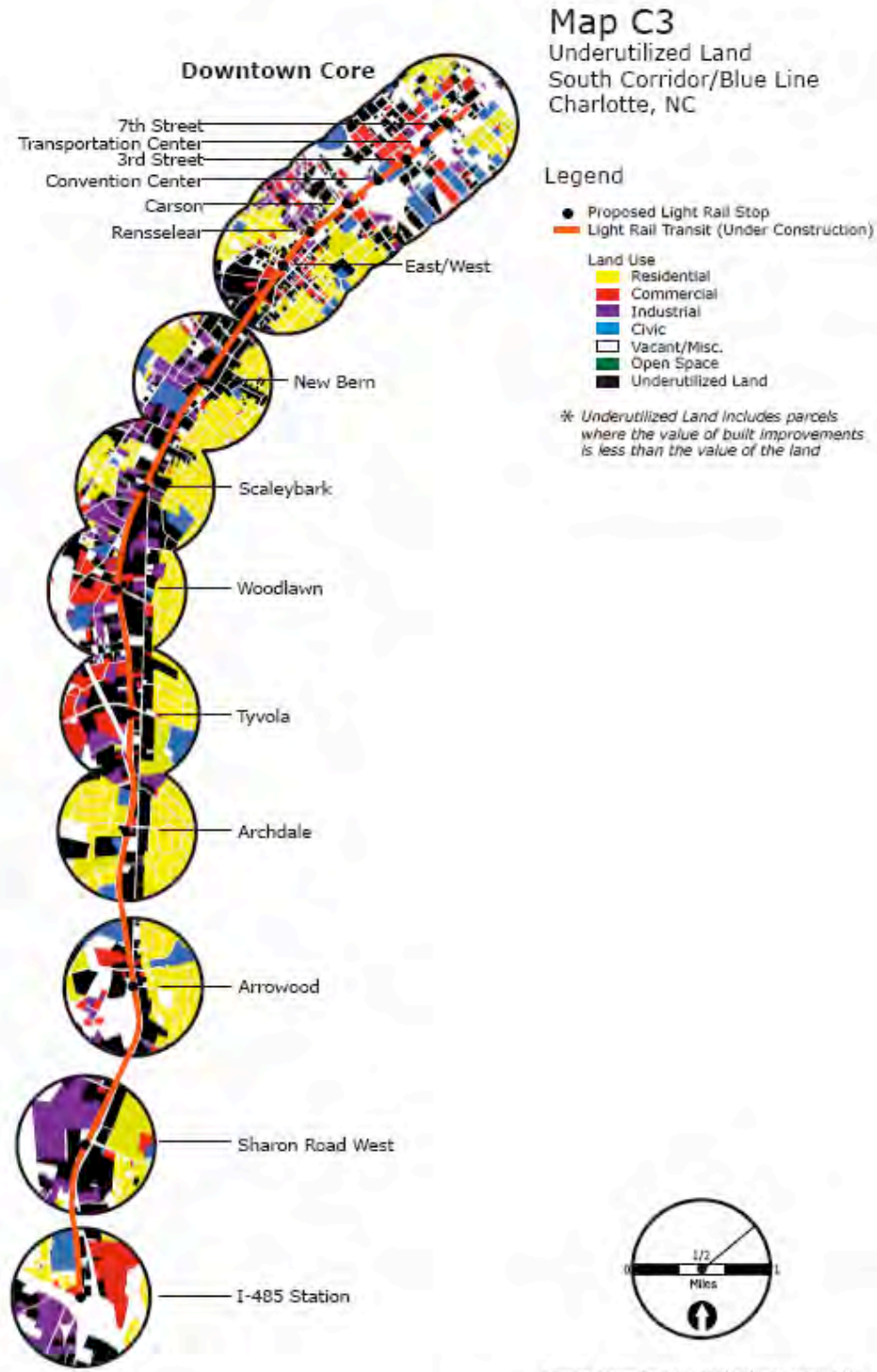
A number of older vacant industrial properties in the South End have already begun to be converted to mixed office, retail and residential uses. Industrial properties in Uptown and South End are likely to be most appropriate for conversion given the older building types, the value of the land, the more fine-grained fabric of these areas and a viable housing market. More recently developed industrial parcels further south on the corridor, in particular around the Sharon Road West and I-485 Stations may need to be preserved for future industrial uses.

The underutilized acreage along the South Corridor could potentially provide important opportunity sites for capturing a percentage of the projected future demand for housing near transit. Assuming that perhaps half of the 1,277 identified underutilized acres were suitable for redevelopment, and that the average corridor housing density of 6.7 units per acre were applied, between 4,000 to 8,500 new housing units could potentially be located

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<sup>80</sup> Parcels with single-family homes and civic uses were excluded from the analysis due to the difficulty of redeveloping these types of uses. It should be noted that not all technically underutilized industrial land is appropriate for redevelopment as traditional transit-oriented development (i.e. higher intensity of mixed housing, retail, and office space). Because industrial uses in general have much less need for valuable buildings, parcels with existing viable industrial uses can be misidentified as redevelopment opportunity sites for TOD. Healthy, diverse regional economies require some amount of land be reserved for current and future industrial and light industrial or flex uses. Such areas can provide an important source of entry-level or family wage jobs that are another critical component of sustaining mixed income communities. While it is unlikely that the most appropriate place for such reserves is within walking distance of rail transit, this can only be determined through more detailed land use analysis beyond the scope of this case study.

within the South Corridor on these sites. While this is a very rough ballpark estimate, and does not reflect efforts by the City to increase densities within transit zones, it does suggest the potential for identifying those underutilized sites most suited for redevelopment and targeting resources towards them.



**Table C2** (next page) summarizes the existing land use patterns discussed above, as well as demographic characteristics, zoning, new development projects and planning efforts. The table groups adjacent stations with similar land use, zoning and demographic characteristics. Of the 50 new projects identified in the Uptown and South End neighborhoods, only one is mixed-income residential. The others, including new developments occurring at the New Bern station are all market-rate. Zoning was changed around the first seven station areas in 2003 to support greater densities and mixed-use development at these stations

### ***Corridor Demographics Are Similar to Region***

In 2000, the population living within a one-half mile radius of the future light rail stops contained smaller household sizes, lower household incomes, and was less likely to own the housing units in which they lived than the population of the region as a whole (see **Table C3**, below). Of the five case study corridors, the median household income of the South Corridor station areas is the highest *and* the closest to the regional median; the overall corridor median income is 85 percent of the regional median with an income differential of only \$7,000, while the average differential of the case study corridors is \$16,000. No station area has a median household income below 60 percent of the regional median (see also **Map C4**, page 75).

**TABLE C3: Demographics & Journey to Work, Corridor & Region, South Corridor, Charlotte, North Carolina 2000**

DEMOGRAPHIC CHARACTERISTICS	Population	Households	Average HH Size	Median HH Income	Median Age	% Hsg Units
						Owner-Occupied
South Corridor (within 1/2 mile of stops)	21,063	9,406	2.12	\$39,388	33	31.9%
Region	1,499,293	575,510	2.55	\$46,119	34	63.8%
<b>JOURNEY TO WORK</b>	<b>Car Alone</b>	<b>Car Pool</b>	<b>Transit</b>	<b>Walk/ Bike</b>		
South Corridor (within 1/2 mile of stops)	0.72	0.17	0.05	0.05		
Region	0.81	0.12	0.01	0.01		

Source: Center for TOD, Strategic Economics, US Census 2000

The station areas of South Corridor fairly even distribution of household incomes relative to the larger metropolitan region, with median household income at all stations between \$30,000 and \$50,000. The new households moving into high- and mid-rise towers, as well as converted historic buildings, may shift the demographic make-up of the central city neighborhoods significantly upwards.

**Table C2: Existing Land Uses & New Development, South Corridor (2007), Charlotte**

Station Areas (1/2 mile Radius, see Map C2)	Existing Land Uses <sup>1</sup>	Key Demographic Indicators, 2000	Current Zoning	Recent, Planned and Proposed Development <sup>2</sup>	TOD Land Use Planning Efforts
Uptown 7th Street Transportation Center 3rd Street Convention Center	DT Commercial Medium & DT Density Residential Civic	Median HH Income: \$30 - 33,000 % Owner-Occupied: 27 - 43% Average HH Size: 1.3 - 1.55	Intense Mixed Use	50 Total projects: 18 market rate residential 14 market rate mixed use residential 1 mixed income residential 7 office 3 retail 3 hotel 2 civic 2 parking	TOD-oriented residential, commercial and mixed use zoning adopted in 2003 for Uptown and South End stations.
South End Carson Rensselear East/West	Low & Medium Density Residential Industrial Commercial	Median HH Income: \$35 - 50,000 % Owner-Occupied 35 - 41% Average HH Size 1.44 - 1.9	Intense Mixed Use Corridor & Local Rtl Industrial Low Density Res	16 total projects: 2 market rate residential 4 market rate mixed use residential 7 office/office with retail 3 retail	
New Bern Scaleybark	Low Density Res. Industrial Corridor Commercial	Median HH Income: \$32 - 38,000 % Owner-Occupied 19 - 37% Average HH Size 2.22 - 2.67	Low Density Res Industrial Corridor Retail	2 total projects: 1 market rate residential 1 market rate mixed use residential	Transit-supportive overlay <sup>3</sup> in progress for New Bern through Tyvola: Intended to transition industrial and commercial to more intensive uses. Along corridor at station, mixed uses allowed, residential areas allowed more density and employment uses more intensity.
Woodlawn Tyvola	Commercial Low Density Res. Industrial	Median HH Income: \$34 - 41,000 % Owner-Occupied 31 - 58% Average HH Size 2.22 - 2.43	Low Density Res Industrial Corridor Retail	0 total projects	
Archdale Arrowood	Low Density Res. Vacant Corridor Commercial Industrial Civic	Median HH Income: \$41,000 % Owner-Occupied 30 - 54% Average HH Size 2.45 - 2.61	Low Density Res. Local Retail Business Park Industrial/warehouse	0 total projects	Transit-supportive overlay in progress for Archdale through I-485 Station: Vacant parcels allowed to develop more dense housing and mixed uses near station and corridor.
Sharon Road West I-485 Station	Industrial Commercial Low Density Res	Median HH Income: \$42 - 47,000 % Owner-Occupied 17 - 87% Average HH Size 1.94 - 2.98	Industrial Low & Med Density Residential Park & Ride	0 total projects	

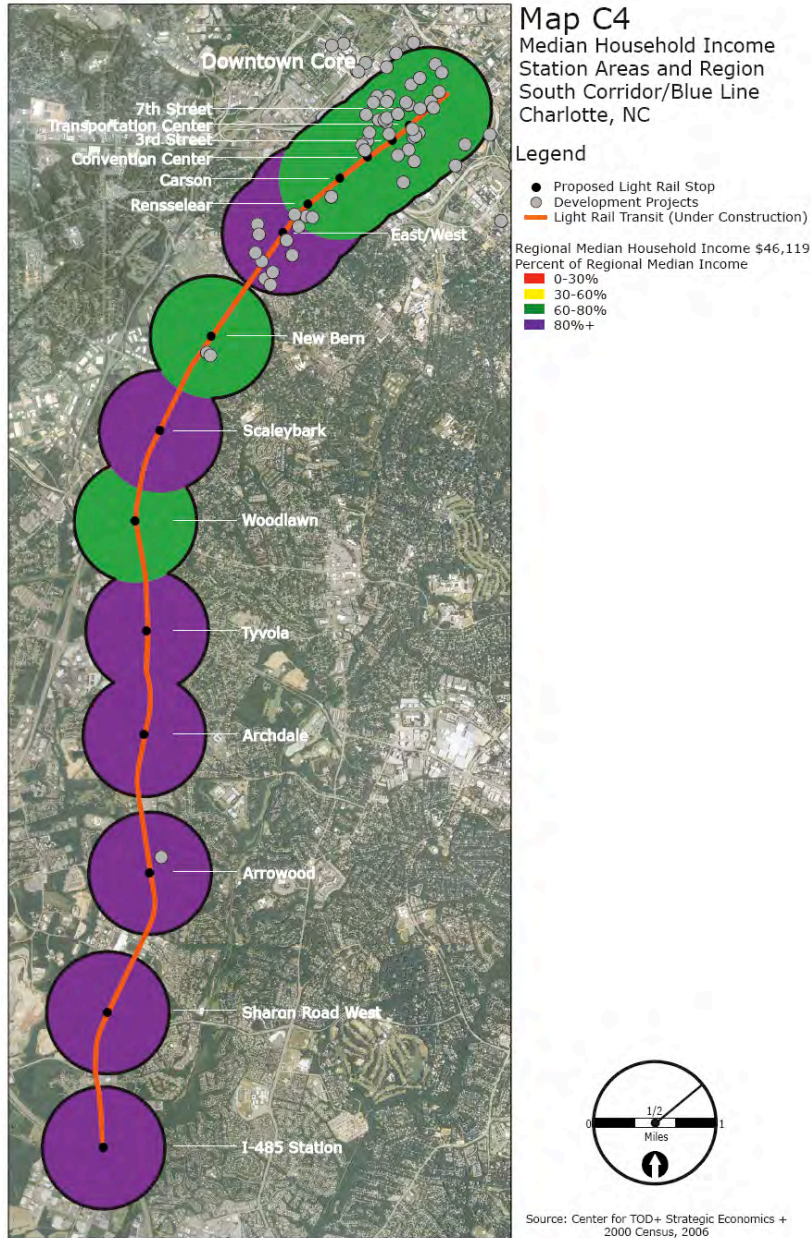
<sup>1</sup> Density designations as follows: DT = >50DUA, high density = 26 - 50DUA, medium density = 10 - 25DUA, & low density = .5 - 9DUA.

<sup>2</sup> Known completion dates for projects date as far back as 2002; project information was provided by the City of Charlotte and completion dates were not available for all projects.

<sup>3</sup> Transit-supportive overlay intended to encourage transition in areas where the market is not yet established.



Journey to work data shows that transit ridership along the corridor is higher than the regional average (5 percent versus 1 percent) and auto use is lower (72 percent versus 81 percent), yet households within the corridor are extremely auto-dependent in comparison with the other case study corridors. Changing the commute pattern in the corridor will take major changes in land use to support the new light rail. Fortunately, the City is taking a strong approach to promoting transit-oriented development within the corridor to help increase future ridership.



## ***Uptown and South End Lead the Way to TOD***

Charlotte is experiencing an urban renaissance due in part to rapid population and economic growth, and in part due to the larger national market trend towards more urban, compact development. The Uptown area best exemplifies this trend, with significant development activity in retail, housing, and commercial projects. **Map C5** (following page) shows recently built, planned, and proposed development activity within the 15 future station areas. Approximately 50 new development projects have been initiated in Uptown since 2002, including 3,350 new condominium and apartment units currently under construction or proposed. Of the 50 projects, 33 are residential or residential with ground floor retail. The seven new office projects, two new retail projects, and three new hotels represent a significant degree of commercial activity as well. The City of Charlotte projects that Uptown will add 3,400 new housing units and 50,000 new jobs by 2025.

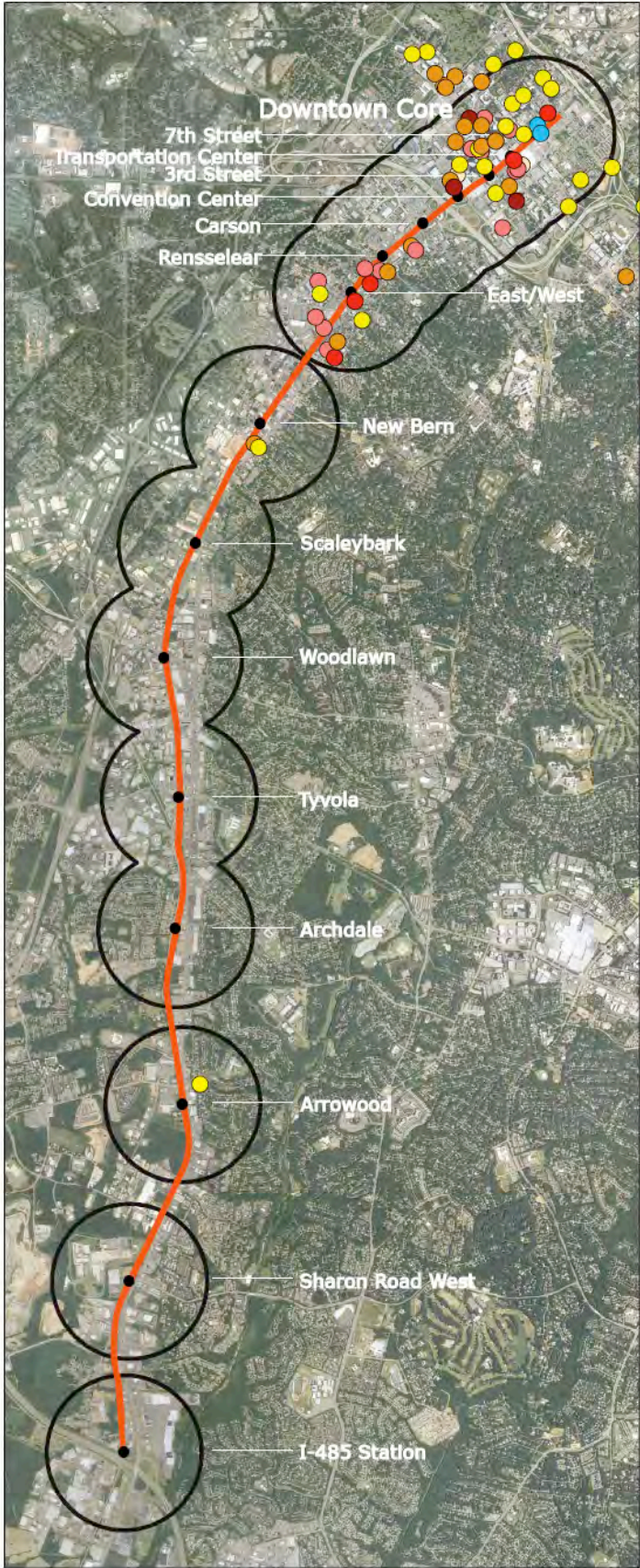
### Developments Are Springing Up on the South End



*Photo Courtesy of Peter Ehrlich*

The South End is also experiencing a significant amount of both commercial and residential development, and both new and rehabilitation/conversion projects. Its historic residential districts, attractive older industrial building stock, proximity to the central business district and existing network of local streets and short blocks combine to give the area a unique, pedestrian-oriented flavor highly suitable to developers interested in building TOD products. Because the City has been proactively pursuing transit-oriented projects for this area and building on existing assets, the South End is well on its way to becoming a vibrant and diverse urban district poised to take advantage of the new light rail line.

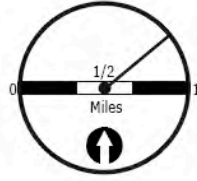
Compared to Uptown and the South End, there is little current development activity at the other future station areas. Activity has picked up at the New Bern station, one station to the south of the South End, with the recently announced Poindexter Village, a 17-acre mixed-use project, with up to 1,000 residential units in three eight-story buildings atop



# Map C5

Recent, Planned + Proposed Development (After 2002)  
South Corridor/Blue Line  
Charlotte, NC

- Legend**
- Proposed Light Rail Stop
  - Light Rail Transit (Under Construction)
  - Recent Development
    - Residential
    - Mixed-Use Residential
    - Retail
    - Office
    - Hotel
    - Civic
- \* Some projects may not show up due to overlapping dots



Source: Center for TOD+ Strategic Economics + City of Charlotte, 2006

150,000 square feet of retail.<sup>81</sup> While there are significant redevelopment opportunities at most station areas, none have the extensive infrastructure needed to support a transformation from unconnected, large-scale, single-use development to a more walkable, multi-use, transit-supportive environment. It will take some time for these critical investments, beyond the transit itself, to be put in place. The City's approach to land use planning around the stations (described in detail in the next section) is a strong step towards making these transformations.

### ***Proactive City Involvement Creates Comprehensive TOD Framework***

Building on lessons learned from other communities, the City and CATS are taking a strategic approach towards planning for TOD and creating tools to strengthen its existing urban neighborhoods and build new transit-oriented districts around the future stations. The overall framework for this work was an integrated 2025 transit and land use plan for the City of Charlotte and other cities in Mecklenburg County. Adopted in 1998, it laid out a general process for planning and implementation of land use regulations and future infrastructure improvements. The framework includes the creation of transit station area principles (completed in 2001) for all the future lines,<sup>82</sup> general and joint development policies (2003), transit station area plans (in various stages), zoning updates, infrastructure plans, and implementation.

In anticipation of the South Corridor light rail, defined one-half mile walking areas around each of the new stations are the focus of new land use and infrastructure planning and re-zoning. The Uptown and South End Stations moved ahead with transit-supportive zoning in 2004-05, as well as "pedscape" and station area plans currently being implemented. While the underlying zoning for the stations from New Bern to I-485 has not yet been updated, the City has developed proposed transit-supportive overlays intended to begin transitioning these areas to more appropriate land uses. Equally critical to improving access and ridership, the City and CATS have identified and begun implementing other key infrastructure improvements to sidewalks, bike paths, medians, park and ride lots, and water drainage around seven of the outer stations. These improvements are being financed by a \$50 million bond for infrastructure projects to support the light rail.

The City and CATS have joined together at the Scaleybark Station to purchase 17 acres of land, hoping to see new TOD development transform this area just beyond the South End into a compact mix of housing and retail that will trigger market interest further

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<sup>81</sup> Doug Smith. *Hip Life Along Light Rail*. Charlotte Observer, November 1, 2006.

<sup>82</sup> Planning principles are divided into three general categories: land use and development, including mixture of complementary transit-supportive uses and increase land use intensity; mobility, including pedestrian and bicycle system, street network and parking; and community design, including building and site design, streetscape and open space. These general principles guide the various station area plans, re-zoning efforts and infrastructure plans that have followed for the each station.

south along the line. Several developers have submitted offers in response to a request for proposals currently under review by the City.

### ***V. Creating Mixed-Income Communities: Public Agencies Learn on the Go with Proactive Approach***

From the outset, affordable housing has been a stated policy goal of the City's overall approach to TOD. A comprehensive review of the City's affordable housing policy began in 1999, culminating in a 2001 plan to better link transit access and affordability. Initial development activity has focused more on building a TOD market in Charlotte than on providing new affordable housing, in part of out the need to demonstrate the legitimacy and demand for an urban, high-density, mixed-use TOD market. The City, however, is developing a set of tools to try and foster both TOD and affordability, particularly given the positive development response thus far.

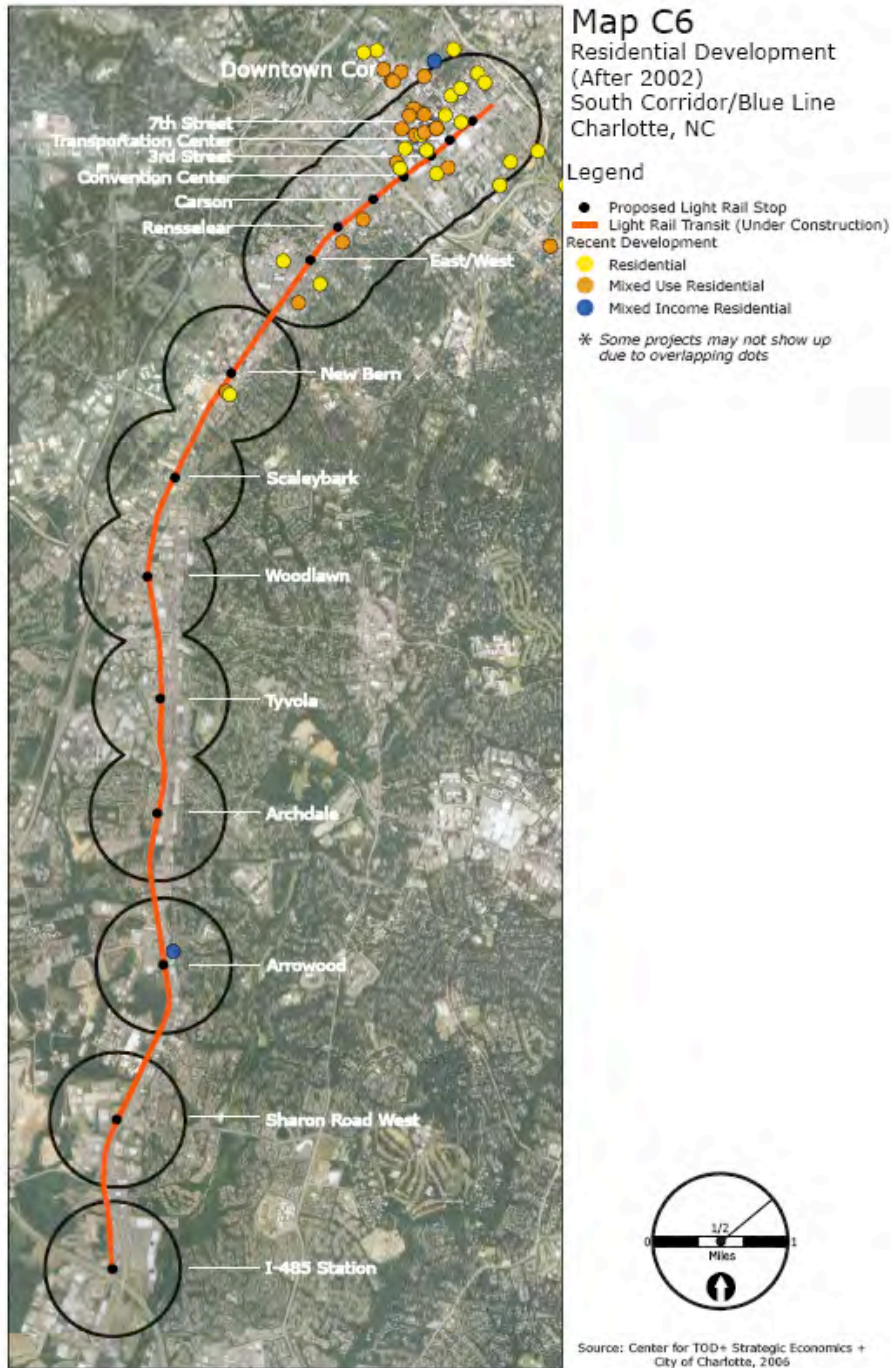
### ***Local Policy TOD and Affordable Housing Tools Need to be Calibrated***

In 2001, the City of Charlotte revised its affordable housing policy to reflect the new transit investment and balance the development of affordable and market-rate housing in the light rail corridors. The normal local fair-share housing policy limits the share of publicly subsidized units in a "neighborhood statistical area" to 10 percent of the total number of housing units. Intensive discussions with community groups resulted in an exception to the local fair share housing policy to allow areas within one-quarter mile of transit to have up to 20 percent publicly subsidized affordable units. However, these discussions also resulted in a policy that only five percent of units within a given new project should be affordable to households at less than 60 percent area median income.

This rule has proven very challenging for financing of mixed-income or affordable projects as federal Low-Income Housing Tax Credits require deeper and broader levels of affordability and tax credit investors tend to look for projects with maximum affordability. The City and various agencies involved in financing affordable housing are currently trying to resolve these issues and it is likely that further public outreach will be necessary to reach a resolution. In the meantime, the City has been granting exceptions to the affordability limits, as appropriate. The City is also using its affordable housing trust fund to acquire sites within transit areas and plans to work with developers in the redevelopment of these sites to provide affordable units.

Despite these efforts, there has been very little affordable or mixed-income housing development activity in the South Corridor since 2002 (see **Map C6**, following page). In addition to a mixed-income project on the edge of the Uptown station areas, a mixed-income project approximately one-quarter mile from the Arrowood station is currently in predevelopment. It will include 100 units of affordable housing and 92 market rate units. The project received credit enhancement through HUD, tax credits from the North Carolina Housing Finance Agency, City of Charlotte affordable housing bonds as well as debt from the Charlotte Housing Authority.

Developers of new housing projects are responding to a call for mixed-income housing through unit design and size to provide a range of housing options (studio through two-bedroom) at different market rate price points. Some developers are concerned that a greater balance needs to be struck between for-sale and rental properties which also provide affordable housing options and support compact development goals.



The City and County have used their local resources to provide gap financing to help projects score better for receiving State affordable housing funds, resulting in Charlotte being allocated more affordable housing per capita than other cities in the state.

Unlike the Fairmount Line in Boston, with its long history of CDC involvement and local concerns with displacement of low-income households, neighborhoods along the South Corridor and around the other future light rail lines do not perceive a critical need for providing or preserving affordable housing in the corridor. Given that average household income for the corridor is over 50 percent of area median income, some residents have expressed reticence towards policies that would bring in new lower-income residents, seeing this as a negative action. Another concern expressed by a local official in a listening session help in Charlotte for this study, is that significant public investment is being used to build the light rail line and make infrastructure improvements within the corridor. Adding subsidies for affordable housing may be targeting too much public funding within one geographic area, and part of the public policy goal is to use the transit investment to bring new market-rate housing to the station areas. These attitudes are a significant challenge to creating housing opportunities near transit for the full economic range of households projected to increase over the next 25 years.

## ***VI. Local Policy Tools: Public Agencies Seek to Facilitate TOD Ahead of Market Response***

**Table C4**, next page, describes a number of specific tools being used locally to promote TOD and link it with affordable housing.<sup>83</sup> The majority of policy tools and funding sources are less than five years old, and the transit line is still under construction, making it difficult to evaluate their ultimate success.

The City also created a TOD Response Team including members of the various departments that oversee development projects in order to assist developers with obtaining entitlements, necessary public improvements and financial assistance for TOD along the transit corridors. Because not all station area plans and new land use regulations were adopted at once, and each took some time to plan, the Charlotte-Mecklenburg Planning Commission has been proactive in sponsoring site-specific re-zonings for TOD in areas where plans have not yet been adopted. Finally, the City, County, and CATS have created a South Corridor Land Acquisition Fund for public assembly of key opportunity sites around stations.

There is an emerging interest to provide transit-oriented communities that serve not only a mix of income levels, but also of family types. Recent transit-oriented development nationally and in Charlotte have primarily consisted of compact housing units less than 1,000 square feet in size. While these smaller-sized units make such projects feasible for

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<sup>83</sup> A variety of general tools, including overall State funding for affordable housing/subsidized housing are also being used in the Twin Cities region. These tools are discussed in Appendix A of the report. Table C4 highlights those specific to promoting TOD or have a linkage between affordable housing and proximity to transit, or creating mixed income communities.

developers, they may not be appropriate for families with children hoping to live near transit. The desire in Charlotte to build family-oriented TOD, and the correlated ingredients, such as ample open space and quality schools is a theme emerging locally for planners to consider in extending the reach of TOD beyond Uptown.



**TABLE C4: TOD & Affordable Housing Policy, Financing & Funding Tools, South Corridor, Charlotte, North Carolina**

Tool	Intended Funding Agent/ Implementing Agent	For use by:	Policy	Funding/Financing	Affordable Housing	Mixed Income (MI)	TOD	Description	Example
Assisted Multi-Family at Transit Station Areas	City	Developer	X		X	X	X	Policy to encourage development of assisted housing within 1/4mi of transit stations. Assisted multi-family units in transit stations should be developed as part of a larger mixed-income development	New policy
City of Charlotte Housing Trust Fund	City	Developer		X	X	X		The Housing Trust Fund (HTF) provides financing for affordable housing in the Charlotte community. In 2001, City Council set aside \$10 Million for the Trust Fund and in November 2002 and 2004, Charlotte voters approved another \$20 Million and \$15 Million for the Trust Fund respectively.	The Charlotte-Mecklenburg Housing Partnership (CMHP) is building Arrowood Apartments, 192 units, 100 units at 60% of median income and 92 unrestricted market units off South Boulevard in southern Charlotte. The development will be located within walking distance to the proposed Arrowood light rail stop.
Housing Locational Policy	City	Developer	X		X	X	X	The Policy provides a guide for the financing and/or development of new multi-family rental housing projects designed to serve, in whole or part, households that earn 60% or less than the area median income.	New policy
South Corridor Land acquisition fund	City, Region, Transit Agency	City		X			X	South Corridor Land Acquisition Fund was established for the purchase of land near transit stations to create transit oriented development. The purpose of these land acquisitions are to spur private sector transit oriented development by aiding in land assembly, removing blight or inappropriate land uses, and assisting in mixed income housing development.	The first site of this kind is located in the Scaleybark Station Area along the South corridor. The approximately 8 acre site is immediately adjacent to the park and ride for the Scaleybark Station.
The South Corridor Infrastructure Program (SCIP)	City, Region, Transit Agency	City		X			X	The South Corridor Infrastructure Program (SCIP) is a capital improvements program designed to implement infrastructure improvements in seven of the South Corridor Light Rail Project station areas. SCIP is funded through voter-approved bonds and led by the City of Charlotte's Engineering and Property Management Department, Charlotte Department of Transportation (CDOT), the Charlotte Area Transit System (CATS), the Charlotte-Mecklenburg Planning Commission and Charlotte-Mecklenburg Utilities.	The South Corridor Infrastructure Program (SCIP) includes 23 projects that will help connect businesses and communities to the light rail line the City is constructing along South Boulevard.
Transit Station Area Joint Development Principles	City, Region, Transit Agency	Developer, transit agency, City	X				X	The Principles provide a framework for local governments and the Charlotte Area Transit System (CATS) to encourage and promote transit supportive development at transit stations. Support the development of housing, which is affordable to a broad cross-section of the workforce and community and provides a variety of housing choices near transit stations.	New policy

**TABLE C4: TOD & Affordable Housing Policy, Financing & Funding Tools, South Corridor, Charlotte, North Carolina (continued)**

Tool	Intended Funding Agent/ Implementing Agent	For use by:	Policy	Funding/Financing	Affordable Housing	Mixed Income (MI)	TOD	Description	Example
Transit Station Area Development Coordinator Board of Transportation Resolution: Biking and Walking	City, Transit Agency	City					X	Two positions funded by and housed within the City of Charlotte Economic Development Department and CATS. Facilitate infrastructure improvement to enhance the transit station areas and their economic development potential. Work with private developers to understand their needs and address their concerns. Provide education about TOD and help developers find funding sources. Also responsible for land acquisitions and RFPs and RFQs along the transit lines.	Tracy Finch (City), Tina Votaw (CATS)
North Carolina Housing Trust Fund	State	Municipality	X				X	North Carolina cities and towns are encouraged to make bicycling and pedestrian improvements an integral part of their transportation planning and programming.	
North Carolina State Housing Credit	State	Developer		X	X			The North Carolina Housing Finance Agency administers the Housing Trust Fund and pays all its operating costs. The Trust Fund is the state's most flexible housing resource – able to finance home ownership and rental apartments, new construction, rehab, and emergency repairs. It provides the state's largest source of funds to finance supportive housing and emergency repairs/accessibility modifications.	The fund has financed: • 17,000 homes and apartments • \$473 million of new construction and housing rehabilitation. More than 80% of Trust Fund housing benefits very-low-income households (below 50% of local median income). • More than 47% of Trust Fund housing benefits extremely-low-income households (below 30% of local median income).
North Carolina State Housing Credit	State, Region	Developer		X	X			The State Housing Credit was created to be used in combination with federal Tax Housing Credits. The additional financing makes it possible to • build affordable apartments in low-income rural areas• reduce rents in urban areas •produce rental housing affordable to persons with disabilities. A development becomes eligible for state credits once the North Carolina Housing Finance Agency has approved an application for federal credits. If a development does not receive federal credits, it cannot receive state credits.	Hundreds of projects...

Source: Center for Transit Oriented Development, 2006

## VII. TOD and Housing at the Station Area Level: East / West Station Area Reflects Corridor Development Potential

Map C7

East/West Station Transit Zone  
South Corridor/Blue Line  
Charlotte, North Carolina



Land Use



Underutilized Land



**Map C7** displays the mix of land uses in the one-half mile transit zone surrounding the East/West Station. Consistent with the overall discussion regarding underutilized industrial lands, this station area has a number of large parcels that present a substantial opportunity for redevelopment. Some residential and commercial uses are already moving into the corridor within a one- to two-blocks of the station.

The majority of existing residential development is located further from the station, and the station area, similar to the corridor overall, has lower residential density levels than are typically found in urban light rail corridors located close to the central business district. As such, substantial opportunity for infill development exists. The larger underutilized parcels have the potential to provide redevelopment at a scale that can further assist in the transformation providing a mix of retail, commercial, and residential uses.

Tracy Finch, the transit station development coordinator for the City, and Tina Votaw, the Transit-Oriented Development Specialist for CATS, work to promote the TOD vision to developers. The 67-unit Park Avenue building is an example of the kind of new residential development with doors opening onto the tracks, and ground-floor retail. The corridor and East/West Transit Zone contain moderate income households, with the median annual household income for the station area at \$50,337 (see **Table C5**, following page). Even prior to the opening of the light rail line, ten percent of households

in the transit zone used transit for their work trips. CATS and the City hope that focusing development around the stations will significantly increase that number.

**Table C5: East/West Station Transit Zone Characteristics**

<b>Demographics</b>		<b>Housing Unit Type</b>	
TZ Population	2221	Median Year Built	1947
Share of Corridor Population	10.5%	Owner Occupied	478
Households	1155	Renter Occupied	677
<b>The Market</b>		<b>Journey to Work</b>	
Housing Units	1,234	Car Alone	0.74
Share of Corridor Housing Units	12.1%	Transit	0.10
Residential Acreage	175.25	Walk/Bike	0.04
Residential Density	7.04		
Gross Housing Units per Acre	2.47		
Median HH Income 1999	50,337		

Source: 2000 US Census

Development is responding to the coming transit investment. Charlotte's First Colony Corporation has purchased the SouthEnd Steelyard complex on South Boulevard, in close proximity to the East/West Station. The \$11 million deal includes the Steelyard building and parking structure plus the neighboring Tompkins Tool Worx building. The purchase gives First Colony control of the property between South Boulevard and the rail line from Tremont Avenue north to the Pewter Rose restaurant building. Assembling this amount of land allows the developer to maximize the redevelopment opportunity and the City has committed to infrastructure improvements and a transit overlay to support increased densities and mixed-use.

***VIII. Opportunities, Obstacles & Lessons: Proactive Public Agencies Must Also Work with Development Community to Achieve TOD Vision***

As a fast-growing region investing in transit as a tool to manage future growth and congestion while creating a more vibrant, sustainable community, Charlotte provides some important lessons based on its efforts thus far.

***Major Opportunities for Mixed-Income Housing Near Transit***

- **Comprehensive, Integrated Land Use and Transit Policy Framework**  
The City of Charlotte, CATS and surrounding cities have been planning since 1998 for the integration of land uses and infrastructure with the new transit. The benefit of having the agencies responsible for land use and transit both under the same local level of government is tremendous. This has resulted in new proposed land uses and identification of necessary infrastructure improvements for all stations, as well as the creation of several new implementation tools and funding sources. This proactive framework has already helped spur development in Uptown and South End. Over time it will be even more critical to the creation of new transit-oriented

neighborhoods around the southern stations with more typically suburban development patterns and industrial land uses.

- **Existing Urban Fabric in Uptown and South End Creates Significant Infill Opportunities**

The areas around the stations in both Uptown and the South End are already established as complex urban environments with multiple uses, street networks, and physical character. At the same time, there are many redevelopment and re-use opportunity sites that will allow for infill development and conversion of obsolete uses to TOD of greater intensity. The size of properties in this corridor presents a particularly advantageous setting for larger, mixed-use developments.

- **Strong Housing and Commercial Markets in Central City**

Renewed interest in downtown living and significant public and private investments, particularly by Bank of America and Wachovia, in revitalizing downtown Charlotte have generated a wave of new real estate development activity. Charlotte is already experiencing a major upsurge in both residential and commercial development activity in Uptown and South End with 50 recent and proposed projects in Uptown alone. The rail line should bolster this trend, bringing more TOD to these areas.

- **Major Redevelopment Potential around Southern Stations**

The eight stations located south of the South End are surrounded by an enormous amount of underutilized land, due to the amount of low intensity industrial and commercial uses in the corridor. While maximizing the transit investment in these areas must be balanced with Charlotte's need to preserve a diverse and healthy economy, some portion of these large parcels can be redeveloped as TOD.

## ***Obstacles***

- **Lack of Public Infrastructure and Existing Housing Market Around Southern Stations**

Transforming the areas along the southern stations into walkable, multi-modal, mixed-use places will require significant investments that improve the connectivity, safety and character of neighborhoods before transit-oriented development can fully succeed. Without them it will be difficult to attract development to these locations, let alone TOD. Successful TOD will take significant public improvements, excellent urban design directives, and time to transition these areas to transit-supportive places. Over time, as public improvements are made around these stations, there should be an opportunity to pull the momentum of the downtown housing market southward. One concern is that the substantial public investment in place-making and connectivity infrastructure will tap out any funds that would have otherwise been available for affordable housing.

- Community Discomfort with Affordable Housing**

Existing neighborhoods surrounding the new stations on the South Corridor are relatively higher income than those in the other case study corridors. New affordable housing is not perceived as a community benefit, but as a burden, creating a significant challenge for building of mixed-income communities. While the City is taking steps to be proactive in this regard, the public will need to be engaged in discussions involving prioritizing public funding for affordable housing, infrastructure improvements, parking requirements, and community benefits to evaluate the trade-offs of each.
- Auto-Dominated Development Patterns and Travel Trends Need to be Reversed in Transit Zones**

Regionally, less than one percent of commute trips are made by transit, residential densities are low and commercial uses are more suburban in nature. This presents a challenge for public agencies to address through re-zoning and identifying other regulatory or infrastructure barriers to transit-supportive development. Incentives may be necessary, particularly at the more suburban southern stations. Perhaps more significant a challenge, is demonstrating transit's viability as a mode for commuting and the desirability of living in transit-accessible, walkable, mixed-use communities.

### ***Lessons from the Corridor for Charlotte and Other Communities***

- Plan for Success with TOD-Supportive Zoning and Public Improvements**

The City of Charlotte, CATS and other partners have done an extensive amount of work creating an integrated policy framework to support TOD and mixed-income housing in the new light rail corridors. These efforts include the creation of station area plans, updating local zoning, identifying critical infrastructure improvements, and revising the city-wide affordable housing policy. The overall framework and individual components provide a model for forward-looking planning around light rail investments, especially for other cities and regions inserting transit into non-urban settings.
- Planned Growth Corridors Necessitate Comprehensive Implementation Tools**

The City and its partners have created a number of important implementation tools, without which transit-oriented, mixed-income development could not move forward. The voter-approved \$50 million infrastructure bonds to implement the South Corridor Infrastructure Plan, the South Corridor Land Acquisition Fund, creation of a TOD Response Team including dedicated staff at both the City and CATS, and formulation of a Joint Development program are critical aids in bringing TOD to the corridor. The performance of these tools should be evaluated over time, as the line is complete and improvements and development move forward.

- Consider Financing and Funding Challenges in Developing Local Affordable Housing Policy**

The City of Charlotte’s affordable housing policy, while to be commended for identifying early on the need to link affordable housing to quality transit service, has stumbled in its implementation. Recently revised, in conjunction with extensive community discussion, to target the new station areas, the existing policy does not take into consideration the major restrictions and requirements imposed by the affordable housing finance industry, including State and Federal thresholds for allocating tax credits. For mixed-income policies to be effective, they must acknowledge the reality of these funding sources, without which affordable housing will not be built. Mixed-income housing involves multiple decision makers and needs to be closely coordinated to allow for greater and easier use by private for-profit and non-profit developers. Ensuring comparable definitions, thresholds, and timelines can help alleviate inconsistencies.
- Successful TOD is Not Just the Responsibility of the Public Sector**

Given the significant increase in demand for housing near transit and the extent of additional infrastructure improvements needed beyond just constructing the light rail, the City and CATS will need to work with interested private sector developers to make the necessary accessibility and urban design improvements. Already a number of local and national developers have expressed interest in redeveloping parcels around future stations, and even in contributing to future infrastructure investments including streetscape and station area improvements, and potentially partnering to build future stations or streetcar service. These types of public-private partnerships have the potential to yield substantial community benefits and accelerate infrastructure improvements that can further spur redevelopment. Portland’s Pearl District might be a model for public-private partnerships to help deliver mixed-income housing.
- Create Activity Centers Beyond the Downtown**

The strength of the housing and commercial markets in the Uptown and South End districts correlates with the presence in both areas of destination stops and activity centers. As the line moves further south there is a lack of existing commercial or public activity around stations. A challenge for this corridor will be to provide mixed housing, retail, and commercial space that will create activity centers both for residents living within station areas and in surrounding neighborhoods. Successful TOD corridors require a mix of station area types and locating future regional destination activities along the corridor may help increase development opportunities and generate additional non-peak hour ridership.

The next chapter discusses TOD efforts underway in the Denver metropolitan region’s West Corridor, scheduled to open in 2013 as one of five new transit lines being planned for the region over the next 15 years.

# Chapter 6: The Denver Region's West Corridor

New Housing Located near Transit in Downtown Denver



Photo courtesy of RTD

## Corridor Snapshot

Transit Technology	Light Rail
Route Distance & Number of Stops	12.1 miles, 11 Stations
Year Service Will Begin	2013
Projected Daily Ridership	31,100 (estimated for 2025)
Residents Within 1/2 Mile Radius	Population -37,868, Households – 14,389
Residential Density	9.6 Dwelling Units per Residential Acre
Median Income, 1999	Corridor (1/2 mile radius of stops) - \$35,764 Region - \$51,088

### I. Introduction

The Denver region is taking an aggressive approach to transit expansion as a tool for managing rapid growth occurring throughout the region. Projections show that over the next 25 years, more than 1.2 million people and 800,000 jobs will be added to the region.<sup>84</sup> Recent growth has led to an increase in traffic congestion. In November 2004, voters approved the FasTracks ballot measure to increase the regional sales tax to fund five new transit lines in 15 years. This transit expansion includes the West Corridor, a new line that will connect a number of important regional education and employment destinations with downtown Denver and suburban residential neighborhoods. Figure D1 summarizes the key actors and observations described in greater detail in the following

<sup>84</sup> Denver Region Council of Governments, *2030 Metro Transportation Plan*. November, 2004.



pages of this chapter. In the West Corridor, the diversity of station contexts create a variety of opportunities for mixed-income TOD, but there are barriers, such as distressed public housing projects and rising land costs that will need to be overcome. The corridor is already largely built out with residential and commercial uses, reducing the number of large scale redevelopment sites. Future redevelopment opportunities will depend on the availability of land, and redevelopment of older underutilized properties and commercial greyfield sites.

Figure D1: Regional Actors and Highlights

Key Actors	<ul style="list-style-type: none"> <li>• Regional Transportation District (RTD), the regional transit authority, provides services in eight counties in the Denver-Aurora metropolitan area.</li> <li>• The City and County of Denver is the same governmental unit.</li> <li>• The Denver Regional Council of Governments (DRCOG) is responsible for developing regional growth projections and fostering cooperation between 52 county and municipal governments in the region.</li> </ul>
Key Tools	<ul style="list-style-type: none"> <li>• DRCOG's <i>Transportation Improvement Program</i> provides grants for land use planning around stations to be administered by RTD in collaboration with local jurisdictions.</li> <li>• The Metro Mayors Caucus <i>TOD Fund</i> partners with the state Housing Finance Authority to finance the new construction and acquisition/rehabilitation of affordable housing units near transit.</li> <li>• City and County of Denver TOD Strategic Plan defines citywide TOD goals and priorities station areas for further planning. An affordable housing strategy is currently being developed.</li> <li>• Denver has an Inclusionary Housing Ordinance that provides limited potential for new affordable for-sale units.</li> </ul>
Obstacles to Mixed-Income TOD	<ul style="list-style-type: none"> <li>• Two distressed Denver Housing Authority housing projects in the West Corridor discourage market activity that could lead to mixed-income communities. Revitalization of these two sites will require interagency collaboration and a comprehensive strategy.</li> <li>• Affordable housing strategy lags behind transit investments with the result that new market-rate development is not being used to leverage affordable housing</li> <li>• Rising land values around transit stations has the potential to displace current low- and moderate-income residents, especially renters, and increases cost of providing new affordable housing.</li> </ul>
Lessons for Other Corridors	<ul style="list-style-type: none"> <li>• A compelling regional transit and TOD vision can stimulate broad public support for transit expansion as a means to address growth and congestion.</li> <li>• Cities must be proactive with affordable housing strategies during the planning stages of new transit investments to combat land speculation and leverage growing market activity.</li> <li>• Some station areas, especially those with distressed public housing projects, will require interagency cooperation to create mixed-income communities while preserving long-term affordable housing</li> </ul>

## A Train Comes into Downtown from the Southwestern Line

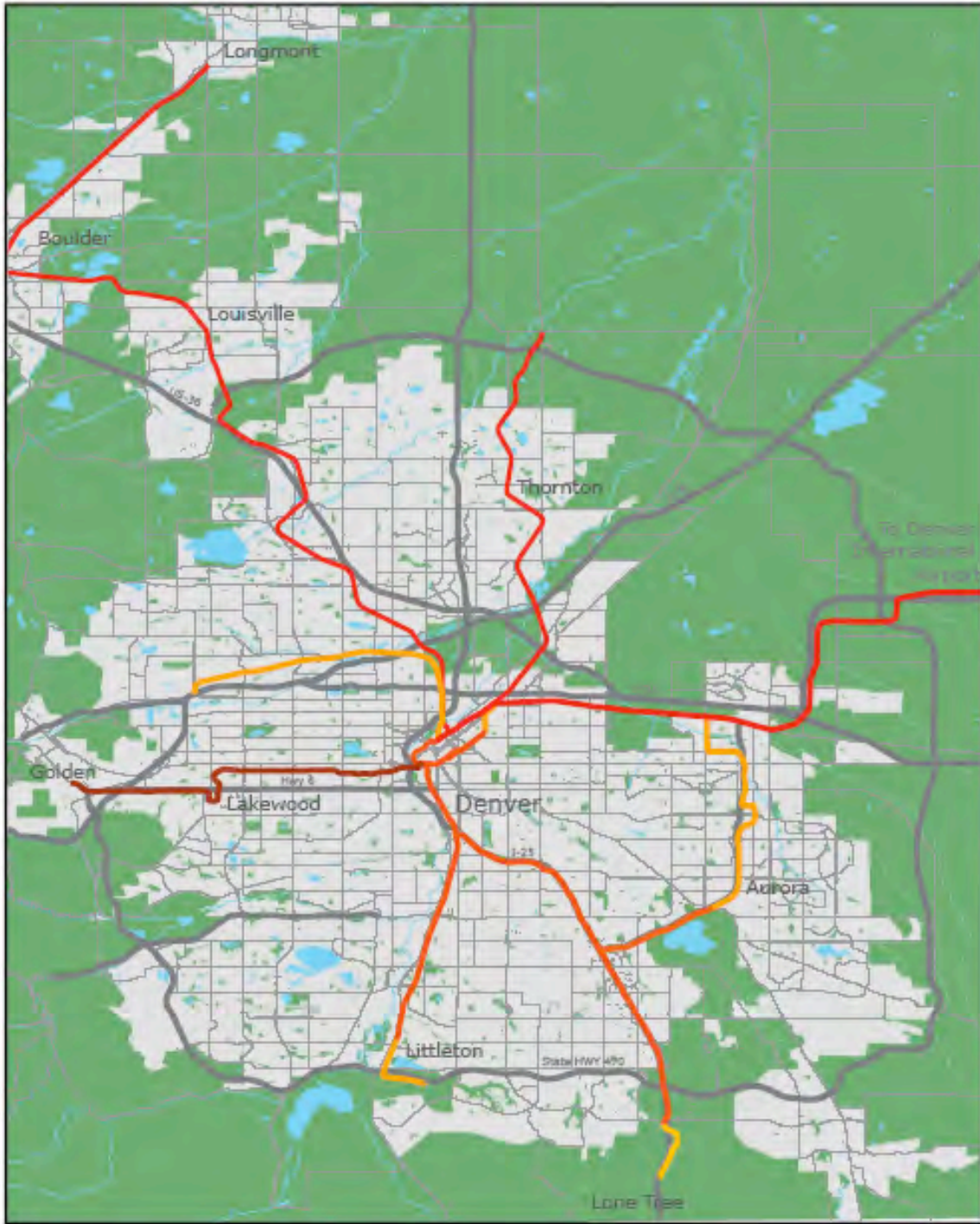


*Photo Courtesy of RTD*

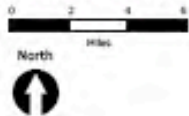
## ***II. West Corridor Continues Transit Expansion Program***

For the past thirty years Denver has been slowly working towards creating a strong regional transit system. Between the last decade, the region has opened four new rail lines: The Central Corridor in 1994, the Southwest Corridor in 2000, the Central Platte Valley spur in 2002, and the Southeast Corridor in 2006. In November 2004 voters passed the “FasTracks” ballot measure to further expand the transit system. (See **Map D1**, next page, for an overview of the existing and proposed regional transit rail network.) The 0.04 percent sales tax revenues will fund the construction of five new transit lines in 15 years, representing a \$4.7 billion regional infrastructure investment. The 119 miles of new tracks and the 57 new transit stations will provide an unparalleled level of transit access for a region of this size and, as such, could fundamentally reshape growth patterns in the region.

The West Corridor is part of the FasTracks transportation plan and anticipated to open in 2013. The light rail line runs west on former interurban rights of way and along the Highway 6 corridor connecting downtown Denver to the City of Lakewood in Jefferson County and terminating at the Jefferson County Government Center in the City of Golden. An estimated 31,100 people per day will use the 12.1 mile line. The 11 new stations that make up the West Corridor serve a number of important regional destinations: including the Auraria Higher Education Center (University of Colorado at Denver, Metropolitan State College, and Denver Community College), the Red Rocks Community College, the Denver Federal Center and the Jefferson County Government Center. The corridor runs through numerous compact and suburban neighborhoods and serves many employment destinations.



**Map D1**  
**Denver Regional Transit**  
 September, 2006



- Legend**
- Existing Light Rail Transit (LRT)
  - West Corridor LRT (FD)
  - Proposed LRT (Local Funding)
  - Proposed Commuter Rail (Local Funding)
  - Major Roads
  - Urbanized Area

FD: Final Design  
 Source: The Center for TOD + Denver RTD

### **III. Warm Regional Housing Market with Growth in Urban Areas**

The Denver region has a “warm” housing market, reflecting the growth in population occurring throughout the region, which is also driving up housing prices. The average price of a housing unit in Denver is \$239,500, significantly above the national average of \$167,000. The housing market has been trying to meet the growing demand, and single-family housing starts have proceeded at a record pace.<sup>85</sup>

In 2005, 30.7 percent of owner-occupied households spent over 30 percent of their income on housing, up 4.4 percent from 2000. For renter-occupied households, the increase was much more pronounced, with 47.7 percent of rental households spending at least 30 percent of income on housing in 2005, compared with 38.6 percent in 2000<sup>86</sup>. The increase in both housing and transportation costs is placing a significant burden on low- and middle-income households in the Denver region.

While there are roughly 45,000 households in the region today who live within one half-mile of an existing light rail stop, a conservative estimate is that by 2030, the potential demand for housing near transit could be close to 155,000 households.<sup>87</sup> At least 40 percent of those desiring to live near transit will come from households with incomes below \$41,864 (80 percent of area median household income) in 2004. Singles and couples without children making annual incomes between \$60,000 and \$125,000 will comprise a significant part of the projected demand.

The development community is responding. Completed in 2002, Englewood City Center is considered the region's first real TOD project. It transformed a dying indoor shopping center into a thriving mix of civic buildings, homes, offices, and stores, all served by light-rail trains. It has come to be seen as a model for a public-private partnership in the region, and its success has spurred more demand for TOD locally.<sup>88</sup> Since the completion of Englewood City The newly opened Southeast Corridor has 18 TOD projects already built or under construction, with a total value of nearly \$750 million.<sup>89</sup>

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<sup>85</sup> Harvard Joint Center for Housing Study, *State of the Nation's Housing 2005*.

<sup>86</sup> US Census, *2005 American Community Survey*, Selected Housing Characteristics.

<sup>87</sup> Center for Transit-Oriented Development, 2006. CTOD's demand analysis was calculated by combining demographic information on households that have shown a preference for living in Denver's transit-oriented communities with regional population projections and research on national real estate and consumer trends. For more information on this methodology, see: CTOD, *Hidden in Plain Sight: Capturing the Demand for Housing Near Transit*, April 2005.

<sup>88</sup> Margaret Jackson, “Development worth bragging about?” Denver Post: October 17, 2006.

<sup>89</sup> Information shared by the Regional Transportation District staff.

## Planned Development Along the Southeast Corridor

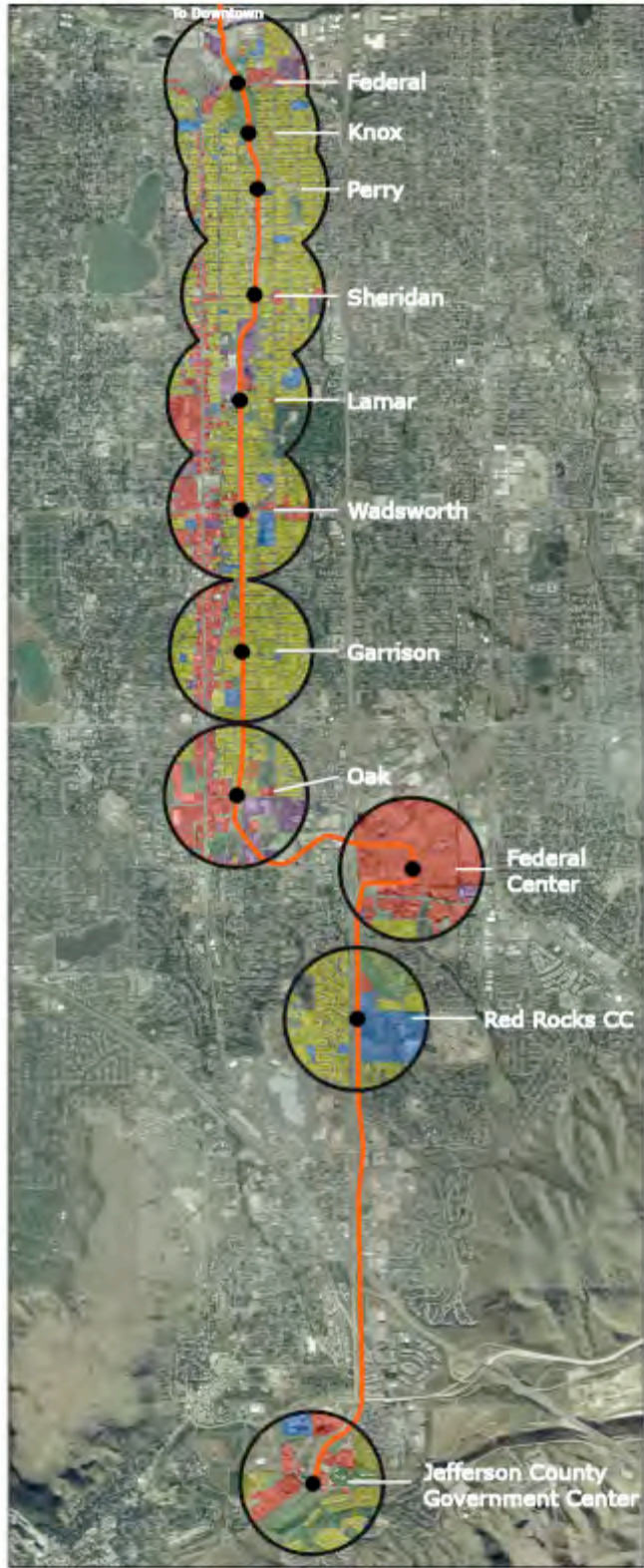


*Photo Courtesy of RTD*

### ***IV. Variety of Uses and Station Contexts Shape TOD Opportunities***

#### ***Mix of Uses and Station Types Characterizes Corridor***

As can be seen in **Map D2**, next page, land uses change from primarily residential around the eastern station areas (Federal/Decatur Station through Sheridan Station), to an increase in commercial, industrial and civic uses as the line moves further west. Between Lamar and Oak Stations, the West Corridor parallels Colfax Avenue, a major retail street. While residential land uses currently border the immediate vicinity of the stations, there may be a transformation over time as infill opportunities link the commercial area on Colfax Avenue with the new transit stations. The grid street pattern serving the West Corridor neighborhoods should provide connectivity to enhance pedestrian access to the transit stations.



**Map D2**  
 Existing Land Use  
 West Corridor  
 Denver, CO

**Legend**

- Proposed Light Rail Stop
  - Light Rail Transit (Planned)
- Land Use
- Residential
  - Commercial
  - Industrial
  - Civic
  - Vacant/Misc.



Source: Center for TOD + City of Denver + Jefferson County, 2006

The Federal Center is a major destination and there are plans to develop the mostly vacant property around this station. The next station, Red Rocks, serves both residential neighborhoods and the Red Rocks Community College campus. A park-and-ride lot is planned for this station. The western terminal station is located near the Jefferson County Government Center on the edge of the Golden city limits. As shown on Map D2, this station area has a much more typical suburban land use and street pattern. Recently, increased residential development has taken place in this station area, and some of the corridor’s larger open parcels are located here.

**Table D1** summarizes the land uses and density within the corridor. Fairly low residential and commercial densities exist, the second lowest among the case study corridors. The corridor does include a mix of uses, as discussed above with plans underway to rezone at most of the stations along the corridor. While most of the station areas are built-out, there are pockets of vacant and underutilized properties.

<b>LAND USES</b>	<b>Housing</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Mixed Use</b>	<b>Civic</b>
Within 1/2 mile radius of stops	<b>57%</b>	<b>28%</b>	<b>7%</b>	<b>n/a</b>	<b>6%</b>
<b>DENSITY/INTENSITY</b>	<b>Housing (DUA)*</b>	<b>Commercial (FAR)^</b>	<b>Industrial (FAR)^</b>		
	<b>9.63</b>	<b>0.59</b>	<b>0.32</b>		

Source: Center for TOD, Strategic Economics, City and County of Denver, Jefferson County, 2006  
 ^ Only Jefferson County Available

The City of Lakewood is currently undergoing a re-zoning effort around its proposed stations. Currently these areas have some big-box retail which is not designed to be transit-supportive. The industrial portions of the Lamar and Wadsworth station areas will likely be re-zoned to higher intensity employment and residential uses. The Oak and Federal Center station areas will also have more intense employment uses, including office and industrial research and development. The Garrison and Red Rock station areas have well established single-family residential and civic uses, and it is unlikely that these areas will change significantly with the implementation of the West Corridor. New zoning for these two stations will reinforce existing uses.

**Table D2, on the next page,** summarizes the above-discussed existing land use patterns, as well as demographics and new development projects and planning efforts around the 11 stations. New development projects are emerging but response is still slow given that the line won’t open for another six years, and a series of new lines have opened elsewhere in the region. Of the 18 projects identified, most are located within Denver, and all of the proposed housing projects are market-rate.

**TABLE D2: Existing Land Uses, Zoning & New Development, West Corridor (2012), Denver, Lakewood, Golden & Jefferson County**

Station Areas (1/2 mile Radius, see Map X)	Existing Land Uses	Key Demographic Indicators, 2000	Current Zoning	Pipeline and Proposed Development <sup>1</sup>	TOD Land Use Planning Efforts
Federal/Decatur (City of Denver)	Vacant Medium Density Res Industrial Low Density Res Infrastructure Park Retail Office	Median HH Income: \$23,000 % Owner-Occupied: 24% Average HH Size: 3.28	High Density Res Commercial Mixed Use Medium Density Res Industrial	5 total projects: 2 MR residential 1 MR MU residential 1 office 1 retail	
Knox Perry (City of Denver)	Low Density Res Med Density Res Vacant Park	Median HH Income: \$27 - 29,000 % Owner-Occupied 38 - 40% Average HH Size 3.1 - 3.35	Medium Density Res Low Density Res	3 total projects: 2 MR MU residential 1 institutional	
Sheridan (City of Denver) Lamar Wadsworth (City of Lakewood)	Low & Med Density Res Commercial Industrial Corridor Retail	Median HH Income: \$32 - 33,000 % Owner-Occupied 20 - 32% Average HH Size 2.06 - 2.69	Medium Density Res Commercial Industrial	9 total projects: 2 MR residential 1 MR MU residential 1 retail 1 hotel 2 MU industrial 2 institutional	6 City of Lakewood stations currently undergoing re-zoning in support of the new light rail for 2007.  The industrial portions of Lamar and Wadsworth will generally be re-zoned to higher intensity employment and residential uses.
Garrison (City of Lakewood)	Low Density Res Corridor Comm	Median HH Income: \$43,000 % Owner-Occupied 50% Average HH Size 2.3	Low Density Res Corridor Comm	0 total projects	Oak and Federal Center will also have more intense employment uses (office and industrial R&D), as well as regional, large-format retail (big-box), which are not likely to take good advantage of the transit investment.
Oak (City of Lakewood)	Medium Density Res Office Corridor Commercial R&D Industrial Office	Median HH Income: \$41,000 % Owner-Occupied 43% Average HH Size 2.23	Intense Mixed Commercial Low & Med Density Res Office Industrial (R&D)	1 total projects 1 MR residential	Garrison and Red Rock are considered too built out and established with single-family residential and civic uses to change significantly; the new zoning will support existing uses.
Federal Center (City of Lakewood)	Vacant High Density Res Industrial Retail Hospital	Median HH Income: \$46,000 % Owner-Occupied 17% Average HH Size 2.0	Planned Development Office High Density Res Industrial (R&D)	0 total projects	
Red Rock (City of Lakewood)	Low Density Res Civic (Comm College) Park Infrastructure (freeway)	Median HH Income: \$46,000 % Owner-Occupied 60% Average HH Size 2.03	Low & Med Dens Res Civic Park	0 total projects	
JeffCo/Federal Center (City of Golden & Jefferson County)	Open Space/Vacant Low Density Res Employment (Gvt) Infrastructure (freeway)	Median HH Income: \$51,000 % Owner-Occupied 75% Average HH Size 2.12	Planned Unit Development - Office Planned Unit Development - Res Infrastructure	N/A	

<sup>1</sup> Pipeline and proposed projects only; completed projects not available.



### Land Slated for Development at Lincoln Station



*Photo Courtesy of RTD*

### ***Large Areas of Underutilized Land Present Opportunities for New Development***

A critical factor in determining a corridor's ability to evolve into a more transit-supportive environment is the amount and type of underutilized or redevelopable land in proximity to stations. A total of 983 acres of underutilized land were identified as potential redevelopment sites along the West Corridor (shown in black on **Map D3**, next page),<sup>90</sup> the second highest amount among the case study corridors.

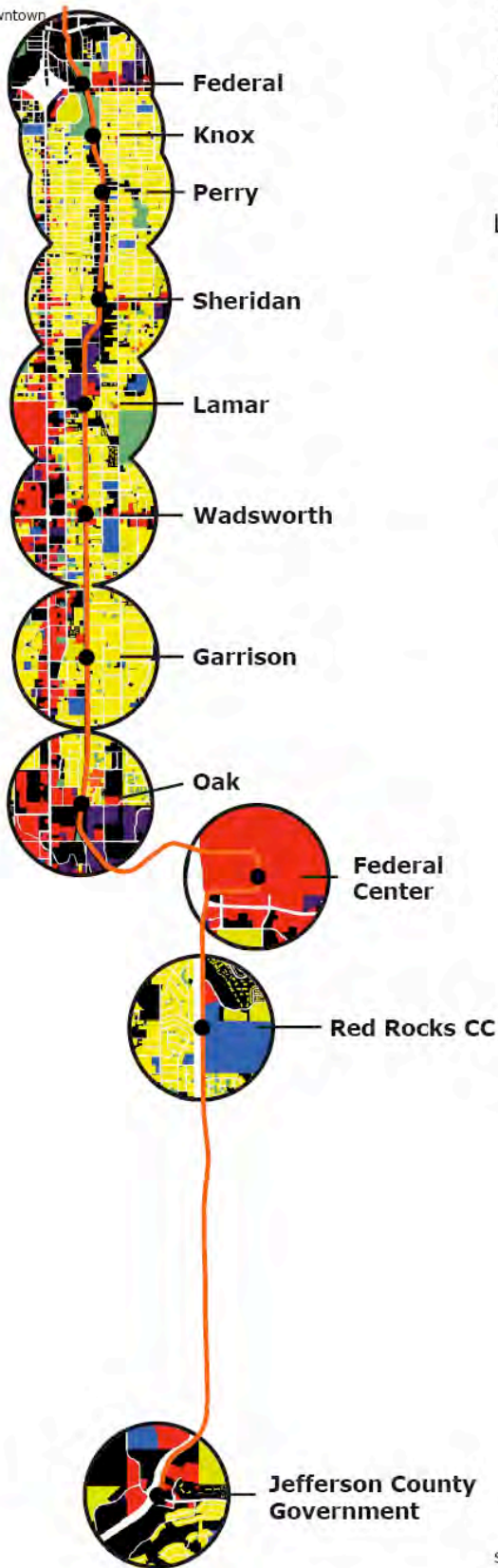
Federal/Decatur Station contains the largest amount of underutilized property and is the most economically distressed area along the corridor. Lamar and Wadsworth stations have a number of underutilized parcels, and are located close to the Colfax Avenue retail area. These stations have high concentrations of underutilized strip commercial properties. Other opportunities exist along the right of way as well as with the parking lots around Federal/Decatur Station.

The underutilized acreage along the West Corridor could potentially provide important new opportunity sites for capturing a percentage of the projected future regional demand for housing near transit. Assuming that perhaps half of the 983 identified acres were suitable for redevelopment, and that the average corridor housing density of 9.6 units per acre were applied to these sites, roughly 4,500 to 9,500 new housing units could potentially be located within the West Corridor on these sites. While this is a very rough ballpark estimate, it does suggest the potential for identifying those underutilized sites most suited for redevelopment and targeting resources towards them.

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<sup>90</sup> Parcels identified as underutilized have a less than a 1:1 land improvement to land value ratio. All parcels shown as black have built improvements that are worth less than the land they are built on. Parcels with single-family homes and civic uses were excluded from the analysis due to the difficulty of redeveloping these types of uses.

To Downtown



# Map D3

## Underutilized Land West Corridor Denver, CO

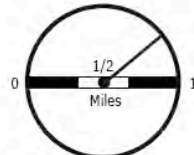
### Legend

- Proposed Light Rail Stop
- Proposed Light Rail Line
- Land Use
  - Residential
  - Commercial
  - Industrial
  - Civic
  - Vacant/Misc.
  - Open Space
  - Underutilized Land

\* Underutilized Land includes parcels where the value of built improvements is less than the value of the land



**NORTH**



Source: Center for TOD + City of Denver + Jefferson County, 2006

## **Corridor Demographics Underscore Housing Opportunities Among Stations**

In comparison to the region, the population living within a half mile radius of the future light rail stops have lower household sizes, lower incomes, and are much less likely to own the housing units in which they live (see **Table D3**, below). In 2000, the median household income for households in transit zones was \$35,764, roughly 30 percent below the regional average. Average household size in transit zones was comparable to the region and higher than in most of the other case study corridors, suggesting a relatively high number of family residences. Nine percent of households in the corridor use transit to commute to work, more than double the regional average.

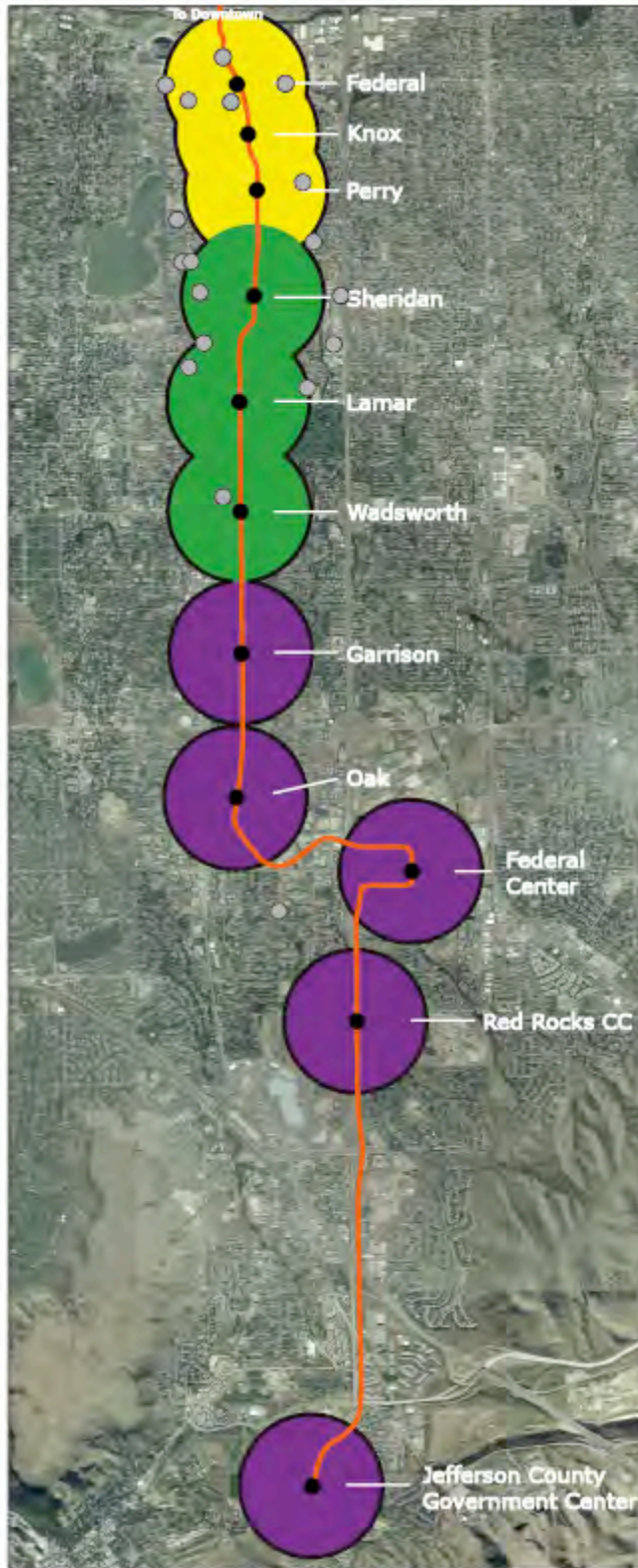
**TABLE D3: Demographics & Journey to Work, Corridor & Region, West Corridor, Denver, Colorado 2000**

DEMOGRAPHIC CHARACTERISTICS	Population	Households	Average HH Size	Median HH Income	Median Age	% Hsg Units Owner-Occupied
West Corridor (within 1/2 mile of stops)	37,868	14,389	2.52	\$35,764	32	31.9%
Region	1,499,293	575,510	2.55	\$51,088	34	63.8%
<b>JOURNEY TO WORK</b>	<b>Car Alone</b>	<b>Car Pool</b>	<b>Transit</b>	<b>Walk/ Bike</b>		
West Corridor (within 1/2 mile of stops)	0.66	0.18	0.09	0.03		
Region	0.76	0.11	0.04	0.03		

Source: Center for TOD, Strategic Economics, US Census 2000

Median household incomes in the station areas range from \$23,000 at Federal/Decatur Station to \$51,000 at Federal Center (see also Map D4, next page). Two large public housing projects are located at Federal/Decatur Station, creating a pocket of concentrated poverty and distressed housing. The percentage of owner-occupied housing also generally increases as the corridor moves west. Typically, neighborhoods with a high percentage of low-income, rental households are more vulnerable to change and displacement as a result of rising property values. The vast majority of current development activity is occurring in the station areas closest in proximity to downtown. The City of Denver and local non-profit housing organizations are working to identify strategies for preserving and improving affordable housing around the lower-income station areas.

Because this corridor is characterized by several neighborhoods with corridor retail, the majority of new development could result in urban mixed-use housing along Colfax Avenue and more compact housing development immediately adjacent to the future stations, while maintaining the existing single-family housing between these two corridors.



**Map D4**  
 Median Household Income  
 (1999), Station Areas and  
 Region  
 West Corridor  
 Denver, CO

**Legend**

- Proposed Light Rail Stop
- Proposed Development Project
- Proposed Light Rail Line

Regional Median Household Income \$51,088  
 Percent of Regional Median Income

- 0-30%
- 30-60%
- 60-80%
- 80%+

Source: Center for TOD + Strategic Economics  
 + Census 2000, 2006

### ***Market Potential Varies Along Corridor***

Highlighted in **Table D2**, page 9, and on the next page in **Map D5** there is currently little market momentum along the West Corridor. Of the 18 projects currently proposed within the one-half mile station areas, half are housing or mixed-use housing projects. As the line will not be in place until 2013, it is unsurprising that the station areas are not yet attracting significant development. The following discussion describes the potential for new development around the different stations.

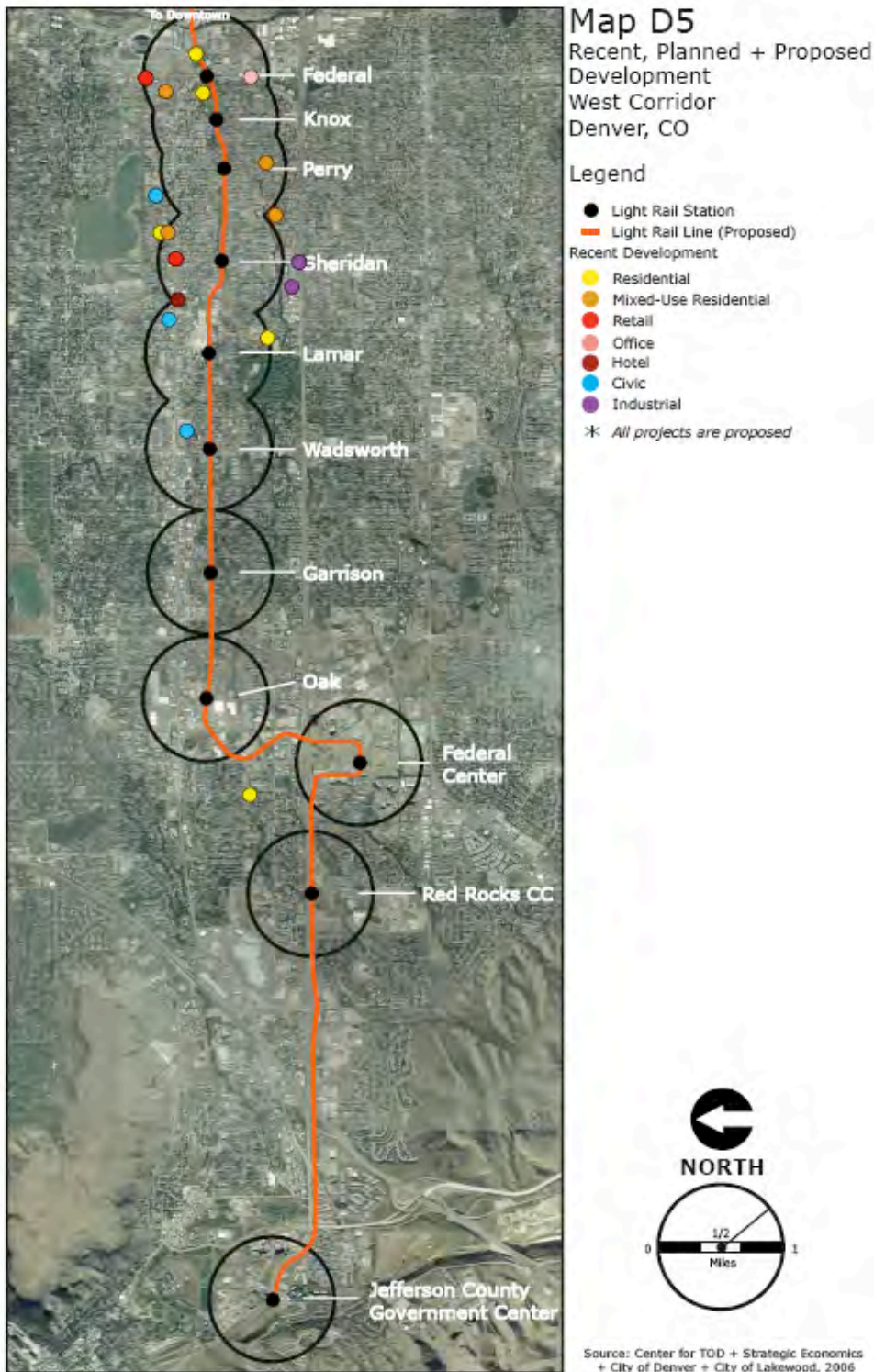
The Federal/Decatur Station contains significant opportunity for transit-supportive, higher-density, infill development. As previously discussed, there are a number of underdeveloped parcels in good proximity to the future station including several large surface parking lots. The area could benefit from its proximity to neighborhoods that have been revitalizing over the past 10 years and attracting new development. However, while current zoning is supportive of higher density residential development, there are challenges to new development.

Existing uses around the station are not well integrated and the walking environment is poor outside of the residential neighborhoods to the southwest of the station. The large Sun Valley public housing project, one of the Denver Housing Authority's most troubled properties, is a deterrent to new market-rate housing development in the area and is isolated from the station itself. See page 107 for discussion regarding the potential for mixed-income redevelopment at this station.

The Knox and Perry station areas are largely built out with single-family homes, though there is some opportunity for medium-density infill in close proximity to the rail line. There are good redevelopment sites in the industrial and low-intensity commercial areas adjacent to the Sheridan, Lamar, and Wadsworth stations, but it may be some time before market-rate housing is viable in these areas. The planned parking structure to the west of the Sheridan station could be combined with subsidized housing to improve the mix of land uses in the area and introduce TOD as a development concept in the area. The City of Lakewood is currently working on re-zoning existing industrial land in these areas to higher-density residential and commercial uses.

Both the Oak and Federal Center station areas could have substantially intensified employment uses, along with housing for employees. While the City of Lakewood is planning for higher-intensity office uses around the Federal Center station, the vision for the area includes an intense office park, rather than a mixed-use, walkable area. A regional big-box retail center is also planned for the area, further reducing potential for development that takes advantage of proximity to transit. Future development at both the Red Rocks Community College and Jefferson County Government Center Stations are challenged by changes in topography, although the Golden Ridge area to the southwest of Jefferson County station may be an attractive higher-density housing site in the future. Major new retail development in the station areas is likely to continue to focus on Colfax Avenue, the commercial corridor running north of and parallel to the line, rather than on the stations themselves. Pedestrian connections from the stations to Colfax Avenue

should be improved all along the corridor, particularly at Oak Station, where there are plans for the intensification of the existing retail concentration at Oak and Colfax.



## ***V. Comprehensive Affordable Housing Corridor Strategy would Aid in Creating Mixed-Income Communities***

While the corridor includes a number of very low-income households, none of the current planned or recently constructed projects include affordable housing. Given the desire to break up concentrated poverty in areas like Federal/Decatur Station, strategies to improve and introduce market rate housing should be pursued. As the value of transit is reflected in the real estate market within the corridor, there will be pressure for single-family rental homes in the area to revert to ownership, with the potential to displace much of the existing low-income rental community.

Pursuing mixed-income TOD in areas where transit runs through existing low-income neighborhoods can offer permanently affordable housing units to counterbalance the likelihood that some renters in existing homes are displaced. The Denver office of Enterprise Community Partners, Inc. and Housing Denver recently commissioned a study to evaluate the need for mixed-income TOD, and suggest a set of strategies for meeting this goal.<sup>91</sup>

Relocation, reconstruction, and/or substantial improvement to the public housing projects at Federal/Decatur Station is warranted both in terms of improving the quality of life for those low-income households living within these developments, and to improve the larger redevelopment potential of this station area. While the City and region are developing new tools to promote TOD, ensuring that low-income households are not left out of the opportunity to live near transit is important. Denver's low-income households are strained by rising housing prices and bear a higher burden in transportation costs as a percentage of their household income than other households. Low-income households can manage housing or transportation costs, but not both. Together these two costs account for between 67-115 percent of household income for low-income families, versus only 23-31 percent for high-income households.<sup>92</sup>

Because of the different opportunities and contexts in the corridor, creating mixed-income communities may require different strategies in different parts of the corridor. In the Federal/Decatur station, a comprehensive strategy is needed to revitalize the two distressed public housing projects in order to catalyze market-rate housing. In other station areas, such as Knox, Perry and Sheridan, there is a need to secure affordability in neighborhoods dominated by single-family rental housing. And, in still other locations, where there is an opportunity to transition to TOD, but the local jurisdictions do not have affordable housing programs, there is a need to devise site-specific mixed-income housing strategies.

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<sup>91</sup> Center for Transit-Oriented Development, *The Case for Mixed-Income TOD in the Denver Region*. CTOD: October 2006.

<sup>92</sup> *Ibid.*

## ***VI. Local Policy Tools: Tools for Deep, Long-Term Affordability Are Lacking***

In preparation for the future construction of the West Corridor light rail, a number of planning and rezoning efforts are underway. A planning effort focused on the re-use of Saint Anthony's Hospital, just north of Colfax Avenue and in the Perry station area, is examining the concentration of commercial activity on Colfax Avenue and the introduction of higher intensity housing along Colfax between commercial nodes. This effort is explicitly addressing pedestrian linkages from the north to the future stations. RTD has also sponsored a West Corridor Value Engineering/TOD Planning Charrette that considered the location and design of station facilities from the perspective of how these improvements could catalyze or inhibit new development in the station areas.

**Table D4**, next page, summarizes some specific policies available in the Denver region to promote TOD, affordable housing or mixed-income development within the West Corridor.<sup>93</sup> The Denver region, in conjunction with building an expanding transit network, is also developing a number of new tools to provide incentives for building new housing along transit. DRCOG and RTD also provide support to local governments doing station area planning through the Transportation Improvement Program and by providing technical assistance documents.

Denver is one of a few cities in Colorado with an inclusionary zoning ordinance, though it is limited in its overall effectiveness. The City's inclusionary policy only pertains to new homeownership units and serves households at 80-95 percent of Area Median Income (AMI), which limits the depth of affordability that can be created through this mechanism. Units are required to remain affordable for 15 years, after which they can be resold at market-rate prices, making long-term affordability a challenge.

The new Metro Mayors' Caucus TOD Fund has created substantial new bonding capacity for affordable housing at TOD sites. Partnering with the Colorado Housing and Finance Authority, the fund includes \$53 million in tax-exempt Private Activity Bond authority to finance the new construction, acquisition and rehabilitation of multifamily housing projects near transit. This fund does not require income targeting below 50 percent AMI so the housing needs of the very lowest-income households wanting to live near transit may not be met.

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<sup>93</sup> A variety of general tools, including overall State funding for affordable housing/subsidized housing are also being used in the Twin Cities region. These tools are discussed in Appendix A of the report. Table D4 highlights those specific to promoting TOD or have a linkage between affordable housing and proximity to transit, or creating mixed income communities.



**TABLE D4: TOD & Affordable Housing Policy, Financing & Funding Tools, West Corridor, Denver, Colorado**

Tool	Intended Funding Agent/ Implementing Agent	For use by:	Policy	Funding/Financing	Affordable Housing	Mixed Income (MI)	TOD	Description
City of Denver Strategic Transportation Plan	City	City, Transit Agency, Developer	X				X	The Public Works Department and Community Planning and Development, developed the Denver Strategic Transportation Plan (STP) to promote their vision of TOD and implement Blueprint Denver, which identified the vision for the City, and the Denver Comprehensive Plan.
City of Denver TOD Strategic Plan	City	City, Developer	X				X	A guide of priorities for planning and implementation of TOD. Includes a definition, context, TOD typology, review of current policies and programs, city-wide recommendations and specific station recommendations.
Transit Mixed-Use Zoning (TMU-30)	City	Developer	X				X	TMU-30 is the zoning which Denver developed for high density TOD projects. Residential, office, hotel, and retail uses are all being considered at this location.
Denver Regional Council of Governments (DRCOG) Transportation Improvement Program	Region, Transit Agency	Region, Transit Agency		X			X	Denver Regional Council Of Governments (DRCOG) created a pool from CMAQ grants dedicated to land use planning around station areas. There is a 50% match. DRCOG put up \$2million and invited local governments to submit applications. In a few instances RTD offered to share the local match. RTD will administer the grants. Not all of the money has been allocated.
Metro Mayors Caucus TOD fund (Private Activity Bond)	Cities, State	Developer, Municipality, Community Development Corporation		X	X	X	X	Through the Metro Mayors Caucus and the Colorado Housing and Finance Authority (CHFA), cities in the Denver region have pooled their Private Activity Bond (PAB) authority to finance the new construction of, or acquisition and rehabilitation of, multifamily rental housing projects near transit. 75% of all units occupied and rent-restricted to households earning no more than 100% of area median income (AMI); and 45% of all units at or below 60% AMI, or 25% of all units affordable to households at or below 50% AMI, include 50 or more dwelling units and be properly zoned for such development
Colorado Brownfields Revolving Fund	State, Federal	Municipality, Community Development Corporation		X				A public-private partnership, the Colorado Brownfields Revolving Loan Fund, encourages the cleanup of unused or underused contaminated properties by offering financing with reduced interest rates, flexible loan terms, and flexibility in acceptable forms of collateral. All cleanups financed through the Fund must have previous approval under the Colorado
Regional Transportation District (RTD) Strategic TOD plan	Transit Agency	Transit Agency	X				X	A "How to Guide" for local governments and private development community on how to engage RTD with TOD and joint development.
RTD TOD Policy	Transit Agency	Transit Agency	X				X	The policy was passed in April 2006 and includes RTD's definition of TOD and vision to encourage compact, mixed-use, pedestrian-oriented, high quality development at and around transit stations consistent with federal requirements, regional goals, and community objectives.

Source: Center for Transit Oriented Development, 2006

## VII. TOD and Housing at the Station Area Level: Barriers to Mixed-Income TOD Must Be Addressed to Realize Opportunities

Map D7  
Federal/Decatur Station Transit Zone  
West Corridor  
Denver, Colorado



Land Use



Underutilized Land



The Federal/Decatur Station is located just west of downtown Denver and overlooks the South Platte River. The sheer quantity of underutilized land in the area and the fact that many of the parcels are publicly owned, make this site a strong TOD opportunity. The best development site within the station area is the City's Public Works facility, which is slated to move elsewhere to accommodate a flood control project and the future transit station. Every effort should be made to ensure that the station platforms are located adjacent to this site, rather than up the hill closer to the stadium parking lot.

Despite the excellent opportunity for development at this station area, the Sun Valley housing project, and to a lesser extent Westridge Homes, both owned and operated by the Denver Housing Authority (DHA), are currently barriers to future development. Sun Valley, one of the most troubled properties owned by DHA, is a disincentive to market rate developers who might otherwise be interested in building housing at this location. The City should initiate a coordinated effort with DHA to consider ways to rebuild these projects with a greater mix of housing unit types targeted at a broader range of incomes while identifying how to replace the existing affordable housing units. Other opportunity sites within this station area include parking lots owned by the Stadium District and several privately owned parcels.

With over 125 acres of underutilized land, this district could accommodate at least 5,000 new residents living in a mix of housing types. New streets and intimate public parks could make this area easy to live in with one less, or no car. The connection to the river makes this area a prime opportunity for active living.

## **VIII. Opportunities, Obstacles & Lessons: Transit Framework Ahead of Affordable Housing Strategy**

As the Denver region moves forward with implementing its FasTracks regional transit plan, the opportunity to significantly impact development throughout the new transit corridors is profound. Denver is to be commended for its proactive efforts to develop a TOD Strategic Plan to help station area planning, rezoning and development. Simultaneous to the transit investment, the regional actors are beginning to explore how to provide assistance and incentives to help ensure that a portion of future development reinforces the transit investment and provides mixed-income housing.

### ***Major Opportunities for Mixed-Income Housing near Transit***

- **Regional Transit Investment Plan Provides Development Framework**  
Most regions in this country investing in transit are doing so with a piecemeal approach, focusing resources on individual corridors without a broader framework for overall improvements to accessibility and mobility. As builds five additional new lines over the next 15 years, it is in a unique position of creating a well-connected, integrated transportation system that will provide a framework for future land development. Indeed, the 119 miles of new tracks and the 57 new transit stations will provide an unparalleled level of transit access for a region of this size, and, as such, could fundamentally reshape growth patterns in the region.
- **The West Corridor Contains A Mix Of Redevelopment Opportunities**  
As the corridor connects a variety of uses—downtown, residential, commercial, educational, and employment—it has the potential for variation throughout the alignment, with different stations serving different purposes to reflect their unique assets. Federal/Decatur Station can provide an excellent redevelopment opportunity that can set the tone for future development along the line, and also be leveraged to create mixed-income TOD. Oak Street and Federal Center already are employment centers that can have a greater intensity of job activity with good transit connections. RTD, the cities of Denver and Lakewood, and Jefferson County are beginning to work together to prepare a corridor-wide strategy to help guide development at future stations and inform station areas that may need targeted support to promote mixed-income housing near transit.
- **Regional Tools Being Developed To Promote TOD**  
The Denver region has endorsed TOD in a variety of important long range planning documents, from the City of Denver’s TOD Strategic Plan to the RTD’s TOD Policy and funding support by DRCOG. Building on the success of existing transit lines and the new development that has been focused around them, the City’s residents and elected officials are stepping forward to provide policy guidance, funding, and technical assistance to build a more sustainable future for the region.

## ***Obstacles***

- **TOD Market Not Yet Established in the West Corridor**

Quite simply, given that the line is still only in the planning stages and won't open for another six years, the market has yet to respond. Given the overall high land prices in the Denver region and the strong interest by developers in TOD, this obstacle may actually prove beneficial for those wanting to provide affordable and mixed-income housing along the West Corridor. Land speculation has already begun, but there is still an opportunity to acquire sites for future mixed-income developments, and to develop tools to help current low-income renters become home owners.

- **TOD Involves Expensive Infrastructure**

Given high land prices at TOD sites, significant residential density is not only desirable but financially necessary for projects to pencil out. This translates into significant infrastructure costs. For example, upgrading the capacity of sewer lines for high density developments can be expensive, particularly for older communities like the City of Lakewood, which may lack overall system capacity. Generally, affordable housing developers are not capable of taking on these infrastructure costs on their own and so require some form of subsidies.

- **Transit Improvements Can Cause Displacement of Existing Low-Income Residents**

The West Corridor includes a high percentage of low-income households, particularly within the eastern Transit Zones. Assuring long-term housing affordability and access to affordable transportation is important. This must be balanced with the need and desire to reduce concentrated poverty in certain neighborhoods and to provide more vibrant, safe, mixed-income communities. Without targeted strategies and coordinated policies, there is substantial likelihood that current low-income households may be displaced as the corridor redevelops, particularly given its proximity to downtown and multiple important regional destinations.

## ***Lessons from the Corridor for Other Places***

- **Transit and TOD Play an Important Role in Addressing Regional Congestion and Development**

The success of the FasTracks ballot measure sends a stunning signal to other regions for the need and opportunity to generate wide regional support for transit investment. The scale of this initiative is resulting in both a rapid expansion of local transit planning, design and construction expertise but also has attracted the attention of national development firms. The Denver region's investment in a coordinated highway and transit strategy to address congestion and environmental quality positions it well to remain an economically competitive region.

- **Don't Underestimate Potential Impact of Land Speculation**

In the Denver region, developers already pay a premium on land at many planned and existing TOD sites. This presents a formidable obstacle to providing housing products at affordable prices. Land prices are being driven up by speculative pressures. Acquiring and holding land, also known as land banking, requires considerable capital outlays, especially when it may be 10 or more years before a rail station is built. This presents steep holding costs for developers and puts land out of the reach of affordable housing developers by the time the transit service is in place. Furthermore, many traditional funding sources—including CDBG, HOME and the new Metro Mayors Caucus TOD fund—cannot be used to purchase land. For regions like Denver that have adopted extensive transit expansion plans, strategies should be pursued in tandem to provide tools for public or private organizations to acquire and hold land within transit zones.
- **Strategies Needed to Transition Distressed Public Housing Projects**

Many transit corridors contain concentrations of poverty, often in public housing projects. These concentrations can discourage market investment, and cause the benefits of transit-oriented development to pass by these communities. Due to the lack of an effective affordable housing strategy and cohesive approach to distressed public housing projects in the Denver region, it has been difficult to catalyze revitalization in some low-income station areas. To alleviate this, the City and County of Denver should lead a Station Area Planning effort for the area surrounding the Federal/Decatur Station, including both Sun Valley and Westridge Homes. The aim of this effort should be to define a compelling vision for the future of this transit district, bring together the various public and private stakeholders, including Denver Housing Association (DHA), Public Works, Economic Development, Denver Urban Redevelopment Authority, Parks and Recreation, RTD and the HUD regional office. Preservation of existing affordable housing is needed, but could be done to provide improved housing conditions for low-income households and help to reduce concentrated poverty.

As part of the Station Area Plan, DHA should be tasked with developing a public housing transition strategy that allows redevelopment of Sun Valley in the near term and a longer term effort to place public housing residents in mixed-income housing. Every effort should be made to maintain the overall supply of public housing units. DHA should explore the value/feasibility of purchasing additional property in the surrounding area as temporary housing. Were HOPE VI funding available for this area, it would be a terrific candidate. Technical assistance from HUD should be sought to share information on how other communities have transitioned from the HOPE VI program to other strategies to achieve similar goals.

The next chapter discusses mixed-income TOD efforts in the Twin Cities metropolitan region along the newly opened Hiawatha Corridor.

## Chapter 7: The Twin Cities' Hiawatha Corridor

### New Development Springs Up Along the Hiawatha Line



*Photo Courtesy of Peter Ehrlich*

### **Corridor Snapshot**

Transit Technology	Light Rail
Route Distance & Number of Stops	12 miles, 17 stops
Year Service Will Begin	2004
Daily Ridership	31,000 (June 2006)
Residents Within 1/2 Mile Radius	Population – 42,377, Households – 17,870
Residential Density	18 Dwelling Units per Residential Acre
Median Income, 1999	Corridor (1/2 mile radius of stops) - \$30,571 Region - \$54,304

### **I. Introduction**

The Hiawatha Line connects a number of important regional employment, recreational and retail destinations. It reintroduced rail transit to the Twin Cities region and initiated an ongoing regional process of building fixed-guideway transit. Transit expansion plans have been spurred by the strong performance of the Hiawatha Line and rising regional housing costs. The corridor has already attracted more development than was originally anticipated, and, while the activity has largely focused on the Downtown Minneapolis, other neighborhood station areas are seeing new development as well. Large areas of civic uses and single-family residential neighborhoods in the corridor limit the development potential somewhat. The strong non-profit and neighborhood organization presence has been an important component in raising concerns about displacement and early advocating for mixed-income development in the corridor. Affordable housing production in the corridor has lagged due to the unanticipated development activity and limits on the ability of local jurisdictions to mandate affordable housing provision as part of new development. The City

of Minneapolis has engaged the community in a series of station area planning and rezoning efforts for the six neighborhood station areas, hoping to use this process to improve local zoning and support for transit-oriented development, and also to respond to neighborhood concerns regarding the future development vision for these emerging transit zones.

The Twin Cities region was home to 1,137,313 households in 2000, of which only two percent (18,704 households) lived within the Hiawatha Corridor transit zones. The demand for housing near transit is anticipated to grow to 80,441 households by 2030 as more regional rail systems are constructed and demographic shifts and population growth bring greater population and diversity to the region.<sup>1</sup> Figure M1 summarizes the key actors and observations described in greater detail in the following pages of this chapter.

**Figure M1: Regional Actors and Highlights**

Key Actors	<ul style="list-style-type: none"> <li>• Metropolitan Council is the seven-county metropolitan planning organization responsible for regional transportation, housing and other infrastructure planning and investments through MetroTransit and its Housing and Redevelopment Authority. The agency takes a more comprehensive approach to regional transportation planning than is found in most regions.</li> <li>• Along the corridor, the City of Minneapolis and the City of Bloomington are responsible for setting affordable housing policies. The City of Minneapolis has a strong neighborhood planning system, which empowers local groups to be involved in the planning process.</li> <li>• Non-profit community development organizations have a long tradition in the corridor and are strong advocates for affordable housing.</li> </ul>
Key Tools	<ul style="list-style-type: none"> <li>• City of Minneapolis, Hennepin County, Metropolitan Council, and State of Minnesota affordable housing funds, including an acquisition fund for multi-family and mixed-use developments along major transportation corridors.</li> <li>• City of Minneapolis TOD zoning process currently underway will help shape future development.</li> <li>• Corridor Housing Initiative is a proactive planning effort to develop more housing on transportation corridors in the City of Minneapolis.</li> </ul>
Obstacles to Mixed-Income TOD	<ul style="list-style-type: none"> <li>• There has not been a coordinated mixed-income TOD strategy to respond to unexpected market response to transit investment.</li> <li>• Limited land availability due to high quantity of civic uses in corridor.</li> <li>• Multiple funding sources and jurisdictions responsible for affordable housing.</li> </ul>
Lessons for Other Corridors	<ul style="list-style-type: none"> <li>• Need to be prepared to capitalize on market strength to leverage community benefits.</li> <li>• Need for better government coordination during the planning and design phase to address infrastructure needs, optimal development sites and integrating transit and pedestrians into communities.</li> </ul>

<sup>1</sup> Center for Transit-Oriented Development, *Hidden In Plain Sight: Capturing the Demand for Housing Near Transit*. Reconnecting America: April 2005; 2030 update forthcoming

## II. Hiawatha Line Introduces Light Rail to the Twin Cities

The Hiawatha Light Rail Line is the first of a series of planned rapid transit projects in the Minneapolis-St. Paul region over the next 25 years. Planned regional expansions include more light rail, the North Star commuter rail and rapid bus projects (see **Map M1: Twin Cities Regional Transit**).

Completed in 2004, the Hiawatha Line has 17 stations and covers 12 miles with standard light rail vehicles using overhead electric wires. It runs in its own right-of-way down a major urban corridor (Hiawatha Avenue/State Highway 55), with fairly short headways during peak hours. Ridership in 2006 already exceeded projected 2025 projections by 7,000 daily riders, or almost 30 percent. The Hiawatha line cost \$715 million dollars to construct, of which the federal share was \$334 million.



**M1**  
TWIN CITIES REGIONAL TRANSIT  
January 2006



- LEGEND**
- HIAWATHA LIGHT RAIL TRANSIT (LRT)
  - - - NORTH STAR COMMUTER RAIL
  - - - UNIVERSITY CORRIDOR LRT (AA/EIS)
  - - - COMMUTER RAIL (PROPOSED)
  - - - BUS RAPID TRANSIT (BRT) (PROPOSED)
  - - - FIXED GUIDEWAY (PROPOSED)
  - MAJOR ROADS
  - ▭ URBANIZED AREA
- EIS: Environmental Impact Statement  
AA: Alternative Analysis  
Source: The Center for TOD + Metro Transit



The line connects multiple destinations, running from downtown Minneapolis through a series of residential neighborhoods, the Metrodome,<sup>2</sup> the Veterans Administration medical center, the Minneapolis-St. Paul International Airport, and retail and office centers in the City of Bloomington, including the Mall of America, while traveling through a mix of industrial and residential neighborhoods. This connection between the residential neighborhoods and major job and entertainment centers has fueled the strong ridership performance of the line.

The corridor includes connections to other modes, including feeder bus service, and runs parallel to a newly expanded Hiawatha Avenue/State Highway 55. According to US Census 2000 Journey to Work data, residents along the line used transit, bicycling and walking in greater numbers than other households throughout the region even before construction of the line, and auto ownership rates remain lower. The primary function of the corridor is to mitigate congestion on parallel roads, including two highly congested nearby interstates (I-35 and I-94), while connecting important regional destinations.

### ***III. Housing Prices Heat Up During the late 1990s***

Between 2000 and 2005, the overall number of housing units in the Twin Cities region increased from 168,624 to 171,614, but the number of occupied units fell from 162,363 to 156,970<sup>3</sup>. Even while this trend towards increased vacancy was taking place, Minneapolis was one a few cities in the nation to add population to its urban core in the 1990's<sup>4</sup>. At the same time, the median cost for housing nearly doubled in the region over the five year period, increasing from \$113,500 in 2000 to \$226,900 in 2005.<sup>5</sup>

The rapid price escalation is a cause of concern for many communities and elected officials in the region. Whereas in 2000, 21 percent of households who owned their homes spent over 30 percent on housing, in 2005 the percentage had increased to 28. For renters, the situation was even more dramatic, with 50 percent of rental households spending at least 30 percent of household income on housing in 2005<sup>6</sup>.

In the last five years, downtown Minneapolis has seen significant new or converted higher-density housing. In particular, the Warehouse District, which contains a number of obsolete industrial buildings prime for conversion, has seen a large number of new residential or mixed-use development projects. The growing market for more compact urban living coupled with industrial properties available for conversion and the introduction of light rail have already catalyzed the redevelopment of a mixed-use, higher-density, transit-supportive downtown.

The TOD housing boom in Minneapolis has exceeded all expectations. A market study completed for the city in 1999 had projected there would be a demand for 7,150 housing units near transit by 2020.<sup>7</sup> The city estimates that the number of units either proposed, under

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<sup>2</sup> In October 2006, Metro Transit reported that over a quarter of Twins fans rode light rail to the playoff games at the Metrodome.

<sup>3</sup> US Census Bureau, 2005 American Community Survey, Selected Housing Characteristics.

<sup>4</sup> Harvard Joint Center for Housing Study, *State of the Nation's Housing 2005*.

<sup>5</sup> US Census Bureau, 2005 American Community Survey, Selected Housing Characteristics.

<sup>6</sup> Ibid.

<sup>7</sup> Presentation by Mike Christenson, Director of Economic Development, Minneapolis Community Planning and Economic Development (CPED) Department, City of Minneapolis, "The Emerging Real Estate Market and

construction or built already exceed that number—including 5,000 units in the booming downtown market and another 2,000 from Cedar Riverside to Bloomington. This would suggest that TOD is a valid real estate product niche in the Twin Cities, as elsewhere.

#### ***IV. Assessing the Development Potential and Existing Characteristics Along Hiawatha Corridor***

##### ***Varied Land Uses and Underutilized Sites Shape Future Development Potential Along the Hiawatha Corridor***

Given the diversity of housing type and mix of uses along the Hiawatha Corridor, the development response should be expected to show similar diversity dependent on the scale and type of redevelopment potential that exists around station areas.

A variety of distinct land use patterns are included in the half mile radii surrounding the stations on the Hiawatha Corridor (see **Map M2: Existing Land Uses**, next page). The four downtown station areas contain higher-intensity commercial, civic, residential, and mixed-uses, along with parking lots and some industry.<sup>8</sup> Some of the originally industrial parcels have already converted to higher-density residential and mixed-use buildings. The residential density around these station areas is very high, ranging from 87 to 265 units per net residential acre (as compared with an average 18 units per acre for the region).

The three stations just southeast of Downtown across I-35W/I-94—Cedar/Riverside<sup>9</sup>, Franklin Avenue and Lake Street—contain a mix of existing development types. All three station areas contain a significant amount of existing highway infrastructure and a mix of industrial, commercial, and civic uses. Surrounding the stations are residential areas of attached and single-family homes of varying densities, scattered with some commercial and industrial uses. The next two stations are predominantly single-family residential neighborhoods built on a historic grid block pattern.

Moving further south, the 50<sup>th</sup> Street/Minnehaha Park and VA Medical Center stations are approximately half built-out single-family neighborhoods and half civic uses, including a national park and major medical center. The next three stations are either within the Minneapolis-St. Paul International Airport or are surrounded by uses supporting the airport. None of these station areas present much opportunity for change. The final three stations are within the City of Bloomington, and contain primarily large-scale retail, office, and light industrial uses, including the Mall of America.

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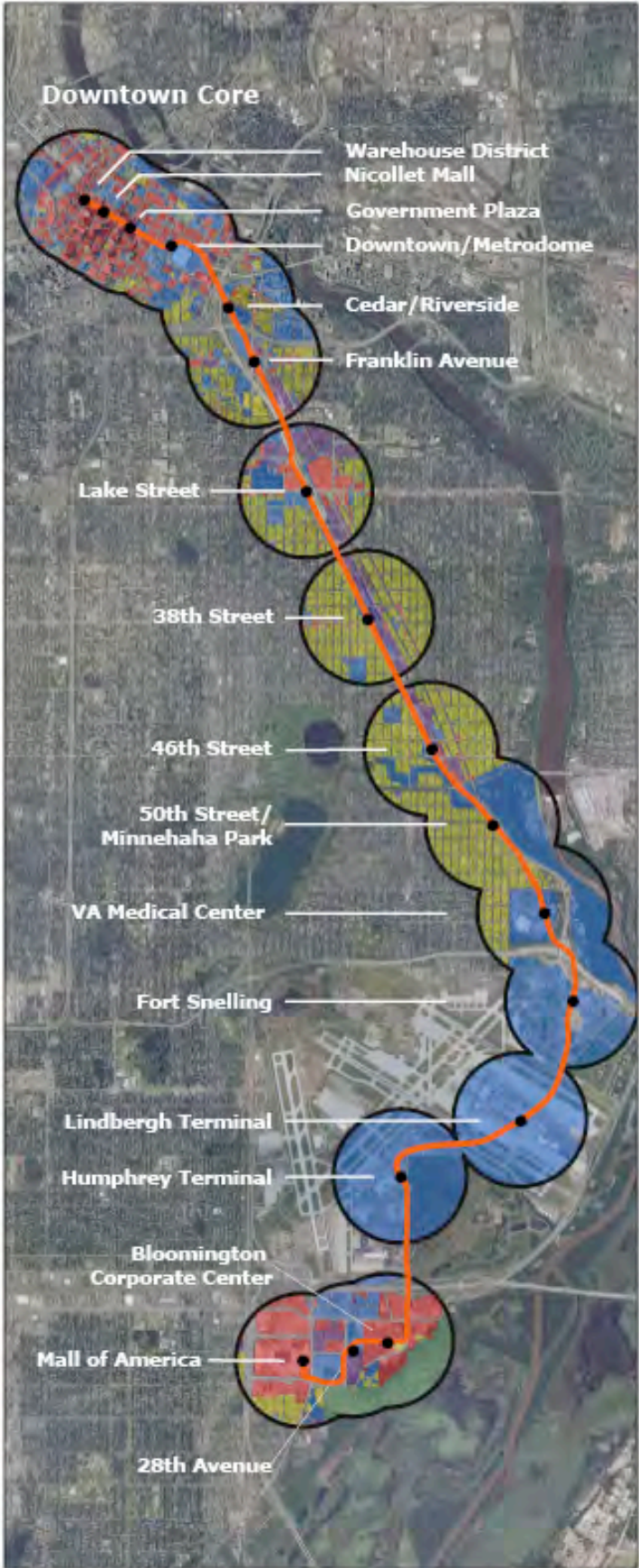
Policy Framework in Minneapolis,” March 2005,  
[http://www.ci.minneapolis.mn.us/cped/plans\\_home.asp#P79\\_4285](http://www.ci.minneapolis.mn.us/cped/plans_home.asp#P79_4285)

<sup>8</sup> Because much of the residential development in the area is quite recent, it is underrepresented in the existing land use data that the CTOD obtained from the Metropolitan Council.

<sup>9</sup> Cedar/Riverside is somewhat unique in that this large-scale mixed-use residential neighborhood was constructed thirty years ago as part of the New Town/In Town federal housing program.

# Map M2

Existing Land Use  
Hiawatha Line  
Minneapolis, MN



## Legend

- Light Rail Stop
  - Light Rail Transit
- Land Use
- Residential
  - Commercial
  - Industrial
  - Civic
  - Vacant/Misc.



Source: The Center for TOD + Metropolitan Council, 2006

**Civic Uses Dominate Corridor and Limit Redevelopment Potential**

As a whole, the corridor is dominated by civic uses: 54 percent of total land uses (excluding roadway infrastructure) are civic (see **Table M 1** below, and shown in blue on **Map M2**, previous page), by far the highest proportion of any of the case study corridors studied. Civic uses range from government buildings to state university properties, federal facilities, parks, and the airport. The high percentage of civic use presents both challenges and opportunities for future intensification. Properties owned and controlled by the government may be better positioned to take transit investments into consideration when planning for expansion or redevelopment. Such examples could include underutilized parcels along the light rail that were purchased as part of the project right-of-way. However, many civic uses are permanent, and therefore provide little opportunity for transformation. Along the corridor this is the case for many sites including a cemetery, national historic Fort, and regional park. Overlapping federal, state, and local jurisdictions also make redevelopment more complex.

**TABLE M1: Land Uses & Density, Hiawatha Light Rail, 2005**

<b>LAND USES<sup>1</sup></b> Within 1/2 mile radius of stops	<b>Housing</b> 24%	<b>Commercial</b> 17%	<b>Industrial</b> 5%	<b>Mixed Use</b> N/A	<b>Civic</b> 54%
<b>DENSITY/INTENSITY</b>	<b>Housing</b> (DUA)* 17.6	<b>Commercial</b> (FAR)^ N/A	<b>Industrial</b> (FAR)^ N/A		

<sup>1</sup>Roads and other infrastructure excluded from total.

Source: Center for TOD, Strategic Economics, Metropolitan Council, 2006

**Underutilized Land is Predominantly Located at Either End of the Line**

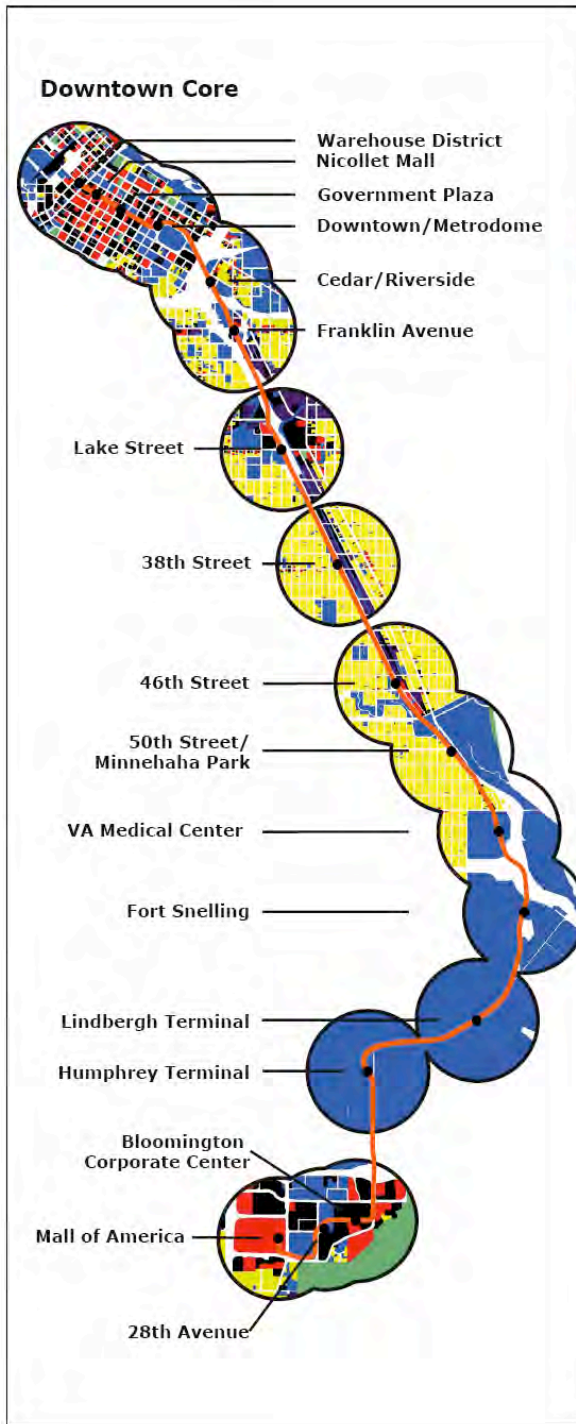
The amount and type of underutilized or redevelopable land in proximity to stations can play a critical factor in determining a corridor’s ability to evolve into a more transit-supportive environment.<sup>10</sup> A total of 504 acres of underutilized land were identified as potential redevelopment sites along the corridor (shown in black on **Map M3**, next page).

The places with the greatest amount of underutilized land, and therefore redevelopment potential, are those areas surrounding the Downtown and Bloomington stations. Both have scattered surface parking lots and some industrial uses. The Lake Street station also possesses some redevelopment opportunity on low-intensity commercial and industrial parcels.<sup>11</sup>

<sup>10</sup> It should be noted that not all technically underutilized industrial land is appropriate for redevelopment as traditional TOD. Because industrial uses in general have much less need for valuable buildings, parcels with existing viable industrial uses, or parcels that should be retained for future types of industrial uses can be misidentified as redevelopment opportunity sites.

<sup>11</sup> CTOD worked with the City of Minneapolis and the Midtown Community Works Partnership, a coalition of city, county, and regional governments, business owners, and community advocates to develop a station area plan for the Hi-Lake station now being implemented. The plan includes pedestrian improvements to enhance the connection between neighborhoods that are separated by the light rail and Hiawatha Avenue, which is a major overhead arterial at this station.

# Map M3 Underutilized Land Hiawatha Line Minneapolis, MN



## Legend

- Light Rail Stop
- Light Rail Transit
- Land Use
  - Residential
  - Commercial
  - Industrial
  - Civic
  - Vacant/Misc.
  - Open Space
  - Underutilized Land

\* Underutilized Land includes parcels where the value of built improvements is less than the value of the land



Source: The Center for TOD + Metropolitan Council, 2006 <sup>12</sup>

<sup>12</sup> Shown in black are parcels with less than a 1:1 land improvement to land value ratio. These are parcels with built improvements that are worth less than their land value. Shown in red and purple are the more valuable land uses that surround those parcels. Parcels with single-family homes and civic uses were excluded from the analysis due to the difficulty of redeveloping these types of uses.

The underutilized acreage along the Hiawatha Corridor could potentially provide important opportunity sites for capturing a percentage of the projected future demand for housing near transit. Assuming that perhaps half of the 504 identified underutilized acres were suitable for redevelopment, and that the average corridor housing density of 18 units per acre were applied, between 4,000 to 9,000 new housing units could potentially be located within the Hiawatha Corridor on these sites. While this is a very rough ballpark estimate, it does suggest the potential for identifying those underutilized sites most suited for redevelopment and targeting resources towards them.

### ***Zoning Supports TOD Opportunities***

The City of Minneapolis is currently engaged in a planning process for the six non-downtown stations called the Hiawatha LRT Neighborhood Station Area Re-zoning. The current zoning for the downtown and the next three stations contain a mixture of land use types and residential densities (from 11 dwelling units per acre to over 50 DUA), and the most development activity. The first four neighborhood station area plans have already been developed. A first phase of the rezoning effort focuses on creating pedestrian-oriented zoning overlays. The second phase identifies major zoning adjustments that are required to improve TOD. This process should further improve the intensity and mix of uses around the three stations closest to the downtown. There is strong interest by these neighborhoods to redevelop the underutilized land around transit with housing and commercial opportunities for residents at a mix of income levels. Some industrial conversion opportunity sites exist immediately adjacent to the rail line at 38<sup>th</sup> and 46<sup>th</sup> Streets. The current City re-zoning effort will determine appropriate transit-supportive uses for these areas.

The three Bloomington stations areas are zoned in support of existing uses: regional retail, office park, open space, and industrial park. The limited residential areas are zoned medium density, which allows for some increase over existing densities in some parts. Beyond the Mall of America expansion, the City has no plans for further intensification of these areas. **Table M2** on the next page, summarizes the existing land use patterns, demographics, and new development projects and planning efforts along the corridor grouping adjacent stations with similar land use and zoning characteristics.

**TABLE M2: Existing Land Uses, Zoning & New Development, Hiawatha Corridor (2004), Minneapolis & Bloomington**

Station Areas (1/2 mile Radius, see Map M2)	Existing Land Uses	Key Demographic Indicators, 2000	Current Zoning	Recent, Planned and Proposed Development <sup>1</sup>	TOD Land Use Planning Efforts
Downtown Warehouse District Nicollet Plaza Government Plaza DT Metrodome	DT Commercial DT Residential Industrial Parking Civic	Median HH Income: \$26 - \$34,000 % Owner-Occupied 18 - 30% Average HH Size 1.27 - 1.38	DT Commercial DT Residential Mixed Use	66 total projects: 32 market-rate residential 5 affordable residential 6 MU market-rate res 1 MU affordable res. 1 MU mixed-income res. 3 MU hotels 2 hotels 2 retail 3 office 3 MU office 8 civic projects	
Cedar/Riverside Franklin Ave Lake Street	Med, High & DT Res Infrastructure (freeway) Industrial Commercial	Median HH Income: \$15 - 17,000 % Owner-Occupied 4-11% Average HH Size 1.96 - 2.23 <i>Lake Street</i> Median HH Income: \$31,000 % Owner-Occupied 37% Average HH Size 2.63	DT Residential High & Med Density Res Office/Residential Retail	23 total projects: 4 market-rate residential 2 affordable residential 2 mixed-income res 2 market-rate MU res 3 affordable MU res 2 mixed-income MU res 3 retail 2 office 3 civic	Hiawatha LRT Neighborhood Station Area Re-zoning
38th Street 46th Street	Low Density Residential Industrial Park (National Park)	Median HH Income: \$37 - 47,000 % Owner-Occupied 73 - 88% Average HH Size 2.18 - 2.37	Low Density Residential Industrial Park (National Park)	10 total projects: 3 market-rate residential 2 market-rate MU res 1 affordable MU res 1 mixed-income MU res 2 retail 1 office	
50th Street VA Medical Center	Low Density Residential Park (National Park) Civic (VA Medical Center)		Low Density Residential Park (National Park) Civic (VA Medical Center)	5 total projects: 4 market-rate residential 1 market-rate MU res	
Airport Fort Snelling Lindbergh Terminal Humphrey Terminal	Civic	N/A	Civic	0 total projects	
Bloomington Bloomington 28th Mall of America	Regional Retail Office park Park Industrial Park Low & Med Density Res	Median HH Income: \$44 - 47,000 % Owner-Occupied 8 - 52% Average HH Size 1.93 - 1.99	Regional Retail Office park Park Industrial Park Med Density Res	1 mixed use commercial	

<sup>1</sup>Projects built, planned or proposed since 2003, the year prior to completion of the line.  
Source: Strategic Economics, City of Minneapolis, Metropolitan Council, 2006. 120

### **Hiawatha Corridor Serves a Range of Incomes and Households**

The corridor as a whole had a median household income of \$31,000 in 1999, in comparison with the regional median of \$54,000, the greatest income differential for any of the case study corridors (see **Table M3**, below). In addition, only 37 percent of units are owner-occupied, as compared with 70 percent for the region, the second greatest tenure differential of the five corridors. Average household size varies significantly from 1.27 to 1.38 persons per household in downtown households to up to 2.63 persons per household in the more residential neighborhoods.

Transit ridership, walking, and biking were substantially higher in the corridor than the region as a whole prior to the light rail investment. Frequent bus service, more compact development, and the presence of several bike lanes throughout the corridor contributed to a greater bicycle/pedestrian mode split.

**TABLE M3: Demographics & Journey to Work, Corridor & Region, Hiawatha Line, Minneapolis, Minnesota 2000**

DEMOGRAPHIC CHARACTERISTICS	Population	Households	Average HH Size	Median HH Income	Median Age	% Hsg Units
						Owner-Occupied
South Corridor (within 1/2 mile of stops)	42,377	17,870	2.06	\$30,571	34	36.5%
Region	2,968,806	1,137,313	2.56	\$54,304	34	70.4%
<b>JOURNEY TO WORK</b>	<b>Car Alone</b>	<b>Car Pool</b>	<b>Transit</b>	<b>Walk/ Bike</b>		
South Corridor (within 1/2 mile of stops)	0.53	0.11	0.17	0.15		
Region	0.81	0.10	0.01	0.01		

Source: Center for TOD, Strategic Economics, US Census 2000

**Map M4** overlays new planned, proposed and recently built development with median household income of each station area. To date, the vast majority of development activity has occurred in the four Downtown station areas, which have higher median incomes than other places along the corridor. In general, the pattern of development activity, *thus far*, does not correlate with lower-income areas or with the lower percentage of owner-occupied units (see **Table M2** for owner occupation by grouped station areas).

Local affordable housing advocacy groups in the Twin Cities and other case study regions are concerned about the potential of new transit investments to accelerate gentrification. Given the corridors demographic profile and lower home ownership rate, the neighborhoods along the corridor may be vulnerable to change, though current and near future development activity is not focused on these areas. Addressing the potential for displacement may be warranted as development pressures continue to build.<sup>13</sup>

<sup>13</sup> A description of tools to create Mixed Income Transit Oriented Development, was prepared by Douglas Shoemaker for the Center for Transit Oriented Development in August 2006 and is available on-line at [www.reconnectingamerica.org](http://www.reconnectingamerica.org)





**Map M4**  
 Median Household Income  
 (1999), Station Areas and  
 Region  
 Hiawatha Line  
 Minneapolis, MN

**Legend**

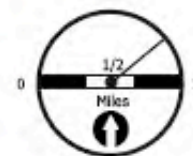
- Light Rail Stop
- Development Projects
- Light Rail Transit

Regional Median Household Income \$54,304  
 Percent of Regional Median Income

- 0-30%
- 30-60%
- 60-80%
- 80%+

\* Some projects may not show up due to overlapping dots

\* Projects Unavailable for Bloomington Stations



Source: The Center for TOD + Strategic Economics  
 + Census 2000, 2006

## Recent Market Activity is Focused Primarily in Downtown

Since 2003, the year before the line opened, 11,931 housing units and 1,054,436 square feet of commercial space have been built, are currently under construction, are planned or proposed within a one-half mile radius of the line's 14 stations in the City of Minneapolis. The Downtown Council calculated that 30,000 people now live downtown—more than in downtown Denver, Dallas, Houston, and Indianapolis combined—up from 19,000 just ten years ago. This is a very large amount of housing development activity for such a short period of time and far beyond what was projected in the 1999 TOD market study for the city demonstrating the strength of the market for downtown housing, especially when supported by transit.

The majority of new projects, 66 out of 105 total projects and 45 out of 72 residential and mixed use/residential projects, are within the one-half mile areas surrounding the four Downtown stations (see **Map M5**, next page, and **Table M2**, page 120). The Warehouse District is experiencing a burst of residential development activity, as many industrial buildings are converted into loft condominiums. The successful conversion of older industrial buildings to housing is often dependent on good transit, because it is difficult to retrofit warehouses and manufacturing plants to include typical parking ratios.

While the market is providing more housing downtown than was projected in the 1999 study, many of the projects going up outside downtown are smaller infill projects in neighborhoods surrounding the stations, and not the larger and more complex “catalytic” projects that are essential to putting a significant number of riders within walking distance of transit. The three southeastern stations just beyond the downtown contain a mixture of land uses and more limited redevelopment potential. These three station areas have had a total of 23 new projects built or proposed since 2003. The next four stations (38<sup>th</sup> Street through the VA Medical Center) primarily contain single family residential and civic uses and have seen only 15 built or proposed projects since 2003. The three stations between Minneapolis and Bloomington (Fort Snelling and two serving the airport) are outside of local jurisdiction, and are unorganized federal territories with no potential for change.

The final three stations in the City of Bloomington are seeing development market activity.<sup>14</sup> A major redevelopment and expansion of the Mall of America is currently in the planning stages, including the underutilized parcel directly to the north of the existing mall. The preliminary Phase II plan calls for a 5.6 million square foot mixed-use center consisting of retail, hotel, office, residential and entertainment uses, as well as 6,500 new structured parking spaces. However, transit linkage is not a focus of this planning and development effort.

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<sup>14</sup> Complete project data was not available from the city but interviews with local developers did inform the study.



**Map M5**  
 Recent, Planned + Proposed  
 Development (After 2003)  
 Hiawatha Line  
 Minneapolis, MN

**Legend**

- Light Rail Stop
  - Light Rail Transit
  - Recent Development
  - Residential
  - Mixed Use Residential
  - Retail
  - Office
  - Hotel
  - Civic
  - Parking
- \* Some projects may not show up due to overlapping dots
- \* Projects Unavailable for Bloomington Stations



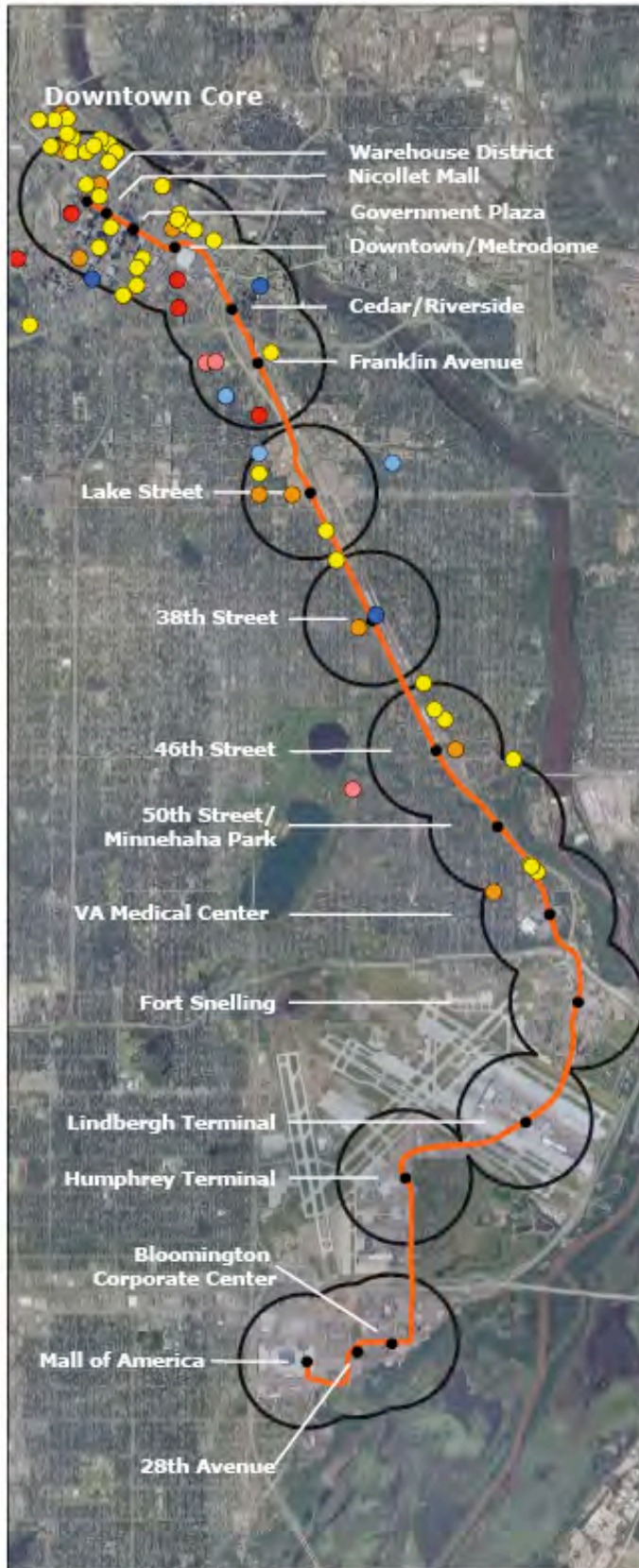
Source: The Center for TOD + Strategic Economics + City of Minneapolis, 2006

## ***V. Mixed-Income TOD Focuses on Preservation of Mixed-Income Neighborhoods in Partnership with Community-Based Efforts***

As previously noted, the corridor overall contains households at a range of incomes, with a significant number of low-income households residing within the transit zones immediately adjacent to the downtown. The downtown housing market has seen the most overall development in the corridor, much of it high-end. Not all new housing is affordable only to those with high incomes. Twenty-five percent of the 72 new residential or mixed-use residential projects since 2003 are affordable or mixed-income. The distribution of projects can be seen in **Map M6** and in **Table M2**. Seven out of the 18 projects containing affordable units are in the downtown station areas, while nine are in the three next station areas. The concentration of affordable projects around Cedar/Riverside, Franklin, and Hiawatha-Lake Street (Hi-Lake) correspond with the lower median household incomes and focus of community development corporations active within these areas. The neighborhood organizations along the corridor are keenly focused on advocating for the housing needs of current low-income residents and are concerned that more focused policies need to be adopted to ensure that rental and home ownership opportunities will remain along the corridor as new development occurs.

The Center for Neighborhoods is one non-profit organization that is working with other neighborhood and housing advocates, as well as the City's multi-family housing staff to better educate residents on opportunities for home ownership, the benefits of transit, and trying to ensure that affordable housing is part of the future development efforts along the corridor. The City's Corridor Housing Initiative is a partnership between the Center for Neighborhoods and the City of Minneapolis, and focused on preserving and increasing affordable housing along transit corridors. The Corridor Housing Initiative reduces front-end costs for developers by providing community support for development through suggested development guidelines, neighborhood and City support for higher density development through zoning recommendations, and increased access to available City funding cycles.

The Midtown Community Works Partnership (MCWP) is another organization active in the corridor, focused specifically on the Hi-Lake station area. MCWP is a collaboration between neighborhood organizations, business owners, and local governments to develop and support TOD redevelopment plans and pedestrian improvements around the Hi-Lake Station. The City of Minneapolis has also partnered with local realtors to develop materials for prospective homeowners that highlight the benefits of living near transit. Strong neighborhood organizations remain actively involved in station area plans and implementation efforts along the corridor, working with the City to track development and demographic trends to help shape future development and incorporate neighborhood priorities into the development approval process and any future rezoning.



# Map M6

## Residential Development (After 2003)

### Hiawatha Line

### Minneapolis, MN

#### Legend

- Light Rail Stop
- Light Rail Transit
- Recent Development
  - Market Rate Residential
  - Market Rate Mixed Use Residential
  - Affordable Residential
  - Affordable Mixed Use
  - Mixed Income Residential
  - Mixed Income Mixed Use

\* Some projects may not show up due to overlapping dots  
 \* Projects Unavailable for Bloomington Stations



Source: The Center for TOD + Strategic Economics + City of Minneapolis, 2006

## **VI. Local Policy Tools: Multiple Funding Sources Lack Clear Linkages**

The degree of development interest along the corridor has surprised local planners and neighborhood residents. The Metropolitan Council provided planning funds early in the construction of the light rail project, and the City has been working to catch up and develop station area plans with strong neighborhood input. While overall response to the Hiawatha light rail has been extremely positive, there is growing anxiety over potential neighborhood change and displacement. In part, this may reflect a need for government to explicitly state a commitment to maintaining affordable housing and creating mixed-income neighborhoods within transit corridors.

The City of Minneapolis, Hennepin County, the Metropolitan Council, and even the State have a variety of TOD and affordable housing programs available to households throughout the region, including in this corridor (described in **Table M4, next page**).<sup>15</sup> Gap financing is provided by Minneapolis and Hennepin County for building affordable housing for low-income groups, and includes an incentive for proximity to transit. The County also has a TOD program for redevelopment and construction within or adjacent to the County's transit corridors. A relatively new program, it is helping to construct a number of new projects beyond just the Hiawatha corridor. A majority of projects using these funds have been market rate. The City's Corridor Housing Initiative, mentioned previously, is viewed as another innovative strategy for engaging neighborhoods and educating citizens on the planning process and trade-offs associated with higher densities, mixed use, and access to affordable housing.

The Metropolitan Council, together with the County and State, provide funds to clean up polluted land for redevelopment. A number of parcels along the corridor would qualify for brownfield clean-up funds, particularly in the older mixed-use residential and older industrial areas. Several vacant parcels of land remaining from the construction of the Hiawatha line are publicly owned by the Minnesota Department of Transportation and the Metropolitan Council. The transfer and potential use of these parcels by the City would be a powerful tool for providing mixed income housing and serving as a market catalyst in the Hi-Lake station area for shaping new TOD development.

While a variety of affordable housing and TOD tools exist, the linkage between them needs to be strengthened and better articulated. Given the rate of development and growing public interest in equitable development along the corridor, the City and County are currently working to address this need and provide new tools and information.

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<sup>15</sup> A variety of general tools, including overall State funding for affordable housing/subsidized housing are also being used in the Twin Cities region. These tools are discussed in Appendix A of the report. Table M4 highlights those specific to promoting TOD or have a linkage between affordable housing and proximity to transit, or creating mixed income communities.

**TABLE M4: TOD & Affordable Housing Policy, Financing & Funding Tools, Hiawatha Line, Minneapolis, Minnesota**

Tool	Intended Funding Agent/Implementing Agent	For use by:	Policy	Funding/Financing	Affordable Housing	Mixed Income (MI)	TOD	Description	Example
Corridor Housing Initiative	City	Households	X					A proactive planning process to create viable development projects that include affordable housing options along corridors, particularly transit corridors	Guidebook on development guidelines and principles developed by local steering committee, aimed at helping developers understand local opportunities and values, and for citizens to better understand linkage between density and community benefits.
Pedestrian Oriented Overlay District (PO Overlay)	City	Developers		X				In 2005 the City Council adopted amendments to the zoning code related to the PO Overlay District. New provisions apply only to the LRT Station Areas. Provisions included minimum density requirement, increased density bonuses and bicycle parking requirement	
Minneapolis Affordable Housing Trust Fund (AHTF) and Minneapolis Affordable Ownership Housing Program (AOHP)	City	Developers		X	X	X	X	Gap funding for affordable and mixed income rental housing. Priority for projects with increased density and proximity to jobs and transit.	
Minneapolis Higher Density Corridor Acquisition Program	City	City Acquisition		X	X	X	X	Funding for acquisition of property for multifamily housing and mixed use development on corridors. Funds target mixed-income, higher density housing development.	
Affordable Housing Incentive Fund (AHIF)	County	Developers	X	X	X			The Program provides last-resort gap funding for affordable housing for low income people. This supports a variety of affordable housing initiatives that serve low-income families, youth, seniors, homeless families and adult, and people with disabilities. Most of the projects chosen for funding are linked to transportation, local employment, schools and supportive services.	Lyndale Neighborhood Development Corporation/City of Lakes Community Land Trust – 3310 Nicollet Condominiums, Minneapolis: This project will construct 35 condominium units of which four units will be AHIF units. Project is mixed-income, provides workforce housing for the nearby employment centers and is located near a public transit corridor.

Hennepin County TOD program	County	Developers								<p>The criteria and guidelines for this fund are designed to support both redevelopment and new construction within or adjacent to Hennepin County Transit Corridors. Eligible multi-jurisdictional projects must be located in either a county or local redevelopment area or housing district. Multi-jurisdictional program must include plans for one of the following: housing rehabilitation and removals, industrial polluted land cleanup, environmental cleanup, community corridor connections, corridor planning, acquisition or property, development and redevelopment of housing and existing commercial projects, and job creation.</p> <p>SHIF funds are used to address one-time and time-limited gaps in supportive housing services for both project and community based affordable housing initiatives. It coordinates housing with transit, employment and social services to help build self-reliance and housing stability for individuals and families.</p> <p>Program gives families with low incomes the opportunity to live in neighborhoods outside areas with high levels of poverty. At least 40% of units must be to households with incomes below 30% AMI; the remainder to households with 80% AMI or below. Cities where homes are located must have affordable rental housing in their comprehensive plans.</p>	<p>The TOD program has generated more than 2,000 home-ownership units and 1,000 rental units and leveraged \$30 million in private financing. In 2005, 542 market rate units built with TOD grants and 216 affordable units. In 2003 there were only 68 affordable units built with these funds, and 504 market rate units.</p>
Supportive Housing Initiative Fund (SHIF)	County	Developers & Cities	X	X	X	X	X			<p>The Act funds have leveraged millions of additional dollars in private and public investment that has provided new jobs, housing choices, and business growth. The Act has resulted in more than 20,500 new and 600 rehabilitated housing units. More than 1,700 new rental units with the vast being affordable to low income households.</p>	<p>Case management services for residents, vocational education</p>
Family Affordable Housing Program	Metropolitan Council	Households								<p>The Act is a voluntary, incentive-based approach to help the Twin Cities metropolitan area address affordable and lifecycle housing needs while providing funds to communities to assist them in carrying out their development plans. Funds are used to clean up polluted land for redevelopment, new jobs and affordable housing, create development or redevelopment that demonstrates efficient use of land and infrastructure through connected development patterns, create affordable housing opportunities.</p>	
Livable Communities Account (LCA)	Metropolitan Council, with State funds	Cities								<p>The goals of the Local Housing Incentive Account (LHIA) are to help create and preserve affordable rental and ownership housing throughout the region for low- and moderate-income households at all of life's stages, and to support residential reinvestment and redevelopment to achieve economically healthy and livable communities. This program is conducted in coordination with the Minnesota Housing Finance Agency.</p>	
Local Housing Incentive Account (LHIA)	Metropolitan Council, with State funds	Cities								<p>in 2005, Funding will provide for the renovation of nine buildings slated for redevelopment, including 99 units of the Ames Lake Neighborhood. Twenty of the units will be affordable to households at or below 50 percent of the area median income, with 10 of those units available to households at 30 percent of area median income. Sixty-one units will be affordable to households at 60 percent of area median income, and 18 of the units will be market rate. Rents (including utilities) will</p>	
Tax Base Revitalization Account (TBRA)	Metropolitan Council, with State funds	Developers								<p>Bloomington Corporate Center Grant Award: \$736,000 in 2002 to help remove asbestos and hazardous materials from buildings on the former Control Data campus south of the Minneapolis-St. Paul International Airport. Demolition of the three buildings will make way for a future higher-density, mixed-use development with housing, office space, a hotel/exhibition hall and two parking ramps. The Mall of America and planned light-rail transit are nearby.</p>	
Smart Commute Mortgage	Metropolitan Council and Fannie Mae through Bremer Bank	Households within a 1/4 mile of public transit route								<p>Low downpayment program (3%) and credit underwriting process for an additional \$2,400 in income attributable to regular transit use. If household is located in Mpls Enterprise Zone, up to \$2,500 closing cost assistance. Free transit pass for one year.</p>	

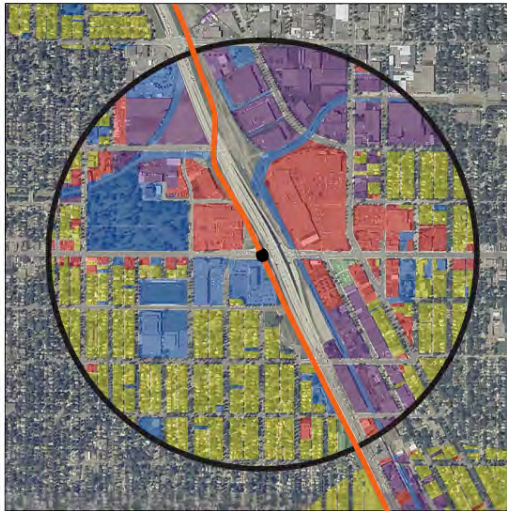


## VII. TOD and Housing at the Station Area Level: Hi-Lake Station Illustrates Redevelopment Potential

Map M7  
Lake Street Station Transit Zone  
Hiawatha Line  
Minneapolis, Minnesota



Land Use



Underutilized Land



The market is moving more slowly outside of downtown, but research indicates that both the condo and rental markets are strong and expanding. More than 2,000 housing units are either proposed, built or under construction along the Hiawatha line south of the CBD and Downtown East. The Lake Street station, located roughly mid-point on the Hiawatha line, serves the neighborhoods surrounding a major commercial arterial, Lake Street, and four lane highway (Hiawatha/Hwy 55). Consequently this area is simply referred to as Hi-Lake. Transportation infrastructure divides the station area into four quadrants, with a number of large underutilized sites. As shown in Map M7, there is a mix of commercial (including strip malls, a Target retail store, and large grocery store), and civic land, including a large cemetery in the northwest quadrant of the station area and an underutilized school site in the southwest quadrant. Given the former heavy industrial nature of this area, there are also a number of sites with environmental contamination.

The transit zone is home to roughly 15 percent of the corridor's population (see Table M4). The majority of households are low-income and transit-dependent, with median household income in 1999 of only \$23,342. Transit is used by a quarter of the transit zone's population to commute to work, and the majority of housing units in the transit zone are rental.

Table M5: Lake Street Station

<b>Demographics</b>		<b>Housing Unit Type</b>	
TZ Population	5683	Median Year Build	1958
Share of Corridor Population	14.7%	Owner Occupied	403
Households	1709	Renter Occupied	1307
<b>The Market</b>		<b>Journey to Work</b>	
Housing Units	1,595	Car Alone	0.42
Share of Corridor Housing Units	10.4%	Transit	0.25
Residential Acreage	193.20	Walk/Bike	0.05
Residential Density	8.26		
Gross Housing Units per Acre	3.20		
Median HH Income 1999	\$23,342		

Source: 2000 US Census

For the past two years the Midtown Community Works Partnership, a collaboration of public and private organizations and property owners, has been developing an implementation strategy for redeveloping the station area. The City and County have invested in street improvements along Lake Street, and are currently implementing a new plan to improve pedestrian connections within the station area, particularly under the elevated Lake Street station. These improvements are providing an incentive for developers, together with other housing and TOD funding tools being put in place. The MCWP has identified a need to fund façade improvements and other strategies to assist the numerous small businesses located along Lake Street, providing important local services and employment. The community recognizes the need to develop an action plan that can preserve affordable housing and local businesses, but that also maximizes the development potential around the new transit station to create more economic and community vitality.

The Hi-Lake Shopping Center, located in the northwest quadrant of the Hi-Lake station area, was recently purchased by a new owner who has reinvested in the property and is proposing a mixed-use residential and commercial development in the strip mall's existing parking lot. Other available sites are being bought up by land speculators or developers who are building small, opportunistic projects that are not making the highest and best use of property close to the station. 24 units of housing have been built three blocks east of the station, and 100 more are proposed three blocks to the west. Target is planning an upgrade that will bring the store up to the street and make it more pedestrian friendly. The Edison/PPL School site remains underutilized and there is vacant land behind it that will eventually be transferred to the city, perhaps providing an opportunity in the longer term for a transit village along the south side of Lake Street with direct linkages to the station. Monies from the Metropolitan Council's Livable Communities Demonstration Act were used to redevelop an underutilized 2.29-acre area to include two four-story mixed-use buildings on two blocks that are two to three blocks from the Lake Street LRT Station and across from Pioneer Cemetery. The project includes 96 affordable rental housing units, 41,000 sq. ft of commercial space (13 retail uses), 96 underground & 76 surface parking spaces, and 150 new employment opportunities.

## ***VII. Opportunities, Obstacles & Lessons: Development Response to Transit Investments Can Be Difficult to Anticipate***

The Minnesota light rail experience provides some fascinating observations and conclusions. Local city planners will be the first to say that the positive response to light rail by riders and developers has far exceeded their expectations. Planning for success is an extremely important lesson for local governments who are often not fully engaged in early project development and engineering, but who will play a critical role in the line's ultimate success and in addressing the challenges that face communities after opening day.

### *Major Opportunities for Mixed-Income Housing near Transit*

- **Transitioning Industrial Space Near Downtown; Strong Urban Housing Market**

Much of the recent development activity along the Hiawatha Line is located around the four stations in Downtown. The investment in the light rail bolstered market momentum towards the conversion of a formerly industrial area to higher density residential and mixed use, and the integration of mid and high rise condominium towers into the broader Downtown. The result is development oriented towards transit, greater activity throughout the day and evening, and a more walkable, vibrant place to live and work.

- **Well-established Bus Transit Ridership Prior to Building of Light Rail**

Prior to the building of the Hiawatha Line, a significant proportion of commute trips in the station areas were conducted by bus transit or walking (17 percent and 15 percent, respectively). The familiarity of the local population with transit helped bolster ridership on the Hiawatha to projected 2025 levels within two years of opening.

- **Corridors that Link Regional Destinations Contain Powerful Ridership and Development Potential.**

The ability of the Hiawatha Corridor to link suburban and urban commuters to downtown jobs, sports and theater events, medical treatment, and major retail and open space destinations has been central to the line's success. Integrating the travel needs of urban neighborhoods with suburban commuters has resulted in a dynamic line with ridership throughout the day and week. The region identified proximity to transit as an important factor in building a new baseball stadium near the proposed Northstar Commuter Rail line. The ridership characteristics associated with destinations like sports stadiums and airports is not well captured by current transportation models, yet they comprise an important part of this line's success both in terms of generating ridership, but also in terms of generating interest by developers. Proximity to these regional attractions, now better connected through transit, positively impact land values and real estate potential.

- **Station Area Planning and Active Community Participation Already in Place to Guide Future Development.**

The City of Minneapolis and Met Council took early steps to support local planning efforts along the corridor. The City's Corridor Housing Initiative, Pedestrian Overlay District, and Station Area Rezoning efforts provide information and opportunity to engage neighborhoods in defining redevelopment, identifying needed zoning changes, and understanding the linkages between density, design, affordability, and transit-oriented development. Strong and active neighborhood organizations and community development corporations exist along the corridor and remain active in approving future development and ensuring that community goals are achieved.

## ***Obstacles***

- **Very High Proportion of Existing Civic Land Uses in Corridor**

Over fifty percent of existing land uses along the corridor are classified as civic. The preponderance of civic uses is both a potential obstacle and an opportunity: civic owners should have more resources and more of a mandate to consider transit amenities in redeveloping their properties, but civic uses tend to be more fixed, are complicated to redevelop and are challenging to integrate with other uses. Civic owners and uses are also often indifferent to market influences and can be very slow in moving forward with planning and development. In particular, the three stations that are unincorporated federal territories have essentially no redevelopment potential as one is a national historic site and the other two are airport serving.

- **Multiple Jurisdictions Require Greater Regional Coordination**

In addition to connecting two cities, the line also includes the metropolitan airport authority and federal government. Strategic planning for balanced and inter-related land uses along the line is complicated by these divisions. The Metropolitan Council, as regional government, can play a role in addressing the coordination of transportation and affordable housing along the alignment. Housing and transportation challenges are regional in nature and can greatly benefit from efforts that better coordinate the policies and tools being developed by local jurisdictions, including county governments. The Metropolitan Council, as the regional entity that plays both a housing and transportation role, may be uniquely positioned to identify where gaps may exist and to help citizens and developers better navigate public resources to preserve and create mixed-income housing near transit.

## ***Lessons from the Corridor for Other Places***

- **Better Government Coordination During the Planning and Design Phases**

The State Department of Transportation played a critical role in the engineering, design and construction of the Hiawatha Light Rail line. While they quickly met the challenge of successfully building a new form of transportation in the region, stronger

inclusion of local city staff, community residents, and the private sector could have helped in siting some critical infrastructure. The location and design of the Franklin Avenue station, for instance, which limits neighborhood access and includes major utilities, limits redevelopment opportunity at this site and creates a significant cost barrier. Similarly, efforts are underway at the Hi-Lake station to make necessary pedestrian improvements to improve the access and safety of this area. Further along the corridor, neighborhoods are exploring ways to provide better pedestrian access and connectivity across the four-lane Hiawatha Highway that separates stations, located on the western right-of-way from neighborhoods located to the east. The alignment also resulted in some irregularly shaped land parcels that by themselves will be difficult to redevelop as TOD without some larger land assembly assistance.

- **Planning for Success and Proactively Addressing Neighborhood Change**

The majority of new development projects have thus far focused on the Downtown area given redevelopment opportunity and market momentum. Public intervention to maintain and provide new affordable housing opportunity is warranted if the market moves south into the low-income neighborhoods of Seward, Longfellow and Phillips. These communities have pockets of concentrated poverty and could benefit from strategies to build more mixed-income neighborhoods. The City and County should seize the opportunity to capture the value created by TOD and the market momentum to address concentrated poverty and to provide more affordable housing. Such a strategy requires policy tools that engage the private sector, and also a public commitment of funds for gap financing, rental subsidies, or other incentives before substantial redevelopment occurs. While recent development trends do not indicate that displacement is taking place yet in these neighborhoods, public, private and non-profit partners do need to develop coordinated policies to ensure equitable development along the corridor.

- **Capitalize on Market Strength to Leverage Community Benefits**

In downtown Minneapolis, 66 new projects have been planned or built since 2003. Forty-five of these are residential and seven contain some number of income-restricted and rent-subsidized units. While impact fees are illegal in Minnesota, it is possible to leverage community benefits from large development projects through developer agreements that link changes in use (i.e. increased density) and other entitlements to local community investments such as affordable housing. These types of programs need to be put in place prior to major rezoning and coordinated with public infrastructure improvements to be successful.

- **Create Incentives for More Compact Development and Inclusion of Affordable Housing**

Successful transit-oriented development requires large-scale projects as well as smaller infill projects in order to bring density, pedestrian activity, and mixed-use activities to neighborhoods. A high percentage of future development along the corridor will be on smaller parcels, much of it infill development. For these sites, density bonuses associated with community benefits such as inclusion of affordable housing units, green building techniques, preservation or creation of open space, and

sidewalk/streetscape improvements should be pursued. Such a strategy has been successfully used in a number of communities to capture the value of TOD and ensure that new development helps to build stronger neighborhoods benefiting new and existing residents. Providing incentives for increased density is a powerful way to also generate additional transit ridership and should be coordinated with reduced parking requirements for TOD projects.

- **Regional Leadership on Housing and Transit is Necessary Ingredient for Long-Term Success**

As the Twin Cities region seeks to make additional investments in fixed guideway transit, tremendous potential exists to meet the projected increased demand for housing near transit. However, retrofitting a region with transit service and development oriented towards transit requires tools and strategies beyond what any one jurisdiction can provide. A number of different regional actors are stepping forward to provide important pieces of the puzzle, but stronger regional coordination of investments and policies is important to the overall efficacy of transit-oriented development.

The next chapter discusses mixed-income TOD efforts occurring within Portland's streetcar corridor, connecting the Pearl District to the South Waterfront area via downtown and Portland State University.

## Chapter 8: Portland’s Downtown Streetcar Corridor

The Portland Streetcar in the Pearl District



Photo Courtesy of PDXHistory.org

### Corridor Snapshot

Transit Technology	Streetcar
Route Distance & Number of Stops	3 miles, 38 stops
Year Service Began	2001 (Pearl District and Downtown), 2006 (South Waterfront)
Daily Ridership	7,783 (2005 average)
Residents Within _ Mile Radius	Population—30,731, Households—19,555
Residential Density	39 Dwelling Units per Residential Acre
Median Income, 1999	Corridor (1/2 mile radius of stops) - \$27,921 Region - \$46,090

### ***I. Introduction***

Portland’s Downtown Streetcar continues the region’s tradition for innovative, comprehensive land use and transportation planning. The streetcar was financed by a mix of public and private funding. Its construction in formerly industrial areas adjacent to the downtown has spurred the creation of new vibrant neighborhoods. The State of Oregon forbids the use of inclusionary zoning and requires compact infill development as an outcome of urban growth boundaries around all urbanized areas. These two conditions have helped set the stage for the remarkable redevelopment of the Pearl District, north of the downtown, and the South Waterfront area south of downtown. New mixed-use neighborhoods have rapidly developed with mixed-income housing, shopping, employment, and public open space uses. Portland’s efforts can provide some critical lessons for creating mixed-income communities around transit across the United States.

Since the streetcar alignment was selected in 1997, over 7,000 residential units and almost 5 million square feet of non-residential space have been built or are anticipated to be complete by 2009 within the corridor. This amount of residential development in the corridor is especially remarkable given that only 8,005 units were built in the Portland *region* between 2000 and 2005. Prior to the mid-1990s, very little residential development had occurred in the downtown for some time and a considerable amount of pent-up demand for convenient, urban housing had built up. In parallel with the national housing boom, buoyed by low mortgage interest rates and economic trends, housing production accelerated in the late 1990s and early 2000s as the downtown market was established. The Portland region was home to 741,776 households in 2000 and is expected to grow by 54 percent to 1.15 million households in 2030. Of that growth, 27 percent of future households are projected to want housing near transit. Figure P1, below, summarizes the key actors and observations described in greater detail in the following pages of this chapter.

Figure P1: Regional Actors and Highlights

Key Actors	<ul style="list-style-type: none"> <li>• Metro, the only elected regional government in the country, has established a regional transportation and land use vision.</li> <li>• Tri-Met is the regional transit agency responsible for both transit planning and operations.</li> <li>• The City of Portland and the Portland Development Commission take a proactive role in local land use and development planning.</li> </ul>
Key Tools	<ul style="list-style-type: none"> <li>• Developer Agreements between the Portland Development Commission and private developers have set specific conditions and time scales for public and private revitalization efforts, and community benefits.</li> <li>• The first modern streetcar in the United States has been used to spur redevelopment in former industrial areas adjacent to the downtown.</li> </ul>
Obstacles to Mixed-Income TOD	<ul style="list-style-type: none"> <li>• Environmental contamination of industrial sites and recalcitrant property owners present two primary obstacles to TOD.</li> <li>• Because much of the mixed-income housing in the corridor is provided through Development Agreements, and not as part of a more comprehensive affordable housing strategy, it can be difficult to assess the levels of affordability that the development market will bear.</li> </ul>
Lessons for Other Corridors	<ul style="list-style-type: none"> <li>• Development Agreements provide an important tool for capturing value in the redevelopment of large (often formerly industrial parcels).</li> <li>• Development Agreements function best when made within a comprehensive transportation, land use, and design framework.</li> <li>• There is a range of tools beyond inclusionary zoning that can create mixed-income communities. These tools provide flexibility to respond to changing housing needs, but must be carefully managed to preserve certainty in the development process.</li> </ul>



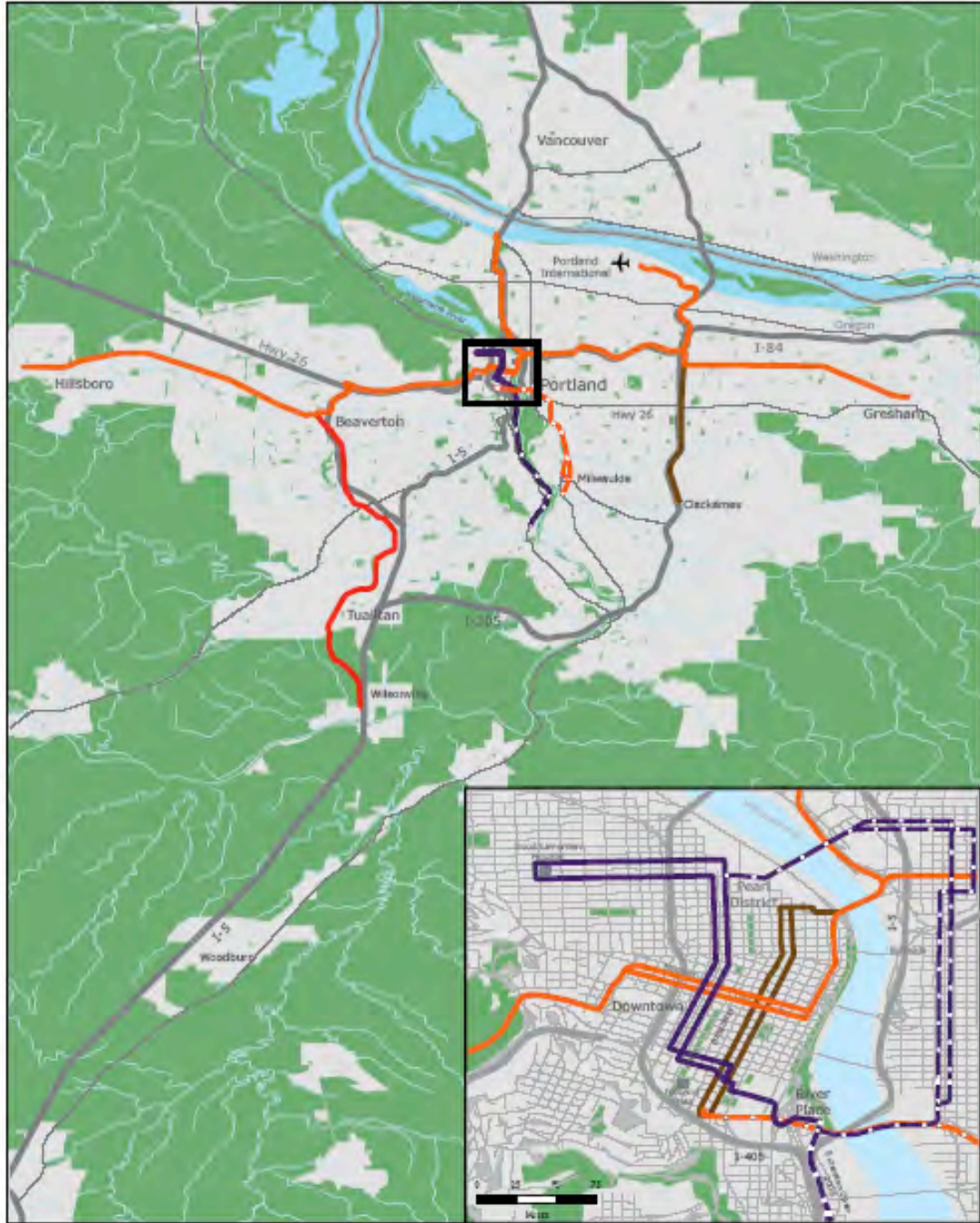
## ***II. Modern Streetcar Supports Housing and Redevelopment Effort***

Portland's central city, particularly the neighborhood known as the Pearl District, has undergone a major transformation since 1990. The Pearl District lies east of the I-405 freeway and west of the North Park Blocks and runs north from Burnside Street to the Willamette River. Land uses have both diversified and intensified in the past two decades. The Portland Streetcar has played a significant role in this transformation. Physically, the streetcar has enabled a greater density of development with lower parking ratios. Psychologically, the selection of the streetcar alignment in 1997 is pointed to by many as the key turning point in pushing development to a greater level of urbanism.

The Portland Streetcar is the first modern streetcar system to be built in the United States. As a part of Portland's broader strategy to improve mass transit throughout the region, the streetcar was built as a downtown circulator (see **Map P1**, next page for an overview of the regional transit rail network). The initial 2.4 mile segment of the line was completed in 2001 and subsequently extended twice: first to River Place south of downtown, and then to the South Waterfront area. The line now has 38 closely spaced stations, each a few blocks apart, allowing the streetcar to serve as a "pedestrian accelerator" and resulting in more walking trips and less demand for parking. During the spring of 2006, average weekday ridership exceeded 7,000, almost double the ridership number in 2001. As a transit application, the Portland Streetcar is smaller than typical light rail vehicles, but still use overhead electrical wires. Vehicles operate on the street mixed with traffic. Headways are short to medium in length and projected ridership is lower than other types of larger-capacity rail investments serving longer distances. Journey-to-work travel within the streetcar district consists largely of transit and walking trips (30 percent) without many auto trips (40 percent of total), verifying the circulatory role it plays both within the downtown area and between other transit options.

Portland used creative approaches to fund the streetcar construction. The cost of parking was increased from 75 cents to 95 cents per hour and the city issued bonds backed by future parking revenues to raise \$28.5 million. Property owners along the alignment agreed to form a local improvement district (LID), which provided another \$10 million. Tax increment financing contributed \$7.5 million, and a mix of other sources provided another \$11 million.

The streetcar connects major destinations within the central city, including Portland State University and Good Samaritan Hospital, and links to the regional light rail and bus system. In 2006 streetcar service was extended to the South Waterfront, another abandoned industrial site like the Pearl District but located south of downtown, in order to improve connectivity. While the Pearl District was being called this country's most successful redevelopment project, South Waterfront is almost double the size with twice the potential. Construction was already underway in 2006 on the first neighborhood, the \$2 billion Central District, covering 31 acres. The South Waterfront is now connected to the Oregon Health and Sciences University atop a nearby hill via aerial tram.



# Map P1 Portland Regional Transit

September, 2006



- Legend**
- Existing Light Rail Transit (LRT)
  - South Corridor Phase I (FD)
  - South Corridor Phase II (Proposed)
  - Streetcar
  - Streetcar Extensions (Proposed)
  - Washington County Commuter Rail (FD)
  - Major Freeways
  - Urban Areas
- LRT: Light Rail transit  
FD: Final Design

Source: Center for TOD + TriMet, 2006

### **III. Strong Regional Market Leads to Rising Housing Prices**

Between 2000 and 2005 the Portland region added 8,005 housing units, while occupancy rates remained relatively steady during that time period.<sup>1</sup> During the same period, median housing prices increased by \$71,000 to \$225,900; a 46 percent increase<sup>2</sup>. This increase in cost is reflected in the number of households spending 30 percent or more of their income on housing. The percentage of property owners in Portland spending that amount increased to more than 30 percent in 2005, up from less than 28 percent in 2000. Renters were disproportionately affected by the increases. In 2005, almost 53 percent of renters in the region spent more than 30 percent of their household income on housing<sup>3</sup>. Some researchers contend that housing costs have increased because the urban growth boundary has limited the land supply in the region. Regardless, Portland's housing prices are within the lower range of average home prices for West Coast cities.

The State's Metropolitan Housing Rule requires jurisdictions to set aside enough buildable land so that at least 50 percent of new residential units are attached single-family housing or multiple-family housing, or to justify an alternative percentage based on their particular circumstances. This rule, coupled with decreasing household size and increasing market demand for urban living, has caused an increase in the availability of multi-family housing. However, the State also adopted legislation forbidding inclusionary zoning. Thus, there's no regulatory mechanism to impose mixed-income requirements on new development.

The Portland Development Commission (PDC) consistently and effectively used land acquisition, public investments, and development agreements to forge public-private partnerships and achieve ambitious planning goals. These include the production of affordable housing, transit, and transit-oriented development as well as economic development and urban recreation. Most of the central city is included in one of several urban renewal areas and most new development has benefited from PDC investment either directly or indirectly.

### **IV. "Perfect Storm" of Transit, Land Use, and Market Readiness Fuels Redevelopment of Streetcar Corridor**

The streetcar wasn't solely responsible for leveraging the tremendous amount of development that occurred in the Pearl District. Rather, the streetcar is part of a "perfect storm" of planning and policy, development opportunities, and public-private investment. The following sections describe previous and current land uses, underutilized land, demographic characteristics, market conditions, local land use regulations, and transit-oriented development and affordable housing policies that have shaped downtown Portland's transformation.

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<sup>1</sup> Harvard Joint Center for Housing Study, *State of the Nation's Housing 2005*.

<sup>2</sup> Ibid.

<sup>3</sup> US Census, *2005 American Community Survey*, Selected Housing Characteristics.

## **Streetcar Serves High-Density, Mixed-Use Subareas**

Shown in **Map P2**, on the next page, and on Table P1, below, the land within a one-half mile radius of the streetcar corridor is comprised of several areas where different land uses are dominant. Prior to redevelopment, the Pearl District contained primarily underutilized industrial uses and included several very large parcels, including the Burlington Northern Railyard, Weinhard's Brewery and the Lovejoy Viaduct (an obsolete bridge off-ramp).<sup>4</sup> These three parcels were the major source of redevelopable land for mixed-use projects and contribute to the high overall percentage of current mixed-use land in the corridor, 11 percent.

**TABLE P1: Land Uses & Density, Portland Downtown Streetcar, 2005**

<b>LAND USES</b>	<b>Housing</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Mixed Use</b>	<b>Civic</b>
Within 1/2 mile radius of stops	<b>25%</b>	<b>53%</b>	<b>11%</b>	<b>11%</b>	<b>n/a</b>
<b>DENSITY/INTENSITY</b>	<b>Housing (DUA)*</b>	<b>Commercial (FAR)^</b>	<b>Industrial (FAR)^</b>		
	<b>39.13</b>	<b>1.41</b>	<b>0.04</b>		

Source: Center for TOD, Strategic Economics, City of Portland, 2006

In addition to the Pearl District, the streetcar serves Portland's central business district, where the majority of land uses are commercial, and the Portland State University. While there has been some intensification of uses in this area, much of the downtown was already built out to significant intensities prior to the creation of the Central City Plan (1988), which led to the transformation of the greater downtown and the building of the Streetcar.

The western edge of the area within one-half half mile of the streetcar is largely residential. This area was built out with a range of housing types, primarily attached, prior to the building of the streetcar. Currently, the corridor is more than twice the density of any of the other case study corridors examined in this report. The South Waterfront is currently undergoing considerable development. Most of the area south of the Ross Island Bridge (the southernmost bridge into the downtown), which appears vacant on Map P2, previous page, is under construction with residential towers, medical, and other office uses. This entire area was previously industrial. The aerial tram connecting the South Waterfront to the Oregon Health Sciences University, the city's largest employer, began operation at the end of January 2007.

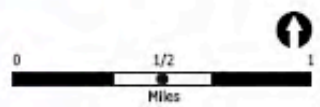
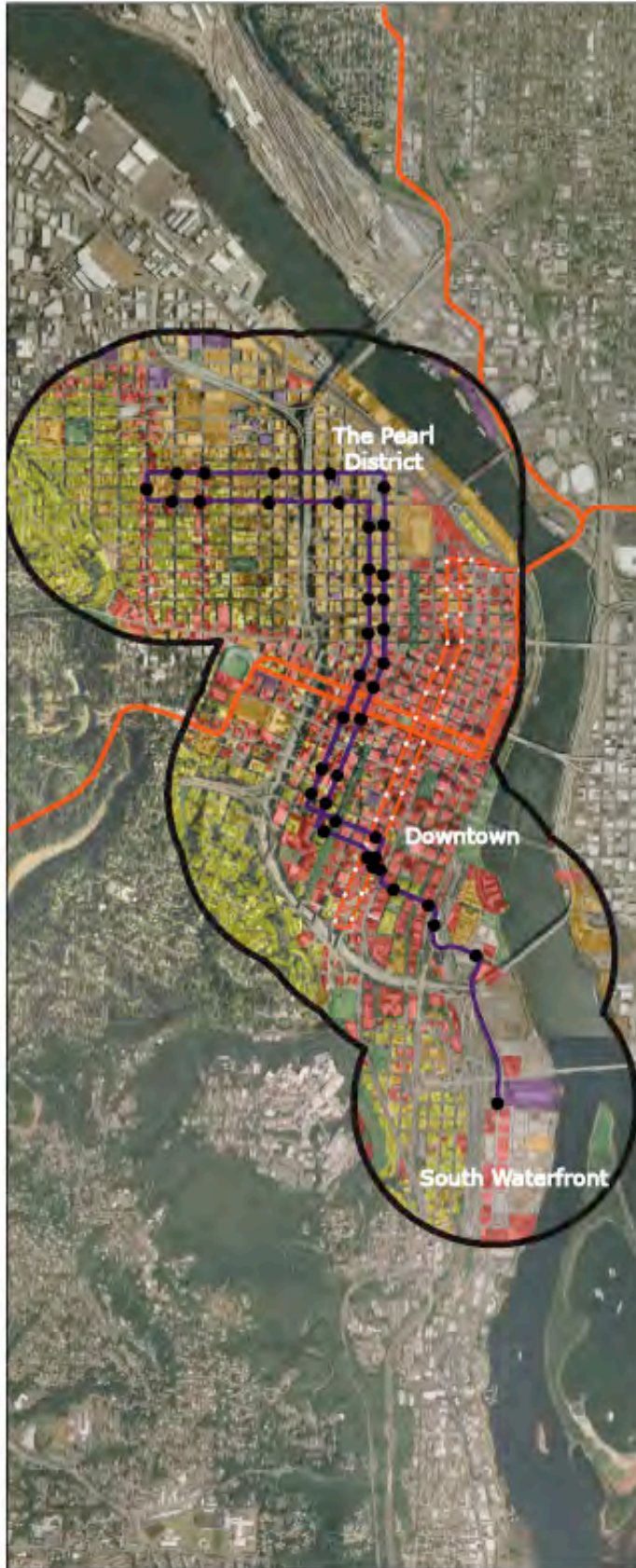
<sup>4</sup> An even more detailed discussion of the history and economic development impact of the Portland streetcar can be found in the publication, *Street Smart: Streetcars and Cities in the Twenty-First Century*, published by Reconnecting America in 2006.

# Map P2

## Existing Land Uses Downtown Streetcar Portland, Oregon

### Legend

- Existing Streetcar Stop
- Existing Light Rail Transit
- - - Planned Light Rail Mall Expansion
- Streetcar Line
- Land Use
- Residential
- Commercial
- Industrial
- Civic
- Mixed Use
- Vacant/Misc.



Source: Center for TOD + Metro, 2006

### ***Large Parcels of Underutilized Land Fueled Revitalization Efforts***

One of the most important lessons of the Portland Streetcar is the high degree of synergy between new transit investment and transitioning obsolete industrial parcels, provided the market exists and appropriate infrastructure is put in place. A large amount of obsolete, industrial land existed in large parcels close to downtown prior to the streetcar investment. The PDC worked to stimulate the private market by investing in new housing, commercial opportunities, and open space. The city also rezoned an additional 40 acres of industrial land that had served as a warehouse district to allow for more commercial and mixed-use development.

The relatively small number of property interests in these areas allowed for master planning of whole new neighborhoods. It also allowed the City to leverage significant contributions to the construction of the streetcar and many other critical public infrastructure improvements<sup>5</sup> necessary to create balanced, higher-density places. The high value of new development in these areas has produced a sizeable stream of tax increment funds.

The following table, **Table P2: Existing Land Uses, Demographics, Zoning, New Development & Planning Efforts, Downtown Streetcar (2001, 2006), Portland, Oregon**, summarizes the above-discussed existing land use patterns, as well as demographic characteristics, zoning, new development projects, and planning efforts. Because the 38 stations are located quite close to one another, they are grouped into six areas with roughly similar characteristics. In addition to the sheer number of new development projects within the corridor, it is important to note that a number of these have included mixed-income or affordable residential units. The Pearl District displays some of cutting edge architectural and green building design. Affordable and mixed-income projects are blended with market rate housing with essentially no noticeable differentiation in design, quality or appearance.

### ***High-Intensity Zoning Tied to Public Improvements***

Land use and zoning designations in the greater downtown are predominantly high-intensity commercial, higher-density residential (26 DUA or higher), vertical mixed-use, and a special category called employment that allows a mix of uses. The major development agreements for the Pearl District and South Waterfront tied the level of required density to various improvements in public infrastructure. When the Lovejoy Viaduct (an unnecessary off-ramp from the Broadway Bridge, which no longer needed to be elevated to accommodate freight rail activity) was removed, required minimum densities increased from 15 to 87 dwelling units per acre (DUA). Required densities increase to 108 DUA with the commencement of the streetcar construction and increased again to 131 DUA with the construction of the first neighborhood park. Hoyt Street Properties is now requesting additional density for the final phases of build out in the Pearl and the City is negotiating for the development of a third neighborhood park.

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<sup>5</sup> For example, two new, highly innovative and successful parks were built as part of the Pearl district and a third is under consideration for the final phase of development of the Pearl.



**TABLE P2: Existing Land Uses, Demographics, Zoning, New Development & Planning Efforts, Downtown Streetcar (2001, 2006), Portland, Oregon**

Grouped Stations (see Map P3)	Existing Land Uses	Key Demographic Indicators, 2000 <sup>1</sup>	Current Zoning	Recent, Planned and Proposed Development <sup>2</sup>	TOD Land Use Planning Efforts
Station Group #1 (Northwest Portland)	Vertical Mixed Use Residential Corridor Retail	Median HH Income: \$28,000 % Owner-Occupied: 13% Average HH Size: 1.39	High Density Res Medium Density Res Vertical Mixed Use	5 projects total: 2 market-rate residential 1 MR mixed-use res 1 hotel 1 retail	Numerous extensive and intensive planning and re-zoning project were conducted through out greater downtown Portland from the e. 1990s to e. 2000s in support of the streetcar improvements and creation of new downtown neighborhoods and job centers.  Although many of the ultimate uses changed over time, the Central City Plan (1988) was the major comprehensive plan for the greater downtown that introduced the idea of significant intensification and expansion of the downtown into the adjacent industrial areas.
Station Group #2 (Pearl District)	Vertical Mixed Use Residential		Employment DT Residential	21 projects total: 5 residential (1 affordable) 8 mixed-use residential (2 mixed income) 4 mixed-use office 1 retail 1 office 1 hotel 1 parking	
Station Group #3 (Pearl District)	Vertical Mixed Use DT Commercial		Employment DT Commercial	20 projects total: 5 residential 8 mixed-use residential (1 affordable) 5 mixed-use office 1 mixed-use industrial 1 civic	
Station Group #4 (CBD)	DT Commercial		DT Commercial	8 projects total: 1 MU affordable res 5 civic 1 office 1 mixed-use office	
Station Group #5 (Museum Blocks, Portland State U & CBD)	DT Commercial Medium Residential		DT Commercial High, Medium & Low Density Residential	19 projects total: 4 residential (1 affordable) 5 mixed-use residential (1 affordable, 1 mixed-income) 2 mixed-use office 7 civic 1 parking	
Station Group #6 (RiverPlace & South Waterfront, 2006 Streetcar extension)	Vacant Land Commercial Residential Industrial		Commercial Medium Density Res Low Density Res Vertical Mixed Use Industrial	6 projects total: 4 mixed-use MR res 1 civic 1 hotel	

<sup>1</sup>Demographic characteristics are for the entire line, as stops are quite close to one another.

<sup>2</sup>Projects included are within 2 blocks of a streetcar stop and were built, planned or proposed since 1997, when the alignment was chosen. **Map P3** shows fewer projects than this matrix, as several projects are immediately adjacent to one another and overlap when mapped.

Source: Strategic Economics, City of Portland, Portland Streetcar, Inc., 2006.



### ***New Development Has Altered Previous Corridor Demographics***

In 2000, the population living within a one-half mile radius of future streetcar stops had considerably smaller household sizes, lower incomes, and were much less likely to own the housing units in which they lived than the population of the region as a whole (see **Table P3**, below). All three of these characteristics: a household size of 1.39 persons, median income level of \$27,921, and only 12.8 percent owner-occupied units, are the smallest and lowest, respectively, of all of the case study corridors.

**TABLE P3: Demographics & Journey to Work, Corridor & Region, Downtown Streetcar, Portland, Oregon 2000**

<b>DEMOGRAPHIC CHARACTERISTICS</b>	<b>Population</b>	<b>Households</b>	<b>Average HH Size</b>	<b>Median HH Income</b>	<b>Median Age</b>	<b>% Hsg Units Owner-Occupied</b>
Streetcar (within 1/2 mile of stops)	30,731	19,555	1.39	\$27,921	37	12.8%
Region	2,265,223	867,255	2.56	\$46,090	35	59.4%
<b>JOURNEY TO WORK</b>	<b>Car Alone</b>	<b>Car Pool</b>	<b>Transit</b>	<b>Walk/ Bike</b>		
Streetcar (within 1/2 mile of stops)	0.38	0.05	0.19	0.32		
Region	0.73	0.09	0.06	0.04		

Source: Center for TOD, Strategic Economics, US Census 2000

Typically, these factors contribute to making an area vulnerable to change because the population is more likely to be transitory and disenfranchised. It is highly likely that the demographic profile of the station areas has changed since 2000, given the degree of new development that has occurred in the Pearl District and the number of new, wealthier homeowners that have moved into the corridor. The degree of displacement is difficult to assess without more detailed analysis, but civic and political leaders are concerned that they are losing the affordability battle. Because this was previously an industrial area, the majority of new development has resulted in new housing, rather than the replacement of older, lower-value housing with more expensive units.

Some single-room occupancy hotels near Burnside Street have been redeveloped since 2000, but there is still a considerable stock of subsidized affordable housing in the western part of Downtown and some new affordable housing units have been added as part of the new development in the Pearl District. (See further discussion of mixed-income housing strategies on page 14.) Overall, the pace of new affordable housing production throughout the region has not kept up with redevelopment and conversion.

Households living within the streetcar corridor transit zones also were more likely to use transit for commuting to work than households located elsewhere in the region. Most striking, and reflective of the urban environment and proximity to central business district, over 30 percent of households walk or bike to work and less than 40 percent commute by automobile. In contrast to other case study corridors, the Portland region's mode split stands apart, particularly relative to its size.

### ***Downtown Market Spurs Ambitious Revitalization Projects***

In the 1980s, PDC introduced financial incentives for downtown housing, which resulted in several projects along the South Park Blocks. A new downtown housing market was also pioneered by artists and others in need of large, loft-like work/live spaces through the small-scale adaptation of historic warehouses in the industrial area now known as the Pearl District. At the same time, the City was planning for the transition of this area and the South Waterfront from obsolete industrial uses to more valuable and intense office uses that would integrate with the adjacent CBD office centers. However, in the early 1990s, the office market plummeted and in 1994, a 34-acre portion of the Burlington Northern Railyard was obtained by a developer, Hoyt Street Properties, with a housing vision for the area. Hoyt Street Properties subsequently acquired a large portion of the South Waterfront industrial properties, pioneered the phased development of mixed housing and retail through out the 1990s in the Pearl District. This development activity accelerated in 1997, after Hoyt Street Properties reached a development agreement with the PDC.

Hoyt Street Rail Yards, Prior to Redevelopment

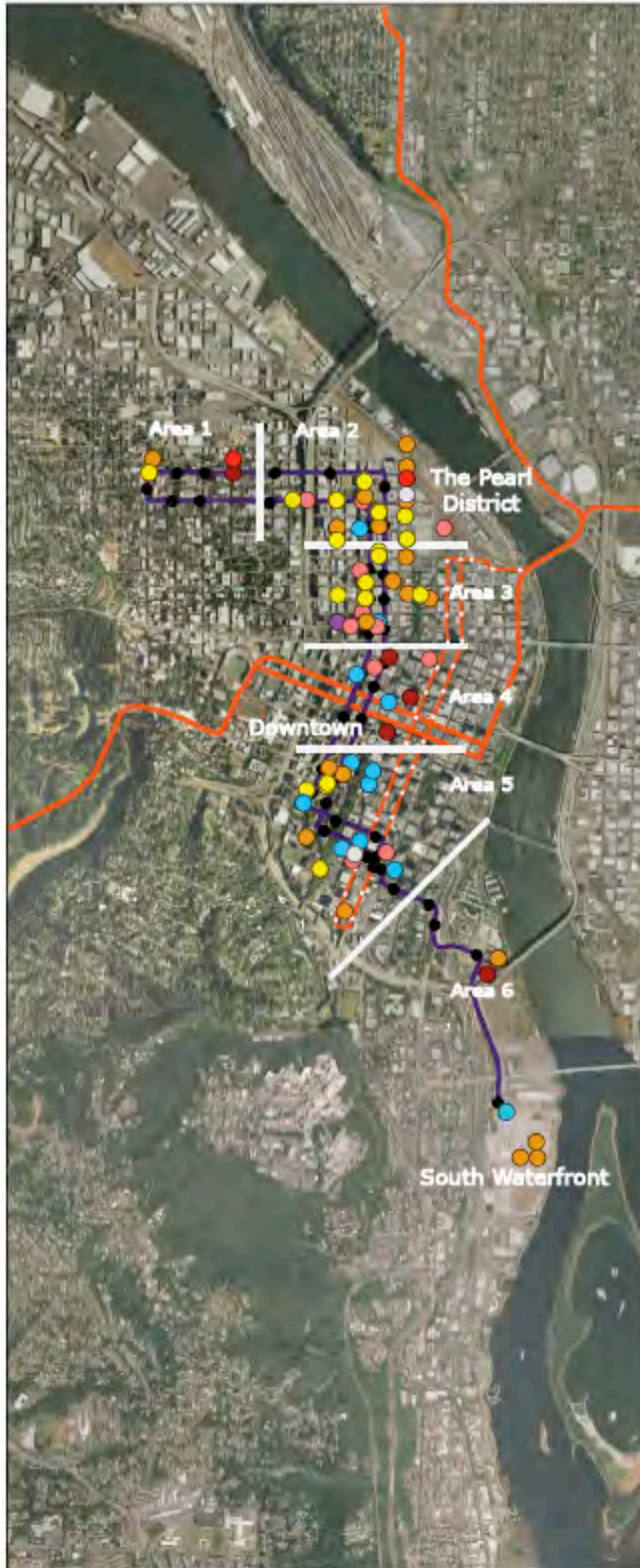


*Photo Courtesy Hoyt Street Properties*

In 1999, office development also came to the Pearl District, with the Weiden & Kennedy headquarters and several more projects thereafter. A second major phased development project in the Pearl District was the redevelopment in 2000 of the five-block Blitz-Weinhard Brewery into mixed housing, office, and retail.<sup>6</sup> Currently, the condominium and rental housing and office markets are well established in the Pearl District with additional projects planned through 2009. As can be seen on **Map P3** and detailed in **Table P2**, a total of 41 projects have been built or are planned for construction since 1997 in the Pearl District.<sup>7</sup> Of these, nine are mixed-income or affordable residential.

<sup>6</sup> Gloria Ohland and Shelley Poticha, *Street Smart: Streetcars and Cities in the Twenty-First Century*. Reconnecting America: November 2006, see discussion of Developer Agreements by Vicki Quick (pp. 58 – 62).

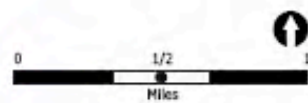
<sup>7</sup> All projects described are within a two-block radius of a transit stop.



**Map P3**  
 Recent, Planned + Proposed  
 Development (1997 - 2009)  
 Downtown Streetcar  
 Portland, Oregon

**Legend**

- Existing Streetcar Stop
  - Existing Light Rail Transit
  - - - Planned Light Rail Mall Expansion
  - Streetcar Line
- Recent Development
- Residential
  - Mixed-Use Residential
  - Retail
  - Office
  - Hotel
  - Civic
  - Parking
- \* Projects Shown are within a 2 block radius of stations  
 \* Some projects may not show up due to overlapping dots



Source: Center for TOD + Strategic Economics +  
 City of Portland, 2006

In addition to the massive amount of development that has occurred in the Pearl District, considerable housing and new civic projects have been built since 2000 or are planned for construction in the next couple of years in the area surrounding the South Park Blocks. A total of 19 different projects have been built or are planned for construction since 1997 in this area, including the Museum Place Project, a mixed-income project that the PDC assisted through site assembly and developer negotiations.

The Pearl District Today



*Photo Courtesy Hoyt Street Properties*

The South Waterfront area is now the major focus of construction activity in the greater downtown. Its redevelopment involves street improvements, streetcar service, and an aerial tram (another transportation innovation). Given the success of the mid-rise projects in the Pearl, developers and real estate investors feel sufficiently confident in the Portland urban housing market to finance and build high-rise projects in the South Waterfront. At full build-out in 2015, South Waterfront will have 3,000 housing units and 10,000 jobs. Four different projects, including three 23- to 31-story condominium towers with ground floor retail and an extension campus of the Oregon Health Services University are currently under construction.

In less than a quarter of the South Waterfront district's 130-acre total land area, the following public goals will be achieved:

- Creation of 5,000 jobs, half the projected job growth for the entire district;
- Development of 2,700 of the 3,000 housing units planned for the district, and 430 of the proposed 788 units of affordable housing proposed;
- A one-quarter mile riverfront greenway at an average width of 125 feet (a 100-foot setback was planned for the entire district);
- Transit system development, including streetcar, tram, and bus; and,
- Improved environmental conditions and sustainable building practices throughout.

## ***V. Creating Mixed-Income Communities: Affordable Housing Integrated into Larger Development Projects***

The City of Portland and PDC have responded to affordable housing advocates by including income diversity in the transformation of the Pearl District and South Waterfront areas. State law prevents the use of inclusionary zoning as an affordable housing tool, but does require a provision for a mixture of housing types that has created a relatively high percentage of multi-family units relative to other regions.

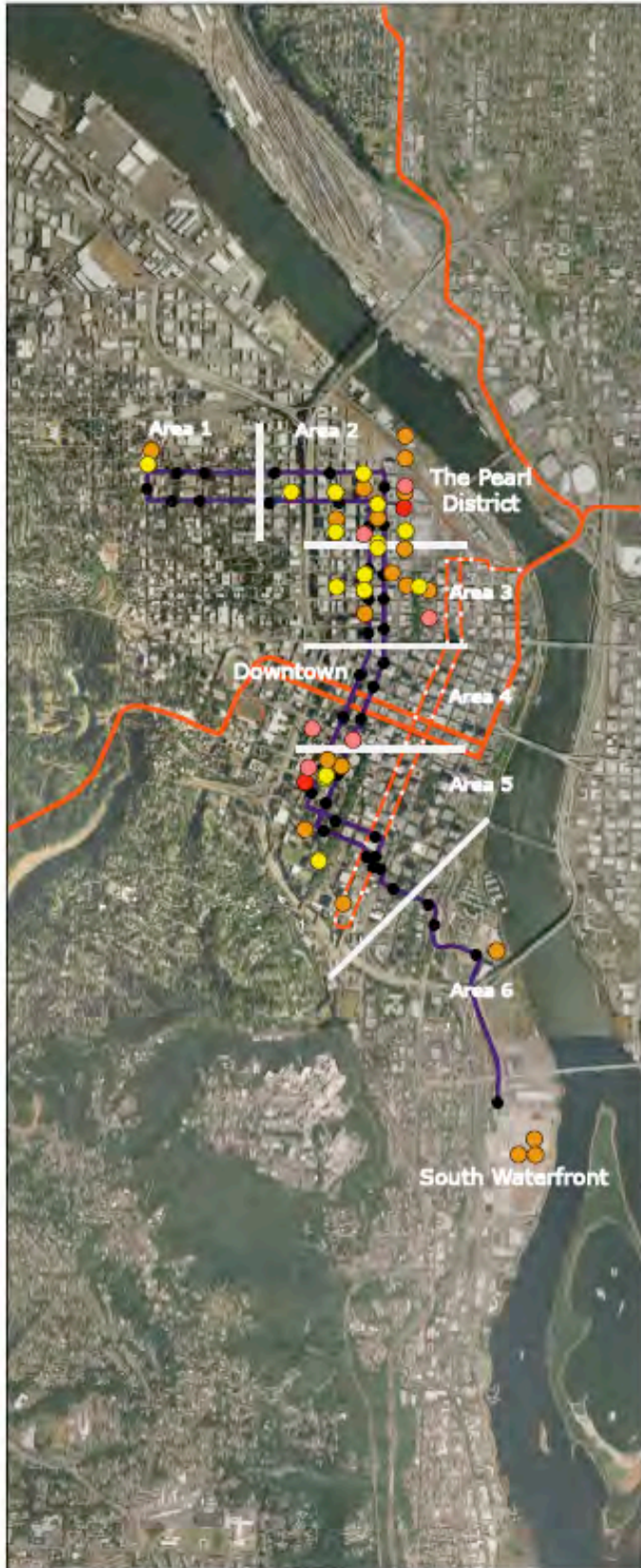
A View from the Sitka Apartments, One of Several Affordable Housing Projects



*Photo Courtesy Ed McNamera*

Approximately 19 percent of the total new or significantly renovated residential and mixed-use/residential development projects built within a two-block radius of the transit stops are affordable or mixed-income projects (see **Map P4**, next page). Of the total 7,248 dwelling units built during this time frame, approximately 1,243, or 17.1 percent, are affordable to low- or moderate-income households. Detailed information regarding the level of affordability in each project was not available. However, anecdotal information suggests a range of affordability, from 180 units of low-income family units at 30 percent of area median income (AMI), to 120 units of transitional housing in the Danmore project and 203 units of affordable to households at 50 to 60 percent AMI in the Sitka project pictured above.

In laying out the affordability goals for the creation of the Pearl District and, more recently, the South Waterfront area, the City and affordable housing advocates took an explicitly mixed-income approach. Because state property law does not allow inclusionary housing ordinances, affordable housing in the major redevelopment projects in the Pearl District was achieved via the development agreements that governed new



**Map P4**  
 Residential Development  
 (1997-2009)  
 Downtown Streetcar  
 Portland, Oregon

**Legend**

- Existing Streetcar Stop
- Existing Light Rail Transit
- - - Planned Light Rail Mall Expansion
- Streetcar Line
- Recent Development
- Market Rate Residential
- Market Rate Mixed-Use Residential
- Affordable Housing
- Affordable Mixed-Use
- 1/2 Mile Station Area Radius
- \* Projects Shown are within a 2 block radius of stations
- \* Some projects may not show up due to overlapping dots



Source: Center for TOD + Strategic Economics +  
 City of Portland, 2006

development.<sup>8</sup> Negotiations over the development agreement with Hoyt Street Properties included city-wide affordable housing advocates, such as the Portland Organizing Project. It was agreed that the ratio of affordable- to-market-rate housing should mirror the income distribution of the city as a whole over time, with each new phase of development to be matched to current city demographics. While in hindsight some affordable housing groups feel that greater levels of affordability could have been achieved given the success of Hoyt Street's projects, at the time, there was a concentration of affordable housing in western downtown and very little market-rate housing in downtown as a whole, and the depth of the market for high-end housing was unknown. Based on the success of the Pearl District, the PDC in 2003, negotiated a development agreement with North Macadam Investors (NMI), which controls much of the South Waterfront area. It is arguably the biggest developer agreement in Portland's history, given the area and money involved, the number of players, and the complexity and scope of the commitments. The same guiding principle of matching the requirement to existing city-wide income categories is being applied in the South Waterfront. Included in the developer agreement between PDC and NMI is the construction of 400 to 480 market rate condominiums and 30 affordable condominiums, as well as 100-150 market rate apartments and 200 affordable apartments.

## ***VI. Local Policy Tools: PDC Leads Coordination of Public and Private Entities***

Nationally, the Portland region is seen as a model of coordinated land use and transportation planning that is based on significant community involvement and vision. While public sector actors and organizations have played a key role in the city's establishment of a vision for redevelopment, implementation of the vision can be credited to private sector players committed to an environmentally and socially sustainable future.

The streetcar's success results from a number of factors, including Portland's investment in pedestrian, bicycle, and transit improvements, and historic commitment to urban planning detailed in the 1988 Central City Plan and reinforced by regional and state land use policies and law. A network of powerful activist neighborhood associations, together with strong local political leadership and a group of forward-looking developers, all worked together to implement policies supportive of both the planning and finance of the urban redevelopment, including the streetcar.

The PDC has taken a lead role in coordination of development activity in along the streetcar corridor. Created by Portland voters in 1958 as a special purpose government agency, the PDC serves as the city's urban renewal, housing, and economic development agency. A board of five volunteer citizens appointed by

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<sup>8</sup> Affordable units at low and median income affordability levels were paid for by Hoyt Street via subsidy from the market rate units; very low income units provided at rents affordable to households at below 50% local family median income received some public subsidy.

the Mayor and approved by the City Council governs the PDC. The agency's executive director reports to the board on the work of 200 PDC professionals in an array of relevant areas, including real estate development, finance, construction, urban planning, project management, economic and community development, architecture, and law.

The PDC's urban renewal work is funded primarily by tax increment financing by which future tax revenues pay for revitalization efforts in designated areas of the city. Based on extensive input from the community and PDC, the City Council creates an Urban Renewal Area by establishing its boundaries, adopting a plan for improvements, and setting the baseline tax revenues that will continue to be collected as normal. The city then issues urban renewal bonds to pay for those improvements based on the expected property value increases. As property values increase with new investment, the increase in property tax revenues is used to pay off the bonds. Once they are paid off, all tax revenues within the district become part of normal property tax collections.<sup>9</sup>

Equally critical were the establishment of the River District (includes the Pearl District) and North Macadam (includes South Waterfront) Urban Renewal Areas in 1998 and 1999, respectively.<sup>10</sup> The Streetcar Local Improvement District, a property assessment on non-owner occupied residences, was created to help fund the Downtown Streetcar and other improvements.

Various other local policy, financing, and funding tools with potential application in other places are summarized in **Table P4**, on the following page.<sup>11</sup> They represent a variety of tools available both to subsidize affordable housing and to promote transit-oriented development. TriMet, the regional transit authority, is a national leader in joint development of properties along its multiple transit corridors. The City is also a strong player in supporting TOD, and TOD tax abatements are authorized by the State to provide additional incentives for developing near transit.

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<sup>9</sup> Gloria Ohland and Shelley Poticha, *Street Smart: Streetcars and Cities in the Twenty-First Century*. Reconnecting America: November 2006.

<sup>10</sup> The new URAs also benefited from the funding available from the Downtown Waterfront URA, established in 1974 in the central waterfront portion of the Downtown, and Portland's most successful URA district.

<sup>11</sup> A variety of general tools, including overall State funding for affordable housing/subsidized housing are also being used in the Twin Cities region. These tools are discussed in Appendix A of the report. Table P4 highlights those specific to promoting TOD or have a linkage between affordable housing and proximity to transit, or creating mixed income communities.



**TABLE P4: TOD & Affordable Housing Policy, Financing & Funding Tools, Downtown Streetcar, Portland, Oregon**

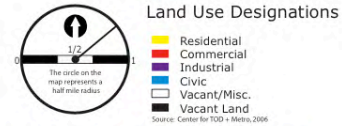
Tool	Intended Funding Agent/Implementing Agent	For use by:	Policy	Funding/Financing	Affordable Housing	Mixed Income (MI)	TOD	Description	Example
Public Parking Garages Revenue Bonds	City							Financed streetcar	Portland streetcar
TOD Property Tax Exemptions	City			X	X	X		TOD tax abatements support high-density housing and mixed-use developments affordable to a broad range of households on vacant or underutilized sites along transit corridors whose design and features encourage building occupants to use public transit. Projects must be located within one-quarter mile of a light rail station or selected bus corridors. Projects are exempted from ad valorem taxes on the value of the improvement for a 10-year period.	Arbor Vista Condominiums are 27 for-sale units located adjacent to Jefferson Street MAX station. Approximately two-thirds of the units were sold at market-rate, while the other third were reserved for a special financing program in which Innovative Housing provided a second mortgage that made the unit more affordable. Each homeowner purchasing the below-market units received a 10-year property tax abatement on the improved value of the home.
Affordable Housing Incentive Fund (AHIF)	County	Developers & Cities	X	X	X			The Program supports a variety of affordable housing initiatives that serve low-income families, youth, seniors, homeless families and adult, and people with disabilities. Most of the projects chosen for funding are linked to transportation, local employment, schools and supportive services. Loan funds are available to fund the acquisition of property, other activities necessary to take title to property, or to fund a portion of the cost of a contract purchase of property for rental, multifamily for-sale housing or Mixed-Use developments that meet the programmatic objectives of the Urban Renewal Area or a special initiative of the PDC.	Over the past six years, \$23.6 million in AHIF funding has created or preserved 3,350 housing units (including 2,680 affordable units) and leveraged more than \$470 million in additional public/private financing. The Board recently approved \$4 million in 2005 funding for 16 projects that help create 1,427 housing units throughout the county, including 563 affordable units.
Direct Financed Acquisition Loan	City	Developers		X	X	X	X	An Equity Gap Contribution (EGC) provides public funding for rental or Mixed-Use projects that provide public benefits and are owned by Eligible Non-Profit Organizations. An EGC is intended to fund the difference between the projected project costs and available sources of construction and permanent financing.	
Equity Gap Contribution	City	Developers		X	X	X	X	HDSLs are subordinate loans with favorable terms that are used to fund projects that provide public benefits and demonstrate a financial need. The HDSL may be used for new construction or rehabilitation of existing residential, rental and Mixed-Use properties that will predictably generate sufficient cash flow to allow regular periodic payments on the HDSL.	

Tool	Intended Funding Agent/Implementing Agent	For use by:	Policy	Funding/Financing	Affordable Housing	Mixed Income (MI)	TOD	Description	Example
<b>TABLE P4: TOD &amp; Affordable Housing Policy, Financing &amp; Funding Tools, Downtown Streetcar, Portland, Oregon (continued)</b>									
Tool	Intended Funding Agent/Implementing Agent	For use by:	Policy	Funding/Financing	Affordable Housing	Mixed Income (MI)	TOD	Description	Example
Non-Profit Acquisition Financing Loan	City	Non-profit developers		X	X			Acquisition loans are designed to fund acquisition of property and other activities necessary to take title to property for low or moderate income housing.	Example
Nonprofit Facility Loans	City	Non-profit developers		X	X	X		The Nonprofit Facility Loans are loans with favorable terms that are used to fund costs of development associated with the acquisition, rehabilitation or construction of service facilities that provide space for delivery of services to a) primarily Low- or Moderate-Income residents, or b) designated Low-Income neighborhoods within the City of Portland.	Example
Vertical Housing Development Zone	State	Developers		X			X	Vertical Housing Development Zones subsidize "mixed-use" projects, to encourage denser urban-style development or redevelopment, which also will tend to induce greater utilization of alternative transportation modes.	
Sales of excess right-of-way	Transit Agency	Developers					X	The Gresham Central Apartments is a 90-unit housing development located at the Gresham Central MAX station. The design creates a pedestrian-friendly street that facilitates the residents' access to downtown by walking, bike or transit. Additionally, the completed project forms a land-use bridge between the downtown and the transit station.	
Oregon "Bike Bill" ORS 366.514	State	Municipalities	X				X	Requires the inclusion of facilities for pedestrians and bicyclists wherever a road, street or highway is built or rebuilt by ODOT, municipalities, or counties. Minimum spending of 1% of highway funds.	
Multifamily Housing Tax Credit Bonds	City			X	X			The Belmont Dairy established a new standard for inner-city redevelopment in Portland. Land uses for the 21st Century that promote the preservation of history, urban density, affordability and utilization of existing infrastructure that provides easy access to public transit, bicycle, and	

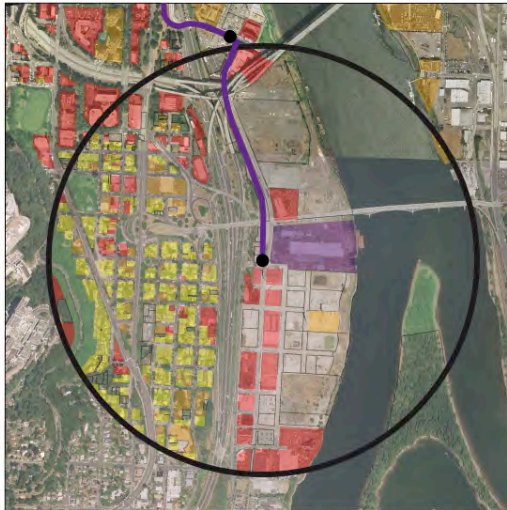
## VI. TOD and Housing at the Station Area Level: Ongoing Revitalization of the South Waterfront Station Area

Map P7

South Waterfront Transit Zone  
Portland Streetcar  
Portland, Oregon



Land Use



Vacant Land



**Map P7** shows the redevelopment potential within the South Waterfront transit zone. Very little existing housing surrounds the station, and what is included in the one-half mile radius is separated from the station by a large arterial. For decades this area has been largely isolated from the downtown and nearby residential neighborhoods because of topography and transportation infrastructure, including proximity to I-5. Significant redevelopment potential exists within the station area. The streetcar investment was strongly promoted by the City and development community as a tool to redevelop this former industrial area and extend the downtown economic vitality and high-quality urban design along the Willamette River.

In response to the streetcar investment and incentives provided by the PDC, the Oregon Health and Sciences University (OHSU) has partnered with the City and local developers to construct several new mixed-use buildings connected to the University by an aerial tram that opened in January 2007. The first new OHSU building opened in October 2006. As noted earlier in this chapter (see discussion on page 149), the PDC entered into an agreement with North Macadam Investors to redevelop the South Waterfront station area and provide a substantial increase in housing, including an agreement for mixed income housing units, and a mix of commercial, retail and office space. OHSU is a primary tenant of the new office space, and also will develop student housing located near the station.

## ***VII. Opportunities, Obstacles & Lessons: Comprehensive Planning and Favorable Conditions Facilitate Implementation and Allow for Value Capture***

One of the most significant findings from the Portland Streetcar Case Study, is the powerful role that developer agreements can play in stimulating developer that supports a range of community benefits, including creating transit-supportive development. Hoyt Street Properties has stated that the levels of density could not have been achieved in the Pearl District without the streetcar, given the amount of parking that would otherwise have been necessary. Planning staff emphasized that the speed with which development moved forward in the Pearl District after the negotiation of the developer agreement was in part due to an unusual amount of flexibility allowed in the agreement and the good faith of all parties in implementing its requirements.

### ***Major Opportunities for Mixed-Income Housing Near Transit***

- **Large Obsolete Industrial Parcels Create Opportunities for New Neighborhoods**  
The extent of large, single-owner parcels with obsolete industrial uses adjacent to the downtown in both the Pearl District and the South Waterfront is an extremely significant opportunity. Portland wasn't just planning for in-fill development, it was creating whole new neighborhoods and was able to design new infrastructure and urban amenities accordingly. These parcels created the framework for developing public-private agreements that included affordable and mixed-income housing goals.
- **Pent-up Demand for Urban Housing Creates Market for Urban Housing**  
Prior to the development of the Pearl District, very little housing existed in the downtown. High-quality, high-density housing and urban amenities were largely absent as a product type in Portland.<sup>1</sup> The streetcar and coordinated redevelopment benefited from pent-up demand that coincided with demographic trends such as down-sizing baby boomers and population growth to make a new type of urban housing type viable, and in fact, highly sought after.
- **Developer Acquisition of Land Prior to Up-Zoning Allows for Public Amenities**

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<sup>1</sup> Prior to the development of the Pearl District, Homer Williams, the major visionary in the Williams & Dame-led development team at Hoyt Street Properties, had done primarily single-family development projects. However, after looking at the many potential amenities of the area and evolving demographic shifts, he and the rest of the development team took a significant risk in building a higher-density, transit-oriented product type new to them and to Portland. Mr. Williams is now also a key property owner/developer in the South Waterfront, leading the first projects being built in the North Macadam areas. PDC has been the conduit for millions of dollars in public investment throughout the districts served by streetcar.

Hoyt Street Properties and the City of Portland were able to acquire large portions of the Burlington Northern Railyard prior to the significant escalation in property value that accompanies up-zoning. Because the purchase of the land did not absorb the majority of value to be created by new development, as it typically does, development was able to contribute more to local amenities and affordable housing production.

- **Streetcar Technology Has Lower Costs and Simpler Implementation**

The total cost of the first three phases of the Downtown Streetcar, including the Downtown, Pearl District and extensions to South Waterfront was \$88.7 million, with the average cost per track-mile ranging from \$13 to \$25 million for each phase. This is significantly less expensive than light rail, which has ranged from \$20 to \$60 million per track-mile in recent projects. Additionally, because construction of streetcar track is less intensive and the cars are smaller, the design preserved on-street parking and allowed shared use of the streetcar lane with autos, all of which minimized the impact of construction and encouraged local business and property owner support of the project.

- **Creative Financing of Transit**

The Portland Streetcar was largely financed through local sources (revenue bonds on a public parking garage rate increase, tax increment financing from the Urban Renewal Areas and property assessment through a local improvement district), an unusual approach that allowed more local control and flexibility in planning and implementation.

- **Lack of Significant Numbers of Existing Residents in Redevelopment Areas**

One of Portland's significant opportunities in planning for and implementing new higher-density downtown neighborhoods was the relative lack of population in the industrial areas that were being redeveloped. The lack of existing residents has meant little or no community opposition to adjacent development projects or higher residential densities, and has also not created significant displacement of low-income households.

## ***Obstacles***

- **Lack of Existing Infrastructure Increases Cost of Redevelopment**

Given the industrial nature of the uses in these areas and the large parcelization pattern prior to the streetcar investment, few of the amenities and basic infrastructure necessary to quality residential or mixed-use neighborhoods existed in the Pearl or South Waterfront. Public funding was required to provide improved road networks, open space or civic amenities prior to redevelopment. Requirements were also included in the developer agreements to require a private sector contribution, and while necessary to successfully redevelop the area, significant cost from both private and public sectors was required.

- Contamination on Large Industrial Sites Adds to Legal and Cost Barriers**

Much of the former railroad property proved to be contaminated, though the extent of contamination was not known until detailed testing was performed in 1997. Developers and the PDC worked with the Oregon Department of Environmental Quality to determine appropriate levels of abatement and were ultimately allowed to cap the soil and build on top, rather than remove any contamination, which would have been cost-prohibitive. The abatement process created additional costs and delays that were ultimately recovered from the former railroad owners.
- Recalcitrant Property Owners Can Delay or Alter Alignment and Redevelopment**

While the most visionary property owners helped mold and achieve the vision for each new neighborhood, several property owners in the North Macadam/South Waterfront area have been unenthusiastic about the City's high-density goals for the area. In 1993, a group of property owners proposed a suburban development concept for the area featuring cul-de-sacs, which was rejected by the City. In order to reach the area south of Ross Island Bridge (South Waterfront) where OHSU and Williams & Dame (Hoyt Street Properties) and Gerding/Edlund (Brewery Blocks developer) are currently developing projects, the streetcar alignment currently skirts a hold-out property leaving a potential stop unbuilt until the ownership of the property changes.
- High Housing Prices and Construction Costs Challenge Affordable Housing**

While a number of new affordable housing projects have been built, and mixed-income housing also exists in the corridor, the cost of subsidizing these units is high. As land prices has escalated with the growth in demand, and prestige, of urban living within the corridor, continuing to provide new affordable housing units, and preserve those that have been created through developer agreements remains a challenge. Regional housing advocates and policy makers are struggling to meet the growing need for housing affordable to households at a range of incomes, particularly in transit corridors where reduced transportation savings particularly benefit lower-income residents.

### ***Lessons from the Corridor for Other Places***

- Strength of Development Agreements as Tool For Value Capture**

Comprehensive development agreements that specifically outline the responsibilities of all parties are essential to the success of complex public/private projects, especially at this large a scale. Effectively executed, they enable the developer to be appropriately supported, motivated, and rewarded, while ensuring the public trust is kept and urban planning goals are honored. In exchange for entitlements and various types of public support, large-scale development projects can help pay for new infrastructure, affordable housing, and other amenities.
- TOD Land Use and Design Framework Critical**

The 1988 Central City Plan established the initial framing plan that laid out the structure of the new neighborhoods and the general vision for the expansion of Downtown. Having a clear redevelopment plan and appropriate zoning in place prior to new development and infrastructure investment was critical to the developer negotiations, the implementation of the streetcar and successful placemaking.

- **Flexibility is Key in Accommodating Market Changes**  
While the Central City Plan and the development agreements for the major parcels structured the project's implementation, the ultimate outcomes didn't conform exactly to the concepts laid out in each. Changes in the market and additional unexpected costs (e.g. contamination abatement) were accommodated over time with the results perhaps being better than originally anticipated. Such flexibility is necessary to respond to changing market pressures and allowing for profitable return for developers and changing community needs. Much of the redeveloping areas served by streetcar are "performance" zones, where a broad range of uses are allowed, but the building must respond to design standards.
- **Underutilized Industrial Land Presents Significant TOD Opportunity**  
There is great potential for successful TOD in previously industrial areas located close to urban cores. Large parcels used for obsolete, or misplaced industrial uses hold promise for the creation of whole new urban, higher-density mixed-use, transit-oriented districts with appropriate planning and investment.<sup>2</sup> Successful redevelopment requires supportive land use and infrastructure planning. Significant investment is likely needed, allowing for partnerships between public and private actors to meet a multitude of transportation, open space, and housing improvements
- **Degree of Redevelopment Opportunity Points to Different Tools**  
Portland utilized a variety of finance and planning tools to address environmental clean-up, subsidized housing and creation of mixed-income projects, support of TOD, and a continued focus on mixed-use development and transportation choice. The development agreement is of particular use in dealing with large transitioning parcels that require considerable infrastructure, but it is a less appropriate tool for use in built out areas where small infill projects make up the majority of new development opportunity. Jurisdiction must develop a set of tools that correspond to the unique challenges and opportunities that exist within each setting.
- **Affordability Tools Exist Beyond Inclusionary Requirements**  
States without affordable housing inclusionary requirements can require affordable units through negotiated development agreements, and other approaches that capture the value created by higher-density, market rate TOD housing. The Portland approach of matching the affordability of units to household income distribution city-wide is an

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<sup>2</sup> Not all industrial land is appropriate for development with higher value uses. Depending on the types of uses and built space located in an industrial area, the importance of maintaining a healthy, diverse regional economy may require preservation of some amount of space for evolving industrial, and light industrial uses with convenient access to the urban core.

innovative way to achieve mixed-income housing inclusive of the community as a whole.

- **Value Capture Strategies Must Balance Array of Community Benefits**  
In dealing with major development projects, many different public goods are needed to make a place work. Affordable housing goals must be balanced with goals for open space, transit, and other public facilities and goods necessary to create quality urban districts. Community dialogue is required to determine these benefits, and any trade-offs or priorities that may shift over time.
- **Create Equal Opportunity for Development Players**  
Developer agreements and tax abatements have been two powerful tools in the Portland region to shape development around transit and meet public benefits. However, some of the tax abatement incentives available to affordable housing projects in the central city applied differently to for-profit or non-profit developments. Tax abatements aimed at stimulating the production of affordable housing should be available equally to achieve the maximum amount of housing possible, rather than rewarding certain types of organizations over others. The City's tax abatement policy is being currently being modified to address this discrepancy. Realizing the potential of both the for-profit and non-profit development community to provide affordable housing and economic development opportunities is important to success. Ensuring that incentives and policies can be used by each is necessary.

The next chapter summarizes the key findings from the case studies specific to the shared challenges and opportunities for creating mixed-income housing near transit.



## **Chapter 9: Putting Mixed-Income TOD into Practice – Lessons from the Five Case Studies**

There is no single effective approach to promoting mixed-income housing in neighborhoods near transit. Rather, all stakeholders – federal, state, regional, local and private-sector – are grappling with the challenges of simultaneously removing barriers to building mixed-use neighborhoods where transit is convenient and ensuring that a full range of households can access the lifestyle and affordability benefits of TOD.

The geographic diversity of the case study regions and the differing levels of maturity of their transit systems provide insights regarding the market response to new transit investments, the challenges of preserving and creating mixed-income housing near transit, and the strategies for capturing the value creating by TOD to achieve community benefits. A host of innovative strategies is being tried in these five very different places, with varying degrees of success. And, though this study has generated substantial new and interesting information about the linkages between housing and transit, much more work is needed to refine this methodology and provide practitioners with strong analytic tools and predictive models.

Throughout this report we have distinguished between the different challenges, opportunities and players at the regional, corridor and station area levels. The following discussion of lessons learned from the case studies follows this same format.

### **Lessons from the Regions**

The five case study regions vary in size, extent of transit service and strength of the housing market. This in turn, affects the degree to which transit-oriented development serves as an organizing framework for growth and the extent to which mixed-income housing can be included in new TOD projects.

- **Travel Characteristics in Transit Zones are Unique from the Region**  
As shown in **Table 9.1**, next page, residents of transit zones are three times as likely to take transit to work than residents of the region as a whole. Residents of transit zones are also three or more times likely to bike or walk to work than are residents of the region as a whole.

**Table 9.1: Transportation Characteristics in Case Studies and Nationally**

Case Study Region		Year Regional Rail Service Began	System Size in 2005 (Stations)	Journey To Work, 2000*		
				Car Alone	Transit	Bike/Walk
Boston	Region	1855	Extensive (288)	73.86%	9.03%	4.12%
	Transit zones			49.60%	24.97%	13.08%
Portland	Region	1986	Large (108)	73.12%	5.71%	2.98%
	Transit zones			57.42%	13.75%	11.47%
Denver	Region	1994	Small (24)	75.60%	4.34%	2.38%
	Transit zones			56.61%	12.17%	14.04%
Twin Cities	Region	2004	Small Expanding (17)	N/A	N/A	N/A
	Transit zones					
Charlotte	Region	2007	Small Expanding (10)	N/A	N/A	N/A
	Transit zones					
United States	USA	n/a	3,349	82.42%	9.82%	3.69%
	Transit zones			41.93%	33.91%	10.32%

Sources: Center for Transit Oriented Development and 2000 US Census

- Transit Mode Shares Increase with Transit System Size**  
 Denver, Portland and Boston – small, large and extensive transit systems, respectively – show a strong progression of increasing transit mode shares for both the regions as a whole and for areas within walking distance of transit stations. As transit system size increases, providing access to a greater number of people living and working near a transit station, transit ridership also increases.
- The Importance of the Trip Not Taken**  
 Nationally, residents of TOD use their cars to get to work at roughly half the rate of regional residents; almost 42 percent in transit zones versus slightly over 82 percent nationally. This implies that TOD can be a significant strategy for reducing vehicle-miles traveled and peak-hour freeway congestion, without having to sacrifice regional growth. This finding can also be instructive for local strategies to reduce parking requirements in TOD to help lower construction costs and create incentives for achieving other community benefits.
- Pedestrian-Oriented Development is Key to Transit-Oriented Development**

In all case study regions, pedestrian and bike mode shares in transit zones are three to seven times higher than regional averages. As transit system size expands, transit modes shares from transit zones exceed walking and biking modes. For instance, whereas Denver has a higher percentage of residents using biking and walking than transit for work trips, both Portland and Boston have higher transit rates.

- **Demographic and Home Ownership Differences Influence Development Opportunities and Impacts**

Just as households living near transit exhibit different travel behavior than their regional counterparts, these same households also possess some important demographic distinctions.

- **Households Living near Transit are Smaller, with Lower Incomes than the Region as a Whole**

However, as transit systems grow in size, household composition and income more closely resemble regional averages. **Table 9.2** on the next page shows the variation among the transit zones in each of the case studies, and nationally, with the larger region in which they reside. Residents in transit zones in Boston, the largest transit system that was studied, have household sizes that are 89 percent of the regional average and household incomes that are 93 percent of the regional average. This compares to Denver, a small transit system in 2000, where household sizes in transit zones are only 82 percent of regional averages and incomes are 62 percent of regional averages.

**Table 9.2: Demographic Factors in Case Study Regions and Nationally**

Case Study Region		2000 Households	Average Household Size	2000 Median Income	Housing Tenure (Owner  Renter)
Boston	Region	1,785,552	2.54	\$51,727	59% 41%
	Transit zones	413,528	2.27	\$48,306	38% 62%
Portland	Region	741,776	2.56	\$47,061	63% 37%
	Transit Zones	73,911	2.13	\$34,899	37% 63%
Denver	Region	939,971	2.53	\$51,760	66% 34%
	Transit Zones	17,373	2.07	\$31,839	36% 64%
Twin Cities	Region	1,136,615	2.56	\$54,317	72% 28%
	Transit Zones	17,870	2.03	\$30,613*	39% 61%
Charlotte	Region	575,293	2.55	\$46,120	68% 32%
	Transit Zones	3,777	1.70	\$40,715	37% 63%
United States	USA	281,421,906	2.57	\$41,994	66% 34%
	TZs	6,188,770	2.44	\$35,000	35% 65%

Sources: U.S. Census 2000, CTOD National TOD Database, Center for Neighborhood Technology.

- **More Transit Households are Renters than Owners**

Households living within a half mile of transit are 54 percent more likely to rent than to own their home. A larger number of multi-family housing opportunities exist near transit, and rental prices are usually more affordable near transit. However, as the value of land near transit increases in response to increased demand for housing near transit, rental households are more vulnerable to displacement. Ensuring preservation and creation of both rental and home ownership opportunities near transit is important to households of all income levels.

- **Desire for TOD Housing Includes a Significant Percentage of Low- and Very Low-Income Households**

Current TOD and affordable housing strategies being implemented in the case study regions are not likely to deliver this amount of supply. A range of affordable housing needs exists – including housing for students, older Americans on fixed incomes, and families – so diversity of affordable housing stock is needed. Most existing affordable housing policies identified for each case study region do not include special consideration or criteria for transit proximity. Most local TOD efforts do not include an affordability component, with the exception of Charlotte’s Housing Locational Policy and Portland’s specific developer agreements.

**Table 9.3: TOD Demand**

Case Study Region		Projected Transit System Size 2030	Projected Households in 2030	Percent TOD Capture*	Share of 2030 Projected TOD Demand from Households earning less than \$50,000
Boston	Region	Extensive	2,819,609		
	TOD Demand		750,726	27%	56%
Portland	Region	Extensive	1,154,318		
	TOD Demand		279,891	24%	68%
Denver	Region	Large	1,513,746		
	TOD Demand		138,207	9%	68%
Twin Cities	Region	Medium	1,712,316		
	TOD Demand		123,776	7%	55%
Charlotte	Region	Large	848,539		
	TOD Demand		76,931	9%	64%
All Regions with Existing or Planned Transit	Regions Total		65,139,272		
	TOD Demand		15,209,786	23%	63%

Source: Center for Transit Oriented Development, 2006 TOD Capture refers to the share of regional households fitting the “TOD Profile” in terms of demographics including age and household type.

- Regional Demand for TOD is Projected to Increase**  
 Demand for housing near transit will more than double as an increasing number of households respond to changing demographics, increased congestion, and a desire for greater housing and mobility choice (see **Table 9.3**, above). Some of this increased demand reflects the success of new TOD projects that incorporate good design, accessibility, and a mixture of uses that are attractive to residents and employees, including those who may not use transit.
- Affordable Housing Funding is Limited**  
 State and Federal funding for affordable housing has dwindled dramatically in the past decade. At the same time, escalating building costs and land prices are increasing the cost and challenge of providing and rehabbing affordable units. Whereas there are some successful HOPE VI projects that incorporate access to transit, this funding source no longer exists. Preserving and strengthening existing funding sources is important, as it seizing the opportunity to fully leverage funds. A growing number of housing authorities are acting as community development and redevelopment agencies. The

leadership and creativity demonstrated by the Portland Development Commission and MassHousing illustrate the importance of meeting affordable housing objectives through larger redevelopment strategies. Similarly, prioritizing tax credits and other affordable housing subsidies for locating near transit can help to address TOD affordability challenges and help to ensure stable transit ridership.

### ***Partnership, Leadership and Innovation are Necessary Ingredients***

An overarching observation from this study is that better coordination of housing and transportation policies is needed. Transit investments and housing markets are influenced at the corridor level, whereas housing and transportation policies are often made at the State and regional levels. Given the different scales of investment and policy decisions, transportation and housing needs to be more closely aligned. While transit agencies are not responsible for local land use or regional housing policies, transit investments should be closely coordinated with each.

Charlotte and Portland have staff within transit agencies and the city to work with developers to identify key TOD opportunity sites. Hennepin County in the Twin Cities region has developed a TOD program to create incentives for housing in existing and proposed transit corridors. Preservation and creation of new housing is a priority for consideration in allocation of these funds. These are important first steps, but still insufficient to meeting the challenges identified in each region for creating mixed-income housing near transit.

- **Government Leadership is Key**

Government leadership can take many forms. In Massachusetts, the former Governor stepped forward to propose new funding and policies to support TOD. In Portland, the Portland Development Commission took early leadership to redevelop around the streetcar. In Charlotte, the City and transit agency work together to coordinate land use and transit planning. In every instance, leadership by at least one level of government was critical to providing the commitment necessary to provide new funding sources, policies and change existing regulatory barriers.

- **Public-Private Partnerships can Yield Impressive Results**

In Boston, a group of four community development corporations have come together to advocate for improved transit service and affordable housing within the Fairmount/Indigo Line. The CDC collaborative is partnering with the City, MBTA and MassHousing to try and achieve results. In Portland, local for-profit developers were early leaders in creating an urban, infill market located near the proposed streetcar alignment. Their leadership and financial commitment, and willingness to try a new market product yielded substantial benefits to the developer and to the public. Business and community leaders

also were instrumental in getting the Portland streetcar funded and constructed.

## ***Lessons from the Corridors***

The five case study corridors represent a mix of urban form, transit technology and maturity. Urban Commuter Corridor, District Circulators, Planned Growth and Destination Corridors are four different types of transit corridors portrayed in the case studies. Each corridor types contains a different mix of land use, densities and transit service that impact the development potential within the corridor. Several key corridor-level observations are discussed below and summarized along with some station area specific observations in **Table 9.4**

**Table 9.4: Highlights from Case Studies, Lessons Learned at the Corridor Level**

<b>Opportunities that Influence Success</b>	<b>Examples from the Case Studies</b>
TOD potential is directly related to existing parcelization and land use patterns.	Large, underutilized industrial sites in Portland created the framework for redevelopment of an entire neighborhood. Conversely, Boston's Fairmount/Indigo Line contains primarily small, scattered parcels within residential areas making more transformative redevelopment difficult, and limiting the ability to assemble larger parcels that can yield higher profits.
Land speculation and strong market interest drive up housing prices.	The national trend towards urban, downtown living helped to spur market-rate development in Portland's Pearl district, Minneapolis's Warehouse District, and Charlotte's Uptown. Strong market demand has exerted pressure on preservation of affordable housing units. In contrast, Boston's Fairmount/Indigo Line has not been a focal point for significant new development allowing local CDCs to purchase land prior to land escalation.
Market readiness shapes development response.	Denver's West Corridor, still six years from completion, has relatively few new development projects. The Charlotte housing market is beginning to respond to TOD, but still strongly centered around the downtown. The projects in both cities are primarily market rate.
Necessary infrastructure improvements to support TOD can be costly.	Charlotte's South Corridor runs predominately through former industrial areas and residential neighborhoods that are more suburban in form. Significant infrastructure, beyond the light rail line, is needed to improve pedestrian access and increase sewer and water capacity to allow for greater intensity of use. The City has developed an infrastructure funding program to address this challenge.
Comprehensive actions needed to stimulate mixed-income TOD.	Most of the case study regions did not have identified strategies for preserving existing affordable housing or creating new mixed-income housing near transit. Charlotte has adopted some policies, but is working to modify them as to improve their effectiveness. Portland has addressed affordable housing through individual developer agreements. Every region has a number of valuable affordable housing tools, but has yet to focus these tools on transit corridors in a comprehensive fashion.

*Source: Center for Transit-Oriented Development, 2007*

- **TOD Potential is Directly Related to Existing Parcelization and Land Use Patterns**

Redevelopment opportunities along the case study corridors are shaped by the size and scale of underutilized parcels. In Boston, where the Fairmount line extends through established residential neighborhoods, the amount of underutilized land is very small and the parcels that are available are fragmented and dispersed. However, in Charlotte, where the planned transit line extends through obsolete commercial and industrial properties, the amount of developable land is much more significant. Transit-supportive plans, zoning and implementation mechanisms are needed to ensure TOD-appropriate development.

**Table 9.5: Corridor Housing Capacity Estimates**

Corridor	City	Underutilized Total Acreage	Adjusted Underutilized Acreage	Current Corridor Density (du/acre)	Low End Capacity	High End Capacity	Regional TOD Demand	% of Regional Demand (Low)	% of Regional Demand (High)
Fairmount	Boston	345	173	18	3,105	6,210	750,726	0.41%	0.83%
South	Charlotte	1,277	639	6.7	4,278	8,556	76,931	5.56%	11.12%
West	Denver	983	492	9.6	4,718	9,437	138,207	3.41%	6.83%
Hiawatha	Minneapolis	504	252	18	4,536	9,072	123,776	3.66%	7.33%

Source: Center for Transit-Oriented Development, 2007

Note: We did not estimate underutilized acres for the Portland streetcar corridor due to inaccuracies with the data and the rapid redevelopment that has already occurred within the Pearl District on formerly underutilized sites.

A number of the identified underutilized parcels may not be suitable for redevelopment. **Table 9.5** summarizes the potential capacity of these corridors, and the percentage of regional TOD demand that could be achieved if aggressive measures were implemented to target housing within each. These estimates range from less than one percent in Boston’s Fairmount/Indigo corridor to over 11 percent in Charlotte’s South Corridor.

- **Land Speculation and Strong Market Interest Can Drive Up Housing Prices**

Investments near new or enhanced transit stations in existing low-income neighborhoods may displace the very residents they are designed to serve because increased accessibility to regional jobs and services tend to drive up land prices and attract a new, more affluent population. Respondents noted that land speculation is beginning to occur in those corridors still in the planning stages. This presents a formidable obstacle to providing housing products at affordable prices, and in particular for preserving affordable rental housing. Proactive actions are necessary to avoid displacement. In Boston, over 2,000 expiring use units have been identified. Denver's West Corridor



has several distressed public housing properties close to proposed new stations. Improving and preserving housing choices for low-income households can help to ensure that both housing and transportation costs are more affordable to these residents.

- **Market Readiness Shapes Development Response and Impacts Land Values**

The national trend towards urban, downtown living helped to spur market-rate development in Portland's Pearl district, Minneapolis's Warehouse District, and Charlotte's Uptown. Experience along the Hiawatha line shows that once the downtown housing market strengthened and became expensive, developers sought out housing sites at stations further from downtown. Developers say their clients are seeking less expensive housing with easy access to downtown amenities. Boston also displays this trend, particularly as new development is beginning to emerge along the Fairmount/Indigo Corridor as it contains some of the region's last remaining affordable housing. Improved transit service may accelerate the market for housing in the corridor. Both the Denver and Charlotte systems could provide similar experiences once their systems are built.

- **Necessary infrastructure improvements to support TOD can be costly**

The ability to channel market forces to create a vision of change is a very powerful tool that determines the success of a transit-oriented district. Additional new infrastructure, beyond the transit investment, may be needed, particularly for former industrial properties that are being redeveloped as residential or mixed-use. Charlotte developed the South Corridor Infrastructure Program to address this challenge. In Massachusetts, the Commonwealth is taking the unusual step of reimbursing localities for the net cost of educating students in new housing located in smart growth districts, of which include proximity to rail transit.

- **Comprehensive Housing and Transportation Efforts Needed to Stimulate Mixed-Income TOD**

In the Boston's Fairmount corridor there has been quite a bit of affordable housing development, largely led by four Community Development Corporations. In Portland, the City was able to use its entitlements process to leverage affordable housing through a series of development agreements that linked approvals to inclusionary housing. In Minneapolis, State legislation proactively links funding of affordable housing to efficient land use and transportation infrastructure which has had the effect of channeling projects toward the Hiawatha light rail corridor. Each of these examples is instructive, though none of the regions studied possess a comprehensive strategy for creating and preserving housing for a range of incomes within the existing and proposed transit corridors. Such a strategy seems warranted to ensure that a full range of housing choices exist, and that existing low-income residents are not forced into other areas of the region that do not include transit options that can help to reduce their overall household transportation costs.

## Lessons from the Station Areas

Summarized in **Table 9.6** and discussed in the remainder of this chapter, are those challenges and opportunities that exist at the station area level within the five case study corridors.

**Table 9.6: Highlights from Case Studies, Lessons Learned at the Station Area Level**

Opportunities that influence Success	Examples from the Case Studies
Regulatory Barriers exist which can add cost and delay.	Minneapolis and Charlotte are both in the process of creating new overlay districts to support increased densities, pedestrian-oriented improvements, and mixed-use development in transit station areas. Portland was an early leader in reducing parking requirements for projects located in transit corridors. Denver has adopted transit mixed-use zoning.
Capture value to leverage community benefits.	Even before redevelopment of the Pearl District began, the Portland Development Commission negotiated a developer agreement with a large land owner to achieve community benefits in exchange for public infrastructure support. These included affordable housing, creation of a community park, and density bonuses.
Affordable housing developers do not have the capital to land bank.	Both Portland and Charlotte have land-banking funds that help pay for acquisition of sites that can be later sold to non-profit and affordable housing developers.
Community opposition to density and affordable housing create barriers.	In Boston, residents expressed opposition to bringing in more affordable housing feeling that they had too much already. In Charlotte, some are expressing resistance to affordable housing efforts in a corridor that is largely middle income.
Industrial contamination of infill sites creates legal and cost challenges.	Every corridor contains sites that have been identified, or are suspected of having environmental contamination. Minneapolis used regional brownfields funds to clean-up some parcels, and Portland engaged in a significant clean-up effort as a first step for redeveloping the Pearl District.

Source: *Center for Transit-Oriented Development, 2006*

- Regulatory Barriers Exist Which Can Add Cost and Delay**  
 TOD sites frequently require rezoning and land assembly. This can lead to lengthy acquisition and permitting processes, which increase development costs. When developers are saddled with these costs, it can be much more difficult to also provide affordable units within projects. Minneapolis and Charlotte both have implemented phased overlay districts around transit stations to address regulatory barriers to TOD and allow increased densities and mixed-use development. Portland was an early leader in reducing parking requirements, which can add significant cost to projects. As one developer there noted, a high percentage of his projects are being sold to couples who either don't own a car or sell their car once they move in and take advantage of the streetcar and car-sharing programs.
- Capture Value to Leverage Community Benefits**  
 As evidenced in all of the case studies, market rate development is occurring within transit corridors, even those like Denver's West Corridor that are still in

the planning stage. As the local TOD market becomes more established there are opportunities to provide incentives to developers through density bonuses, reduced parking requirements, and infrastructure improvements that can create value which allow projects to be financially viable. Capturing the value created through these public incentives by requiring developer contributions in return can be an effective tool for achieving transit-supportive land uses and intensities, and also community benefits. Even before redevelopment of the Pearl District began, the Portland Development Commission negotiated a developer agreement with a large land owner to achieve community benefits in exchange for public infrastructure support and incentives.

- **Affordable Housing Developers Do Not Have the Capital to Land Bank**

Acquiring and holding land, also known as land banking, requires considerable capital, especially when it may be 5 to 10 years before a rail station is built. This presents steep holding costs for any developer, particularly nonprofit developers that are most likely to produce below-market-rate housing. Furthermore, many traditional funding sources – including CDBG, HOME and other federal housing funds – cannot be used to purchase land, whereas transit properties are increasingly reluctant to purchase excess land during project construction out of concerns that increased project costs can negatively affect their chances at federal funding. Both Portland and Charlotte have land-banking funds that help pay for acquisition of sites that can be later sold to non-profit and affordable housing developers.

- **Community Opposition to Density and Affordable Housing Create Barriers**

Residents of established communities may be particularly resistant to changes that are perceived as negatively impacting their property values or community character. Initial resistance and development delays can be expected with higher density projects, particularly without an inclusive, community planning process at the outset. Engaging the public is essential in the planning and implementation phases. A number of new planning tools from visual preference surveys to charrettes to design tools that engage, educate and excite the public. Federal transportation planning funds are available for many of these types of new planning tools.

- **Industrial Contamination of Infill Sites Creates Legal and Cost Challenges**

Every corridor contains sites that have been identified, or are suspected of having environmental contamination. Likely a number of the corridor-level underutilized parcels identified in this study are environmentally contaminated. These “brownfields” present a cost hurdle to their redevelopment, and include potential liability issues that need to be assessed. However, most states and regions provide specific funds for brownfields redevelopment that may actually create incentives and make them more desirable properties to developers that can take advantage of these programs. Minneapolis used regional brownfields funds to clean-up some

parcels, and Portland engaged in a significant clean-up effort as a first step for redeveloping the Pearl District.

The final chapter builds off of the key findings from the case studies described here. It suggests a series of recommended actions by the local, regional, State and Federal partners that can help to promote more mixed-income housing near transit.

## Chapter 10: Recommendations

The previous chapters of this study described the efforts being taken in five different regions to better link housing and transportation, indicating the promise of and barriers to implementing mixed-income transit-oriented development. Chapter Nine summarized the lessons learned in terms of challenges, opportunities and market response to TOD that is occurring in Boston, Charlotte, Denver, the Twin Cities and Portland. This chapter provides recommendations for policymakers and practitioners pursuing mixed-income TOD based on the findings from the five case studies and general observations about the maturing TOD marketplace.

While there are challenges to providing mixed-income TOD, the experience of these five case study regions, and other emerging TOD markets, find that successful TOD requires proactive strategies to provide transit-supportive land use conditions and catalysts for market response. Among the strategies to be pursued:

- Identify and utilize opportunities for TOD within the region and transit corridors;
- Provide incentives for mixed-income market response;
- Remove regulatory barriers to higher density, mixed-use development;
- Coordinate long-range housing and transportation plans and investments; and,
- Improve local capacity and partnerships.

**Table 10.1** on the next page illustrates recommended policies at the state, regional and/or local level to strengthen opportunities for creating mixed-income housing near transit. The table indicates the various governmental actors and opportunities for partnering with private sector actors, be they for-profit or non-profit. Each region has a unique set of public and private entities with a role to play in supporting mixed-income housing near transit. These recommendations provide a guide for initiating the implementation process and identifying opportunities for collaboration among several partners.<sup>3</sup>

The federal government is also an important partner. Improved coordination of affordable housing and transit investments can advance or be impeded through its policies and financial assistance. This chapter concludes with a discussion of potential actions that should be considered at the federal level to improve collaboration between federal agencies, to reward those communities investing in

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<sup>3</sup> One example of multi-agency collaboration is the effort to jump-start development along the Hiawatha light rail line in the Twin Cities. The Minnesota Department of Transportation was the primary agency involved in building the Hiawatha line and had ownership of several acres of “left over” land after project construction. These state owned parcels have for the most part, been transferred to the Metropolitan Council who is working with the City of Minneapolis to determine their future redevelopment potential. In this case, the state, region and local governments have all played a role in identifying and leveraging transit-oriented opportunity sites.

mixed-income housing near transit, and to identify needed research to better inform federal policies and funding.

**Table 10.1 Recommended Strategies for Supporting Mixed-Income TOD**

<i>Identify Realistic TOD Opportunities</i>	Assess the potential for TOD opportunity sites and potential areas of low-income household displacement at the corridor scale.		x	x	x
	Identify publicly-owned development sites along transit corridors.			x	
	Target a percentage of future regional growth into transit corridors.		x		
<i>Provide Incentives for Mixed-Income Market Response</i>	Incentives for TOD supportive densities and mixed-income housing.	x	x	x	x
	Create TOD land acquisition/land banking funds.		x	x	
	Modify Low-Income Housing Tax Credits to offer greater incentive for locating near transit.	x			x
	Value-capture tools for affordable housing and TOD-related improvements.			x	x
<i>Remove Regulatory Barriers</i>	Address regulatory barriers in order to reduce the cost of TOD development.	x	x	x	x
	Proactive station area planning and zoning.			x	
<i>Coordinate Housing and Transportation</i>	Coordinate long-range housing and transportation plans.	x	x		
	Target existing funding to support affordable housing preservation and creation within transit corridors.	x	x	x	
<i>Improve Local Capacity, Partnerships and Data Collection</i>	Strengthen TOD capacity within public housing and transit agencies.	x	x	x	
	Utilize FTA's policy on joint development to emphasize housing opportunities and TOD in transit zones.		x	x	x
	Monitor and track data on development activity, demographic trends, property values at the corridor and station area levels.		x	x	
	Build partnerships between public and private stakeholders.	x	x	x	x

Source: Center for Transit-Oriented Development, 2006

The first set of recommendations respond to a need by regions and localities to identify those sites along a corridor that may yield the greatest redevelopment potential, and/or could be publicly-owned or managed sites that may allow for quicker or more proactive strategies to redevelop as mixed-income housing near transit. An assessment of the market potential and identification of key sites to preserve, redevelop or rezone can be an

important first step in developing a comprehensive strategy to guide public investments and policies, and inform private housing developers.

### ***I. Identify and Utilize Opportunities for TOD within the Region and Transit Corridors***

- **Target a significant percentage of future regional growth into transit corridors**

The results of this study indicate that as transit systems expand and touch a large number of regional workplaces and destinations, they can encourage a wider range and number of household types. When developing regional long-range transportation plans, MPOs should be encouraged to study the demographics and market demand for focusing a significant portion of regional housing growth into transit-accessible locations and providing new transit service to underserved areas.<sup>4</sup>

- **Assess the potential for TOD opportunity sites and potential areas of low-income household displacement at the corridor scale.**

The Corridor Typology and the methodology for identifying (re)development opportunities – looking at where new and proposed development is occurring and identifying underutilized sites – should be used by Cities to identify potential TOD sites, inform regulatory reform and focus policy tools. Where transit corridors cross multiple local jurisdictional boundaries, corridor working groups should be formed to ensure consistent use of analytical tools and coordinated strategies for catalyzing development on opportunity sites.<sup>5</sup> The steps practitioners should take to identify opportunity sites include:

- Identify the “type” of transit corridor according to the Corridor Typology presented in this study;
- Identify transit zones and the market demand for new housing and jobs;
- Identify potential for (re)development within the transit zones;
- Identify the barriers to encouraging or attracting housing and affordable housing development in transit zones; and
- Identify available tools (and try to develop missing tools) to help with attracting mixed-income housing in transit zones.
- Identify and utilize publicly-owned properties along transit corridors for mixed-income housing

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<sup>4</sup> The Southern California Association of Governments (SCAG) has developed a Compass Blueprint which includes its Two Percentage Strategy to focus new development within transit corridors, defined as Growth Opportunity Areas.” <http://www.compassblueprint.org/>

<sup>5</sup> Multi-jurisdictional Corridor Working Groups are being used in the San Francisco Bay Area to respond to the Metropolitan Transportation Commission’s TOD Policy, which requires local governments to demonstrate how they plan to meet identified thresholds for housing along transit corridors before capital funds are released. [http://www.mtc.ca.gov/planning/smart\\_growth/](http://www.mtc.ca.gov/planning/smart_growth/)

Housing authorities, cities, counties, state departments of transportation, and transit agencies often have property assets, ranging from land, buildings and excess facilities that could be redeveloped to preserve public housing and create new affordable housing for a range of underserved populations.<sup>6</sup> Where feasible, these sites should be identified and used to provide mixed-income housing, and to signal market redevelopment potential. Enabling legislation may be necessary in those states that prohibit public agencies from actively engaging in development activities.

## ***II. Provide Incentives for Mixed-Income Market Response***

The next set of recommendations address the frequent need for targeted public intervention to address any existing barriers that may impede development, particularly of mixed-income housing near transit.

- **Create incentives for local jurisdictions to build at transit-appropriate densities**

Transit and affordable housing are two significant public investments. Some regions are tying the allocation of transit, infrastructure, and housing funds to agreements by local jurisdictions to deliver plans, zoning and other implementation tools that demonstrate a commitment to TOD.<sup>7</sup> A number of potential incentives exist that could be developed and implemented at various governmental levels. Portland has utilized developer agreements to achieve public benefits through density increases. Density bonuses are a common tool used in communities to provide incentives to developers to improve the rate of return on development in exchange for locally-determined benefits such as affordable housing, green space, historic preservation, streetscape improvements, etc. Reducing parking requirements for development near transit can also provide developers an incentive to locate in a TOD. Some states, such as Massachusetts, provide specific funds for development in existing transit corridors.<sup>8</sup>

- **Facilitate the Use of Value Capture Tools for Affordable Housing and TOD-related Improvements**

High infrastructure costs, land assembly, brownfield clean up and lengthy permitting processes often make building in transit zones very expensive. Adding the cost of providing income-restricted affordable housing units can make projects infeasible. Tools such as Tax Increment Financing, Business Improvement Districts, assessment districts and developer agreements can

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<sup>6</sup> Public housing leaders Henry Cisneros, Jack Kemp, Kent Colton and Nicolas Retsinas are in the process of writing a new publication highlighting opportunities for improved state and local affordable housing policies. *Opportunity and Progress: A Bipartisan Platform for State and Local Housing Policy* is scheduled for release in 2007 and preliminary materials indicate that it will be an important new resource.

<sup>7</sup> See the Regional TOD Policy of the San Francisco Bay Area's Metropolitan Transportation Commission, [http://www.mtc.ca.gov/planning/smart\\_growth/](http://www.mtc.ca.gov/planning/smart_growth/).

<sup>8</sup> Chapters 4-8 of this report describe a variety of incentives being used in the case study regions. The Center for Transit-Oriented Development website ([www.reconnectingamerica.org](http://www.reconnectingamerica.org)) provides a comprehensive list of resources and examples.



generate funds to help pay for housing and infrastructure improvements that benefit the greater community. The administering agency bonds against projected revenue streams to finance public improvements, such as new sewers, streets, sidewalks, site clearance, removal of hazardous conditions, site assembly, shared parking and parks. By helping to upgrade local infrastructure and ready sites for development, an Urban Renewal Authority or other similar local entity can lower the cost of private development near transit, making the provision of affordable housing more feasible.

- **Create TOD Land Acquisition/Land Banking Funds**

A TOD land acquisition or land banking fund can enable the early purchase of land around transit facilities, or corridors, where transit enhancements are planned to safeguard land for affordable and mixed-income housing. These funds can also serve a second purpose of acquiring existing housing and requiring that it be kept affordable in perpetuity in neighborhoods that may become gentrified as higher-income individuals and families take advantage of transit proximity. Development fees, flexible use of some state transportation or housing funds, foundation support, or other strategies could be used to create such local or regional funds.<sup>9</sup>

- **Modify Low Income Housing Tax Credits to offer greater incentive for locating near transit**

The Low Income Housing Tax Credit program (LIHTC) is the greatest single source of funding for affordable housing at the state and regional levels. Twenty-eight states already give preference or require proximity to transit as criteria for distributed these credits. Four key changes by states in distributing their LIHTCs would go a long way to making mixed-income TOD more feasible and far-reaching:

1. *Points for Transit Proximity* – help TOD projects score more competitively.
2. *Basis Boost for TOD* – increase the available subsidy for TOD projects.
3. *Project Allotment Cap Increase* – enable larger projects at TOD sites to benefit from the LIHTC.
4. *Prioritize tax credits for Preservation and Consolidate the Underwriting processes* to allow developers to apply for tax credits and other resources simultaneously – help preserve rental TOD, and expedite TOD projects.

### ***III. Remove Regulatory Barriers that Prevent Mixed-Income, Mixed-Use Development***

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<sup>9</sup> A coalition of banks, foundations the City and housing providers has come together to fund an affordable housing land acquisition fund for New York City. This new fund was announced by the City in 2006.

Regulatory barriers, be it zoning that does not allow for mixed-use development, densities that do not support transit service, inappropriate parking standards, or lack of pedestrian access to station areas, to name only a few, can stifle the TOD market and add significant costs to projects. The next set of recommendations is aimed at identifying and addressing potential barriers that may impede the ability to produce affordable housing within TOD projects.

- **Address regulatory barriers in order to reduce the cost of TOD development**

Too often, regulatory barriers stand in the way of delivering affordable or mixed-income housing. These include: (1) Local zoning codes that often do not allow for mixed-use, higher density development; (2) parking requirements that do not reflect the lower rates of auto ownership and use in these types of projects and infrastructure standards do not reflect the multi-modal nature of TOD; (3) a complex and lengthy development process that results in many cases in high-end housing projects that are able to absorb the time, uncertainty (or risk), and infrastructure costs of TOD. State, regional and local government agencies should evaluate the rules that govern development in transit zones and determine if barriers exist to building mixed-income TOD. Incentives and funding tools should be provided to help make appropriate reforms and monitor performance.<sup>10</sup>

- **Encourage proactive station area planning and zoning**

Developing a clear vision for redevelopment of a station area can help to provide a more transparent process for both developers and community residents when projects are proposed. Often though, development projects are approved on an incremental basis, without the guidance provided by a long-range plan. This can lead to community opposition and unnecessary delay of potentially appropriate projects. A TOD Strategic Plan that identifies desired place types at each transit station could be a first step to clarify goals and expectations.<sup>11</sup> Priority development locations should be targeted for more detailed station area planning efforts that are prepared in concert with the community and define public infrastructure, building sites, open space and design standards. Once station area plans and zoning are put in place, individual development proposals can be evaluated against their compliance with the plan, often with expedited approvals.<sup>12</sup>

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<sup>10</sup> The Atlanta Regional Commission, San Francisco Bay Area Metropolitan Transportation Commission, Southern California Association of Government and Oregon Department of Transportation each have programs in place to provide resources to local governments seeking to remove regulatory barriers for TOD. Often, transportation funds from the Congestion Mitigation and Air Quality (CMAQ) program are used to make grants for zoning code reform efforts and other activities that help pave the way for higher density development near transit.

<sup>11</sup> The City of Denver has developed a TOD Strategic Plan, available on-line to the public at <http://denvergov.org/TODStrategicPlan/tabid/395267/Default.aspx>

<sup>12</sup> As mentioned in Chapter Seven, the City of Minneapolis has engaged residents along the Hiawatha Corridor in a series of station area planning efforts for the six neighborhood station areas. The first four

#### **IV. Coordinate Housing and Transportation Plans and Investments**

A key recommendation resulting from this study is the need to better coordinate housing and transportation planning and investments, at all levels of government. There are a variety of strategies that could be implemented ranging from coordination of Federally- required planning documents to local efforts to and encourage mixed-income housing near transit when possible.

- **Coordinate long-range housing and transportation plans**

HUD and FTA require regions to prepare long and short range plans as key elements of the federal housing and transportation funding process. As a condition to receive Community Development Block Grants and other housing formula grants<sup>13</sup>, HUD requires states, cities and counties to prepare a five-year *Consolidated Plan*, as well as an annual *Action Plan* specifying the expenditure of funds in support of their long range plans. Cities with populations of 50,000 or more, urban counties of 200,000 or more and each state must provide a summary of the jurisdiction's estimated housing needs for the ensuing five-year period, including an estimate of the number and type of families in need of housing assistance and a summary of the cost burden experienced by extremely low-income, low-income, moderate-income, and middle-income renters and owners. At the same time, the U.S. Department of Transportation (DOT) requires states and metropolitan areas to develop a 20-year long range transportation plan and a four-year Transportation Improvement Program (TIP). Better coordination between these plans could result in more effective use of housing and transportation funds, and improved planning to address regional housing and transportation needs. The primary obstacle to better coordination is the fact that the TIP is a metropolitan area-wide document, while the Consolidated Plan is undertaken by individual jurisdictions within metropolitan areas. Working together with MPOs, cities and counties may be able to identify particular projects that benefit in terms of cost-efficiencies and impact by a coordinated approach.

- **Target existing funding to support affordable housing preservation and creation of new affordable housing within transit corridors**

States, regions and cities utilize a variety of programs to finance affordable housing and supportive services. (See matrix of TOD and affordable housing tools and funds within each case study chapter and in Appendix A.) Where

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neighborhood station areas have completed detailed plans for pedestrian-oriented zoning overlays and recommendations to change zoning, where appropriate. Efforts are underway to develop similar plans for the remaining two neighborhood station areas. The City's Corridor Housing Initiative helps with implementation of these plans, focusing on preserving affordable housing along transit corridors.

<sup>13</sup> Home Investment Partnership (HOME) grants, and Emergency Shelter Grants (ESG)

there are substantial needs to preserve existing affordable housing, purchase rental properties for permanent use as affordable housing and/or build new affordable housing, an effort should be made to determine if existing programs can be targeted to transit-oriented locations. This approach makes it possible to direct resources to locations that provide substantial affordability benefits to low income residents without necessarily expanding funding sources.

## ***V. Improve Local Capacity, Partnerships and Data Collection***

The final set of recommendations for state, regional and local actors speak to the need to build staff and information capacity within agencies and to partner at a variety of levels. The case studies demonstrated a number of different methods to achieving these recommendations be it assigning staff to focus on real estate issues, tracking development trends within corridors and using this information to engage citizens in station area planning, or taking advantage of Federal joint development authority where appropriate.

- **Strengthen the TOD capacity within public housing, cities and transit agencies**

Massachusetts created a state-level TOD specialist to help coordinate state housing and transit programs to support infill development around transit. Charlotte and Portland both have staff within their local transit agencies whose primary responsibilities include monitoring and supporting development around stations. These kinds of positions help create the capacity within public agencies to interface with the real estate and development communities, and to coordinate with other related public agencies.

- **Utilize FTA’s policy on joint development, to emphasize housing opportunities and TOD in transit zones**

Real estate acquired by the transit agency for its stations, park-and-ride lots, and staging areas represents a significant opportunity to support local development plans for transit-oriented and mixed-income housing. Even the air rights above the transit station may be used for TOD. FTA’s new joint development policy provides unprecedented flexibility to the transit agencies to lease, or even sell, their property to facilitate joint development. Such properties could form the basis for significant new transit-oriented development that meets both the transit agency’s goals for increased ridership and the local community’s goals for affordable, mixed-income housing.<sup>14</sup>

- **Monitor and track data on development activity, demographic trends, and property values at the corridor and station area levels**

These kinds of data can be powerful tools to fine-tune policies aimed at promoting TOD and mixed-income housing, educate members of the community about trends in the area, and direct developers to (re)development

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<sup>14</sup> Examples of such “dual purpose” joint developments include Goose Hollow, in Portland, Oregon, Dublin/Pleasanton on the BART system in San Francisco, or Bethel New Life, in Chicago, Illinois.

opportunities. Keeping lines of communication open and based on facts, not rumor, can be enormously helpful as members of the public watch change happen in their communities. Cities and regional agencies should be encouraged to build geographic-based databases to track this data and make it publicly available.<sup>15</sup>

- **Encourage Partnerships Between Public and Private Stakeholders**  
At the heart of all of these recommendations is a need for enhanced partnerships between public agencies that intersect with housing and transit investments and policies, and between the public sector and private sector stakeholders. Engaging the community as a full partner in the planning and implementation of transit and housing investments can better affect the ability of these investments to achieve community goals and visions, and to build trust. Partnering with the development, real estate and business communities may result in projects that create enhanced development opportunities, but may also create funding partnerships that leverage public and private dollars. Ensuring everyone is at the table to discuss where development is and should occur in the future can result in an improved process and better projects.

### ***Specific Federal Recommendations***

The Federal government is an important partner in building mixed-income housing near transit. Through its policies and investments, it can help shape opportunities at the local level. There are a number of recommendations that the Federal Transit Administration and US Department of Housing and Urban Development could consider to improve the coordination between the two agencies that would encourage similar cooperation at the state, regional and local levels. These recommendations address both how the two agencies could work together, as well as potential adjustments to existing policies and funding programs that could create greater incentives for communities to develop housing for a range of incomes near transit.

- **Continue to coordinate transportation and housing programs at the federal level**

FTA and HUD should establish an interagency working group responsible for following through on the recommendations of this study. A primary function of this group would be to develop a Five-Year Research and Action Plan for Mixed-Income TOD. The plan would identify the tools that are needed to improve coordination of transportation and housing programs and the most appropriate ways to develop them; potentially identifying specific projects seeking federal funding on which to coordinate. Initial efforts might focus on how to: track housing trends in transit-served regions, monitor the efficacy of

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<sup>15</sup> The City of Minneapolis is tracking development along the Hiawatha Corridor and using their data collection effort to inform property owners, developers and neighborhood residents about development trends and opportunities. A series of data and maps are available to the public via the Internet, see [http://www.ci.minneapolis.mn.us/cped/projects\\_list.asp](http://www.ci.minneapolis.mn.us/cped/projects_list.asp)

the various policies and tools that have been deployed, identify performance measures for transit corridors and mixed-income TOD, identify and fund needed research on best practices, and provide technical assistance.

- **Use transportation and housing policies and funding to encourage mixed-income housing near transit**

HUD should explore regulatory and policy approaches that may increase the supply of affordable or mixed-income housing within transit corridors. These would focus on preservation of existing rental housing near transit, and new construction of affordable and mixed-income housing. One approach is to encourage this as an element to be addressed in each community's Consolidated Plan submittal. Another approach could be to provide incentives in its competitive grant awards, such as those for Section 202 housing for the elderly or Section 811 for disabled persons, or HOPE VI, for projects that maximize access to transit, or are located adjacent to transit.

FTA will continue to evaluate and rate proposed major transit investments known as New Starts and Small Starts (49 USC 5309) under Congressionally-mandated criteria. Under FTA's current evaluative procedures, projects in areas with high population densities tend to earn better ratings because more people can walk to transit leading to higher ridership and resulting benefits. FTA also gives higher ratings to projects that serve higher numbers of lower income, transit-dependent people. Consequently, the net effect is that the higher the population of lower-income residents near a transit station, the better the project's anticipated ridership and mobility benefits. FTA should explore other approaches for rating projects that demonstrate the potential for higher ridership by transit dependent populations.

- **Consider implementing a federal affordability measurement (or Index) that reports on the combined costs of housing and transportation**

Affordability is impacted both by housing and transportation, the two highest household expenditures. For households earning \$50,000 or less, transportation now costs more than housing in most metropolitan areas, and this cost is highly dependent on the character of the location of housing.<sup>16</sup> The Federal government should act to ensure that housing consumers (renters, homeseekers) and suppliers (investors, builders, regulators and developers) are made aware of the full direct costs of housing. Only the federal government can assure the multi-agency coordination necessary to keep the data bases that such disclosure is dependent on, of high quality and up-to-date. HUD and FTA should consider whether or not, a measurement that included these combined costs could be used by localities and regions to report on metropolitan affordability at the regional and Census tract levels, and work to ensure that these costs are fully disclosed by the marketplace.

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<sup>16</sup> Barbara J. Lipman, *A Heavy Load: The Combined Housing and Transportation Burdens of Working Families*. Center for Housing Policy: October 2006.

One potential index that could be tested by FTA and HUD to determine its applicability is the Housing and Transportation Affordability Index, described earlier in this study.<sup>17</sup> A pilot program that uses the Affordability Index to evaluate planned investments and their impact on enhancing a region and neighborhood's overall affordability could help determine the effectiveness of such a tool.

- **Accelerate efforts to preserve existing rental housing near transit, both affordable and market rate**

Today's transit zones provide a large stock of rental housing, which generally yield affordable housing for many segments of the population. Within the supply of rental housing near transit, there is also a substantial stock of affordable-subsidized rental housing. Special efforts by HUD and local authorities could be undertaken in order to identify the number HUD-funded units near transit and seek to protect those units with expiring affordability clauses. The next large expiration of HUD units will happen in 2009, and includes thousands of units in regions with some of the worst housing affordability crises.<sup>18</sup> The cost for rehabbing and preserving existing affordable units is 30 to 50 percent of the cost of building new and acquiring land for more rental housing near transit would be even more costly. HUD is encouraged to consider providing technical assistance and guidance to local communities before these units are lost to this market.

- **Direct HUD funding sources to build housing near transit facilities**

HUD's Community Development Block Grant (CDBG) funds are an important source of providing new affordable housing units. Previously the HOPE VI program helped transform distressed public housing and integrate rental and home ownership opportunities. These programs do not specifically identify transit-oriented locations as priority sites for funding, nor do they recognize the affordability merits of providing housing near transit facilities. HUD should conduct a feasibility study to determine the potential for directing existing programs such as CDBG, Market-to-Market, and other housing credit and bond programs toward developing new affordable units in new and existing fixed-guideway transit corridors. HUD could also determine the extent to which new funding sources are necessary to address the unique conditions present in TOD, such as higher land costs and rents.

- **Continue to study the causal relationships between housing markets and transit investments**

This study is the first in many years to study the linkages between housing markets, transit investments, travel patterns and development trends. FTA and HUD should

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<sup>17</sup> Center for Transit-Oriented Development and Center for Neighborhood Technology, *The Affordability Index: A New Tool for Measuring the True Affordability of a Housing Choice*. Brookings Institution, Urban Markets Initiative, Market Innovation Brief: January 2006. Also discussed in Chapter Two of this study, footnote 5.

<sup>18</sup> In Boston's Fairmount/Indigo Line corridor, 2,200 expiring uses are set to expire in 2009. Local CDCs are concerned about the impact to these households, many of whom are older Americans, who have a need to be located near affordable transportation. This is an issue that came up in the other case study communities, but for which data was not readily available.

consider what, if any, funding sources, including the use of Transportation Cooperative Research Program, HUD research program and the Center for Transit Oriented Development's federal funds, are available to provide guidance to policy-makers and practitioners.

Priority research items include:

- Tracking development trends and transit ridership patterns in transit-served regions;
- Monitoring the efficacy of the various policies and tools that have been deployed to promote or retain mixed-income housing in transit zones;
- Identifying performance measures for transit corridors and mixed-income TOD that can be used by state, regional and local agencies; and,
- Further research on best practices and case studies on the benefits of mixed-income TOD.



## Appendix A. General Transit-Oriented Development and Affordable Housing Policies and Funding

Tool	Intended Funding Agent/Implementing Agent	For use by:	Policy	Funding/Financing	Affordable Housing	Mixed Income (MI)	TOD	Description	Example	Tools Used in Case Study City
<b>GENERAL TOOLS FOUND IN MANY CITIES</b>										
Accessory Dwelling Units	City	Developer, Homeowner			X			Allowing accessory dwelling units (ADUs) uses surplus space in existing single-family neighborhoods. An accessory dwelling unit is an additional living unit, including separate kitchen, sleeping, and bathroom facilities, attached or detached from the primary residence, on a single-family lot.	Bellevue, Wash., allows the development of accessory dwelling units (ADUs). The ADU must be attached to the primary residence, and either the ADU or the primary residence must be occupied by the property owner (Stroh 2000). The city only requires a very low registration fee of \$25 for homeowners retrofitting their house with an ADU.	Portland, Minneapolis
Area plans and Station-Area Plans	City	City, Developer					X	Neighborhood, District, and Area Plans are tools for documenting community goals and objectives for long-term development, through an inclusive community-based planning process. City Planning departments can facilitate and incorporate them into Comprehensive Plans so that new developments will follow the community's vision. Local community groups may also initiate the plans and work with the City to adopt them.	A station-area plan for North Station/Fleet Center in Boston will make the North Station TOD neighborhood the gateway for the northern approach to the Rose Kennedy Greenway development (being constructed over the Central Artery Tunnel).	Boston, Charlotte, Denver, Minneapolis, Portland
Density Bonuses in exchange for affordable units and other elements/amenities	City	Developer		X	X			A density bonus provides an increase to the developer in the permitted floor area or dwelling units within a project in exchange for other amenities, or in some cases, affordable units. In relation to TOD, "increased density allows greater economies of scale, and gives more people easy access to transit from their home or work, encouraging transit use. Creating compact, pedestrian-friendly neighborhoods can also help support neighborhood-serving local businesses.	Near the Ballston Metro station in Arlington, Virginia, bonuses have been introduced to create housing and retail spaces in buildings that would otherwise be exclusively office space, creating a 24-hour district.	Boston, Portland, Charlotte, Denver, Minneapolis
Development Fee Waiver	City	Non-profit developer		X	X			The waiver can be used for Non-Profit Affordable Housing projects to offset some of the development fees associated with the rehabilitation or new construction of affordable housing units.	Arvada, near Denver has an ordinance that provides for a development fee waiver "for all housing developments which will be granted a federal subsidy for rent or mortgage payment"	Portland, Denver
Impact fee reduction / waiver	City	Developer, non-profit developer		X	X			To reduce costs for developers constructing affordable housing, municipalities can waive their fees for permitting, or impact where the development is not going to create extraordinary infrastructure burden	Longmont, near Denver offers up to 100 percent waiver of certain fees, using a five-year affordability period for single-family development, and a ten-year period for multi-family.	Boston, Denver

## DEFINITIONS of TERMS USED

### Type of Tool:

<i>Policy</i>	An adopted plan to promote transit, develop affordable housing and/or mixed-income communities.
<i>Funding/Financing</i>	A program or policy that provides direct funding, capital and/or incentives for preserving and/or developing affordable housing, transit-oriented development, and/or mixed-income communities.

### Targeted Policy Outcome:

<i>Affordable Housing</i>	Policies and/or funding/financing sources aimed at developing and/or preserving housing for low and moderate income people. HUD's definition of affordability is for a household to pay no more than 30 percent of its annual income on housing.
<i>Mixed Income</i>	Mixed income policies and/or funding/financing sources aimed at incorporating a mixture of households with varying incomes in the same development or transit zone. Definitions vary greatly depending upon the population served, location, tenure type, management and scale. Policies that require affordable housing on-site in market-rate developments are thus both "Affordable Housing" (above) policies and "Mixed Income" policies.
<i>TOD</i>	Policies and/or funding/financing sources aimed at creating transit oriented development (TOD). Transit-oriented development is typically described as a mix of uses at various densities within a one-half-mile radius, or walking distance, of a transit stop.

Source: *Center for Transit-Oriented Development, 2006*

## Appendix B. Methodology Discussion

### 1. Determining Underutilized Properties

In the discussions of each of the individual corridor case studies, the Center for TOD utilized local assessor's data and geographic information systems (GIS) to analyze and quantify underutilized properties within a half-mile radius of transit stations, referred to as the Transit Zone. The methodology used for this analysis is described below.

#### GIS Data Used in Analysis:

- Station Points – Geocoded stations sited in latitude and longitude based on local street maps and transit agency data.
- Half Mile Buffers - The buffers were created through a buffer function in GIS of the station points, using the half-mile as the buffer distance.
- Assessors Parcel Data – Assessors data was obtained from local sources. The data is usually held with the tax assessor however the agency that tracks land use generally keeps an updated copy as well. Sources for this project were comprised of cities, counties, regional governments, and city-county conglomerates. The Assessors data should be in GIS format and also have values attached to the property including the land, structure and total value.
- Aerial Photographs – 2005 aerial photographs were obtained from the United States Department of Agriculture GeoSpatial Data Gateway. Aerial photos can specifically be downloaded here:  
<http://datagateway.nrcs.usda.gov/>

Data were clipped with the half mile buffer allowing for easier management of data. After clipping, a new layer for the parcel data was used, replacing the initial county or city layer. The square footage of each parcel was then calculated using the formula code in Table 1 to calculate total available land. To get acres, divide by 43,560. For Areas where the base measurement unit is meters, use 4,046.

**Table 1. Code for Calculating Parcel Square Footage in ESRI GIS**

```
Dim dblArea as  
double  
Dim pArea as IArea  
Set pArea = [shape]  
dblArea =  
pArea.area
```

#### Finding Parcels

Underutilized properties were calculated based on the value of the structure (provided in the database of the parcel file), divided by the value of the land. If the value is less than one the property is considered underutilized. In instances

where there is only a land cost and a total cost, the total cost was divided by the land value. Values less than two were classified as underutilized. Identified underutilized properties were mapped and cross checked as much as possible for accuracy and local conditions, however, small discrepancies may exist. Our analysis did not use single family residential properties or government property. With local knowledge of conditions and tax assessment the calculation numbers one and two can be adjusted to fit properties on a higher range that might fit the criteria of underutilized.

## 2. Calculating Housing Capacity in Selected Transit Corridors

Producing underutilized properties is a sensitive and tricky undertaking. Because local officials and planners know more about what is going on parcel by parcel, the numbers produced are a rough estimation based on the best local datasets. On the ground analysis of every parcel is not feasible but these estimations give us a basic idea of what is possibly available.

In order to get to some sort of capacity number that would act as a rough gauge of possible absorption we would have to significantly underestimate the acreage that would act as our base number. By taking 30 percent to 50 percent of the number we have given as underutilized acreage we could properly give an estimate of the possible capacity of the corridor. So for example, in Denver's West Corridor 983 acres are marked as underutilized. Taking 50 percent of the total acreage, we would have 491 acres to calculate against a density range.

The density range would consist of capacity of the reduced acreage at current corridor density versus double that current density. The range serves to not peg down a single number target for the corridor but rather give a rough approximation of what could be achievable in the corridor if reusing the property available. The figure below shows calculations of capacity using the above system.

Corridor Housing Capacity Estimates									
Corridor	City	Underutilized Total Acreage	Underutilized Acreage Adjusted	Current Corridor Density	Low End Capacity	High End Capacity	Regional TOD Demand	% of Regional Demand (Low)	% of Regional Demand (High)
Fairmount	Boston	345	173	18	3,105	6,210	750,726	0.41%	0.83%
South	Charlotte	1,277	639	6.7	4,278	8,556	76,931	5.56%	11.12%
West	Denver	983	492	9.6	4,718	9,437	138,207	3.41%	6.83%
Hiawatha	Minneapolis	504	252	18	4,536	9,072	123,776	3.66%	7.33%

Note: We did not estimate underutilized acres for the Portland streetcar corridor due to inaccuracies with the data and the rapid redevelopment that has already occurred within the Pearl District on formerly underutilized sites.

## **Glossary of Terms**

ADA Compliance - The Americans with Disabilities Act (ADA) is a wide-ranging civil rights law that prohibits discrimination based on disability

Affordable Housing – Defined as housing that costs no more than 30 percent of a household’s annual income. Families who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care

APTA - American Public Transportation Association, a national membership organization comprised of transit agency and industry representatives and advocates.

Area Median Income (AMI) - State and MSA-level calculations of median income, completed on a year-by-year basis by HUD, to establish maximum income limits for affordable housing programs

Assessment Districts - District created by local jurisdiction or businesses to collect taxes or other fees; many different types of assessment districts

Boston Redevelopment Authority (BRA) - Boston's planning and development agency

Bus Rapid Transit (BRT) - Buses running in dedicated lanes that have increased station visibility and specific ITS (Intelligent Transportation Systems) capabilities

Business Improvement District (BID) - See Assessment Districts

Capacity – The approximate number of housing units that could be accommodated on underutilized land

CATS - Charlotte Area Transit System

CBD - Central Business District

CDBG or Community Development Block Program - The largest Federal source of financial assistance for supporting neighborhood revitalization, housing rehabilitation and economic development activities; program is administered by the US Department of Housing and Urban Development

Community Development Corporation (CDC) - Non-profit entities that provide benefits and services to surrounding communities such as affordable housing, job training, or economic development projects

Charrette - A collaborative community planning and design process that brings stakeholders together in intensive work sessions to develop plans for their neighborhoods or regions

Choice Rider - Transit riders who could afford to own and operate a personal automobile but choose to take transit

Circulator - Term describing the transit function of streetcars, which often circulate people through a district rather than providing point to point transportation

Commuter Rail - Class of transit vehicle; these passenger vehicles are required to be larger than light rail or heavy rail by the Federal Railroad Administration because they run in similar right of ways as freight lines

Consolidated Metropolitan Statistical Area (CMSA) - A geographic entity designated by the Federal Office of Management and Budget (OMB) for use by Federal statistical agencies; an area becomes a consolidated metropolitan statistical area (CMSA) if it qualifies as a metropolitan area (MA), has a census

population of 1,000,000 or more, has component parts that qualify as primary metropolitan statistical areas (PMSAs) based on official standards, and local opinion favors the designation. CMSAs consist of whole counties except in New England, where they consist of county subdivisions (primarily cities and towns)

Context Sensitive Design - An interdisciplinary design that involves all stakeholders to develop a multi-modal transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while promoting pedestrian safety and mobility

Corridor - The area served by a transit line from end to end; specifically defined in this study as the half-mile distance from the stations to the surrounding neighborhoods along the transit alignment

CTOD - Center for Transit-Oriented Development

DHA- Denver Housing Association

Displacement - A process where land values increase in an existing neighborhood to the point that existing residents can no longer afford rents, sales prices, or taxes and are forced to seek housing elsewhere

DRCOG - Denver Regional Council of Governments

DUA - Dwelling units per acre; or units per acre

Economic Development Corporation (EDC) - A non-profit entity that promotes economic development within a region

Entitlement Process - The range of steps that a developer must go through to obtain approvals for a proposed development

EOT Massachusetts - Executive Office of Transportation for the Commonwealth of Massachusetts

Euclidian Zoning - Standard zoning that promotes the separation of uses

FAR - The floor to area ratio; buildings are regulated using FAR meaning that the area of the building can be a certain size over the base land on which it sits, often by a multiplier such as 3:1

Fastracks - Denver regional tax measure passed in 2005 to raise money for transit expansion

Final Design - Phase in the New Starts or Small Starts process which includes right-of-way acquisition, utility relocation, and the preparation of final construction plans

Fixed-Guideway Transit/Fixed-Route Transit - Transit vehicles operating in a separated grade or lane specifically created for that transportation mode

Form-Based Code - Development Code that prescribes the building types instead of uses

FTA - Federal Transit Administration

Grade Separation - See Fixed Guideway Transit

Greyfields - Term used for an area that is not yet blighted but suffering from excess vacancies, that could be redeveloped for multiple uses

Half-Mile Radius - Typical Distance of the impact of fixed-guideway transit; also known as 10 minute walk

Headway - The time between buses or trains operating on an identified route

Heavy Rail - Also known as metro systems, this rapid transit technology is fully grade-separated and operates using electricity pulled from a third rail. Examples

of metro systems include the New York City subway, the Washington Metro and BART in San Francisco

HOME Grants - The largest Federal block grant given by the US Department of Housing and Urban Development to State and local governments designed exclusively to produce affordable housing for low-income families.

Home Rule - Resisting regulation by the State government in favor of self legislation and regulation

HOPE VI - A Federal housing program that began in 1992 to transform and replace severely distressed public housing with innovative urban neighborhoods that tried to lessen concentrations of poverty and promoted mixed-income communities

Housers - Term coined for workers and practitioners in the housing industry

HUD - The U.S. Department of Housing and Urban Development

In-Fill - Projects where underdeveloped or vacant properties in an existing urban environment are redeveloped

Intelligent Transportation Systems (ITS) - A worldwide initiative to add information and communications technology to transport infrastructure and vehicles

Land Assembly – Acquiring adjacent parcels of land for single ownership in order to do a larger redevelopment project

Land Bank - To buy and hold land from speculative and developmental pressures, potentially for a use that benefits the larger public such as affordable housing or open space

Light Rail Transit (LRT) - A range of rail transit that encompasses streetcars through larger weight vehicles on mostly grade-separated systems

Local Improvement District (LID) - See Assessment Districts

Location Efficiency - The conscious placement of homes, jobs, shopping, entertainment, parks and other amenities close to transit stations to promote walking, biking and transit use

Low- to Moderate-Income Working Families – Households in which at least one wage earner works the equivalent of a full-time job and earns from the minimum wage of \$1,700 per month and up to 120 percent of the median income in their area

MBTA - Massachusetts Bay Transportation Authority

Metro HRA - Housing and Redevelopment Authority for the Twin Cities Region

Metro Transit - Transit Authority of the Twin Cities Region

Metropolitan Council - The Twin Cities Metropolitan Planning Organization that makes regional transportation, land use and public housing decisions and operates the regional transit authority

Metropolitan Planning Organization (MPO) - The policy board of an organization created and designated to carry out the metropolitan transportation planning process.

Metropolitan Region - A major city center and surrounding cities and suburbs, generally defined in this report as the standard, Federally-defined Metropolitan Statistical Area (MSA) or Consolidated Metropolitan Statistical Area (CMSA)

Metropolitan Statistical Area (MSA) - A geographic entity designated by the Federal Office of Management and Budget for use by Federal statistical agencies; a metropolitan statistical area (MSA) is a metropolitan area (MA) that is not closely associated with another MA. An MSA consists of one or more counties, except in New England, where MSAs are defined in terms of county subdivisions (primarily cities and towns)

Mixed-Income - A single neighborhood or development offering a range of housing prices

Mode Share - The amount of people that use a particular mode of transportation

NDC - Neighborhood Development Corporation

New Starts - A U.S. Department of Transportation program, authorized as part of SAFETEA-LU, which serves as the Federal government's primary financial resource for supporting locally-planned, implemented, and operated major transit capital investments, including light rail, streetcars, commuter rail and bus rapid transit systems

NIMBY - "Not in My Backyard" residents who oppose development in their area

On-Street Parking - Parking that is located in the public right of way

Parcelization - The division of land into smaller pieces; land owners with large parcels might want to parcelize their property and sell off the smaller pieces

Parking Requirements/Ratios - The amount of parking that is required by development codes associated often with the square footage of a space; e.g.

One parking space for 250 Square Feet of a development

PDC - Portland Development Commission

Pedestrian-Oriented - Specifically building to cater to the needs of pedestrians instead of automobiles

Pedscape - The landscape as designed for pedestrians

Place-Making - The creation of place through pedestrian orientation and public spaces in the public realm of a district

Portland Metro - The Portland Metropolitan Planning Organization that makes regional transportation, land use and public housing decisions; it is the only

elected regional government in the country Potential Demand - The projected number of households that are likely to prefer relatively compact housing in a transit zone if such housing exists with the characteristics they deem important, including but not limited to neighborhood amenities such as retail, unit size, and competitive pricing

Primary Metropolitan Statistical Area (PMSA) - A geographic entity designated by the Federal Office of Management and Budget for use by Federal statistical agencies. If an area that qualifies as a metropolitan area (MA) has a census population of one million or more, two or more primary metropolitan statistical areas (PMSAs) may be defined within it if they meet official standards and local opinion favors the designation. When PMSAs are established within an MA, that MA is designated a consolidated metropolitan statistical area (CMSA)

Public/Private Partnership - A system in which a government service or private business venture is funded and operated through a partnership of government and one or more private sector companies

PUMS - Public Use Microdata Series



Rapid Transit – High-capacity, high-frequency transit operation that often runs in its own guideway or right-of-way

Region - In this report the region refers to the metropolitan region, but can also refer to much larger land areas such as the southeast region of the United States or other geographic areas

Residential Density - Housing Units per Acre of residential land

Ridership - Amount of riders on a system, often calculated by year or average weekday

Right-of-Way (ROW) - The path owned by government agencies through which transportation whether road or rail passes

RTD Denver - Regional Transportation District, Denver’s regional transit agency

Smart Growth - Well-planned development that protects open space and farmland, revitalizes communities, keeps housing affordable, promotes economic development and provides more transportation choices. Smart Growth promotes cooperation between often diverse groups to arrive at sustainable long-term strategies for managing growth

Streetcar - A subset of light rail in which the primary operations of the vehicles are in the street mixed with traffic

Streetcar Suburbs - Communities that were shaped and served by streetcars during the late 19<sup>th</sup> to early 20<sup>th</sup> Centuries at which time streetcars were most popular

Streetscaping - The addition of special attributes to a street such as trees, benches and other amenities

Surface Parking - Parking located on the surface of a property; a surface parking lot

Tax Increment Financing (TIF) - A tool used to capture the future tax benefits of real estate improvements in a designated area to pay the present cost of those improvements

Transit Corridor – (See Corridor)

Transit Region - A metropolitan area, according to standard Census defined areas, with a fixed-guideway transit system. Depending on the region and the size of the system, the metropolitan areas are either Metropolitan Statistical Areas (MSAs), Primary Metropolitan Statistical Areas (PMSAs), or Consolidated Metropolitan Statistical Areas (CMSAs).

Transit Zone (TZ) - The area around a transit station consisting of everything within a half-mile radius of that station

Transit-Oriented Development (TOD) - Includes the whole district surrounding the station, comprised of several projects and a mix of uses, the streetscape and walking environment, and integrated design, land use and activity that support transportation choice

Tri-Met or Tri-County Metropolitan Transportation Authority - Transit Authority for the Portland region

Twin Cities - Name of the region that refers to the cities of Minneapolis and St. Paul and the surrounding seven- county metropolitan area

ULI - Urban Land Institute

Urban Mass Transportation Administration (UMTA) - now the Federal Transit Administration or FTA

Underutilized Properties - In this study, underutilized property means parcels with less than a 1:1 land improvement to land value ratio, meaning the properties are worth less than the land on which they are built

Value Capture - For local governments, value capture can mean higher tax revenues from increased sales and property values; for the transit agency, value capture means lease revenues from joint development, increased farebox revenues, and lower costs for providing access

Vehicle Miles Traveled (VMT) - The total number of miles traveled in automobile and other vehicles for a specified area

Workforce Housing - Residential units that are offered at the going market rate, but that are affordable to the typical household with at least one full-time wage earner; often contrasted with luxury housing