



LET'S MOVE 
NASHVILLE
Metro's Transportation Solution

Economic Development Memorandum

April 21, 2018



Executive Summary

The *Let's Move Nashville Transit Improvement Program* (TIP) is expected to have a considerable impact on generating transit-oriented development (TOD) along corridors with high-capacity transit (HCT). HCT is characterized by the capability to carry an increased number of passengers and more frequent services than a standard bus system.

TOD tends to happen near HCT stations due to an increase in economic and social activity. It results in mixed-use development, creating vibrant and connected communities.¹ Transit investments have also been found to appreciate property values and spur private investment along high-capacity corridors (HCC). Based on findings from other U.S. cities, it is estimated that property owners along the LRT corridors would enjoy a one-time benefit of \$1.1 billion in property value appreciation due to an increased demand for land in proximity to high-capacity transit. In addition to increased property values, on average there is a \$4 return in private investment for every \$1 spent on transit investments.

The purpose of this memo is to communicate the complexity of the relationship between an investment in high-capacity transit and the economic development that it tends to spur. This analysis considers the convergence of changes in property value, private investment potential and social equity on economic development in Davidson County.

Background

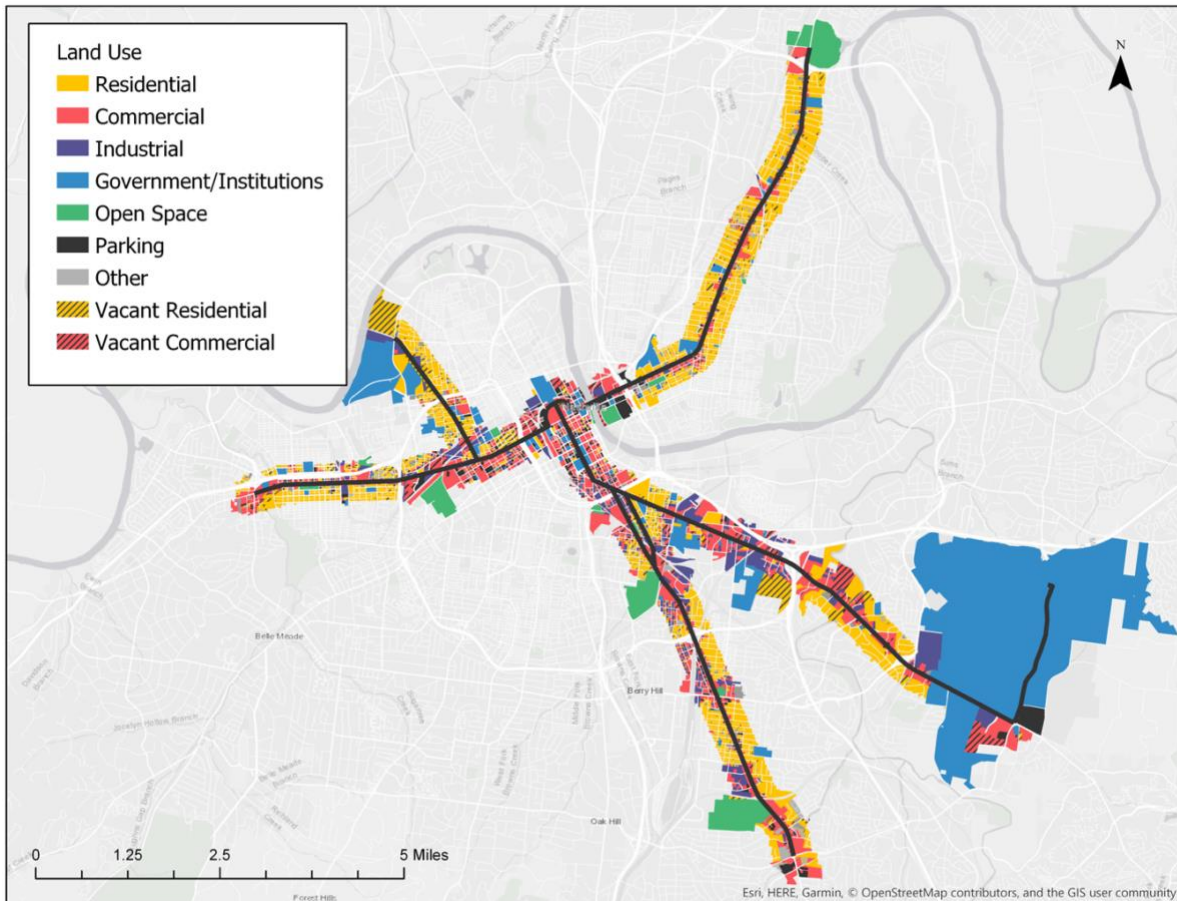
Metro Nashville and Davidson County (Metro) and the Metropolitan Transit Authority (MTA) are in the planning and development stages for significant improvements to Nashville's multimodal transportation infrastructure. The changes first proposed in the 25-year *nMotion Strategic Transit Plan* (September 2016) and the *nMotion High Capacity Transit Briefing Book* (August 2017) have been more fully articulated in the TIP. The TIP includes a combination of LRT and Rapid Bus infrastructure, as well as improvements to the Music City Star (MCS) commuter rail and the local bus system to provide a robust, countywide, multimodal transportation network for residents, businesses, and visitors. In addition to the multimodal improvements provided by the TIP, the program will also serve to improve pedestrian infrastructure.

This analysis evaluates the economic development potential along the TIP's proposed LRT corridors and its impact on Metro's residents. Economic development and growth can also result in the proximity of Rapid Bus transit stations, in particular when Rapid Bus corridors are provided dedicated lanes and can act as fixed-guideway transit in a

¹ Federal Transit Administration (2018) Transit-Oriented Development.

similar manner to LRT.² However, since the extent to which there will be dedicated lanes for Rapid Bus has not been determined in the TIP, this analysis focuses solely on the potential impacts across the five LRT corridors that are proposed in the TIP. It is worth noting that, depending on the extent of bus-related amenities, existence of dedicated lanes for Rapid Bus, and other factors, some economic development associated with this dedicated service would be expected. As a result, this analysis is likely to underestimate the full TOD impact associated with TIP investments. To understand the existing land-use conditions of the study area, defined as properties within a ¼-mile distance from the LRT corridors, parcel data from Metro’s Planning Department was mapped using ESRI’s ArcMap and overlaid with the service area buffer as shown in **Figure 1**.

Figure 1. Parcels by Land Use Along the LRT Corridors



Source: Metro Planning Department (2017)

² Nelson, A et al. (2015) National Study of BRT Development Outcomes. National Institute for Transportation and Communities.

Transit Premium

The TIP is expected to bring an increase in property values along HCCs, especially for LRT as areas in direct proximity to the corridors become more accessible and exhibit higher levels of economic activity.³ ⁴ Rail-served communities allow residents to reach meaningful community destinations more easily, visitors to reach large retail centers and other notable destinations throughout the city, and businesses to be better connected to the local labor pool.⁵

The change in property values that result from an investment in transit is referred to as a “transit premium,” which has been found to range from a few percent decrease to over 150% increase across various real estate sectors. The transit premium and potential for TOD resulting from an investment is dependent on multiple factors, including the regulatory environment and market conditions of the area.⁶

Table 1 provides information related to the exhibited property value changes in various U.S. cities as a result of transit investments. While in some cases the transit premium has been found to be negative, the net impact on property value across commercial and residential properties tends to be positive. However, the extent of the transit premium ranges widely because of conditions that might either favor or hinder TOD. For example, single-family housing has been found to range from 2.98 to 31.25%, which is largely influenced by community-specific characteristics such as zoning, density, walkability, etc.

³ Transit Cooperative Research Program (2002) Estimating the Benefits and Costs of Public Transit Projects: A Guidebook for Practitioners. Report 78.

⁴ Center for Transit-Oriented Development (2008) Capturing the Value of Transit

⁵ Cervero, R et al. (2002) Land Value Impacts of Rail Transit Service in San Diego County.

⁶ National Association of Realtors, Public Transit Boosts Property Values, If Conditions are Right. Transportation and Real Estate: Making the Connections.

Table 1. Average Transit Premiums for Light Rail Systems Across US Cities

City	Area Around Stations	Transit Premium			Source
		Residential	Commercial	Other	
San Diego, CA	½ mile	Condo 12.24% Single family 2.98% Multi-family 5.80%	Commercial 16.50%	--	Cervero et al. (2002)
Dallas, TX	¼ mile	Residential 12.6% Vacant 11.1%	Office 13.2% Retail (2.2%)	Industrial (8.5%)	Weinstein et al. (2012)
Charlotte, NC	1 mile	Single-family 4.0% Condo 11.3%	No effect	--	Billings (2011)
Portland, OR	1,640 feet	Single/Multi-family 10.6%	--	--	Musaad et al. (1993)
Minneapolis, MN	1 mile	--	0.3% - 0.4%	--	Ko and Cao (2013)
St. Louis County, MO	¼ mile	Single family 31.25%	--	--	Garrett (2004)
Atlanta, GA	300 feet	--	Office 13%	--	Center for Transit Oriented Development (2008)

Methodology

In order to estimate the TIP's effect on property values, a benefit transfer method was utilized. Benefit transfer can be defined as the use of research from pre-existing studies conducted under a similar context to predict outcomes on a new study area. In short, benefit transfer applies the values from a study site where data has been collected and analyzed to a site where there is little or no data available.⁷ Because this analysis anticipates impacts associated with the TIP's proposed improvements, the benefit transfer method is employed to project impacts that would accompany the future implementation of the TIP.

⁷ Johnston, R. J. et al. (2015) Benefit Transfer of Environmental and Resource Values: A Guide for Researchers and Practitioners. Chapter 2: Introduction to Benefit Transfer Methods.

A number of studies examining the property value impacts associated with transit were compiled and are listed in **Table 1**. The studies compiled are results of hedonic pricing analyses. A hedonic pricing analysis evaluates the benefit of a non-market characteristic on market prices.⁸ One example of a non-market characteristic would be proximity to public transportation, which each of these studies has analyzed for various transit systems throughout the U.S. Hedonic pricing is a commonly utilized method to estimate transportation-related benefits that influence property values.⁸

Upon compiling results from a number of hedonic pricing analyses that focus on the impact of nearby transit, two studies were used as a basis for estimating Nashville's anticipated transit premium. Research from Dallas⁹ and San Diego¹⁰ were chosen for use in a benefit transfer estimation due to the thoroughness of the research completed within each study across various sectors of the real estate market as compared to other research studies (**Table 1**). As a result, it is expected that these studies provide a comprehensive view of impacts provided by transit on land values.

While a transit premium is anticipated to be a one-time benefit that Metro residents would experience, it is expected to materialize across several years, starting upon the announcement of the transit investment.¹¹ This expectation has been confirmed through interviews with various stakeholders throughout Metro who reported that an increase in interest in properties along HCCs has already been exhibited by developers throughout the city.

To estimate the anticipated transit premium using the benefit transfer methodology, ArcMap was first used to define a ¼-mile buffer along the entirety of the LRT network. The buffer was then overlaid with Metro's 2017 Tax Assessor Data to obtain the parcels within the study area (**Figure 1**). Each parcel was then inventoried by land use (e.g. single-family, condo, commercial, office, government, etc.).

Upon inventorying properties by their assigned land use category, the corresponding premium (**Table 2**), was applied to the parcel's appraised (market) value as obtained from Metro's 2017 Tax Assessor Data. For example, if a single-family parcel's appraised value is \$500,000 and the premium was found to be 10%, the expected increase in property value for that property would be \$50,000. Premiums were estimated for occupied and vacant residential and commercial properties. Given the wide range of premiums found across real estate sectors in the studies chosen for benefit transfer analysis (e.g. commercial premiums range from -9.9% to 91.10% along

⁸ Transportation Benefit-Cost Analysis. Hedonic Pricing.

⁹ Weinstein BL et al. (2002) An Assessment of the DART LRT on Taxable Property Valuations and Transit Oriented Development. Dallas Area Rapid Transit.

¹⁰ Cervero, R and Duncan, M (2002) Land Value Impacts of Rail Transit Service in San Diego County.

¹¹ Center for Transit-Oriented Development (2008) Capturing the Value of Transit.

the different corridors in San Diego), the lowest and the highest premiums were excluded before averaging the impacts on each corridor by land use category.

Table 2. Transit Premiums Applied in the Analysis

Land Use	San Diego	Dallas	Average
Industrial	16.5%	-8.5%	4.0%
Commercial - Office	16.5%	13.3%	14.9%
Commercial - Parking	16.5%	-2.2%	7.2%
Commercial - Other	16.5%	-2.2%	7.2%
Residential - Condo	4.3%	12.6%	8.4%
Residential - Multi-family	6.3%	12.6%	9.4%
Residential - Other	-0.5%	12.6%	6.1%
Residential - Single-family	-0.5%	12.6%	6.1%
Vacant - Commercial	16.5%	-2.2%	7.2%
Vacant - Residential	-0.5%	11.1%	5.3%
Vacant - Multi-family	6.3%	11.1%	8.7%

The resulting increase in property values from applying the San Diego and Dallas premiums were averaged, totaling to \$1.1 billion in benefits to property owners along the LRT corridors. It is important to note our estimates are understated for several reasons. First, San Diego's estimated property value impacts were analyzed within a ½-mile of transit stations, while this analysis only considers properties within ¼-mile of LRT corridors. It is expected that the closer a property is to transit, the higher the associated transit premium. Second, government-owned properties, such as schools, fire stations, etc. were excluded from this analysis, although property values would still be expected to increase as transit connects an increased number of individuals to Metro services. Finally, this analysis does not project that proper utilization of properties will occur in the future on properties identified as underdeveloped. Underdeveloped properties are often the most attractive for investment and because of this the property value impact estimated is anticipated to be understated. Additionally, annual transportation benefits are expected to accrue to Metro residents as a result of the TIP have been identified in other Technical Memos that will supplement the one-time transit premium identified in this analysis.

Transit Oriented Development

Investments in transit and the resulting increase in transportation options tend to spur commercial, residential, office and entertainment-centered development around or near transit stations, typically referred to as TOD. This type of development creates more dense, walkable and livable communities and provides a way of managing economic growth by concentrating it along HCCs.¹² Combined with travel cost savings, TOD may increase the appeal of living in urban neighborhoods.¹³

By drawing more residents to areas of denser development, the need to clear green space, farms and forests for suburban development may decrease. To accommodate the county's growth between 2007 and 2012, 16% of Davidson County's farmland was lost, amounting to 6,500 acres.¹⁴ Additionally, attracting more residents to the urban core will reduce Metro's need to invest in additional infrastructure such as water and utility lines. Research has found that public services cost 10% more to support suburban sprawl than urban development,¹⁵ while the latter also generates more revenue for the general fund.¹⁶

TOD is a function of the effectiveness of public and private institutions in a city. Governmental policy encouraging such investments plays a critical role in inciting private development along transit corridors. TOD supporting policies have proven to be the primary predictor of success for TOD. Well-functioning agencies with common goals increase the likelihood of development along corridors or at specific sites throughout a city.¹⁷ The state of Tennessee has created legislation for Transit Oriented Development Districts (TODD). A TODD can be designated in a high-capacity transit-deficient area to increase its suitability for transit and encourage development. TODDs must be within a ¼-mile radius of a high-capacity corridor, such as LRT or Rapid Bus.¹⁸ Within TODDs, tax increment funding could be utilized to secure funds and subsidize development for affordable housing. While TODD legislation provides stipulations for implementation, Metro understands the need to consider preexisting land use patterns of an area when

¹² National Conference of State Legislatures (2012) Transit Oriented Development in the States.

¹³ De Vos, J et al. (2013) Transportation policy as spatial planning tool; reducing urban sprawl by increasing travel costs and clustering infrastructure and public transportation. *Journal of Transport Geography* 33:117-125.

¹⁴ Census of Agriculture (2012) Farms, Land in Farms, Value of Land and Buildings, and Land Use: 2012 and 2007.

¹⁵ Burchell, RW et al. (2003) Conventional Development Versus Managed Growth: The Costs of Sprawl. *American Journal of Public Health* 93 (9): 1534-1540.

¹⁶ Smart Growth America (2013) Fiscal impact analysis of three development scenarios in Nashville-Davidson County, TN.

¹⁷ Hook, W et al. (2013) More Development For Your Transit Dollar: An Analysis of 21 North American Transit Corridors.

¹⁸ Senate Bill 783

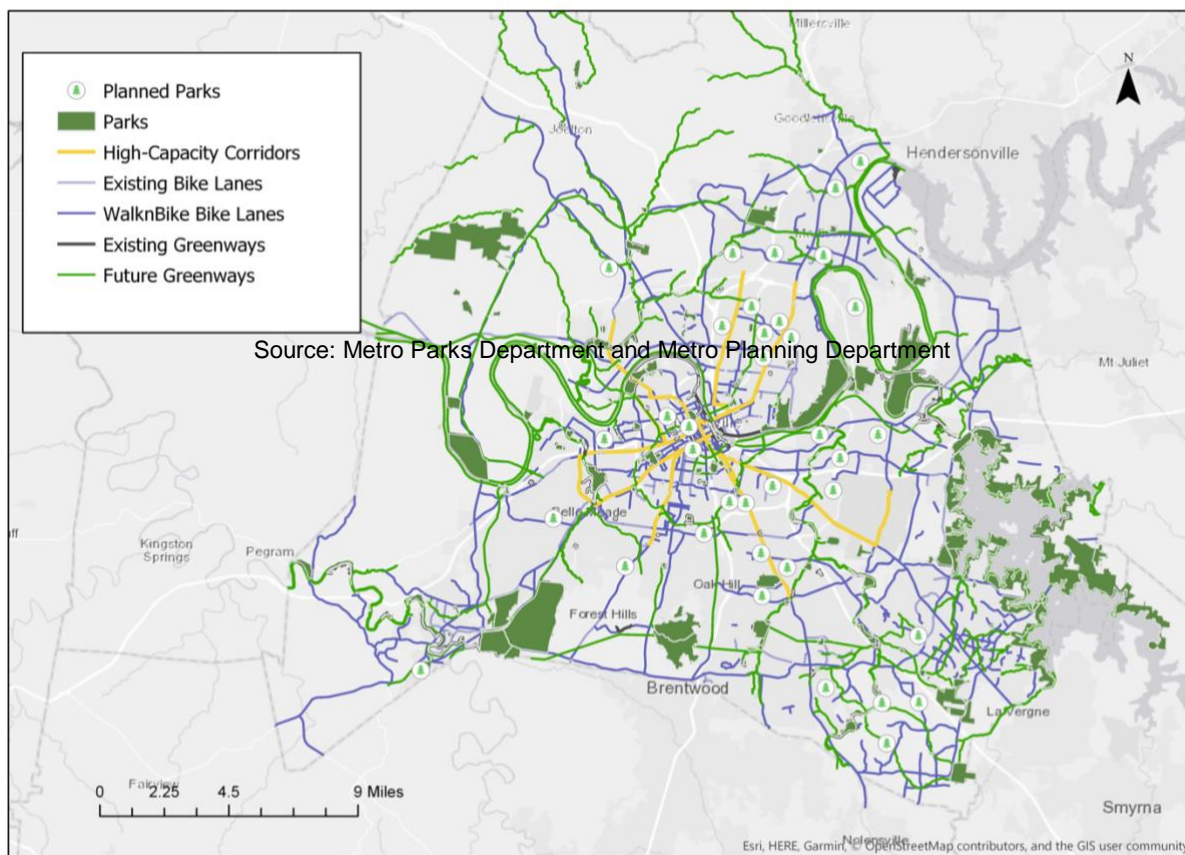
implementing TODDs in accordance with HCC. One TODD has been implemented in Donelson already, and throughout development there was consideration taken in regard to the area's preexisting urban design overlay goals and development standards.¹⁹ With the TIP's implementation, Metro would also consider the current development and zoning standards along each HCC to determine areas best fit for TODD to focus development and manage growth appropriately throughout the city.

In addition to Nashville's regulatory environment, other infrastructure plans throughout the city will expand the number of parks, greenways and bicycle infrastructure, each of which are well-aligned with the TIP's service area and location of each HCC. **Figure 2** shows the locations of current and planned parks, greenways, and bicycle lanes throughout the city. As is evident from the map provided, the TIP will complement other plans throughout Metro and together these plans will better connect people to various important locations and will provide an increased amount of open space throughout the city as the city is able to concentrate growth along transit corridors.

¹⁹Nashville Metropolitan Development and Housing Authority (2017) Donelson Transit-Oriented Development.

Figure 2. Park, Greenway, and Bike Lane Plans in Nashville

Land potential, including the strength of the regional market, has also been shown to have a strong impact on the amount of TOD investment resulting from the implementation of transit.⁸ Nashville’s regional market strength has been near the top of any real estate market in the country in recent years. The Urban Land Institute ranked Nashville ninth in terms of overall real estate prospects across all markets in the U.S. and eleventh in terms of homebuilding prospects in 2018.²⁰ These rankings indicate the current strength of the real estate market in Davidson County, signaling a strong development potential. In addition to Nashville’s high-ranking real estate trends, Nashville’s population is steadily growing. The U.S. Census Bureau recently released estimates showing that Nashville’s metro statistical area gained 36,337 people over the course of a one-year stretch from 2015 to 2016.²¹ As this trend continues and more



²⁰ PricewaterhouseCoopers and the Urban Land Institute (2017) Emerging Trends in Real Estate: United States and Canada 2018®

²¹ U.S. Census Bureau. U.S. Census Bureau 2010 Decennial Census. U.S. Census Bureau Estimates Program 2016.

individuals move to the area, more development will be necessary to sustain the influx of demand for residences and businesses. While economic development is already ongoing in Nashville as a result of the strength of the local economy, transit provides Metro the opportunity to manage the expected growth of the city and to promote smart land-use planning. The strength of the regional market and steady population growth of Nashville can serve to enhance the economic momentum typically associated with TOD.

As a result of TOD, density efficiencies, transportation efficiency, shifts in consumer expenditures, and community redevelopment can occur representing true economic gains that Davidson County would experience from implementing the TIP.²²

Private Development

Transit investment's greatest opportunity to both create and capture value is related to new development along the corridors. While the land value of existing properties tends to appreciate due to a transit investment, the resulting TOD can lead to new infill development opportunities on underdeveloped properties such as vacant units and parking lots.²³ As a result of infill development the tax base can be restored on underutilized lots,²⁴ making more funds available for public use.

To assess the potential for private development along the LRT corridors, occupied and vacant commercial and residential properties were considered. Underdeveloped properties within a ¼-mile were also identified using ArcMap as part of the analysis. Underdeveloped parcels have been defined as properties where the appraised value of the improvements on the property account for 60% or less of the total appraised value.²⁵ In addition to commercial and residential properties found to be underdeveloped, parking lots were also categorized as underdeveloped because of the expectation that TOD will decrease the need for parking spaces and will allow for a more productive use of the land.²⁶ Based on the stated assumptions, it is estimated that about 2,728 acres of

²² Litman, T (2015) Rail Transit in America: A Comprehensive Evaluation of Benefits. Victoria Transport Policy Institute.

²³ Center for Transit-Oriented Development (2008) Capturing the Value of Transit

²⁴ De Sousa, CA (2002) Measuring the Public Costs and Benefits of Brownfield versus Greenfield Development in the Greater Toronto Area. *Environment and Planning B: Planning and Design* 29:251-280.

²⁵ As an example, if a building located on a parcel was appraised at 100,000 and the land on the parcel was appraised at 100,000, then the total appraised value of the property would be 200,000. This property would then be considered underdeveloped since the improvements, or the building, only makes up 50% of the total appraised value of the parcel.

²⁶ Ewing, E et al. (2017) Trip and parking generation at transit-oriented developments: Five US case studies. *Landscape and Urban Planning* 160:69-78

land along the LRT corridors have redevelopment potential, including approximately 600 parking lots as shown in **Table 3**.

Table 3. Underdeveloped Properties along the LRT corridors

Land Use	Parcels	Acres
Residential	5,826	1,209
Commercial	2,708	1,176
Parking	599	340
Total	9,133	2,728

Source: Tax Assessor Data (2017)

In peer cities, investment in transit has stimulated significant private investment as areas along HCCs become more appealing for commercial and multi-family development. In all cities examined and presented in **Table 4**, ROI ranges from \$0.95 to \$14.90 for every dollar invested in transit. In Nashville, it is assumed that \$4 in private investment are generated for every \$1 invested in the TIP.

Table 4. Private Investment from Transit in Peer Cities

City	Mode	Miles	Transit Capital Investment (\$ millions)	Private Investment (\$ millions)	ROI
Dallas	DART Rail	93 ²⁷	5,600 ²⁸	5,300 ²⁵	\$0.95 ²⁹
Phoenix	Metro LRT	20.3 ³⁰	1,417 ²⁶	2,820 ³¹	\$1.99 ²⁶
Denver	LRT / Central Corridor	5.3 ³²	171 ²⁶	2,550 ²⁸	\$14.9 ²⁸
Minneapolis	LRT / Green Line	11 ³³	957 ³⁴	5,100 ³⁵	\$5.3 ²⁶
Los Angeles	Orange Line BRT	14.5 ³⁶	249 ²⁶	300 ²⁸	\$0.83 ²⁸
Charlotte	LRT / Lynx Blue Line	9.6 ³⁷	515 ³⁸	1,400 ³⁴	\$2.7 ²⁶
Portland	MAX Blue Line LRT	33 ³⁹	1,765 ²⁶	6,600 ²⁸	\$3.74 ²⁸
Pittsburgh	MLK Jr. East Busway BRT	9.1 ⁴⁰	252 ²⁶	903 ²⁸	\$3.59 ²⁸

²⁷ Dallas Area Rapid Transit (2018) DART Rail Facts.

²⁸ Metro Magazine (2016) Dallas' rail-connected development driving regional growth, study says.

²⁹ Values were derived from 2 of the 3 values per city. For example, sometimes the "Private \$/Transit \$" ratio was known so only one of either Private Investment or Transit Investment was needed to derive the remaining unknown value.

³⁰ Gober, P (2006) Metropolitan Phoenix: Place Making and Community Building in the Desert. University of Pennsylvania Press.

³¹ Hook, et al. (2013) More Development for Your Transit Dollar: An Analysis of 21 North American Transit Corridors. Institute for Transportation & Development Policy.

³² Regional Transportation District (2018) Central Corridor Light Rail Line: System Overview.

³³ Metropolitan Council. The METRO Green Line.

³⁴ St. Paul Metropolitan Council (2016) Development Along the Green Line Soars to More Than \$4 Billion.

³⁵ St. Paul Metropolitan Council (2017) Nearly \$6.8 Billion in New Development Reported Along LRT Lines.

³⁶ Federal Transit Administration (2011) Metro Orange Line BRT Project Evaluation.

³⁷ Charlotte Area Transit System Transit Vision (2014) Charlotte Area Transit System.

³⁸ Zeiler, P. Charlotte LYNX Blue Line Economic Development Impact and Land Use Patterns.

³⁹ Tri Met (2012) Westside MAX: Blue Line Extension Fact Sheet.

⁴⁰ Wohlwill, D (2009) BRT in Pittsburgh: Martin Luther King, Jr. East Busway.

Jersey City	Hudson-Bergen LRT	34 ⁴¹	2,200 ⁴²	5,300 ⁴³	\$2.41 ²⁶
Salt Lake City	Mid-Jordan Red Line LRT	10.6 ⁴⁴	535 ⁴⁵	1,600 ⁴⁶	\$2.99 ²⁶
Average		22.2	1,244	2,907	\$3.94

Additionally, interviews with 15 community stakeholders were conducted to understand the existing conditions and development potential along the corridors. Interviewees included: councilmembers, elected and appointed officials, the Nashville Chamber of Commerce, the Nashville Convention and Visitors Corp, community organizations and transportation experts. **Appendix A** summarizes the findings resulting from stakeholder interviews by corridor.

Overall, the stakeholders interviewed expect a high level of development to occur on all HCCs, especially given the strength of Nashville’s current real estate market and population growth. There was consensus among most stakeholders that the level of development would differ by corridor, and several noted that some corridors are already more built out than others. There were also varying opinions on the type of development that would occur along the corridors. For example, Nolensville and Gallatin are widely expected to attract residential development, while others are expected to attract primarily commercial development, or a mix of the two. It is worth noting that almost all interviewees expressed a concern for displacement and highlighted the impact policies can have on supporting equitable TOD in allowing current residents, especially those that need it the most, to enjoy the benefits of a safe and reliable transit network.

While there are governmental and market policies at play, the design of a transit system also impacts the private investment that would result from transit investments. For example, systems built within downtown or that connect downtown to other desirable areas with clusters of employment and economic activity have been found to have the strongest development potential.¹⁵ In addition, systems including LRT tend to have more positive land use impacts, and have shown to act as a catalyst for accessible

⁴¹ Jacobs, A (2000) They Think It Can; Is the Light-Rail Line an Affirmation of a Long-Awaited Rebirth or a Misguided Way to Deal With Jammed Roads and Tainted Air?

⁴² The National Council for Public-Private Partnerships (2016) NJ Light Rail Is a Successful, Historic Transit P3.

⁴³ Alan M. Vorhees Transportation Center (2008) Land Development at Hudson-Bergen Light Rail Stations.

⁴⁴ Nossaman LLP (2011) Utah Transit Authority Expands Light Rail Network.

⁴⁵ Lee, J (2013) Here's what you need to know about taking TRAX to the SLC airport.

⁴⁶ Utah Transit Authority (2012) Performance Report.

development.⁴⁷ By implementing LRT and Rapid Bus together, the TIP is designed to address varying levels of demand along each HCC and to connect each corridor to the central business district, encouraging high levels of development throughout the city.

Social Equity

When areas of historically low-income populations are struck with a wave of economic development, there is a risk of particularly vulnerable populations being displaced as a result. This happens because of a process called gentrification, which occurs when urban renewal and rebuilding accompanies an influx of middle-class or affluent people in economically depressed areas and associated displacement of previous residents.⁴⁸ There are areas of Metro in which this is taking place now.

A review of the literature finds an inconsistent relationship between transit-oriented development and gentrification. Instead of offering a predictable pattern that can be replicated to anticipate outcomes from city to city or region to region, the literature underscores the reality that real-world outcomes are much more complex.

Indicators of gentrification include changes in the number of low-income households, increases in housing prices, and shifts in minority populations and education level. Researchers have found that gentrification can be impacted by a number of dynamic factors including the type of transit added, existing neighborhood walkability, historical and trending economic activity, historical and trending crime rates, prevalence of rental properties, affordable housing policy, and other more intangible variables such as shifts in 'sense of place,' which can only be measured observationally by walking neighborhood's streets and opening up conversations with residents.

The most robust exploration into the connection between TOD and urban displacement was done at University of California, Berkeley, where they collected data on TOD-related impacts on low income communities.^{49,50}

The study identified six disadvantaged communities within which a Metrorail station has been opened within the past thirty years. While there are risks of gentrification, there are also a variety of policy tools and strategies to ensure that the benefits associated with transit are distributed equitably.

⁴⁷ Metropolitan Area Planning Council. Bus Rapid Transit vs. Light Rail Transit: A Side-by-Side Comparison of Competing Mass Transit Options.

⁴⁸ Merriam Webster Dictionary. Gentrification definition.

⁴⁹ UCLA Comprehensive Project (2015) Oriented for whom? The impacts of TOD on six Los Angeles neighborhoods.

⁵⁰ Zuk, M. et al. (2017) Gentrification, Displacement and the Role of Public Investment. Journal of Planning Literature 33 (1) 31-44.

Equitable TOD

Transit improvements alone cannot guarantee that benefits are distributed equitably among residents of Davidson County. There are a variety of tools available to pair improvements in transit with supporting local policies as the land value appreciates nearby transit stations. Implementing policies such as these will help create fair and equitable TOD.

To avoid unintended consequences of economic development, the Mayor's Office convened a Transit and Affordability Taskforce to draft recommendations to "help Metro's decision-makers ensure that the proposed high-capacity transit corridors are safe, affordable and inclusive." The recommendations resulting from the Taskforce include:

- Transit Oriented Development Guidance
- Community Engagement
- Government Alignment and Resilience
- Funding
- Private-public partnerships

Combining the opportunities potentially generated by TODDs with the recommendations provided by the Taskforce is one way to help create equitable economic development along high-capacity transit corridors.

Policies that promote mixed-use development, mixed-income housing, and investments that promote walking and biking tend to foster more equitable transit-oriented communities.²⁴ The socioeconomic diversity of neighborhoods with mixed-income housing contributes to sustainability while deterring the concentration of low-income households in a community. More compact, multi-modal smart growth development patterns tend to increase heterogeneity of races and income levels, access to education and employment opportunities and economic mobility. As density increases, the probability that a child born to a family in the bottom quintile of the national income distribution will reach the top quintile of the national income distribution by age 30 increases by about 41%.⁵¹ The TIP provides the opportunity to create this type of development by pairing transit with policies that will enhance economic mobility for Nashvillians.

Various cities throughout the U.S. have achieved equitable TOD through implementing tools and policies that promote equity and address local challenges. Each community's

⁵¹ Ewing R, Hamidi S (2014) Measuring Urban Sprawl and Validating Sprawl Measures. Metropolitan Research Center, University of Utah.

efforts have been crafted to address issues that are particular to the community of interest by using the locally available assets. Three cities that have experienced TOD and capitalized on opportunities to use TOD as a vehicle for addressing social issues in their city are described below.

Minneapolis

Minneapolis' Green Line has exceeded ridership expectations and illustrated an ability to connect aging and racially diverse neighborhoods that have experienced "decades of disinvestment" as the city has grown. The Green Line has seen residential and commercial development as a result of transit investment, and has illustrated successful equitable TOD through a variety of efforts. As a first step, the Central Corridor Funders Collaborative was created as an innovative partnership comprised of local and national foundations to encourage active engagement from a diverse set of community stakeholders. The Funders leveraged \$54 million of additional investment around the rail line and ensured that the benefits were widely shared throughout the community.⁵¹

In addition to involving the community in the planning process and investing in corridor-wide solutions, Twin Cities LISC is also supporting a unified housing strategy, coined *The Big Picture Project*.⁵² This project serves to invest in the creation and preservation of long-term affordable housing and in activities that help low-income individuals stay in their homes. The organization monitors the annual progress in regard to the creation and preservation of affordable housing. Through these active efforts, Minneapolis has already reached 80% of their 10-year goal, which will come to term in 2020, and of all newly created housing units 20% built have been affordable.⁵³ The success seen by Minneapolis' Green Line has been a result of vigilant monitoring and tailoring policies and strategies to the needs of the community.

Seattle

Seattle's updated 20-year growth plan includes a dedicated discussion on displacement and outlines an equitable development framework to prevent such phenomena from occurring. Community coalitions worked with the city to develop the plan update with a focused effort on engaging historically under-represented communities throughout the city.

The City's Race and Social Justice Initiative works to measure progress and identify issues on racial equity. The area around some light rail stations in Seattle has

⁵² MZ Strategies (2016) Advancing Equitable Transit-Oriented Development through Community Partnerships and Public Sector Leadership.

⁵³ Twin Cities LISC (2016) The Big Picture Project: Aligning housing plans along Central Corridor. Progress Report 2016.

experienced gentrification and following this, the city won a grant from the Department of Housing and Urban Development to create the Community Cornerstones program for displacement prevention. This organization used community-driven approaches to address concerns in the community and inspire other place-based strategies for investment. One portion of their approach has been to implement a loan program and purchase land near transit development to support mixed-use development and affordable housing. To date, the city has allocated \$6.7 million to provide affordable housing, office space, childcare, community meeting rooms, local retail space, and a cultural center. In addition, this organization has also implemented inclusive engagement strategies to build relationships with communities. Finally, the Rainier Valley Community Development Fund includes \$50 million created to preserve communities that are receiving transit investment.

Denver

Denver has demonstrated a collaborative approach to generating investment to support equitable TOD. Mile High Connects is a coalition of private, public and non-profit organizations working to “increase access to housing choices, good jobs, quality schools, and essential services via public transit.”³¹ Mile High Connects (MHC) ensures that residents are involved in planning efforts for public transit, invests in quality data, and advocates for affordable housing along the transit system as it expands. The FasTracks transit expansion incited displacement pressures in low-income and minority communities. In response, the MHC has remained committed to preserving affordable housing and has incorporated education and workforce development as integral to its platform supporting equitable TOD. The agency is working with local developers and the public sector to preserve 90% of current affordable housing units nearby transit and is working to ensure that 25% of new housing near transit stops is affordable. The MHC launched a TOD fund to support affordable housing as well, which has expanded greatly since its advent. Last, the MHC advocates for subsidized fares for income-eligible riders to ensure that access to the system is equitable.

Denver’s Regional Transportation District (RTD) has been recognized as a leader in its joint development program and public-private partnership effort. RTD engages with the community to create a vision for the redevelopment of surface parking lots into mixed-income housing and prioritizing station development.

The cities mentioned as case studies have utilized policy tools and crafted strategies that are unique to the challenges faced by their communities to ensure that all populations benefit from investments in transit. In similar fashion, Metro has already started to craft such tools using community input such as that given by the Transit and Affordability Taskforce, the creation of TODDs, and the use additional strategies that answer the most pressing needs of Metro’s community. The city has a commitment to

preserving and creating affordable and workforce housing around transit and has started to gather data from residents to assess quality of life throughout the city and satisfaction levels with Metro services.⁵⁴

Conclusion

The purpose of this memo is to communicate the complexity of the relationship between an investment in high-capacity transit and the economic development that it tends to spur. The implementation of the TIP is expected to result in a transit premium amounting to \$1.1 billion in Davidson County. In addition to an expected transit premium, TOD is likely to occur as a result of investment in HCC. TOD is typically accompanied by significant private development that enhances economic activity and drives demand nearby transit stations. Given the experiences of other cities, it is anticipated that in Nashville \$4 in private investment are generated for every \$1 invested in the TIP. Additionally, the HCC proposed by the TIP are well-aligned with other infrastructure plans throughout the county and the design of the TIP will contribute greatly to focusing economic development along HCCs to provide the residents of the city with greater overall connectivity and strategic land use.

Finally, Metro is committed to the preservation and creation of affordable housing to ensure equitable economic development for residents of Nashville, and the city has already convened a taskforce to address community concerns. Transit provides Nashville the opportunity to implement a growth management tool aimed at providing community benefits such as affordable housing, and the resulting TOD can act as a vehicle for equitable economic growth. Each of the components of economic development analyzed would serve to strengthen the city's regional competitiveness and provide Nashville a greater opportunity to evolve into one of the country's most dynamic metropolitan areas.

⁵⁴ Metro Government of Nashville and Davidson County (2018) Survey: Nashville Residents Voice Approval for Metro Services, Nashville's Quality of Life

Appendix

Appendix A. Stakeholder Interview Response Compilation by HCT Corridor

Corridor	Observations
LRT	
Gallatin	<ul style="list-style-type: none"> • The city needs to reduce traffic as retail booms • Developers have already started buying property in preparation of the transit investment • This area is currently undergoing rapid development, and LRT would enhance existing investment • The 16 blocks near Spaghetti Junction in East Nashville is a prime area for transit access • There is potential for development along Trinity Lane, Eastland Ave and Gallatin because of the size of the parcels • The development is expected to be mostly residential • There is a need for more sidewalks and greenways to successfully connect people to transit stops
Murfreesboro	<ul style="list-style-type: none"> • Being near the airport makes the need for transit in this area more immediate and it would open the area up to visitors. • Given the industrial feel of the corridor, the development is anticipated to be mostly commercial • For economic development to occur, the area will need higher presence of residents with disposable income • The area is not as integrated as other corridors, so TOD might be more challenging
Nolensville	<ul style="list-style-type: none"> • The soccer stadium and zoo need to be connected with safe and accessible transit • This corridor has the potential to become a vibrant “Cultural Corridor” stemming out from the area around Casa Azafrán • The corridor recently transitioned from rural uses, making it a lower-cost development area • If sidewalks and bikeways were implemented they could connect the sprawl of offices developing there • The area has been historically underfunded • The development is expected to be mostly residential

<p>Charlotte</p>	<ul style="list-style-type: none"> • This area is well-developed area already, but there is potential to enhance infill development • A high demand for housing exists along the corridor, but current zoning is mainly for single-family • OneCity is a big opportunity that needs better connectivity
<p>Northwest</p>	<ul style="list-style-type: none"> • TOD will create demand for more businesses, which will hire people from within the neighborhood • Transit offers the opportunity to address food desert prevalence • Transit will provide the opportunity to connect residents with academic institutions in the area • There is a potential to attract more businesses if the area first attracts more residents
<p>Rapid Bus</p>	
<p>Dickerson</p>	<ul style="list-style-type: none"> • Affordability as a big attractor for residents and businesses along this corridor • This corridor has been largely disinvested in and blighted, and transit would help the neighborhood reach its full potential • There are plenty of large and vacant lots that could be used more productively • Trinity Lane is the main area for infill development, and it could become a good feeder to Bordeaux corridor • Potential to attract businesses if the area first attracts more residents • This is the least developed of the HCCs, and has potential to attract mid-range workforce (e.g. call centers, etc.) • The River North development is kick-starting redevelopment efforts • Transit offers an opportunity to address food desert prevalence along the corridor • This corridor is expected to densify with businesses and residences along the Pike and near Gallatin • The economy and development are expected to respond to investment, so there will be more potential if the corridor is further connected to neighboring counties • Affordable housing recently approved right along the corridor • Need for greenways, and transit will help this

<p>Hillsboro</p>	<ul style="list-style-type: none"> • We need to eliminate bottlenecks from dense residential and limited feasible transit • Corridor is already dense, but transit might impact by improving the business and residence options • Greenways could run through to connect multiple corridors • Workforce housing needed along the corridor
<p>West End</p>	<ul style="list-style-type: none"> • This corridor is already dense, but transit can improve accessibility and improve land use • Transit would preclude need for so much parking • Housing would be beneficial along the corridor for individuals who access hospitals • Opportunities for infill development will be improved with transit • Preservation of Music Row is necessary and would be assisted by transit • Need for workforce housing is high along this corridor
<p>Bordeaux</p>	<ul style="list-style-type: none"> • Community involvement will be key to successfully implement the plan and ensure that current residents are able to enjoy its benefits • There is a need for more stops and increased walkability for further development • The area has been historically underinvested in, but transit could change that • Transit offers an opportunity to address community concerns about being “left behind” • This area will need to attract more residents before more commercial activity and employment are seen • There is a significant presence of large and vacant lots offers the opportunity for improvements • Transit offers the potential to address the prevalence of food deserts • Universities (TSU, Fisk, Meharry) could present a driving force for new markets • There is opportunity to attract residents from Ashland City and Clarksville along this corridor • Partnerships with academic institutions and businesses will be key to avoiding displacement • Corridor covers South and North Bordeaux, which have different neighborhood visions