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The Scale of the Prize

An Analysis of Potential Development in the Albuquerque Rapid Transit Corridor
Based on Comparisons with Development Achieved Nationally
in Transit Station Areas and Corridors

Prepared by the Center for Neighborhood Technology

For the Government of the City of Albuquerque

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Executive Summary

Albuquerque's planning agencies and civic leaders have long recognized a need to invest in public transportation that will drive adjustments in the region's land use patterns in order to ameliorate traffic congestion, improve air quality, increase the region's attraction to skilled professionals and innovative firms, increase workers' access to jobs and residents' access to services that can improve health and quality of life. Other regions around nation have invested in fixed guideway transit systems in order to achieve similar goals.

The proposed Albuquerque Rapid Transit (ART) is a bus rapid transit (BRT) system that will incorporate virtually all of the features that transit-oriented development studies, including BRT research, have shown are characteristic of transit systems that meet regional goals, particularly for economic development:

- The technical features of the ART – including its permanent stations, pre-boarding fare system, dedicated lanes, signal priority, and service schedule -- ensure speed, reliability, and convenience for its customers.
- The ART route -- virtually the entire length of Central Avenue -- connects relatively dense residential neighborhoods to centers of employment, vital services, and entertainment.
- In combination the ART's technical characteristics and route will provide reliable accessibility to other transit services, including multiple north-south bus routes.
- The ART will make a basic contribution to numerous local government and institutional plans to revitalize Albuquerque's economy and protect its environment, including the Preferred Scenario of the regional Long Range Transportation Plan, the expansion of the UNM Hospital and campus, ABQ the Plan, Innovate ABQ, STC.UNM (UNM technology transfer non-profit organization), the Downtown ABQ Mainstreet Initiative and the Downtown 2025 Sector Development Plan.
- The private market has shown its readiness to invest in the ART corridor through some 17 mixed-use, multifamily building, or commercial projects that have been built in this corridor within the last three years, with at least 12 additional projects proposed. Several developers of these projects have expressed their expectation that the ART will make an important contribution to the success of their investments.

In light of these facts, the Center for Neighborhood Technology (CNT) conservatively projects that the ART will stimulate the redevelopment of 80% of the vacant or severely under-utilized real estate parcels within a 5/8 mile radius of its Central Avenue route. In this projection CNT anticipates that the type of uses to which these properties will be redeveloped will mirror current land use in the same station areas. CNT also expects and that the level of intensity to which these properties will be redeveloped will correspond to the middle range of intensity for fixed guideway transit station areas with these types of land use, per data on hundreds of station areas analyzed by the Center for Transit Oriented Development. These projected developments could occur over period as brief as 10 or as long as 20

years, depending largely on local government decisions regarding the implementation of the ART. The results of these projections are summarized on the following table.

Summary of Projected New Development Linked to Implementation of the ART

Station Areas	Assessed Value	Residents	Residential Units	Office Jobs	Retail Jobs	Development Value
Downtown	$ 197,359,099	2,169	1,146	5,108	1,664	$ 917,219,750
Urban Neighborhoods	$ 54,870,890	3,003	1,444	573	502	$ 331,424,286
Town Center	$ 166,421,934	12,263	4,690	432	1,313	$ 1,683,798,595
Total	**$ 418,646,923**	**17,435**	**7,280**	**6,113**	**3,479**	**$ 2,932,442,631**

According to data from the Institute for Transportation and Development Policy (ITDP), the projected value of development to be stimulated by the ART is in the midrange of development linked to similar new transit systems, including BRT, in comparable cities. It is less than the developments triggered by new transit in Cleveland, Kansas City, and Portland; larger than the transit corridor developments built to date in Las Vegas, Pittsburg, and Charlotte; about the same as developments launched in Seattle and Phoenix.

CNT's projections may also be compared to estimates of development to be spurred by the ART at 64 locations in the middle of the Central Avenue corridor (Downtown and some Urban Neighborhood station areas) that were presented by members of the Albuquerque chapter of the National Association of Industrial and Office Properties (NAIOP) in 2014. CNT's estimates of overall development value, which considered entire station areas rather than just selected sites, where approximately 20% higher than those of the NAIOP members for the same portions of the ART corridor. CNT also projected higher levels of commercial development and job creation and lower levels of residential development than the NAIOP estimates. While CNT's projections are more reflective of the most recent data on station area development, NAIOP members' projections of higher levels of downtown housing are in line with emerging trends that may not yet be evident in data on the built environments of station areas.

Two observations on the development that may be anticipated in the ART corridor drive CNT's recommendations related to public policy for the implementation of this transit system:

- First, while the scale of development projected for the ART corridor is substantial, it amounts to less than 30% of the station area development that the Middle Region Council of Governments (MRCOG) has projected is necessary to realize the Preferred Scenario of the Albuquerque Region's *Long Range Transportation Plan* – the scenario that will relieve traffic congestion, improve air quality, and provide the basis for a growing economy in this metropolitan area.
- Second, the characteristics of the proposed ART that make high estimates of its development potential appropriate – its technical and service features, the economic vitality of its route, and its synergy with a range of critical development initiatives -- are interdependent. The high quality of

transit service offered by the ART is necessary to create a significant asset on Central Avenue. At this time, deploying such a large transit investment on any other Albuquerque route or a mere portion of Central Avenue would amount to ignoring the region's principal development assets. The well-documented relationship between quality transit service and an urban environment that attracts the workers and firms of a knowledge-based economy makes public support for the ART and initiatives such as Innovate ABQ and expansion of the University of New Mexico two sides of a coin.

Accordingly, CNT offers the following recommendations for implementation of the ART:

Protect the integrity of the ART plan and implement the full service as proposed: In the event that full funding of the ART would not be secured by a pending federal Small Starts grant and local funds now committed as a match, additional funds should be sought through other federal grant programs and local sources. If necessary, prudent borrowing through federal programs that are readily available during 2016 should be used. Any substantial cuts in operating capacity, service, or route would undermine the connectivity or reliability of the ART and diminish its potential value. The most important step that Albuquerque can make to encourage large and early private investment linked to the ART is to operate the fully conceived system from its inception and so convince the market that this system's potential long-term value will be realized.

Accelerate Development of the Second ART Line and Ancillary Services**:** The envisioned second ART line, which will link the Albuquerque International Sunport and a large section of the city to Downtown and the University of New Mexico, should be implemented with all possible speed. The value of a transit system depends to a large degree in its connectivity. To the extent that the ART offers access to more destinations it will be more widely used and the value of properties with access to it will grow. For the same reason connections from ART stations via conventional bus service or shuttle services to major retail or commercial centers should be studied and optimized whenever possible. Possible funding mechanisms for such service may be Transportation Management Associations (TMAs) – associations of employers that contribute financially to services that benefit their workers and enlarge their job or customer pool.

Prioritize Economic Development Initiatives and Programs Inter-related with the ART: The first of these initiatives should be completion of Albuquerque's Integrated Development Ordinance (IDO) process so that it establishes by right zoning that permits construction at the level of density appropriate to Downtown, Urban Neighborhood, or Town Center transit station areas, accompanied by building standards and public investments that create pedestrian-friendly environments in transit-served neighborhoods. Economic development programs should focus on coordinating tax incentives, low-interest financing, small scale infrastructure investments, workforce training, and other enterprise support programs to ensure the development of ART station areas. Public agencies should also prepare workforce housing and worker training programs that will enable residents in a broad range of income levels to enjoy the benefits of development as property values in the ART corridor rise.

I. Albuquerque's Need and Opportunity for Transit-Oriented Development

A. Coordinating Land Use and Transportation

Over the past fifteen years, the Albuquerque Metropolitan Area (AMPA) experienced rapid growth and land use patterns changed substantially as a result. The region spread outwards into the desert with the large majority of the growth in housing over this period occurring in Sandoval and Valencia Counties. During the housing bubble, this trend accelerated and led to the rapid construction of single-family housing on the outer edges of those counties. This land development pattern drove substantial increases in pollution, congestion and infrastructure maintenance costs. It has also resulted in a considerable mismatch between the location of housing and the location of employment in the AMPA region, which increases commute times, exacerbates congestion and decreases economic opportunity. In its most recent Long Range Transportation Plan, *2040 Futures*, the Mid-Region Council of Governments (MRCOG) emphasizes many proposals that will link land use and transportation planning in order to mitigate these problems, change development patterns and position the AMPA to capitalize on its assets as the region grows in the coming decades. A basic strategy of this plan is the expansion and improvement of the public transit system and the concentration of future real estate development along transit corridors. The construction of a Bus Rapid Transit line on Central Avenue, named the Albuquerque Rapid Transit (ART), is a key component of this strategy.

As the *2040 Futures* plan explains, residential and employment location patterns contribute to the increasing congestion at the bridges in the AMPA region. While most recent housing growth has occurred west of the Rio Grande, the majority of jobs continue to be located east of the river. This has led to severe congestion at the bridges as workers who live west of the river travel east to their jobs. This jobs-housing imbalance is depicted in Table 1 below wherein "ratios [of jobs to housing units] above one are considered a healthy balance, and it is generally assumed that a higher jobs-housing ratio equates to more opportunities to live close to work and shop close to home, thereby enabling shorter driving distances."[1]

Table I.1: Jobs-Housing Ratio

Jobs-Housing Ratio	2000	2004	2008	2012	2000-2012
East of the Rio Grande	1.6	1.51	1.5	1.39	-0.21
Housing	199,242	209,484	215,080	219,694	10%
Jobs	319,099	317,060	323,496	306,296	-4%
West of the Rio Grande	0.67	0.68	0.65	0.56	-0.11
Housing	94,808	112,495	137,652	146,537	55%
Jobs	63,647	76,820	89,307	82,685	30%
AMPA Average	**1.3**	**1.22**	**1.17**	**1.06**	**-0.24**

[1] Mid-Region Council of Governments, "2040 Long Range Transportation Plan," April 2015, p. 2-10.

Source: Mid-Region Council of Governments, "2040 Long Range Transportation Plan," April 2015, p. 2-10, Table 2-3.

Though the jobs-housing ratio is substantially better east of the river, it too has worsened considerably since 2000. The net result of changes over the past ten years has created a situation in which, if current trends continue, the AMPA region will experience continually increasing congestion, especially at the bridges that cross the Rio Grande.

MRCOG periodically measures congestion in corridors throughout the AMPA and publishes a list of the 30 most congested corridors in the region. While Central Avenue was ranked 20th in 2008 and 2010, the corridor was the 12th most congested in the region in 2012 .[2] This is especially problematic due to the large job centers and major employers located in the corridor.

One cause of this congestion is the overreliance on single-occupancy vehicle commuting throughout the region. MRCOG examined local travel behavior in a recent report, "Commuting Characteristics in the Albuquerque Metropolitan Area: An Analysis of Changing Travel Behavior, 2006-2013." This study found that despite decreases in per capita vehicle miles traveled and a considerable increase in transit ridership, single-occupancy vehicle use is actually increasing throughout the region. As a result, "the Albuquerque [Metropolitan Statistical Area] MSA stands above the national average overall in total auto commuting mostly due to the high rate of commuters driving alone."[3] If alternatives to single-occupancy vehicle travel are not provided, this problem will only increase as the population grows.

Though MRCOG revised its population projections for 2035 downwards from its projections in 2010 by 15%, the MPO still predicts that the region will grow by nearly half a million people by 2040. MRCOG predicts that this will have a dramatic impact on travel demand and congestion with a 51% increase in daily vehicle miles traveled (VMT) and an increase of 94% in Rio Grande river crossings.[4]

No new bridges are planned for the region, so the MRCOG must find alternate methods to relieve congestion. These include increasing employment west of the river and increasing housing east of the river. Another method is to increase and improve transit service that crosses the Rio Grande in order to decrease the number of cars using the bridges. This strategy is outlined in the Long Range Transportation Plan, in which the MPO proposes the establishment of a *Priority Transit Network* that would provide a convenient means for 20% of trips over the Rio Grande to be taken by transit by 2040. Beginning in 2016, 25% of sub-allocated federal transportation funding will be spent on transit in order to achieve this goal.[5]

In preparing its 2040 Long Range Transportation Plan, the MRCOG created multiple scenarios. The Trend

[2] Mid-Region Council of Governments, "A Profile in Congestion: The 30 Most Congested Corridors in the Albuquerque Metropolitan Area" Oct. 2013, p. 26.
[3] Mid-Region Council of Governments, "Commuting Characteristics in the Albuquerque Metropolitan Area: An Analysis of Changing Travel Behavior, 2006-2013." Sep. 2015, p. 3.
[4] Mid-Region Council of Governments PowerPoint Presentation, "2040 Population Projections…and their Implications for the 2040 Metropolitan Transportation Plan," p. 18.
http://www.mrcog-nm.gov/images/stories/pdf/transportation/CMP/CMP_2040PopulationProjections.pdf. Accessed on December 28, 2015.
[5] Mid-Region Council of Governments, "2040 Long Range Transportation Plan," April 2015, Appendix K.

Scenario explores what would happen if there are no major changes to transportation infrastructure or land use patterns in the region. The Preferred Scenario envisions a different future in which major investments are made in transportation infrastructure with the result of increasing the levels of new construction, employment , and residential density in transit corridors. As the LRTP states, "In many respects, transit is an organizing principle for the Preferred Scenario: not only are transit nodes emphasized for additional development, but services are enhanced to provide meaningful connections across the metropolitan area and improve travelers' ability to reach their destinations without relying exclusively on private vehicles."[6] Table 2 demonstrates the dramatic effects that improving transit service and prioritizing development in transit corridors is projected to have on the region.

Table I.2: 2012-2040 Growth Rates for Select Performance Measures: Trend and Preferred Scenarios

Performance Measure	Trend Scenario	Preferred Scenario	Total Difference: Preferred vs. Trend
Access			
Housing near Activity Centers	77%	125%	27%
Housing near Transit	66%	120%	32%
Housing near Employment Sites	28%	47%	15%
Transportation			
Systemwide Speed (PM Peak MPH)	-40%	-31%	15%
Vehicle Hours Traveled (PM Peak)	162%	117%	-28%
Vehicle Miles Traveled (Daily)	48%	42%	-4%
Transit Ridership	34%	138%	78%
River Crossing Trips (Daily)	42%	38%	-3%
Average Commute Time	50%	24%	-18%
Sustainability			
New Land Developed (acres)	27%	19%	-5%
Emissions (CO_2)	31%	22%	-8%
Growth in Forest-Fire Risk Areas	84%	63%	-10%

Source: Mid-Region Council of Governments, "2040 Long Range Transportation Plan," April 2015, p. 1-13, Table EX-3.

In addition to congestion, the sprawling development of land and increased single-occupancy vehicle travel in recent years has contributed to further substantial problems, such as increased water usage, the rising costs of infrastructure maintenance, declining air quality due to CO_2 emissions and heightened risk of forest fires. As MRCOG explains and Table 2 shows, however, the Preferred Scenario "demonstrates that a long-range vision for growth can have a variety of benefits, including better transportation conditions, fewer investments in new infrastructure, and improved air quality and reduced emissions…"[7]

The ART system will not only aid in the reduction of congestion along Central Avenue, but will also help contribute to economic development throughout the corridor. In 2013, TRIP, a national transportation research group, ranked the Central Avenue Bus Rapid Transit project number 7 on its list of the "Top 50

[6] Mid-Region Council of Governments, "2040 Long Range Transportation Plan," April 2015, p. ex-4.
[7] Mid-Region Council of Governments, "2040 Long Range Transportation Plan," April 2015, p. 168.

Transportation Projects to Support Economic Growth and Quality of Life in New Mexico." The authors of this report described the ART as a vital "connector of transit destinations … that would assist in redevelopment of the vacant or underused land" in the corridor.[8]

B. Economic Growth and Changing Preferences

According to analysis by the Bureau of Business and Economic Research (BBER) at the University of New Mexico, New Mexico's economy has lagged behind the economies of neighboring states in the Southwest in recent years.[9] Even more worrisome, Director of the BBER Jeffrey Mitchell notes, is that "Albuquerque isn't even keeping pace with the slow growth in the rest of New Mexico. Albuquerque is trailing the state. From what we see, Albuquerque is continually losing jobs while competing cities are doing very well."[10] Of particular concern is the continued loss of business and professional employment, which includes white-collar jobs such as attorneys, accountants, architects, engineers and computer technicians. Mitchell calls this sector a "bellwether of where we're going," since, as he explains, this sector is "leading the national rebound in jobs," but it has declined continuously in the AMPA since 2010.[11] This decline may be surprising because Albuquerque has led New Mexico in job growth in past decades and because the region includes institutions that specialize in research and development including the University of New Mexico (UNM), UNM's hospital system, and a base of technology companies. One for reason for this relative decline may lie in the changing preferences of millennial and knowledge workers and the companies that employ them.

As the Urban Land Institute notes in its 2015 survey of opinions about housing and transportation, over half of Americans "would like to live in a place where they do not need to use a car very often," and this attitude is especially prevalent among millennials (63%).[12] There is already an organization of local millennials, MiABQ, advocating for increased transit and the land use changes that transit can enable, such as walkable environments.[13] Over 70% of millennials plan to move within the next 5 years and in order for Albuquerque to attract and retain these young workers, it will need to provide housing options that are in line with their preferences, which differ from most of the existing housing stock in the region. Millennial workers will power the economy for generations so attracting them to Albuquerque now, before they have settled down with families, is an urgent priority, which the ART can go a long way towards fulfilling. Additionally, as Baby Boomers grow older, providing housing options near high-quality transit will become increasingly desirable, as it will serve to both enhance their quality of life by

[8] TRIP: The Road Information Program, "Top 50 Transportation Projects to Support Economic Growth and Quality of Life in New Mexico," Aug. 2013, p. 9. http://www.tripnet.org/docs/NM_TRIP_Economic_Development_Report_Aug_2013.pdf. Accessed on Oct. 15, 2015.
[9] Mitchell, Jeffrey, "New Mexico's Economy: Recent Developments and Outlook," Bureau of Business and Economic Research, Jan. 2015. https://bber.unm.edu/presentations/BBER-EconOutlook2015.pdf. Accessed on Oct. 15, 2015.
[10] Mayfield, Dan, "NM economic expert: 'While the nation has been growing, we've gone sideways'," Albuquerque Business First, Jan. 2015. http://www.bizjournals.com/albuquerque/news/2015/01/15/nm-economic-research-expert-while-the-nation-has.html. Accessed on Oct. 15, 2015.
[11] Metcalf, Richard, "Job growth positive but slow in NM," Albuquerque Journal, Jan. 16, 2015. http://www.abqjournal.com/527145/news/job-growth-positive-but-slow-in-nm.html. Accessed on Oct. 15, 2015.
[12] Urban Land Institute, "America in 2015: A ULI Survey of Views on Housing, Transportation, and Community," June 2015, p. 25. http://uli.org/wp-content/uploads/ULI-Documents/America-in-2015.pdf. Accessed on Oct. 15, 2015.
[13] MiABQ Millennials Project, "Recommendations for Downtown Revitalization," April 20, 2015. http://www.miabq.com/uploads/files/MiABQ%20Round%202%20Recommendations%20-%20April%202015.pdf. Accessed on Oct. 15, 2015.

maintaining their mobility, while also allowing local businesses to capture their discretionary spending.[14]

If the full development potential of the ART and other transit investments is realized in Albuquerque and the AMPA, this growth will not decrease the supply of single-family housing or transform the predominantly car-oriented culture of Albuquerque. The large majority of the region's residents will continue to use the car as their primary mode of transportation. The ART will, however, offer another travel option, which will foster greater diversity in the types of neighborhoods and lifestyles that the city's transportation infrastructure is able to support.

C. Capitalizing on Assets, Realizing Plans

Many efforts to increase economic development along the Central Avenue Corridor are already underway or in the planning stage, including the expansion of the UNM Hospital and campus, ABQ the Plan,[15] Innovate ABQ,[16] STC.UNM (UNM technology transfer non-profit organization),[17] the Downtown ABQ Mainstreet Initiative[18] and the Downtown 2025 Sector Development Plan.[19] As part of ABQ Ride's application for federal Small Starts funding to build the ART, the transit agency listed 17 significant multifamily or mixed use projects, representative of the types of development that the ART will foster, that have been built in recent years, and another 12 projects that are proposed in the Central Street corridor.[20] The ART is a prominent feature of these plans and projects can serve as the "spine" of redevelopment efforts, according to Albuquerque's Mayor Richard Berry.[21] Technology and start-up companies are currently dispersed throughout the region without any particular geographic proximity to each other, which serves to blunt the intense innovation and job creation that can occur when these types of companies and institutions are located in a dense area, such as in Silicon Valley or the Boston region.[22] Innovate ABQ seeks to concentrate many of these companies into a cluster called Innovation Central in Downtown Albuquerque and thereby "…create an environment with improved innovation-based employment opportunities that will help attract a new generation of high-caliber students, faculty, researchers, innovators, and entrepreneurs" to the region.[23]

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[14] Harvard Joint Center for Housing Studies, "Housing America's Older Adults – Meeting the Needs of an Aging Population," 2014. http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/jchs-housing_americas_older_adults_2014-ch7-references.pdf Accessed on Jan. 4, 2015.

[15] City of Albuquerque, "ABQ the Plan: Investing in the future of Albuquerque," June 2014. https://www.cabq.gov/mayor/priorities-and-initiatives/initiatives/abq-the-plan. Accessed on Dec. 21, 2015

[16] Innovate ABQ. http://innovateabq.com. Accessed on Dec. 21, 2015.

[17] STC.UNM, https://stc.unm.edu/_files/150310-ABQ-EDF-Presentation.pdf. Accessed on Dec. 21, 2015.

[18] Downtown ABQ Mainstreet Initiative, http://www.abqmainstreet.org. Accessed on Dec. 21, 2015.

[19] City of Albuquerque, "Downtown 2025 Sector Development Plan" June 2014. https://www.cabq.gov/planning/documents/copy_of_Downtown2025_Dec14r.pdf. Accessed on Dec. 21, 2015.

[20] ABQ Ride, *Supplemental Land Use and Economic Development Information and Supporting Documentation Templates for Small Starts Projects,* Draft Submittal for the City of Albuquerque, Albuquerque Rapid Transit Project, July 2, 2015

[21] Metcalf, Richard, "Revitalizing ABQ's 'spine'," Albuquerque Journal, Oct. 12, 2015. http://www.abqjournal.com/658300. Accessed on Nov. 30, 2015.

[22] Innovate ABQ PowerPoint Presentation to New Mexico Legislative Finance Committee, June 24, 2015. http://www.nmlegis.gov/lcs/handouts/ALFC%20062415%20Item%204%20LFC%20Innovate%20ABQ%20150624.pdf. Accessed on Oct. 15, 2015. And the Brooking Institution's discussion of Innovation Centers http://www.brookings.edu/about/programs/metro/innovation-districts

[23] Innovate ABQ, "Innovate ABQ Development Framework," April 15, 1015. http://innovateabq.com/developmentframework/. Accessed on Oct. 15, 2015.

This initiative will help to reverse the trend of declining employment in the business and professional services, which BBER Director Mitchell sees as essential to improving Albuquerque's economy. The designation of Central Avenue as Innovation Corridor is a fundamental part of the plan and the ART will play a vital role in making the city desirable for the workers that Innovate ABQ seeks to attract to the region. Many local business leaders have already determined that this effort has tremendous potential and is important for the city's future. As several prominent developers have noted, Innovate ABQ and the potential BRT line are already propelling development to the corridor.[24]

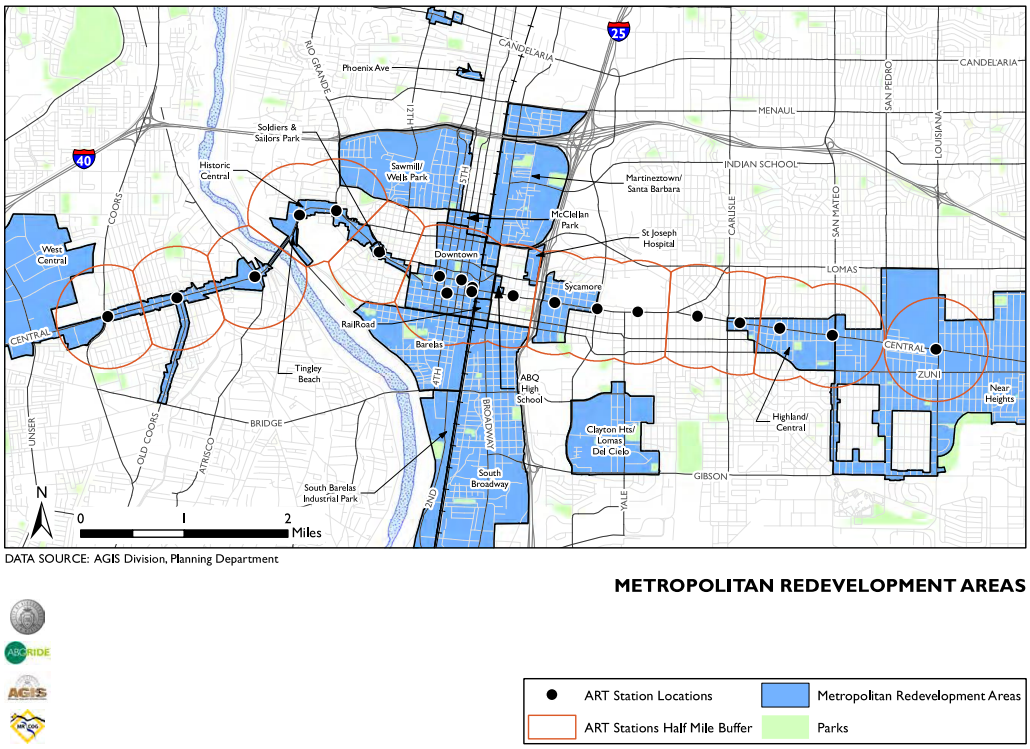
D. Integrating Redevelopment Efforts and Zoning

1. Metropolitan Redevelopment Areas

Land use and zoning regulations will also play an essential role in this transformative process. The City of Albuquerque's Metropolitan Redevelopment Agency has established numerous Metropolitan Redevelopment Areas (MRA's) in the Central Avenue Corridor. MRA's are designed to aid the redevelopment of community areas in the city by using tax incentives and infrastructure improvements to encourage private sector development in blighted or underutilized areas. In particular, MRA's are tools for promoting the "efficient allocation of public and private resources, concentrating on land uses for greater efficiency, stability, image, diversity and control."[25]

Nearly the entire ART corridor on Central Avenue falls within an existing MRA with the most recent being the Historic Central Metropolitan Redevelopment Area Plan, which was established in 2013 and runs along Central Avenue from the Rio Grande River to the western edge of Downtown.[26] MRAs also permit changes to the zoning code, within their areas, in order to incentivize desired types of development.

[24] Guzman, Stephanie, "Rapid transit, Innovate ABQ drives redevelopment in Central corridor," Albuquerque Business First, Sep. 18, 2015. http://www.bizjournals.com/albuquerque/print-edition/2015/09/18/rapid-transit-innovate-abq-drives-redevelopment-in.html Accessed on Oct. 15, 2015.
Guzman, Stephanie, "Titan CEO answers the 'why now?' of new Central Avenue project near UNM," Albuquerque Business First, Sep. 22, 2015. http://www.bizjournals.com/albuquerque/blog/real-estate/2015/09/titan-ceo-answers-the-why-now-of-new-central.html. Accessed on Oct. 15, 2015.
Scott, Damon, "Nob Hill's Platinum aiming for young professionals," Albuquerque Business First, June 11, 2014. http://www.bizjournals.com/albuquerque/news/2014/06/11/nob-hill-s-platinum-aiming-for-young-professionals.html. Accessed Oct. 15, 2015.
[25] City of Albuquerque, Metropolitan Redevelopment Agency, https://www.cabq.gov/planning/metropolitan-redevelopment-agency. Accessed on December 28, 2015.
[26] City of Albuquerque, "Historic Central: Metropolitan Redevelopment Plan," Dec. 2, 2013. https://www.cabq.gov/planning/documents/HistoricCentralMRAHCMRADec2013AsAdopted.pdf. Accessed December 21, 2015.



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2. Integrated Development Ordinance (IDO)

The City of Albuquerque and Bernalillo County are currently in the midst of a 2-year process to create an updated and consolidated zoning code. Both city officials and private developers feel that this is a necessary step to streamlining the real estate development process while protecting neighborhoods and encouraging growth. One of the most important features of this IDO will be the simplification and standardization of the zoning code throughout the city. As the initial report on the ABC-Z process explains, currently only 53% of the city is covered by "standard" zoning districts; "the remaining 47% is governed by SU or overlay districts." [28]The current state of zoning in the city stifles growth, as its complexity causes confusion and acts as a constraint on real estate development. With the adoption of new IDO, the city will seek to clarify the zoning code and thereby incentivize development, which will be concentrated in downtown areas and transit corridors. Zoning measures suggested by the literature on BRT that should be considered in the IDO process include: density bonuses, higher Floor Area Ratio (FAR), street-facing orientation for buildings, specified setbacks, mixed-use and TOD, and pedestrian-oriented design standards.[29]

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[27] Data Source: AGIS Division, Planning Department City of Albuquerque: https://abqbrt.blob.core.windows.net/resources/FTASmallStarts/Economic%20Development/Attachment%20A_Metropolitan%20Redevelopment%20Areas_opt.pdf

[28] Clarion Associates, LLC, "Albuquerque ABC-Z: Land Regulation Diagnosis, Best Practices, and Annotated Outline," May 2015, p. 5. http://albuquerque.engagingplans.org/sites/albuquerque.engagingplans.org/files/pdf/Diagnosis-Best%20Practices-Outline%20PUBLIC%20DRAFT.pdf. Accessed on December 21, 2015.

[29] Arthur C. Nelson & Joanna Ganning, "National Study of BRT Development Outcomes", page 56, National Institute for Transportation and Communities (NITC), January 2015, http://www.lulu.com/shop/arthur-c-nelson/nitc-rr-650-national-study-of-brt-development-outcomes/paperback/product-22468494.html?ppn=1

E. Early Albuquerque Market Developments

Though transit is already popular along Central Avenue, accounting for 42% of total system ridership,[30] implementation of a full-service bus rapid transit line will allow the city to capitalize on recent demographic trends (including growing numbers of seniors and millennials' preference for urban housing) to increase economic development along the corridor. Some of this transit-oriented development is occurring already in Downtown,[31] Sawmill,[32] EDO[33] and Nob Hill.[34] An analysis of economic development opportunities completed in 2011 for the city also found substantial potential for economic growth along Central Avenue west of the Rio Grande.[35]

ART can contribute to and drive many of these investment decisions. When asked about his recent decision to develop a large property along the corridor, Titan CEO Ben Spencer explained that his decision was heavily influenced by plans for the ART, stating, "We're very supportive of ART. This project is not contingent upon the opening of ART. But we think the ART will be a tremendous benefit to this project and we think it will spur more development along the corridor."

F. True Rapid Transit

The Albuquerque transit system's "Rapid Ride" program has increased the frequency of service along designated routes, including Central Avenue, and has triggered consistent increases in ridership in recent years. The ART will build on the success of Rapid Ride by introducing true bus rapid transit service with dedicated transit lanes, prioritized signaling at intersections, per-boarding ticketing, level boarding platforms and a service frequency of 7.5 to 15 minutes, depending on location in the corridor.[36] These basic improvements in transit service are expected to result in a 15% improvement in travel time as well as a 20-25% improvement in on-time performance.[37] As Dayna Crawford, deputy director of the city's Transit Department, explains, "the Rapid Ride bus routes on Central are "often at capacity, delayed by

[30] City of Albuquerque, "ABQ the Plan: Investing in the future of Albuquerque," June 2014, p. 20. https://www.cabq.gov/mayor/priorities-and-initiatives/initiatives/abq-the-plan. Accessed on Dec. 21, 2015

[31] Scott, Damon, "A car-loving city hits the brakes," Albuquerque Business First, April 11, 2015. http://www.bizjournals.com/albuquerque/print-edition/2014/04/11/a-car-loving-city-hits-the-brakes.html. Accessed on Oct. 15, 2015.

[32] Guzman, Stephanie, "Construction launches on Sawmill apartment complex," Albuquerque Business Journal, Oct. 6, 2015. http://www.bizjournals.com/albuquerque/blog/real-estate/2015/10/construction-launches-on-sawmill-apartment-complex.html. Accessed Oct. 15, 2015.

[33] Guzman, Stephanie, "Titan CEO answers the 'why now?' of new Central Avenue project near UNM," Sep. 22, 2015. http://www.bizjournals.com/albuquerque/blog/real-estate/2015/09/titan-ceo-answers-the-why-now-of-new-central.html. Accessed Oct. 15, 2015.

[34] Guzman, Stephanie, "Apartment projects continue to emerge in East Nob Hill," Oct. 12, 2015. http://www.bizjournals.com/albuquerque/blog/real-estate/2015/10/apartment-projects-continue-to-emerge-in-east-nob.html?iana=ind_cre. Accessed Oct. 15, 2015.

[35] Gibbs Planning Group, Inc., "Retail Market Analysis: West Central District, Albuquerque, NM," Jan. 2011. https://www.cabq.gov/planning/documents/WestRte66RetailMarketAnalysis0311.pdf. Accessed Dec. 22, 2015

[36] MRCOG, "White Paper – Regional Accessibility Benefits Associated with Implementation of the Albuquerque Rapid Transit on Central Avenue", December 2015

[37] City of Albuquerque, "ART Fact Sheet," November 2015. https://www.cabq.gov/transit/documents/art-landscape-handout-november-2015.pdf. Accessed December 28, 2015.

traffic" and, as a result, suffer from poor reliability of service.[38] In addition to improved service levels and increased transit speeds, the permanent physical infrastructure and street design of the ART would also play an essential role in attracting and expanding economic development in the corridor. In many ways, however, it is the increased accessibility that improved transit service will provide to Albuquerque residents that will lead to the greatest gains in economic development.

Increasing accessibility is one of the most significant ways that public transit promotes economic development. Improved accessibility is vital to regional economic growth as it provides increased regional efficiency, while strengthening linkages between workers and employment. A study by Professor Joseph Berechman showed that from the worker's perspective, "improved accessibility has a positive impact on economic development in terms of changes in employment and earnings."[39] Accessibility can also play an important role in improving the economic prospects of low-income and transit dependent citizens. As Professor Todd Litman explains, "improving affordable, accessibility options directly benefits disadvantaged people, improves their access to education and employment, and therefore their productivity… and improves their ability to access medical services and healthy food, which reduces healthcare costs."[40]

Beyond improving economic outcomes for individuals and households, accessibility can play an important role in regional economic development by linking job centers and workers, especially when transit is connected to economic clusters. As Robert Puentes notes, "improving transportation connections to jobs enhances the efficiency of labor markets for both workers and employers. A high quality public transit network can allow employers to benefit from the clustering and agglomeration of people and businesses, and thereby raise productivity in metro areas."[41]

The recent MRCOG whitepaper noted earlier measured the number of residents and jobs that could be reached within 45 minutes using the level of accessibility available through the ART. The results, as depicted in Table 3, demonstrate that the ART would improve accessibility substantially for residents throughout the city, as compared to the current regular and Rapid Ride bus service.[42]

[38] Westphal, D'val, "The pros and cons of ABQ bus rapid transit," Albuquerque Journal, Sep. 18, 2015. http://www.abqjournal.com/646078/news/the-pros-and-cons-of-albuquerques-proposed-bus-rapid-transit-on-central.html. Accessed Dec. 22, 2015.

[39] Ozbay, k., Ozmen-Ertekin, Berechman,J., "Empirical Analysis of Relationship between Accessibility and Economic Development," Journal of Urban Planning and Development, 1 June 2003, p. 13.

[40] Litman, p. 9.

[41] Puentes, et. al., "Missed Opportunity: Transit and Jobs in Metropolitan America," Brookings Institution, May 2011, p. 3.

[42] Mid-Region Council of Governments, "White Paper – Regional Accessibility Benefits Associated With Implementation of the Albuquerque Rapid Transit on Central Ave," December 2015.

Table I.3: Jobs and Residents Accessible Within 45 Minutes: Before and After ART Implementation

Starting Location	Current Transit System		ART Implementation		Percent Increase	
	Residents	*Jobs*	*Residents*	*Jobs*	*Residents*	*Jobs*
Central & Unser	145,246	89,139	195,744	107,966	35%	21%
Central & Coors	212,141	111,892	307,982	180,163	45%	61%
Central & Rio Grande	263,391	178,336	417,820	242,210	59%	36%
Central & 1st	268,127	208,181	419,572	254,946	56%	22%
Central & Cedar	244,277	200,683	399,999	245,660	64%	22%
Central & Yale	255,771	216,566	402,740	257,532	57%	19%
Central & Bryn Mawr	257,569	206,080	411,303	262,811	60%	28%
Central & Juan Tabo	261,006	184,909	328,622	219,638	26%	19%
98th & Dennis Chavez	155,589	86,635	202,800	109,636	30%	27%
Eubank & Academy	300,855	210,714	325,843	228,744	8%	9%

Source: Mid-Region Council of Governments, "White Paper – Regional Accessibility Benefits Associated With Implementation of the Albuquerque Rapid Transit on Central Ave," December 2015, Table 1, p. 5.

Since the ART intersects with so many north-south bus lines, the accessibility improvements of this service will extend to many residents who do not live directly in the Central Avenue corridor. The benefits of this transit enhancement (including improvement in employment and earnings, travel time savings, and quality of life) will not be confined to residents and businesses in the corridor, but broadly shared by residents throughout the city. As Puentes explains, these considerable accessibility improvements will also increase economic efficiency and influence business location decisions, which will likely lead to increased development along the Central Avenue corridor.

G. Matching Comparable Bus Rapid Transit (BRT) Projects in Other Cities

1. BRT Investments in Comparable Cities

BRT is a relatively new form of transportation in the US. CNT could identify only 12 examples of BRT in America for which research has been published in the professional literature. Of these systems, only the BRT lines of Pittsburg were in operation before 2005, and some of the types of data needed for a comprehensive analysis of BRT performance are only available through 2012. Moreover, these cases vary widely in terms of the physical elements of their BRT systems, the types of locations they connect, and the size and economic health of the cities in which they are located. Within these limitations several studies have examined the economic impacts of BRT in America to date and the results of this research are informative and encouraging for the development of the ART.

In its overview of BRT case studies throughout North America, the Institute for Transportation and Development Policy (ITDP) observes that, depending on local conditions, BRT can prompt levels of economic development that are equal to or greater than similar light rail or streetcar systems. Furthermore, since BRT systems are cheaper to build and operate, they can "leverage far more TOD investment per dollar of transit investment. ITDP analysts advocate for BRT as a means to "bring jobs,

activity, and life back into their communities" and note the "success of BRT as a mobility option and as an economic development lever."[43]

A 2012 study by the Government Accountability Office (GAO) entitled "Bus Rapid Transit: Projects Improve Service and Can Contribute to Economic Development," also supports this claim. The GAO determined that BRT has the ability to increase economic development. The study states that BRT can enhance economic development in a manner similar to rail transit when certain conditions are present, including physical BRT features that convey a sense of permanence to developers, major institutional employment and activity centers along or near the BRT corridor, and transit-supportive local policies and development incentives." [44] Albuquerque's planned ART possesses all of these attributes. The city's largest employment centers lie along the proposed ART line, institutions such as the UNM and Innovate ABQ strongly support implementation of the ART, as do leaders of the regional development community, and Mayor Berry is a staunch proponent of the project.

The ITDP prepared the following summary of investments made in transit corridors for BRT and comparable streetcar and light rail systems. It shows that a number of cities have seen substantial economic development investments along their BRT routes, during a brief period that included the worst recession in 80 years. These cases include Cleveland ($5.8b), Pittsburgh ($903m), Las Vegas ($2.0b), Kansas City ($5.2b) and Eugene, Ore ($100m).[45] In several of these cities the large scale of investment within a few years of the BRT's opening indicates that significant projects were launched in anticipation of the transit service's operation. It is important to note that these figures are based entirely of the value of developments built in BRT corridors. They do not reflect travel time savings, individual transportation expenditures, increased economic and labor market efficiency or increased earnings and employment due to improved accessibility, which, when quantified, constitute substantial benefits of improved transit service.

[43] Hook, W., Lotshaw, S., and Weinstock, A., "More Development for your Transit Dollar: An Analysis of 21 North American Transit Corridors," Institute for Transportation Policy and Development," 2014, p. 152.
[44] U.S. Government Accountability Office, "Bus Rapid Transit: Projects Improve Service and Can Contribute to Economic Development," July 2012, p. 38.
[45] Hook, p. 95.

Table I.4. Investments Linked to BRT Comparable Projects

CORRIDOR	*BRT STANDARD*	LAND POTENTIAL	GOVERNMENT TOD SUPPORT	TOD INVESTMENT (MILLIONS)	TOD INVESTMENT PER DOLLAR OF TRANSIT INVESTMENT (MILLIONS)
STRONG TOD IMPACTS					
Cleveland HealthLine BRT		Emerging	Strong	$5,800	$114.54
Kansas City Main Street Metro Area Express (MAX) bus	Below Basic	Strong	Strong	$5,200	$101.96
Seattle South Lake Union (SLU) Streetcar	Below Basic	Strong	Strong	$3,000	$53.57
Portland Streetcar	Below Basic	Strong	Strong	$4,500	$41.48
Portland MAX Blue Line LRT		Emerging	Strong	$6,600	$3.74
MODERATE TOD IMPACTS					
Las Vegas Strip & Downtown Express (SDX) BRT		Strong	Moderate	$2,000	$42.28
Boston Washington Street Silver Line bus	Below Basic	Emerging	Moderate	$650	$20.97
Denver Central Corridor LRT		Strong	Moderate	$2,550	$14.88
Eugene Emerald Express Green Line (EmX) BRT		Emerging	Moderate	$100	$3.96
Pittsburgh Martin Luther King, Jr. East Busway BRT		Emerging	Moderate	$903	$3.59
Phoenix Metro LRT		Emerging	Moderate	$2,820	$1.99
Ottawa Transitway BRT		Emerging	Moderate	$1,000	$1.71
Charlotte Lynx LRT		Emerging	Moderate	$810.20	$1.66
Boston Waterfront Silver Line bus	Below Basic	Strong	Moderate	$1,000	$1.39
Los Angeles Orange Line BRT		Emerging	Moderate	$300	$0.83
Denver Southwest Corridor LRT		Limited	Moderate	$160	$0.71
WEAK TOD IMPACTS					
Ottawa O-Train LRT		Limited	Weak	nominal	nominal
Pittsburgh "The T" LRT		Limited	Weak	nominal	nominal
Las Vegas Metropolitan Area Express (MAX) bus	Below Basic	Limited	Weak	nominal	nominal
Pittsburgh West Busway BRT	Basic BRT	Limited	Weak	nominal	nominal
Pittsburgh South Busway BRT	Basic BRT	Limited	Weak	nominal	nominal

BRT Standard Gold BRT Standard Silver BRT Standard Bronze

The ITDP has also summarized investments in transit corridors in relationship to the general economic condition of the region in which they are located. This summary shows that large development investments have been made along BRT routes in several cities where the economy was only fair or poor.

Table 5. TOD Impacts in the most successful corridor in each city, in relation to regional real estate market strength.

CITY	REGIONAL REAL ESTATE MARKET STRENGTH	TOTAL TOD INVESTMENT (IN MOST SUCCESSFUL TRANSIT CORRIDOR)
Portland	Generally Good	$6.6 Billion (MAX Blue Line LRT)
Cleveland	Generally Poor	$5.8 billion (HealthLine BRT)
Kansas City	Fair	$5.2 billion (Main Street MAX bus)
Seattle	Generally Good	$3 billion (SLU Streetcar)
Phoenix	Fair	$2.821 billion (Metro LRT)
Denver	Generally Good	$2.55 billion (Central Corridor LRT)
Las Vegas	Generally Poor	$2 billion (SDX BRT)
Boston	Generally Good	$1 billion (Waterfront Silver Line bus)
Ottawa	Generally Good	$1 billion (Transitway BRT)
Pittsburgh	Fair	$903 million (MLK, Jr. East Busway BRT)
Charlotte	Generally Good	$810 million (Lynx LRT)
Los Angeles	Generally Good	$300 million (Orange Line BRT)

2. Early Outcomes from BRT Investments in Comparable Cities

A study sponsored by the National Institute for Transportation and Communities (NITC) and released in January 2016 has deepened our understanding of the economic impacts of BRT. NITC's analyses are limited by the basic fact that, with one exception, BRT systems in the US have only been operating since 2005 or later. When sufficient data is available, the NITC study rigorously compares levels of development achieved in BRT corridors with development that has occurred in control areas, which are similar to the BRT corridors but without rapid transit service. Comparisons are also made between development in BRT corridors and the general pace of development in the urban counties where BRT routes are located. NITC's overall conclusions might be fairly summarized by saying that BRT has positive economic impacts, in so far as impacts can be determined from available data, but it is not a magic bullet for economic development. In northeastern cities that have been losing population and jobs for decades BRT has not reversed these trends in a few years, but population and job loss has usually been slowed in BRT corridors. In southwestern regions that have followed decentralized patterns of development for decades, BRT corridors have usually achieved positive growth, surpassing regional growth rates for some types of properties, but the general rate of growth is not yet faster than the pace of regional sprawl.[46] While the NITC study continually qualifies its findings in light of data limitations, it reports a number of meaningful, specific analytical results.

The NITC study analyzed new development patterns within BRT corridors between the periods 2000 and 2007, before the Great Recession, and 2008 to 2015, covering the recession and recovery. This analysis found that BRT corridors increased their share of new office space in the counties where they are located by a third, from 11.4 percent to 15.2 percent. We also find that although new

[46] Arthur C. Nelson & Joanna Ganning, "National Study of BRT Development Outcomes", Executive Summary and Conclusions, National Institute for Transportation and Communities (NITC), January 2015, http://www.lulu.com/shop/arthur-c-nelson/nitc-rr-650-national-study-of-brt-development-outcomes/paperback/product-22468494.html?ppn=1

multifamily apartment construction within 0.50 mile of BRT was small, its share of multifamily housing in the county has more than doubled since 2008. NITC concluded that BRT corridors appear to be gaining market share for new offices and multifamily apartments.[47]

Table I.6 Distribution of Office Development 2000-2007 and 2008-2015

Metric	**BRT Metros**
2000-2007	
New Office Square Feet	39,292,786
<=0.50 mile Transit	4,487,390
BRT Corridor Share	11.4%
2007-2015	
New Office Square Feet	13,682,472
<=0.50 mile Transit	2,081,209
BRT Corridor Share	15.2%
Change in Share of New Office Development	***33.2%***

Note: Difference in share have z-scores resulting in p <0.01.
<= means less than or equal to.[48]

Table I.7 Distribution of Multifamily Apartment Development 2000-2007 and 2008-2015

Metric	**BRT Metros**
2000-2007	
New MF Square Feet	25,271,580
<0.50 mile Transit	546,325
Share	2.2%
2007-2015	
New MF Square Feet	6,746,189
<0.50 mile Transit	349,177
Share	5.2%
Change in Share of New Multifamily Units	139.4%

Source[49]

The NITC study notes that there is a large body of literature showing that office properties capitalize on the benefits of rail transit proximity to achieve higher rents and values. NITC found that in most metropolitan areas, BRT systems are associated with higher office rents per square foot within 0.50 mile of BRT stations, apparently influencing non-residential property rents in ways similar to rail transit.[50]

[47] Nelson, NITC, pages 30-32
[48] Ibid
[49] Ibid
[50] Nelson, NITC, pages 65-67

Table I.8 Summary of BRT Corridor Location and Office Rents

System	Central County	Downtown	Outside Downtown
Cleveland		$2.44	
Eugene-Springfield		$1.93	
Kansas City		$2.67	
Las Vegas	$4.81	+	$4.85
Pittsburgh	$1.57	+	$2.30

Note: "+" means predicted direction of association but statistically insignificant coefficient[51]

Another significant finding of the NITC study is that BRT corridors generally out performed areas that were comparable but lacked public transit (called "counter-factual" areas) in job growth. NITC compared job growth in BRT and counter-factual areas in the years leading to the great recession, through 2007, and in the in the first years of recovery from the recession, 2008-2011. In most regions job loss was greater in the BRT corridors through 2007 (years when most BRT systems were either not yet in operation or just beginning to function), but positive job growth in BRT corridors was significantly higher than in the control areas during the recession recovery years (when BRT systems were in operation).[52]

Table I.9 Mean Block Group Shift-Share Summary of BRT Station Area and Counter-Factual Locations before Recession (2002/2004-2007) and during Recovery (2008-2011)

	Pre-Recession Shift-Share		Recovery Shift-Share	
BRT Line	**Counter-Factual**	**BRT**	**Counter-Factual**	**BRT**
Pittsburgh South—1977 – Basic	-14.4	-62.9	-10.0	-108.8
Pittsburgh East—1983 – Bronze	49.4	5.7	-5.0	34.1
Pittsburgh West— 2000 – Basic	-23.6	-133.3	-3.3	86.4
Las Vegas MAX—2004 - Unrated	-140.8	-203.5	223.5	-13.1
Los Angeles Orange—2005 - Bronze	5.8	63.3	-67.2	-55.4
Los Angeles Silver—2009 - Unrated	29.4	-137.8	-32.9	1,035.5
Kansas City Main Street—2005 - Unrated	6.8	-9.6	-47.6	9.9
Eugene-Springfield Emerald Express—2007 - Bronze	-1.6	5.0	-6.5	34.8
Cleveland Health Line—2008 - Silver	-17.1	-24.4	-45.8	-29.1
Bronx Pelham Parkway—2008 - Unrated	-0.9	-6.2	-4.2	40.8
Phoenix Main Street—2008 - Unrated	-10.5	-44.2	-20.3	-72.9
Salt Lake City MAX—2008 - Unrated	-67.4	-44.5	-57.1	95.0
Positive Shift in Share	4	3	1	7
Unweighted (summed) means*	(214.3)	(454.6)	(43.5)	21.8

*Excludes Los Angeles Silver Line [considered an outlier because job growth was so high in this corridor]
Note: Coefficients are the sum of the "industry share" of the shift in mean jobs per block group from shift-share analysis comparing change in share of total jobs between BRT station areas and counter-factual locations with respect to their central county over pre-recession (2002-2007; Phoenix is 2004-2007) and recovery (2008-2011) periods.[53]

[51] Ibid
[52] Nelson, NITC, pages 52-4
[53] Ibid, page 53

3. Similarities in BRT Research Findings

In regard to several aspects of economic development, the NITC study reports that BRT systems with technical features of design and equipment which enable them to serve their customers with greater speed and reliability, appear to achieve stronger positive economic impacts than BRT services that lacked these characteristics. This observation agrees with findings of ITDP and GAO research that BRT systems with such features as dedicated lanes, signal priority, pre-boarding fare systems, and permanent stations, are likely to generate higher levels of ridership and related private investment. The NITC, ITDP, and GAO studies also agree that BRT systems are likely to succeed as transit services and as drivers of economic development to the extent that they:

- Connect dense residential neighborhoods to centers of employment, vital services, and entertainment
- Provide reliable accessibility to other transit services
- Operate in conjunction with local government and civic initiatives that attract and incentivize private investment, in part by providing a zoning environment that will encourage dense development coupled with place-making initiatives.[54]

This level of agreement in BRT research is positive news for Albuquerque and the ART in two respects. First, the proposed ART incorporates state-of-the-art technology, design and operating practices; it connects the primary centers of employment and services within the city to rapidly growing neighborhoods and other transportation services; it is an integral part of other progressive development initiatives within the city and region, including the preferred development scenario of MRCOG, Innovate ABQ, and a growth-oriented and comprehensive zoning reform program – all points that are discussed Sections I.A.-F. of this report. In short, the ART proposal incorporates those features that national experience indicates are elements of successful BRT operation and positive economic impact. Second, the characteristics of successful BRT operation and linked development are, to a large extent controllable. While risk is involved in achieving the objectives of any major infrastructure investment, Albuquerque can reduce these risks by fully executing its well-conceived ART plans and continuing to refine its strategies in light of local experience and ongoing BRT research.

[54] Nelson, NITC, "Implications for Planning and Development", pages 116-7

II. Comparative Analysis of Albuquerque's Transit-Oriented Development Opportunity

In an initial effort to quantify what the Central Avenue ART would mean to development in Albuquerque, members of the city's chapter of the National Association of Industrial and Office Property Developers (NAIOP) projected the service's development impacts on 12 station areas in the central portion of the corridor, including downtown and the other districts in the corridor that are now most intensively developed. In a presentation of their findings in January 2014, the NAIOP members estimated that the ART would stimulate the redevelopment of some 64 currently vacant acres, with a conservatively set floor-to-area ratio of 1.5, resulting in the creation of approximately 3,900 residential units; 3,300 office jobs; 2100 retail jobs, and $941 million in new investments.

The Center for Neighborhood Technology (CNT) has projected the approximate value of development in the Central Avenue corridor -- along with changes in assessed value, employment and housing units -- given implementation of the ART. While CNT's analysis supports the NAIOP members' estimates, it is in some respects, broader, more nuanced, and directly based on data for achieved development in other transit station areas and corridors nationally. The following pages describe the basic logic, key assumptions, and results of CNT's analysis.

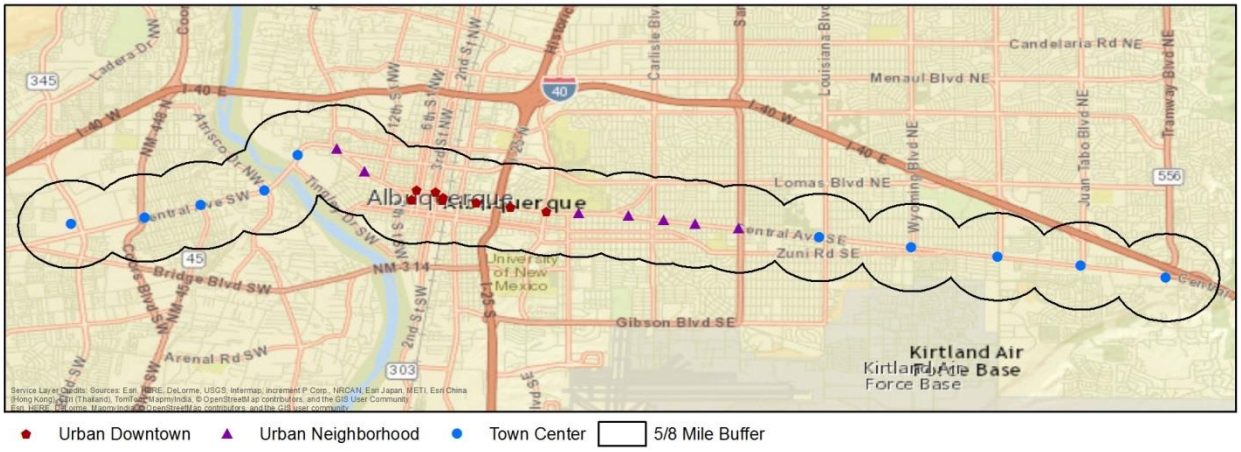
A. The Typology of Station Areas

Transit-oriented developments (TODs) are not restricted to the urban core and can occur in neighborhoods outside of the downtown. In essence, TOD outside of downtown areas will have the essential characteristics of convenient pedestrian access to transit, an integrated mix of land uses, and higher density of residents and\or jobs than comparable areas that are not transit served. However, the intensity of development will be lower areas outside of the central business district. Using TOD Typology defined in the book *New Transit Town: Best Practices* in TOD, the 25 planned ART stations are classified as one of three TOD station types: Downtown, Urban Neighborhood and Town Center.

Downtowns are high-density neighborhoods with neighborhood serving amenities. They provide access to several types of transit, can act as transfer points and attract residents who seek a 24-hour location with a variety of cultural amenities. In many cases they are one of the employment centers of the city. Urban Neighborhoods are defined as historic neighborhoods that surround the downtown and that often are extensions of the downtown street grid and were historically served by streetcar or heavy rail. These livable, vibrant neighborhoods today are home to moderate to high density housing with main street shopping and civic amenities integrated into the neighborhoods. The urban form supports heavy pedestrian activity and can form a transit corridor for bus rapid or light rail transit.

Town Centers are emerging neighborhoods with demand for high quality shopping and transit connections to the urban downtown. These regions provide opportunities for dense land uses around transit stations that scale down within a half-mile from the stations; multifamily residential buildings give way to single family detached homes as you move away from the station. Town Centers typically support neighborhood retail along the main street. The following chart summarizes CNT's grouping of the ART station areas into these three categories.

Downtown	**Urban Neighborhood**	**Town Center**
1st Street @ Central (across from A.T.C.)	16th Street	Atrisco Drive
1st Street @ Central (in front of A.T.C.)	Bryn Mawr Drive	BioPark
Cedar Street	Cornell Drive	Coors Boulevard
Copper Avenue @ 2nd	Rio Grande Boulevard	Eubank Boulevard
Copper Avenue @ 6th	San Mateo Boulevard	Juan Tabo Boulevard
Gold Avenue @ 6th	Solano Drive	Louisiana Boulevard
University Boulevard	Washington Street	Old Coors Drive
Walter Street		Tramway Boulevard
		Unser Boulevard
		Wyoming Boulevard



B. Key Comparisons and Assumptions

Buffers and Assessed Values

For analytical purposes, the 25 ART stations were grouped into three districts that corresponded to their typologies, and a 5/8 mile buffer was created around each of the districts. The 5/8 mile buffer corresponds to a half mile walking distance around each station through developed or developable land plus allowance for street widths. Buffers were created for the districts rather than individual station areas to avoid double counting those areas within the half mile walking distance of more than one station. The three district buffers were overlaid on the Bernalillo County Assessor's 2015 parcel data and

the proportional weighted average of assessed value per acre for Commercial, Residential and Vacant parcels was calculated.

	Downtown	Urban Neighborhood	Town Center
Commercial Wt. Average Assessed Value/Acre	$1,463,309	$756,535	$431,161
Residential Wt. Average Assessed Value/Acre	$1,021,919	$1,014,705	$603,376
Vacant Wt. Average Assessed Value/Acre	$331,008	$215,291	$146,415
Under-utilized Properties- Commercial Wt. Average Assessed Value/Acre	$410,590	$273,990	$198,364
Under-utilized Properties - Residential Wt. Average Assessed Value/Acre	$157,926	$175,200	$100,294

The percentage increase in total assessed values between 2006 & 2015 was calculated for each of the three districts and it was assumed that the developed parcels will have the same percentage increase in assessed values.

	Downtown	Urban Neighborhood	Town Center
Total Assessed Value - 2006	$1,312,409,823	$1,577,824,088	$1,931,696,215
Total Assessed Value - 2015	$1,592,921,256	$2,061,918,052	$2,362,678,117
Percent change (2006-2015)	21.4%	30.7%	22.3%

Vacancy and Under-Utilized Properties

The number of vacant acres in the 5/8 mile buffer for each of the three districts was calculated using vacancy of parcels as indicated in the property class column of Assessor's data. Overlapping parcels were assigned to the denser district (in order of higher density: Downtown, Urban Neighborhood, and Town Center). Vacant parcels that were in the following land uses were subtracted: drainage/flood, parks/recreation, transportation/utilities and public/institutional.

Under-utilized properties are defined as the parcels in which the land value is greater that the building improvements. Parcels with "Commercial or Residential" property class having building improvement values less than three-fourths of the land value were extracted (to eliminate overlaps and over-estimation) as well as parcels with following land uses: drainage/flood, parks/recreation, transportation/utilities and public/institutional. Parcels with surface parking lots were identified and half were removed from the under-utilized properties category since parking requirements will still need to be fulfilled with a mix of parking structures and surface lots. After these considerations were made, intuitive estimates were made of the percentages of the remaining vacant and under-utilized land that would be developed, allowing for the possibility that many of these parcels might not be buildable for unique reasons.

	Downtown	Urban	Town Center

		Neighborhood	
Percent vacant land developed	80%	80%	50%
Percent under-utilized properties developed	80%	50%	33%

TOD Typology/Land Use Mix

Land use mix in different TOD areas are derived from the Normative Metrics presented in the Center for Transit-oriented Development's (CTOD) *Performance-Based Transit-Oriented Development Typology Guidebook*[55]. On the basis of comparing data from hundreds of transit station areas, the Guidebook categorizes station areas into three place types: Employment Places, Balanced Places and Residential Places. This categorization broadly corresponds to the station area typologies of *New Transit Town*: Downtown:

Employment Places – Downtown Urban Neighborhood

Balanced Places – Urban Neighborhood

Residential Places – Town Center

The *Guidebook* makes a further differentiation of five levels of intensity of development within each of the three broad TOD typologies. For each level, the *Guidebook* has calculated average numbers of workers, residents, and households per acre. The level of intensity is inversely proportional to the vehicle miles traveled (VMT) per station area resident. In other words, the lower the average VMT per station area resident, the higher is the number of workers, residents, and households per acre. We can simplify this finding by expressing it in terms of a five-point scale:

1 – high VMT, low density
2 – high-moderate VMT, low-moderate density
3 – moderate VMT, moderate density
4 – low-moderate VMT, high-moderate density
5 – low VMT, high density

Examining census data for the ART station areas, CNT found that the current densities of its Downtown and Urban Neighborhood station areas are roughly a 3.5 on our 5-point scale, while the Town Center station areas are about a 2.5 on the 5-point scale. This finding indicates that the densities of the Center Avenue Corridor's Downtown and Urban Neighborhood station areas are now sufficient to support rapid transit, but could be developed more intensively, while the corridor's Town Centers need some further development to reach average densities for US transit station areas.

Downtown: Employment Places – ART, Average of Low & Low-Mod VMT, 3.5

Urban Neighborhood: Balanced Places – ART, Average of Low & Low-Mod VMT, 3.5

Town Center: Residential Places – ART, Average of Low-Mod & Mod VMT, 2.5

[55] CNT was one of the three founding members of CTOD and the metrics formulated for TOD typology are derived from an analysis of approximately 3,760 existing train station areas across 39 regions of the nation. The typologies are conservative estimates derived by taking the average values observed in the station areas from the U.S. Census and CNT's Housing and Transportation (H+T®) Affordability Index.
http://ctod.org/pdfs/2010PerformanceBasedTODTypologyGuidebook.pdf

Actual average numbers for the *Guidebook* station area levels and the averages which correspond to typical ART station areas are provided in the following table.

	Downtown - Employment Place			Urban Neighborhood - Balanced Place			Town Center - Residential Place		
	Low-Mod VMT	**Low VMT**	**Average**	**Low-Mod VMT**	**Low VMT**	**Average**	**Mod VMT**	**Low-Mod VMT**	**Average**
Residents	5,103	12,581	8,842	10,732	29,875	20,304	10,229	20,106	15,168
Workers	29,811	96,725	63,268	11,031	34,280	22,656	2,351	4,612	3,482
Total Intensity (workers+residents)	34,914	109,306	72,110	21,763	64,155	42,959	12,580	24,718	18,649
Households	2,524	6,828	4,676	4,646	15,466	10,056	3,906	7,684	5,795
Household Size	1.67	1.58	1.63	2.21	1.95	2.08	2.62	2.61	2.62
Gross Density (Units/Acre)	10.3	28.5	19.4	16.4	48.7	32.6	10.3	21.6	16.0
Residential Density (Units/Acre)	20.6	51.4	36.0	20.9	55.6	38.3	12.1	23.6	17.9
Block Size (Acres)	6.4	3.7	5.1	5.8	3.7	4.8	5.7	4.1	4.9

Other figures of interest from the *Guidebook* data are indications of "Total Intensity" the sum of workers plus residents in a station area, and the ratio of workers to residents. CNT has made a broad assumption that in the vacant land to be redeveloped within the ART corridor, the ratios of land allotted to commercial and residential use will approximate the ratios of workers to residents in a station area. By applying these ratios to future residential and commercial land uses (vacant & under-utilized properties to be developed) we estimate the following percentages for the uses of newly developed land in ART station areas:

	Downtown	**Urban Neighborhood**	**Town Center**
% Residential	20%*	47%	81%
% Commercial	80%*	53%	19%

* The percentages were tweaked to increase residential from 12% to 20% in keeping with the objective of making Albuquerque's downtown into a 24-hour residential place.

Future commercial land uses were further split into office and retail. The proportion of these land uses in the future is assumed to be same as the current proportion which was calculated from Albuquerque's current land use.

Office to Retail ratio from current land use	Downtown	Urban Neighborhood	Town Center
Office	0.70	0.30	0.20
Retail	0.30	0.70	0.80

Floor Area Ratio

Floor area ratios are assumed to be constant in the entire district for each type of development for calculation purposes. In reality, densities will be highest in developments surrounding the stations and gradually scale done towards the periphery of the 5/8 mile buffer. These estimates are based on the anticipated intensities of land development. Actual intensities will be determined by combinations of zoning allowances and market forces. CNT's projections of FAR should be read as such estimates and not directly as recommendations for zoning. To the extent that these estimates are considered in Albuquerque's Integrated Development Ordinance (IDO) process, a useful question would be, "What FAR regulations applied to ART station areas would be conducive to achieving the levels of development projected in CNT's analysis?"

Floor Area Ratio (FAR)	Downtown	Urban Neighborhood	Town Center
Residential	2.0	1.3	0.8
Commercial office	2.0	1.0	0.5
Retail	2.0	0.5	0.5

Building Construction

Building construction costs were derived from the *RS Means Building Costs Calculator* for the year 2013 for new construction in Albuquerque. The cost estimates are an average of costs for using Union Labor or Open shop.

Downtown	Cost per sq ft
Residential (1-3 story building)	$129.69
Office (5-10 story building)	$140.34
Retail (3 story department store)	$115.78

Ten percent of the retail developments in the Urban Neighborhood & Town Center are assumed to be restaurants. The remaining retail will be a mix of big box and smaller retail stores.

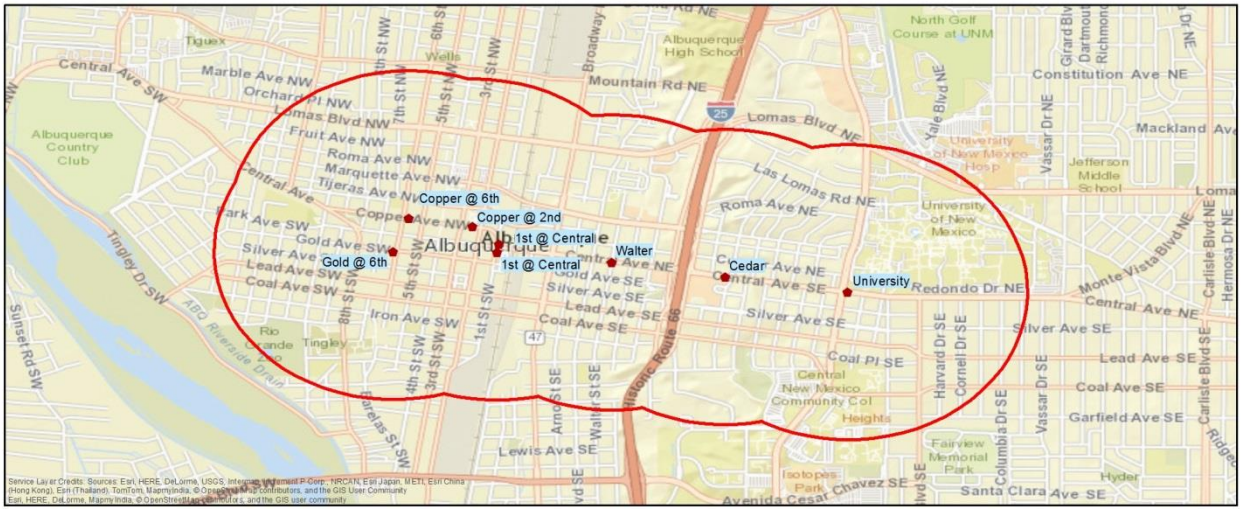
Urban Neighborhood & Town Center	Cost per sq ft
Residential (1-3 story building)	$129.69

Office (2-4 story building)	$135.07
Retail (1 story) - 90% of retail	$103.31
Restaurant(1 story) - 10% of retail	$252.39

C. Calculations of Potential Development Scale

1. Downtown District

The downtown district's eight stations and the 5/8 mile buffer area are seen in the below map. Currently, there are 23.2 acres of vacant land and 76.3 acres of under-utilized properties in this district, eighty percent of which will be developed in to a denser employment center. Complementary retail amenities and dense mixed-use residential uses support the vision of creating a 24-hour downtown.

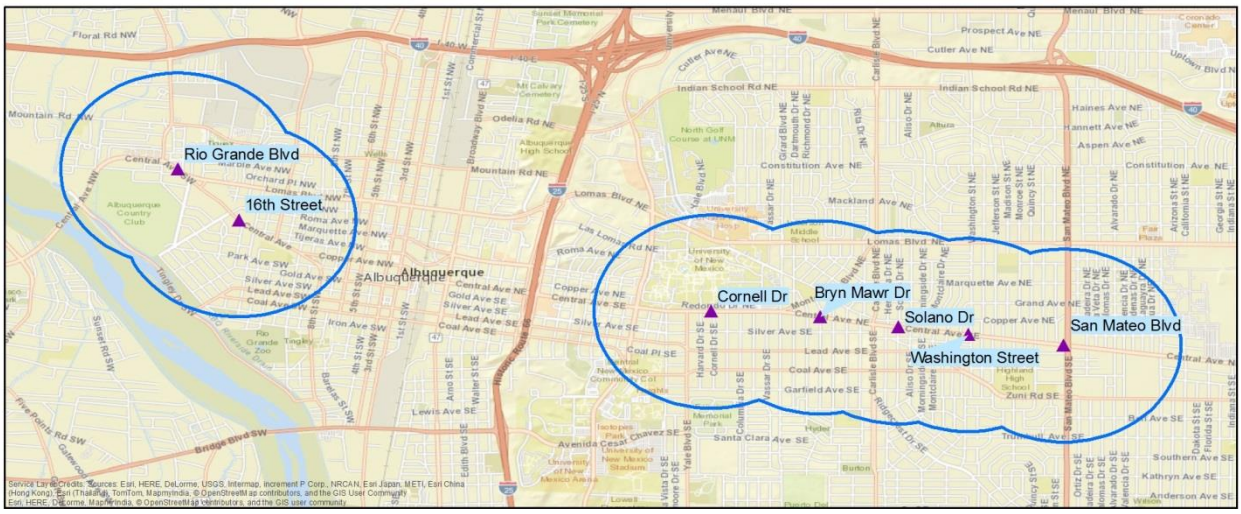


Downtown

Ref No.		Vacant Acres	Underutilized Properties		Calculation	Assumptions	Source
		A	B				
1	Downtown Buffer (acres)	23.2	76.3				Assessor's Data 2015
2	80%/80% to be developed	18.5	61.0		Line 1 * 0.8	80% of vacant land and underutilized properties to be developed	
	Residential						
3	Residential Share of development	3.7	12.2		Line 2 * 0.2	20%	TOD Typology
4	Acres developed (FAR included)	7.4	24.4		Line 3 *2.0	2.0 floor area ratio	
5	Total Acres	31.8			4A + 4B		
5	Acres Added from Vacant Land – Residential	31.8			Same as Line 5		
6	Sq Ft Added from Vacant Land – Residential	1,386,425			Line 5 *43560	1 acre = 43,560 square feet	
7	Value of New Residential	$31,817,939			((Line 4A * 690,911) + (Line 4B *863,992)) * 1.214	Adjusted Residential Value per acre (vacant) = $690,911 (Difference between Residential & Vacant value per acre) Adjusted Residential Value per acre (underutilized) = $863,992 (Difference between Residential & Vacant value per acre) Total Assessed Value - Percent increase from 2006 to 2015 = 21.4%	Assessor's Data 2015 Assessor's Data 2015 Assessor's Data - 2006 & 2015
8	Number of Units	1,146			Line 5 * 36	Residential Density (Units/Acre) = 36.0	TOD Typology
9	Number of new residents	2,169			Line 8 * 1.89	Average Household Size = 1.89	ACS 2013
10	Value of new residential construction	$179,805,417			Line 6 * 129.7	Building Cost per Sq Ft = $129.7	RS Means Estimation for 3 story Apartment in ABQ
	Office						
11	Office Share of development	10.4	34.2		Line 2 *0.56	56%	TOD Typology; ABQ Land Use
12	Acres developed (FAR included)	20.8	68.3		Line 11 *2.0	2.0 floor area ratio	
13	Total Acres	89.1			12A + 12B		

14	Acres Added from Vacant Land – Office	89.1			Same as Line 13		
15	Sq Ft Added from Vacant Land – Office	3,881,989			Line 14 *43560	1 acre = 43,560 square feet	
16	Value of New Office	$115,875,312			((Line 12A * 1,132,301) + (Line 12B *1,052,719)) * 1.214	Adjusted Commercial Value per acre (vacant) = $1,132, 301 (Difference between Commercial & Vacant value per acre) Adjusted Commercial Value per acre (vacant) = $1,052, 719 (Difference between Commercial & Vacant value per acre) Total Assessed Value - Percent increase from 2006 to 2015 = 21.4%	Assessor's Data 2015 Assessor's Data 2015 Assessor's Data - 2006 & 2015
17	Jobs Created- Office	5,108			Line 15/760	1 employee per 760 sq ft	
18	Value of new office construction	$544,798,352			Line 15 * $140.3	Building Cost per Sq Ft = $140.3	RS Means Estimation for Office building in ABQ Downtown
	Retail						
19	Retail Share of development	4.5	14.6		Line 2 * 0.24	24%	TOD Typology; ABQ Land Use
20	Acres developed (FAR included)	8.9	29.3		Line 19 * 2.0	2.0 floor area ratio	
21	Total Acres	38.2			20A + 20B		
22	Acres Added from Vacant Land – Retail	38.2			Same as line 22		
23	Sq Ft Added from Vacant Land – Retail	1,663,710			Line 22 *43560	1 acre = 43,560 square feet	
24	Value of New Retail	$49,660,848			((Line 20A * 1,132,301) + (Line 20B *1,052,719))*1.214	Adjusted Commercial Value per acre (vacant) = $1,132, 301 (Difference between Commercial & Vacant value per acre) Adjusted Commercial Value per acre (vacant) = $1,052, 719 (Difference between Commercial & Vacant value per acre) Total Assessed Value - Percent increase from 2006 to 2015 = 21.4%	Assessor's Data 2015 Assessor's Data 2015 Assessor's Data - 2006 & 2015
25	Jobs Created- Retail	1,664			Line 23/1000	1 employee per 1,000 sq ft	
26	Value of new retail construction	$192,615,981			Line 23 * $115.8	Building Cost per Sq Ft = $115.8	RS Means Estimation for 3 story department store in ABQ Downtown

2. **Urban Neighborhood District**



The eight stations and their corresponding 5/8 mile buffers make up the Urban Neighborhood District. There are 108.5 acres (5% of the district) of vacant land and under-utilized properties, of which 62.3 acres is projected to be developed into an equal mix of residential and retail land uses. The assumed floor area ratio of 1.3 accounts for a variety of residential types: multi-family, townhomes, single family. Offices, retail stores and restaurants will have lower floor area ratios to accommodate parking needs.

Urban Neighborhood

Ref No.		Vacant Acres	Underutilized Properties		Calculation	Assumptions	Source
		A	B				
1	Downtown Buffer (acres)	27.0	81.5				Assessor's Data 2015
2	80%/50% to be developed	21.6	40.8		Line 1A * 0.8 & Line 1B * 0.5	80% of vacant land and 50% of underutilized properties to be developed	
	Residential						
3	Residential Share of development	10.0	19.0		Line 2 * 0.47	47%	TOD Typology
4	Acres developed (FAR included)	13.1	24.7		Line 3 *1.3	1.3 floor area ratio	
5	Total Acres	37.7			4A + 4B		
5	Acres Added from Vacant Land - Residential	37.7			Same as Line 5		
6	Sq Ft Added from Vacant Land - Residential	1,644,119			Line 5 *43560	1 acre = 43,560 square feet	
7	Value of New Residential	$40,723,354			((Line 4A * 799,414) + (Line 4B *839,506)) * 1.307	Adjusted Residential Value per acre (vacant) = $799,414 (Difference between Residential & Vacant value per acre)	Assessor's Data 2015
						Adjusted Residential Value per acre (underutilized) = $839,506 (Difference between Residential & Vacant value per acre)	Assessor's Data 2015
						Total Assessed Value - Percent increase from 2006 to 2015 = 30.7%	Assessor's Data - 2006 & 2015
8	Number of Units	1,444			Line 5 * 38.3	Residential Density (Units/Acre) = 38.3	TOD Typology
9	Number of new residents	3,003			Line 8 * 2.08	Average Household Size = 2.08	TOD Typology
10	Value of new residential construction	$213,225,792			Line 6 * 129.7	Building Cost per Sq Ft = $129.7	RS Means Estimation for 3 story Apartment in ABQ
	Office						
11	Office Share of development	3.5	6.5		Line 2 *0.16	16%	TOD Typology; ABQ Land Use
12	Acres developed (FAR included)	3.5	6.5		Line 11 *1.0	1.0 floor area ratio	
13	Total Acres	10.0			12A + 12B		

14	Acres Added from Vacant Land - Office	10.0			Same as Line 13		
15	Sq Ft Added from Vacant Land - Office	435,356			Line 14 *43560	1 acre = 43,560 square feet	
					((Line 12A * 541,244) + (Line 12B *482,545))*1.307	Adjusted Commercial Value per acre (vacant) = $541,244 (Difference between Commercial & Vacant value per acre)	Assessor's Data 2015
						Adjusted Commercial Value per acre (vacant) = $482,545 (Difference between Commercial & Vacant value per acre)	Assessor's Data 2015
16	Value of New Office	$6,567,751				Total Assessed Value - Percent increase from 2006 to 2015 = 30.7%	Assessor's Data - 2006 & 2015
17	Jobs Created- Office	573			Line 15/762	1 employee per 760 sq ft	
18	Value of new office construction	$58,801,292			Line 15 * $135.1	Building Cost per Sq Ft = $135.1	RS Means Estimation for 2-4 story Office building in ABQ
	Retail						
19	Retail Share of development	8.0	15.1		Line 2 * 0.37	37%	TOD Typology; ABQ Land Use
20	Acres developed (FAR included)	4.0	7.5		Line 19 * 0.5	0.5 floor area ratio	
21	Total Acres	11.5			20A + 20B		
22	Acres Added from Vacant Land - Retail	11.5			Same as line 22		
23	Sq Ft Added from Vacant Land - Retail	502,440			Line 22 *43560	1 acre = 43,560 square feet	
					((Line 20A * 541,244) + (Line 20B *482,545)) * 1.307	Adjusted Commercial Value per acre (vacant) = $541,244 (Difference between Commercial & Vacant value per acre)	Assessor's Data 2015
						Adjusted Commercial Value per acre (vacant) = $482,545 (Difference between Commercial & Vacant value per acre)	Assessor's Data 2015
24	Value of New Retail	$7,579,785				Total Assessed Value - Percent increase from 2006 to 2015 = 30.7%	Assessor's Data - 2006 & 2015
25	Jobs Created- Retail	502			Line 23/1000	1 employee per 1,000 sq ft	
26	Value of new retail construction	$59,397,202			(Line 23 * 0.9 * $103.3) + (Line 23 * 0.1 * $252.4)	Building Cost per Sq Ft for Retail = $103.3 (90%) Building Cost per Sq Ft for Restaurant = $252.4 (10%)	RS Means Estimation for Retail Store & Restaurant in ABQ

3. **Town Center District**

The Town Center District is the largest district in size – over 5,000 acres encompassing ten stations and their buffer areas. Vacant and under-utilized properties make up 20% of this district. It has several auto-oriented shopping centers and land use patterns are suburban in character with largely single-family and some multi-family housing. The district is projected to develop at a slower pace than the other two districts. Only 50% of the vacant parcels and one-third of the under-utilized properties are anticipated to develop in the upcoming years. Future development is assumed to preserve the residential character of the district with opportunities for more moderate density housing and complemented with neighborhood retail.

Town Center

Ref No.		Vacant Acres	Underutilized Properties		Calculation	Assumptions	Source
		A	B				
1	Downtown Buffer (acres)	387.9	630.2				Assessor's Data 2015
2	50%/33% to be developed	193.9	209.9		Line 1A * 0.5 & Line 1B * 0.33	50% of vacant land and 33% of underutilized properties to be developed	
	Residential						
3	Residential Share of development	157.7	170.7		Line 2 * 0.81	81%	TOD Typology
4	Acres developed (FAR included)	126.2	136.5		Line 3 *0.8	0.8 floor area ratio	
5	Total Acres	262.7			4A + 4B		
5	Acres Added from Vacant Land - Residential	262.7			Same as Line 5		
6	Sq Ft Added from Vacant Land - Residential	11,444,063			Line 5 *43560	1 acre = 43,560 square feet	
7	Value of New Residential	$154,540,043			((Line 4A * 456,961) + (Line 4B *503,082)) * 1.223	Adjusted Residential Value per acre (vacant) = $456,961 (Difference between Residential & Vacant value per acre) Adjusted Residential Value per acre (underutilized) = $503,082 (Difference between Residential & Vacant value per acre) Total Assessed Value - Percent increase from 2006 to 2015 = 22.3%	Assessor's Data 2015 Assessor's Data 2015 Assessor's Data - 2006 & 2015
8	Number of Units	4,690			Line 5 * 17.9	Residential Density (Units/Acre) = 17.9	TOD Typology
9	Number of new residents	12,263			Line 8 * 2.62	Average Household Size = 2.62	TOD Typology
10	Value of new residential construction	$1,484,180,548			Line 6 * 129.7	Building Cost per Sq Ft = $129.7	RS Means Estimation for 3 story Apartment in ABQ
	Office						
11	Office Share of development	7.2	7.8		Line 2 *0.037	3.7%	TOD Typology; ABQ Land Use
12	Acres developed (FAR included)	3.6	3.9		Line 11 *0.5	0.5 floor area ratio	
13	Total Acres	7.5			12A + 12B		

14	Acres Added from Vacant Land - Office	7.5			Same as Line 13		
15	Sq Ft Added from Vacant Land - Office	328,354			Line 14 *43560	1 acre = 43,560 square feet	
						Adjusted Commercial Value per acre (vacant) = $284,746 (Difference between Commercial & Vacant value per acre)	Assessor's Data 2015
					((Line 12A * 284,746) + (Line 12B	Adjusted Commercial Value per acre (vacant) = $232,798(Difference between Commercial & Vacant value per acre)	Assessor's Data 2015
16	Value of New Office	$2,376,378			*232,798)) * 1.223	Total Assessed Value - Percent increase from 2006 to 2015 = 22.3%	Assessor's Data - 2006 & 2015
17	Jobs Created- Office	432			Line 15/760	1 employee per 380 sq ft	
18	Value of new office construction	$44,349,168			Line 15 * $135.1	Building Cost per Sq Ft = $135.1	RS Means Estimation for 2-4 story Office building in ABQ
	Retail						
19	Retail Share of development	29.0	31.3		Line 2 * 0.149	14.9%	TOD Typology; ABQ Land Use
20	Acres developed (FAR included)	14.5	15.7		Line 19 * 0.5	0.5 floor area ratio	
21	Total Acres	30.2			20A + 20B		
22	Acres Added from Vacant Land - Retail	30.2			Same as line 22		
23	Sq Ft Added from Vacant Land - Retail	1,313,417			Line 22 *43560	1 acre = 43,560 square feet	
						Adjusted Commercial Value per acre (vacant) = $284,746 (Difference between Commercial & Vacant value per acre)	Assessor's Data 2015
					((Line 20A * 456,961) + (Line 20 B	Adjusted Commercial Value per acre (vacant) = $232,798(Difference between Commercial & Vacant value per acre)	Assessor's Data 2015
24	Value of New Retail	$9,505,513			*503,082)) * 1.223	Total Assessed Value - Percent increase from 2006 to 2015 = 22.3%	Assessor's Data - 2006 & 2015
25	Jobs Created- Retail	1,313			Line 23/1000	1 employee per 1,000 sq ft	
26	Value of new retail construction	$155,268,879			(Line 23 * 0.9 * $103.3) + (Line 23 * 0.1 * $252.4)	Building Cost per Sq Ft for Retail = $103.3 (90%) Building Cost per Sq Ft for Restaurant = $252.4 (10%)	RS Means Estimation for Retail Store & Restaurant in ABQ

III. Findings and Recommendations

A. Findings

1. Discussion of Findings

The proposed ART system will incorporate virtually all of the features that transit-oriented development research, including BRT studies, has shown are characteristic of transit systems that spur economic development:

- The technical features of the ART – including its design, equipment, and service plan -- ensure speed, reliability, and convenience for its customers.
- The ART route -- virtually the entire length of Central Avenue -- connects relatively dense residential neighborhoods to centers of employment, vital services, and entertainment.
- In combination the ART's technical characteristics and route will provide reliable accessibility to other transit services, including multiple north-south bus routes.
- The ART will make a substantive, in some cases essential, contribution to numerous local government and institutional plans to revitalize Albuquerque's economy and protect its environment, including the Preferred Scenario of the regional Long Range Transportation Plan, the expansion of the UNM Hospital and campus, ABQ the Plan, Innovate ABQ, STC.UNM (UNM technology transfer non-profit organization), the Downtown ABQ Mainstreet Initiative[56] and the Downtown 2025 Sector Development Plan. Accordingly, local government is fully committed to support the ART, in part through the use of promotional efforts and incentives that have been applied in Albuquerque's MRA program, and in part by establishing a consistent zoning environment that will encourage intensive development in transit corridors through the Integrated Development Ordinance (IDO) process.
- The private market has shown its readiness to invest in the ART corridor through some 17 mixed-use, multifamily building, or commercial projects that have been built in this corridor within the last three years, with at least 12 additional projects proposed. Several developers of these projects have expressed their expectation that the ART will make an important contribution to the success of their investments.

In light of these facts, CNT conservatively projects that the ART will stimulate the redevelopment of 80% of the vacant or severely under-utilized real estate parcels within a 5/8 mile radius of its Central Avenue route. In this projection CNT anticipates that the type of uses to which these properties will be redeveloped will mirror current land use in the same station areas and that the level of intensity to which these properties will be redeveloped will correspond to the middle range of fixed guideway transit station areas with these types of land use, per national data sets. These projected developments could occur over period as brief as 10 or as long as 20 years. The results of these projections are summarized on the following table.

[56] Downtown ABQ Mainstreet Initiative, http://www.abqmainstreet.org. Accessed on Dec. 21, 2015.

Summary of Projected New Development Linked to Implementation of the ART

Station Areas	Assessed Value	Residents	Residential Units	Office Jobs	Retail Jobs	Development Value
Downtown	$ 197,359,099	2,169	1,146	5,108	1,664	$ 917,219,750
Urban Neighborhoods	$ 54,870,890	3,003	1,444	573	502	$ 331,424,286
Town Center	$ 166,421,934	12,263	4,690	432	1,313	$ 1,683,798,595
Total	**$ 418,646,923**	**17,435**	**7,280**	**6,113**	**3,479**	**$ 2,932,442,631**

Through the limited scope of CNT's assignment, these projected outcomes reflect only direct development from the conversion of vacant and under-utilized properties to productive use. This analysis does not calculate additions to public revenues through property taxes on increased assessed value or sales taxes generated by new or expanded businesses and their employees. The analysis also does not include estimates of induced or indirect benefits, which would require the application of an econometric model.

The scale of the direct development projected here would have a significant impact on Albuquerque's land use, travel patterns, and economy. The level of these projections might be compared to the developments projected by members of Albuquerque's chapter of NAIOP, in the January 2014 presentation noted earlier, which included $941m in development value, 3,900 residential units, 3,300 office jobs, and 2,100 retail jobs. The NAIOP members' projections were based on the development of 64 specific locations, most of which front directly on Central Avenue, rather than considering the entire 5/8 mile radius buffer around Central; it was also limited to Downtown and Urban Neighborhood station areas and did not include the Town Center station areas. The NAIOP members' projections also did not have the benefit of extensive data from fixed guideway station areas around the nation that were instrumental in framing CNT's projection assumptions.

One aspect of this comparison in which the NAIOP members' projections may be more predictive than CNT's is in the number of residential units to be constructed in Downtown and Urban Neighborhood station areas. Although CNT's projections of Downtown station area housing are more reflective of the most recent data for the built environment of US station areas, national market demand for higher levels of Downtown housing have been documented, and a number of Downtown and Urban Neighborhood TOD projects now in active development are delivering high concentrations of residential units. If NAIOP members, who are actually building projects in Albuquerque, are correct in thinking that higher levels of residential units will be developed in central portions of the ART corridor, this would be a positive outcome for travel patterns and economic development in Albuquerque.

ART corridor projections should also be considered in the context of developments in other cities discussed in Section I.G. of this report. While $2.9b in anticipated development investment is a figure

that triggers a deep intake of breath, it is in the midrange of reported development investments linked to comparable BRT and other fixed guideway systems, sometimes in fair to weak markets, sometimes with less technically advanced systems than the proposed ART, and realized within shorter periods of time than CNT has projected.

A further important consideration is the extent to which projected direct development impacts of the ART will contribute to the realization of the Preferred Scenario in MRCOG's *Long Range Transportation Plan* for the Albuquerque region. As noted earlier, the Preferred Scenario represents the Albuquerque metropolitan area's best strategy for solving its transportation congestion and air quality problems and supporting the development of its economy to a competitive 21st Century level. To achieve some key objectives of the Preferred Scenario, which are noted in the following table, the region will need to locate approximately 23,000 additional households and create some 30,000 jobs within a quarter mile of transit stations by the Year 2040. The projections of this report concern a 5/8 mile buffer around the ART route, but the large bulk of the expected development will occur within a quarter mile of the ART stations. So by a rough approximation, nearly 30% of the development required to meet the Preferred Scenario's objectives will be achieved when the development projected for the ART corridor is realized.

Projected ART-Linked Development & Preferred Scenario Requirements[57]

Required Development within Transit Station Areas	2012	2040	Required Development	ART-Linked Projected Development	ART-Linked Development Contribution
Households	19646	43151	23505	7280	31%
Jobs	97153	127421	30268	9592	32%

Thirty percent of required regional development in one corridor over a 10 to 20 year period is certainly a major contribution to the Preferred Scenario. However, this is the corridor that includes downtown Albuquerque and a number of the region's primary employment and activity institutions, and it is the only corridor in the region for which true rapid transit service has been proposed in detail. To achieve the objectives of the Preferred Scenario, every piece of projected development in the ART corridor must be realized as quickly as possible, and accomplishments within this corridor must give rise to additional enhanced transit services and linked development.

2. Summary of Findings

CNT's recommendations are driven by its basic findings:

(1) The ART – as currently proposed with its technical and service characteristics, route, and constructive interface with other key development initiatives – is poised to stimulate economic development within a 5/8 mile buffer around Central Avenue that includes:

- $2.9b in the value of new development

[57] MRCOG, "2040 Long Range Metropolitan Transportation Plan", Figures drawn from Table 2-12: Select Performance Measures, 2012, 2040 Trend and Preferred Scenarios http://www.mrcog-nm.gov/transportation/metro-planning/long-range-mtp

- $418m in increased assessed property value
- 7,280 new residential units
- 9,592 new jobs

(2) The features of the proposed ART that create its value are interdependent, e.g.:
- The assets and development potential of the Central Avenue route justify the public investment in the ART's technical features, and these features are essential to a qualitative improvement in transit service that will incentivize further development in the Central Avenue corridor.
- The nine-mile route linking communities west of the Rio Grande to Albuquerque's downtown are essential to achieving anticipated congestion mitigation, and the ridership drawn east by the ART will add vitality to the city's downtown and urban neighborhoods.
- The ART will provide a basic amenity for the urban work environment and lifestyle that is a requirement for the success of such initiatives as Innovate ABQ and technology sharing programs of the UNM, and the success of these initiatives will drive the ridership of the ART.

(3) Substantial as development directly linked to the ART is projected to be, this development alone will not be sufficient to achieve the growth in transit station areas required by the Preferred Scenario of MRCOG's *Long Range Transportation Plan.* To achieve substantive regional change, the impact of the ART will need to be felt as early as possible, and it will need to enhance currently interconnecting transit services and give rise to others.

B. Recommendations

<u>Protect the integrity of the ART plan and implement the full service as proposed.</u> In resolving any issues related to the implementation of a transit service in a busy urban corridor, such as parking or left turn options at specific locations, chose solutions that do not the compromise service capabilities of the ART. Certainly reject any misguided suggestion to deviate the route of the ART from the "truly central" Central Avenue corridor that is essential for the synergy between rapid transit service and a directly served healthy market. Building and operating the full ART as proposed should not be problematic if complete funding can be secured by a pending federal Small Starts grant and local funds now committed as a match. However, if additional funds are needed, these should be sought through other federal grant programs and local sources. If necessary, prudent borrowing through federal programs that are readily available during 2016 should be used. Any cuts in operating capacity, service, or route which would undermine the connectivity or reliability of the ART should be considered only as a last resort. Such diminutions can easily lead to public perceptions that the transit service is not valuable, impressions that could result in decreased ridership and reduced private investment in the transit corridor, driving a downward cycle that would be difficult to reverse.

A corollary to implementing the entire ART as planned is to implement it swiftly. The experience of other cities shows that substantial private investments in transit corridor housing and businesses may be expected as soon as the plans for a fixed guideway transit service are definitely determined. The economic impacts from a transit service investment take decades to fully unfold. The sooner a project

begins, the sooner it will yield economic benefits and provide a basis for extending complimentary transit services and transit-oriented development corridors.

Accelerate Development of the Second ART Line and Ancillary Services: The envisioned second ART line, which will link the Albuquerque International Sunport and a large section of the city to Downtown and the University of New Mexico, should be implemented with all possible speed. The value of a transit system depends to a large degree in its connectivity. To the extent that the ART offers access to more destinations it will be more widely used and the value of properties with access to it will grow. For the same reason connections from ART stations via conventional bus service or shuttle services to major retail or commercial centers should be studied and optimized whenever possible. Possible funding mechanisms for such service may be Transportation Management Associations (TMAs) – associations of employers that contribute financially to services that benefit their workers and enlarge their job or customer pool.

Prioritize Compatible Zoning, Economic Development Programs, and Mixed-Income Community Development in the ART Corridor. While development projects in the Central Avenue – ART Corridor will enjoy strategic advantages from the concentration of existing businesses and institutions and from the ART service, these projects will require public sector support, and such support can contribute to the equitable distribution of development benefits.

- Fundamentally, development projects in the corridor should have by right zoning that permits construction at the level of density appropriate to Downtown, Urban Neighborhood, or Town Center transit station areas. Such density should be accompanies by building standards and public investments that create pedestrian-friendly environments and a sense of place in transit-served neighborhoods. Ensuring such zoning and public space compatibility should be a principal objective of Albuquerque's Integrated Development Ordinance (IDO) process.
- Recognizing that economic development assistance in the ART corridor is likely to generate success and yield regional benefits from creating housing and jobs in transit-served locations, the economic development programs of the region should coordinate tax incentives, low-interest financing, workforce training, and other enterprise support programs to ensure the development of ART station areas.
- City and regional planners should also expect that property values in ART neighborhoods will rise, potentially leading to the displacement of some lower-income households but also creating opportunities to establish thriving mixed income communities in keeping with HUD's Affirmatively Furthering Fair Housing guidelines. By ensuring that residential developments contain a mix of market rate and affordable units, considering the development of land trusts in selected locations, and focusing job training and placement efforts to aid residents in filling the jobs generated in the corridor, public initiatives can help to deliver the benefits of ART-linked development to all local residents.