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National Case Example Review

ATL Regional Transit Plan

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Contents

National Case Example Review

The purpose of this memorandum is to identify relevant case examples that could be informative for ATL staff in their communications with stakeholders. The case examples selected focus on two key topics: (1) coordinating land use policies and practices with transit investments to maximize the investments' effectiveness, and (2) the use of various project-specific funding sources to implement capital projects and/or create funding streams to cover ongoing operational expenses.

Land Use and Transit Investments Coordination Case Examples

Fixed-route transit investments generate the most ridership, thereby providing service to more people, when they are made in locations with transit-supportive land uses – that is, they have adequate densities of population and jobs to support the use of the transit service. Regional agencies such as the ATL and the Atlanta Regional Commission, as well as regional operators, have significant control over what transit projects are funded and implemented, but very little influence over land use decisions that determine how effective transit investments will be. The following three case examples highlight regions where there have been efforts to align land use and transit investments to increase the benefits of transit investments to the public.

Denver

Following an unsuccessful ballot measure for rail in 1997, Denver's Regional Transportation District (RTD) and local communities began planning FasTracks, a transit expansion program. In May 2002, RTD received permission from the legislature to go to the ballot by petition. RTD could decide which year to go to the ballot, but FasTracks first had to be reviewed and approved by the Denver Regional Council of Governments (DRCOG). Between June 2002 and March 2004, RTD commissioned baseline polls and focus groups, and developed a public education program including key messaging about the growing metropolitan area and widely sharing the planned map. Although Colorado has a long ballot and it was a presidential election year, all 32 Mayors in the region supported and helped campaign for the program. In 2004, voters in the Denver metropolitan area approved a 0.4 percent sales tax to fund FasTracks.[1]

[1] Denver's FasTracks Case Study and Best Practices, https://www.miamidade.gov/citt/library/summit/2015-transportation-summit-presentations/phil-washington-presentation.pdf.

The program includes 122 miles of new light rail and commuter rail service, 18 miles of bus rapid transit (BRT), and 57 proposed new stations. Since 2004, through FasTracks, RTD has built 25 miles of light rail track and 53 miles of commuter rail.[2] In order to maximize the benefit of this expansion, FasTracks bills itself as both a land use and a transit development program, involving close coordination between RTD, the City and County of Denver, and Denver Regional Council of Governments (DRCOG), which all have transit-oriented development (TOD) programs and staff.[3] RTD's collaboration with organizations and local government has allowed it to successfully align transit system expansion with development, including through the following two programs:

> Blueprint Denver – The City and County of Denver created Blueprint Denver, a land use and transportation plan. In 2010, it adopted a new zoning code that allows higher-density and mixed-use development in transit station areas. The plan was updated in 2019.[4] The City and County of Denver has also created a classification system for transit stations, based on pedestrian activity, residential zoning, and density, to set expectations for development around them. For example, downtown stations are expected to be surrounded by mixed-use and high-density TOD since they have a high pedestrian activity, while a suburban station would have a town center-like development around it.[5] This typology, along with RTD's TOD Design Criteria gives developers a good idea of what is both expected and permitted when designing plans for a new station and surrounding area.

> Urban Land Conservancy (ULC) and Enterprise Community Partners – Along with several other investors, ULC, Enterprise Community Partners, and the City and County of Denver have established the first affordable housing TOD acquisition fund in the country. The purpose of the fund is to create affordable housing units across RTD's service area of eight counties throughout the Denver metropolitan area through purchasing land on current and future transit corridors and selling it back to developers with no holding fee. This reduces risk for housing developers by allowing ULC to hold onto the land while developers secure financing.[6] As of 2019, 17 loans have been made through the fund providing a total of $34 million in

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[2] RTD FasTracks Strategic Plan for Transit Oriented Development, https://www.rtd-denver.com/sites/default/files/files/2019-08/rtd-tod-fastracks-strategic-plan-2010.pdf.

[3] Keith A. Ratner, Andrew R. Goetz, The reshaping of land use and urban form in Denver through transit-oriented development, Cities, Volume 30, 2013, Pages 31-46, ISSN 0264-2751, https://doi.org/10.1016/j.cities.2012.08.007.

[4] Blueprint Denver, https://www.denvergov.org/media/denvergov/cpd/blueprintdenver/Blueprint_Denver.pdf.

[5] City and County of Denver Transit-Oriented Development Typology, https://www.denvergov.org/content/denvergov/en/transit-oriented-development/typology.html.

[6] Urban Land Conservancy Denver Transit-Oriented Development Fund, https://www.urbanlandc.org/denver-transit-oriented-development-fund/.

financing for property acquisitions near transit. More than 1,450 affordable homes near public transit have been created or preserved.[7] Ensuring the construction of affordable housing near public transit is an effective strategy for enhancing transit ridership, as low- and moderate-income individuals have a higher propensity to use transit services.

Only 0.6 percent of land area in the Denver region is within a half-mile of an RTD station; however, between 2005 and 2019, those station areas have captured 25 percent of multifamily development and 31 percent of office development.[8] In this case, the transit infrastructure planning occurred first, and the efforts were thereafter focused on ensuring supportive land use around planned transit projects.

Los Angeles

The Los Angeles County Metropolitan Transportation Authority (LA Metro) operates a transit system that serves 88 cities and unincorporated areas in LA County.[9] One major challenge in furthering high-density transit-oriented development, according to Los Angeles leaders, is identifying available land where development can occur around transit stations. Only a small portion of land in the City of Los Angeles is zoned to permit multi-family housing, and even neighborhoods around major transit stops are designated as historical zones to preserve single-family zoning.[10] Both LA Metro and the County of Los Angeles have created programs to incentivize rezoning and development:

> LA Metro TOD Planning Grant Program – In 2011, LA Metro launched a TOD Planning Grant Program (PGP). The program awarded grants, funded by LA Metro on an application basis, to the County of Los Angeles and all cities within the county with land use regulatory jurisdiction within a one-half mile of existing, planned, or proposed LA Metro rail or bus stations to incentivize both development and modification of zoning regulations to support TOD. From 2011 to 2018, the program awarded grants to municipalities for TOD plans for specific stations, modification of zoning codes, and the drafting of amendments to Master/General Plans.[11] The

[7] Denverite, *City Council moves toward extending funding for affordable, transit-oriented development*, December 2019, https://denverite.com/2019/12/11/city-council-moves-toward-extending-funding-for-affordable-transit-oriented-development/.
[8] RTD 2020 TOD Status Report, https://www.rtd-denver.com/sites/default/files/files/2021-02/2020-TOD-Status-Report.pdf.
[9] LA Metro Local Government and External Affairs, https://www.metro.net/about/community-relations/community-and-municipal/.
[10] Barbour, E., Grover, S., Lamoureaux, Y., Chaudhary, G., & Handy, S. (2020). Planning and Policymaking for Transit-Oriented Development, Transit, and Active Transport in California Cities. UC Davis: National Center for Sustainable Transportation. http://dx.doi.org/10.7922/G25M63Z4.
[11] Transit Oriented Development Planning Grant Program, https://www.metro.net/projects/tod/.

program granted $23.8 million in funding for 41 land use plans that are influencing land use around 86 Metro, Metrolink (the region's commuter rail system), and BRT stations.[12] In 2018, LA Metro introduced the Transit Oriented Communities (TOC) Policy and developed a TOC Implementation Plan in 2020. The TOC Implementation Plan outlines a process to review the lessons learned from the TOD Planning Grant Program and build on top of the grant program for a more holistic integration of TOCs into the design and construction of new stations.[13] One Metro TOD PGP grantee, the City of Los Angeles, used the funds it received to fund its Transit Neighborhood Plans (TNP) Program. The TNP works in conjunction with community plans to provide a framework for enhancing communities around a transit station through zoning modifications and pedestrian-friendly design guidelines.[14]

> Transit Oriented Communities Incentive Program – The TOC Incentive Program, operated by the City of Los Angeles and separate from LA Metro's TOC Policy, encourages the construction of affordable housing near bus and train stops through incentives for developers. The incentives are split into tiers depending on how close a project site is to a transit stop, and each tier offers the ability to deviate from local zoning codes by increasing density, increasing residential Floor Area Ratios (FAR), decreasing parking space requirements, increasing height, reducing setback, reducing open space, and increasing lot coverage. For example, a development with two non-Rapid Bus lines, each with a bus coming at least every 15 minutes, is in Tier 1, while a development less than 750 feet from an intersection of two Metro Rail stations or an intersection of a Metro Rail station and a Rapid Bus station is in Tier 4.

> **Table** 1 shows the percentage of total units that must be affordable for lower income populations.[15] In return, the development receives a residential density increase, such as increasing the otherwise maximum allowable number of units by 50 percent (Tier 1) to 80 percent (Tier 4).[16] As

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[12] Transit Oriented Communities Demonstration Program – Lessons Learned Report, https://media.metro.net/projects_studies/joint_development/images/reportTOClessonsLearned.pdf.

[13] Transit Oriented Communities Implementation Plan, https://media.metro.net/2020/Metro-TOC-Implementation-Plan-Final.pdf.

[14] Transit Neighborhood Plans (TNP) Program, https://planning.lacity.org/plans-policies/initiatives-policies/transit-neighborhood-plans.

[15] Extremely Low Income households are those with incomes under 30 percent of the area median income (AMI); thresholds for Very Low Income and Lower Income households are 50 percent and 80 percent of the AMI, respectively. In 2021, the AMI for Los Angeles County is $80,000. Los Angeles Almanac Poverty and Lower Living Income Level Guidelines, http://www.laalmanac.com/social/so24.php#:~:text=1)%20Low%2DIncome%20Families%20are,of%20the%20median%20family%20income.&text=Consequently%2C%20the%20extremely%20low%20income,low%20(50%25)%20income%20limits.

[16] City of Los Angeles TOC Guidelines, https://planning.lacity.org/odocument/39fae0ef-f41d-49cc-9bd2-4e7a2eb528dd/TOCGuidelines.pdf.

of January 2020, over 19,000 residential units were proposed in three years of the TOC Incentive Program, with 3,863 of them (20 percent) affordable.[17]

TABLE 1

Percentage of total units that must be affordable for lower income households, by tier

	Extremely Low Income (ELI)	Very Low (VL)	Lower Income (LI)
Tier 1	8%	11%	20%
Tier 2	9%	12%	21%
Tier 3	10%	14%	23%
Tier 4	11%	15%	25%

Both LA Metro and the City and the County of Los Angeles have made steps to incentivize development to increase transit ridership. LA Metro's TOD Grant Planning Fund encourages municipalities to adopt transit-focused regulatory plans. For example, the City of Bellflower won a TOD grant to develop a TOD Specific Plan before its new light-rail corridor is constructed. The Specific Plan defined updated land use plans, design guidelines, and development standards.[18] Although LA Metro does not have authority over land use in each jurisdiction it serves, the grant program allows it to work with jurisdictions to ensure increased density around new and existing stations, enhancing ridership and, thus, the return on investment in transit system service and infrastructure.

Seattle

Seattle's Sound Transit has undertaken a major system expansion. In 2016, Sound Transit 3, the third and most recent voter-approved system development plan and program, called for 62 miles of light rail that will ultimately connect 16 cities, BRT on major highways, and commuter rail capacity expansions.[19] Seattle's population is increasing faster than any other big city in the country, and transit ridership in the region is growing faster than

[17] Curbed Los Angeles, *LA is encouraging developers to put denser housing near transit. Here's how*, January 2020, https://la.curbed.com/2020/1/22/21055436/transit-oriented-communities-development-dense-housing-explained.

[18] The Downtown Bellflower Transit Oriented Development Specific Plan, https://media.metro.net/2020/Bellflower-Specific-Plan.pdf.

[19] Sound Transit History of voter-approved plans, https://www.soundtransit.org/system-expansion/building-system/history-voter-approved-plans.

anywhere else in the country.[20] Sound Transit and the City of Seattle have adopted policies to increase development around new and planned stations, including the following.

> Sound Transit TOD Policy – In 2010, Sound Transit completed a TOD Strategic Plan. In order to reorient TOD around future and recently completed stations, Sound Transit adopted an updated TOD policy in 2018. Sound Transit often purchases land for building stations and installing tracks, and sometimes has additional land it no longer needs after the projects are complete. The TOD Policy allows Sound Transit to use the surplus land to plan and develop TOD. The TOD policy allows Sound Transit to implement TOD through joint development, partnerships with public and private entities, and public and stakeholder engagement. Since 2018, over 1,300 housing units have been built or are planned on Sound Transit surplus properties, with over 80 percent of them affordable to those earning 80 percent or less of the region's median income. [21]

> Future Station Area Planning – Sound Transit's Office of Land Use Planning & Development staff work in project teams to lead station area planning and urban design efforts. Their work informs the Sound Transit's Board of Director's decision-making on project budgets. For example, Sound Transit is working with the City of Bothell to complete a TOD report for three joint development TOD scenarios at a potential future park and ride site. Sound Transit and the City of Bothell considered an integrated TOD scenario that would allow shared parking between commuters and the visitors of the developments (residents, employees, consumers, etc.) that would reduce capital expenditures by reducing the need for construction of additional parking.[22] Shared parking reduces the number of parking spaces that would need to be constructed, decreases parking oversupply, and cost can be split between Sound Transit and the retail developers.

> Seattle Parking Tax – In 2010, the Seattle City Council raised the tax on paid parking lots to 12.5 percent, which brings in an additional $5.4 million per year.[23] The revenues are placed in a Transportation Fund and used for transportation projects.[24]

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[20] Sound Transit Seattle Area 2019 Regional Report, https://www.soundtransit.org/sites/default/files/documents/regional-report-seattle-201901.pdf.

[21] Sound Transit Transit-Oriented Development, https://www.soundtransit.org/system-expansion/creating-vibrant-stations/transit-oriented-development.

[22] Sound Transit Quarter 1, 2021 Transit-Oriented Development Quarterly Status Report, https://www.soundtransit.org/sites/default/files/documents/st-tod-quarterly-report-q1-2021.pdf.

[23] Seattle City Council Raises Parking Lot Tax, Authorizes Citywide Taxing District, https://www.seattletimes.com/seattle-news/seattle-city-council-raises-parking-lot-tax-authorizes-citywide-taxing-district/.

[24] Seattle, Washington Municipal Code, https://library.municode.com/wa/seattle/codes/municipal_code?nodeId=TIT5REFITA_SUBTITLE_IITA_CH5.35COPATA.

Sound Transit's ambitious expansion goals include increased or new service to Seattle's suburbs. This requires Sound Transit to work with local jurisdictions to encourage development around transit stations to ensure that the new stations will be a successful investment. The development of Sound Transit's surplus properties has generated over $63 million in revenue for Sound Transit that helps support transit services and expansion.[25]

Transit Funding Case Examples

In the Atlanta region, the two largest sources of operating revenues are sales taxes and fare revenues, which make up over three-quarters (77 percent) of all operating revenues. Capital revenue sources are primarily sales taxes (78 percent) and federal funding (18 percent). More information on current revenue sources for transit is available through the ATL's Annual Report and Audit[26] the technical memorandum, "Today's Funding Landscape: How is Transit Funded in the Atlanta Region?". The purpose of this case example review is to highlight the successful use of project-specific revenue sources to fund transit projects in other regions in the U.S. that could be of interest to the ATL and operators in the ATL region.

Cleveland HealthLine BRT

The Greater Cleveland Regional Transit Authority (RTA) constructed a 7.1-mile, 36-station BRT line offering 10-minute headways along the Euclid Avenue corridor in downtown Cleveland at a cost of $168.4 million. The capital costs were funded by a Federal Transit Administration (FTA) New Starts Grant (49%), state fuel tax funds (30%), and various local and agency sources (21%). The BRT, which reduced travel times by over 25 percent compared to previous local bus service and has seen high ridership, opened to revenue service in 2008. The project has won numerous awards and catalyzed, boosters estimate, over $9.5 billion in economic development along the corridor. The project was noteworthy not only for its performance as one of the first and most successful BRT lines in the U.S., but also for being the first example of the sale of naming rights to fund the service. The BRT line became known as the HealthLine with the purchase of a naming rights agreement between RTA and the Cleveland Clinic and University Hospitals, two medical centers and major employers along the corridor. Under the agreement, the two organizations agreed to pay $6.25 million over 25 years in return for naming rights of the BRT line. Since

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[25] Sound Transit Quarter 4, 2020 Transit-Oriented Development Quarterly Status Report, https://www.soundtransit.org/sites/default/files/documents/st-tod-quarterly-report-q4-2020.pdf.
[26] ATL Annual Report and Audit, https://atltransit.ga.gov/planning/.

this deal, the RTA has struck two additional deals with sponsors purchasing naming rights for other services:

> Cleveland State Line – Cleveland State University bought naming rights for RTA's route along Clifton Boulevard; the agreement went into effect in December 2014. The university is paying $150,000 a year.[27] The Cleveland State Line runs along a 4.1-mile upgraded boulevard with numerous improvements including bus-only lanes.
> MetroHealth line – MetroHealth System will pay $4.1 million for 25 years of naming rights for RTA's route that links the MetroHealth campus with Downtown Cleveland.[28] As part of the agreement, the line operates buses with the MetroHealth System branding. MetroHealth system will also have its name on improved bus stops and stations.[29]

Since this time, other agencies including the Southeastern Pennsylvania Transportation Authority (SEPTA) and the New York City Metropolitan Transportation Authority (MTA) have sold station naming rights to private businesses for multimillion dollar sums. The Chicago Transit Authority (CTA) has established a Corporate Partnership Program that arranges deals through which well-established sponsors, primarily large corporations, purchase branding and promotional opportunities (including installations at stations, special Free Rides on New Year's Eve service), with the proceeds used to fund the agency's maintenance and project-related expenses.[30]

Detroit QLine Streetcar

The QLine (or QLINE) Streetcar, which runs for 3.3 miles along the Woodward Avenue corridor in Detroit, Michigan, began operations in 2017. The project underwent many rounds of planning between 2006 and 2013, which included changes to its length as well as mode; previous studies envisioned the line being BRT or light rail. The $187 million line,[31] originally known as the M-1 Rail project, was sponsored and is now operated by M-1 Rail, a non-profit consortium of private and public businesses and institutions. The QLine Streetcar is the first example of a major transit project in the U.S. being led and

[27] Cleveland.com, *MetroHealth System Buys Naming Rights to RTA's West 25th Street Route*, https://www.cleveland.com/metro/2017/03/rta_and_metrohealth_create_new.html#:~:text=The%20Cleveland%20Clinic%20and%20University,at%20Windermere%20in%20East%20Cleveland.
[28] MetroHealth.org, *RTA and MetroHealth Partner to Rebrand the 51 Bus Line,* https://news.metrohealth.org/rta-and-metrohealth-partner-to-rebrand-the-51-bus-line/.
[29] Cleveland.com, *RTA says HealthLine Had 10-year Payback of $9.5 Billion, 'Woke up' Euclid Corridor,* *https://www.cleveland.com/news/erry-2018/11/149927818e3851/rta-says-healthline-had-10year.html*.
[30] Federal Highway Administration Center for Innovative Finance Support, https://www.fhwa.dot.gov/ipd/pdfs/fact_sheets/program_value_cap_naming_rights.pdf.
[31] Crain's Detroit Business, *QLine Funders, Other Backers get Ride on Woodward as Streetcar Dream Nears Fruition*, https://www.crainsdetroit.com/article/20170427/NEWS/170429833/qline-funders-other-backers-get-ride-on-woodward-as-streetcar-dream.

funded by private businesses and philanthropic organizations in partnership with the local, state, and federal government. Capital funding for the project came from a combination of:

- Private businesses and institutions – The project's private sector funding partners, which collectively contributed over $89 million to the project, included automakers, healthcare insurers and systems, universities, financial institutions, economic development authorities, foundations, and other large corporations. Contributions from M-1 Rail members included a nearly $50 million grant from the Kresge Foundation and sponsorships of 13 QLine stations, which generated $3 million per station.
- Federal grants – In 2013, the project received a $25 million Transportation Investment Generating Economic Recovery (TIGER) grant. In 2014, the City of Detroit was awarded an additional $12.2 million TIGER grant for the project, bringing the total federal portion of the project to $37.2 million.
- Naming rights – Quicken Loans bought the naming rights to the line, resulting in the choice of the name QLine Streetcar, for $5 million. (This was in addition to another $10 million contributed by the company.)
- Federal New Market Tax Credits (NMTC) – Six community development entities contributed over $42 million (combined) of NMTC allocations.[32] The NMTC program provides investors, often financial institutions, with an incentive to invest in projects in low-income communities. Intermediary organizations select investment projects, and investors receive a tax credit against their federal income tax for investing in the projects. The credit totals 39 percent of the original investment amount and is claimed over a period of seven years.

M-1 Rail says the line has catalyzed over $8 billion in growth along the corridor.[33] Annual operating expenses for the QLine Streetcar were around $7 million prior to the COVID-19 pandemic, when service was temporarily suspended.

Denver Union Station

The Denver Union Station project was the redevelopment of Denver's historic Union Station to create an intermodal transit district connecting commuter rail, light rail, BRT, and local bus service – all surrounded by transit-oriented development, including a mix of land uses (residential, retail, office). Specific construction components included: light rail and commuter rail stations; a regional bus facility; extension of a pedestrian mall and shuttle service;

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[32] United Fund Advisors, *National Community Fund I, LLC Completes NMTC Financing For Detroit Streetcar Project*, https://www.unitedfundadvisors.com/national-community-fund-i-llc-completes-nmtc-financing-for-detroit-streetcar-project/.

[33] QLine Detroit Official Homepage, https://qlinedetroit.com/about/economic-impact/.

accommodation of downtown circulator service; pedestrian improvements; replacement parking; and utility infrastructure. The project's sponsor, the Denver Union Station Project Authority (DUSPA), is a nonprofit, public benefit corporation formed by the City of Denver to oversee the project. DUSPA partnered with the Union Station Neighborhood Company (USNC), which served as the master developer for the private land and vertical site development projects through a design-build-operate (DBO) arrangement, and supported the management of the transit and public infrastructure components of the project. Ownership and maintenance of the transit and public infrastructure components of the project were transferred to the Regional Transportation District (RTD) upon completion of construction. The total cost for the DB project was $518.6 million.[34] Capital funding for the project came from 21 awards from 14 funding sources, including:[35,36]

- Federal grants
  - FHWA Projects of National and Regional Significance (PNRS) – $45 million
  - FTA Capital Investment Grants – $10 million
- Federal Transportation Infrastructure Finance and Innovation Act (TIFIA) Assistance (direct loan) – $146 million
  - RTD pledged $165 million annuitized at 5.65 percent to $12M annually to DUSPA to secure and repay TIFIA loan
- Federal Railroad Rehabilitation & Improvement Financing (RRIF) Loan – $155 million[37]
  - Denver Downtown Development Authority, a statutory authority with tax increment financing (TIF) powers formed by the City, pledged TIF revenue for 30 years to DUSPA to secure and repay the RRIF loan.
- Federal American Recovery and Reinvestment Act (ARRA Stimulus) Grant – $29 million
- RTD contribution – $65 million
- Other state and local funds – $24 million
- Land sales - $18 million
- Revenues during construction - $58 million

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[34] U.S. Department of Transportation, Denver Union Station, https://www.transportation.gov/buildamerica/projects/denver-union-station#:~:text=On%20February%203%2C%202017%2C%20the,its%20%24145.6%20million%20TIFIA%20loan.&text=This%20is%20a%20unique%20financing,the%20TIFIA%20and%20RRIF%20programs.

[35] Id.

[36] Ballard Spahr, LLC, Financing of The Denver Union Station, https://www.law.du.edu/documents/rmlui/conference/powerpoints/2013/KhokhryakovaADUSCaseStudyFinancing-of-The-Denver-Union-Station-DMWEST-9630502-1.pdf.

[37] Federal Highway Administration Center for Innovative Finance Support, Project Profile: Denver Union Station, https://www.fhwa.dot.gov/ipd/project_profiles/co_union_station.aspx

The Council of the City and County of Denver also provided the following commitment: "In the event of a shortfall in revenue available for debt service on the subordinate loan (RRIF), the City and County of Denver will request of its City Council appropriation of up to $8 million annually during the term of the loan to make up any such shortfall." The project was noteworthy given that it was the first time U.S. DOT combined credit assistance from the TIFIA and RRIF programs for a single project. The TIFIA and RRIF loans were fully repaid in 2017, more than 20 years early, due to larger than anticipated TIF revenues from the surrounding development.

Value Capture Examples

Value capture is a type of public financing that recovers from private landowners some or all the value that public infrastructure investments generate. Typically, value capture involves collecting revenues through special or targeted taxation mechanisms or fees and directing the revenues to finance improvements or new construction. Value capture is particularly relevant in the context of transit development since land is more valuable when located near high-quality public transit service and infrastructure. In the Denver Union Station case cited in the previous section, using tax increment financing (TIF), a form of value capture, allowed the City of Denver to pay off federal loans sooner than anticipated. Value capture can be implemented in different methods, including:[38,39,40]

- Tax increment financing – Local jurisdictions create TIF districts and use taxes on future gains in real estate values to pay for new infrastructure.
- Special assessment districts – By creating special assessment districts around public transit infrastructure, jurisdictions can impose new fees or tax increases, based on property value, sales, or other special business fees, on owners within the areas. The fee or tax is typically estimated based on the benefit to the properties of being in proximity to the new or improved infrastructure.
  - In the Washington, DC metropolitan area, Fairfax County, Virginia, established a special assessment district on commercial and industrial properties in the areas around the new Silver Line heavy rail stations. During Phase 1, which involved construction of 11.7 miles of rail and five stations, Fairfax County implemented an additional property tax, which increased the base tax rate for property owners by 22 percent and raised $400 million. Phase 1 was implemented in July 2014, and

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[38] APTA, Value Capture for Public Transportation Projects: Examples, https://www.apta.com/wp-content/uploads/Resources/resources/reportsandpublications/Documents/APTA-Value-Capture-2015.pdf.
[39] FHA, Value Capture, https://www.fhwa.dot.gov/ipd/value_capture/.
[40] FHA, Value Capture Case Studies, https://www.fhwa.dot.gov/ipd/value_capture/case_studies/.

both Fairfax County and neighboring Loudoun County established Phase 2 tax districts based on the success of the first. Value capture sources have funded approximately one-fifth of Silver Line project.

- Impact fees – Impact fees are one-time fees collected from properties around the improvements that are typically collected up-front, instead of depending on future revenues. Impact fees do not have to be used on the site of development and can be used for services such as schools, local roads, and parks.
  - The City of Bellevue, Washington implemented impact fees to help finance construction during the expansion of the Sound Transit light rail network. Until May 2021, jurisdictions in the state of Washington were unable to use TIF due to the state property tax system, so the City used impact fees that varied for different types of land uses.[41] For example, residential and commercial fees generate different amounts of traffic and were thus charged different fees.
- Joint development – Joint development allows a transit agency to form a partnership with a private entity to develop land around new or improved infrastructure. Joint development is most common at transit stations.
  - In 1997, Bechtel Enterprises and the City of Portland, Oregon jointly developed the airport light rail line and Cascade Station, a 120-acre plot of land on the way to the airport. The 5.5-mile light rail extension with four stations would cost $125.8 million. Bechtel contributed $28.2 million in return for an 85-year lease to develop all the land at Cascade Station without paying rent to the City and received a design-build construction contract for the light rail without having to go through a bidding process.
- Air rights sale – An agency can sell or lease air rights over agency land to provide new revenue sources. In this case, agencies usually have less involvement in the actual development process.
  - In Boston, Massachusetts, the current South Station rail terminal and bus terminal are two separate buildings that are difficult to connect between. The Massachusetts Bay Transportation Authority (MBTA), Boston Planning & Development Agency (BPDA), and a developer, Hines, are collaborating to improve connection between the two terminals and construct a mixed-use tower with office and residential space. The project dedicates the area above South Station to significant infrastructure improvements, including increasing the bus terminal capacity by 50 percent and increasing train station platform circulation.

[41] Davis Wright Tremaine, LLP, Washington State's Expanded TIF Authority Creates Powerful Catalyst for Public-Private Partnerships, https://www.dwt.com/insights/2021/05/washington-state-tax-increment-financing-law.

The project is expected to be completed in 2025 and will generate recurring income to MBTA through bus gate fees and retail revenue.[42]

- Split-rate property taxes – Split-rate property taxes impose separate tax rates on the values of land and buildings, rather than one property tax rate on the entire parcel of land. Imposing a relatively higher rate on the value of land encourages development, rather than allowing a developer to purchase an empty parcel and waiting for the value to appreciate.
  - The City of Harrisburg implemented a split-rate property tax system and between 1982 and 2006, the city has recorded over 30 thousand building permits that represent over $3.46 billion in new investment in the city. In addition to Harrisburg, 20 cities in Pennsylvania utilize split-rate property taxes to incentivize development.[43]

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[42] MBTA, South Station Transportation Center Improvements, https://www.mbta.com/projects/south-station-transportation-center-improvements.

[43] Lincoln Institute of Land Policy, Why So Little Georgism in America: Using the Pennsylvania Case Files to Understand the Slow, Uneven Progress of Land Value Taxation, https://www.lincolninst.edu/sites/default/files/pubfiles/1275_hughes_final.pdf.