

NORTH AVENUE RISING



Increasing Economic Activity Through Multimodal Investments

Lead Applicant: Maryland Transit Administration (MTA)
In partnership with the City of Baltimore

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FY 2016 TIGER Discretionary Grant Program

Total Project Costs: \$27.3 Million

TIGER 2016 Funds Requested: \$14.7 Million



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Project Name	<i>North Avenue Rising</i>
Applicant	Maryland Transit Administration
Co-sponsor	City of Baltimore, MD
Contact Information	Kevin Quinn, Maryland Transit Administration Director, Office of Planning and Programming 6 Saint Paul Street, 9th Floor Baltimore, MD 21202 kquinn@mta.maryland.gov (410) 767-8361
Project Type	Urban
Project Description	The Maryland Department of Transportation's Maryland Transit Administration (MTA) and the City of Baltimore are partnering to revitalize the critical North Avenue corridor with a multimodal investment in bicycle, pedestrian, and transit improvements, including dedicated bus lanes to improve travel speeds and enhanced bus stops with improved shelters, wayfinding, and streetscaping to improve the passenger experience. The goal of <i>North Avenue Rising</i> is to support economic revitalization along the corridor through increased mobility, and to broaden access for residents of the corridor to economic opportunity throughout Baltimore.
Project Cost	\$27.3 million
TIGER VIII Request	\$14.7 million
Other Source(s) and Amounts	\$10.0 million – Maryland Department of Transportation \$1.0 million – City of Baltimore \$1.6 million – Federal Highway Administration Total: \$12.6 million
NEPA Status	Documented Categorical Exclusion initiated in April 2016 and expected to be completed January 2017
Completion Date	2020
Benefit-Cost Analysis Results	Based on the BCA, <i>North Avenue Rising</i> is estimated to achieve a 1.16 ratio of benefits to costs at a 7 percent discount rate, and a 2.17 benefit cost ratio at a 3 percent discount rate.

Table of Contents

1. PROJECT DESCRIPTION	1
2. PROJECT LOCATION	4
2.1 Introduction to North Avenue	4
2.2 North Avenue Assets	6
3. PROJECT PARTIES	9
4. GRANT FUNDS AND SOURCES/USES OF PROJECT FUNDS	10
4.1. Capital Sources of Funds	10
4.2. Capital Uses of Funds	10
4.3. Summary of Operating Sources and Uses	13
5. SELECTION CRITERIA.....	14
5.1. Primary Criteria.....	14
5.1.1 Economic Competitiveness	14
5.1.2 Quality of Life	18
5.1.3 Safety	23
5.1.4 State of Good Repair	24
5.1.5 Environmental Sustainability	25
5.2. Secondary Criteria.....	25
5.2.1 Innovation.....	25
5.2.2 Partnership.....	26
6. BCA RESULTS.....	27
7. PROJECT READINESS	27
7.1. Technical Feasibility.....	27
7.2. Financial Feasibility	28
7.3. Project Schedule	28
7.4. Required Approvals.....	28
7.5. Assessment of Risks and Mitigation Strategies	30
8. FEDERAL WAGE RATE CERTIFICATION	30
APPENDICES	
Appendix A: Letters of Support	
Appendix B: North Avenue Rising - Dedicated Lanes - Ladders of Opportunity Connectivity Analysis	
Appendix C: Baltimore Development Corporation – The Economic Impact of the North Avenue Rising Proposed Infrastructure Improvements	
Appendix D: Benefit Cost Analysis	



1. PROJECT DESCRIPTION

North Avenue plays a vital role in Baltimore as a corridor that connects neighborhoods and institutions across the City. One of the few east-west roadways that span the Jones Falls Expressway, North Avenue is an important corridor for the local economy. The avenue connects the Maryland Transit Administration's (MTA's) Metro Subway and Light Rail lines and is traversed by Baltimore's second-busiest bus line, carrying nearly 4 million passengers annually – a figure that is expected to grow as the MTA implements a new *BaltimoreLink* bus network. North Avenue is also a designated truck route and serves as US Route 1 through Baltimore City.

Over the past several decades, North Avenue and the communities that surround it have suffered from economic disinvestment. Today the corridor is characterized by a mixture of vacant residential and commercial properties and deteriorating sidewalk and roadway infrastructure, but it is also home to longstanding institutions such as Coppin State University and an emerging arts district that encompasses the Maryland Institute College of Art. The corridor has a rich cultural history worthy of celebration, and beneath a surface of disrepair it brims with potential. The City of Baltimore and the

surrounding communities have come together with a common goal to revitalize the corridor to its full potential.

Sponsored by the MTA and the City of Baltimore, the *North Avenue Rising* project is a unique suite of proposed transportation investments intended to improve corridor and regional mobility and leverage these transportation improvements with other State, City, and private development initiatives to revitalize the surrounding area. As shown in Figure 1, *North Avenue Rising* includes dedicated bus lanes, enhanced bus stops, accessibility improvements to the Penn-North Metro Subway station, improved crosswalks, bike boulevards and lanes, and needed intersection improvements and roadway repaving throughout the corridor.

In addition to showing aspects of *North Avenue Rising*, Figure 1 shows the City's ongoing investment in the East Baltimore streetscape and repaving project (from Aisquith to Washington Streets) and MTA's enhanced *BaltimoreLink* bus stops at Penn-North, Light Rail (MICA-North), Charles/St. Paul (Station North), and Harford (Courthouse). Both investments are being funded outside *North Avenue Rising* but are functionally connected to this effort.

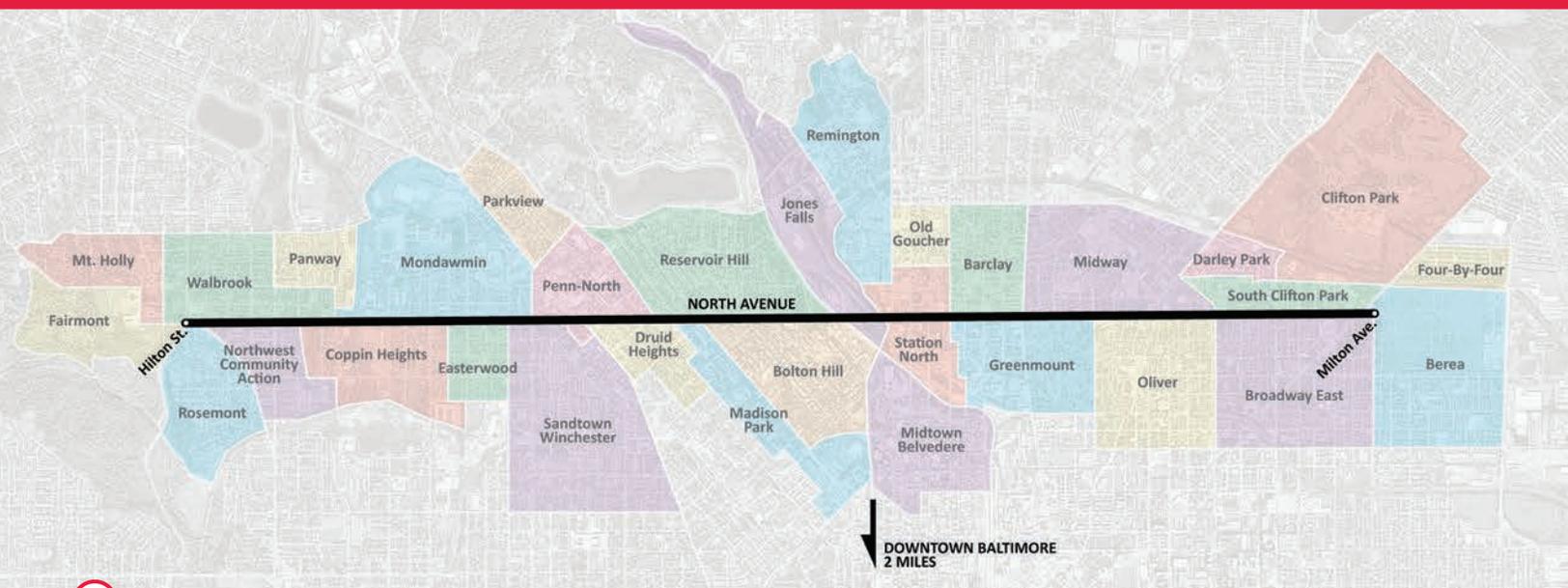
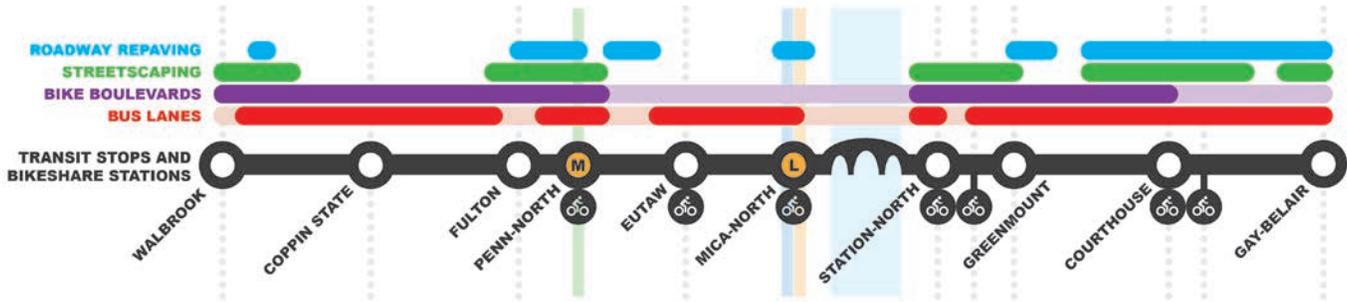


Figure 1: *North Avenue Rising* – Project Elements



More specifically, *North Avenue Rising* features the following transportation improvements:

- **Dedicated bus lanes** to improve transit reliability and increase bus speeds
- Needed **roadway repaving** to maintain a state of good repair
- **Transit signal priority** (TSP) installed at key intersections to reduce delay for buses at intersections and improve on-time performance
- **Enhanced bus stops** at key transfer points, featuring improved shelters, landscaping, and improved signage to assist wayfinding
- **Sidewalk improvements**, ADA-compliant curb ramps, and pedestrian signals at key intersections
- Pedestrian-scale **sidewalk lighting**
- **Bike share stations, bike lanes, and shared bus/bike lanes** where feasible along North Avenue and parallel roadways
- **Access, lighting, and safety improvements** to MTA’s Penn-North Metro Subway station
- **Reconstruction** of the Pennsylvania Avenue/ North Avenue intersection

The *North Avenue Rising* project scope is described in greater detail in the **4. Grant Funds and Sources/Uses of Project Funds** section of this application.

The communities surrounding North Avenue are heavily transit-dependent, with fewer than 47 percent of corridor households having reliable access to an automobile. Moreover, MTA’s Route 13, which serves North Avenue communities, is the system’s second-busiest bus line, carrying over 12,000 riders each weekday. The goal of *North Avenue Rising* is to support economic revitalization along the corridor through increased mobility, and to broaden corridor residents’ access to economic opportunities throughout the Baltimore region.

In fact, North Avenue has already been identified as a key transit corridor in MTA’s \$135 million revision of the citywide transit network. MTA’s *BaltimoreLink* plan will create an interconnected transit system and features a redesign of the entire local and express bus systems via the addition of new, high-frequency, branded, and color-coded “CityLink” bus routes that improve connections to jobs and other transit modes. The new *CityLink* service – as well as other local bus routes - will operate on North Avenue’s dedicated bus lanes and their operation will be enhanced by transit signal priority and passenger amenity investments proposed under the *North Avenue Rising* project.





Meanwhile, the City of Baltimore has been engaged in a number of community and economic development initiatives along North Avenue. Following a streetscape planning effort for the east side of North Avenue – which is currently under construction – the Baltimore City Department of Transportation (BCDOT) partnered with the Neighborhood Design Center to develop a Streetscape Master Plan for West North Avenue. The planning process included extensive public engagement to ensure that the community’s vision was captured, resulting in a master plan which recommends many of the transit, bicycle, and pedestrian improvements that comprise *North Avenue Rising*.

Earlier this year, Baltimore City also evaluated investment opportunities under its Leveraging Investments in Neighborhood Corridors (LINCS) program. Along North Avenue, the effort identified general maintenance needs, improvements related to Safe Routes to School, and programmed bicycle facilities. BCDOT further participated in an Urban Land Institute Technical Assistance

Panel for Pennsylvania and North Avenues, which identified economic development opportunities and transportation investments aimed at maximizing economic potential.

We believe that between Maryland’s commitment to improved transit throughout Baltimore and the City’s targeted investments along North Avenue, the *North Avenue Rising* project creates yet another “Ladder of Opportunity” for this disadvantaged community.



BALTIMORE LINK

BaltimoreLink is a multi-phase plan to redesign the bus network and create a unified transit system by restructuring existing MTA modes as *LocalLink* (Local Bus), *Light RailLink*, *Metro SubwayLink*, and *MobilityLink*. Other key elements of *BaltimoreLink* include dedicated bus lanes, transit facilities, and transit signal priority. A major component of the *BaltimoreLink* system is

CityLink: new, high-frequency, color-coded bus lines that will improve reliability and better connect riders to *Light RailLink*, *Metro SubwayLink*, MARC Train, Commuter Bus, Amtrak, and other services in the Baltimore region.

In Baltimore, *CityLink* lines will run every 10 minutes during peak hours and every 15 minutes midday. *CityLink* buses will be specially branded by color and will offer easy-to-read signage and maps to make the system user-friendly. Once implemented, riders on the new *CityLink*, *Light RailLink*, and *Metro SubwayLink* system will be able to get from any stop to any other stop on these lines with only one transfer.

2. PROJECT LOCATION

North Avenue is one of the City of Baltimore’s major central arteries, connecting the City’s northern, southern, eastern, and western communities. Until 1888, North Avenue was the northern boundary of the City. It passes through more than a dozen Baltimore neighborhoods over its five mile length – from Fairmount and Coppin Heights in the west to Oliver and South Clifton Park in the east. North Avenue lies entirely within the Seventh Congressional District. Figure 4 shows the location of the proposed TIGER project alongside key corridor destinations.

2.1 Introduction to North Avenue

The proposed *North Avenue Rising* project is located along North Avenue and parallel roadways in an area of central Baltimore bounded by Hilton Street on the west and Milton Avenue on the east. North Avenue is one of the most heavily-trafficked transportation corridors in the City, serving as a major truck route for the movement of goods into, out of, and through the City. In addition to the Route No. 13 bus – which will be upgraded to a *CityLink* route as the MTA rolls out its *BaltimoreLink* plan – portions of five other MTA bus routes traverse parts of North Avenue, while nineteen north-south bus routes intersect it, providing transfer opportunities for travel throughout the City and region. The MTA’s Penn-North Metro Subway Station sits at the critical intersection of Pennsylvania and North Avenues, and a Light Rail station is located between the Jones Falls Expressway (Interstate 83) and the North Avenue bridge over the Jones Falls waterway. Three blocks south of North Avenue lies Baltimore’s Pennsylvania Station, an important multimodal hub serving Amtrak, MARC Train, six MTA bus routes, MTA Light Rail, the Charm City Circulator, intercity Bolt buses, and several college and university shuttles.

During the first half of the 20th Century, North Avenue was a two-lane boulevard surrounded by a mixture of commercial and residential activity. It was home to well-maintained rowhomes, bustling department stores, markets, bowling alleys, and majestic theatres. The commercial section of Pennsylvania Avenue stretching south from North Avenue was the entertainment district for Baltimore’s African American community with a jazz scene second only to New York’s Harlem. Redlining, prevailing lending practices,

and shifts in the City’s industrial economy led to a long period of population decline and disinvestment in Baltimore. As many City residents migrated to suburban housing and jobs, so too did their buying power that supported retail, services, entertainment and residential life along North Avenue. North Avenue deeply felt the effects of these changes and has yet to regain its economic strength.

Figure 2: West North Avenue and North Charles Street circa 1940



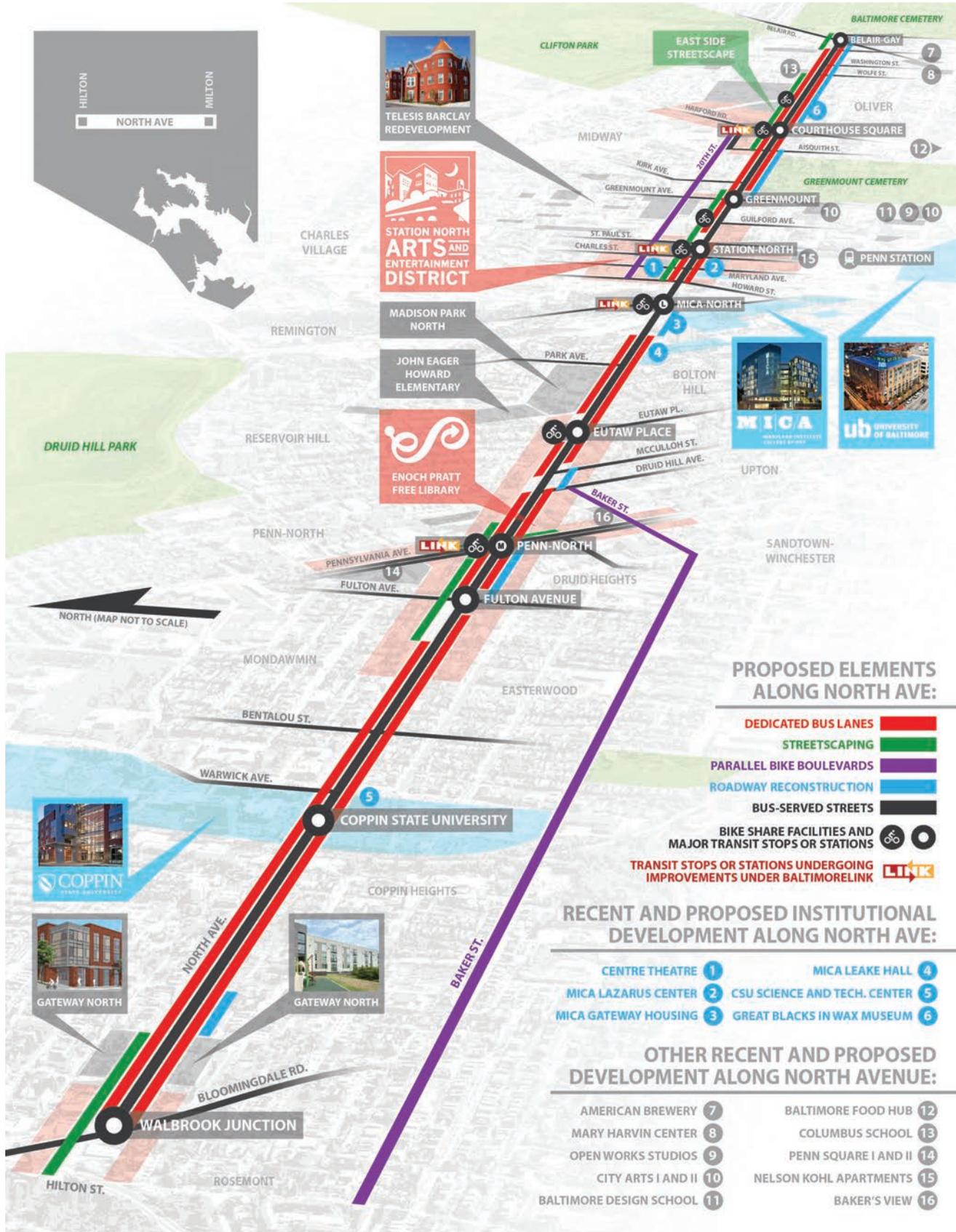
Source: *Kniesche Collection Maryland Historical Society*

Figure 3: Existing conditions at North Avenue and Woodbrook Avenue



NORTH AVENUE RISING

Figure 4: Project elements and other assets along North Avenue



When widened from a two-lane to a six-lane road, many businesses and homes were destroyed or relocated, changing the character of the once main street-like area. Civil unrest erupted after the death of Dr. Martin Luther King, Jr. in 1968 resulting in fires, looting, and extensive property damage throughout East and West Baltimore. Significant portions of North Avenue were affected by the damage and in many ways the corridor has never truly recovered. Residents within a quarter-mile of North Avenue have a median household income just over \$28,000 – 1/3 lower than that of the City as a whole. Over 35 percent of housing units in the corridor are vacant – twice the citywide rate – while homeownership on and around North Avenue is less than half the rate of Baltimore as a whole.

The project area is predominately African American (88 percent), compared to the City’s more racially diverse population of 63 percent African American, 30 percent white, and 7 percent who identify as another race. Perhaps in the most telling statistic of all, while Baltimore struggles with a seven percent unemployment rate – two percent higher than the national average – a staggering 16.5 percent of the workforce along the *North Avenue Rising* corridor is unemployed.

In April 2015, the deeply-rooted socioeconomic disparities found in communities along North Avenue – as well as in portions of many other American cities – were brought to national attention. A night of unrest resulted in damage to corridor businesses and other property. However, there is another story that began to emerge following the unrest displayed in national media. That story is one of a resilient, engaged community working with City and State government to help North Avenue rise again.

Table 1: Selected demographics of the project area and Baltimore City

	North Avenue*	Baltimore City
Housing Characteristics		
Vacant Housing Units	35.1%	17.5%
Owner Occupied Housing	22.5%	46.2%
Racial Demographics		
Black	88.0%	63.0%
White	8.4%	30.0%
Identified as “Other”	3.7%	7.0%
Age		
Under 20 yrs old	25.7%	24.0%
20-64 yrs old	61.5%	64.0%
65 yrs old and older	12.8%	12.0%
Education		
No High School or GED	24.7%	19.8%
Employment		
Employed	83.5%	93.0%
Unemployed	16.5%	7.0%
Not in the Labor Force	57.2%	37.0%
Median Income	\$28,087	\$42,266

* The measurements cover a 1/4 mile area around North Avenue

2.2 North Avenue Assets

The intersection of Pennsylvania and North Avenues (Penn North) is the heart of the corridor and a hub of transportation activity. Approximately 22,000 vehicles and 15,000 bus riders pass through this intersection each weekday. The MTA’s Penn-North Metro Subway station sees 2,500 boardings each day. The plaza enclosing the northern Metro Subway entrance is always buzzing, but this site is also the location of the CVS pharmacy that was a flashpoint of the 2015 unrest. The CVS has since been rebuilt and continues to serve the community, a testament to the City’s and surrounding neighborhoods’ commitment to rebirth.

The Enoch Pratt Free Library's Pennsylvania Avenue branch is situated on the southeastern corner of the Penn-North intersection and has served West Baltimore since 1953, just across the street from the historic Arch Social Club. Renovated in 2012, the library serves as an important community gathering point, offering meeting spaces, computer and internet access, career clinics and adult learning programs, as well as free after-school programs and tutoring for children and teens. Appreciating its importance to the community, the *North Avenue Rising* project features important investments to this intersection including traffic and pedestrian signal reconstruction, bike share station installation, upgraded street and station lighting, and a major overhaul of Metro Subway station elevators and escalators to improve access between the street and underground train platforms.

From Milton Avenue to Hilton Street, the North Avenue corridor features a number of other important community resources. These longstanding community anchors – and other community assets – will be described in greater detail in the **5.1.1. Economic Competitiveness** section of this application, but for orientation are identified in Figure 4 and described briefly here, moving from west to east:

- **Coppin State University (CSU)** is a historically black university within the University System of Maryland founded in 1900. The university is located on West North Avenue and has a student body of approximately 3,300.
- **Maryland Institute College of Art (MICA)** is a world renowned art college comprised of buildings directly on and within a quarter-mile of North Avenue near the Jones Falls Expressway. MICA has approximately 2,200 students.
- The **University of Baltimore (UB)** which is located between MICA and Baltimore's Penn Station just south of North Avenue, enrolls over 6,000 students each year in undergraduate, graduate, and law programs.

- **Baltimore Penn Station** is the City's primary rail station. Located three blocks south of North Avenue, it provides access to Amtrak, MARC, Light Rail, and local and intercity buses.
- The **Station North Arts and Entertainment District (Station North)** was designated an arts and entertainment district by the State of Maryland in 2002. Nestled in between the neighborhoods of Charles North, Greenmount West, and Barclay, Station North is a diverse composition of artist live-work spaces, galleries, rowhomes, and businesses.
- The **Great Blacks in Wax Museum** receives 300,000 visitors each year from across the nation, serving as the primary tourist destination on the east side of North Avenue.

Additionally, several affordable and mixed-income residential developments within a half-mile of North Avenue are under construction or in the planning phase:

- **Madison Park North Apartments** is a shuttered former Department of Housing and Urban Development (HUD) Section 8 apartment complex on eight acres facing North Avenue. This site is slated for major redevelopment into a high-density, mixed-use project, and is located between the Metro Subway and Light Rail stations on North Avenue
- The **Barclay/Old Goucher Telesis Redevelopment** is an \$85 million redevelopment plan in East Baltimore that will provide over 300 mixed-income and mixed-tenure units through a mix of infill development and rehabilitation.
- **City Arts II** is a planned \$20 million project that will provide new housing and gallery space for artists. City Arts I, which was completed in 2010, was the City's first apartment building designed and managed specifically for artists.

- The beautiful **Columbus School** sat vacant for almost ten years until developers invested \$13 million in its rehabilitation (Figure 5). The building reopened as a 50-unit affordable housing development in 2014.
- The **Mary Harvin Center** is a \$16 million 61-unit affordable senior housing development built in partnership with a private developer and the Southern Baptist Church.
- **North Avenue Gateway** is a \$14 million investment completed in 2014 featuring 64 affordable units and a clinic operated by Coppin State University. A second phase across the street is expected to break ground in the next several months.

These developments and other residential and commercial developments are identified in Figure 4 and are described further in **Section 5.1.2 Quality of Life**.

Recent City initiatives to promote the development and revitalization of North Avenue neighborhoods have been undertaken in collaboration with a wide variety of nonprofits, community groups, and local leaders. Many of these initiatives have produced plans which call for increased transit access, bike

and pedestrian improvements, and “complete street” strategies to improve safety and promote economic development – all objectives shared with *North Avenue Rising*. These plans will be described in greater detail in **Sections 5.1 and 5.2**.

Figure 5: Renovated Columbus School serves as attractive affordable housing



Existing Plans and Initiatives

- Penn North Technical Assistance Panel (TAP) (2016)
- Project C.O.R.E (2016)
- Baltimore City Bike Master Plan (2015)
- Greenmount Avenue Technical Assistance Panel (TAP) (2015)
- One Baltimore Initiative (2015)
- West North Avenue Streetscape Conceptual Master Plan (2015)
- The Baltimore City Anchor Plan (2014)
- Greater Rosemont and Mondawmin Area Master Plan (2012)
- The Charles North Vision Plan (2008)
- Barclay/Old Goucher Redevelopment Plan (2007)

“PNCA is encouraged that this effort builds upon existing community plans.”

– **Annie Hall**,
President of Penn-North
Community Association

3. PROJECT PARTIES

North Avenue Rising features the unprecedented commitment of multiple parties coming together to enact positive change in the North Avenue corridor. These project partners are identified and described here; see the **5.2.2. Partnership** section of this application for details.



The **Maryland Transit Administration (MTA)** is a transportation business unit of the Maryland Department of Transportation (MDOT) and one of the largest multimodal transit systems in the United States. MTA operates local, express, and commuter bus service, Light Rail, Metro Subway, Maryland Area Regional Commuter (MARC) Train, and a comprehensive paratransit (Mobility) system. MTA also manages the taxi access system and directs funding and statewide assistance to Locally Operated Transit Systems (LOTS) in 26 Maryland jurisdictions. As the lead agency for the TIGER VIII grant, MTA will be responsible for grant implementation, including day-to-day management, coordination among project partners, quality control, and project evaluation.



Baltimore City is a co-sponsor of *North Avenue Rising*, and BCDOT will implement the roadway, bicycle, and pedestrian components of the project. With 622,000 residents, the City of Baltimore is the largest City in Maryland and the 26th most populous in the United States. The City is leading local efforts to revitalize North Avenue to support the economic competitiveness of neighborhoods along the corridor and to improve the quality of life for Baltimore residents.

North Avenue Rising is supported by a number of other City and corridor agencies, institutions, and stakeholders as presented in Table 2. These agencies have written letters of support for the project, which can be found in **Appendix A**.

Table 2: North Avenue Rising project partners

Applicants	Community Organizations	Advocacy Groups
MD Dept. of Transportation	The Barclay, Midway, Old Goucher Coalition	Central MD Transportation Alliance
Baltimore City	Central Baltimore Partnership	Transit Choices
Government Agencies	Charles Street Development Corp.	Anchor Institutions
Baltimore Regional Transportation Board	Coldstream Homestead Montebello C. C.	Coppin State University
MD Dept. of Housing & Comm. Development	Coppin Heights CDC	Johns Hopkins University
MD Dept. of Planning	Darley Park Community Association	Maryland Institute College of Art
Baltimore City Health Dept.	Druid Heights CDC	Private Developers
Elected Officials	East North Avenue CDC	Jubilee Baltimore, Inc
US Senator Barbara A. Mikulski	Greater Greenmount Comm. Assoc.	Schwaber Holdings
US Senator Benjamin L. Cardin	Greater Mondawmin Coordinating Council	Seawall Development Company
Rep. Elijah E. Cummings, 7th Dist.	The Historic Marble Hill Comm. Assoc.	Telesis Corporation
Rep. C.A. Dutch Ruppersberger, 2nd Dist.	Innovation Village Baltimore	Other
Rep. John P. Sarbanes, 3rd Dist.	Madison Park Improvement Assoc.	Abell Foundation
MD Sen. Shirley Nathan-Pulliam, Dist. 44	Mount Royal CDC	Baltimore Neigh. Indicators Alliance
MD Del. Dana Stein, Dist. 11	The New Broadway East Comm. Assoc.	CivicWorks
MD Del. Mary L. Washington, Dist. 43	The New South Clifton Park Comm. Assoc.	Greater Baltimore Committee
MD Del. Cory McCray, Dist. 45	Penn-North Community Association	MD Film Festival
	Station North Arts and Entertainment Dist.	The National Center for Smart Growth
	Upton Planning Committee, Inc	The National Great Blacks in Wax Museum
		The Neighborhood Design Center

4. GRANT FUNDS AND SOURCES/USES OF PROJECT FUNDS

4.1. Capital Sources of Funds

The MTA and Baltimore City respectfully request \$14.7 million in TIGER VIII funding from USDOT to match \$12.6 million in State, local, and other federal funding to implement the *North Avenue Rising* project. The proposed funding breakdown is provided in Table 3 and Figure 6.

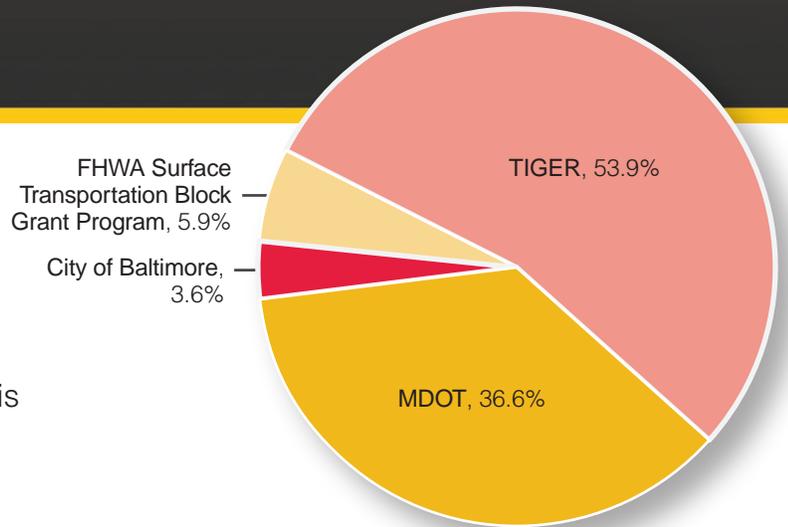


Table 3: *North Avenue Rising* capital sources

Source	Amount	Share (%)
Maryland Department of Transportation	10,000,000	36.6
City of Baltimore	1,000,000	3.6
Total Non-Federal	11,000,000	40.2
FHWA Surface Transportation Block Grant Program	1,600,000	5.9
TIGER	14,730,000	53.9
Total Federal	16,330,000	59.8
TOTAL	\$ 27,330,000	

Figure 6: North Avenue Project funding breakdown

As the capital finance plan indicates, over 40 percent of project costs are State and local commitments to the project. These commitments are confirmed by the project’s funding partners’ letters of support. This investment in *North Avenue Rising* complements over \$13 million in BCDOT

infrastructure investments in the corridor in the past year, while the State’s Department of Community and Housing Development (DCHD) has invested over \$14 million in neighborhood revitalization projects through six state-run programs in the past five years.



4.2. Capital Uses of Funds

As introduced in **1. Project Description**, *North Avenue Rising* features a set of complementary multimodal investments. Table 4 presents the estimated capital cost for each project component. More specifically, *North Avenue Rising* constitutes the following project elements:

Table 4: Cost per project element

North Avenue Rising Project Element	Cost (\$)
Dedicated Bus Lanes	3,300,000
Traffic Signal Priority	1,960,000
Repaving	3,380,000
Penn North Intersection Improvements	2,000,000
Enhanced Bus Stops	2,210,000
Penn-North Station Improvements	4,915,000
Bike Lanes	425,000
Bike Share Equipment	240,000
Streetscaping	8,900,000
TOTAL	27,330,000

Dedicated Bus Lanes – *North Avenue Rising* will implement over seven directional miles of 11 to 15 foot bus lanes distinguished by a two-inch thick resurfacing with red-colored hot mix asphalt.

By using a colored asphalt treatment instead of a painted lane, MTA and Baltimore City are embracing a corridor-long investment with maximum longevity and reduced maintenance requirements (Figure 7). The width of the dedicated lanes will be maximized throughout the corridor to permit safe shared use with bicycles and separate bike lanes where feasible. Other features include bus lane pavement markings at appropriate intervals and the removal and replacement of existing signage to identify the dedicated bus lane and bus/bike shared lane accommodations.

Traffic Signal Prioritization – The project includes the purchase and installation of 40 Siemens Next Phase intersection controllers at every North Avenue intersection. 80 percent of the intersections will be further equipped with TSP equipment, allowing a few critical seconds to be added to the end or beginning of a phase to allow buses to travel through the corridor with less delay.

Roadway Repavement – Improvements will comprise the resurfacing of all North Avenue roadway segments identified in “mediocre” condition as measured by BCDOT’s pavement management system (approximately three-quarter miles), and the reconstruction of all segments in “poor” condition (approximately one-half mile).

Figure 7: Proposed North Avenue cross-section with dedicated bus lanes in front of Madison Park North



Pennsylvania and North Avenue Intersection Improvements

– “Penn and North” is the heart of the corridor and its busiest intersection. Improvements include pavement resurfacing from North Carey Street to Pennsylvania Avenue, enhanced crosswalks and pedestrian bump-outs at Pennsylvania Avenue and West North Avenue with landscaping and ADA-compliant curb ramps, traffic and signal reconstruction at Pennsylvania Avenue and West North Avenue, LED pedestrian lighting on West North Avenue from North Carey Street to Woodbrook Avenue, and new signage.

Enhanced Bus Stops – *North Avenue Rising*

will implement six enhanced bus stops, providing passengers with improved, weather-protected, and safe waiting areas. Each of these stops will be located at critical transfer and activity nodes within the corridor. Enhanced Bus Stops will be located at the intersections of North Avenue with Bloomingdale Road, Coppin State University, Fulton Avenue, Eutaw Place, Greenmount Avenue, and Belair Road to ensure good connections to intersecting *CityLink* and local bus services. These stops will include landscaping, street furniture, new signage and shelters, and other amenities such as real-time bus arrival information where possible.

Furthermore, investments under *BaltimoreLink* will include the improvement of bus stops at the Penn-North Metro Subway station, at the North Avenue Light Rail station, and at the Charles/St. Paul Streets and the Harford Road/Courthouse Triangle intersections to facilitate connections to forthcoming *CityLink* bus routes. The investments at these four locations will be separately funded and will be implemented sooner than locations funded through the TIGER grant, but are nevertheless part of a comprehensive set of improvements along North Avenue.

Penn-North Metro Subway Station Improvements

– As one of the Metro Subway’s oldest stations, Penn-North has fallen into a state of disrepair. *North Avenue Rising* includes (1) a major overhaul of the station’s often-disabled elevators and escalators to provide more reliable service to passengers, (2) demolition of the station’s “storefront” – a metal structure which obstructs the floor-to-ceiling

windows that wrap around the station head house – to improve pedestrian visibility, (3) installation of artwork in the mezzanine level to reflect the character of the historic Penn-North community, similar to artwork at the Johns Hopkins Hospital and Mondawmin Metro Subway stations, and (4) replacement of lighting at the platform, mezzanine, and street levels and emergency egress points with energy efficient fixtures. The lighting will enhance the safety and security of the facility, create a more inviting external and internal station environment, and reduce energy consumption. A rendering of proposed upgrades is shown in Figure 8.

Bicycle Facilities – The project would implement three miles of bicycle boulevards on Baker Street and 20th Street, both of which parallel North Avenue on the west and east sides of the corridor. Based on a “Level of Traffic Stress” analysis of existing and forecast traffic volumes and speeds, these streets were determined to be good candidates for modest bike boulevard treatments because they maintain east-west connections between neighborhoods and destinations along the corridor and provide access to the Jones Falls Trail, the Maryland Avenue Cycle Track, and the Guilford Avenue Bike Boulevard. Bike boulevard treatment would include sharrows, signage, contraflow bike lanes, and minor traffic calming treatments at intersections.

North Avenue Rising will also accelerate Phase II of the City’s new bike share program (Figure 9). Six new bike share stations and associated bike fleets will complement one location already anticipated under Phase I of the program in late 2016. Increasing the number of stations available to residents and commuters will improve the corridor’s bicycling potential as well as the effectiveness of the entire bike share system. Baltimore City is working diligently to lower barriers to receipt of bike share passes, including implementing pay-by-cash membership options, discounted monthly memberships, and providing discounted or free helmets with memberships. The City is also at the forefront of bike share technology, launching the largest electric pedal-assist bike share fleet in the western hemisphere. These “ped-elec” bicycles

Figure 8: Enhanced Bus Stop at the Penn-North Metro Subway Station



lower barriers to using bike share bikes and are twice as likely to convert car trips to bike share trips compared to conventional bike share equipment. MTA is also working closely with the City’s bike share vendor/operator to ensure compatibility between the two systems’ radio frequency identification (RFID) fare payment systems and to add bike share at all rail stations located in the Phase I area. The combined efforts of the MTA and the City will maximize interoperability of bike share and transit.

Streetscaping – Improvements will consist of full streetscape enhancements for targeted blocks along North Avenue, selected to maximize benefits around new development, neighborhood commercial areas, Enhanced Bus Stops, and locations with high pedestrian crash rates. Improvements include highly visible crosswalks, ADA-compliant curb ramps, pedestrian-scaled lighting, accessible pedestrian signals, full traffic signal reconstruction, and the addition of street trees and other plantings. At some locations streetscaping will incorporate curb extensions, thereby reducing crossing distance for pedestrians, eliminating the need for buses to pull in and out of the travel lane, and providing more space for bus stop amenities.

4.3. Summary of Operating Sources and Uses

North Avenue Rising is not expected to result in any additional operating costs for either the MTA or the City, which will be responsible for maintaining

project assets in a state of good repair within their annual O&M budgets. In fact, bus operations in dedicated and repaved lanes would be expected to marginally reduce wear and tear on vehicles and thus result in modest maintenance cost savings, while new infrastructure associated with the Penn-North station and intersection improvements, North Avenue repaving, and sidewalk enhancements will recycle the useful life of these assets, reducing their maintenance needs. Additionally, bus operations in dedicated lanes and with transit signal priority will reduce bus travel times in the corridor and, therefore, operating costs. As described in **Section 5.1.5. Environmental Sustainability**, installation of new energy-efficient LED lighting at the Penn-North Metro Subway station is expected to yield \$104,000 in annual operating savings.

Figure 9: Similar to proposed bike share facilities



“For all these reasons it makes perfect sense to invest in infrastructure to make North Avenue work better for transit, walking and bicycling.”

– **Brian O’Malley**,
President & CEO of Central Maryland
Transportation Alliance

5. SELECTION CRITERIA

5.1. Primary Criteria

As demonstrated below, *North Avenue Rising* is expected to leverage ongoing Baltimore City initiatives and investments in corridor neighborhoods to improve their **economic competitiveness** and the **quality of life** of their residents. In addition, the proposed project results in positive **safety, state of good repair,** and **sustainability** outcomes. Finally, *North Avenue Rising* demonstrates a commitment to **innovation** in technology and public involvement and to the building of multi-institutional **partnerships** to realize creative solutions to mobility and economic challenges.

5.1.1 Economic Competitiveness

According to a Dedicated Lanes Ladders of Opportunity Analysis that was conducted, the dedicated lanes included in the *North Avenue Rising* project will substantially and equitably increase access to job opportunities and essential services for residents along the corridor as well as for Greater Baltimore. Faster and more reliable bus service will provide more *Ladders of Opportunity* to jobs and services for all residents, especially disadvantaged populations. The corridor is a majority minority area in which nearly 90 percent of the population is non-white, and roughly a third of households live below the poverty line.

The most pronounced effects of improved transit operations will be felt in the farthest western and eastern reaches of the corridor where minority and low-income populations are most concentrated, providing a 4.8 percent corridor-wide increase in access to jobs for minorities compared to 3.8 percent for whites. That equates to roughly 7,500 additional jobs reachable for the average minority resident in the corridor. For households living in poverty, a similar increase in job access is expected. These benefits extend far beyond the North Avenue vicinity due to rail and bus connections that provide access throughout the region. Additional details can be found in **Appendix B.**

Moreover, the Baltimore Development Corporation (BDC) has estimated that the construction of *North Avenue Rising* will have the following impacts on Baltimore City:

- The \$27.3 million in construction spending will increase economic activity in the City by \$46.7 million and create an average of 58 jobs over the construction period, earning a total of \$18.8 million in salaries and wages.
- State, local, and federal tax revenues will increase by \$4.6 million over the multi-year construction period.

BDC's analysis can be found in **Appendix C.**

Enriching the character of North Avenue while improving transit travel time, reliability, and mobility choices for corridor residents, *North Avenue Rising* is a transportation investment which will yield substantial economic returns, as described below and in **Section 6 BCA Results.**

5.1.1.1 Economic Development Initiatives

Much of the corridor has already been the focal point of City and community-wide initiatives to improve economic conditions. The *North Avenue Rising* scope emerged from the recommendations of several planning efforts and aligns with what project stakeholders have identified as the most critical items needed to reshape the corridor. Two particular initiatives of note include:

Leveraging Investments in Neighborhood

Corridors (LINCS) – In July 2015 Mayor Rawlings-Blake announced the LINCS strategy to revitalize five of the City's most highly-trafficked corridors that serve as gateways to a wide range of neighborhoods and communities. LINCS intends to improve both the aesthetics and the economic vitality of the selected corridors. North Avenue between Greenmount Avenue and Belair Road has been selected as a LINCS



priority corridor. Two other LINCS corridors – segments on Greenmount Avenue and on Pennsylvania Avenue – cross North Avenue at key intersections. Each LINCS corridor has been assigned a City Planning Department technical team consisting of a design planner, transportation planner, commercial market analyst, and a housing expert to work alongside community partners to develop and implement strategic actions to promote economic development along the corridor. The transit signal priority, Enhanced Bus Stops, and sidewalk and bike lane elements of *North Avenue Rising* directly address the action items identified in the LINCS implementation strategy.

“*North Avenue Rising* will improve transportation and job opportunities across the entire community by attracting private investment in impactful, high density, transit-oriented development.”

– **Ronald J. Daniels,**
President of Johns Hopkins University

Urban Land Institute (ULI) Penn-North Technical Assistance Panel (TAP)

– In October 2015 as part of the LINCS effort, ULI assembled an expert panel to work with community stakeholders to create a series of strategic solutions that would (1) promote economic development by bolstering retail and development activity, (2) focus on improved transportation connections, (3) enhance zoning and land use, and (4) “prioritize the people,” that is, celebrate the identity of the Penn-North community. *North Avenue Rising* will address TAP’s goals by creating stronger pedestrian links to Reservoir Hill, located north of North Avenue, and to Druid Heights, located just to the south. Additionally, TAP identified the Penn-North intersection as a prime location for future investment. Community engagement during TAP workshops called for improvements to the Penn-North Metro Subway station, improved transit options to connect residents to jobs, and improved lighting at bus stops, all of which *North Avenue Rising* will provide.

5.1.1.2 Anchor Institutions

North Avenue features several key anchor institutions. Leveraging the existing investments these institutions have made – and harnessing the creativity and passion their leaders share for the surrounding communities – has been an important objective of the *North Avenue Rising* project.

- A major anchor institution on the western end of the corridor is **Coppin State University (CSU)**. CSU is a historically black public university located on a 38-acre site spanning the northern and southern sides of West North Avenue. CSU has a body of 3,300 students and employs over 800 faculty and staff. In 2015 the school completed an \$80 million investment in its new Science and Technology Center (Figure 10), which resulted in a southward expansion of the campus and required enhanced pedestrian accessibility across North Avenue for students and the campus’s adjacent neighborhoods alike (Mondawmin and Coppin Heights). A *North Avenue Rising* Enhanced Bus Stop will be located directly in front of the Science and Technology Center. Before its construction began, CSU partnered with the Mayor’s Office of Employment Development (MOED) to promote employment opportunities for corridor residents, including a campus job fair to connect job seekers with construction jobs. As a result, the project greatly exceeded the City’s Minority and Women’s Business Enterprise participation targets.

Figure 10: Coppin State University Science and Technology Center on North Avenue

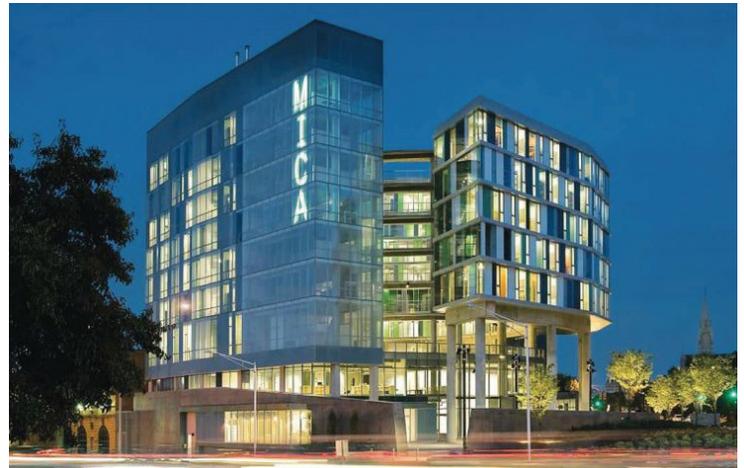


HUD also recognized CSU as a best practices leader for its work with the Coppin Heights Community Development Corporation (CHCDC). Coppin State University partners with CHCDC to ensure the full potential of surrounding neighborhoods is realized. CSU also participates in the City's Live Near Your Work program. CSU has allocated funds to encourage employees to purchase homes and reside in the communities adjacent to the campus, which will directly benefit from the improvements under *North Avenue Rising*.

- The **Maryland Institute College of Art (MICA)** is the oldest continuously degree-granting college of art in the nation and has been recognized as one of the country's leading art institutes, attracting nearly 2,200 students each year from 48 states and 54 countries. According to the Mayor's Anchor Institution Plan, MICA employs close to 900 faculty and staff, with a third of its employees residing within city limits. MICA's campus comprises numerous buildings in the Bolton Hill neighborhood, which borders North Avenue to the south, and the school's leadership and active student body serve as a catalyst for change within the emerging arts district. MICA students bring unique perspectives to North Avenue by harnessing their creativity and diversity to weave aspects of global cultures into the deeply-rooted artistic history of Baltimore.

Between 2008 and 2014, MICA invested over \$60 million along North Avenue, including \$32 million for the Gateway student housing development (Figure 11), \$18.5 million for additional student housing at Commons II, and \$20 million to transform a 1915 North Avenue warehouse into the Fred Lazarus IV Center. The Center (Figure 12) fronts North Avenue and has become a gathering place for residents and students alike. An Enhanced Bus Stop will be located adjacent to the MICA campus.

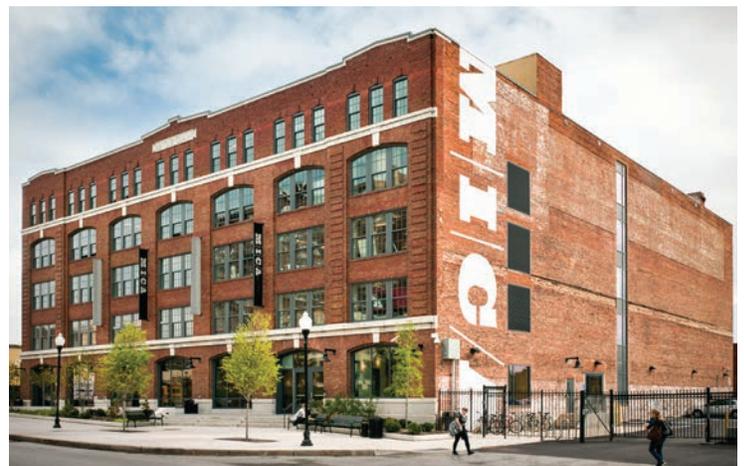
Figure 11: MICA's "Gateway" student housing along North Avenue



"The North Avenue Rising project currently underway represents the best efforts of neighbors and experts acting in good faith to improve streetscaping, connect neighbors to quality transportation, rectify ongoing pavement concerns, encourage multi-modal transportation, and to tie in the inertia of local development groups with a holistic strategy to improve the quality of life of the people who call this area home."

– **Brent Pertusio**,
Madison President of Madison Park Improvement Association

Figure 12: MICA's rehabilitated 1915 warehouse turned arts center facing North Avenue





- The **University of Baltimore (UB)** was founded in 1925 as a private institution but was later consolidated into the University of Maryland system. Located one-quarter mile south of North Avenue, UB has over 600 employees and a student body of 7,000, with 1,000 living within two miles of the campus. According to the mayor's 2014 Anchor Institution Plan, UB has an estimated annual economic impact of \$416 million on the region. UB's contributions to Baltimore City Public Schools in the Mount Royal neighborhood are described further in **Section 5.1.2 Quality of Life**.

- **Johns Hopkins University (JHU)**'s Homewood campus is located a mile north of North Avenue. In 2012, however, JHU launched a comprehensive strategy to improve the qualities of life and place in ten neighborhoods, including Charles North, Greenmount West, and Barclay, through which North Avenue passes. Furthermore, JHU recently opened a joint film center with MICA on North Avenue in the Station North Arts and Entertainment District, as discussed in **Section 5.1.2 Quality of Life**.

5.1.1.3 Innovation Village

Baltimore's first innovation district is currently being developed along the west side of North Avenue from Coppin State University east to Howard Street, encompassing all the neighborhoods within this area. The mission of **Innovation Village** is to "strengthen Central West Baltimore economically through entrepreneurship, innovation, and inclusive growth for all." Innovation Village is home to numerous employment hubs such as the Baltimore Center for Green Careers, the Center for Urban Families, LTN Global Communications, and the Job Opportunities Task Force. The task force operates Jumpstart: Baltimore's Premier Construction Training Program, a 14-week construction training program for residents with a high school diploma or GED. Over 70 percent of students are placed in employment opportunities that lead to high wages and apprenticeships.

5.1.1.4 Other

- **Baltimore Food Hub** – This 3.5-acre food ventures campus located four blocks south of North Avenue will provide opportunities for microenterprise, job creation, and community education. The campus will cluster synergistic activities to capitalize on the potential of the food industry. The Food Hub's commercial kitchen will serve as a food incubator for entrepreneurial cooks and provide local workforce training for the food industry. The food hub will create about 200 culinary jobs in the surrounding neighborhoods over three years.
- **Open Works** – This \$10 million creative arts incubator, currently under construction, will support Baltimore's creative economy in the heart of the Station North Arts and Entertainment District (Figure 13). The space will accommodate several hundred visual artists, photographers, graphic designers, sculptors, weavers, fiber artists, fashion designers, and furniture makers. Additionally, it will provide 150 micro-studios for designing, assembling, and finishing products.

Figure 13: Rendering of the Open Works Center under construction in the Station North Arts and Entertainment District



- American Brewery** – Built in 1887, this historic brewery was abandoned in 1973 and fell into disrepair. The majestic structure was restored in 2009 with the help of Sustainable Communities, Historical, Heritage Structure Rehabilitation, and New Market tax credits. The \$30 million rehabilitation (Figure 14) has transformed the surrounding neighborhood. Today the brewery is home to Humanim, a longstanding nonprofit social and human services provider that offers workforce development training to surrounding neighborhoods.

Figure 14: Historic American Brewery after transformation into Humanim's headquarters



5.1.2 Quality of Life

The improvements under *North Avenue Rising* will have a lasting impact on the quality of life for residents in the corridor. As noted in **Section 2.1**, over a third of housing units in the project area are vacant. The following sections describe how *North Avenue Rising* addresses the livability principles set forth by USDOT, HUD, and the Environmental Protection Agency (EPA).

Provide More Affordable and Convenient Transportation Choices

North Avenue has been identified as a key corridor in MTA's *BaltimoreLink* plan, which will create an interconnected and unified transit system. The goal of the plan's *CityLink* bus routes is to allow riders to board transit anywhere on the high-frequency network and reach their destination with no more than a single transfer. *North Avenue Rising* will implement several key *BaltimoreLink* elements necessary to create an improved system. The project will provide the dedicated bus lanes that *CityLink* routes – and other local buses operating on North Avenue – will use. *North Avenue Rising* will also install the transit signal priority necessary for the system to run efficiently and construct the Enhanced Bus Stops necessary to provide passengers with safer and more comfortable waiting environments.

“It is critical to Baltimore’s future that this space become the place where we demonstrate transportation solutions that will work for Baltimore and show the importance of investing in infrastructure to support transit, walking, and bicycling as part of its overall economic revitalization strategy.”

– **Jennifer Goold**,
Executive Director of
The Neighborhood Design Center

In March 2015 the City of Baltimore updated its Bicycle Master Plan; this plan identified priority corridors for bike facilities and North Avenue ranked in the top ten. *North Avenue Rising* will implement facilities both on and parallel to North Avenue to further the development of the citywide bicycle network. The *North Avenue Rising* project area is transected by the Jones Falls Trail (part of the East Coast Greenway), the Guilford Avenue Bike Boulevard, and the future Maryland Avenue/Cathedral Street Cycle Track, the latter of which is projected to start construction in June 2016. These bike facilities provide north-south access through the City, from North Baltimore to downtown.



5.1.2.2 Promotion of Equitable, Affordable, and Mixed-Income Housing

Corridor residents deserve equitable affordable housing, and affordable housing should promote safety, community involvement, and instill a sense of self-worth and ownership among residents. Part of the overall cost of housing is the cost of transportation to and from the housing. *North Avenue Rising* will increase the speed and reliability of transportation to and from the affordable housing along North Avenue, reducing the overall housing and transportation costs for corridor residents. Over the past five years, DHCD has distributed almost \$50 million in multifamily loans and Low Income Housing Tax Credits and raised \$108 million in Tax Credit Equity to fund over \$200 million in project costs for seven multifamily affordable projects within a quarter-mile of – and three others within a half-mile of – North Avenue.

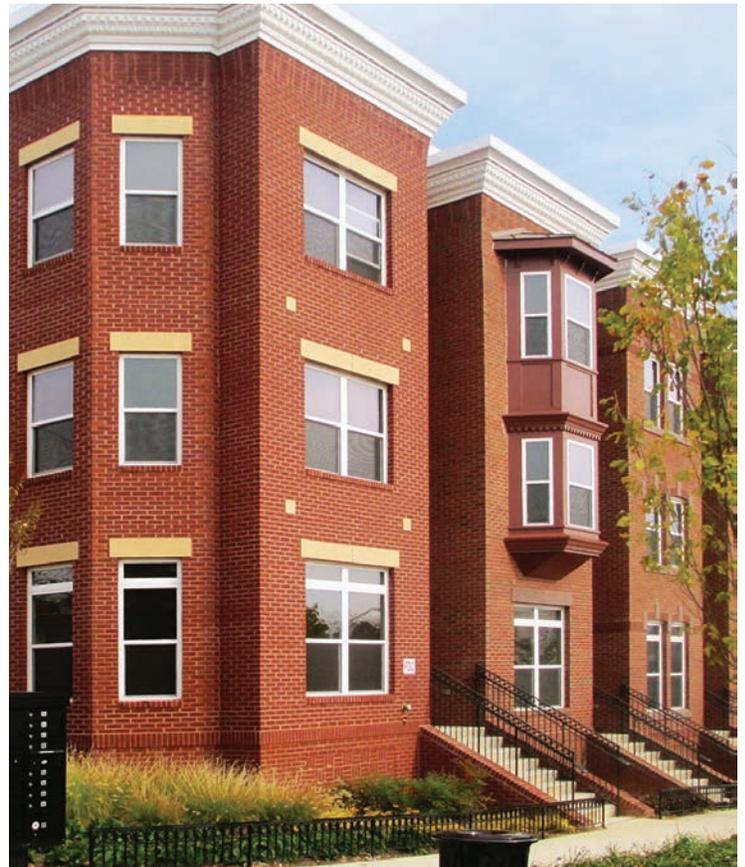
There are currently two major affordable developments in progress along North Avenue that will be directly served by the *North Avenue Rising* project:

- The **Barclay/Old Goucher Redevelopment** is a phased master plan development that includes 101 market-rate homeownership opportunities, 22 affordable homeownership opportunities, 43 replacement public housing units, 91 affordable rental units, 65 market-rate rental units, and approximately 12,000 square feet of community and retail space. This \$85 million investment has been in the planning and development stages for over a decade, providing complete transparency to local community stakeholders along the way. The project, occurring on the eastern side of North Avenue bounded by Greenmount Avenue on the east and Calvert Street on the west, involves rehabilitation and infill construction on scattered sites spanning twenty City blocks. The project was at 50 percent completion as of the end of 2015. The development is a game changer for the area, not only providing high-quality affordable housing for existing residents, but market-rate opportunities that will spur investment and additional

development in the area. An Enhanced Bus Stop will be installed at Greenmount and North Avenues, providing residents with a higher-quality transit experience and increased transit access to jobs and surrounding communities.

- The eight-acre site of **Madison Park North Apartments** on West North Avenue between Park and Linden Avenues has a troubled past. The former HUD Section 8 development consisted of 202 apartment units that, after much violence, drug activity, and unsafe conditions for children and the elderly, earned the nickname “Murder Mall.” In 2014 HUD ordered the property owner to relocate residents and demolish the property. A coordinated effort between the community, City, and State partners aims to create a mixed-use development in its place to improve quality of life in the Reservoir Hill community and complement infrastructure investments along North Avenue.

Figure 15: Affordable new rowhomes in Barclay



- There are numerous newly-completed affordable developments within a quarter-mile of North Avenue that provide both rental and first time homeownership opportunities for low to moderate income families. One example is the **Mary Harvin Center**, which was developed in partnership with the Southern Baptist Church as an affordable senior living development. The Center burned during the 2015 unrest when it was still under construction, but church leaders were not discouraged and rapidly rebuilt the structure. Other affordable developments, such as the **Columbus School, Penn Square I and II**, and the **Gateway** student housing complex, have all brought significant investment to the corridor, offering residents safer and more equitable housing options.
- Finally, Ernst Valery is investing \$20 million in **Nelson Kohl Apartments**, an eight-story apartment building with 103 market-rate units in the Station North Arts and Entertainment District. Currently a parking lot, this development will have discounted rents for artists and gallery spaces to promote their work. The developers are committed to hiring local Baltimore residents to work on the construction of the project.

5.1.2.3 Coordination of Policies which Leverage Investments

The *North Avenue Rising* project is a cohesive component of the mayor’s overarching *Growing Baltimore* initiative and many other community development plans and State initiatives.

In 2015 Governor Hogan and Mayor Rawlings-Blake joined forces to create **Project C.O.R.E. (Creating Opportunities for Renewal and Enterprise)**, a \$93.4 million City and State initiative to demolish vacant homes, clear blight, and make way for new development. Areas located on the far east and west ends of the *North Avenue Rising* corridor have been identified for Phase I demolition. Once demolished, Phase II will include leveraging \$600 million through Maryland’s Department of Housing and Community Development (DHCD) to encourage new investment. *North Avenue Rising* will further

prime these areas for redevelopment, increasing surrounding property values and reassuring developers and residents that the City is committed to revitalizing the area.

On the east side of the corridor, USDOT, BCDOT, and the City’s Public Works Department invested nearly \$13 million in 2015 for **streetscape improvements along a three-quarter-mile stretch of North Avenue** between Aisquith and Washington Streets. Improvements include repaved roadways, brick sidewalks, new curb cuts for handicap access, and replaced traffic signals. These upgrades intend to beautify the corridor to attract new business and investment. The *North Avenue Rising Project* will build on the existing improvements by constructing an Enhanced Bus Stop at nearby Courthouse Square, where riders will be able to access *CityLink* bus service.

“Both Schwaber Holdings and the owners of MCB Real Estate enthusiastically support the TIGER grant application for North Avenue as a critical component of our redevelopment effort.”
 – **Mark L. Renbaum,**
 CEO of Schwaber Holdings

5.1.2.4 Support Existing Communities

A lack of access to educational opportunities for residents in corridor neighborhoods has been a barrier to upward social mobility. In the project area, nearly a quarter (24.7 percent) of residents over the age of 18 have not completed high school or received their GED, compared to only 19.8 percent of residents in the City as a whole.

The Baltimore City Department of Planning (BCDP) created the **Investing in Neighborhoods and Schools to Promote Improvement, Revitalization, and Excellence (INSPIRE)** program to leverage nearly \$1 billion provided by the City and State to renovate or replace selected schools. The John Eager Howard Elementary School located one block north of North Avenue in the Reservoir Hill neighborhood has been selected for redevelopment within the first year



of program implementation. The **John Eager Howard INSPIRE Plan** focuses on the quarter-mile radius surrounding the school and recommends specific, implementable public investments in the community that will articulate a long-term vision for guiding private investment and address environmental, social, and economic conditions. The INSPIRE plan identified complete streets, redesigned streetscapes, and pedestrian connections across North Avenue as priorities, all of which will be addressed under *North Avenue Rising*.

The **University of Baltimore has partnered with Baltimore City schools** to encourage local students to pursue higher education. UB offers three unique programs to City schools: Summer Professional Development Academies, UB College Readiness Academy, and UB College Readiness Summer Academy/Youth Works Program.

Healthy food options are increasingly available to North Avenue residents. In East Baltimore, several sustainable, community-run urban farms have taken root. Operations such as the **Real Food Farm** (Figure 16), **Hidden Harvest Farm**, and **Whitelock Community Farm** offer residents affordable, healthful, high-quality, locally-sourced food, and also provide volunteerism opportunities in exchange for fresh produce. These farms not only produce food to feed the surrounding neighborhoods, but also serve as important community anchors, attracting a wide range of residents to work towards shared missions. While located on separate lots around North Avenue, all these farms are part of the Baltimore City Farm Alliance.

Figure 16: Real Food Farm's mobile farmers' market



Finally, the **Greater Rosemont and Mondawmin Area (GRAMA) Master Plan**, produced by BCDP in partnership with community members in 2012, was the culmination of nearly a decade's worth of collaboration between countless neighborhood leaders and institutional stakeholders. While GRAMA encompasses some historic buildings and burgeoning areas, the communities located directly west of North Avenue were identified as among the most distressed sections of the study area. As the Plan notes, North Avenue is one of the most visible and highly-trafficked corridors in the City, and the glaring blight that pockmarks the corridor induces a negative impression, impeding future growth. The GRAMA plan also identifies North Avenue as a critical transportation route for commercial, local, and transit traffic, calling out its poor north-south pedestrian accessibility in particular.

The number one strategy identified in GRAMA is to “activate North Avenue and nearby neighborhoods by strategically locating Coppin State University facilities and services off campus.” This strategy complements CSU's vision for bolstering North Avenue as a “vibrant walkable street” since it serves as the “front porch” of the university. CSU's new Science and Technology Center opens onto North Avenue and its construction included widened sidewalks and landscaping along the avenue. *North Avenue Rising* builds upon this investment by including an Enhanced Bus Stop in front of the Science and Technology Center.

5.1.2.5 The Value of Communities and Neighborhoods

As discussed earlier, many neighborhoods are negatively impacted by the current condition of North Avenue. However, emerging cultural assets and initiatives are beginning to capitalize on the avenue's unique potential:

- The **National Great Blacks in Wax Museum** was founded in 1983 in a conjoined rehabilitated firehouse and Victorian mansion on North Avenue, and was the country's first wax museum committed solely to the study and preservation of African American history. It receives 300,000

Figure 17: Rendering of the expanded National Great Blacks in Wax Museum along North Avenue



Source: Davis Brody Bond

visitors each year from across the nation, serving as a source of community pride and as the primary tourist destination on the east side of North Avenue. The museum acquired and demolished 52 abandoned properties to the rear of the existing structure, and it plans to expand into a new \$75 million facility spanning the entire 1600 block of North Avenue (Figure 17).

- In 2002 the **Station North Arts and Entertainment District** was the first area in Baltimore to receive state designation as an arts and entertainment district, and in 2015 it was ranked as the third-best arts district in the country by *USA Today*. The district is managed by a nonprofit organization funded primarily by local foundations and nearby anchor institutions committed to promoting arts-based revitalization and placemaking. The district encompasses the East North Avenue corridor between Howard Street and Greenmount Avenue. The area has numerous galleries and coworking spaces that employ local artists and provide affordable incubation spaces for young start-ups.
- The historic **Centre Theatre** on North Avenue operated from 1939 to 1959, later serving as a local church (Figure 18). After the building shuttered its doors, it sat vacant and fell into such disrepair it was in danger of demolition. In 2013 local developer Jubilee Baltimore

acquired the building and invested \$19 million into redeveloping the 66,000 square foot space into a center for arts and innovation by housing the JHU/MICA Film Center and several other local creative organizations. In addition to private investment, developers drew upon \$6.5 million in state and federal historic tax credits as well as on investments from Chase Bank, the Reinvestment Fund, and Telesis Corporation.

- On the west side of the corridor between Hilton Street and Howard Street, the Neighborhood Design Center (NDC) engaged surrounding

Figure 18: Historic and recently-restored Centre Theatre on North Avenue



Source: Karl Connolly

communities in an 18-month design process to create the **West North Avenue Streetscape Conceptual Master Plan**. The NDC included 24 major stakeholders, hosted almost 200 community members at workshops and design reviews, and distributed and collected over 600 community surveys from residents to identify what the corridor needed. This plan was submitted in June 2015 to BCDOT for future implementation. *North Avenue Rising* has incorporated a number of the master plan's high priority recommendations, including the installation of curb extensions at key intersections to increase pedestrian visibility, installation of transit signal priority along the corridor to improve transit service and reliability, and construction of bus shelters at major bus stops. The Walbrook Junction, Coppin State University, and Fulton Avenue Enhanced Bus Stops will be located within the master plan's focus area.

- ULI's TAP 2015 report, **The Greenmount Avenue Corridor: Reclaiming Greenmount Avenue for the Neighborhoods**, found that "Greenmount functions as a 'disinvestment engine' by steadily undoing the meaningful progress that residents and City agencies are working so hard to accomplish." TAP calls for improved crosswalks, transit signal priority, improved bus service, and traffic calming. One significant component of TAP's redevelopment plan is encouraging the development of strong nodes at key intersections, including that at North and Greenmount Avenues. *North Avenue Rising's* Greenmount Enhanced Bus Stop will complement future commercial development, serve as an example for nodal infrastructure investment, and function as a catalyst for additional public/private investment along Greenmount Avenue.

5.1.3 Safety

The most common goals voiced during the three visioning workshops conducted as part of the West North Avenue Streetscape planning process were to increase pedestrian safety, security, and

accessibility along North Avenue. These goals are shared by virtually all community associations in the North Avenue corridor.

Baltimore City is committed to improving safety and security on City streets and across all modes of travel. In 2015 Mayor Stephanie Rawlings-Blake accepted USDOT Secretary Anthony Foxx's *Mayor's Challenge for Safer People and Safer Streets*. That same year, the mayor signed the Vision Zero Resolution at the US Conference of Mayors, thereby committing to develop a Vision Zero approach to addressing roadway safety on City streets.

Through these focused efforts and other ongoing investments in the area, crime in the North Avenue corridor has improved over the last year (Table 5).

While crime in the area has recently dropped, accidents involving transit vehicles in the area have risen slightly (Table 6).

Several elements of *North Avenue Rising* will further reduce crime in the area. Crime Prevention through Environmental Design (CPTED) principles have been and will continue to be applied to emphasize territorial reinforcement. Pedestrian-scale lighting and installation of CCTV cameras at key locations will make the corridor more secure. Investments in new lighting at the Penn-North Metro Subway station and at the Enhanced Bus Stops, in addition to the demolition of the station's "storefront" depicted in Figure 19, will provide passengers with a safer and more secure waiting environment.

The streetscape components of *North Avenue Rising* feature several of the West North Avenue Streetscape Conceptual Master Plan's highest-priority recommendations, including upgrading sidewalks to ADA standards, repainting crosswalks to a standard of high visibility, adding pedestrian-scale lighting, installing pedestrian curb bump-outs, and applying Leading Pedestrian Interval (LPI) signal timing at intersections to help separate pedestrians from turning vehicles.

Table 5: Monthly crimes within a half-mile of the project corridor

	2015 Monthly Average	2016 Monthly Average	% Improvement
Homicide	6.25	4.00	36
Shooting	12.58	8.00	36
Aggravated Assault	63.58	43.57	31
Other Reported Crimes	480.58	332.00	31
Total	563.00	387.67	31%

Table 6: Monthly transit accidents within a half-mile of the project corridor

	2015 Monthly Average	2016 Monthly Average	% Improvement
Bus Accidents	18.08	19.00	-5
Paratransit Accidents	6.25	6.67	-7
Total	24.33	25.67	-6%

Figure 19: Existing storefront at Penn-North Metro Subway Station



North Avenue Rising will culminate in a number of safety improvements for all transportation users of the corridor. Reconfiguration of the Pennsylvania and North Avenue intersection and installation of pedestrian bump-outs, new lighting, and signage will make crossings safer. The shared bus/bike lanes on North Avenue and the bike boulevards on Baker and 20th Streets will reduce bicycle conflicts with general traffic, thus reducing the potential for accidents. The dedicated lanes can also be used by emergency responders, helping fire and police to reach their destinations quickly.

5.1.4 State of Good Repair

The MTA places a high priority on ensuring its transit infrastructure is in a state of good repair (SGR). The MTA recently updated its Transit Asset Management Plan (TAMP), which incorporates updates to its statewide asset inventory as well as the FTA's TERM Lite analytical tool to inform investment decisions. Save for the planned Purple Line LRT and Capital Corridors Transitway in Maryland's Washington DC suburbs, 71 percent of the MTA's capital budget through 2021 is committed to system preservation.

“I am committed to the revitalization of Baltimore City and believe implementation of the *North Avenue Rising* project can significantly improve mobility along Baltimore's North Avenue while also supporting the revitalization of a community that has experienced unrest and economic decay.”
 – **The Honorable Elijah E. Cummings, United States Congress, 7th District, Maryland**



MTA and BCDOT SGR and lifecycle cost analyses were used to develop the scope of work for several elements of the *North Avenue Rising* project scope. Specifically:

- Unscheduled escalator downtime at the Penn-North Metro Subway station has averaged 11 percent over the last six months, a result of deferred escalator rehabilitation.
- Lifecycle cost analysis revealed that lighting upgrades at the Penn-North Metro Subway station will save the MTA \$104,000 in annual utility costs and reduce lighting failures.
- BCDOT's Pavement Management Survey process identified several North Avenue roadway segments in “mediocre” and “poor” condition, which will be rehabilitated or replaced.
- The use of colored asphalt to demarcate dedicated bus lanes will net BCDOT more than 75% in lifecycle cost savings over the epoxy coatings they currently use, and will ensure fewer service disruptions due to maintenance needs.

Figure 20: Shared bus/bike lanes similar to those proposed along North Avenue



5.1.5 Environmental Sustainability

North Avenue Rising will promote transit, bicycling, and walking, which are all sustainable transportation options. These options will reduce environmental pollution and bolster the health of corridor residents. The Baltimore City Health Department, in cooperation with community members, conducted a Health Impact Assessment (HIA) of the West North Avenue Streetscape Conceptual Master Plan. The objective of the HIA was to assess the likely impact of streetscape features on the health of area residents, to identify design priorities that would improve their health, and to generate recommendations to do so.

BCHD found that many of the proposed features of the streetscape plan could improve the health of corridor residents. Additional pedestrian-scale street lighting may help deter crime and increase pedestrians' perception of safety, while repairing and improving sidewalks along North Avenue may encourage walking for transportation and recreation. The addition of bicycle facilities would also encourage more active personal transportation in the corridor.

Energy efficiency is another project benefit. Buses on North Avenue will operate with fewer traffic-induced stops and starts, reducing idling and associated fuel consumption. New sidewalk and Metro Subway station lighting will be more modern and energy efficient. MTA estimates an annual energy savings of \$104,000 from the installation of LED lights at the Penn-North Metro Subway station.

5.2. Secondary Criteria

5.2.1 Innovation

The transit elements of *North Avenue Rising* are derived from MTA's reinvention of citywide bus service under *BaltimoreLink*. As described in the introduction, *BaltimoreLink* is an unprecedented redesign of the City's bus and rail systems to transform transit routes into an innovative **frequent transit grid**. North Avenue will be even more important by functioning as the most prominent, visible spine in the new *BaltimoreLink* grid, and *North Avenue Rising* will help leverage this prominence.

Frequent transit grids seek to restructure prewar hub-and-spoke transit systems into grids composed of bus routes running frequently enough such that passengers need not check schedules before riding. This frequent service eases aversion to transfers, which are crucial for robust, efficient transit systems. *BaltimoreLink* will better serve an old, mature, and dense city undergoing decentralization, and its success will hinge on the cohesion of crosstown corridors like North Avenue.

North Avenue’s transit efficiency will in turn depend on the transit components in the *North Avenue Rising* project: dedicated bus lanes and transit signal priority will offer transit protection from traffic congestion. The use of red color to denote dedicated lanes will be a first for the Baltimore region. Tinting the asphalt red will greatly decrease the maintenance and overall costs of this treatment.

As noted earlier, Baltimore’s new bike share system will have several innovative features including the capability to make virtual stations, RFID card sharing between bike share and transit, and the largest pedal electric assist fleet in the western hemisphere.

5.2.2 Partnership

North Avenue Rising demonstrates strong collaboration among a broad range of participants and integrates transit and transportation services with other public and private investments. A robust collaboration among partners, in conjunction with several plans and studies for improving the North Avenue corridor, has resulted in a long list of support for the proposed project elements. Some partnership highlights include:

- The Maryland Transit Administration and the City of Baltimore have partnered on many projects to improve the overall transportation system for City residents. Both agencies have agreed to Memorandums of Understanding (MOUs) for several projects, including the Howard Street audio/visual pedestrian safety improvements, transit signal priority for Light

Rail, and recent *BaltimoreLink* operating network and capital improvements. In February 2016, the two agencies cooperated closely during Superstorm Jonas to ensure roads were cleared for bus service and tracks were cleared for Light Rail service.

- The MTA and Baltimore City are also coordinating *North Avenue Rising* with the Baltimore Development Corporation (BDC), which has provided \$228,226 in Business Recovery Loans and the Storefront Recovery Grant following the unrest of April 2015.

Despite this history of cooperation, *North Avenue Rising* also represents a novel model for MTA-City collaboration. Development of the *North Avenue Rising* project required a team of MTA planners and BCDOT transit, traffic, and bike/pedestrian planning and design staff - in addition to representatives from BDC, HCD, and DHCD - to quickly translate the recommendations of the West North Avenue Streetscape Conceptual Master Plan and MTA’s *BaltimoreLink* initiative into a realistic project scope, cost, and financial plan.

“An investment in infrastructure supporting transit, walking, and bicycling will contribute to the corridor’s overall economic revitalization, improving opportunities for my constituents and the broader Baltimore community.”

– **Mayor Stephanie Rawlings-Blake**

A ***North Avenue Rising* Project Development Team (NARPDT)** will be sustained through the completion of NEPA, the obligation of a TIGER grant, and the subsequent design, procurement, and construction of the project as described in **Section 7. Project Readiness**. NARPDT will ensure that project elements are coordinated and optimized, and that progress is transparent between funding partners – including USDOT – and the community.

6. BCA RESULTS

A Benefit-Cost Analysis (BCA) was conducted for *North Avenue Rising* to support this TIGER grant application. The BCA was conducted in accordance with USDOT's benefit-cost methodology for a 30-year analysis period, assuming completion of the project by the end of 2020.

The primary project benefit used in the analysis is the monetized travel time savings, which are anticipated to accrue to existing riders of MTA's bus routes along the length of North Avenue. Time savings achieved by riders of buses other than the #13 who travel for a portion of their route on North Avenue and who would benefit from the dedicated lanes are included in the analysis; however, for the sake of a conservative analysis, new riders on the #13 bus who may be attracted to the service because of the faster, more reliable travel time have not been included.

In addition to this conservative estimate, the analysis also considered the benefit of O&M cost savings realized by MTA with the installation of new energy efficient lighting at the Penn-North Metro Subway station.

Based on the BCA, *North Avenue Rising* is estimated to achieve a 1.16 ratio of benefits to costs at a 7 percent discount rate, and a 2.17 benefit cost ratio at a 3 percent discount rate. Additional detail on the project's estimated costs, benefits, and the BCA process can be found in **Appendix D**.

7. PROJECT READINESS

7.1 Technical Feasibility

Except for the bike share facilities the City is installing downtown and elsewhere, both the City and MTA have significant experience implementing *North Avenue Rising* scope elements and are equally committed to advancing the project as quickly as possible. The City maintains over 5,000 lane-miles of publicly-owned streets, and BCDOT has built and maintains over 100 directional miles of on-street bike facilities and 39 miles of off-road trails. The City is currently undertaking – on schedule and within budget – streetscaping on East North Avenue, which will serve as a model for sidewalk

improvements across the corridor under *North Avenue Rising*. The City has design and engineering contracts in place to expeditiously award work. Design would begin immediately upon award of a TIGER grant.

In state fiscal year 2015, the MTA delivered a \$434 million capital program across the State of Maryland. The MTA has conducted numerous technical studies to examine options for improving transit service in the North Avenue corridor, resulting in the dedicated bus lane concept proposed for *North Avenue Rising*. The MTA also has contractual mechanisms in place to allow the agency to move quickly upon grant award

to begin design and engineering of project elements. The MTA fully understands the need for projects to be obligated by September 30, 2019 and completed by September 30, 2024 to comply with TIGER VIII grant requirements. As Figure 22 indicates, these milestones will be easily met.

The MTA has experience implementing large federally-funded capital projects, including:

- **Kirk Avenue Facility** – The MTA was awarded \$40 million from the FTA’s FY 2012 Section 5309 State of Good Repair program to support its State of Good Repair Initiative for Phase I of the Kirk Bus Facility Replacement. The total project cost is \$56 million. This project will replace an outmoded facility that has reached the end of its useful life with an upgraded, energy efficient facility. MTA worked extensively with the community around the facility to ensure the design would meet community standards. Awards were announced in August 2012 and the MTA worked quickly to award the contract in September 2013. The project is underway with scheduled completion in the fall of 2016.
- **Takoma-Langley Park Transit Center** – The MTA was awarded \$13.3 million in TIGER funding in 2010 via the Washington Council of Governments for the construction of a transit center at the northwest corner of University Boulevard and New Hampshire Avenue. This intersection is the busiest in the Maryland suburbs of Washington DC, accommodating transit service from the Washington Metropolitan Area Transportation Authority, Prince George’s County’s “The Bus” system, and Montgomery County’s “Ride On” system. This project is scheduled for completion this summer in advance of the TIGER grant deadline.

The MTA will be the TIGER grant administrator, responsible for all aspects of grant compliance. The MTA has received numerous federal grants and is experienced in managing the requirements associated with receipt of such funds. There are no

outstanding legal, technical, or financial issues with the MTA that would make this a high-risk project.

7.2. Financial Feasibility

The MTA and the City of Baltimore share a high degree of confidence in the cost estimate developed for North Avenue Rising. Line item costs were estimated based on recent experience with similar improvements, are “fully-loaded” (that is, they includes design, construction management, and maintenance of traffic costs), and carry sufficient contingencies.

Both funding partners also demonstrate the financial capacity to reliably match the requested TIGER funds. The Maryland Department of Transportation (MDOT) is responsible for building, operating, and maintaining a safe and seamless transportation network that links Maryland with the rest of the country and the world. The department directs and oversees the planning, construction, and operation of Maryland’s highway, transit, maritime, rail, and aviation facilities, all of which are funded by a common source, the Maryland Transportation Trust Fund. The TTF collected over \$2.9 billion in revenue in FY 2013. It is separate from the State’s general fund and its revenues are dedicated to improving and operating Maryland’s transportation network.

7.3. Project Schedule

As shown in Figure 22, the NARPDT has developed an achievable schedule for executing the proposed *North Avenue Rising* project. Figure 22 presumes obligation of the TIGER grant by the summer of 2017 and the completion of design, procurement, and construction of all project elements by late 2020.

7.4. Required Approvals

The following approvals are required to fully execute *North Avenue Rising*:

- **Legislative Approvals** – No further legislative approvals are necessary for the project.

NORTH AVENUE RISING



Figure 22: North Avenue Rising project schedule

★ Major Project Milestone

	CY 2016				CY 2017				CY 2018				CY 2019				CY 2020			
	Q1	Q2	Q3	Q4																
TIGER Application		★																		
NEPA Categorical Exclusion						★														
TIGER Grant Selection			★																	
TIGER Grant Obligation							★													
North Avenue Rising Implementation																				
Dedicated Bus Lanes																				★
Traffic Signal Priority										★										
Roadway Repavement																				★
Penn and North Intersection Improvements															★					
Enhanced Bus Stops																				★
Penn-North Station Improvements																			★	
Bike Lanes																				★
Bike Share Facilities											★									
Streetscaping																				★

- State and Local Planning** – All project elements will be included in the Baltimore Metropolitan Council (BMC) and Baltimore Regional Transportation Board (BRTB) Transportation Improvement Program (TIP). Improvements to the North Avenue corridor have been studied and supported in the BMC letter of support, and project elements are included as parts of several State and local plans. These plans are discussed throughout **Sections 5.1.1** and **5.1.2**, and are listed in **Section 2. Project Location**.
- NEPA** – MTA expects this project will require a documented categorical exclusion (DCE) to comply with the National Environmental Policy Act of 1969. No impacts to the natural environment are expected given the scope of work and the project’s high-density urban

context. Specifically, there will be no impacts to floodplains, wetlands, streams, farmlands, parks, or forests. On April 7, 2016 the U.S. Fish and Wildlife Service indicated that there are no known rare, threatened, or endangered species in the project area. On April 22, 2016 the Maryland Department of Natural Resources indicated that there are no known state-listed rare, threatened or endangered species in the project area.

- Historic Preservation** – On April 7, 2016 the MTA initiated Section 106 National Historic Preservation Act consultation with the Maryland Historical Trust (the State’s historic preservation office) and identified known historic resources and potential consulting parties.

On April 22, 2016 the Maryland Historical Trust concurred with the initial definition for an area of potential effects, concluded it was unaware of any additional historic resources, and identified a third party to solicit as a consulting party. The MTA will continue consulting with the MHT throughout design of the project and expects to complete the DCE by early 2017.

7.5. Assessment of Risks and Mitigation Strategies

Major transportation capital projects are inherently risky. If selected to receive a TIGER grant, the *North Avenue Rising* Project Development Team (NARPDT) understands it must not only be a good steward of federal dollars, but also of the significant State and local capital match. To that end, the NARPDT has developed a conservative cost estimate and implementation schedule that it has a great deal of confidence in. The NARPDT doesn't expect costs to increase, but in the unlikely event they do, both the MTA and the City of Baltimore are committed to carrying out the complete project as proposed in this application and to cover any overruns with existing capital reserves.

The MTA has an excellent history of risk management spanning decades of project and construction management. This project's risks have been analyzed and include procurement delays, environmental uncertainties, and increases in real estate acquisition costs.

- **Procurement** – The MTA and City of Baltimore have design, engineering, and construction contracts in place that will allow work to be awarded expeditiously. Design will begin immediately upon award of the TIGER VIII grant.

- **Environmental** – The MTA expects this project will require a DCE to satisfy NEPA. There will be no impacts to the natural environment given the scope of work and the project's high-density urban context. Specifically, there will be no impacts to floodplains, wetlands, streams, farmlands, parks, or forests. The project will not cause any residential or commercial displacement.
- **Real Estate Acquisition** – No real estate acquisition is required for this project.

Finally, the NARPDT recognizes that the project scope – while consisting largely of routine elements – must be delivered in a uniquely coordinated fashion. Building upon the close partnership between the MTA and the City of Baltimore, we will ensure the project's timely and coordinated delivery as described in **Section 5.2.2. Partnerships**.



8. FEDERAL WAGE RATE CERTIFICATION

The certification can be found on the following page.



MARYLAND TRANSIT ADMINISTRATION

MARYLAND DEPARTMENT OF TRANSPORTATION

Larry Hogan, Governor • Boyd K. Rutherford, Lt. Governor
Pete K. Rahn, Secretary • Paul Comfort, Administrator

April 25, 2016

CERTIFICATE OF COMPLIANCE WITH FEDERAL WAGE RATE REQUIREMENTS

This certificate states that the Maryland Transit Administration (MTA) will comply with the requirements of subchapter IV of chapter 31 of title 40, United States Code (Federal wage rate requirements), as required by the FY 2016 Appropriations Act.

In addition, the MTA has provided the Federal Transit Administration (FTA) with all other FY 2016 certifications and assurances as a direct recipient of FTA funds.



Paul W. Comfort, Esq.
Administrator & CEO