

LINEBERGER CONNECTOR PROJECT

Application for BUILD 2019 Discretionary Grant



Submitted by:
City of Gastonia, North Carolina

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INTRODUCTION

A bridge. A bike way. A pedestrian link. A network connector. A gateway.

An opportunity.

There is no question the Cities of Gastonia and Lowell and Gaston County's Lineberger Connector (Lineberger Connector) project is an important economic engine for this region of North Carolina, the surrounding property owners, and the North Carolina Department of Transportation (NCDOT). Understanding the setting for the Lineberger Connector project, it is easy to understand why these communities have placed so much emphasis on making this connection a priority as a solution to boost the economic vitality in this part of Gaston County following the devastating impact the North American Free Trade Agreement (NAFTA) has had on the region.

The recession, following NAFTA's ratification in 1994, negatively impacted this region of North Carolina tremendously hard. Between 1995 and 1999, the NAFTA snowball started to roll resulting in the closing of the seven (7) largest industrial utility customers and a total of 54 manufacturing plants causing the loss of more than 7,500 jobs. In 2000, additional plant closures impacted local tax and utility revenues even more—resulting in more than \$70 million in lost revenues just in water/wastewater and additional losses were realized in the electric fund. At the end of 2000, Gaston County had lost more than 13,000 jobs. To date, as of 2017, the economic engines within Gaston County, NC, a federally Designated Qualified Opportunity Zone, have only been able to recover to 53% of its economic glory of the early 1990's.



The City of Gastonia, in conjunction with the City of Lowell, Gaston County, and the private property owners, seek \$18.5 million (50%) in BUILD Discretionary Grant funds to complete the \$37,000,000 package needed to implement the Lineberger Connector project between the two communities. As shown in **Figure 1**, the Lineberger Connector project consists of approximately 1.0 mile of new location roadway and a new bridge over I-85, connecting both sides of I-85 between US 29/74 (Franklin Boulevard) and NC 7 to the north. The proposed project also falls within the project limits for the widening of I-85 by NCDOT. TIP project I-5719 will widen I-85 from a six-lane facility to a minimum of an eight-lane facility. The draft 2020-2029 STIP has this design-build project programmed for construction beginning in FY 2023. Coordination with this TIP project will be critical, given the overlap of activity and impacts on the I-85 ROW. While this can be seen as a challenge for the project, it is also an opportunity to utilize the mitigation credits this site provides. These compensatory wetland and stream credits found on site have the potential to offset overall project costs and benefit the I-85 widening project by providing mitigation directly in the

corridor. The construction of the Lineberger Connector will complete the network between Exit 21 (Cox Road) and Exit 22 (South Main Street) east and west, and NC 7 and US 29/74 (Franklin Boulevard) north and south.

The project also provides a second-grade separation crossing between Exits 21 and 22 over I-85. The Lineberger Connector will complete the network, braid the communities together through this overly congested area, unlocking the development potential of approximately \$900 million in project value for the Greater Gaston area, thus allowing these communities to begin to recover from the impact of NAFTA. This project is located in Gaston County—in North Carolina’s 10th congressional district.

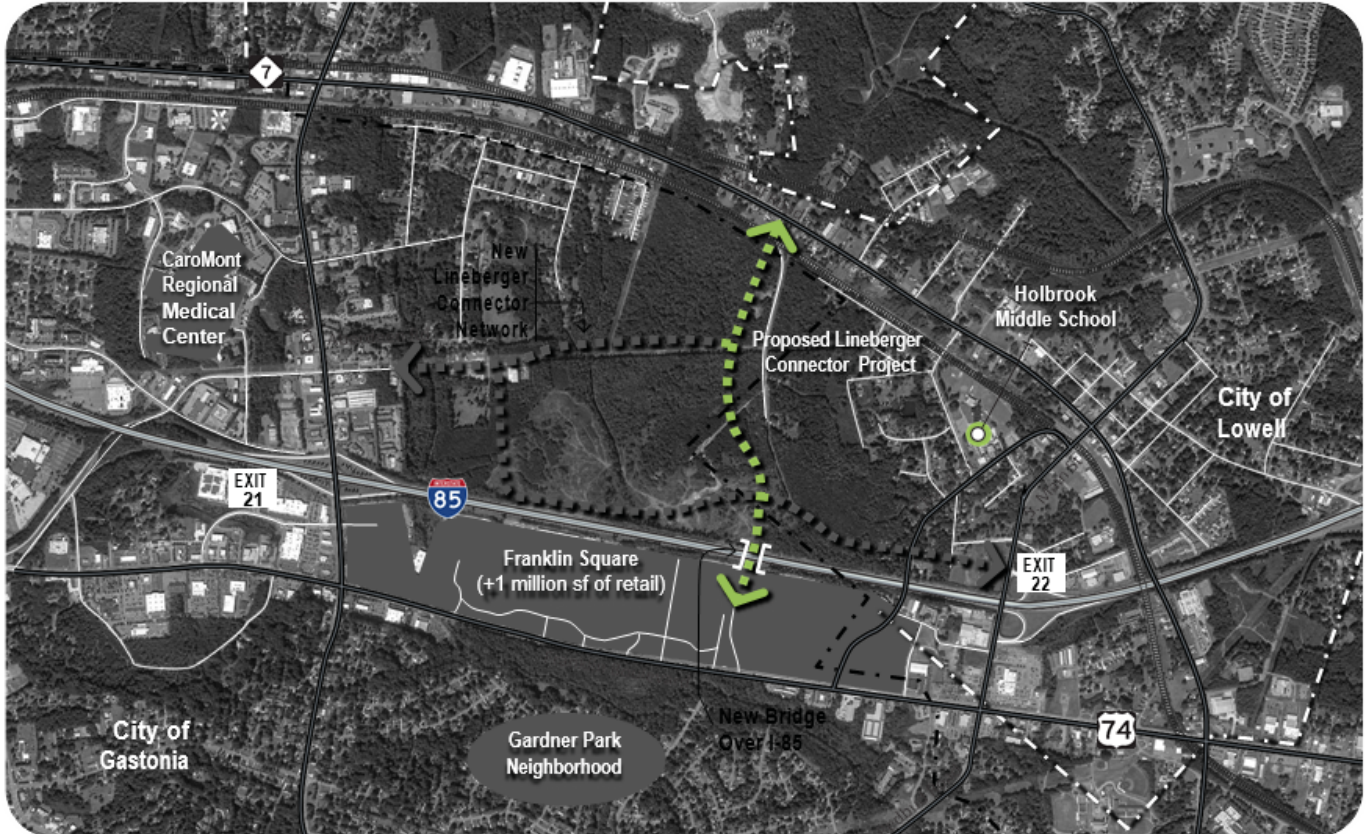


Figure 1: Lineberger Connector project

This project will improve traffic flow for community residents and regional commuters from Gaston County. The new grade separation will also unlock more than 450 acres of property that is ripe for local and regional development. The Charlotte Metro region is one of the fastest growing areas in North Carolina and the U.S. The project area is located along the I-85 corridor which serves the majority of the Southeast and connects the Charlotte region to the northeast corridor along I-95 South to Atlanta. This corridor serves as a major trucking corridor, supplying the eastern seaboard with vital goods and services. Unlocking the 450 acres as a part of the Lineberger Connector project can provide the much-needed manufacturing, logistics, and distribution facilities along the I-85 corridor. These improvements will provide greater economic mobility for citizens in both cities and leverage infrastructure improvements to stimulate economic growth. This project not only will result

in significant long-term benefits to the adjacent communities of Gastonia and Lowell, but will also impact the rural areas of Gaston County and the metropolitan areas of Charlotte. The project meets all BUILD primary and secondary selection criteria and is ready for implementation due to an unprecedented level of support. The results of the BCA are presented in the project summary matrix provided later in this narrative. The BCA ratio at a 3 percent discount is 6.18. Undiscounted results (BCA of 7.11) and results at a 7 percent discount (BCA of 5.27) are also included in the BCA Spreadsheet. *The Lineberger Connector project will be an economic transformation for the region.*

SECTION 1: PROJECT DESCRIPTION

Section 1.1: Project Description

Situated just north of I-85 in Gaston County, the project area remains one of the largest undeveloped properties along the I-85 corridor west of Charlotte; however, this is not from a lack of planning efforts. In fact, several master plans have been developed over the years, depicting a variety of land uses for the property. Within each master plan, access and connectivity have always been left for future consideration. Without a feasible plan for these elements, the property has remained undeveloped.

Transportation, and more importantly access and land use, are the main engines that drive property development. Currently, this 450-acre property can be accessed from the north via West 1st Street (NC Highway 7), but access from the west and east currently does not exist. I-85 along the southern border of the property serves as a significant barrier, restricting connectivity and economic opportunity. However, because of environmental considerations, topography, and the presence of I-85--which will require significant initial infrastructure costs--this property has remained an undeveloped “gem” along the I-85 corridor.

Previously, the “Franklin Boulevard Corridor Access and Alternative Development Mobility Strategy¹” served as a developmental master plan for this property. Unlike previous plans for the region, this developmental master plan envisioned development north of I-85 as well as a framework for future roadway connections to the north, south, east, and west.

The proposed Lineberger Connector project will consist of a one-mile connector road from US 29/74 (Franklin Boulevard) to NC Highway 7. The typical cross-section, as depicted in **Figure 2**, will include a four-lane median divided section with curb and gutter and tree-lined median. To support active transportation for all users, a 10-foot, shared-use path is planned along the west side of the corridor. A new bridge over I-85 will not only serve as a grade separation over I-85, but also as a corridor landmark in Gaston County. Across the bridge, the shared use path will be barrier-separated to improve safety for all users.

¹ https://www.cityofgastonia.com/images/files/engineering/documents/Gastonia_Corridor_Access_Alt_Development_Workbook.pdf

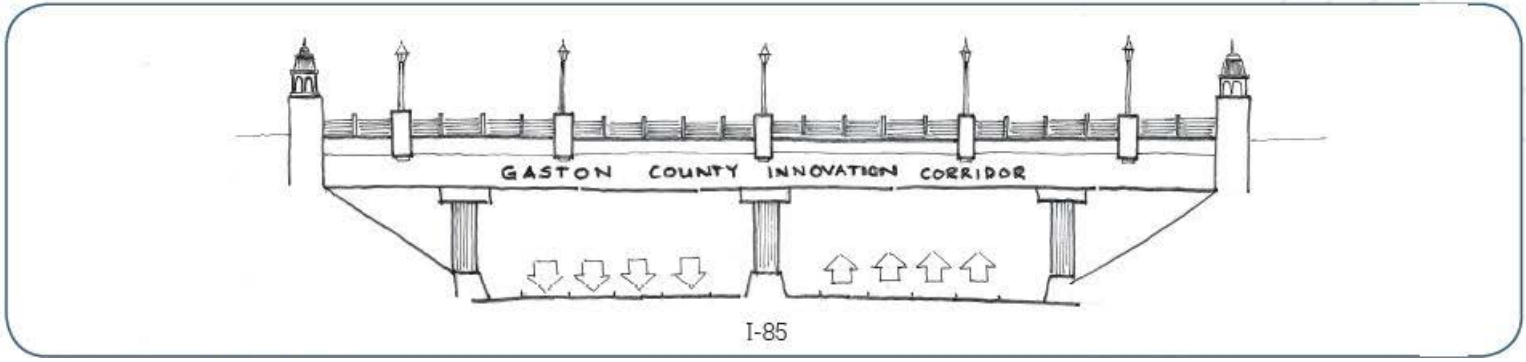


Figure 2: Bridge Section

A detailed alignment plan for the Lineberger Connector can be found as **Figure 3** below as well as an attachment to this application.

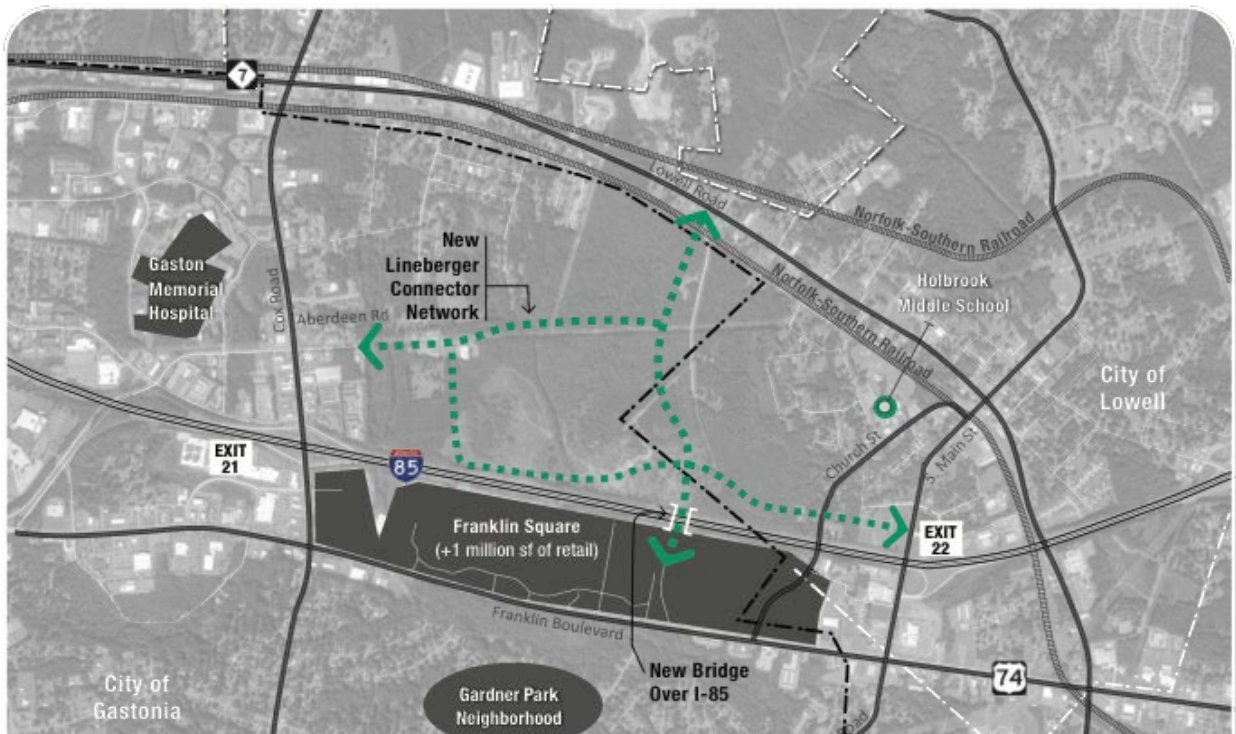


Figure 3: Lineberger Connector Detailed Alignment Plan

WHO WILL BENEFIT?

Expected users include residents of Gastonia, Lowell, and the surrounding communities, as well as commuters traveling through Gaston County. The project area is in one of the fastest-growing parts of the country and 47% of residents commute out of Gaston County for work. Increased mobility will improve access to jobs and bolster the local and regional economies. The Lineberger Connector project will increase mobility between Exits 21 and 22 and across I-85. It also will provide better access to the transportation network for members of nearby communities.

By creating a center for industrial and commercial development, the project also will create opportunities for residents to live and work locally, decreasing travel time for these users. In addition to time savings for residents who may no longer need to commute along I-85, other travelers and the freight industry will benefit from the reduced congestion along the interstate. By funding the project now in order to coordinate with NCDOT's widening of I-85 in this corridor, the residents and interstate travelers will also benefit from reductions in construction time and related delays that would occur if the Lineberger Connector is built after the I-85 improvements are completed. BUILD grant funding will expedite this project in order to maximize the economic, environmental, and quality of life benefits of timing it with NCDOT's improvements.

STATEMENT OF WORK

Roadway Cross-Section and Alignment

The proposed Lineberger Connector project will consist of a network of four-lane roadways with curb and gutter and a tree-lined median, an interstate bridge crossing, and an upgraded railroad crossing.

Right-of-Way and Access Control

The Lineberger Connector project is proposed to have a total right- of-way (ROW) width of 120 feet. Access will be provided along the proposed roads as indicated on the concept plan located on page 2 and as needed to support the anticipated development. All connections to the existing roadway network will have full movement access.

Speed Limit

The proposed speed limit throughout the roadway network of the Lineberger Connector project is 35 miles per hour (mph).

Design Speed

The proposed design speed throughout the roadway network of the Lineberger Connector project is 40 mph.

Intersections/Interchanges

The Lineberger Connector project will connect to the existing roadway network at four locations:

- **North:** intersection with NC 7
- **East:** intersection with South Main Street
- **South:** connection to Lineberger Road
- **West:** connection to Aberdeen Boulevard

There are no interchanges proposed with the project.

Railroad Crossings

As a part of this project, an improved at-grade crossing over the Norfolk Southern Railroad will be implemented just south of the proposed connection to NC 7. The City of Gastonia has conducted conversations with Norfolk Southern about the proposed roadway and at grade railroad intersection

safety improvements.

Bicycle and Pedestrian Facilities/Greenways

Throughout the proposed roadway network, bicycle lanes and sidewalks are planned on both sides, as well as a community park as part of the future development around the Lineberger Connector project.

Transit

The City of Gastonia operates a fixed route bus system. The City would extend service to the newly developed area that would be created with the construction of the Lineberger Connector project. By extending public transit service to this development it will offer the mobility options needed to ensure the project is socially equitable.

The Charlotte Area Transit System has recently adopted the 2030 System Update Plan (<https://charlottenc.gov/cats/transit-planning/Pages/silver-line.aspx>) that shows a light rail extension to Gaston County via US 29/74 which will eventually pass by the proposed Lineberger Connector project.

Utilities

Existing utilities are not present where the proposed new roadway will be constructed. As part of this project, utility connections will be made and carried through the proposed roadway network where it ties into existing roadway. Detailed utility information will be developed during final design. The City of Gastonia provides water, sewer, and electric utilities. The City also owns and maintains a 90-mile fiber optic utility ring around the City that can be leased wholesale to industries who are interested.

Landscaping

Landscaping most likely will be included as part of the Lineberger Connector project. Detailed landscaping plans will be developed during final design. The City employs an Urban Forestry Arborist and that position will work closely with the planning department, developer, and NCDOT in providing for a consistent and indigenous landscaping plan.

SECTION 2: PROJECT LOCATION

The Lineberger Connector project is located in Gaston County, NC within the Charlotte Metropolitan Statistical Area (MSA)—also known as the Charlotte Metro region. Specifically, the project is located on the eastern border of Gastonia, NC and the western border of Lowell, NC as seen in **Figures 4 and 5** — a federally Designated Qualified Opportunity Zone (35°15'19"N 81°10'49"W).

Gastonia is the county seat and the largest city in the County. It is a fast-growing suburb of Charlotte and is likely to see continued growth and economic expansion due to its strategic position within the Charlotte Metro area. The City straddles I-85, which brings both economic opportunity and mobility challenges as the interstate acts as the major connection between areas and forms a barrier that can impede local travel.

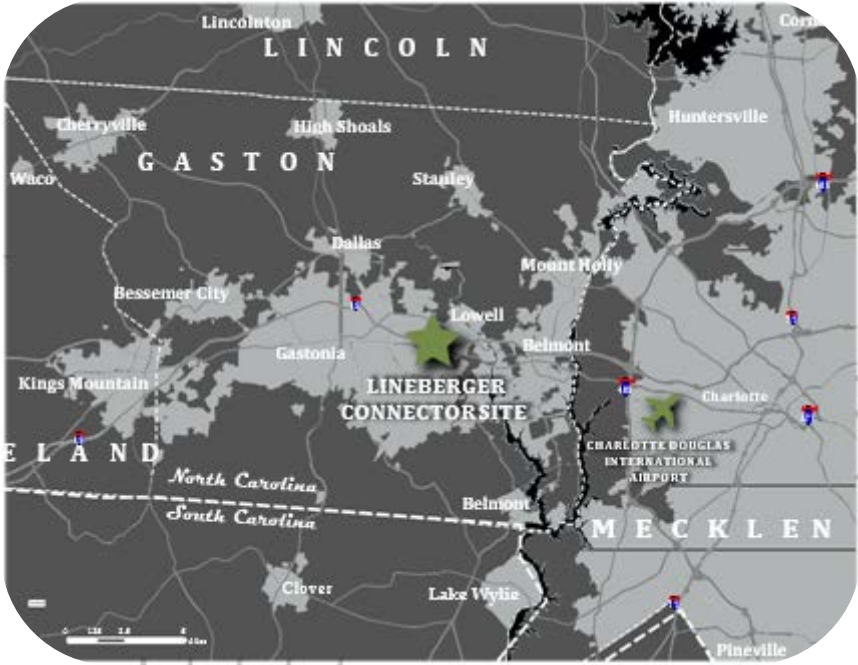


Figure 4: Lineberger Connector Regional Location Map

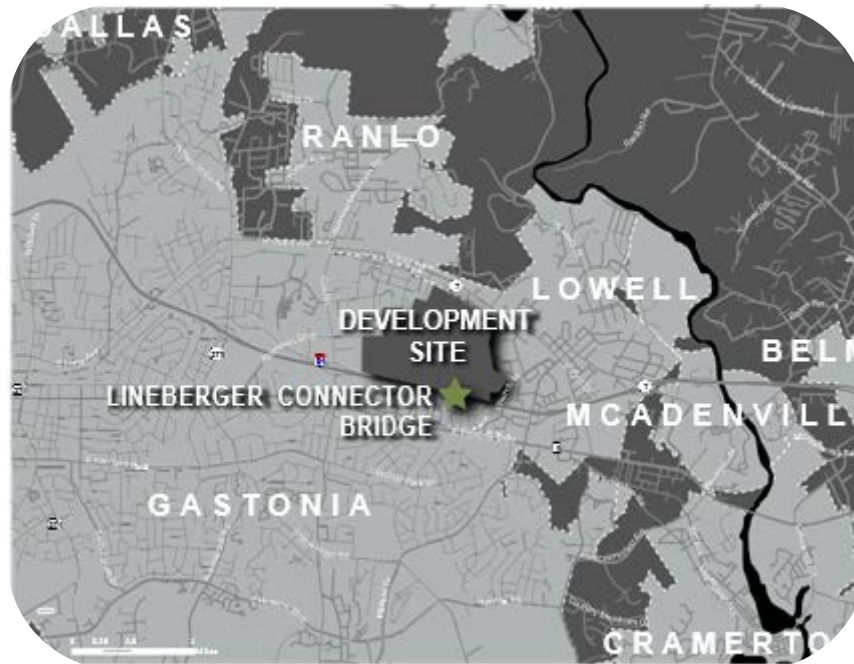


Figure 5: Lineberger Connector Location Map

SECTION 3: PROJECT PARTIES

Section 3.1: Project Lead

The City of Gastonia has been leading planning efforts to complete missing links that serve regional significance. The Lineberger Connector project is a prime example of the City's and County's efforts. Gastonia and Gaston County elected leadership is setting the overall tone for the importance of transportation in the County by their promotion of the Lineberger Connector project as one of the top transportation priorities for Gaston County.

The City of Gastonia, with assistance from NCDOT, will be the administrator of the BUILD 2019 Grant. NCDOT has a proven track record of working with its partners to deliver large scale transportation projects on time and under budget.

Section 3.2: Project Partners

I-85 is being widened for 6 to 8 lanes thru eastern Gastonia, including the segment that fronts the developable land. It is important to all parties, including drivers on I-85, that disturbance on I-85 be minimized. The best way to accomplish this would be to have the project constructed concurrently and as a part of the I-85 widening project. This would have benefits of economy of scale, elimination of duplication of efforts, and a better coordinated construction project for drivers on I-85. While NCDOT is not a financial partner for the project, close collaboration and coordination with them is imperative, and the City of Gastonia has been working closely with the NCDOT on this project. In addition, private developers are supporting the Lineberger Connector project by completing other critical segments of the corridor to the east and west. A description of the City's partners and their contributions to the Lineberger Connector project are provided below.

NCDOT – The North Carolina Department of Transportation is responsible for the maintenance of numerous public roads within the State of North Carolina from subdivision streets to interstate highways. Upon completion of a road construction project, NCDOT works with the party responsible for the construction of the road to accept the road into its maintenance program.

This project enjoys wide support from the region’s elected officials, businesses, and civic organizations. Letters of support for this project are included as **Attachment 13**.

SECTION 4: GRANT FUNDS, SOURCES, USES–PROJECT FUNDING

Capital costs for the Lineberger Connector project are estimated at \$37 million. The project, which is a critical connector between Gastonia and Lowell, is the genesis for continued economic growth for this region of Gaston County. The project sponsors seek approximately \$18.5 (50%) million in BUILD grant funding to complete the funding for project development and construction. As shown in **Table 1**, the remaining sources are anticipated from local and private investment funding sources. The Cities of Gastonia and Lowell, as well as Gaston County, are committed to this project’s development. Both communities understand the necessity of this project to improve overall long-term mobility, community growth, and continued economic success within the Charlotte Metro region.

Type	Source	Amount	Percentage of Total	Notes
Federal	BUILD	\$18.5 million	50%	Construction
Local	City of Gastonia	\$9.5 million	25%	Extension of utilities to serve area
Local	Property Owner	\$3.3 million	9%	ROW contribution and stormwater mitigation
Local	Property Developer	\$5.7 million	16%	
Total Project Cost		\$37 million		

Table 1: Funding Sources Summary

Table 2, below, shows the timing of expenditure of the various funding sources through the development years of the project. Committed local funds are more than enough to advance the project to construction. A detailed project budget is also provided in the Project Readiness section of this application provided below.

Expenditure by year (in millions)				
Funding Source	Amount	2020	2021	2022
Local	\$18,500,000	\$2,000,000	\$2,000,000	\$14,500,000
BUILD	\$18,500,000	\$2,000,000	\$2,000,000	\$14,500,000

Table 2: Funding Expenditure Schedule

SECTION 5: MERIT CRITERIA

The construction of the Lineberger Connector project will facilitate coordination and connectivity within Gaston County's emerging surface transportation system; support long-standing principles, policies, and plans for growing smarter and greener in the County; and contribute to making Gaston County more livable for all its residents. The Lineberger Connector project aligns well with the selection criteria within the BUILD program and qualities within each criterion.

Section 5.1: Primary Selection Criteria

SAFETY

The economic benefit is apparent; the direct benefit to safety that the Lineberger Connector project affords is also evident and includes a reduction in both injury and property damage only (PDO) crashes. I-85 sees a huge volume of daily traffic. The Lineberger Connector project is a smart solution to reducing traffic demand on I-85 and the surrounding arterials and will go a long way towards improving the crash/accident rates in the area. Because of the large number of commuters, as evidenced by the census data provided, the Connector will be ideal to reducing local traffic on I-85, improving travel in the area for residents and commuters alike.

The DOT supports projects that predictably reduce the number, rate, and severity of surface transportation-related crashes, injuries, and fatalities. These projected reductions can be attributed to the plan to introduce a median along the new roadway. The Crash Modification Factors (CMF) Clearinghouse provides information on a countermeasure's expected impact on the safety performance of a location based on statistically significant data from peer reviewed research papers. The CMF for installing a raised median is 0.79, indicating that a 21% reduction in overall collisions can be expected for a corridor where a median is installed. The Lineberger Connector project features a median for the corridor along Cox Road, Lowell Road, and South Main Street.

Part of this project includes construction of a new facility; therefore, there is no existing crash information for that portion of the project. As a proxy, the number of injuries and vehicles involved in PDO crashes along the current route between US 29/74 was used and factored by the diversion rate of 11% for those shifting from this roadway to the new facility. New users of the Lineberger Connector will also benefit from the safety provided by a median, but this is not captured within the BCA.

STATE OF GOOD REPAIR

The primary purpose of the Lineberger Connector project is to increase connectivity in the area between Exits 21 and Exit 22. Between these two interchanges with I-85 there is only one grade separation at Church Street. While this connection does provide some connectivity north and south, its connectivity to NC 7 (Lowell Road) is compromised due to the Norfolk Southern Railroad to the north and the existing homes and neighborhoods that make up the City of Lowell.

The Lineberger Connector project will increase connectivity from all directions (i.e., north, south, east, west), providing a parallel alternative route to I-85 and US 29/74 between Exits 21 and 22. The improved connection not only benefits the available property (i.e., the 450 acres to the north), but also provides an additional connection to CaroMont Regional Medical Center at Exit 21.

As congestion continues to grow in Gastonia and Lowell, the Lineberger Connector project provides alternative routes to improve mobility, reduces the potential for conflicts between all modes, reduces vehicle miles traveled and travel time, and improves air quality in this area, which is currently marginal non-attainment for ozone. Based on the detailed BCA, the proposed Lineberger Connector would reduce travel times and save vehicle miles traveled, both of which have a direct benefit to air quality. As shown in the BCA, a reduction in ozone is also anticipated with this project.

The Charlotte MSA (Charlotte Metro) region is one of the fastest growing regions in the United States. Over the last decade, more than 888,000 people moved to this area, many of whom have made their homes in Gaston County. This impactful growth has created a decade-long growth rate of 59.6%. This tremendous growth has placed a significant burden on the region's transportation facilities, particularly the I-85 corridor through Gaston County. It is not uncommon for several miles-long (+7 miles) queues to form on I-85 during the AM and PM peak hours. Congestion has reached a point that improvements are needed to I-85. NCDOT, under TIP I-5719, will widen the 10-mile stretch from Belmont, NC to US 321 in Gastonia. Construction on this project is anticipated to begin in 2023.

During the construction of this project, all three crossings of I-85 (Exit 21, Church Street, and Exit 22) will require improvement to accommodate the eight-lane typical section. The Lineberger Connector project directly benefits and can reduce the estimated \$258-million cost of I-5719 significantly through the ability to reduce the time of construction as well as the maintenance of traffic (MOT) during construction. The multi-lane parallel connection provided by this project, as well as the extension of Lineberger Road over I-85, allows traffic to be distributed more efficiently between Exits 21 and 22, while maintaining access to Holbrook Middle School.

NCDOT supports projects that improve the condition of existing transportation facilities, including minimized life-cycle costs. These projects are consistent with relevant state, regional, and local efforts and plans to maintain facilities in a state of good repair or projects with an aim to rehabilitate, reconstruct, or upgrade surface transportation assets that, if left unimproved, threaten future transportation network efficiency, the mobility of goods or people, or economic growth due to their poor conditions. The quantitative state of good repair measure of the Lineberger Connector project is the change in repair costs.

These benefits were calculated based upon the net vehicle miles traveled (VMT) from the project and the pavement cost per VMT. Due to a decrease in VMT, the repair benefits are positive since there will be less vehicles traveling along I-85.

ECONOMIC COMPETITIVENESS

The missing link between Exits 21 and 22 lies within the 450 acres known as the Lineberger property. This connection provides a much needed, uncongested connection between the residents that live to the north of I-85 and the more than one million square feet of commercial development located in Franklin Square along US 29/74. The construction of the Lineberger Connector project

creates opportunities for all residents of Gastonia and Lowell, as well as surrounding communities, and sets up transformative change for the 450 acres currently undeveloped.

The employment base within the Charlotte Metro area is the highest in North Carolina and one of the top 25 highest in the U.S. Maintaining a substantial, competitive workforce in this region is critical. The 450 acres adjacent to the Lineberger Connector project not only provide fertile opportunities to new, expanding, or relocating businesses or industry, it also provides access to the significant, competitively priced, and skilled workforce that the Cities of Gastonia and Lowell provide.

The adjacent property along the Lineberger Connector provides space for new industries locating within the region to attract professional, skilled, and managerial staff. Many residents of these communities would readily seek employment within this area in lieu of a commute out of the county to work. This not only improves the quality of life for those workers, but also improves the quality of the environment through reduced vehicle emissions. In addition, the development of this area provides adjacent residents opportunities for upward mobility through proximity to well-paying jobs. Conservative estimates for the 450-acre property adjacent to the Lineberger Connector indicate between 1,500 to 4,000 potential new jobs, depending on the development type and density.

The implementation of the Lineberger Connector Project will save over 28,000 vehicle miles traveled upon implementation.

According to the American Community Survey (2010 Census Data), 30% of adults commute out of Gastonia and Lowell to work within the Charlotte Metro Region, and average travel time to work for those drivers is 24.4 minutes. This is 94% higher than the statewide average commute time in NC of 23 minutes. This is one of the key benefits to this project as well as maintaining, if not improving, the economic completeness of the area. This and other key benefits are summarized below:

In the Path of Growth: The area around Gastonia is projected to add 61,000 new residents between 2010 and 2040, a 30% growth rate. Gastonia is also projected to add approximately 15,000 new jobs by 2040, and 11,000 new students attending various colleges and universities in the region, such as UNC-Charlotte, Belmont Abbey College, and Gaston College

Ripe for Development: The connector is in an area of high projected growth along the I-85 corridor between Gastonia and Charlotte. There are currently multiple developers competing for the opportunity to build out the 450 acres, provided the Lineberger Connector is in place.

Employment Destination: 31,000 people commute through Gastonia or Lowell each day for work.

Importance of I-85: More than 30% of the local workforce commutes each day to the Charlotte Metro, making I-85 one of the busiest commuter corridors in the region. In 2016, NCDOT recorded between 125,000 and 130,000 vehicles per day traveling that corridor.

Local Employment Opportunities: Gastonia's unemployment rate in 2015 was 7.7%—higher than the state average of 5.8%

Economic Opportunity: At \$40,432, Gastonia has a lower median household income than the state's \$46,868. Almost 20% of people in the City lived below the poverty level in 2019.²

² <http://worldpopulationreview.com/us-cities/gastonia-nc-population/>

ENVIRONMENTAL SUSTAINABILITY

Because the Lineberger Connector project includes a new roadway facility, the environmental benefits created by the project may seem indirect, but they have direct impacts on the community, quality of life, and the region. Connecting the communities and activity centers through this project with residents will reduce greenhouse gas emissions through the reduction of vehicle miles traveled (VMT). This reduction benefits not only those who are within proximity of the development, but also those who access I-85 Exit 21 or 22 for their daily commute.

In addition to connectivity and mobility, the shifting of commuting patterns will also aid in VMT reduction. By developing this economic node in Gaston County, countless commuters will be able to avoid the minimum 24-minute commute outside the area. This reduction has been calculated to exceed 28,000 VMT, a significant reduction for Gaston County, but also for the Charlotte region.

The planned network of the Lineberger Connector includes the provision for bicycle and pedestrian facilities through sidewalks, bike lanes, and multi-use paths. This multimodal approach provides an alternative for mobility, and also accommodates the only mode(s) available to them. When coupled with the concentration of development activity on the property, additional, uncaptured reductions in VMT will be realized through the provision of proximity and alternative mode choice.

The Lineberger Connector project will provide a regionally important roadway that will allow for better connectivity among existing neighborhoods, create new and vibrant communities, enhance the economic competitiveness of the region, and alleviate traffic demand along the I-85 corridor.

QUALITY OF LIFE

The Lineberger Connector project, developed in coordination with various planning efforts by the Cities of Gastonia and Lowell, aims to bring the full potential of the economic abilities of these communities to the Charlotte MSA, southeastern US, and the global economy. This opportunity is not just with a bent to economic growth, rather it provides a direct benefit to the 80,000 residents – 76,000 in Gastonia and 4,000 in Lowell – living and currently working outside this region. The completion of this network and the development around it provides Gaston County residents, both those living in the urbanized and rural areas, an opportunity for a competitive, well paid job in their county. It affords them more time with their families and loved ones, as time that had been spent commuting can now be repurposed. While this project cannot create additional hours in the day, it can reallocate those hours for a better use, and not just for additional commerce or work, but quality time giving back to the community they live within. The improved quality of life for residents has been shown to improve workforce productivity, reduce absenteeism, and generally create a more productive and stable workforce.

Section 5.2: Secondary Selection Criteria

INNOVATION

With the implementation of the Lineberger Connector project, additional growth will occur. While some will view this as increased congestion, pollution, and impacts, that could not be further from

the truth. Rather, jobs will be created through innovative investments in development and changes to land use yields. Under the current configuration, the property generates a modest tax revenue for both communities as currently zoned. For the property owners, a 20-year cycle of harvesting timber occurs, generating a modest return, but also an ever-increasing impact to the environment.

However, as envisioned in the Gaston-Cleveland-Lincoln (GLC) MPO planning efforts, the 450 acres of property has the potential to become an economic generator for Gaston County, the Charlotte MSA, and the communities along the I-85 corridor. Strategically located along with approximately one (1) mile of frontage on I-85, the property has tremendous opportunities and is sized and geographically positioned relative to the communities and I-85 such that it has the potential to accommodate a variety of land uses from manufacturing, distribution, single and multi-family residential development, commercial, office, and all types of mixed uses. The unique assets and potential of this property is only restrained due to its lack of strategic and thoughtful connectivity. As estimated earlier this property has the ability to generate up to 4,000 new jobs within the region, each of which will contribute to the productivity and innovation of the American workforce.

PARTNERSHIPS

The Cities of Gastonia and Lowell and Gaston County have a history of working together collaboratively. From the Franklin Boulevard Corridor Access and Alternative Development Mobility Strategy to managing land use along their shared municipal boundary, these communities have a strong working relationship. Gastonia and Lowell partner together on utility provision, transportation planning, and recreation offerings. Never more evident is their ability to come together and develop this application for a 2019 BUILD grant.

The Lineberger Connector project is a top priority for the entire community due to the potential for local and regional benefits. GCLMPO has been an ongoing partner working with both communities on the development of the corridor study which was one of the catalyst projects for the creation of the Lineberger Connector project. Likewise, NCDOT has also been a supporting partner for this project. Copies of the project support letters are attached for review and included on the website www.cityofgastonia.com/BUILD.

This project represents a unique conglomeration of stakeholders and partnerships. As evidenced in previous sections, the Lineberger Connector is a joint undertaking between local (City of Gastonia and City of Lowell), regional (GCLMPO), and state (NCDOT) agencies. Furthermore, the regional importance of Gaston County within the larger Charlotte MSA presents other regional partners that will all benefit greatly from the impact of this project.

The Cities of Gastonia and Lowell and Gaston County have secured letters and resolutions of support from both Chambers of Commerce in Gaston County, the Great Gaston Development Corporation, the local MPO, NCDOT, the local NC General Assembly delegation, U.S. Representative Patrick McHenry, U.S. Senator Richard Burr, U.S. Senator Thom Tillis, and many other local support agencies.

SECTION 6: PROJECT READINESS

The City of Gastonia has taken steady action toward delivery of its road network in the face of high growth pressures. Based on the planning efforts of Gaston County supported by its residents and the region’s transportation agencies, this project is ready to move forward quickly, and is technically and financially feasible. As shown in the project schedule and summarized below in **Table 3**, funds received from the BUILD grant will be obligated by September 2021 and the road open to the public by September 2023.

Section 6.1: Technical Feasibility

The Lineberger Connector project area is bordered on all sides by major roadways and is surrounded by regions of development. Despite this, the area has remained undeveloped over the years. Although the Cities of Gastonia and Lowell have been in favor of development of this property and despite the numerous studies and plans that have been developed, private development has never come to fruition.

As a result, the Cities focused on this property in the Franklin Boulevard Corridor Access and Alternative Development Mobility Strategy. In this plan, a land use strategy and proposed roadway network were developed. It was formally adopted in August 2016 but private development still has not spurred the construction of the roadway connections. To encourage and support economic growth and connectivity, the Cities of Gastonia and Lowell have begun raising support and funds for the Lineberger Connector project.

This project is included in the Gaston-Cleveland-Lincoln Metropolitan Planning Organization (GCLMPO) Comprehensive Transportation Plan (CTP) and Metropolitan Transportation Plan (MTP). However, this project is not included, or assigned funding, in the NCDOT State Transportation Improvement Program (STIP).

A detailed project schedule is shown in **Table 3** below and shows the start and completion dates of environmental reviews and approvals, design, ROW acquisition, and plans, specifications, and estimates (PS&E), as well as start of construction. The schedule includes flexibility to allow for unforeseen delays, while meeting the September 30, 2021 deadline to obligate funds.

MILESTONE	START DATE	END DATE
Draft Design Request for Proposal	Completed	
BUILD Grant Award Announcement	November 12, 2019	
Environmental Documentation	December 2019	August 2020
Preliminary Engineering and Design	February 2020	November 2020
Railroad Coordination	May 2020	January 2021
Obtain Right-of-Way and Utility Easements	November 2020	May 2021
BUILD Grant Negotiations and Agreement Signed/Executed	December 2019	June 2021
Construction	June 2021	September 2023

Table 3: Schedule Summary

Section 6.2: Project Schedule

A detailed project schedule that includes all major project milestones is included in the application as **Attachment 14**. The schedule includes elements of start, completion, environmental reviews, approvals, right of way, PE, final design, procurement, and construction. The schedule shows that all necessary pre-construction activities will be done prior to June 30, 2021 to ensure the obligation of funds deadline of September 30, 2021 is met. It is anticipated that the project will move forward quickly upon receipt of the BUILD funds. The funds will be spent steadily, and expeditiously once construction starts to allow all BUILD grant funding to be expended in advance of the September 30, 2026 expenditure deadline.

Section 6.3: Required Approvals

Environmental, federal, state, and local approvals will be required for this project. Environmental requirements are outlined in the following National Environmental Policy Act (NEPA) discussion. With the proposed interstate and railroad crossings, approval from the Federal Highway Administration (FHWA) and Norfolk Southern Railroad will be required. The City of Gastonia has conducted conversations with Norfolk Southern about the proposed roadway and at grade railroad intersection safety improvements.

At this time, state and local approvals and funding have not been secured. However, as the project moves through further planning and design, these approvals will be obtained and alternatives to secure funding sources will be evaluated.

During the public outreach portion of the Franklin Boulevard Corridor Access and Alternative Development Mobility Strategy, the proposed roadway network was presented to residents of both cities. Throughout this outreach process, local citizenry voiced strong support for the project.

NEPA/404 Merger Process

The environmental process for the Lineberger Connector project is currently underway. Given the anticipated stream and wetland impacts, this project likely will follow the NEPA/404 Merger Process.

To streamline the environmental planning and permitting process, NCDOT, FHWA HQ, FHWA North Carolina Division, and the U.S. Army Corps of Engineers (USACE) developed an interagency agreement in North Carolina that integrates the environmental impact assessment requirements of NEPA and the USACE Section 404 permitting process. This process is known as the NEPA/404 Merger Process and applies to new location projects and other projects that likely will require an individual permit under Section 404 of the Clean Water Act (CWA). At the beginning of each project, NCDOT initiates a screening process to determine the applicability of the NEPA/404 Merger Process for that project.

Concurrence points are defining points in the Section 404/NEPA Merger Process. Concurrence implies that project team members and the agencies they represent agree to decisions made at these defining points in the project development process and, in doing so, pledge to abide by the decision

made unless there is a substantial changed condition. Concurrence is sequential and must be achieved in the proper order.

Section 6.4: State and Local Planning

The Lineberger Connector project supports Gaston County’s long-standing policy, plans, and investments that encourage growth where it is most efficiently served in Gaston County. The Lineberger Connector project is a key component of the County’s Long-range Transportation Plan necessary to improve connectivity between the Charlotte region. The Cities have adequately prepared for necessary utility extensions to serve the property and have water and sewer treatment capacities to facilitate development.

Section 6.5: Assessment of Project Risks & Mitigation Strategies

As with any project, there are certain risks that have been identified for the Lineberger Connector project. For this project, environmental uncertainties, an uncommitted local funding match, and lack of legislative approval are the primary risks. However, these risks will be mitigated as the project moves through the planning process, as outlined in the included project schedule.

The City of Gastonia has assessed risks to the proposed project in this application relative to implementation and has not identified any material risks that will cause delay or otherwise prohibit the obligation of funds prior to the September 30, 2021 statutory obligation deadline. While NEPA and other state and federal environmental approvals present some risk in schedule delays, these risks have been accounted for in the schedule presented within this application. The dates for each phase have contingency built into them to mitigate the risk of delay. Additionally, through the multiple planning efforts that have been conducted over the last decade, there have been numerous public involvement processes to inform the public and adjacent property owners of the proposed improvement and the potential impacts. Moreover, the City of Gastonia is confident that all BUILD grant funds will be expended well in advance of the September 30, 2026 expenditure deadline.

SECTION 7: BENEFIT COST ANALYSIS

A full benefit-cost analysis (BCA) is included in this application as **Attachment 3**. The City of Gastonia has analyzed the costs and benefits of the project in context with regional transportation goals to demonstrate the net benefits of the project. These benefits will be shared by residents and regional commuters of the Cities of Gastonia and Lowell, and Gaston County.

The BCA has been documented in a spreadsheet format consistent with the requirements of the BUILD program.

There are two purposes of the BCA Spreadsheet—to describe in a thorough, complete, and accurate manner the total costs and benefits that will occur each year during the project’s life cycle and to yield a benefit-cost ratio. The benefit-cost ratio is one measure of the societal change that can occur as a result of the Cities of Gastonia and Lowell, and Gaston County’s investment in this transportation project. The benefit-cost ratio is the sum total of project benefits divided by the sum total of project costs. BCA ratios greater than one are indicative of a return on a capital investment as measured

through benefits spread region wide. The total cost of the project is estimated to be approximately \$37 million.

While this project provides definitive benefits under all five of the primary selection criteria of the BUILD program: safety, state of good repair, economic competitiveness, environmental sustainability, and quality of life, analysis is centered on safety, economic competitiveness and environmental sustainability. Specifically, the BCA for the Lineberger Connector project is centered on regional travel time savings that would result from the construction of this project as well as a reduction in accidents on surrounding roadways.

The results of the BCA are presented in **Table 4** below using a discount of 3 percent. The BCA ratio at a 3 percent discount is 6.18. Undiscounted results (BCA of 7.11) and results at a 7 percent discount (BCA of 5.27) also are included in the BCA Spreadsheet.

Benefit Type		Key Benefits Quantified	Undiscounted Net Benefits	3% Discount of NPV of Benefits	7% Discount of NPV of Benefits
Long-Term Outcomes					
Operating Costs	Additional pavement costs	Decrease in pavement repair costs from decrease in auto VMT on I-85	-\$133,473	-\$92,680	-\$60,418
Travel Time/Operating Costs	Vehicle operating costs	Additional vehicle operating costs from decreased VMT	-\$37,623,027	-\$26,124,400	-\$17,030,394
	Travel time savings	Time savings from travel time reduction	\$67,787,795	\$47,069,990	\$30,684,743
other	Noise Costs	Additional noise due to additional Auto VMT	-\$120,126	-\$83,412	-\$54,376
Emissions/Reduction Benefits	Air Quality (Non-Carbon)	Decrease in mobile source emissions	-\$973,575	-\$676,024	-\$440,697
	Air Quality (Carbon)	Decrease in mobile source emissions	-\$1,602,695	-\$1,602,695	-\$1,602,695
	Indirect energy consumption, water quality (auto)	Decrease in mobile source run-off and VMT-dependent manufacturing	-\$2,750,083	-\$1,909,582	-\$1,244,849
Safety Benefits	Reductions in injuries and PDO crashes	Improved intersections	\$28,541,463	\$20,012,485	\$13,205,025
Near-Term Jobs Creation and Economic Activity					
Property Value Increase			\$209,935,490	\$192,120,713	\$171,369,895
Total Benefits			\$263,061,768	\$228,714,393	\$194,826,232
Total Costs			\$37,000,000	\$37,000,000	\$37,000,000
Benefit/Cost Ratio			7.11	6.18	5.27

Table 4: Benefit-Cost Analysis Results

SECTION 8: COST SHARE

The Lineberger Connector project is a critical piece of infrastructure in the transportation network for the Communities of Gastonia and Lowell. BUILD funding is critical to advance and construct this project. The Lineberger Connector is currently listed in the Gaston-Cleveland-Lincoln MPO 2045 MTP for construction in the 2035 horizon year. However, this project is not included or assigned funding in the NCDOT State Transportation Improvement Program (STIP). The critical BUILD funding would help to advance the project from the 2035 horizon year to the funding window timeline outlined in the schedule section of this application. The City of Gastonia’s financial outlook is strong, as evidenced by maintaining an AA bond rating, according to Standard & Poor’s.

The City is actively working with and has a history of working with private entities to develop projects. The Franklin Boulevard Corridor Access and Alternative Development Mobility Strategy is

a good example of a public-private partnership between the City of Gastonia, City of Lowell, and the owners of the Lineberger property. These three entities, in conjunction with the GCLMPO and NCDOT, worked collaboratively and financially to develop the corridor study and acts partly as the reason behind this application.

As discussed throughout this application, the City of Gastonia sees the BUILD grant funding as a catalyst to attract additional private funding investment to bring to fruition the Lineberger Connector project. The magnitude of permits and design required to bring the Lineberger Connector to reality is beyond the abilities of a municipality or private developer acting alone. However, with the infusion of BUILD grant funding, the project becomes feasible and extremely marketable to interested private partners that are critical to complete the project.

The Cities of Gastonia and Lowell have no existing fiscal constraints that would prohibit them from using any non-Federal contributions during the anticipated funding window for the BUILD grant.

The City of Gastonia is experienced in managing grants and has worked with NCDOT and GCLMPO in the past using federal funds. As the lead planning agency for the GCLMPO, the City of Gastonia does use federal funds in the implementation of their transportation program but does not rely on it exclusively. Recently, the City of Gastonia passed the “GO Bonds,” which proactively invests in the implementation of sidewalks and greenways throughout the City.

Currently, the City of Gastonia has 132 miles of sidewalks and 4.6 miles of greenway trails. A majority of this infrastructure has been installed or are existing sections that have been improved to current standards using the GO Bonds. Bond efforts have not been limited to active modes of transportation only. The City has also used their AA bond rating to complete and widen roadways within City limits.

In an effort to make this project a reality, the City of Gastonia is committed to the long-term maintenance of the Lineberger Connector roadways, with the exception of the proposed bridge over I-85. NCDOT will maintain this bridge per their guidelines. The City will use the additional tax revenue generated from the development of the 450 acres to maintain the 1.0 mile of new roadway.

Section 8.2: Fiscal Constraints

As shown in **Table 1**, the City of Gastonia has committed \$18,500,000 (50%) of the required project funding through allocation of local funding and a commitment from the landowner.

Section 8.3: Non-federal Share across the Transportation Program

The Lineberger Connector project is a critical piece of infrastructure in the transportation network for the Communities of Gastonia and Lowell. BUILD funding is critical to advance and construct this project. The Lineberger Connector is currently listed in the Gaston-Cleveland-Lincoln MPO 2045 MTP for construction in the 2035 horizon year. However, this project is not included or assigned funding in the NCDOT STIP. The critical BUILD funding would help to advance the project from the 2035 horizon year to the funding window timeline outlined in the schedule section of this application. The City of Gastonia’s financial outlook is strong, as evidenced by maintaining an AA bond rating, according to Standard & Poor’s.

Section 8.4: Life-cycle Costs Associated with the Project

The proposed Lineberger Connector project will be designed and constructed in accordance with North Carolina Department of Transportation (NCDOT) standards. The City of Gastonia is committed to the long-term maintenance of the Lineberger Connector roadways, with the exception of the proposed bridge over I-85. NCDOT will maintain this bridge per their guidelines. The City will use the additional tax revenue generated from the development of the 450 acres to maintain the 1.0 mile of new roadway.

SECTION 9: FEDERAL WAGE RATE CERTIFICATION

The City of Gastonia will comply with the requirements of Subchapter IV of Chapter 31 of Title 40, United States Code, as evidenced by the certification in **Attachment 15**.

