

US 301: Road to Opportunity

2015 US DOT
TIGER DISCRETIONARY GRANT APPLICATION



APPLICATION SUBMITTED BY:
The City of Wilson, North Carolina



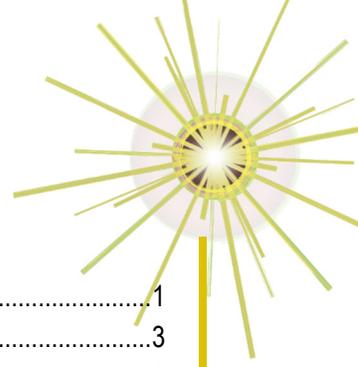
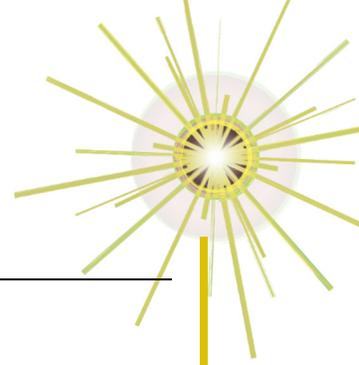


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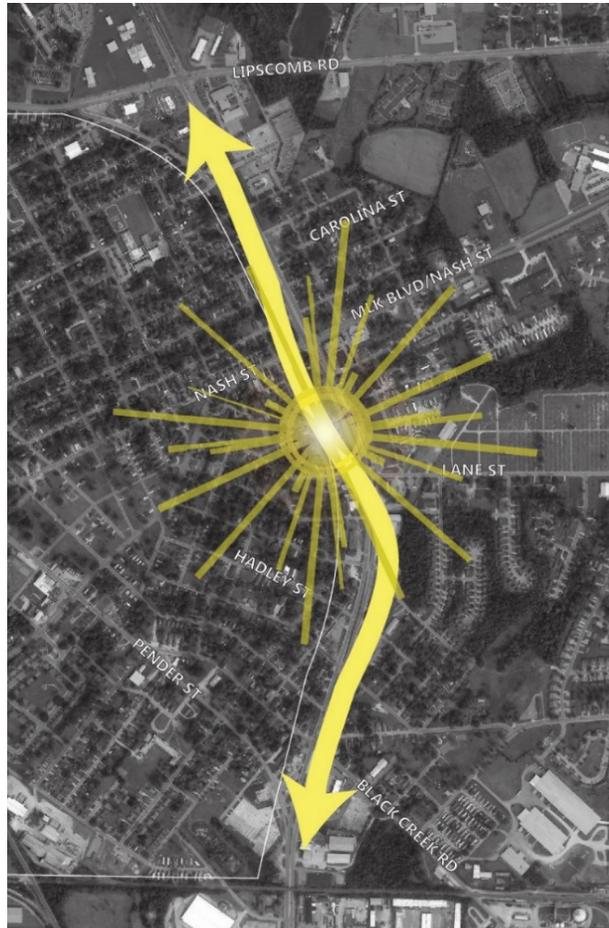
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US 301: Road to Opportunity



Executive Summary

The story of Wilson, North Carolina's US 301 Corridor – its past, its current needs, and its future potential - embodies the spirit of the TIGER Grant Program. Once a high volume interstate highway, it now serves as an oversized local roadway for residents, students, and businesses that creates as many barriers as it does opportunities. It is designed to serve only cars, doing so on outdated infrastructure that suffers from routine flooding and high crash rates. Its location, on the eastern side of Wilson, NC, is in the middle of a low wealth neighborhood within a low wealth region of the country that is struggling economically. It borders the Center City neighborhood, site of a 2012 HUD Choice Neighborhoods Initiative (CNI) Planning Grant award, where residents that are more often than not living below the poverty have limited access to cars, yet there are no pedestrian or cycling facilities. Many of the neighborhood children attend nearby schools, yet almost no students walk to several local schools because of lack of sidewalks and safe crossings. The corridor is home to several local institutions dedicated to providing better opportunities for persons with disabilities and other health concerns, yet the institutions themselves are limited by minimal transportation options for accessing neighborhood goods, services, and recreational opportunities. And due to low congestion typical of a rural highway with minimal interstate travel, US 301 is uncompetitive for additional funding under NCDOT's new project prioritization process.



And yet, for all these many issues, the US 301 corridor and surrounding neighborhood contains a glowing spark of revitalization. Its location makes it a part of everyday life for an astounding diversity of users:

- It is within walking distance of an elementary school, middle school, charter school, a community college (along with a soon-to-be-opened community college satellite campus), and the Eastern North Carolina School for the Deaf;

- It is the closest major roadway to Wilson’s highly successful and expanding industrial job base, located to the east of US 301, and within cycling distance of Wilson’s thriving downtown;
- It is adjacent to a burgeoning ‘Workforce Development Hub’ centered around Wilson Community College (WCC), the future WCC Lee Campus, and Diversified Opportunities, Inc., which provides vocational evaluation, training and placement for individuals with disabilities or disadvantaged circumstances; and
- It hosts a wide array of businesses, including retail, manufacturing, and medical facilities.

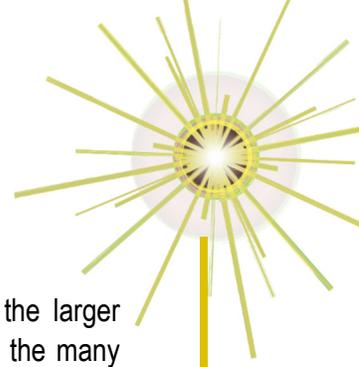
Moreover, the City of Wilson has shown an ability to leverage public investment to better the lives of its residents. Through grants like the Choice Neighborhoods Initiative and EPA Brownfield Assessments, economic incentives targeting job training and business relocations, and critical partnerships at the local, region, and state levels the City has a strong tradition of nurturing the very spark that runs along US 301.



This is a corridor that truly can be a ‘Road to Opportunity’. But its flaws must be addressed to reach that potential. **The City of Wilson and its many partners, on behalf of the users of US 301, are pursuing this TIGER Discretionary Grant to provide roadway upgrades and multimodal improvements on and immediately adjacent to the roadway so that all users - drivers, pedestrians and cyclists - can gain access to the opportunities this roadway provides, now and in the years to come.**

“Transportation is about more than throughput. It’s about creating better lives for people”

Secretary Anthony Foxx - 2015 LOCUS Summit



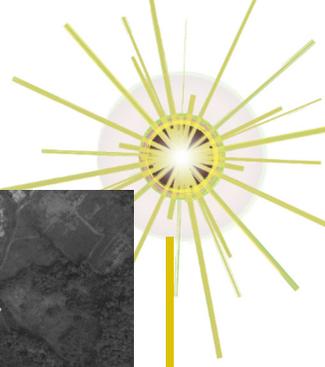
Project Description

PROJECT ELEMENTS

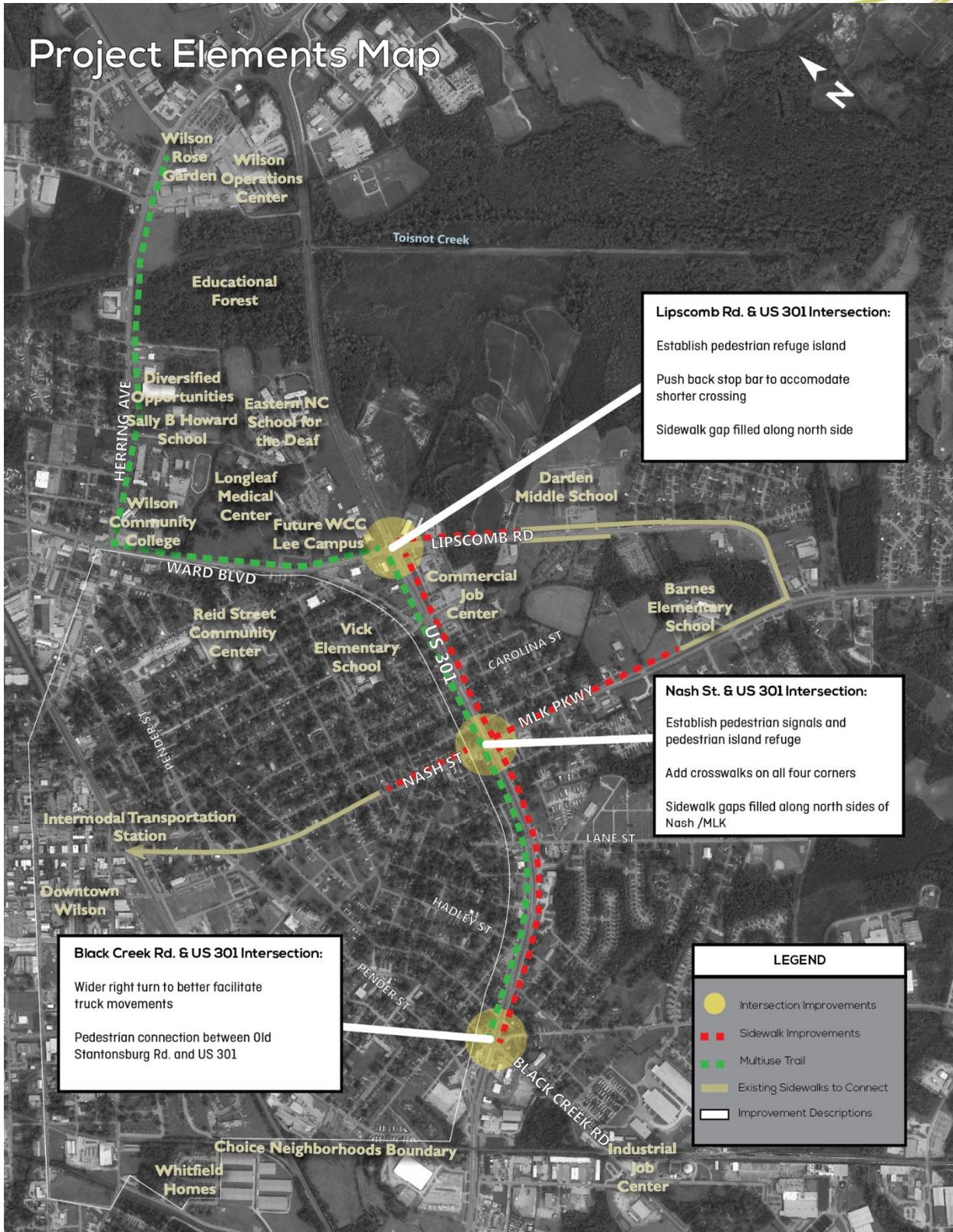
This project is composed of several interrelated parts that serve to connect US 301 to the larger neighborhood, including schools, the Workforce Development Hub, Downtown Wilson, and the many jobs and services in between.

- **Multimodal facilities, road resurfacing and rehabilitation, and stormwater improvements on a 1.15 mile section of US 301.** This section between Lipscomb Road and Black Creek Road would include a multi-use path on the west side of the road, a sidewalk on the east side, new curb and gutter, and a raised median. These improvements provide new bicycle and pedestrian infrastructure where currently there is none, and help mitigate stormwater runoff in a frequently flooded area.
- **Intersection improvements at 3 locations along US 301.** These are designed to improve pedestrian safety and vehicle safety and operations:
 - Lipscomb Road – crosswalks on all four legs, pedestrian signals across US 301; pedestrian refuge islands on north and south side of the intersection
 - MLK Parkway/Nash Street - crosswalks on all four legs, pedestrian signals across US 301; pedestrian refuge islands on north and south side of the intersection
 - Black Creek Road – wide right turn for easier freight turning movements; crosswalks on all four legs; pedestrian signals across US 301
- **Sidewalk gap fill projects on streets adjacent to US 301.** These measure a total of approximately 4,500 feet, covering areas on either side of 301 along the north side of MLK Parkway / Nash Street and on the north side of Lipscomb Road. These improvements would create a complete link between Darden Middle School, Barnes Elementary School, US 301, and Downtown Wilson, critical links for many pedestrians, particularly school children
- **A 1.5-mile extension of the multi-use path to connect residents to educational, employment and civic assets.** The facility would run west from US 301 to Herring Avenue, then north along Herring Avenue to the Wilson Rose Garden. This piece provides pedestrian and cyclist access to the Workforce Development Hub and several recreational areas where currently there is none.

The map below shows the location and various elements of the proposed project.



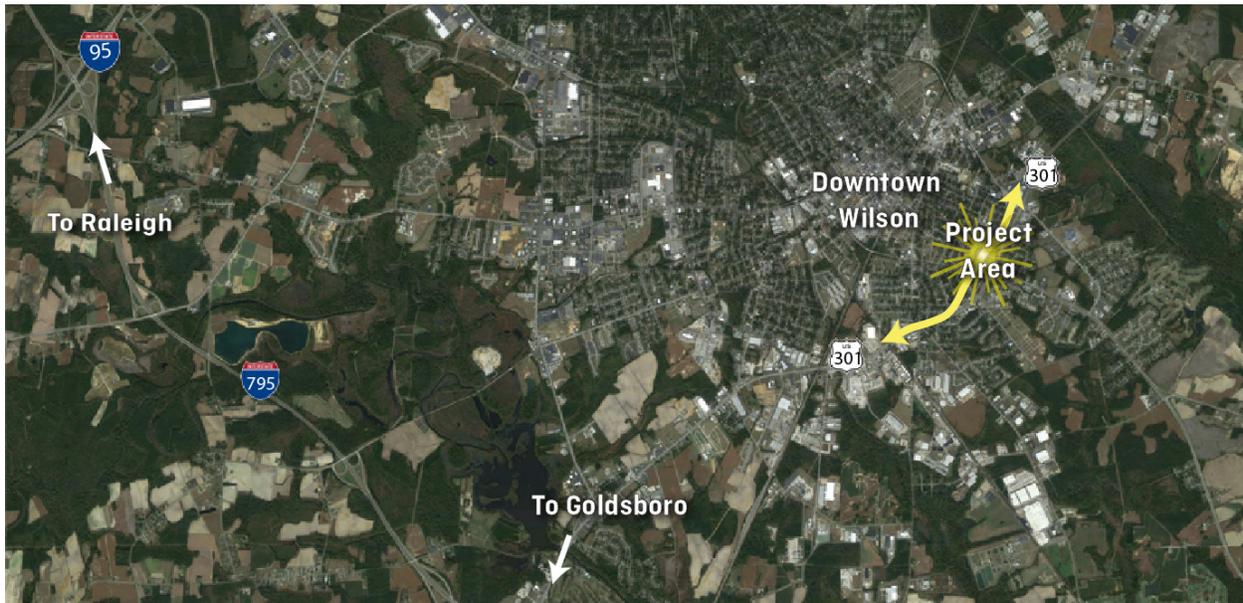
Project Elements Map





PROJECT LOCATION

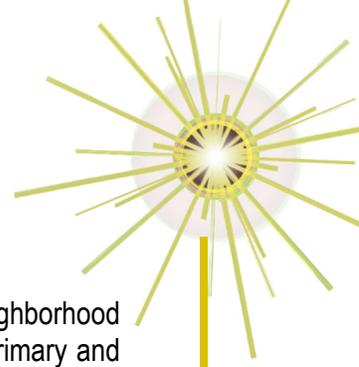
The project is located on the east side of Wilson, NC, a small city of just under 50,000 about 5 miles from I-95 in eastern North Carolina. Wilson is located in a rural area, 40 miles east of Raleigh. The City was once known as “The World’s Greatest Tobacco Market”, though Wilson has since diversified its economy, now hosting an impressive number of industrial and manufacturing facilities for a city its size. US 301 was once the region’s primary north-south interstate highway, but with the nearby stretch of I-95 in opening 1978, the roadway’s use steadily diminished. It now carries 18,000 vehicles daily, far below the carrying capacity of 32,000. This stretch of US 301 is one mile east of downtown, bordered on the west by the Center City neighborhood that is the focus of a HUD CNI Grant; on the northwest by a cluster of educational, medical, and workforce training centers that are referred to as the Workforce Development Hub; and on the east and southeast by a mix of educational, retail, industrial, and residential uses.



The basic demographic profile provided below shows the project area, city, and larger region as one with significant socioeconomic disparities. It is a predominantly minority community, with low median incomes, high poverty rates, limited access to vehicles, and a large number of persons with disabilities.

SOCIOECONOMIC DATA	US 301 Project Area	City of Wilson	Congressional District 1
Population	12,140	49,347	728,046
White	20%	44%	39%
Black or African American	64%	46%	53%
Other	15%	9%	7%
Median Household Income (\$2013)	\$ 22,152	\$ 37,676	\$ 34,076
Percent population below poverty level	44%	26%	26%
Percent of workers in households with 0 Vehicles	11%	4%	5%
Percent of workers in households with 1 Vehicle	33%	25%	21%
Percent population with a disability	18%	15%	18%

Source: American Community Survey 2013 5-year estimates

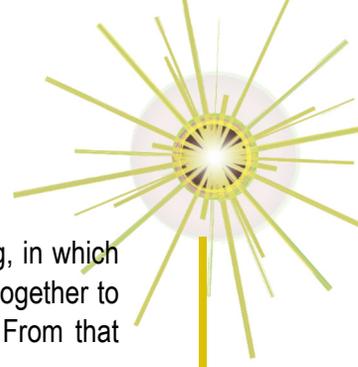


USER GROUPS

A hallmark of this project is the diversity of user groups that make use of the corridor: neighborhood residents of Washington Carver Heights and Center City neighborhoods; students at four primary and secondary schools, Wilson Community College (WCC) and the soon-to-be-completed WCC Lee Campus; commuters to industrial, retail, and medical jobs; and regional freight trucking that serves Wilson and the larger Eastern North Carolina region. But another hallmark is the economic distress that pervades this region and this neighborhood in particular. **North Carolina's Congressional District 1 is the poorest in the state, and as of 2013 was the 11th poorest in the nation**, at a median income of \$34,076. The Center City neighborhood on the west side of the corridor is even poorer, with median incomes of \$19,716. This is a historically underserved community whose daily needs would be greatly enhanced by an improved US 301 corridor.

Some additional detail on user groups follows:

- **Students** - between Wilson Community College, two elementary schools, a middle school, and one K-8 charter school, total student enrollment in the area is nearly 3,700.
- **Commuters** - Wilson is a rare small town that has more jobs than workers. The city currently has 3,500 more people working in the town than residing there. According to the most recent US Census Longitudinal Employment-Household Dynamics (LEHD) data, 21,226 commuters work in Wilson but reside elsewhere, 10,669 commuters live in Wilson but work elsewhere, 7,702 live and work in Wilson. This creates a large commuting group, but also suggests that there is a mismatch between jobs and local skills that could be improved by better local access to the Workforce Development Hub.
- **Employers** - Wilson has more manufacturing jobs than any other sector (22.1% of jobs). Health Care & Social Assistance jobs are second (13.2%). Both sectors are good-paying jobs that can be found in or within walking distance of the project area. Yet many local residents are ill-equipped to reach those jobs or the workforce training needed to acquire those jobs.



TRANSPORTATION CHALLENGES

The wide range of user groups was reflected in a March 16th, 2015 public visioning meeting, in which more than 50 people – composed of residents, civic leaders, and business owners - came together to identify transportation challenges, goals, and a prioritized vision for the US 301 corridor. From that meeting, a clear consensus on transportation challenges emerged. They were:



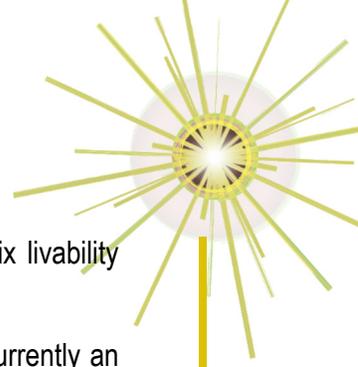
- **Safety** – The road is unsafe for pedestrians and cyclists, as local residents are still forced to use the edge of the roadway to access essential goods, services, schools, and jobs. Residents reported feeling unsafe using the road, but were still forced to use it. This feeling is compounded by the roadway serving as a major freight route for the City, creating an additional safety hazard. This is corroborated by statewide data which shows that three intersections and one roadway segment are all designated as high-crash areas by NCDOT.



- **Infrastructure** – The road lacks the multimodal infrastructure needed to support the economic viability and quality of life for the neighborhood. US 301 is currently an auto-only corridor, lacking pedestrian and bicycle facilities, safe intersection crossings, and inviting landscaping. The beaten dirt paths along and across US 301 give proof to the need for this basic infrastructure.



- **Flooding** – Large swales in the roadway median and along either edge of the right-of-way are designed to accommodate stormwater, but **flooding still occurs** here despite it not being in a floodplain, and the standing water that can build up in the swales makes the roadway even more inhospitable to pedestrians and cyclists.



PROMOTING LIVABILITY PRINCIPLES

This project exhibits strong connections to the Partnership for Sustainable Communities six livability principles:

- **Provide more transportation choices** – This is a multimodal project on what is currently an auto-only corridor.
- **Promote equitable, affordable housing** – For the neighborhood residents, many of whom have **limited access to cars**, improved walk and bike access reduces transportation costs, improving the affordability of the neighborhood.
- **Enhance economic competitiveness** – Better transportation infrastructure on US 301 would **improve access to jobs and job training for local residents**, as well as help alleviate accidents that can impact freight movement on this critical corridor.
- **Support existing communities** – **The project is in the heart of Wilson**, and the project benefits would be most accrued by the existing community.
- **Coordinate policies and leverage investments** – This project is part of a multiyear planning process, it is in line with the recent Center City Neighborhood CNI Planning Grant, and is **backed by \$2 million of public matching funds**, a major investment from one of the poorer regions in the entire United States.
- **Value communities and neighborhoods** –The very purpose of this project is to provide safe, equitable access to a community and neighborhood that is committed to **providing quality of life to all people**, especially those that are traditionally underserved such as underemployed and unemployed minority populations, children from low income households, the elderly and persons with disabilities.

“Wilson is a wonderful city that has the potential to be one of the great walkable cities in North Carolina.”

- City of Wilson Pedestrian Plan, 2006



PROMOTING LADDERS OF OPPORTUNITY

The US 301 project is inspired by, and strongly aligned with, Ladders of Opportunity. The location and demographics of the neighborhood allow the proposed project to meet Ladders of Opportunity in the following ways:

- **Increase connectivity to employment, education, services, and other opportunities – the project area is home to 9,300 jobs** (as of 2011, per US Census data), six schools ranging from elementary school to community college, nearly 30 retail stores, a community center, and a long-term care and research facility, the Longleaf Medical Center. As of now, there is no safe non-vehicular connection between these locations.
- **Support workforce development** – the neighborhood is home to the **Workforce Development Hub**, as described earlier. In addition to the many workforce development activities currently underway, the Wilson Academy of Applied Technology, a collaboration between WCC and Wilson County Schools, is scheduled to open in 2016. Beginning in the ninth grade, students will be enrolled in a manufacturing workforce development program leading to college-level laboratory and coursework in their junior and senior years. The college coursework will prepare them to transition to full-time community college students to complete the associate in science degree in one of several programs directly relating to advanced manufacturing. The Workforce Development Hub would be well served by upgraded connections to the hub and between its various sites.
- **Contribute to community revitalization, particularly for disadvantaged groups** – two of the primary user groups of the proposed project are a very low income neighborhood that is the focus of a recent **HUD Choice Neighborhoods Initiative planning grant**, and the **Eastern North Carolina School for the Deaf** that provides specialized instruction for deaf, hard of hearing, and deaf-blind students.



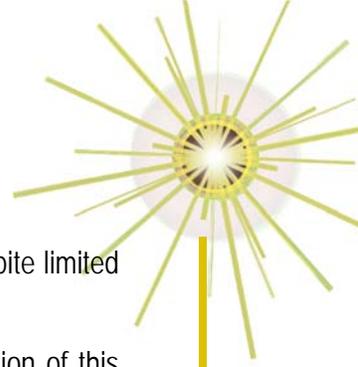


Project Parties

The City of Wilson is serving as the lead agency and primary applicant for this TIGER grant. This application is being coordinated by the Planning & Development Services department, but includes active involvement of many other departments, most notably Public Services, Police, and Water Resources. Additionally, many outside agencies have been a part of the planning and development of this project. They include the following:

- NCDOT – project design assistance, project bidding and letting assistance, project cost estimation assistance
- Wilson Community College – project area landholder, providing easement along Ward Boulevard as needed for multi-use path
- Wilson Housing Authority – stakeholder
- Wilson County – stakeholder
- Washington Carver Heights Neighborhood Association - stakeholder
- 301 Forward – local taskforce for advancing US 301 revitalization
- Upper Coastal Plain Council of Government and Rural Planning Organization – stakeholder
- Wilson 20/20 – non-profit planning, advocacy and outreach organization, stakeholder
- Wilson Opportunities Industrialization Center, Inc. – non-profit poverty assistance center, stakeholder

Each partner has been a valuable contributor to the project to date and has provided a letter of support. **The letters of support attached to the application serve as powerful evidence of the need for this project and of the dedication of the many partners to make this project a success.**



Grant Funds and Sources

The City of Wilson is requesting a total of \$16,618,600 in TIGER grant funds. The City, despite limited resources, is committed to supplementing that request with \$2,000,000 from its general fund.

The funds will be used to construct the project as described in the 'Project Elements' section of this application, but summarized in the table below.

PROJECT ELEMENTS	PROJECT COSTS
US 301 - Lipscomb to Nash/MLK	
Intersections	\$ 350,000
Roadway Shoulder/Curb and Gutter	\$ 2,500,000
Raised Median	\$ 187,500
Multiuse Trail	\$ 175,000
Earthwork	\$ 481,875
Stormwater	\$ 450,000
US 301 - Nash/MLK to Black Creek	
Intersections	\$ 175,000
Roadway Shoulder/Curb and Gutter	\$ 3,400,000
Raised Median	\$ 255,000
Multiuse Trail	\$ 238,000
Earthwork	\$ 610,200
Stormwater	\$ 612,000
Ward Boulevard	
Multiuse Trail	\$ 227,500
Herring Avenue	
Multiuse Trail	\$ 315,000
Lipscomb Road and Nash Street	
Sidewalks	\$ 253,000
Construction Sub-total	\$ 10,230,075
Maintenance of Traffic	\$ 1,023,008
Mobilization	\$ 1,023,008
Contingency	\$ 2,046,015
Construction Total	\$ 14,322,105
Construction Engineering & Inspection	\$ 2,148,316
Design/Documentation	\$ 2,148,316
Project Total	\$ 18,618,737
Local Match	\$ 2,000,000
Requested TIGER Funds	\$ 16,618,737
Percent Local Match	11%



Primary Selection Criteria

The benefits of a US 301 investment are strongly consistent with the TIGER selection criteria, as the project is on an outdated, unsafe roadway that if improved would increase economic competitiveness, quality of life, and environmental sustainability, using innovative planning and multiple partnerships to realize the project vision.

STATE OF GOOD REPAIR



The transportation infrastructure in the project area lags behind the statewide emphasis on complete streets. Because of the lack of pedestrian and bicycle facilities, pedestrian desire lines – heavily trodden paths created by foot traffic – line both sides of the US 301 corridor and at several crossings. These desire lines are exemplified by the photo to the left.

Additionally, the US 301 roadway is routinely incompatible with Wilson County's Comprehensive Transportation Plan, as it lacks sufficient median width to properly detain and

treat stormwater runoff. This shortcoming is partially mitigated by deeper swales, or channels, in the median and on either edge of the roadway. However, this mitigation strategy still does not prevent flooding on the roadway. It also makes the roadway particularly difficult to navigate for cyclists and pedestrians. Maintenance of these stormwater channels are provided twice a year, but it doesn't take long for the drainage channels are to become blocked by trash and mud, making future storm events even more damaging to the roadway and adjacent properties.

Were this project not funded, there is no known funding source to deal with these infrastructure issues. The roadway would continue to provide no proper access for non-vehicular users, would still be incompatible with the county and NCDOT-approved typical highway cross sections, and provide inadequate stormwater support on this key commercial corridor.

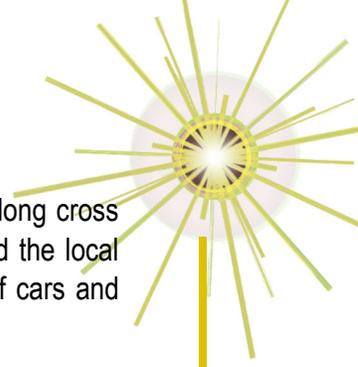
If the project is funded, it would overcome these problems with the following actions:

- Reconstruct the roadway for 1.15 miles in accordance with county and state guidelines;
- Provide high-quality and well-connected pedestrian and bicycle infrastructure in an area where it is sorely needed, improving mobility for residents and local workers; and
- Construct curb and gutter on US 301 from Lipscomb Road to Black Creek Road, allowing for a significantly upgraded stormwater conveyance system that decreases flooding and minimizes annual maintenance costs, improving the corridor's ability to withstand emergencies such as hurricanes.

Additionally, as this is a roadway managed by NCDOT, a sustainable source of revenue is available for maintenance.

SAFETY

Safe multimodal access is at the heart of the corridor's needs. The evidence is easily found throughout the project area. Pedestrian and bicycle facilities are absent on US 301, and disconnected and poorly

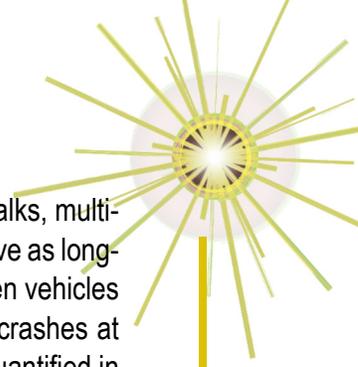


maintained on adjacent streets. Pedestrian desire lines are on both sides of US 301 and along cross streets like Lipscomb Road and Nash Street. These paths are particularly well-worn around the local schools. Pedestrians walking along the edge of the road are routinely within feet or less of cars and trucks. With roadway speeds as high as 45 MPH, this is extremely dangerous.

This danger is confirmed by longitudinal data collected by NCDOT and the City of Wilson Police Department. As the map below shows, five different intersections qualified as 'high crash locations', characterized by 5 or more crashes in a 5-year period; four on US 301 itself (at Lipscomb, Lane, Singletary, and Black Creek Roads) and one on MLK Parkway. Additionally, a fatality occurred in 2011 at US 301 and Lane Street.

More recently, the city Police Department reports 3 pedestrian accidents since January 1, 2014, and there have been more than 100 motor vehicle accidents in the project area during that time. Clearly, there is a safety issue on this corridor that needs to be addressed.





The improvements proposed for this project all help to mitigate these safety concerns. Sidewalks, multi-use paths, curb and gutter, crosswalks, pedestrian islands, and pedestrian signal heads all serve as long-term improvements to vehicle and non-vehicle movements, and well as to interactions between vehicles and pedestrians or cyclists. It is expected that these improvements will significantly reduce crashes at intersections and along the corridor. The safety benefits of the various project elements are quantified in the benefit/cost analyses of this application.

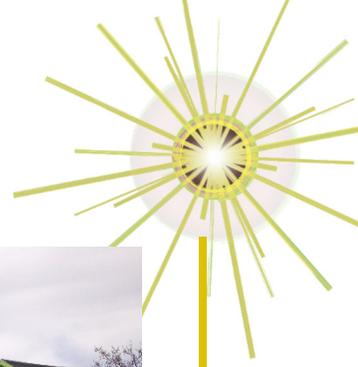
ECONOMIC COMPETITIVENESS

The project area is an extremely economically distressed neighborhood. As noted earlier, the neighborhood's median incomes of \$22,000 makes it one of the poorer neighborhoods in one of the poorest regions in the nation. As a result, many residents face financial barriers to the US 301 corridor. 11% of all households in the neighborhood are without a car, and another 33% have only one. Moreover, the corridor is home to all important categories for Ladders of Opportunity, including employment centers, education, training, and basic needs. If appropriate infrastructure was in place, long-term job creation for the Center City neighborhood would be a likely result.

Additionally, increased mobility for the neighborhood can help reduce a current mismatch between available jobs and local worker skills. The surrounding neighborhood is home to several high-quality manufacturing jobs, but few if any can be filled by local residents. This is part of a larger issue for the City of Wilson. As discussed in the User Group section, far more people commute between Wilson and another city than live and work in Wilson. This is due in large part to the jobs-skills mismatch exhibited on this corridor. By better connecting residents to workforce development tailored to local industries, the better equipped the City is to provide its own work force a better quality of life, through better jobs, decreased vehicle miles traveled, and decreased transportation costs.

Finally, there is compelling evidence that improving walk and bicycle access can increase land values. A 2009 study found that in the typical market, an additional one point increase in Walk Score was associated with between a \$500 and \$3,000 increase in home values. New sidewalks and multiuse paths should lead to improved walkability, and thus the potential for value capture by local homeowners. It can also lead to more economic certainty for smaller, local retail stores that rely on patrons that walk or bike to their stores.

These qualities – a poor neighborhood with limited mobility, a jobs-skills mismatch, and increased economic potential for businesses and homeowners - make the need for multimodal infrastructure on this corridor even more critical.



QUALITY OF LIFE

The quality of life benefits of this project align strongly with the Partnership for Sustainable Communities' Livability Principle of creating affordable and convenient transportation choices. For the many residents with limited auto access, walking or cycling is the only affordable mode of travel. For all users, however, new infrastructure can reduce transportation costs. The locations of proposed infrastructure – along US 301 – at major intersections, and along Lipscomb and MLK Parkway / Nash Street – have all been identified because they create direct connections to homes, schools, jobs, institutions, and shopping. This allows for quality of life benefits to be enjoyed by all users.



Additionally, the multi-use path connecting the workforce development hub locations to one another also serve to tie together existing and planned recreational uses. The multi-use path itself is also a recreational asset, furthering the project's quality of life benefits.

Quality of life is a key consideration in many of Wilson's planning efforts. The project has been developed in coordination with many land use, transportation, and economic development plans and working groups. Chief among these is the 301 Forward committee, a task force of local stakeholders dedicated to redevelopment and revitalization of the US 301 corridor. Originally called the 301 Task Force, it first convened over a decade ago. In recent years, it has been stewarded by the Chamber of Commerce, with oversight by City Council. The committee includes three sub-committees; transportation, economic development, and neighborhood, demonstrating the multidisciplinary nature of 301 Forward. Its mission is "to revitalize the Highway 301 corridor as a vibrant place to work and live"¹. The proposed project stems directly from the work undertaken by the 301 Forward committee.

Previous land use planning efforts have also influenced the shape of the proposed project. A Safe Routes To School Action Plan was produced in 2012, and it showed the need for better bicycle and pedestrian connectivity throughout the neighborhood; US 301, Lipscomb Road, Nash Street / MLK Parkway, and Ward Boulevard are all designated Priority Pedestrian Corridors in that plan. These findings mirror those of Wilson's Pedestrian Plan (2006) and Comprehensive Bicycle Plan (2008).

"The surveys indicate that a notable proportion of students in Wilson live within walking or biking distance of school. The survey figures, when compared to the percentage of students currently walking or biking to school, suggest that significant untapped potential exists for active travel to school in Wilson."

- Wilson Safe Routes to School Plan

¹ <http://www.wilsonncchamber.com/pages/301Forward>



Finally, this project aligns with strategies proposed in the Center City Neighborhood Transformation Plan under HUD’s Choice Neighborhood Initiative. Among the neighborhood strategies is the following; “Set goals to complete improvements along Nash, Hines, and Pender Streets within the next 5 years.” Nash Street is one of the corridors of focus in this TIGER grant application.

ENVIRONMENTAL SUSTAINABILITY

US 301 revitalization is based upon livability principles and the “Triple Bottom Line” model that balances economic, environment, and equity. This project therefore plans to incorporate environmental best practices to the fullest extent possible.

Environmental sustainability is addressed in one way through mode shift from auto trips to walk or bike trips, reducing energy use and air pollution. The benefit/cost analysis shows an expected increase in walk and bicycle mode share from 3% to 9%, as infrastructure would then match the needs of local residents. All told, between trips to work, school, home, and daily services, more than 5,000 additional walk or bike trips can be generated through infrastructure upgrades, the vast majority of them between the two community college campuses where currently there is no opportunity to walk or bike. More detail can be found in the benefit/cost section of this application.

Another way this project addresses environmental sustainability is through improved stormwater management and conveyance. The area is prone to flooding, and deep swales designed to accommodate stormwater often overflow into the roadway or the adjacent neighborhood. A curb and gutter system can help alleviate this problem, improving both environmental sustainability and quality of life for those whose lives and well beings are impacted by flooding of the kind seen in the adjacent photos, taken earlier in the spring of 2015.



Secondary Selection Criteria

INNOVATION

The US 301 project was born out of an innovative planning approach, one that is many years in the making. As discussed earlier, the US 301 Forward committee is unique in the region for its long-standing devotion to corridor revitalization. Its focus on tying together economic development and transportation, while now a concept accepted at all levels of government, was ahead of its time upon the committee's inception in 2003. As the committee has progressed from a task force to a more organized redevelopment initiative, it has incorporated extensive leadership from the Chamber of Commerce, making the connection between transportation investment and economic development even stronger. Concurrently, the City of Wilson 2030 Comprehensive Plan included topic-specific charrettes, dealing with the details of neighborhood revitalization in the planning area. US 301 was one of the topic charrettes, and the findings of that effort informed the proposed project as it is submitted here.

PARTNERSHIPS

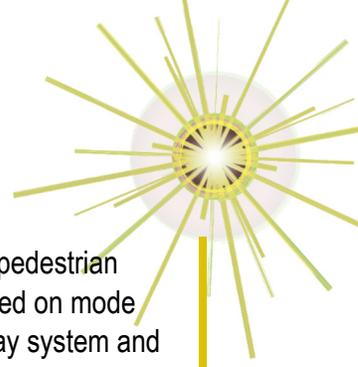
Strong multidisciplinary partnerships are at the heart of the US 301 project. The project is supported by a diverse group of government agencies, economic development councils, a range of public schools from elementary to college, the Housing Authority, and residents, to name a few. The City of Wilson has a long track record of collaborative planning, development, and project implementation. While the City is the lead agency for this project, its many partners are the key to project success. This is exemplified by the number of agencies pledging support for this project, whether that is participation in 301 Forward, attendance at the March 2015 visioning workshop, or from their letters of support attached to this application. The community at large has been a critical partner as well, with a March visioning meeting drawing more than 50 community members.



“If we can get the grant, it sounds great! I think when the changes happen, people will be very happy.”

- Dianne Dew, Area Resident

As Quoted in *The Wilson Times*, March 17th 2015



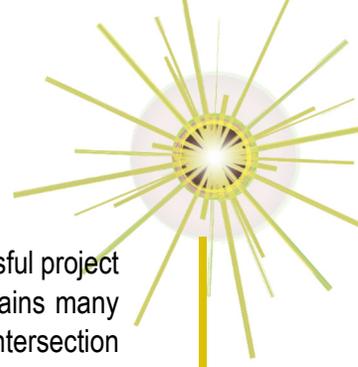
Results of Benefit-Cost Analysis

The benefits of the US 301 project is based on a number of factors that relate to new bicycle/pedestrian facilities and select roadway improvements. The benefits in the analysis have therefore focused on mode shift to walking and bicycling for every day trips, the value of recreational trips on the greenway system and safety benefits from improved vehicular and pedestrian infrastructure. Because measuring mode shift related travel behavior in response to the provision of new multimodal facilities is elusive, this analysis makes very conservative assumptions in this regard relative to other benefit/cost analyses for TIGER grant applications that were reviewed in preparation of this application.

There are several aspects of the project improvements that facilitate improved processing of motorized vehicle traffic. However, none of the projects include true through capacity elements (such as additional lanes). As such, there was no assumption of induced motorized vehicle demand based on the improvements in the application.

The table below summarizes the findings of the benefit cost analysis, and shows that the presumed benefits far outweigh project costs, with a benefit to cost ratio of 1.71.

BENEFIT-COST FACTOR	PRESENT DAY TOTAL VALUE
Operating cost of vehicles taken off the network	\$ (5,773,471)
Emissions from vehicles taken off the network	\$ (300,330)
Wilson Community College use	\$ (5,041,614)
Health benefit to pedestrians and cyclists	\$ (4,646,859)
Recreational value	\$ (1,675,509)
Crash reduction	\$ (12,930,373)
Total Benefit	\$ (30,368,156)
Construction of facilities (includes time discount)	\$ 17,681,440
Resurfacing facilities every 20 years less no build resurfacing costs	\$ 84,025
Total Cost	\$ 17,765,465
Benefit-Cost Ratio	1.71



Demonstrated Project Readiness

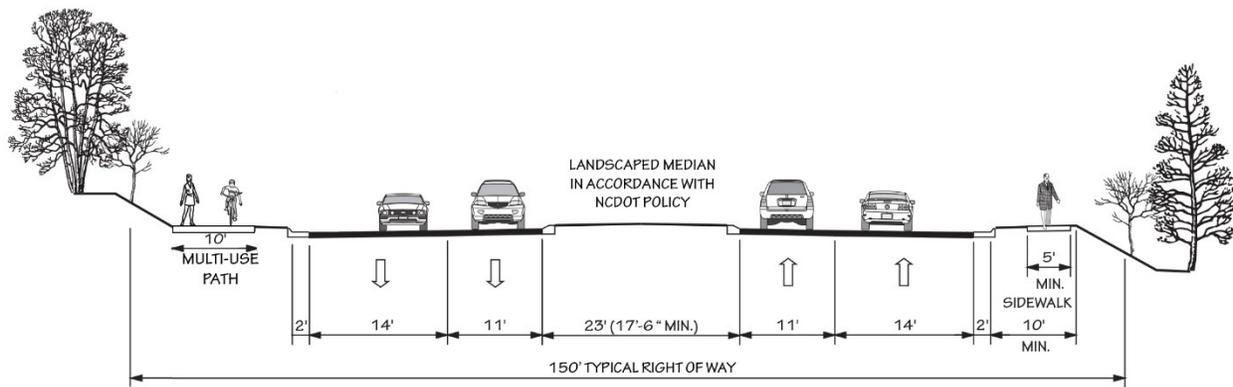
The City of Wilson has both the technical capacity and financial resources to ensure a successful project outcome. The project as proposed is in line with NCDOT technical specifications, and contains many elements that the City has extensive implementation experience in (particularly sidewalks, intersection improvements, and stormwater installation). The project has been designed to minimize environmental or permitting risks. And the project has a dedicated funding source and a dedicated set of partners ready to make the project a reality. The following sections provide detailed information on technical feasibility, financial feasibility, project schedule, status on required approvals, and a project risk assessment.

TECHNICAL FEASIBILITY

The proposed project is designed to work best as an indivisible whole, but for the purposes of this feasibility assessment is discussed in parts.

US 301 mainline

The first part is the section of US 301 between Lipscomb Road and Black Creek Road. Currently, this 1.15 mile section is a four-lane road with a median swale, no wide outside lane or sidewalk, and swales on either side of the road to capture stormwater runoff. The 1.15 mile section would include a multi-use path on the west side of the road, a sidewalk on the east side, curb and gutter for stormwater collection, and a raised median. The proposed typical section is shown below.

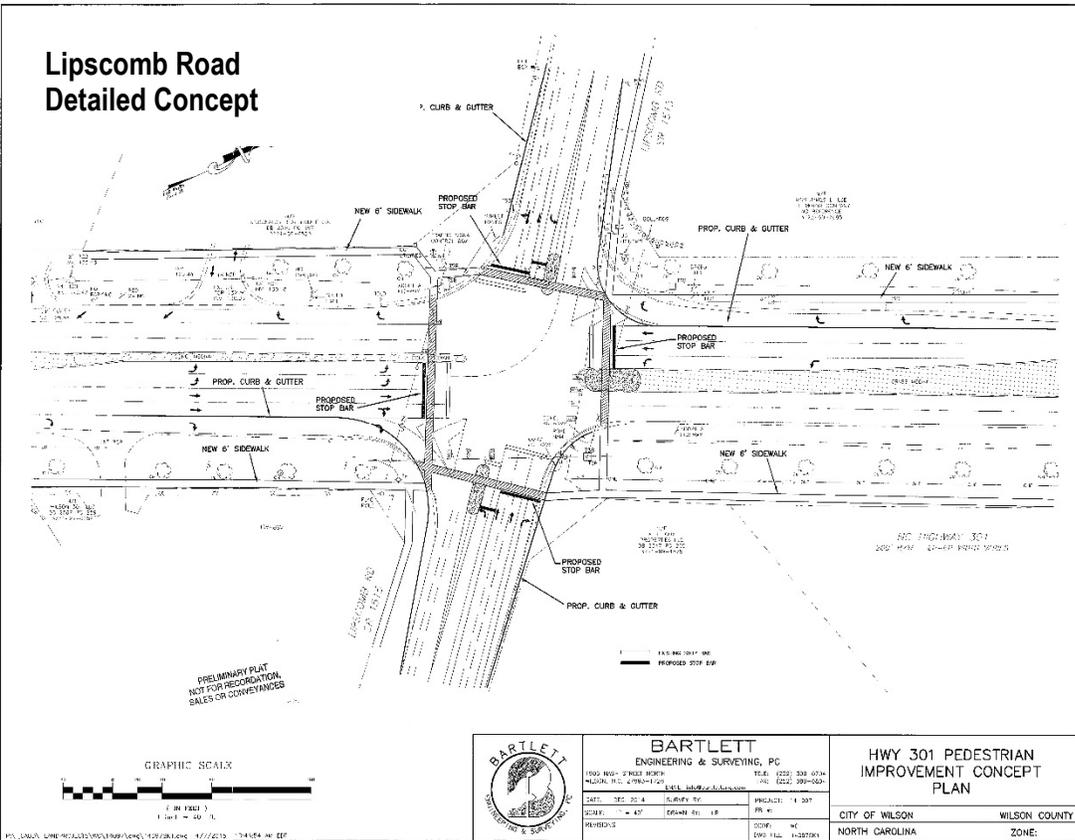
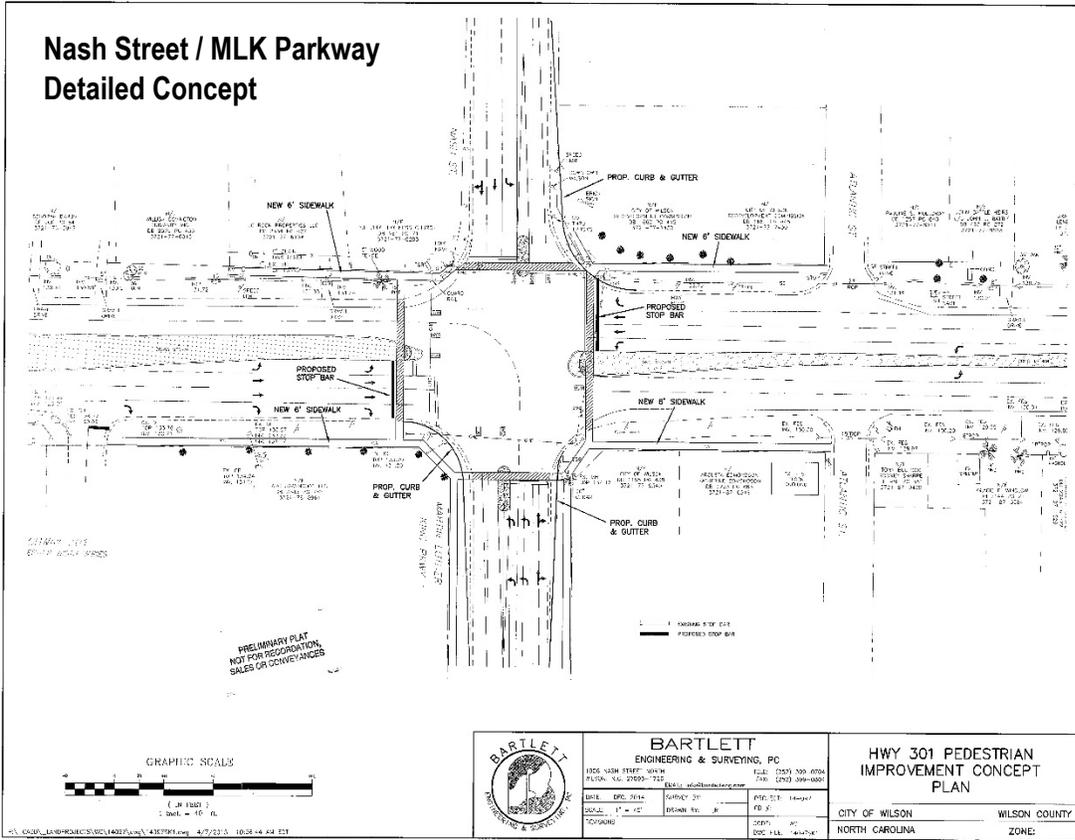
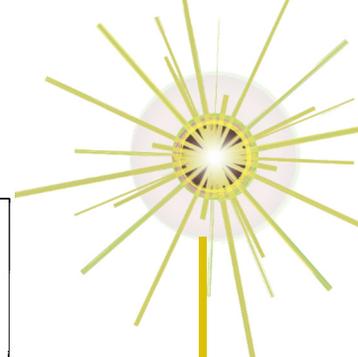


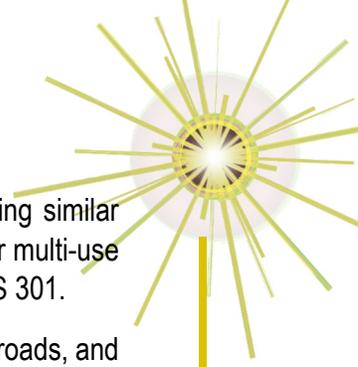
US 301 is an NCDOT-maintained road, and as such all construction activities must meet NCDOT approval. This cross section is consistent with approved cross sections as provided in the Wilson County Comprehensive Transportation Plan, page 115². The roadway right-of-way is 150 feet for the length of this section, which easily accommodates the proposed roadway elements. The plantings in the landscaped median will be provided by the City, with NCDOT approval.

US 301 intersections

There are eight intersections along US 301 between Lipscomb and Black Creek Roads. Of these, two are major crossings: Lipscomb Road and Nash Road / MLK Parkway. The City has prepared detailed concept plans for each intersections, as shown below. The improvements include new stop bars, crosswalks, pedestrian islands, sidewalk, and curb and gutter attachments.

² See https://connect.ncdot.gov/projects/planning/TPBCTP/Wilson%20County/WilsonCTP_Report.pdf





A detailed concept plan will be created for Black Creek Road intersection as well, proposing similar infrastructure. All other intersections will receive typical crosswalks to connect the sidewalk or multi-use path along US 301, but no other intersection will receive any pedestrian treatments across US 301.

All intersection improvements are proposed on either City-maintained or NCDOT-maintained roads, and no right-of-way acquisition is required.

Sidewalk improvements

There are three proposed sidewalk links adjacent to US 301 that are needed to fill network gaps:

- The north side of Nash Street heading west from US 301 to a spot approximately 675 feet where existing sidewalk ends
- The north side of MLK Parkway / Nash Street heading east from US 301 to Barnes Elementary School, an approximately 2,500 foot span
- The north side of Lipscomb Road heading east from US 301 to Darden Middle School, an approximately 1,700 foot span

Engineering drawings for these proposed improvements are underway but not yet complete, though there is sufficient right-of-way between the roadway and private property to provide six foot sidewalks on all new links.

A separate sidewalk improvement is being proposed on the south side of Lipscomb Road across from Darden Middle School, which would connect to this project and further benefit an adjacent lower-income apartment complex. That project is shown in the figure below.





Workforce Development Hub Multi-Use Path

Connecting the proposed pedestrian and cyclist network along US 301, Nash Street, and Lipscomb Road to the larger employment, educational, and development node to the west of US 301, a multi-use path is planned to extend from the intersection of US 301 and Lipscomb Road’s northwest corner westward (here Lipscomb Road becomes Ward Boulevard) to Herring Avenue, proceeding north to Firestone Parkway, site of the Wilson Rose Garden City of Wilson Operations Center. The east-west stretch from Herring Avenue to US 301 is approximately 3,300 feet, while the north-south stretch is approximately 4,700 feet.

FINANCIAL FEASIBILITY

The City of Wilson has a dedicated, available and prioritized source of local funds. City Council has agreed to provide a \$2,000,000 match from the City’s General Fund. All maintenance of proposed capital projects can be undertaken by NCDOT and the City, as appropriate.

A detailed project budget is provided below. The project is to be completed as one phase, but the major components are broken out for ease of review.

PROJECT SCHEDULE

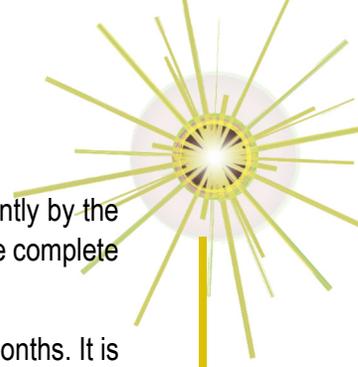
The schedule for this project is determined by the speed with which the City can meet a series of key milestones: required approvals, final engineering design, project letting and negotiation, and construction. The required approvals are discussed in more detail in the following section. Given the scope of the work proposed, and the many successes implementing similar projects within Wilson and around the state, the City is confident that the project can meet all required deadlines stipulated in the Notice of Funding Availability.

The table below summarizes the proposed project schedule.

	JUN	SEP	DEC	MAR	JUN	SEP	DEC	MAR	JUN	SEP	DEC
PROJECT STAGE	2015			2016				2017			
Required Approvals	■	■									
Final Design	■	■	■								
Project Letting & Negotiation				■	■	■					
Construction							■	■	■	■	■

Overall, it is expected that this project can be open for public use by late 2017, well before required deadlines. Justification for this schedule is as follows:

Required Approvals – as discussed in more detail in the next section, this project is not on the statewide transportation improvement projects list, and is very unlikely to be eligible given the current prioritization process. It is, however, consistent with many local plans focused on US 301 revitalization. Additionally, the project may be eligible for a programmatic Categorical Exclusion, helping to speed the process of project approval and eventual construction.



Final design – design is currently underway on all parts of the project. This is being done jointly by the City and NCDOT. Based on previous project experience, it is estimated that final design will be complete by the end of 2015.

Project letting and negotiation – The project is expected to be let and negotiated within 9 months. It is expected that construction can be led by a single contractor, thus streamlining the contract negotiation and allowing for the possibility of a shorter timeline than 9 months in reality. Project letting will be coordinated between City staff and NCDOT.

Construction – Based on the schedule of NEPA review, final design, and project letting, construction is scheduled to begin in the fall of 2016. This date is designed to provide an additional 3 month contingency period if environmental reviews, final design, or project letting and negotiation is unexpectedly delayed. However, this date is still a full year in advance of the required September 30, 2017 statutory deadline. City engineering staff has determined that this project will have 12 month construction timeline, so that the project can open in full during the 2017 calendar year.

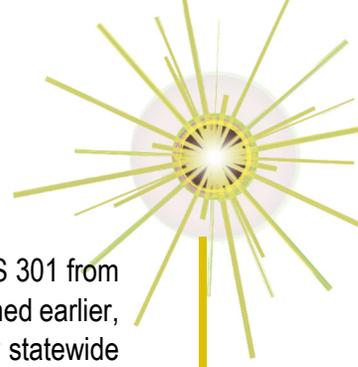
REQUIRED APPROVALS

Environmental Reviews

In anticipation of a formal NEPA review process, a cursory review of FHWA CFR 23 Chapter 1 was done to determine if the project is likely to qualify for a Programmatic Categorical Exclusion (CE), the simplest and fastest approval. The project meets all of the criteria for a programmatic CE, including:

- No significant environmental impacts
- No unusual circumstances
- No acquisition of right-of-way
- No use of Section 4(f) properties
- No anticipated adverse effect determinations from the State Historic Preservation Officer
- No work in wetland
- No work encroaching a floodway or 100-year floodplain
- No changes in access control
- Not located in an air quality non-attainment area
- Anticipated consistency with the State's Coastal Zone Management Plan
- No federally listed endangered or threatened species

As such, the expectation is that a programmatic CE will be appropriate for this project, which will significantly speed the pre-construction process. The City has begun contacting relevant stakeholders (such as the State Historic Preservation Officer), and all work on the review process is anticipated to be completed by the end of 2015.



Legislative Approvals

The project overlaps with and is in strong concurrence with Requested Project Priority #2 (US 301 from Wiggins Mill to US 42 East) in the 2014 Wilson Transportation Improvement Plan³. As mentioned earlier, the lack of congestion makes this corridor extremely unlikely for state funding under the new statewide TIP prioritization process.

Because US 301 is an NCDOT-maintained road, the City has specifically sought NCDOT acceptance of this project concept, and have received a letter of support for the project, which is attached to this application.

State and Local Planning

This project stems directly from years of planning effort aimed at improving the conditions of US 301 and the surrounding neighborhood. This project is consistent with the City of Wilson 2030 Comprehensive Plan's Goal 16: Redesign Highway 301, which focuses on redesigning the roadway so as to better serve neighborhood and pedestrian traffic⁴. Additionally, the project is consistent with all of the following local plans undertaken within the last 10 years:

- Wilson Comprehensive Bicycle Plan⁵
- Wilson Pedestrian Improvement Plan
- Wilson Safe Routes to School Plan
- Wilson 20/20 Community Vision
- Wilson County Comprehensive Transportation Plan

ASSESSMENT OF PROJECT RISKS AND MITIGATION STRATEGIES

The City has assessed risks to the US 301 project as proposed in this application, and has not identified any material risks that will prevent the obligation of funds provided through the TIGER grant program. The City identified NEPA documentation, final design, and project costs as presenting some risk. The risks with documentation and design relate to possible schedule delay inherent in all design and approval processes, but these risks have been accounted for in the schedule above.

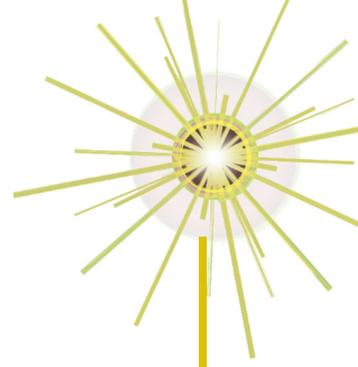
MATERIAL CHANGES TO PRE-APPLICATION INFORMATION

Subsequent to the pre-application submittal for this project, the project elements were refined and a more detailed cost estimation methodology was employed. This resulted in the determination that more money was needed to complete the project. Also during that time, the City of Wilson raised its level of commitment of local funds from \$1.5 million to \$2.0 million.

³ <http://www.wilsonnc.org/wp-content/uploads/2014/12/Wilson-TIP-Projects-w-Maps.pdf>

⁴ <http://www.wilsonnc.org/wp-content/uploads/2014/12/COW-comprehensive-plan.pdf>

⁵ All referenced plans can be found here: <http://www.wilsonnc.org/planning-and-community-revitalization/plans/>



Benefit Cost Analysis Assumptions

Detailed information on benefit calculations are provided here.

BENEFIT ELEMENTS

Vehicle Operating Costs

These savings come from the cost difference between operating a car, which is estimated to cost \$0.575/mile, and walking or riding a bicycle, which cost nothing. The VMT reduction is based on an increase in the biking and walking mode share from its 2010 level (as provided by the US Census American Community Survey 5-year estimates) to a higher share after construction of the facility. School trips are assumed to shift at a higher rate than other types of trips.

Emissions

The shift from auto travel to biking and walking as a result of the new infrastructure will reduce the costs imposed on society by the emission of pollutants and greenhouse gases from cars. The costs of these pollutants (CO₂, VOCs, NO_x, and PM_{10+2.5}) were given in the TIGER application resources provided by US DOT, and emission rates per mile came from the US EPA. They were applied to the VMT reduction calculated for this analysis.

Health

The documented health savings associated with walking and biking for everyday travel are \$3.15 per user per mile⁶. The total value of health benefits over the life of the project was calculated using the total reduction in VMT due to mode shift.

Recreational Value

Recreational use of bicycle and pedestrian facilities has been calculated to have a unit day value of \$3.81⁷. The daily number of recreational users was estimated relative to the number of users on similar facilities.

Crash Reduction

An important goal of these improvements is to improve the safety of this corridor for motorists, pedestrians, and cyclists. By separating pedestrians and cyclists from the road on a path, their chances of being hit by a car are reduced. The intersection improvements will improve the safety of pedestrians crossing the road, and slow down traffic, reducing the severity of crashes.

“We are a healthy community with a holistic view of wellness for all our citizens at all stages of life and socioeconomic status.”

- Wilson 20/20 Community Vision

⁶ Victoria Transport Institute. (2015). Evaluating Active Transport Benefits and Costs. <http://www.vtpi.org/nmt-tdm.pdf>

⁷ Delaware River City Corp. (2005). North Delaware Riverfront Greenway Master Plan and Cost Benefit Analysis. <http://www.drcc-phila.org/reports/NDR-Chapters/NDR-Chapter%204CostBenefit.pdf>



Wilson Community College (WCC)

The multi-use path passes the campus of WCC, and will link the main campus with its satellite Lee Campus. The community college will benefit from use of the trail by both students and maintenance staff. Benefits for students were treated as a mode shift from driving to walking or cycling. Benefits for maintenance were treated as a shift from trucks to electric golf carts.

COST-BENEFIT ANALYSIS

Home-Based and Work-Based Trip Estimation

Home-based work trip origins and destinations by block group for the area adjacent to the project were identified from 2011 Census data⁸. The school trips estimate was based on data provided by Wilson County schools on enrollment and school bus ridership, and information on walking to school from the Wilson Safe Routes to School Plan. Home-based non-work trips were calculated from work trips, based on the assumption that work trips make up 16% of all trips⁹. These calculations are shown in the OD tab in the spreadsheet. Affected non-home-based trips were calculated from the number of people who work in the adjacent block groups but do not live there, assuming that they each make one work-based trip per day. Non-home-based trips are shown in the NHB tab of the spreadsheet.

To calculate total person miles traveled (PMT), the distance traveled for home-based and school trips was based on the network distance between the centroids of the relevant block groups. Non-home-based trips and trips within a single block group were assumed to be 0.5 miles in length. Trips by community college students and maintenance staff were set at the distance between WCC main campus and Lee Campus, 0.5 miles.

Trip and PMT growth was assumed to be proportional to population growth. Growth rates for Wilson County were taken from the NC Office of State Budget and Management and applied directly to the total number of trips and number of mode-shifted trips in order to estimate the total VMT that will be eliminated by the project over the first 30 years of the project. Growth calculations are shown in the Factor Summary tab of the spreadsheet.

Recreational Trip Estimation

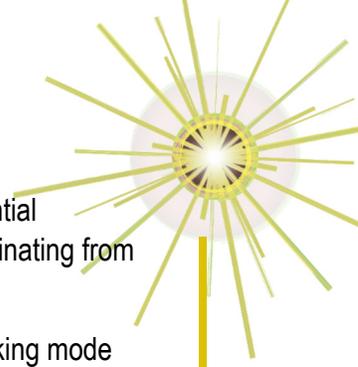
Since no facility of this type currently exists in Wilson, this analysis considered similar facilities in other communities to estimate the number of daily recreational trips that will use the sidewalks and multi-use paths. A greenway of similar length in Asheville, NC, averaged 600 recreational trips per day. The recreational trip attraction of this greenway was calculated by accounting for the difference in population between Asheville and Wilson, as well as the differences in scenic attractiveness and destinations along the trail. The final estimate was 51 recreational trips per day. Calculations concerning recreational trips are in the Recreation tab of the spreadsheet.

Vehicle Trip Mode Shift Benefits

In order to estimate the emissions and vehicle operation savings resulting from the project, an estimate was needed of the VMT that would be reduced by travelers shifting from private automobiles to biking and walking. To simplify the analysis, biking and walking were combined into one category. This was a

⁸ U.S. Census Bureau. (2011). LEHD Origin-Destination Employment Statistics. <http://onthemap.ces.census.gov/>

⁹ National Household Transportation Survey. (2009). Summary of Travel Trends. <http://nhts.ornl.gov/2009/pub/stt.pdf>



conservative assumption relative to benefit/cost analysis, because bike trips have more potential opportunity to reduce VMT compared to walking, due to longer potential trip length. Trips originating from WCC were excluded from this analysis and handled separately.

Reduction of VMT was calculated based on an assumption of a change in the biking and walking mode share of affected trips. The starting biking and walking mode share was 10% for school trips and 3% for all other types of trips, based on data from the ACS, Wilson County Schools, and the Wilson Safe Routes to School Plan. It was assumed that after construction of the project, the biking and walking mode share would increase to 50% for school trips, 5% for work-based trips, and 9% for all other types of trips, equal to walking and biking mode share in downtown Wilson. These changes are summarized in the Mode Share tab of the spreadsheet.

The number of miles that shifted from private auto to biking and walking were used to calculate the emissions, vehicle operation, and health savings benefits of the project. These calculations are in the Factor Summary tab of the spreadsheet.

Health and Recreational Benefits

The health benefits of daily active commuting were calculated based on the miles traveled by people living and working in the project area. The amount saved in health costs per mile of active transportation was applied to the VMT reduction of home-based-work trips. It was also applied to half of the non-home-based trips that shifted to non-motorized modes. The dollar amount per mile used was a weighted average of the benefit per mile for walking and for biking. This calculation is in the Factor Summary tab of the spreadsheet.

The benefits also include the recreational value of the trail, for those who use it for jogging, walking dogs, and other recreational activities. The recreational value per user per day was applied to the estimated daily number of recreational trips, discussed above. This is shown in the Recreation tab of the spreadsheet.

The health benefit and recreational value amounts came from sources that are noted in the Assumptions tab, and have been converted to 2015 US dollars.

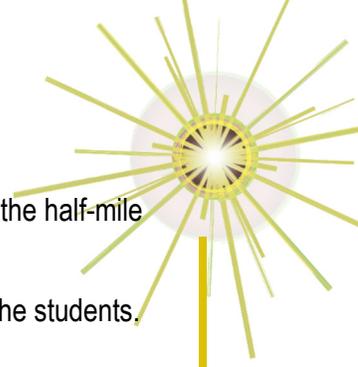
Safety Benefits

Four of the intersections in the corridor of this project were designated “High-Frequency Crash Locations” by NCDOT in 2011. The intersections of NC 301 with Black Creek Rd., Singletary Rd., Lane St., and Lipscomb Rd. had a total of 52 crashes between 2007 and 2011¹⁰. In order to be conservative, this analysis assumes that over the life of the project, it will prevent two pedestrian fatalities, one serious vehicle collision, and two minor vehicle collisions. There are two types of costs associated with collisions: property damage and injuries, both of which were given in the TIGER BCA resources. Property damage costs were given as a flat amount per vehicle, and injuries were categorized by severity, using fractions of the value of a statistical life. These calculations are in the Safety tab of the spreadsheet.

Wilson Community College

WCC’s location on the multi-use path positions it to take maximum advantage of the trail’s value, making it a major beneficiary of the project. There is currently no sidewalk connecting the college with the site of its

¹⁰ NCDOT. (2011). Crash Type: High Frequency. <https://connect.ncdot.gov/resources/safety/pages/crash-data.aspx>



future satellite Lee Campus. In the absence of any pedestrian improvement, any travel along the half-mile distance between the main campus and Lee Campus will be done by driving.

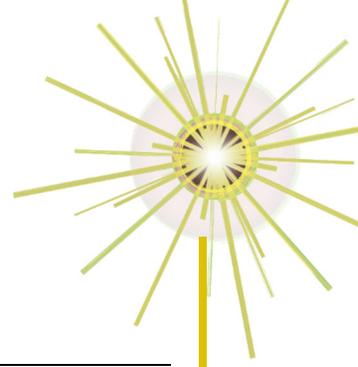
WCC's benefits from the path have been calculated in two parts: the maintenance staff, and the students. These calculations are in the Wilson CC tab of the spreadsheet.

It is likely that maintenance staff will need to travel regularly between the two parts of campus, often with tools and other equipment. The project will allow the staff to make these trips in electric golf carts rather than trucks. This analysis assumed that there will be two maintenance round-trips each work day, and calculated the differences in operating cost and emissions caused by switching from trucks to golf carts. The cost of emissions of a golf cart and the sources used to calculate them are shown in the Golf Cart Emissions tab.

Students will be able to use the path to travel between the two campuses on foot or bicycle, and it will also connect them to the commercial center at the intersection of US 301 and Lipscomb Road. The analysis assumes that curriculum students will use the greenway for one round-trip, 0.5 miles each way, which they would have otherwise made by driving. (Continuing education students are not included in this calculation.) The total number of VMT avoided in this way was used to calculate emissions and operating cost savings at the same rates as used for the home-based and work-based trips above.

PROJECT COSTS

Project construction costs were estimated at \$18,618,600. A breakdown of costs is provided on page 20 of this application. The cost of resurfacing the path in 20 years is estimated to be \$140,000 per mile, and was added to the project costs for the year 2037. Cost calculations are in the Costs tab of the spreadsheet.



Appendices

Federal Wage Rate Certification

Letters of Support

Benefit-Cost Analysis Spreadsheet

City of Wilson TIGER Grant Publicity Flyer