

Corridor Studies



Scope

The City's corridor studies seek to identify the mix of transportation improvements and land uses that would be most effective in moving people and goods in specific areas, and balancing those improvements with available funding and neighborhood and community concerns. These studies help to identify multi-modal transportation and streetscape design options and programmatic strategies to improve the corridors, with a particular focus on how transportation and streetscape strategies impact placemaking and economic development.

With the implementation of the 2030 Comprehensive Plan, numerous corridor studies have been proposed for a variety of transportation corridors. These studies have been an excellent way to bring together City staff, neighborhoods, and CAC's to discuss how these crucial corridors flow through and serve our residents and businesses, and how they can be brought up to date and into the 21st century.

The following corridor studies have been identified for completion over the next 10 years:

Corridor Studies/Area Planning/Feasibility Studies (some may be in-house)

- Avent Ferry Road (Gorman to Varsity)
- Capital Boulevard North (I-440 to I-540)
- Falls of Neuse/Spring Forest Area Plan
- Jones Franklin (Buck Jones to I-440)
- Lake Wheeler Road North (I-40 to South Street)
- Lead Mine Road
- Litchford Road Corridor
- New Bern West (I-440 to Neuse River)
- North Boulevard (Capital from Wake Forest to Crabtree Blvd)
- Old Wake Forest Road (coordinate w/ TTA project)
- Rogers Lane (New Hope Church to New Bern Avenue)
- Six Forks Road Corridor (I-440 to Lynn/Spring Forest)
- Strickland Road (Leesville to Creedmoor)
- Wade Avenue (Faircloth to Glenwood)
- Wilmington Street (I-440 to S. Saunders)

Target Funding Level: \$300,000 per year

Advance Planning & Feasibility Studies

Scope

The City regularly retains private engineering and planning firms to conduct special studies for the City on a variety of transportation projects. Previous studies have included alignments for proposed street connections, pedestrian and bicycle volume counts, and special traffic analysis projects. Future planned projects include additional bike and pedestrian field counts, and the exploration of a potential bikeshare program.

Target Funding Level: \$50,000-\$100,000 per year



Bicycle Lane Marking & Signage

Scope

The City is continuing the installation of new bicycle lane striping and markings per the recommendations of the City's Bicycle Transportation Plan. This program also funds the improvements or replacements of existing bicycle route signage, along with the installation of additional signs and wayfinding equipment. Signage will be installed along new bicycle route locations as well as various intersections of the Capital Area Greenway and local streets. This ongoing program also includes the restriping of vehicular travel lanes to accommodate bicycle lanes. This level of annual funding can provide for roughly 25 miles of bicycle markings to be added to our street system per year.

Target Funding Level: \$500,000 per year

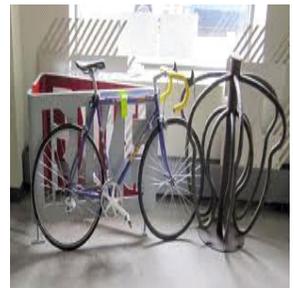


Bicycle Facilities/Parking & Stations

Scope

This program is responsible for the deployment and installation of new bicycle racks, secure parking bicycle parking stations, and supportive facilities per the recommendations of the City's Bicycle Transportation Plan.

Target Funding Level: \$25,000 per year



Pedestrian Intersection Safety Improvements

Scope

This program aims to improve pedestrian facilities at street intersections, at greenway intersections, and at mid-block crossing locations by adding crosswalks, pedestrian refuges, pedestrian signal heads, and push buttons. Priority is given to intersections and locations with high numbers of pedestrians or transit customers.

Target Funding Level: \$150,000 per year



Sidewalk Improvements

Scope

This program constructs new sidewalks along public streets as prioritized by the City Council in an effort to improve pedestrian safety and accessibility. The City's Comprehensive Pedestrian Plan sets standards for deciding which priority sidewalks are built first, and it establishes guidelines and best practices for sidewalk and intersection construction.

The 2011 transportation bond included \$7.75 million for new sidewalk construction, as well as an additional \$4 million for sidewalk repairs. Sidewalk projects can be initiated by the City and can also be requested through the public petition process by local residents.

Target Funding Level: \$1.5 million per year



Sidewalk Repairs

Scope

This program repairs broken and deteriorated sidewalks at various locations as requested by property owners and approved by the City Council. Repairs will address trip hazard abatement and replacement of concrete slab for sidewalks throughout the City. In 2011 the City Council ended the City's practice of assessing adjacent property for the full cost of sidewalk repairs. Since then the Public Works Department has fielded more than 1,000 new requests for sidewalk repairs.

Target Funding Level: \$1.0 million per year



Thoroughfare Streetlight Installation

Scope

The City is responsible for all streetlight installations in areas within our City limits on public streets. Requests for new installations originate with developers, field observations, annexations and citizens. The City works with local energy providers to provide services for streetlights through their leasing programs. The installation of street lights on major streets helps to raise the level of illumination on streets and sidewalks to enhance personal safety and security.



Target Funding Level: \$250,000 per year

Safe Routes to School

Scope

The City's Safe Routes to School Program works towards making it safe, convenient, and fun for children to walk and bike to and from school. The key to a successful Safe Routes to School Program is teaching children about the broad range of transportation choices and instructing them in important lifelong safety skills. This program also coordinates infrastructure investments around these schools that facilitate safe walking and biking. Funds from this program are used to provide local matches against outside grant funding.



Target Funding Level: \$100,000 per year

Sidewalk Petition Projects

Scope

The City's petition program for sidewalks provides citizens with an opportunity to initiate new sidewalk construction. This program is oriented towards completing sections of the sidewalk network that have not been identified by the Pedestrian Program and is primarily intended for streets in residential neighborhoods. Sidewalks along non-residential streets can be considered on a case-by-case basis.



In order for the a sidewalk petition to be considered, 75% of the property owners must indicate they are in favor of a sidewalk along the street.

Target Funding Level: \$500,000 per year

Transit Equipment/Facilities and Maintenance

Scope

The Federal Transit Administration (FTA) Bus and Bus Facilities Program provides capital funding to replace, rehabilitate and purchase buses and related equipment and to construct bus related facilities. The new formula grant program was established under Section 5339, replacing the previous Section 5309 discretionary Capital Investment program.

This is a formula program and must be applied for through the Capital Area Metropolitan Planning Organization. FTA requires an 80/20 Federal/Local match for this program. This funding will provide for the City's share of replacement of capital equipment items associated with the operation of the Capital Area Transit System.

Target Funding Level: \$50,000 per year



Street Improvement and Paving Petitions

Scope

This program is responsible for the construction of street improvements and petition paving projects associated with capital projects or petition projects as requested by citizens and authorized by the City Council. The Street Improvement Petition Program provides citizens an opportunity to initiate improvements to non-standard streets that have not been identified in the city's Capital Improvement Program.

Target Funding Level: \$2.0 million per year



Public-Private Partnerships

Scope

Public-private partnerships (P3s) are contractual agreements formed between a public agency and the City that help improve the delivery of transportation projects. The City has participated in several previous public/private projects in which the developer has assumed some responsibility for the majority of the design work and construction activities, together with the risks associated with providing these services for a fixed fee.

Some of the benefits of this approach include advanced property acquisition. Projects along the US 70 and US 1 corridors identified in the 2030 Comprehensive Plan have been completed using the P3 method. These program allocates contingency funds that can be used to capitalize on potential P3 projects when they are presented.

Target Funding Level: \$1.0 million per year

Streetscape Projects

Scope

The City undertakes Streetscape Improvement Projects along a variety of streets to improve pedestrian safety and encourage economic investment. These projects can entail improvements to the street, sidewalks, bike lanes, streetlights, and other amenities. Project priorities for the City's Streetscape Capital Program were updated in 2012 and include over 30 candidate projects.

Target Funding Level: \$2.0 million per year



Transit Passenger Facilities & Amenities

Scope

This funding provides for the implementation of new and improved transit amenities at stops along priority transit corridors within the operation of the Capital Area Transit System. Amenities include elements such as shelters, benches, trash cans, and bike racks. A portion of the costs for this program include the acquisition of easements for shelters on private property located outside of the public right-of-way.

Target Funding Level: \$200,000 per year



Intersection Signage and Signal Improvements

Scope

This program aims to improve services at intersections through refurbishment of intersection medians, signal head replacement (LED), overhead street markers. The City is facing new visibility requirements from the Federal Highway Administration that may necessitate the replacement of over 70,000 signs in the City's inventory of Raleigh with new highly reflective sheeting. This unfunded mandate would have a significant cost implication for the City that would be borne by this program.

Target Funding Level: \$475,000 per year



Traffic Signal Installations

Scope

Traffic signals are important for determining the right-of-way at an intersection, creating orderly traffic flow, allowing pedestrians to cross streets and providing cross-street traffic a chance to cross or enter an intersection. When installed at appropriate locations, traffic signals can increase the capacity of an intersection, reduce the frequency of collisions, and provide better minor street access. Because traffic signals are expensive to install and may induce safety problems if not appropriately placed, the City only installs signals where warrants are met in the field and where they will clearly improve safety and make the intersection operate more efficiently.

The City typically installs one or two traffic signals per year through the Capital Improvement Program. Other traffic signals throughout the City are funded by private development or by NCDOT. Costs for signal installations have been increasing due to the more frequent use of metal strain pole and cantilevered mast arms.

Target Funding Level: \$165,000 per year



Bridge Repair & Maintenance

Scope

Funding for this program is used to address necessary repairs and provide maintenance for city owned bridges. There are currently a total of 38 bridges and structures in the City's inventory. These structures will be improved on a gradual basis with oldest bridge structures receiving the highest priority. This program provides funding for biennial inspections of the City's structures. Three bridges are beginning to give indication for more routine, systematic repairs and annual inspections. being needed.

Target Funding Level: \$120,000 per year



Neighborhood Traffic Management Program

Scope

The City's Neighborhood Traffic Management Program seeks to mitigate speeding on residential neighborhood streets. This program funds the implementation of traffic calming measures along these streets as requested by resident petitions and submitted to City Council for approval. These measures are designed to help improve pedestrian, bicycle and vehicular safety and access.

The objectives of the City in dealing with neighborhood traffic issues are:

- Ensure the public safety of streets in residential areas for drivers and for pedestrians;
- Improve multi-modal opportunities within a neighborhood, including enhancements for pedestrian, bicycle, and transit accessibility and;
- Achieve moderate vehicle speeds on residential streets by a combination of policies, physical measures, and public outreach.

Target Funding Level: \$1.0 million per year



Intersection Safety Improvements

Scope

This program funds intersection improvements to address crash patterns at various locations throughout the City. These locations have been identified as high hazard locations and can require substantial geometric, signing, or signal improvements to reduce crashes and improve safety. These improvements can also involve intersection reconstruction, hard channelization, and drainage enhancements.

Target Funding Level: \$500,000-\$1.0 million per year



Street Resurfacing

Scope

The purpose of the resurfacing program is to maintain the City's street system that consists of approximately 1,050 miles of roads. Normal deterioration of streets due to age, weather and traffic volume necessitates resurfacing activities to maintain integrity and usability of roadways. A good maintenance program helps to avoid full reconstruction costs at a later time. The goal for the Public Works Department is to provide resurfacing on average every 10-15 years. In order to maintain this resurfacing cycle for a street system the size of Raleigh, an annual funding level of at least \$10 million per year is recommended.

Target Funding Level: \$10-12 million per year



Bus and Van Replacements

Scope

The Federal Transit Administration (FTA) Bus and Bus Facilities Program provides capital funding to replace, rehabilitate and purchase buses and related equipment and to construct bus related facilities. The new formula grant program was established under Section 5339, replacing the previous Section 5309 discretionary Capital Investment program.

This is a formula program and must be applied for through the Capital Area Metropolitan Planning Organization. FTA requires an 80/20 Federal/Local match for this program. This funding will provide for the City's share of replacement of buses and vans in the Capital Area Transit system which have reached their life expectancy. The variability in the target funding levels reflects the uncertainty associated with the new federal MAP-21 legislation and how matches will be applied by NCDOT.

Target Funding Level: \$400,000-\$800,000 per year



LED Streetlight Program

Scope

The primary benefits of LEDs are their reduced energy consumption, longer lifetime, directionality and controllability. The energy savings are 50% or more over conventional street lighting systems, and the lifetime is estimated at 5 times longer yielding an excellent payback time of 4.4 years. The "instant on" and dimming ability of LEDs may offer additional energy savings through control strategies that can brighten and dim based on time of day, ambient light, or any other control parameters desired. Motion sensors can turn LEDs on or off instantly, allowing lighting to be used only when needed.



Typical outdoor lighting (metal halide or high-pressure sodium fixtures) have a re-strike time of a few minutes before they can turn on and therefore cannot be used with motion sensors. The City is partnering with Duke Progress to explore these types of new possibilities with LED streetlighting fixtures. The requested funding will be used to expand the installation of LED lighting after a successful Pilot program that installed LED lights downtown lights.

Target Funding Level: \$4.0 million

Preventive Maintenance

Scope

Per Federal Transit Administration (FTA) requirements for managing federally-funded assets, the City has developed a Vehicle Maintenance Program that is approved and in place. Specifically, all vehicles funded using federal dollars via NCDOT Public Transit Division (PTD) must be included in the program which includes a comprehensive written Vehicle Maintenance Plan. It is important for the City to have a strong vehicle maintenance program since well-maintained vehicles are essential to providing a safe and secure ride for our customers.



Preventive maintenance is required to ensure vehicles remain in a state of good repair based on manufacturer recommendations. Preventive maintenance also helps avoid breakdowns that may jeopardize passenger safety; helps ensure that all equipment, such as wheelchair lifts, is functioning properly; and conserves the vehicle maintenance budgets by reducing avoidable unplanned major repairs. This funding will provide for the City's share of costs associated with maintenance of fleet/service vehicles, buildings, and grounds at the Capital Area Transit as well as upgrades to computer hardware and software as needed.

Target Funding Level: \$900,000 per year