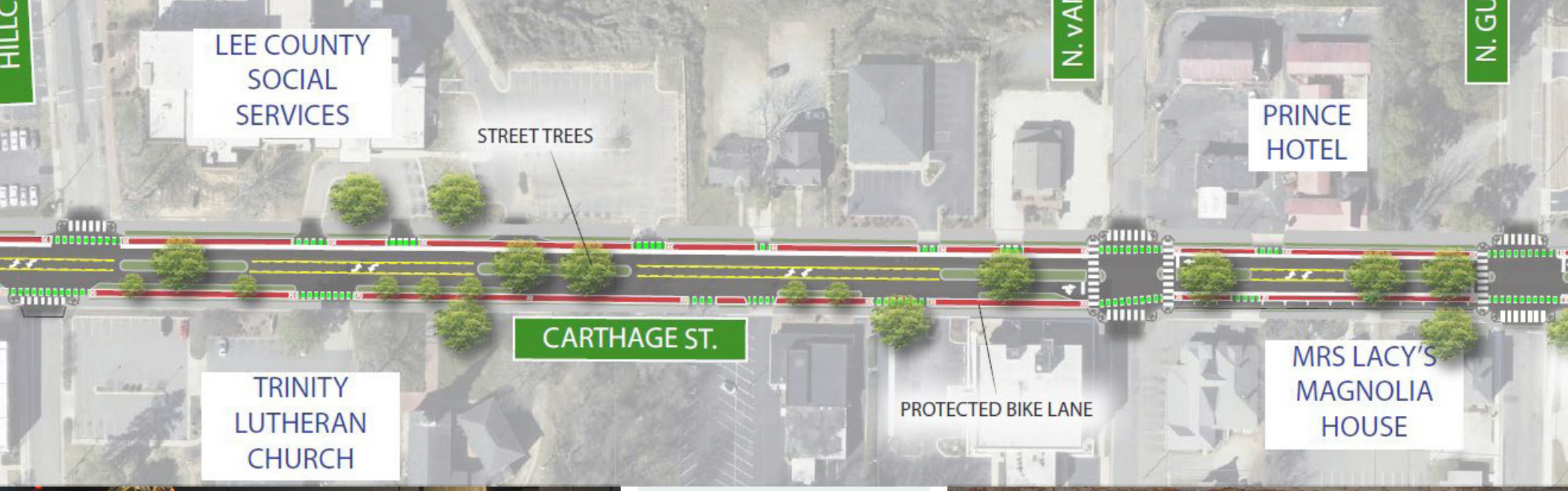

CITY OF SANFORD

COMPLETE STREETS FEASIBILITY STUDY

July 2019

Acknowledgments

Sanford's Complete Street Feasibility Study would not be possible without the combined efforts and support from NCDOT the City of Sanford, and numerous community members and leaders from Sanford and the surrounding area.

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Peggy Taphorn	Temple Theatre Director
Dan Harrington	Downtown Business Owner
Lawrence Curtis	E.Sanford Property Owner
Greg Stoch	City Historic Preservation Commission
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City of Sanford
CARTHAGE ST & CHARLOTTE AVE
Complete Streets Study

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Coca-Cola
Coca-Cola
TEMPLE
BLACK BOX
Portraits by
Steven

1

INTRODUCTION AND PROCESS

In This Chapter

1.1 Why this Plan, Why Now?

The Sanford Complete Streets Feasibility Study provides safe pedestrian and bicycle accommodations to multiple users and destinations along the corridor, including such important destinations as the Downtown Municipal Service District, Kiwanis Children's Park, Depot Park, and two planned greenways. The recommended bike and pedestrian improvements also provides "built in" traffic calming along one of the City's gateways into their community. This corridor serves everyday needs of the businesses and residences that border it, providing an east-west multimodal spine that is 2.5 miles long through the City's highly developed core. Hence, the study has to purposefully engage both the downtown business community and residential communities along the corridor. In addition to its transportation role, the Sanford Complete Streets Feasibility Study has aspects that improve quality of life, protect public value and investment, and increase the economic viability of land and improvements in the corridor. Development of the feasibility study will generate more detailed information on site characteristics. Plans in previous years support the City's idea to redesign Carthage Street and Charlotte Avenue to be more pedestrian and bike friendly. Past planning efforts are further discussed in Chapter Three.

The City of Sanford and NCDOT's Bike and Pedestrian Division, together with the Stantec consulting team, began a 10-month planning process to guide the development of the Carthage St. and Charlotte Ave. Corridor Study within the 10-month planning timeframe. The project encompassed a comprehensive multimodal strategy (accommodating vehicles, pedestrians, cyclists, and transit users), traffic volumes (AADTs) and identification of deficiencies, a Complete Streets plan, concept designs, cost estimates, and a phased improvement program. A key part of this effort also included facilitating a multiday charrette open to key stakeholders, neighborhood leaders, and the greater community of Sanford.

1.2 Project Process & Timeline

The Feasibility Study was completed within a 10-month time frame. The planning process used in this endeavor was divided into three distinct phases. The limits of the study started at Wicker Street and continue down Carthage and Charlotte to Oakwood Avenue. The first phase centered on taking data inventory and analyzing the collected data. The City of Sanford, in working with the consultants and NCDOT, created a set of committees made up of government officials, board members, planners, business owners, and residents to guide the development of the plan while ensuring the interests of the City and their neighbors were heard. A website, survey, and mapping tool were launched online to collect feedback from the community marking the beginning of public engagement focused on Carthage Street and Charlotte Avenue that continued throughout the planning process.

The second phase, the longest and most involved, started with the first major public event, the Public Symposium. At that point, the project team shifted focus to creating and documenting meaningful public engagement opportunities and directly using that feedback in the planning and design work. Following this, the Project Charrette, a multiday planning and design event was planned and executed. Before and during the charrette, possible design alternatives were examined. This exercise provided the identification and initial evaluation of possible alternatives for improving accessibility. It was during this process that new ideas, showcased later in this report, were first developed and presented to the committees and the public for feedback.

The final phase of the process focused on preparing the report and refining the recommendations for adoption. The feedback gathered from the public was utilized while the proposed solutions were refined through close work with the committees and the collaboration of professionals across fields of planning, engineering, and urban design. During this vital refinement period, every item produced, opinion voiced, and suggestion posed came together as a unified vision to guide the City in coming years.

1.3 Guiding Principles

Though the project carries constraints, it is important to recognize that all streets serve a combination of functions, all of which are intimately tied to the travel-way, pedestrian, and building realms. The basic context zones of streets help define the role of the street and its design throughout its life-cycle. Through the stakeholder outreach, public involvement and committee collaboration, the following Guiding Principles were developed to guide the design team along the planning and design process. It was here that the core values were applied to decisions related to Complete Streets, beautification, multi-modal elements, traffic calming, and safety and development along the Carthage Street and Charlotte Avenue:

Participants raising their hands to cast votes posed by a design team leader during the Project Symposium

Modal Choices must be a Priority

The lack of bicycle and pedestrian design elements make traversing Carthage Street and Charlotte Avenue difficult and undesirable. It is better to create an environment where walking and biking are not only encouraged but are the priority.

Modal choice opportunities need to be integrated into future Sanford design.

The Safety of All Users is Critical

Hand-in-hand with creating pedestrian- and bicycle-friendly environments is the notion that the corridor should be safe for everyone to move across and through. Many of the comments received from the public invoked safety-related issues, whether it be for a lack of lighting, safety and security, unsafe design, or poor accommodations for pedestrians and bicyclists crossing the street. The most outstanding example of this is that over 50% of the Project Symposium respondents felt that Carthage Street and Charlotte Avenue are “unsafe” or “very unsafe” today. As we redesign this important corridor through Sanford we must be cognizant of key safety design features like “built in” traffic calming features, site lines, lighting and access management best practices.

A safe street provides protection to cyclists and pedestrians alike.

Focus on Best Design Practices for Access Management & Enhanced Connectivity

This Plan must continue these efforts towards enhancing connectivity for all modes. Today, there is a "gap" in the network connectivity for bicycle and pedestrians, as it relates to Carthage Street and Charlotte Avenue. Access management design techniques can be used to enhance the safety and predictability of Carthage Street and Charlotte Avenue. That is, "cleaning up" this road including driveway consolidation, median islands, cross access, and back-door connectivity will be essential for the safety of all users and making the corridor more predictable to traverse.

Creating a predictable traversable streetscape for all modes of travel will be key.

Corridor Must Support Surrounding Uses through Attractive Design

Carthage Street serves as entryway to the community's downtown center, historic district and commercial/retail development. Carthage Street and Charlotte Avenue are more than how fast vehicles can move through town, they serve as a way of getting people to jobs, residential neighborhoods, commercial areas, upholding land values, and encouraging favored redevelopment. Creating an aesthetic environment and enhanced beautification through the use of improved streetscaping details and repair/maintenance is vital to this objective. Parts of Carthage and Charlotte already benefit from the recent improvements to Downtown Sanford. It's important to extend these efforts throughout this corridor.

Creating an aesthetically pleasing environment and enhancing beautification through the use of improved streetscaping details and repair/maintenance is vital to this

Renewed Focus on Safety and Security Aspects throughout Corridor

The space limitations and future development trends of the corridor itself are pushing towards better urban design and placemaking opportunities. With this in mind, there is a keen interest in creating a vibrant, active and attractive approaches to downtown. Sanford has charted a course towards investment in quality development, community design and public space. To create an environment with these aspects there needs to be effort behind making downtown Sanford feel safe and secure. Residents and tourists should feel safe and comfortable walking around downtown and through their neighborhoods at all hours. Safety measurements should be an aspect of all concept designs.

Safety is important for all users in every community

Prioritize safety improvements on major streets

1.4 Key Goals

Early in the planning process, the project team gleaned from interactions with the community, the City, and NCDOT a set of goals that this study should accomplish. These goals were brought up numerous times in one way or another, directly or indirectly. They are not markers to check off when this plan is adopted, they are goals that when achieved will signify that the plan for Carthage Street and Charlotte Avenue has been realized. The city's brand speaks to Sanford being the center of it all and this plan hopes to encourage that.

The recommendations and the action items to implement these endeavors will be detailed in the final chapters of this plan, and further support the principles and goals that have guided the Complete Streets Feasibility Study.

1 Create an Equitable Corridor for Everyone and Every Mode

2

Promote Pedestrian and Cyclist Access from Adjacent Neighborhoods

3

Celebrate the City with Clear Gateways

4

Retain & Respect the Small-Town Feel

5

Cultivate Redevelopment Opportunities


109
Fairview
DAIRY BAR
Since 1953
OPEN
The Flame
STEAKHOUSE

2

SMART GROWTH

In This Chapter

2.1 Principles of Smart Growth

Many pillars of our society directly impact the quality of our lives. These include public health and wellbeing, education, transportation, environmental health, employment and economic growth. These pillars are often influenced by the way our cities grow and develop. Thus, the growth and development of our cities has a significant influence on our society and our quality of life. Increasingly, interest is growing around how to make the way we grow and develop more equitable for all walks of life and more sustainable for ourselves and for future generations.

In many areas, growth and development has not occurred in equitable and sustainable ways thus far, rather it has sprawled out in an uncoordinated manner through segregated and separated land uses. Where this has happened, it is not uncommon for employees to commute very long distances to work, as residential land uses have been geographically separated from employment centers. Over time, research has shown that these automobile-oriented patterns of development have many negative impacts on our lives as well as the natural environment. Alternatively, coordinated, compact and mixed use development has emerged as the smarter way to grow our cities. By putting our daily needs like housing, jobs, education and goods and services geographically closer to one another, the need for expensive infrastructure decreases and development is more efficient. This yields smarter development that is more walkable, less automobile-oriented and which supports social, civic and physical activity.

Communities are realizing that smart development not only provides a higher quality of life and a brighter future for us all, but it provides more choices of how to get around, where to live, work and to socialize. The principles of Smart Growth have emerged from this new interest in smart development and the organization Smart Growth America has led the way on updating those as well as establishing best practices. Communities and development that embrace these principles have not only succeeded, but they've become in demand, marketable and profitable. Smart Growth essentially seeks to improve the way our cities evolve and change while preserving the best of our past and providing the brightest future for following generations.

The following ten principles in this chapter are excerpts from This Is Smart Growth, www.smartgrowth.org.

Strengthen and Direct Development Toward Existing Communities

"Smart growth directs development towards communities already served by infrastructure, seeking to utilize the resources that existing neighborhoods offer and to maintain the value of public and private investment. By encouraging development in existing areas, communities benefit from a stronger tax base, closer proximity of jobs and services, increased efficiency of already developed land and infrastructure, reduced development pressure in fringe areas, and preservation of farmland and open space. In addition, the process of increasing development in existing communities can maximize the use of existing impervious surfaces, thereby improving local and regional water quality, and can create opportunities for more transportation options, which lower vehicle miles traveled and ultimately improve regional air quality. Often existing neighborhoods can accommodate much of the growth that communities require through infill development, brownfields redevelopment, and the rehabilitation of existing buildings. For example, a 1996 study found that brownfields in Detroit, Chicago, Milwaukee, and Cleveland could absorb one to five years of residential development, 10 to 20 years of industrial development, or 200 to 400 years of office space."

While it is a pawn shop today, the Wilrik Theatre was a historic movie theatre, evident with the presence of the large marquee awning

Provide a Variety of Transportation Choices

"The science of traffic management and prediction has begun to catch up with what citizens have observed for years: new road capacity fills up almost as fast as it is constructed. Known in transportation circles as "induced demand," studies now show that as large new roads are built people increase their driving to take advantage of the new infrastructure. Some studies suggest that between 60 and 90 percent of new road capacity is consumed by new driving within five years of the opening of a major road. In the short term, people may switch from using transit and carpools to traveling on the new road, and in the long term, with the increased accessibility of the surrounding land, development patterns shift to create more growth and new traffic in the area.

In response, communities are beginning to implement new approaches to transportation planning, such as better coordinating land use and transportation; increasing the availability of high quality transit service; creating redundancy, resiliency and connectivity within their transportation networks; and ensuring connectivity between pedestrian, bike, transit, and road facilities. In short, they are coupling a multi-modal approach to transportation with supportive land-use patterns that create a wider range of transportation options."

The pedestrian and cyclist upgrades along Carthage Street and Charlotte Avenue will enhance the first-last mile connectivity for transit riders.

Create Walkable Communities

"Before the mid-1900s, urban communities and neighborhoods focused on the pedestrian. They were designed to move people to their destinations. However, in the past fifty years, dispersed development patterns and the separation of uses have led to an increased reliance on personal automobiles and to an elimination of many characteristics that support walkable communities. Other pedestrian-friendly features must be present, such as an appropriate mix of densities and uses, compact street intersections, and neighborhoods that are scaled to people."

Sanford has a well-grided downtown district which offers opportunities for pedestrian and bike facilities to bring more people downtown into the city.

A walkable neighborhood street with a wide pedestrian realm with adjacent commercial space and outdoor seating

Encourage community involvement from as many users as possible

Encourage Community And Stakeholder Collaboration In Decision Making

"For a community to be successful in implementing smart growth, its vision, objectives, and actions must be embraced by the private sector. The private sector is crucial to supplying the large amounts of money and construction expertise needed to meet the growing demand for smart growth developments. If investors, bankers, developers, builders, and others do not earn a profit, few smart growth projects will be built. Fortunately, government can help reduce barriers to profitable smart growth development practices. Since the development industry is highly regulated, the value of property and the desirability of a place are determined in large part by government investment in infrastructure and by government regulation."

"A key component of smart growth is to ensure early and frequent involvement of all stake- holders to identify and address specific needs and concerns. The range of these stakeholders is broad and includes developers, urban planners, transportation engineers, conservation and environmental groups, community development advocates, historic preservationists, commuters, students, environmental justice advocates, senior citizen organizations, children's advocacy groups, churches, parent-teacher associations, civic associations, and many others. Each is capable of contributing a unique and valuable perspective to both broad community plans and specific project designs. "

Mix Land Uses

"Mixing land uses—commercial, residential, recreational, educational, and others—in neighborhoods or places that are accessible by bike and foot can create vibrant and diverse communities. In large part, a mix of uses attracts people to shop, meet friends, and live in urban neighborhoods like Georgetown in Washington, D.C., or small towns like Wiscasset, Maine. Mixed land uses are critical to achieving the great places to live, work, and play that smart growth encourages."

Sanford's downtown is unique and historic. Helping Sanford grow smartly will involve working with local partners to anchor mixed use developments along the historic downtown district.

The Metropolitan, a mixed use center with commercial, office, and residential adjacent to a community college campus

Take Advantage of Compact Building Design

"An important part of achieving smart growth, compact building helps create the convenient neighborhood centers that people want. Compact building design also presents opportunities to absorb growth and development in a way that uses land more efficiently. By using smaller building footprints for new construction, compact design leaves undeveloped land open to absorb and filter rainwater, which in turn reduces flooding and stormwater drainage needs and lowers the amount of runoff pollution.

Other benefits accrue as well. Compact communities help achieve the density of population needed to support viable transportation alternatives. It is estimated that people will willingly walk to destinations—services as well as transit stops— located within a quarter to one-half of a mile radius. Thus, a minimum density of six to eight households per acre around bus stops would support bus service.

Downtown space in Sanford is limited and compact neighborhoods require fewer linear feet of utility lines—like water, sewer, electricity, phone service, and others—than dispersed communities do. As a result, local governments find that it is cheaper to provide and maintain many services to compact communities."

Compact, narrow lot single family homes with sidewalk connectivity and vegetation

Create a Range of Housing Opportunities and Choices

"By using smart growth approaches to create a wider range of housing choices, communities can begin to use their infrastructure resources more efficiently, better accommodate the housing needs of all residents, and help aging citizens remain in their homes. Housing is a critical part of the way communities grow, as it constitutes a significant share of new construction and development. More importantly, however, housing provides people with shelter and is a key factor in determining a household's access to transportation, commuting patterns, access to services and education, and consumption of energy and other natural resources.

There are opportunities for unique housing developments close to downtown Sanford. Incentives to outfit older historic buildings into housing units should be realized.

Providing quality housing for people of all income levels is an integral component in any smart growth strategy. In addition to improving a household's quality of life, housing can ensure a better jobs — housing balance and generate a strong foundation of support for neighborhood transit stops, commercial centers, and other services, thereby mitigating the environmental costs of auto-dependent development."

Urban four-pack homes with stoops, balconies, sidewalk connectivity, and integrated with various housing options within the neighborhood, including single family homes and apartments

Engaging community leaders and residents alike

Make Development Decisions Fair, Predictable, and Cost Effective

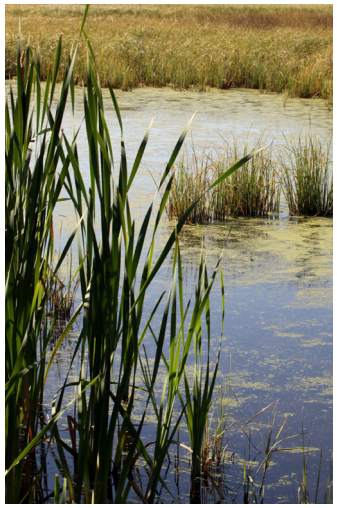
"For a community to be successful in implementing smart growth, its vision, objectives, and actions must be embraced by the private sector. The private sector is crucial to supplying the large amounts of money and construction expertise needed to meet the growing demand for smart growth developments. If investors, bankers, developers, builders, and others do not earn a profit, few smart growth projects will be built. Fortunately, government can help reduce barriers to profitable smart growth development practices. Since the development industry is highly regulated, the value of property and the desirability of a place are determined in large part by government investment in infrastructure and by government regulation."

Foster Attractive Communities with a Strong Sense of Place

"Communities with a strong sense of place build on their unique history, identity and assets to foster community pride, increase social interaction and market their community to potential businesses and residents. The results can improve economic stability, increase property values and greatly impact the lives and memories of residents. Investing in your community's unique assets and history can create a situation where residents will become your greatest ally in guiding growth that benefits the entire community. Involving the public in planning decisions and community improvement projects is the first step in building a sense of place. Communities that are effective in implementing this tenet have consistent policies and regulations in place that create synergy between preservation efforts and new development and are always looking for ways to improve by building sense of place."

Sanford offers popular festival and events throughout the year. Every year they host thousands for the Sanford Streetfest, Trick or Treating Downtown, and the Sanford Christmas Parade.

Tap into local amenities to develop a sense of place



Preserve natural environmental areas

Preserve Open Space, Natural Beauty, and Critical Environmental Areas

"Open space supports smart growth goals by bolstering local economies, preserving critical environmental areas, providing recreational opportunities, and guiding new growth into existing communities. Preservation of open space can have a profound impact on a community's quality of life, and therefore a region's economic prosperity. An economic analysis performed for the East Bay Regional Park District in California concluded that "the provision of open space and associated recreational and educational opportunities, environmental and cultural preservation, alternative transit modes, and sprawl-limiting characteristics, all contribute positively to the quality of life in the East Bay region." A 1997 study reported that owners of small companies ranked recreation, parks, and open space as the highest priorities in choosing a new location for their business.

Networks of preserved open space and waterways can shape and direct urban form and at the same time prevent haphazard conservation (conservation that is reactive and small scale). These networks, known as "green infrastructure," help frame new growth by locating new development in the most cost-efficient places. Green infrastructure also ensures that the preserved areas are connected so as to create wildlife corridors, preserve water quality, and maintain economically viable working lands."


RAILROAD
HOUSE
RAILROAD
HOUSE
Museum

3

PLANNING AREA CONTEXT

In This Chapter

3.1 Area History & Context

Founding

Sanford, NC was founded in 1874 and named after Colonel Charles Ogburn Sanford, a railroad engineer responsible for many of our states railroads, including those in Sanford. The city's location, a gateway connecting the southeast to Raleigh and Greensboro, put it in prime position to be an industrial hub for the Piedmont.

Transportation Gave Sanford Its Mark On The Map

Sanford's position at the confluence of where the sandy coastal plain meets the Piedmont's red clay also presented an opportunity for the brick industry – eventually earning Sanford the title, "Brick Capital of the USA." The combination of its industries – bricks, tobacco, furniture, textiles – and its important railway connections ensured Sanford a spot on the map.

Built in 1872, the Railroad house is the oldest house in Sanford. Today it houses the Railroad House Historical Society. The Railroad House sits in front of the retired Union Depot Station. Today, 4-6 trains run through Sanford each day.

This tradition as an important hub for transportation and regional connection has continued as major routes developed through the area, including Highways 1, 421, and 15/501.

Top: Buggy Building
Bottom: Depot Building in Sanford, Photo courtesy of Jimmy Haire and Images of America: Sanford and Lee County, by Jimmy Haire & W.W. Seymour, Jr.

Vision and Planning for the Future

Historically, through their industry, geography, and railways, the city has done a great job of connecting itself to other communities. They have found success through not stopping at the county line, but recognizing the importance of building Sanford's role in the region.

Now an inward focus to help connect long time residents, as well as attract newcomers and visitors, to their city is essential to ensure its local character is maintained and celebrated. With its Temple Theatre, historic architecture, vibrant pottery and art community, there is a lot to celebrate. This vision of a more pronounced identity has already experienced success through a successful arts and mural program as well as the streetscape project.

Mayor Mann has set forth a vision for downtown Sanford – one that moves toward a village concept - charming, picturesque, independent, and human scale. We always strive for the character of our streets to match the neighborhoods and buildings they line. Not only does this contribute to the identity of the area, it also leads to a better and safer design. When we think about a village in terms of mobility, we envision slow streets, human scale streets that support people of all ages and abilities.

A discussion was sparked when a roundabout was proposed along Carthage. While roundabouts are often deemed the safest intersection solution, and rightfully so, the proposal presented opportunities to consider larger questions about the character of Sanford and the community's vision.

Left: Depot Building Today,
Right: Buggy Building Today

3.2 Past Planning Efforts

Comprehensive Bicycle Transportation Plan (2013)

The City of Sanford Comprehensive Bike Plan was drafted to continue the local planning momentum after the adoption of the 2010 Comprehensive Pedestrian Plan. The City applied for and was awarded a NCDOT Bicycle and Pedestrian Planning Grant in 2011 to develop this plan. The Plan serves to provide a framework for the City of Sanford, Town of Broadway, and Lee County to work jointly in establishing a network of regionally and locally connected bicycle facilities in the area. The three goals of the plan were as follows:

- Achieve local and regional connectivity through bicycle facility development
- Increase the miles of bicycle facilities available to residents and visitors to safely access
- Encourage residents and visitors to view bicycling as a form of transportation and a way to achieve more active lifestyles

Figure 2: Cedar Street Park

The Comprehensive Bike Plan featured a detailed methodology and project prioritization process that assigned scores based on proximity to schools, connectivity to proposed facilities, proximity to Parks or Recreation Centers, direct access to existing trails and facilities, population density, public recommendations, low vehicle access, direct access to retail or commercial areas, area income levels, crash history, and minority population in the area. From this analysis, six on-road bicycle facilities projects were listed. Charlotte Avenue and Carthage Street, listed as the 2nd and 5th priority projects, were both recommended to implement bike lanes along their entirety. Other on-road recommendations included bike lanes on Woodland Ave and Third Ave, paved shoulders on Broadway, and bike boulevard and bike lanes on Vance St. (The Third Ave and Vance projects cross Carthage and Charlotte). The plan detailed a select number of on- and off-street recommendations but it features an expansive network that included both types of bicycle connections to propose a better connected Sanford.

Off-street recommendations were included on

Cover page of the network recommendations in 2013 Bike Plan.

connecting streets. Multi-use Greenway Trails or Side paths proposed on Carbonton Rd, Church Street, and along a tributary running parallel to the rail line in downtown Sanford, where Carthage Street becomes Charlotte Avenue.

The Comprehensive Bicycle Plan proposed a multiuse side path along Wicker Street. This side path could connect to the Tramway/Pendergrass Loop and to West Lee Middle School. East of Kiwanis Family Park, a side path could connect to the Kiwanis Children's park and surrounding neighborhoods.

The plan also detailed policy recommendations and edits to specific land use and zoning policies in the City of Sanford Code of Ordinances and the Sanford-Broadway-Lee County Unified Development Ordinance.

Group bike rides in Comprehensive Bike Plan.

Charlotte Avenue Recommendations

The Comprehensive Bike Plan recommended reducing the existing 2-4 travel lanes with parallel on street parking to 2 dedicated vehicle lanes (11 ft) with a center turning lane (10-11 ft), with parking preserved where it currently is located (7-8 ft), bike lanes (4 ft min) and sidewalks on either side of the roadway. High visibility crosswalks and stop bars are proposed for intersections.

Carthage Street Recommendations

The Comprehensive Bike Plan recommended reducing the existing four travel lanes with parallel on street parking and a center turning lane in some areas to two dedicated vehicle lanes (11 ft) with a center turning lane (10-11 ft), with parking preserved where it currently is located (7-8 ft), bike lanes (4 ft min) and sidewalks on either side of the roadway. High visibility crosswalks and stop bars are proposed for intersections.

Lee County Comprehensive Transportation Plan (2011)

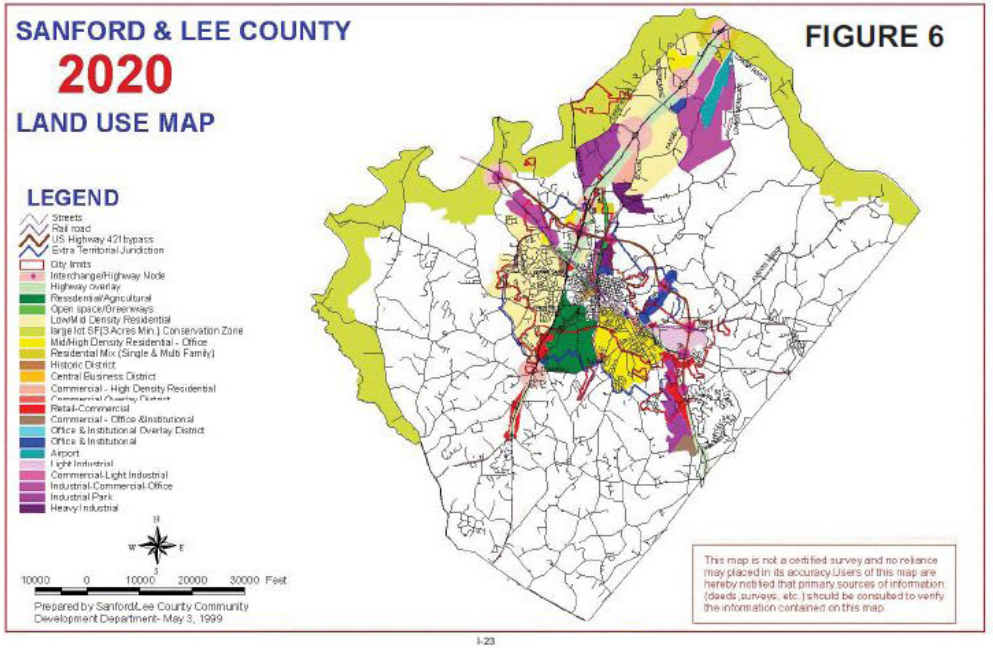
The Lee County CTP ranked intersections by the number and severity of crashes at each location. Listed intersections and their rankings are as follows:

- Charlotte and Seventh #5
- Carthage and Horner #8
- Charlotte and Third #37
- Carthage and Wicker #45
- Carthage and Steele #59
- Carthage and Gulf #60

US Bike Route 1 runs the length of study and recognized as needs improvement, and the roadway was also noted as needing improvement; the CTP recommended adding dedicated bike lanes along these streets.

Included in the CTP are recommended improvements to Hawkins Avenue and Horner Boulevard, converting both to four lane divided roadways, or boulevards. The Hawkins Avenue improvements begin at US 1 and end at Burns Drive with a proposed roundabout, however, the CTP recommended bike lanes along the stretch, which could continue beyond Burns Drive and lead to downtown where Hawkins intersects to Charlotte.

Horner Boulevard improvements were recommended from US 1 to the Harnett County border. Horner functions as a business route, gateway corridor, and a main spine through Sanford, connecting Historic Downtown Sanford to Historic Downtown Jonesboro, as well many commercial businesses, restaurants, and the county courthouse. Bike lanes were recommended along boulevards in urban areas, wide shoulders are recommended along rural stretched. Access management like strong cross connectivity through adjacent parcels are recommended to maintain access to businesses where medians are utilized to control turning movements.



Graphic from 2011 Comprehensive Transportation Plan, 2020 Land Use Map.

Downtown Enhancement Master Plan (2011)

The Downtown Enhancement Master Plan provided a framework for improvements and branding Downtown Sanford, roughly defined as Carthage Street and Wicker Street from their intersection by Kiwanis Children's Park and Chatman Street. This plan catalyzed streetscape improvements to Sanford's historic downtown, improving the overall aesthetics and encouraging economic growth. It also supported walkability and pedestrian safety and comfort, lending to the identification of intersections where such improvements were deemed necessary. The Downtown Plan identified primary risk and secondary risk intersections, with Carthage and Horner Blvd and Charlotte and Hawkins Ave being two primary risk locations and the Chatham St, Moore St, Vance St, Hillcrest Dr, and Wicker St all being secondary risk locations. The plan proposed medians and brick crosswalks in certain locations, as well as defining the area as a series of overlapping districts within Downtown: West End, Three Points, Central, Warehouse, Financial, Uptown, Theatre, Wall Street, and Depot.

Downtown Enhancement Master Plan (2011) cover page.

Comprehensive Pedestrian Plan (2010)

The City of Sanford Comprehensive Ped Plan was a part of the continued effort to make Sanford a more livable community for residents. The vision statement behind the plan was "to promote a high quality of life through a well-connected, safe, and aesthetically pleasing pedestrian system that is available to and usable by all of the citizens of the City of Sanford". The Pedestrian Plan identifies proposed facility improvements and the location, implementation, and maintenance of these improvements. The end result of this effort proposes a better connected pedestrian network for the City of Sanford.

The Comprehensive Pedestrian Plan included signage guidlelines for Sanford. Some of these styles can be seen in Sanford today.

Relevancy to the Carthage Street and Charlotte Avenue Complete Streets Study

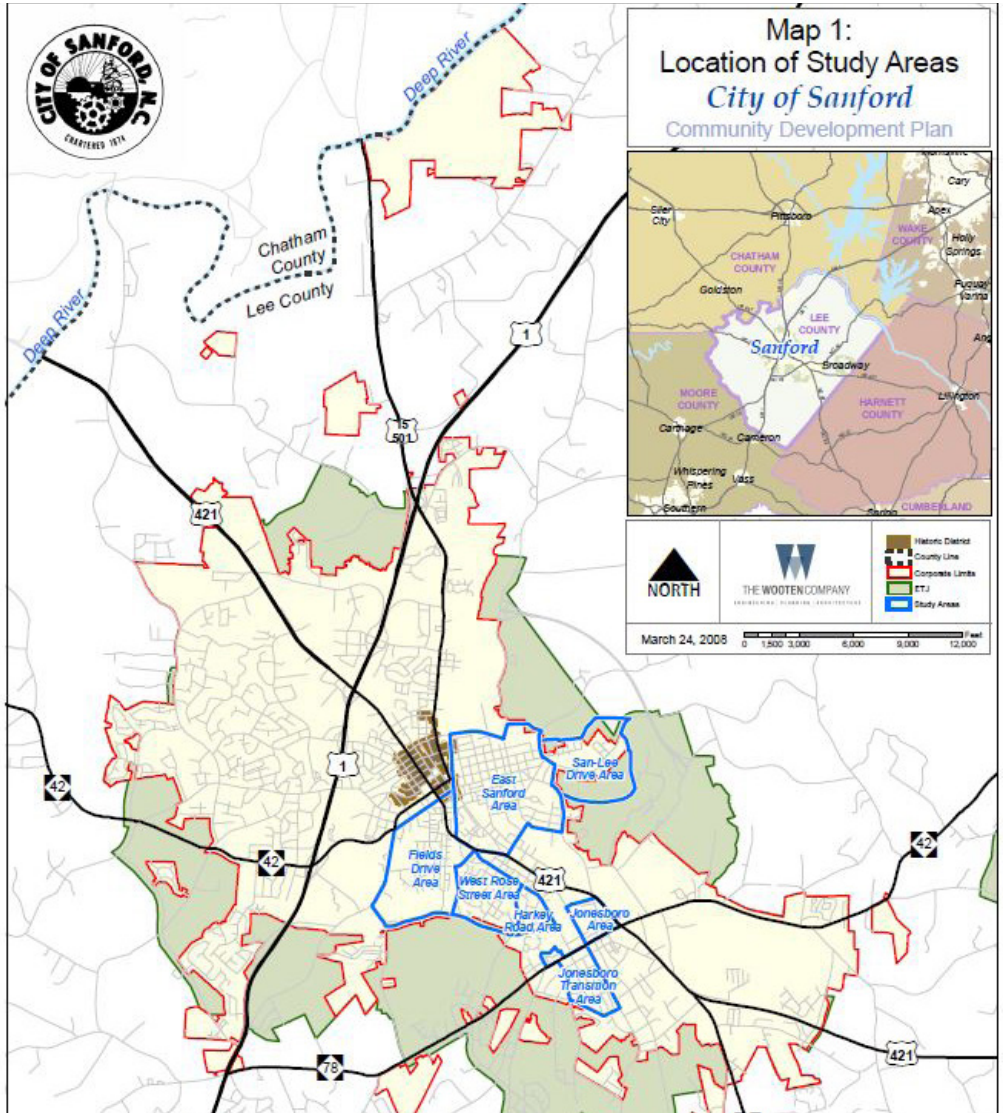
The Pedestrian Plan noted Carthage Street and Charlotte Avenue as a pedestrian corridor that needed facilities improvements. Additionally, it noted significant cross streets that were identified as pedestrian corridors including Hawkins Avenue, Horner Boulevard, 3rd Street, 7th Street, and Wicker Street. The Pedestrian Plan also focuses on greenway recommendations, including advocating for connection the greenway trails in Kiwanis Family Park to the trails at San Lee Park, located beyond either end of the study area for the Complete Streets Plan. The City, Lee County, and NCDOT are partnering together to develop and connect existing greenways with new trails.

The Pedestrian Plan also notes the existing lack of pedestrian and bicycle facilities like sidewalks and sufficient crossing to major destinations, including several along and around the study area, specifically Kiwanis Family Park, Kiwanis Children's Park, Depot Park, the Armory, and the future W.B. Wicker Elementary School.

Lee County Parks & Recreation Master Plan Update (2010)

The Parks and Recreation Department of Lee County released the Master Plan with the purpose to provide a framework to increase recreation opportunities with new or improved facilities and programs. It noted the 43 miles of riverfront within Lee County and the growing Hispanic community and subsequent need for more soccer fields. The plan lists five goals and number of objectives that support them. The third goal suggests amending the open space standards for the UDO to permit developers provide either land or funds to support the development of greenways, trails, and sidewalk connections. With this, the Update intended for the City and County work to promote safe and efficient routes to parks from adjacent neighborhoods, connect to or continue existing greenway or trail facilities, and support and encourage active transportation locally and regionally through non-motorized links.

Master Plan Update Cover



Study Area map taken from the Development Plan in 2008.

City of Sanford Community Development Plan (2008)

The Community Development Plan was drafted to inventory and assess current community development needs with the intent to target specific areas with the assistance and planning direction that was most suitable to address noted deficiencies. East Sanford was also noted as one of the seven study areas around town and overlaps with the Carthage Street and Charlotte Avenue study area. East Sanford was noted as needing infrastructure improvements to water, sewer, and roads, and features contiguous areas where adjacent blocks show signs of distress and deterioration. Due to these factors, East Sanford was identified as a high priority area the City should focus on for community revitalization. The Community Development Plan identified six smaller sections as focus areas for further investigation, four of which are in East Sanford: McIver Street Study Area, Maple Avenue Study Area, Hickory Avenue Study Area, and Matthews Street Study Area.

3.3 Funded Projects

Sanford's Bond-Funded Projects

Due to the City's foresight, the City of Sanford has been successful in attaining actual dollars to fully or at least partially fund many of the projects identified in past planning efforts, particularly projects in areas in and around the Carthage St/Charlotte Ave. corridor. In late 2013, the City passed 4 bond referendums totaling $14.5 Million in sidewalk, downtown streetscape, park, and greenway improvements. To date the sidewalk and downtown projects have been completed, while the park project with a new splash pad, playground, and bathroom renovations at Kiwanis Family Park (less than a quarter mile from the western boundary of the feasibility study) is slated to be completed at the end of summer 2019. While the $4 Million in greenway/sidepath funding is yet to be spent, several projects have been identified for funding or partial funding.

Medical Mile Greenway (between Kiwanis Family Park & Fields Dr.) - Estimated Total Cost: $600,000. Construction Date: N/A

Wicker Street Sidepath (between Carthage St. & Kiwanis Family Park) - Estimated Total Cost: $420,000. Construction Date: N/A

Wicker Street Road Diet & Sidepath (between Carthage St. & Horner Blvd.) - Estimated Total Cost: $3,200,000. Construction Date: N/A

NCDOT State Transportation Improvement Program (STIP)

NCDOT is required by both federal and state law to put together a multi-year plan that identifies the construction funding for and scheduling of transportation projects throughout the state. Both the City and NCDOT are allowed to submit projects, many attributable to the Lee County Comprehensive Transportation Plan, for funding based upon a data driven process so that projects are scored against one another. The list below identifies projects in Sanford listed on the STIP that incorporate and hopefully implement some of the final recommendations from this Feasibility Study, while others may just complement them due to their proximity to the corridor.

STIP # EB-5863

Road diet along Carthage Street from Wicker Street (NC 42) to Chatham Street. Road diet will include construction of bike and pedestrian facilities. Total cost: $1,913,000. Construction Date: 2021

STIP # EB-6002 (Draft STIP, not yet official)

Improvements along Charlotte Avenue from Chatham Street to 11th Street will include road diet, bike and pedestrian facilities and new sidewalk. Total cost: $1,400,000. Construction Date: N/A

STIP # EB-5742

Multiuse path to be constructed from West Lee Middle School Entrance to Kiwanis Family Park. Total cost: $1.4MM. Construction Date: 2019, but will be moved back to later date.

STIP # U-5709

Roadway widening along Carthage Street from Fire Tower Road to Wicker Street. Includes construction of roundabouts at intersections, sidepath, and bike lanes. Total cost: $11,372,000. Construction Date: 2021

STIP # U-5722

Complete Street improvements along Horner Blvd. from US 1 to former ACL railroad crossing east of Washington Ave in Sanford. Reconstruct as a complete street, with improvements such as medians, sidewalks, bicycle facilities, and streetscaping. Total cost: $32,331,000. Construction Date: 2023

STIP # EB-6003 (Draft STIP, not yet official)

Construct new sidewalk along McIver Street from Moore Street to Oakwood Avenue. Total cost: $793,000. Construction Date: N/A

3.4 Corridor Characteristics

Sanford's main corridor takes on distinctive characteristics from one end to the other. Early in the planning process it was noted that the volume traveled daily, adjacent land uses, building typology, and activities occurring along the roadway are different for certain segments along Carthage Street and Charlotte Avenue.

Downtown Municipal Service District:

WICKER STREET TO FIRST STREET ALONG CARTHAGE STREET-1.0 MILE

From Wicker Street to Carbonton Road is a two-lane road with a center turn lane. Carbonton Road to S. Horner Blvd is a four-lane road with a center turn lane. S. Horner Blvd. to N. 1st Street is a four-lane road with on-street parking. These three sections make up the Downtown Municipal Service District in Sanford. There are various small retail shopping centers and denser commercial, retail, and offices as you move north through the corridor. There are no bike facilities along this section.

Residential Fringe:

FIRST STREET TO OAKWOOD AVENUE ALONG CHARLOTTE AVENUE-1.0 MILE

Moving east from 1st Street the landscape becomes more residential. From 1st Street to Oakwood Ave, there are a wide range of single-family homes and multi-family homes. Sidewalks run on the north side of the street from 1st Street to 5th Street. Sidewalks on the south side of the street stop at 3rd Street. There are limited pedestrian and no bike facilities along this section. Pedestrian level lighting is also sparse along this residential section.

Present day photos of Carthage St. (left) and Charlotte Ave. (right)

3.5 Roadway Analysis

Vehicular Crashes and Traffic Volumes

Specific areas within the City of Sanford have relatively high traffic volumes, and there are several "hot spots" prone to crashes. Illustrated below, the roads within the study area highlighted in red and orange carry the largest amount of vehicles on a daily basis. Carthage Street carries 5,000 to 10,000 vehicles per day. Charlotte Avenue carries between 500 and 5,000 vehicles per day.

Between 2015 and 2018, 94 vehicle crashes were reported along Carthage Street and Charlotte Avenue. The majority of the crashes took place at key intersections near the downtown area, at Wicker Street and Carthage Street intersection, and at the intersection of 7th Street and Charlotte Avenue.

"Nothing compares to the simple pleasure of a bike ride."
-John F. Kennedy

Traffic Volume and Crash Map (2015-2018)

City of Sanford Complete Streets Feasibility Study

Vehicular Crash and Volume Map (05/2015-06/2018) (94 total crashes along main corridor)

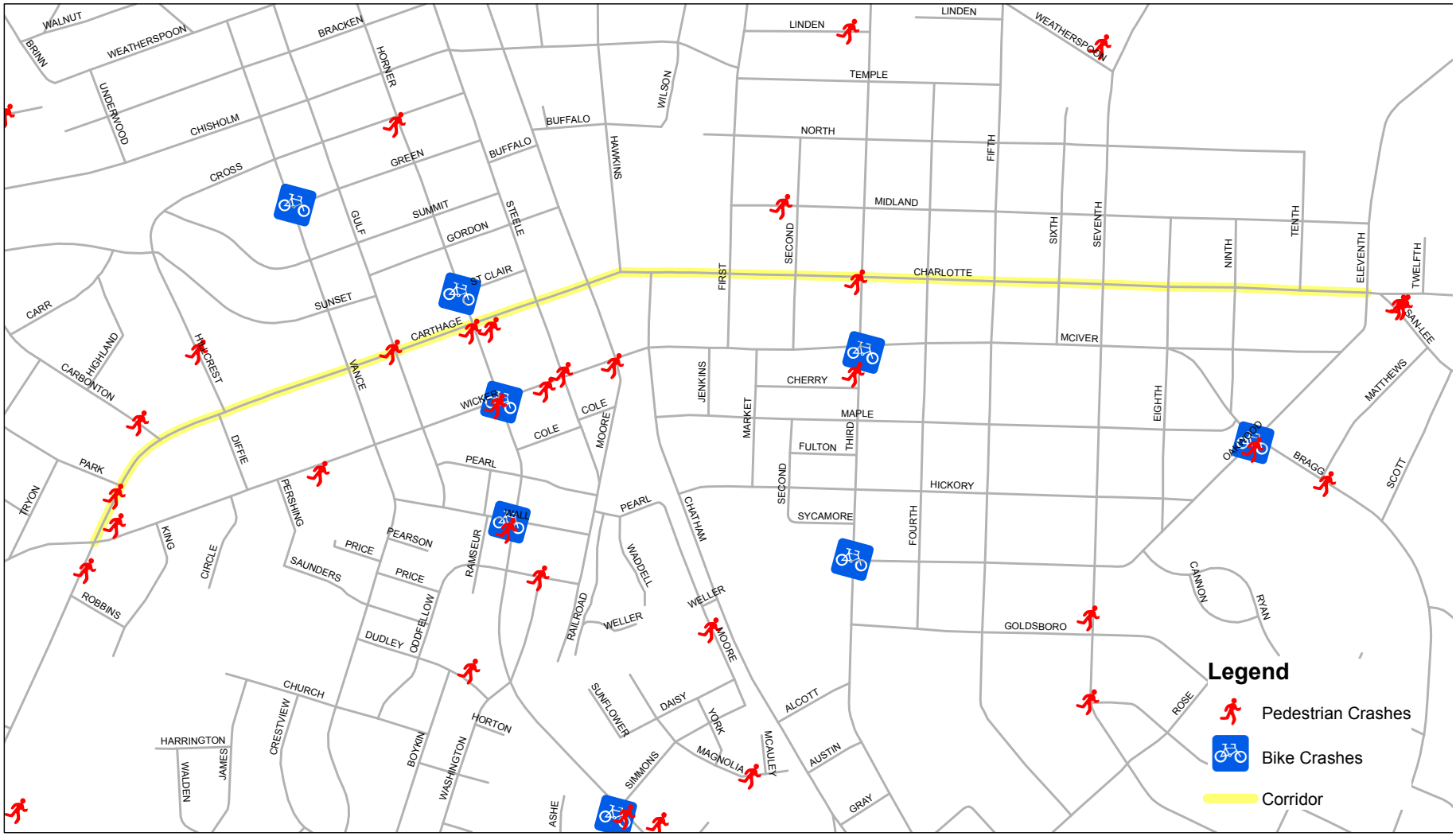
Bike and Pedestrian Crashes

The pedestrian and bicycle crash data used here show the documented incidents when one or more vehicles was involved in a collision with one or more pedestrians or cyclists. From 2007 to 2015, there were 7 reported pedestrian collisions on Carthage Street and 1 pedestrian collision on Charlotte Avenue. There were no reported cyclists collisions just off or near Carthage Street or Charlotte Avenue. The data suggests there is low danger to pedestrians and cyclists, but it can also infer that there are a low number of accidents because there is a low number of cyclists and pedestrians utilizing Carthage Street and Charlotte Avenue. The lower use of Carthage Street and Charlotte Avenue can be due in part to perceived danger, lack of attractions or destinations, lack of amenities, and lack of infrastructure to support pedestrian and cyclist use.

Bike and Pedestrian Crashes (2007-2015)

City of Sanford Complete Streets Feasibility Study

Bike and Pedestrian Crash Map 2007-2015




1 inch = 50 feet

4

PUBLIC ENGAGEMENT

In This Chapter

The Power of Public Input

Public engagement plays an integral role in any design or study that impacts the daily lives of community members and local business. Planning *for* a community of any size is not as successful as planning *with* the community; the results are stronger, implementation is harder fought for, and the community is often bonded tighter due to involvement. Aside from this, engagement provides invaluable feedback to current conditions and problems that might not be fully understood by planners, engineers, and designers looking at data alone; the human element and anecdotal evidence helps to color the project team's view of the issues and provide better suggestions for improvement.

In the Sanford Complete Streets Feasibility Study process, public engagement is found in all three phases. It includes hand selected committees, a project website, an online survey and interactive mapping exercise, a public symposium, a project charrette, and an open house to present the final recommendations. In providing points of engagement throughout the process, residents are encouraged to stay involved and keep up with the project, with the intent that they can see their feedback and conversations come to life in the final plan. Without their help, the vision for Carthage Street and Charlotte Avenue is never created and never realized. Engagement was critical to this plan.

Residents participating at the Public Symposium.

4.1 Steering Committee

At the beginning of this process, NCDOT and City of Sanford worked with the project team to create a steering committee that would lead the progress of the plan. The Steering Committee worked closely with the Consultant to set the meeting and engagement schedule as well as deadlines during the process. This group represented the various interests of different groups and aspects of the city and included business owners,representatives from the Chamber and Downtown Sanford, Inc., neighborhood associations and representatives, emergency services, and representatives from various city boards. This group met 4 times during the process. The Steering Committee served not only as a project oversight committee, but also as a decision-making entity throughout the life of the project. These committees helped to provide venues for sharing information, raised and discussed ideas, increased overall community participation, identified other stakeholders for focus groups, fostered communication between the community and the project team, focused and provided resources, helped to set a direction and priorities, and vetted the plan recommendations and action plan. They were present every step of the way to provide their local and specialized knowledge to the project team and were consistent in their advocacy for this vision.

Steering Committee discussing issues at the first committee meeting.

Steering Committee used poker chips to prioritize issues in the city.

Mapping exercises to explain the areas for potential improvements.

4.2 Website & Online Survey

Early in the process a project website was generated (www.sanfordcompletestreets.com) so residents, property owners, business owners and other stakeholders could access information and provide input throughout the process. The website featured pages dedicated to explaining the purpose of the project, when upcoming meetings were and their results, related documents produced, photo albums of events, and ways to get involved with the project.

Among the ways to get involved were a comment box, an online survey, and an interactive mapping tool. The comment box allowed for residents to leave general thoughts or ask questions which the project team could respond to directly. The online survey features a set of 20 questions related to traveling and living along Carthage Street and Charlotte Avenue. People were given the opportunity to voice concerns and rank priorities for the corridor. Related to that survey was an online mapping tool hosted by Esri Online. This tool offers the ability for residents to ground their comments and complaints to georeferenced data, providing the project team with the exact location of where their concern is located and description of the problem. The survey and map were open for interaction for several months and closed when the design recommendations were completed.

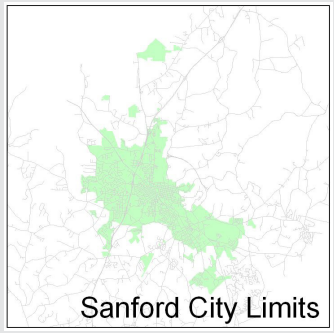
Key Takeaways from Survey : Demographics

How old are you?

35 years old
(median age)

Where do you live?

93% live within city limits



Key Takeaways from Survey : Existing Mobility

Primary mode of transportation?

Car
(96% of participants)

Time it takes you to get to work/school?

Don't travel for work/school
(17% of participants)

Biggest transportation concern?

Hard to get around on foot or bike
(28% of participants)

Key Takeaways from Survey : Future Mobility Opportunities

How satisfied are you with the level of safety along Carthage St. and Charlotte Ave.?

Dissatisfied/Somewhat Dissatisfied
(55% of participants)

Top THREE ranked transportation improvement projects

Intersection & Traffic Signals

Greenways/ Trails

Pedestrian Facilities

Key Takeaways from Survey : Improve Aesthetics Opportunities

What type of goods and services do you travel out of town for?

Retail Shopping
(21% of participants)

Quality Restaurants and Entertainment
(36% of participants)

Top THREE ranked aesthetic improvement projects

Street Trees/ Landscaping

Street Lighting

Public Art

Residents' quotes:

"I love that this project is happening. I live two blocks from Carthage, so this will have a great positive impact on my family."

"If Carthage St. was more safe, young families would walk and bike more."

"Connection from Charlotte to Carthage needs to be smoother. Headed in the right direction, just need to keep moving forward."

"I would like to see the old hotels turned back into hotels. The Prince should be shut down- back in the day. It was the best steakhouse to eat and the nicest place to rent a room."

"Need more parking"

4.3 Walking & Biking Tour

One of the first meetings with the Steering Committee included a Walking and Van Tour of the entire corridor. This exercise provided direct local knowledge of the corridor early on to the project team and included the discussion of issues along the corridor that were echoed by residents throughout the process.

Tour Results

A. Need sidewalks and bike lanes. Need parking in residential areas and bus areas.
B. Lack of affordable housing, transit services, and code enforcement.
C. Update Railroad crossing for better visibility and walkability.
D. Challenge in connecting the surrounding areas to the Moore-Horner corridor.
E. Need better crosswalks-make pedestrian safety number one.
F. Partner with the Lee Country Arts Council and Historic Preservation to bring more public art to the city.
G. Temporary lane closures to see how 2-lane street would function.
H. Lack of street and pedestrian-level lighting.
I. Better wayfinding and signage along sidewalks.

The walking tour team surveying the study area

When answering these questions, think about your current trip as well as what the area is like in the Spring/Summer time (peak toursist season).

Rate the Place:

COMFORT & IMAGE	POOR			GOOD
Overall attractiveness	1	2	3	4
Feeling of safety	1	2	3	4
Cleanliness/Quality of maintenance	1	2	3	4
Comfort of places to sit	1	2	3	4
Shade/Protection from sun/heat	1	2	3	4
Comfort & Image average rating: (sum/5) _____				
Comments/Notes:				
ACCESS & LINKAGES				
Quality of cycling facilities	1	2	3	4
Quality of crossing facilities	1	2	3	4
Ease in walking/Quality of sidewalks	1	2	3	4
Access to transit	1	2	3	4
Clarity of wayfinding signage	1	2	3	4
Access & Linkages average rating: (sum/5)_____				
Comments/Notes:				
USES & ACTIVITIES				
Mix of stores/services	1	2	3	4
Public spaces for community events	1	2	3	4
Overall vitality of area/how busy it seems	1	2	3	4
Economic vitality	1	2	3	4
Uses & Activities average rating: (sum/4)_____				
Comments/Notes:				
SOCIABILITY / SUITABILITY				
Number of people in groups	1	2	3	4
Evidence of volunteerism	1	2	3	4
Sense of pride and ownership	1	2	3	4
Presence of children and seniors	1	2	3	4
Sociability average rating: (sum/4)_____				
Comment/Notes:				

Identify Opportunities

1. What do you like best about this area?

2. List three things that you would do to improve the area that could be done right away and that wouldn't cost a lot:

-
-
-

3. What three changes would you make in the long term that would have the biggest impact?

-
-
-

4. How would you describe the journey to the various destinations along this route? Whether your journey is by car, foot, or bike what improvements are needed to improve future trips?

5. Do you see any opportunities for pilot projects or tactical urbanism? What local partnerships or local talent can you identify that could help implement these improvements?

Participants during the walking tour discuss the conditions of Charlotte Avenue.

Place Game Evaluation

Along with discussion at various points, the participants were asked to fill out a Place Game Evaluation. This simple tool developed by the Project for Public Spaces is used to grade and prioritize improvements for areas like Sanford's corridors. The game tries to answer the question, "what makes a place great" by grading key attributes of great places on a scale of one (poor) to four (good). The key attributes are comfort and image, access and linkages, uses and activities, and sociability. At the end of the exercise, participants were encouraged to identify opportunities for improvements within the above categories. The grades and observations helped begin the dialogue for what Sanford needs to create more walkable and bikeable corridors.

The overall ratings were as follows (1 poor - 4 good):

- Comfort and Image: 2.5
- Access and Linkages: 2.2
- Uses and Activities: 2.8
- Sociability/Suitability: 2.9

4.4 Project Symposium

The Public Symposium was the first large scale public meeting for the Feasibility study. The project team used the symposium as a public project kick off workshop. During this meeting, the project was introduced, with conditions inferred from data analysis and discussions with the Steering Committee, and preliminary analysis done by the project team was presented, as well as possible outcomes for the Feasibility Study. A survey was given to the audience, and due to the use of instant push button technology, the results are shown in real time, giving everyone the opportunity to see what they said as a community. Following this exercise, the audience was split into groups and given project maps and a member of the project team or Steering Committee. This provided the team with a large amount of public input and comments directly on the corridor and the areas surrounding it.

The Project Symposium was held on the evening of September 20, 2018, in the Bob Hales Recreation Center on McIver Street. Key takeaways from the engagement exercises during the Traveling Roadshow and Symposium are on the following pages.

Residents and officials participating in the Visual Preference Survey.

Key Takeaways from Live Polling

What is the biggest safety problem along the corridor?	What do you value the most in your streets?	I would walk/bike more if...	Do you support Access Management along the corridor?	What traffic calming techniques would you like to see?
Poor Lighting and Security (35% of participants)	**Safety,Providing for All Modes, Functionality** (60% of participants)	**It Felt Safer and More Inviting** (40% of participants)	**Definitely** (50% of participants)	**Median Islands** (25% of participants) **Intersection Treatments** (20% of participants)

THREE top things residents leave town for

Enjoy Dinner

Buy Dress Shoes

Shop in Bulk

THREE top places to reach by walking or biking

Parks/Community Center

Downtown

Schools

Priorities for walking and biking in Sanford

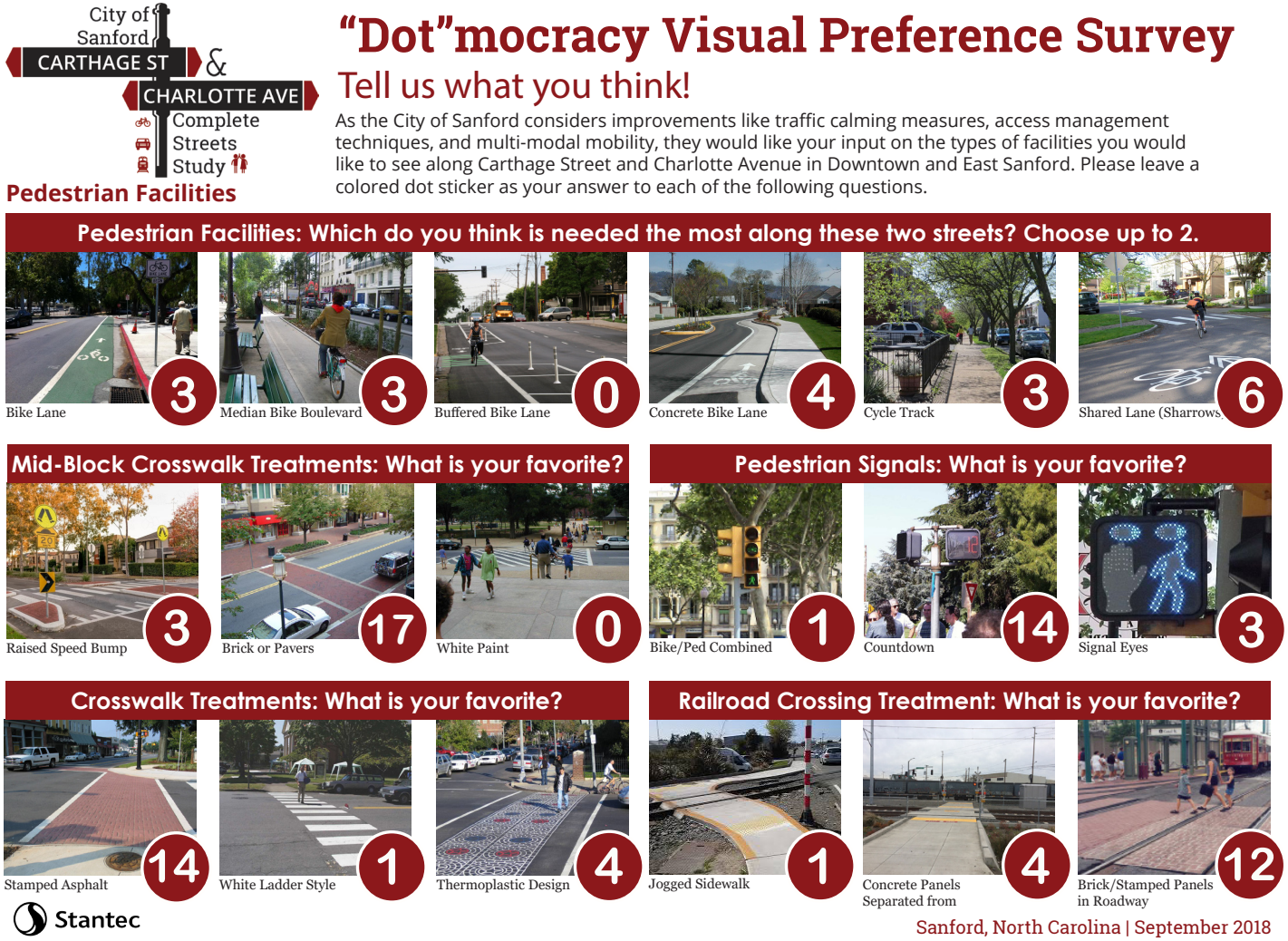
- Fits with or improves appearances
- Ensure people can get to work, school, etc. regardless of income
- Provide safe ways for everyone to move
- Support property values and businesses

What makes OUR PLACE?

Walking and Biking should have a level playing field with cars — every place should be reachable by walking or biking, SAFELY.

"Dot"mocracy Results

During the Project Symposium participants were asked to use the power of their vote in an exercise called "Dot"mocracy. Each person was given a set of dot stickers and shown a series of images related to various multi-modal transportation and design treatments. Within each set, participants selected their preferred strategy or visual preference. The exercise gave the design team a strong sense of the community's vision for Carthage Street and Charlotte Avenue.



Results-Brick/Stamped Pavers/ really stood out as a favorite in more than one category.

City of Sanford
CARTHAGE ST & CHARLOTTE AVE
Complete Streets Study

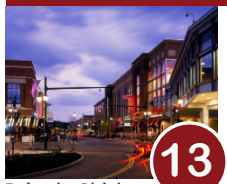
Traffic Calming/Streetscape

"Dot"mocracy Visual Preference Survey

Tell us what you think!

As the City of Sanford considers improvements like traffic calming measures, access management techniques, and multi-modal mobility, they would like your input on the types of facilities you would like to see along Carthage Street and Charlotte Avenue. Please leave a colored dot sticker as your answer to each of the following questions.

Streetscape: Which elements are most important to you? Choose up to 2.

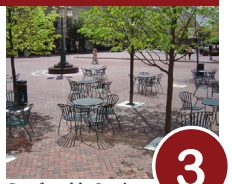

13 Pedestrian Lighting


3 Wide Sidewalks

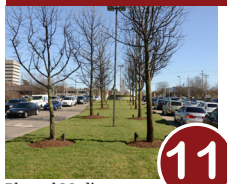

2 Pocket Medians


8 Street Trees

7 Signage & Wayfinding


3 Comfortable Seating

Traffic Calming: What is your favorite?


11 Planted Median

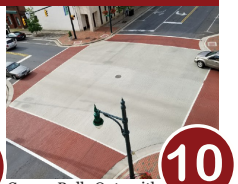

1 Speed Humps


8 Bulbouts

Intersection Treatment: What is your favorite?


2 Painted Intersection


5 Corner Bulb-Outs with Plantings


10 Corner Bulb-Outs with Pavers

Corridor Character: What is your favorite?


17 Mixed Use Walkable Character


0 Auto-Dominated Sprawl


3 Hybrid

Stantec

Sanford, North Carolina | September 2018

Results- Traffic Calming and Streetscape: Mixed Use Walkable Character and Pedestrian Lighting won this round.

City of Sanford
CARTHAGE ST & CHARLOTTE AVE
Complete Streets Study

"Dot"mocracy Visual Preference Survey

Tell us what you think!

As the City of Sanford considers improvements like traffic calming measures, access management techniques, and multi-modal mobility, they would like your input on the types of facilities you would like to see along Carthage Street and Charlotte Avenue. Please leave a colored dot sticker as your answer to each of the following questions.

Bicycle Facilities

Bicycle Facilities: Which is your preferred approach to cycling facilities? Choose up to 2.


Bike Lane — 7


Protected Bike Lane — 7


Buffered Bike Lane — 4


Concrete Bike Lane — 4


Cycle Track — 0


Shared Lane (Sharrows) — 5

Open Space: What is your favorite?


Passive Gardens — 6

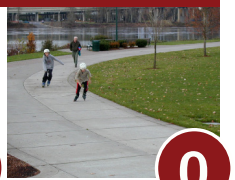

Flexible Green Spaces — 12


Play Spaces — 2

Off-Road Greenway: What is your favorite?


Natural Surface/Granite Fines — 5


Asphalt — 11


Concrete — 0

Bike Parking Options: What is your favorite?


Disappearing Bike Racks — 10


Standard Bike Racks — 1


Creative Shaped Bike Racks — 7

Would you like to see more on-street parking along the corridor?

Yes — 7

No — 5

Stantec

Sanford, North Carolina | September 2018

Results-Bicycle Facilities: Protected Bike Lanes and Flexible Green Spaces are what residents want to see.

4.5 The Charrette

The charrette (a multiday pubic workshop) was the biggest and most coordinated push of the project. It required all hands on deck, with six members from the project team on location for a three-day design and engagement effort. This was held at the Sanford Buggy Factory (and Department of Planning and Community Development), where the project team, consisting of planners, urban designers, and engineers worked together with the public to deliver design recommendations for the project.

The charrette was open to the public all three days and pin-up sessions were available every night from 6 – 7 pm.

While the design work was taking place, focus groups met several times a day, in the same room, to discuss the project as it relates to certain concerns of the Town. Focus group meetings were held with members of the following communities:

- Business owners
- Emergency services
- Engineering/NCDOT/Railroads
- Economic development
- Chamber of Commerce
- Bike/ped advocacy
- Downtown Sanford, Inc.
- Neighborhoods/residents
- Planning/historic preservation

Each focus group meeting kicked off with a walk through of the process to date, then opened up for discussion, questions, and knowledge exchange.

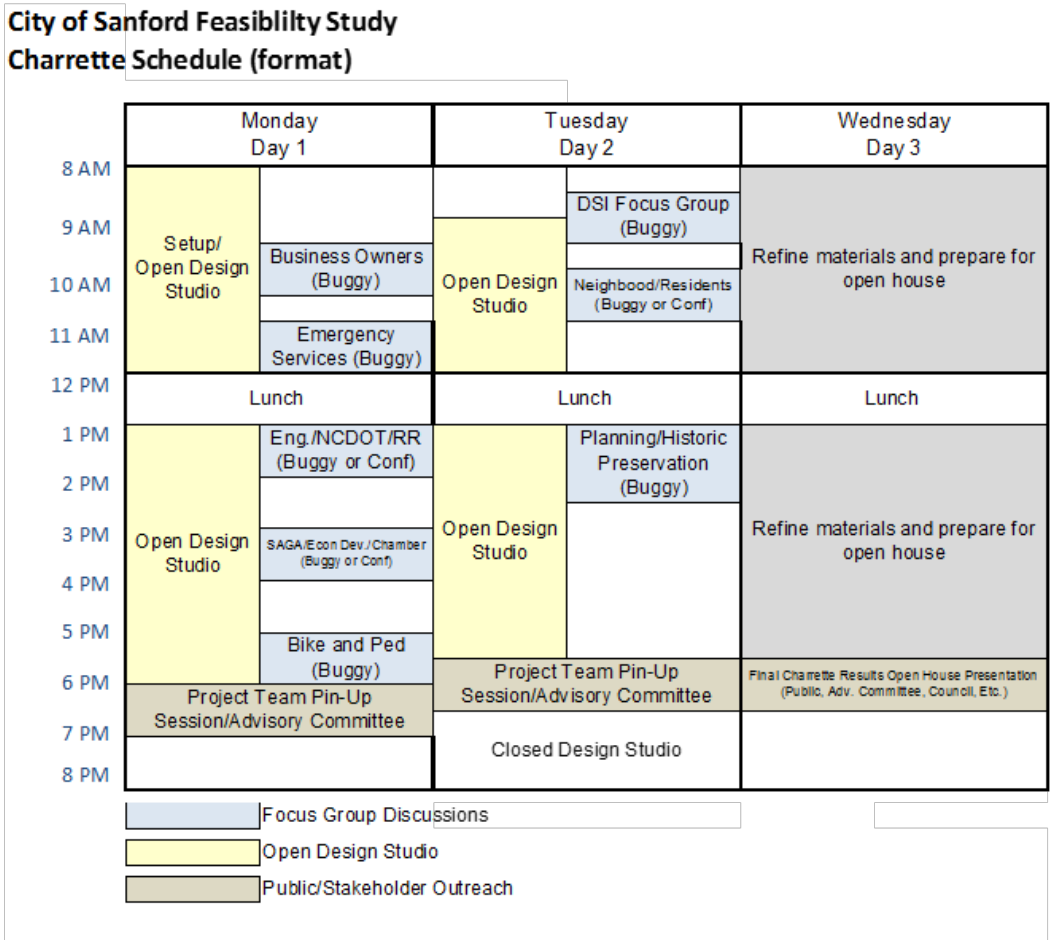
Charrette Meeting: Project leadership sits down with a focus group to go over the corridor plans.

Focus Group Meeting: This meeting involved emergency services: police, firemen, and EMTs.

During and after these meetings, attendees were able to see the design professionals in action, and discuss the corridor solutions in detail. The project team continuously refined the design considerations for Carthage and Charlotte based on feedback from the public and the focus group meeting received during the charrette, allowing the public to influence the process and ultimately affect the final outcome and recommendations to create a design that meets the needs of all residents of Sanford.

The last night of the charrette featured an open house, presenting the length of the corridor and the discoveries and designs drafted during the week. The public was able to respond to the work presented and see how their feedback was incorporated in the conceptual designs and renderings. This open house was hosted in the evening to allow for community members who were unable to join during the work day, and the informal format allowed community members to meet with the project team, key stakeholders, and interact with the final concept designs along the corridor.

The event began with an introduction and review of the project to date, then a walk-through of



Charrette Schedule

the corridor, from west to east. All renderings and concepts from the designers throughout the week were shown, allowing attendees to view the transformation of ideas, see public input integrated into the process, and join the vision for this corridor.

Over 50 residents and officials showed up to review the final designs which were then made available on the website. Throughout the entire process, Sanford residents have shown a keen interest in the future plans and steps their town is taking towards improving their downtown corridor. Sanford's public engagement was essential to the design and development of the Carthage St./Charlotte Ave. corridor. The project team is extremely grateful to the community members who expressed concerns, hopes, and visions for their downtown, and for leading the team in developing the right design for them.

Open House presenting the full corridor of numerous designs, ideas, and feedback integrated throughout the charrette.


PACKARD
Packard
GULF
ESSO
ESSO


TEMPLE
STEELE

5

MOBILITY AND URBAN DESIGN

In This Chapter

5.1 Overall Mobility Recommendations

Complete Streets Design Theme

The overarching design theme for Sanford was simple: to provide more cyclists and pedestrian options for residents and visitors to safely move around Carthage Street and Charlotte Avenue. As a community grows in size and population, so do its mobility needs. To address these needs, a comprehensive solution must be found that does more than simply provide more roadway capacity. It needs to complement the ever-changing surrounding environment, while improving the overall travel experience for the public. A Complete Streets philosophy allows practitioners to broaden the approach to walkability – various elements of a walkable environment beyond just sidewalks. We do this through thoughtful consideration of the end user, network connectivity, and enhanced multimodal infrastructure.

With direction provided by local constituents including the Steering Committee, public officials, City staff, NCDOT, the business community, and the general public, the Project Team was able to identify key planning themes to help craft the recommendations. This input from the stakeholders, technical analysis, and the physical realities of Sanford all dictated the elements that were incorporated into the final corridor design concepts.

Guiding Principles

Prior to the design charrette, a public symposium was held on September 20th, 2018, where residents worked with the project team to define a vision for the corridor, which the project team was then able to boil down to five guiding principles. Those principles are:

1. Modal choices must be a priority
2. The safety of all users is critical
3. Focus on best design practices for access management and enhanced connectivity
4. The corridor must support surrounding uses through attractive design
5. Renewed focus on safety and security aspects throughout the corridor.

With safety, modal choice, and best design practices at the forefront of community needs, we turn to a Safe Systems approach to offer insight on what facilities that reflect those values would look like. Communities that have adopted a safe systems approach often see significant reductions in traffic related incidents, and an increase in more people embracing active modes like walking and bicycling.

Project Symposium participants

Complete Streets are safe, accessible, conveniently designed streets for road users, of all ages and abilities.

With Carthage and Charlotte streets comprising Downtown Sanford's primary east-west corridor, and traversing a variety of land-use types, this diverse group of road users includes delivery trucks, personal vehicles, bicycles (and other two-wheeled modes), people with disabilities, and pedestrians.

Steering Committee participating in the walkabout

New/repaired sidewalks, protected multi-use paths, high quality intersection treatments, and context sensitive bikeways are some of the suggested improvements.

TREAT WALKING AS THE MOST IMPORTANT ISSUE TO ADDRESS

The addition of street trees and better lighting, as well as recommendations to replace crumbling pavement and sidewalks, are integral to the project.

PRESENT A STELLAR IMAGE TO RESIDENTS, VISITORS, AND BUSINESSES

Anticipating traffic impacts from new development and proposing design standards that ensure cost-effective construction are two key points.

BETTER INTEGRATE THE ROAD WITH THE ADJACENT COMMUNITY

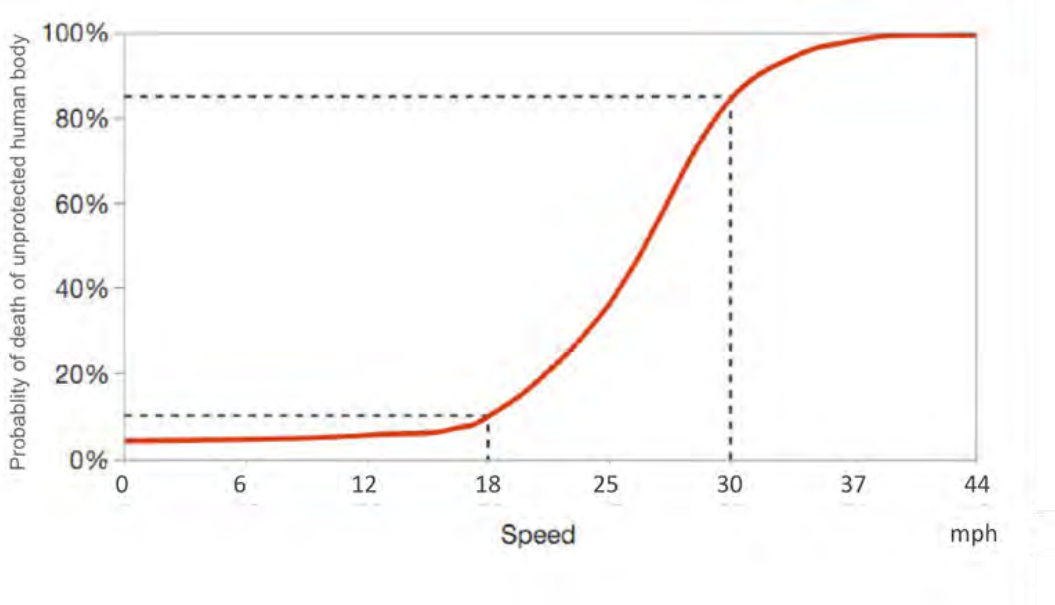
5.1.1 Safe Systems

Safe Systems is a proactive approach to safety. It acknowledges human error in transportation and works to prevent incidents as well as limit the severity when they do happen.

Speed, volume, mass are the three major infrastructural components of developing a systematic approach to safety. This design neither restricts traffic access (volume), nor the types of vehicles allowed along the corridor (mass). The focus of this design was on speed, and how to change travel speeds along the corridor to reach the principles outlined previously.

From this chart one can see that at 18 mph, we reach the 10% threshold, where pedestrians and cyclists have a 90% chance of survival when hit by a car at speeds lower than this. This increases dramatically, and this probability nearly reverses at 30 mph, where pedestrians and cyclists have only a 15% chance of survival.

The recommendations of this study are informed by a combination of this knowledge, as well as knowledge of traffic volume, land-use, desired goals for downtown, and public input.



Probability of death for unprotected individuals when struck by motor vehicles at various speeds

Safe Systems suggests that to be objectively safe enough to reduce risk of fatality and serious injury, and subjectively safe enough that a majority of the public would feel comfortable cycling and walking, the following guidelines should be followed for Sanford's main corridor:

- 0-20 mph: No designated facilities for cyclists or pedestrians needed
- 20-25 mph: Bike lanes (painted, with no physical separation) and sidewalks
- 25-35 mph: Protected bike lanes (light separation, like bollards, armadillos, etc.) and sidewalks
- 35+: Shared side path or Fully separated bike lane (cycle track) and sidewalk

***Please note that these speeds refer to the actual speeds of motor vehicles, and not the posted speed limit.**

***Because of the presence of large trucks, delivery vehicles, etc., along the Carthage and Charlotte corridor, and the large difference in mass between those large vehicles and bikes/pedestrians, recommendations err on the slower side of these guidelines.**

To achieve the desired speeds outlined above, descriptions of each segment of the corridor have been included in the following section.

The truck seen here is driving over the bike lane, forcing the cyclist to the left of the truck.

5.1.2 Preferred Access Plan

The study area for the Sanford Complete Streets Feasibility Study serves many functions to many travelers. Whether by foot, bike, car or truck, this study area transitions through a diverse built environment. The core study area bounded by Wicker Street to Oakwood Avenue along Carthage and Charlotte, respectively, is represented by a mix of predominantly commercial (primarily along Carthage Street), single and multi-family properties, and institutional uses.

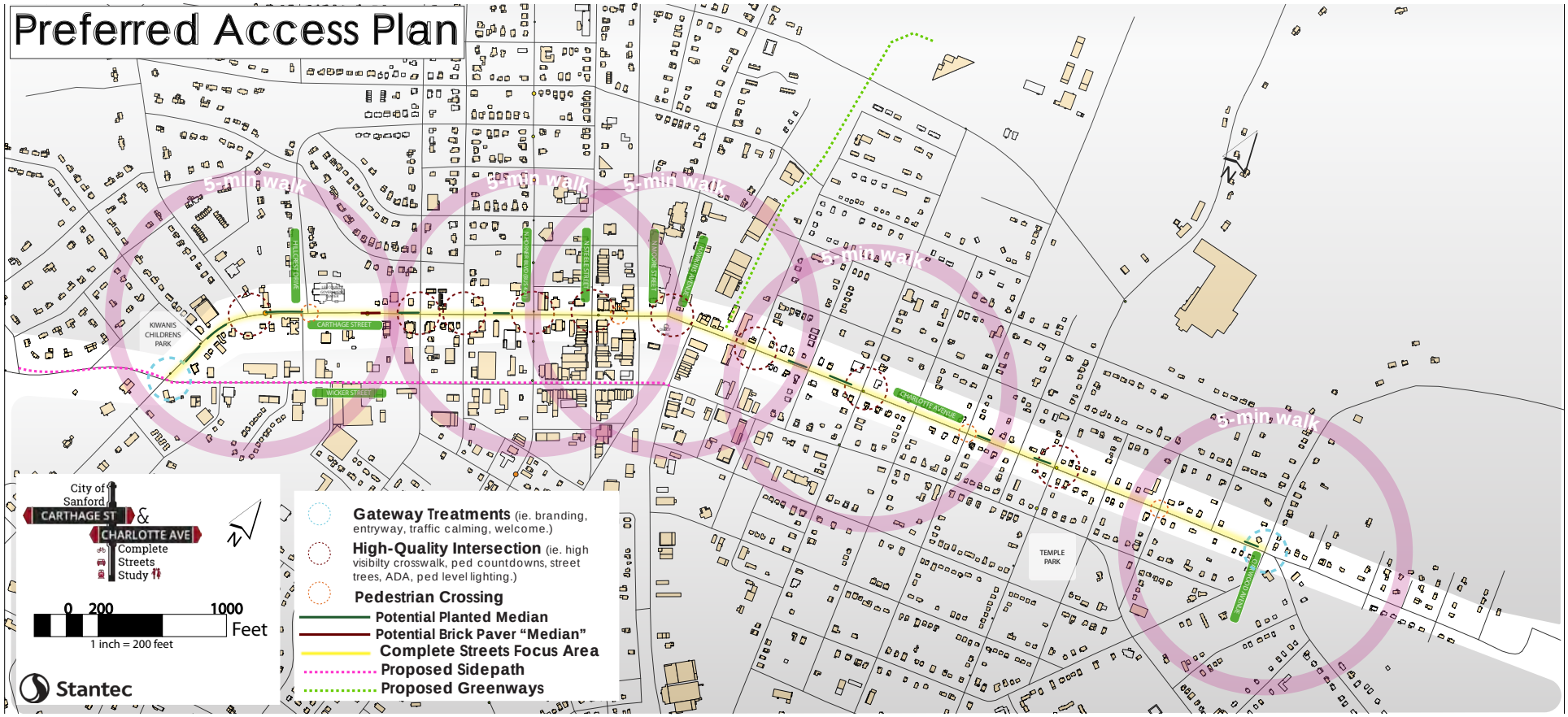
When developing the concept designs for the Sanford Complete Streets Feasibility Study, several design considerations were assumed to create the highest value facility. Traditional design practices may be impractical and limited by the existing rights of way and challenging regional drainage problems. However, redesigning Carthage Street and Charlotte Avenue to address a road built for cars to move quickly, will provide a greater opportunity to accommodate a higher level of bicycle and pedestrian activity, mobility and safety improvements.

The following design criteria were used when designing the Carthage Street and Charlotte Avenue improvements. Project limits: Carthage Street from Wicker Street to Moore Street; Charlotte Avenue from Moore Street to Oakwood Avenue.

- Design Speed within Downtown Core: 30 MPH. Posted Speed: 25 MPH.
- Lane widths: 11 foot wide
- Cross slope: 2%.
- Shoulder widths: Curb and gutter.
- Bike Lanes: Buffered/Protected Bike Lanes
- Sidewalks: 5-foot wide (Carthage Street) and 5-foot wide (Charlotte Avenue, where sidewalk exists)
- Wide Sidewalks (6'-15') at Commercial Areas
- Grades: Maximum 3% grade

The Preferred Access Plan provides a high level view of the entire corridor for Carthage Street and Charlotte Avenue and the associated improvements. The following Complete Streets and connectivity design improvements are included:

- **Spacing Standards "Rules of Thumb":** for signals (1000'), street connections (500') as well as driveway separation to protect the access management along the corridor.
- **High Quality Intersection Treatments:** to enhance the safety and mobility for pedestrian and bicycle crossing. These design treatments include high-visibility crosswalks, pedestrian count downs, street trees, and pedestrian level lighting. The spacing of these high quality intersections along the Carthage Street corridor are 900' – 1100' (2 minute walk to nearest crossing) and Charlotte Avenue corridor are 1000' –1700' (3-4 minute walk to the nearest crossing).
- **Connectivity:** Enhanced street connectivity is essential to protecting the mobility and safety along a given roadway. Carthage Street and Charlotte Avenue are well-connected with block spacings at 450 feet. The Preferred Access Plan encourages healthy connections where appropriate to be made through redevelopment activities. These new connections reflect new 2-lane facilities, typically built by the development community.
- **Road Diet:** The maximum average daily traffic through the corridor (7800) supports a road diet approach. A road diet will help further calm traffic and provide safer options for cyclists and pedestrians. The road diet will stay within existing curblines and existing ROW, if possible, doing so avoids costly impacts to drainage systems and helps avoid property and ROW acquisition along the corridor.


Preferred Access Plan
5-min walk
5-min walk
5-min walk
5-min walk
5-min walk
CARTHAGE STREET
WICKER STREET
CHARLOTTE AVENUE
KIWANIS CHILDRENS PARK
TEMPLE PARK
City of Sanford
CARTHAGE ST
&
CHARLOTTE AVE
Complete Streets Study
0 200 1000
Feet
1 inch = 200 feet
Stantec
Gateway Treatments (ie. branding, entryway, traffic calming, welcome.)
High-Quality Intersection (ie. high visibilty crosswalk, ped countdowns, street trees, ADA, ped level lighting.)
Pedestrian Crossing
Potential Planted Median
Potential Brick Paver "Median"
Complete Streets Focus Area
Proposed Sidepath
Proposed Greenways

5.2 Carthage Street & Charlotte Avenue Focus

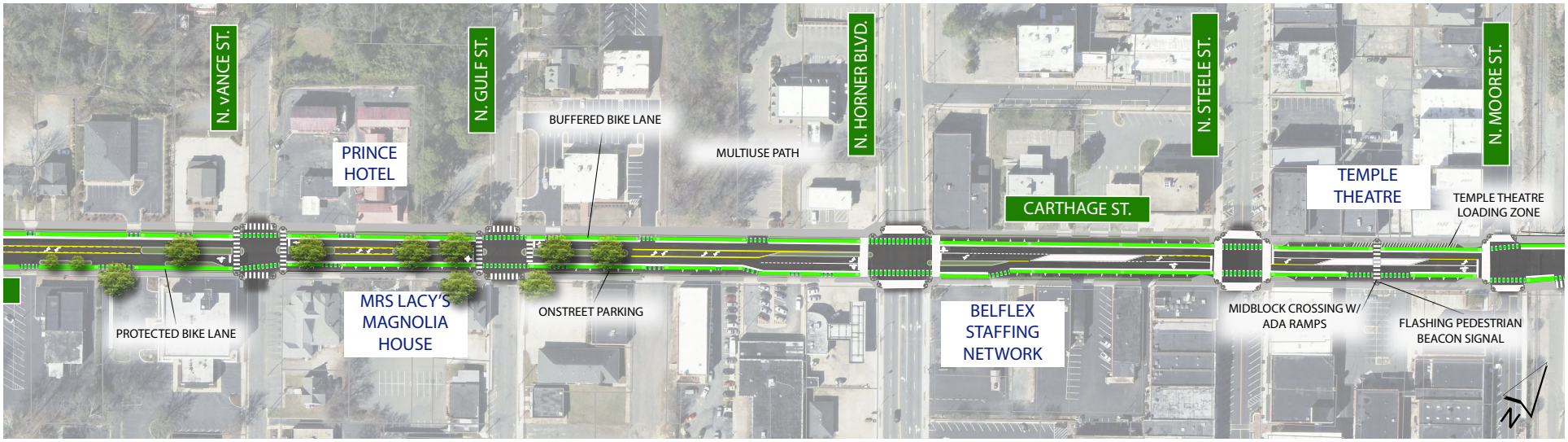
5.2.1 Carthage Street Design

Carthage Street, with its connections to Wicker and Hawkins, as well as its historic shops, restaurants and the Temple Theatre is Sanford's main street. While only 0.8 miles in length, it traverses multiple land-use types, and therefore must serve a variety of people and modes.

What we don't see is a shift in the road typology. While the area and activities progress, the road remains very similar. This creates a discrepancy between the behavior expected by pedestrians of motorists and the actual exhibited behavior of motorists. For example, in the Central business areas, we anticipate that motorists will drive more slowly, and keep an eye out for pedestrians.

However, since the layout of the road has changed very little, motorists are given the visual cue to continue driving as fast as they previously were. This is a safety issue.

Our approach was to divide Carthage Street into three sections and work to redesign a road typology that matches the surrounding land uses.

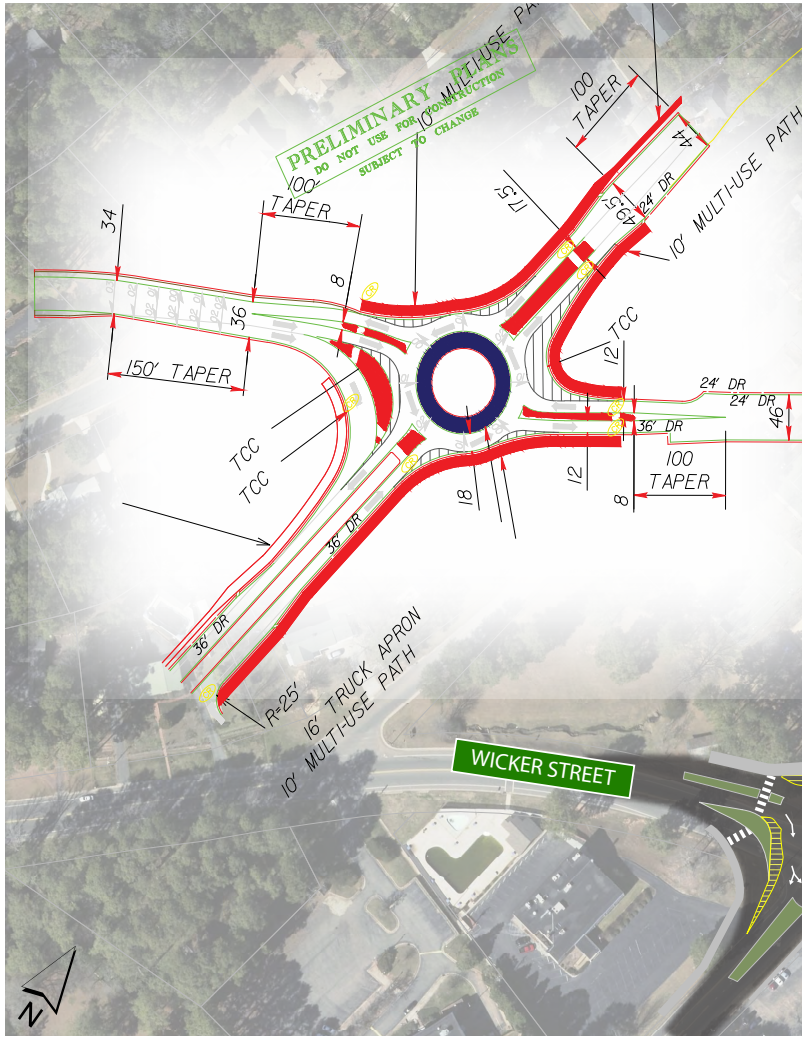


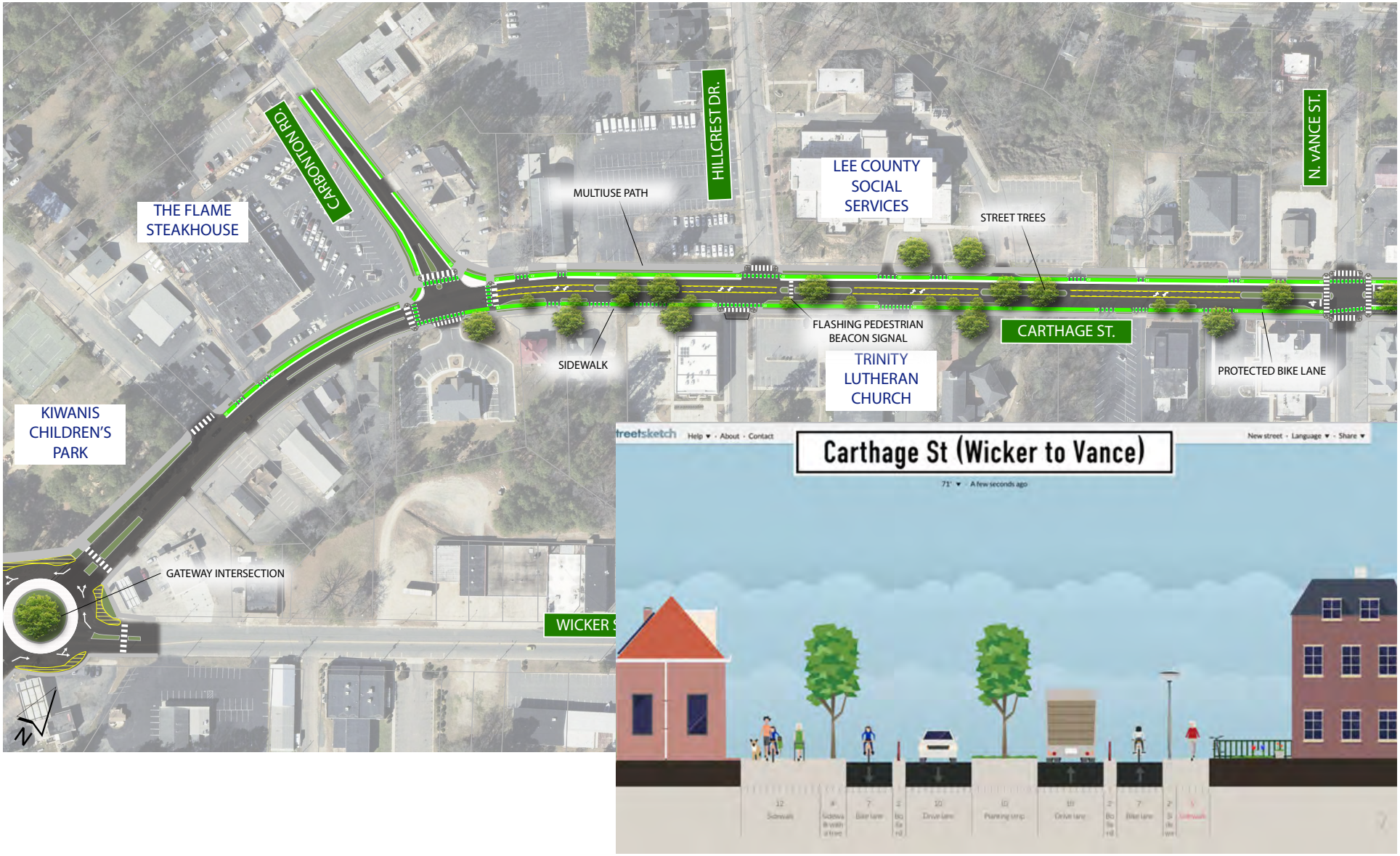
Section 1: Wicker to Vance

From the intersection of Carthage and Wicker, moving east and approaching Horner, we see low density development largely featuring professional services – areas where people are more inclined to get to their destination as quickly as possible. This stretch of the corridor should focus on traffic flow, over place. (noting that traffic flow can be maintained at slower speeds). Moving people forward, whether walking, biking, etc. is the main priority. Because cars are moving faster, interactions with bikes/pedestrians would be slightly more unsafe and they should be protected. To protect bike lanes and sidewalks as much as possible, those interactions are limited through access management.

Design Features:

- Design Speed: 30 mph
- 2-lane roadway, with a median
- 10’-11’ lanes
- Planted median should be used in place of the continuous left turn lane, with gaps for left turns as needed.
- A median with plantings or other vertical elements will have the most impact on visually narrowing the roadway and encouraging motorists to drive 25 mph.
- Where vertical elements are not possible due to left turns, use brick or stamped monolithic median.
- Meandering 10’ - 12’ side path from Wicker to Horner (does not require extra right of way, but will move in existing curb lines into the roadway)
- Protected bike lanes on both sides of the street (painted pavement on north side, planted protection on south side)
- To minimize conflicts, access management should shift all possible




CARBONTON RD.
HILLCREST DR.
N. vANCE ST.
THE FLAME STEAKHOUSE
MULTIUSE PATH
LEE COUNTY SOCIAL SERVICES
STREET TREES
FLASHING PEDESTRIAN BEACON SIGNAL
CARTHAGE ST.
SIDEWALK
TRINITY LUTHERAN CHURCH
PROTECTED BIKE LANE
KIWANIS CHILDREN'S PARK
GATEWAY INTERSECTION
WICKER
treetsketch
Help · About · Contact
Carthage St (Wicker to Vance)
New street · Language · Share
71' · A few seconds ago

driveways to side streets, where possible

Intersections:

- Bike lanes and shared side path become one crossing at intersections (bike lanes bend out to become side path, or run adjacent to the side path)
- At 25 mph the need for left turn lanes will be diminished. Maintain only as needed.
- Pedestrian refuges are needed at crossings greater than 2 lanes, and intersections that do include a left turn lane should also include a pedestrian island.

Example of planted protection for bike lanes

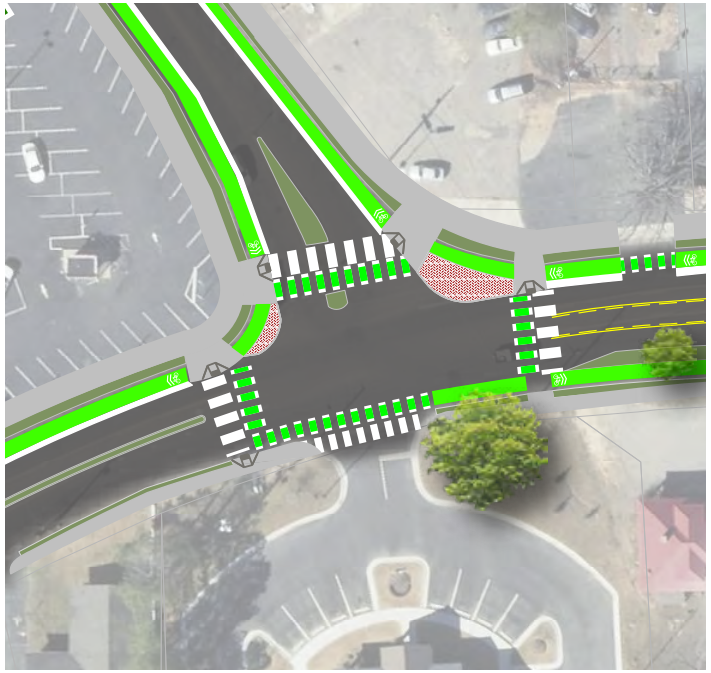
Shown here are examples of bike lanes running adjacent to crosswalk and a protected sidepath:

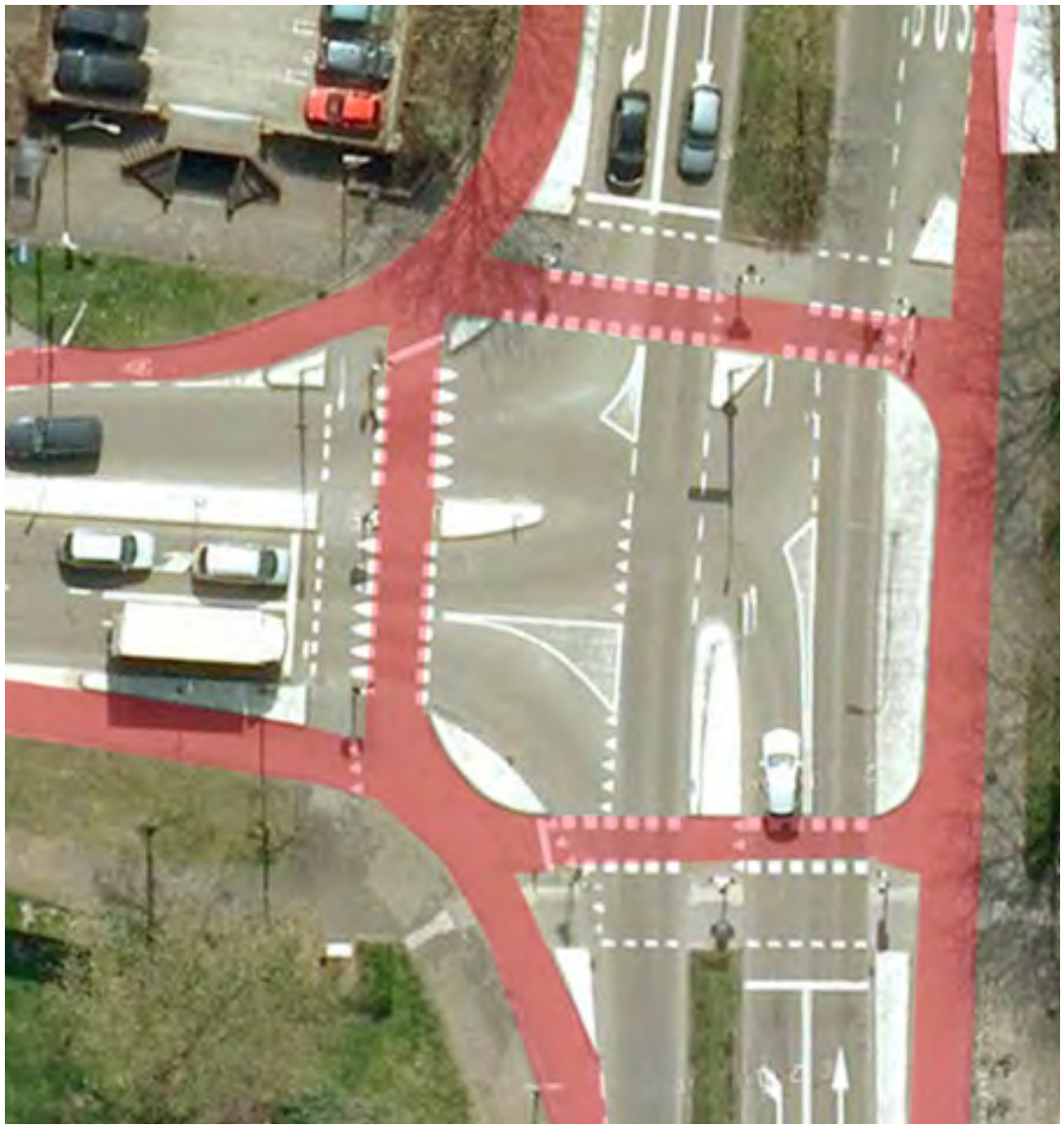
Carbonton Road Intersection:

» Protected 'T' intersection,
» Remove free flow right turn from the east onto Carbonton

Shown here is an examples cyclist and pedestrian movements through a 'T' intersection.

***This intersection has more lanes than is necessary for Carbonton Road, but note the use of bull noses to guide**

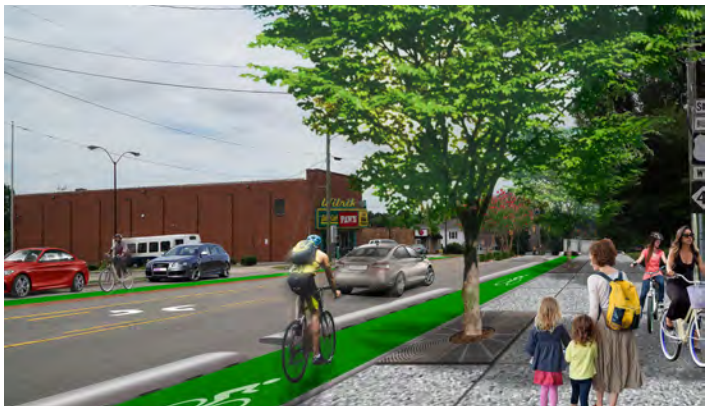




Example of protected intersection at Carbonton Rd. and Wicker St.

Section 2: Vance to Horner

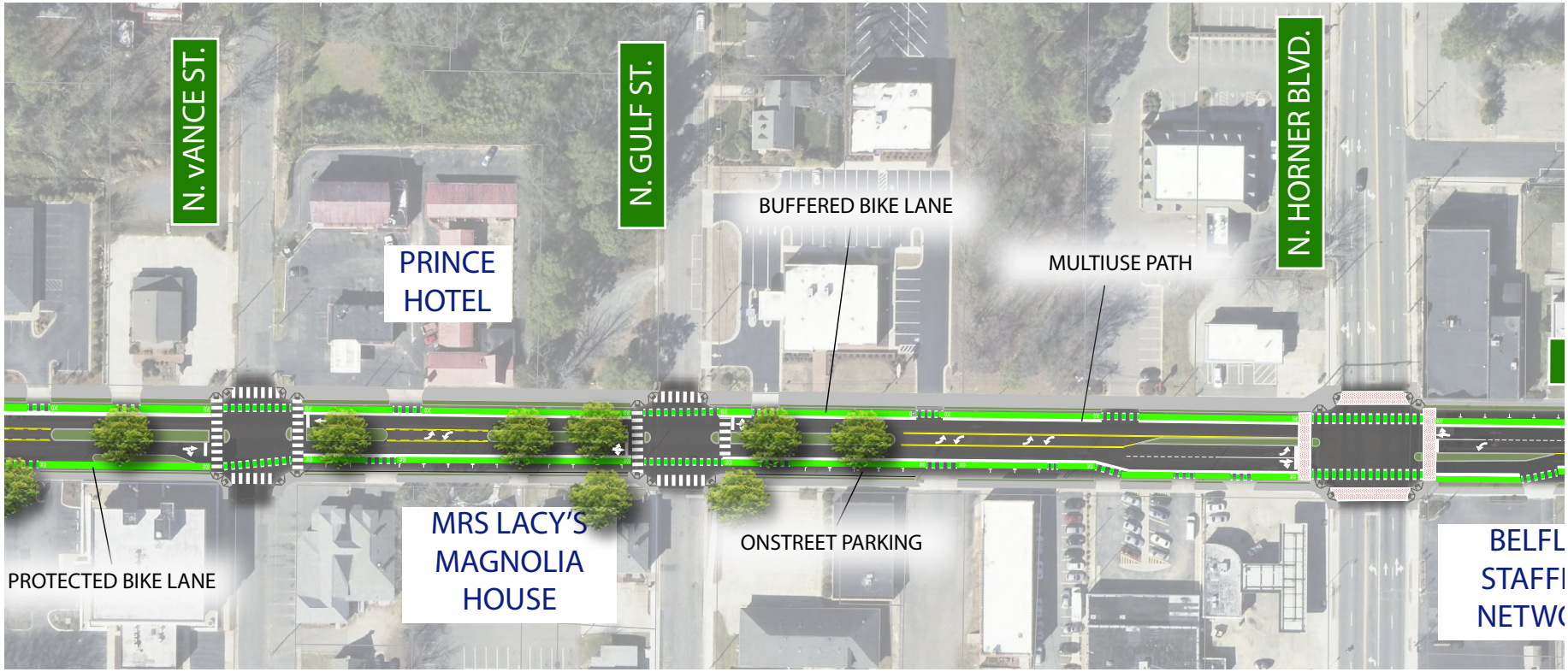
Carthage Street between Vance and Horner serves as a transition to the denser downtown core. Buildings start to move closer together, and the demand for on-street parking is higher. The primary difference between Sections 1 and 2 is the addition of on-street parking.



Photosim: Before and After along Carthage Street looking west

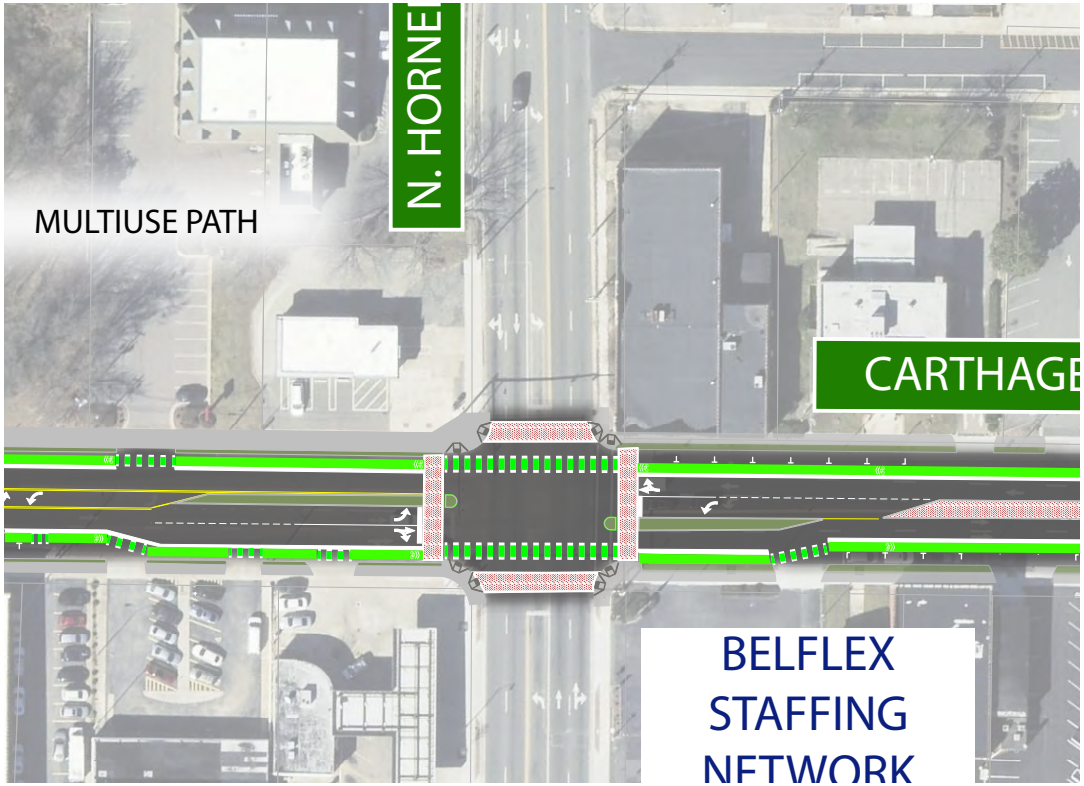
Design Features:

- Design Speed: 25 mph
- 2-lane roadway, with a median and 10'-11' lanes
- Planted median should be used in place of the continuous left turn lane, with gaps for left turns as needed.
- A median with plantings or other vertical elements will have the most impact on visually narrowing the roadway and encouraging motorists to drive 25 mph.
- Where vertical elements are not possible due to left turns, use brick or stamped monolithic median).
- Meandering 10' - 12' side path from Wicker to Horner (does not require extra right of way, but will move in existing curb lines into the roadway)
- Parking on the south side of the street
- Parking: pocket parking or bulb-out parking, so that even when the spaces are unused, the space is still designated – lending itself a role as visually narrowing the street, again in an effort to slow traffic as we approach the downtown, and more people are walking/cycling.
- 6' painted bike lanes between the parked cars and the roadway. When bike lanes are adjacent to traffic, it is of utmost importance that the median utilizes vertical elements as much as possible to narrow the roadway and slow traffic to 25 mph maximum. A 2' buffer that provides tactical feedback and heightened awareness to drivers, like brick pavers, rumble strips, or painted asphalt provides a small, but effective additional layer of safety measures.
- 6 buffered bike lanes on the north side of the street.
- To minimize conflicts, access management should shift all possible driveways to side streets, where practical


N. vANCE ST.
N. GULF ST.
N. HORNER BLVD.
BUFFERED BIKE LANE
MULTIUSE PATH
PRINCE HOTEL
MRS LACY'S MAGNOLIA HOUSE
ONSTREET PARKING
PROTECTED BIKE LANE

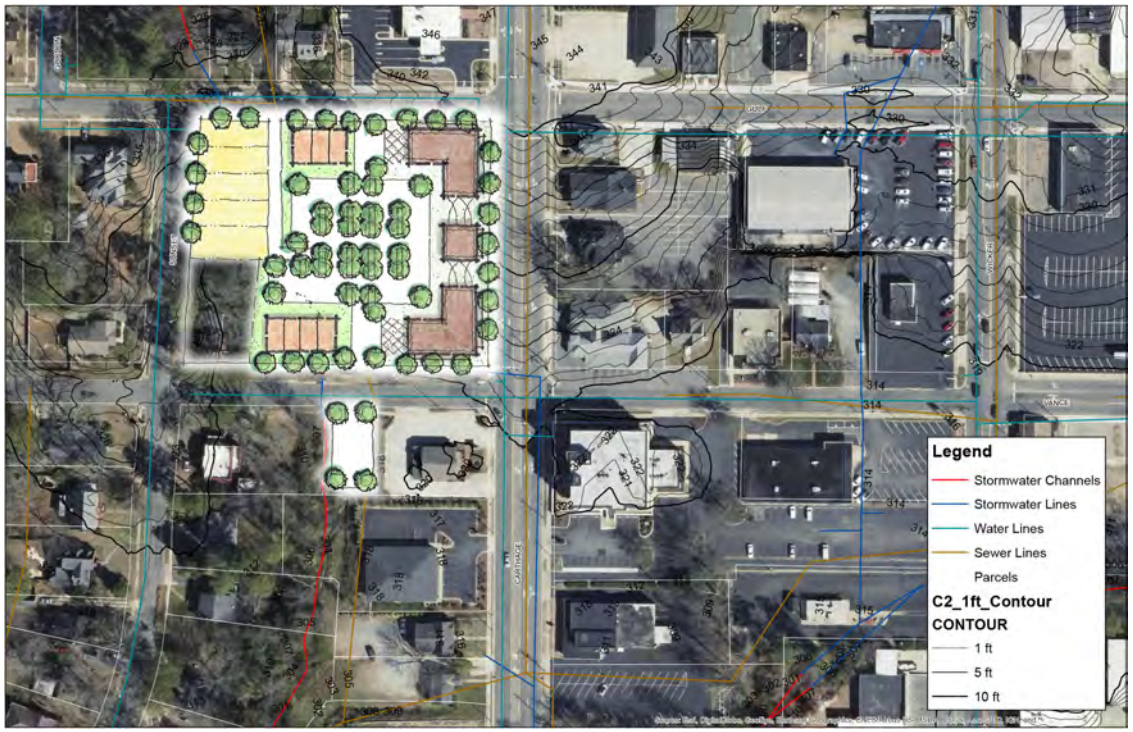
Horner Boulevard Intersection:

- » Protected intersection.
- » Plan for a protected intersection on all four sides, because of future design changes to Horner.
- » Shift shared path to sidewalk/on-street bike lane, east of Horner.
- » Bike/pedestrian refuge where there are three lanes or more.



Prince Hotel Redesign:

The current site of the Prince Hotel was routinely called out by residents and committee members alike for being an unsafe and dangerous place. Many of the survey respondents emphasized the need to re-purpose the hotel site and create a more pleasant and safe environment. The design team accepted this challenge and proposed a new site design of mixed-use retail and residential sites This new proposed layout can be seen to the right.

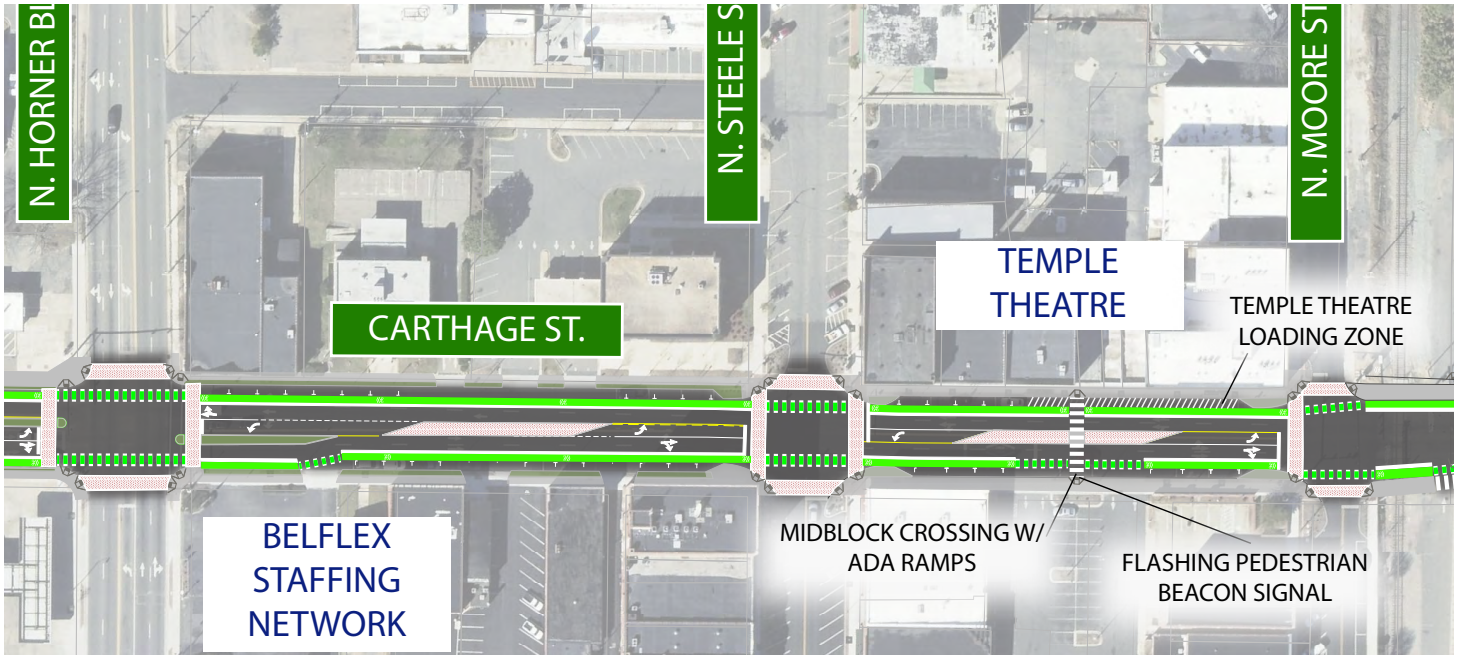


Prince Hotel Redesign:

- 17,500 sf ground floor active retail
- 14 upper story lofts
- 7 townhomes
- 5 single family lots
- 84 required parking spaces
- 94 provided parking spaces

Section 3: Horner to First

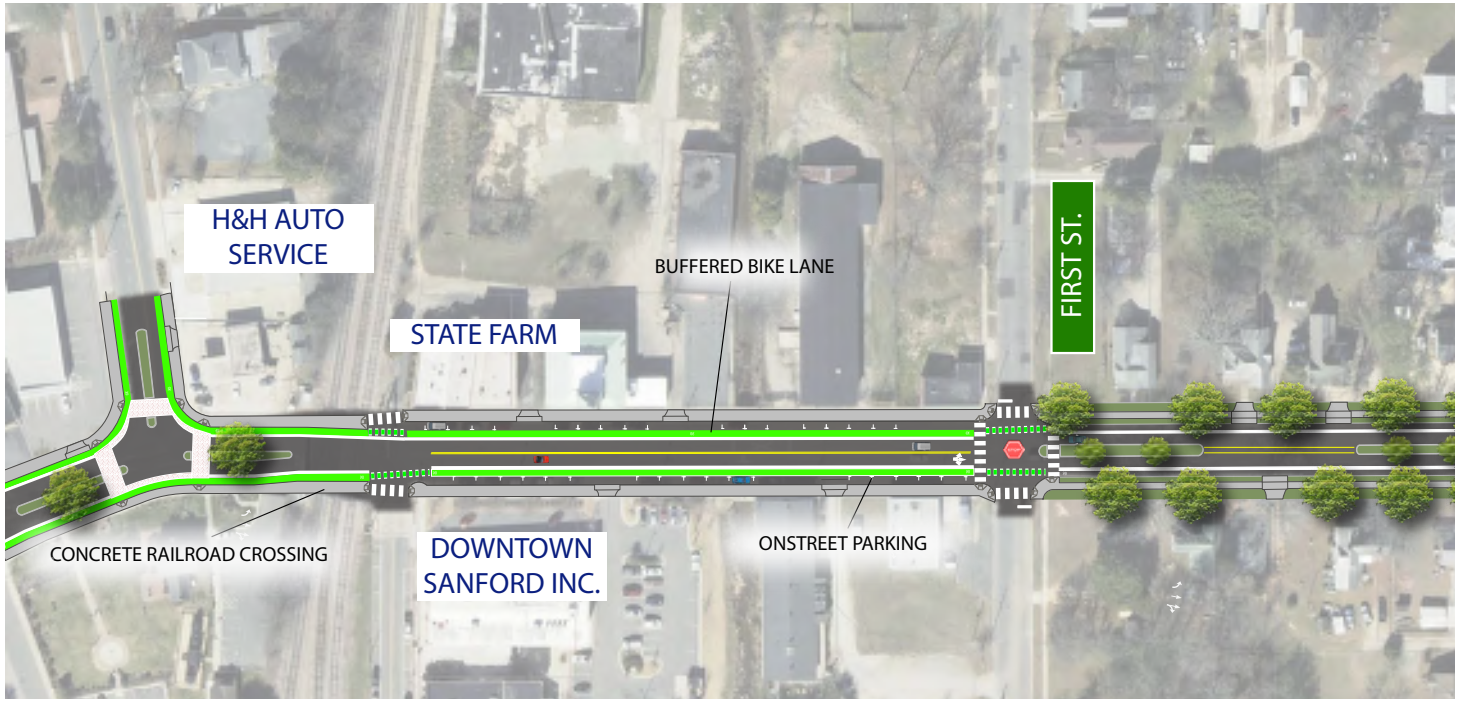
The four blocks between Horner Boulevard and First Avenue make up the Central Business District and the historic downtown. In this section, the shift in land use and a more human scale to the built up environment is evident. Located here are a number of shops, restaurants, historic buildings, and the theater-all places where visitors should want to walk around and enjoy. This stretch of the corridor should focus on enhancing the sense of place and expanding on recent improvements. Vehicular access and traffic flow should come second to pedestrian movement.



Between Horner and First, in particular, people of all ages and abilities can be expected to be walking and cycling, together with people driving and operating delivery vehicles. Where differences in mass are quite large, as they are between pedestrians and delivery trucks, and these modes must mix as they do in downtown environments, extra care must be taken to slow traffic as much as possible.

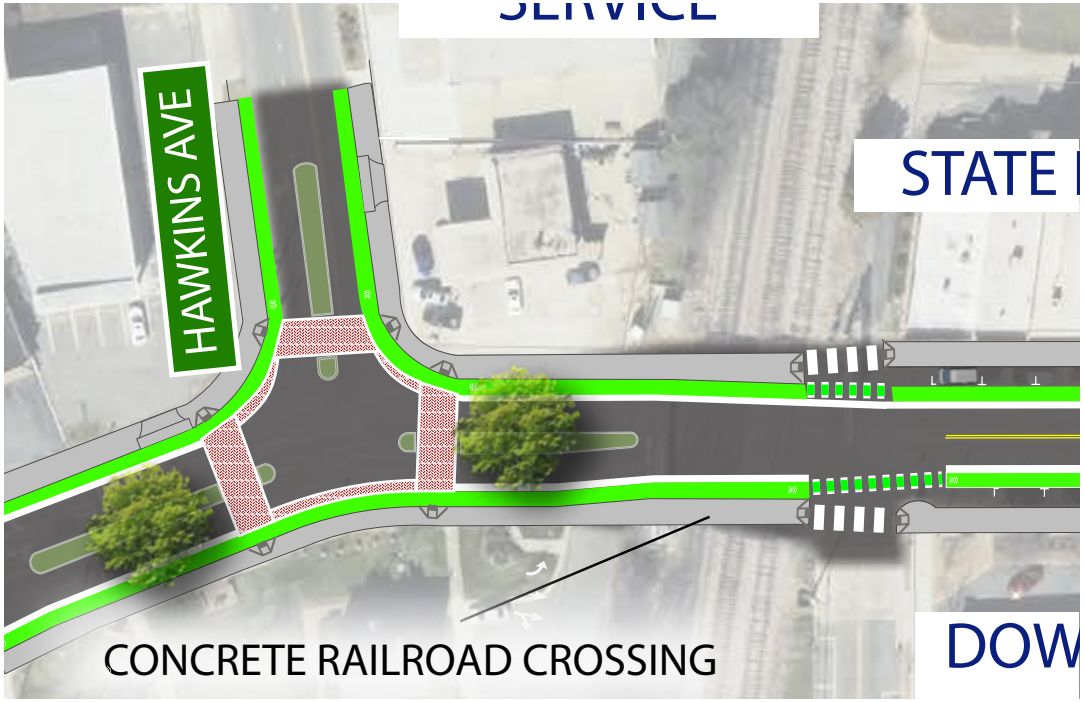
Design Features:

- Design speed: 30 mph, Posted Speed: 25 mph
- Lane widths a maximum of 10’
- 2 lanes, bike lanes, sidewalk
- Maintain streetscape elements
- High quality crosswalks
- Shared path shifts to on-street bike lane
- 6’ min bike lanes on both sides of the street
- Parking on both sides of the street



Hawkins Avenue Intersection:

- Enhanced Bike/Pedestrian Safery T intersection, much liked the one shown at Carbonton (left turn lanes should not be needed turning onto Hawkins)
- Incorporate streetscape materials and brick pavers to indicate gateway entrance from Hawkins to the downtown
- Because of poor sightlines between Hawkins and the railroad crossing, we recommend narrowing the intersection, and providing crossings on all approaches

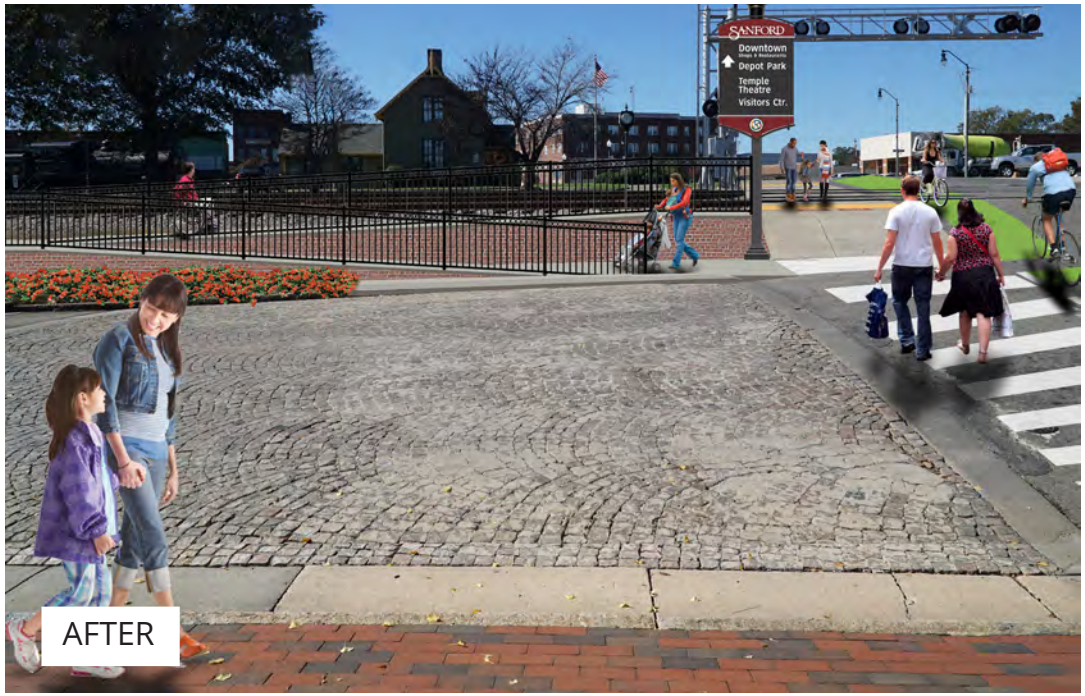


Examples of panels and pavers for smooth transtition of railroad tracks:

Railroad Crossing Design:

The railroad crossing between Hawkins and Chatham is the cause of significant discussion, and countless scratches on cars, from cars bottoming out over the tracks. To address the variation in level of the tracks, we recommend using railroad panels to smooth the transition.

To address the steep grade, we recommend an ADA accessible switchback ramp to make the crossing accessible. Bike lanes would carry straight through the intersection, with the ramp available for disabled and non-disabled pedestrian use.



5.2.2 Charlotte Avenue Design

The eastern segment of the corridor, consisting of Charlotte Avenue, from 1st to 11th serves primarily to connect residents to downtown. Feedback from the public and focus groups noted that speeds are too high, with 3rd and 7th Street intersections experiencing a notable amount of offenders. The role of this section is to connect downtown to East Sanford and San Lee Park, and emphasis was placed on traffic flow to accommodate these movements while improving the quality of the roadway.

Charlotte Avenue - Complete Streets Improvement Plan

Design Features:

- Design speed: 40 mph Posted: 35 mph
- 2 lanes
- 10-11’ driving lanes
- Relatively low traffic volumes combined with slower speeds should eliminate need for left turn lanes
- Road diet recommended for 4 lane segments
- Buffered and protected bike lanes, using bollards, trees and other vertical elements. Vertical elements will be important wherever possible to maintain the visual of a narrow street.
- 6-7’ bike lanes
- Sidewalk on both sides
- High-quality pedestrian crossings

Charlotte Avenue at 7th Street Facing West:

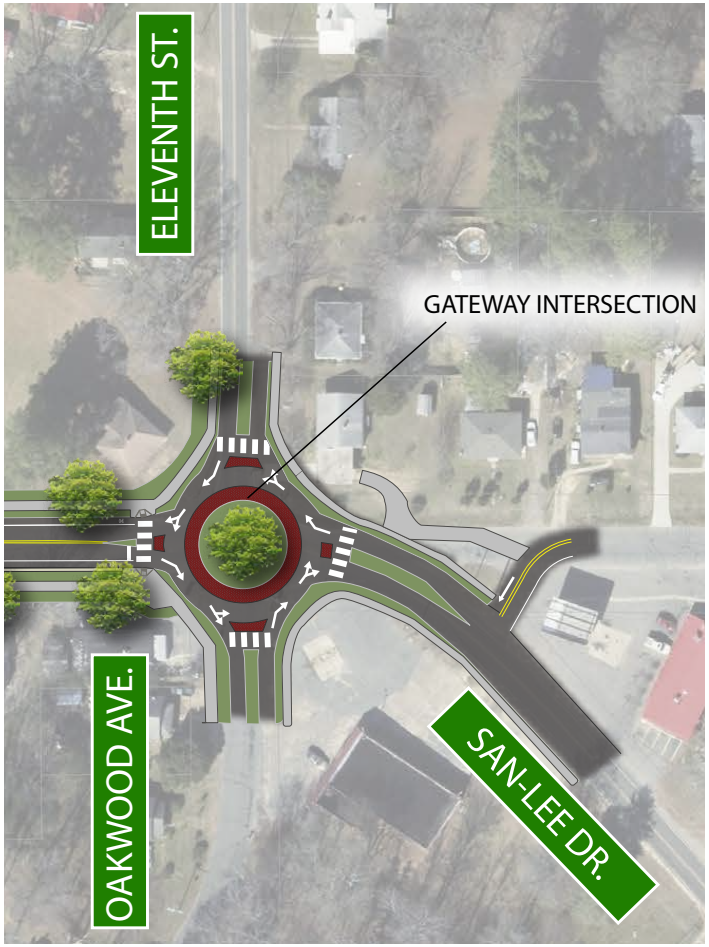
To encourage cyclists from residential neighborhoods to bike downtown, the design extends bike lanes down Charlotte Avenue to 11th Street. The bike lanes will be buffered with two to three foot marked pavement. Pocket medians have been placed at key spots along this section, while trying to minimize driveway conflicts.

Charlotte Avenue at 9th Street facing East:

Here is another view along Charlotte Avenue. This is 9th Street and Charlotte looking towards the east end of Charlotte Avenue. The bike lanes will carry cyclists to the gateway roundabout at the end of Charlotte Avenue. The streets will be lined with pedestrian level lighting that highlights the Sanford's small town feel with welcoming banners.

11th Street Crossing:

The 11th Street Crossing presents an interesting opportunity to create a gateway that mirrors that at Carthage and Wicker. A roundabout with accommodations for cyclists and pedestrians solves the challenge of this junction. With a current 5-legged intersection.



Example: one-lane roundabout

5.3 Key Recommendations

A. Work with NCDOT Bike and Pedestrian Department to reconstruct (i.e., road diet) Carthage Street and Charlotte Avenue into a 2-3 lane Complete Street with dedicated bike lanes. Add street trees and street level lighting.

B. Make the intersections at Carbonton, Horner, and Hawkins safer for pedestrians and cyclists.

C. Construct a single-lane roundabout at the end of Charlotte Avenue at Oakwood Avenue.

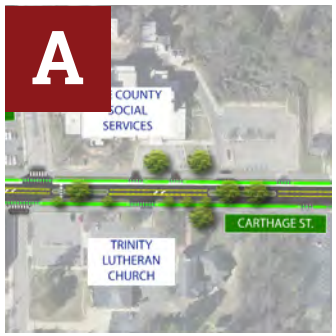
D. Create up to 20 new parallel parking spots along Carthage Street near thebusinesses adjacent to Horner Blvd.

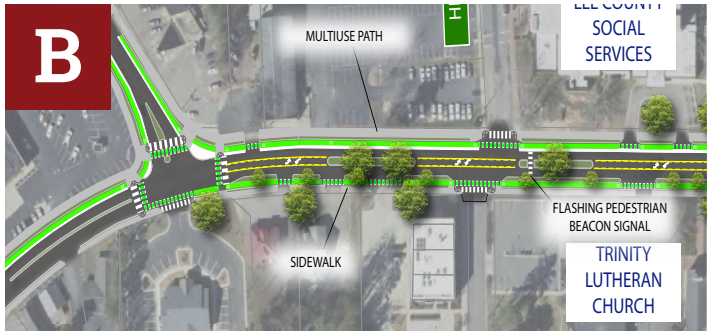
E. Add a signalized pedestrian crossing in front of Temple Theatre.

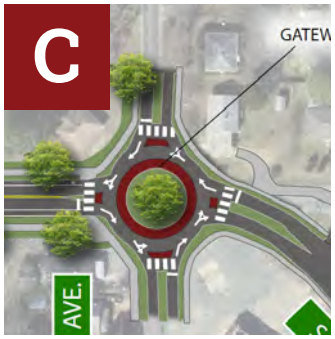
F. Construct planted and traversable bricked medians along the corridor in strategic locations.

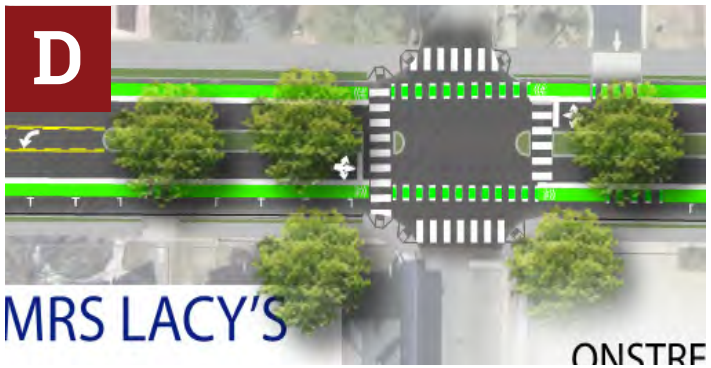
G. Construct 10’ delineated concrete paths at all railroad crossings.

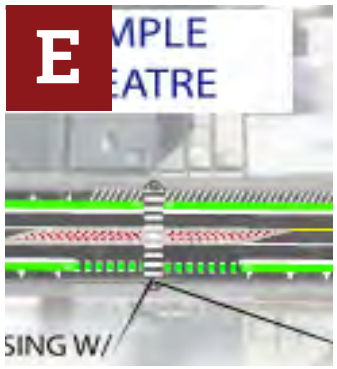
H. Install 10’-12’ sidepath along Carthage Street from Horner Blvd. to Wicker Street.












Welcome To
Historic
East
SANFORD

6

IMPLEMENTATION

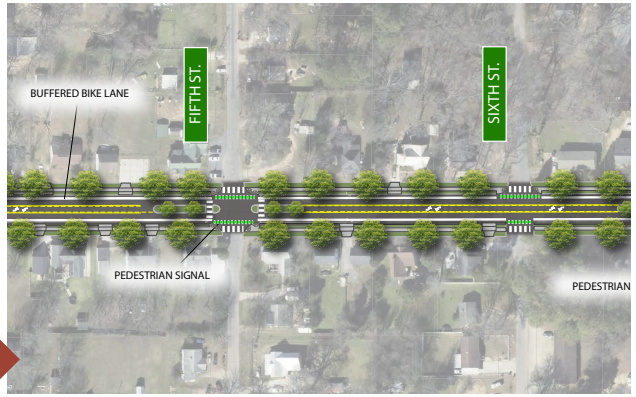
In This Chapter

6.1 Top 5 in 5

To initiate the implementation process, 5 projects (transportation, placemaking, and development) have been identified that should be implemented over the next 5 years.

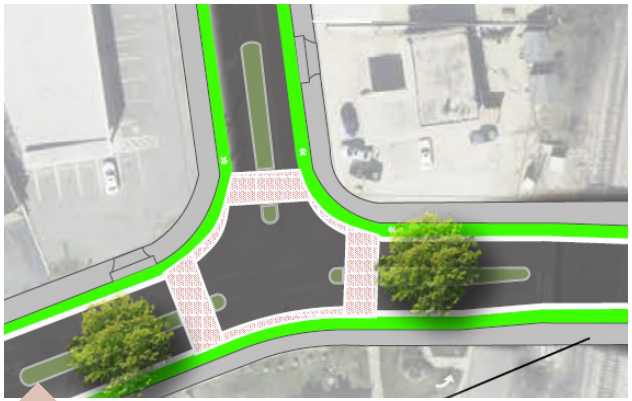
1

Road Diet with Bike lanes on Charlotte Ave. after resurfacing



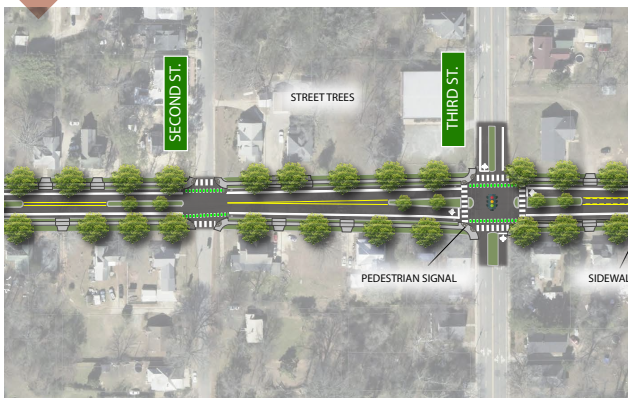
2

Improve Lighting on Charlotte Avenue.



3

Road Diet with Protected/ Buffered Bike Lanes on Carthage



4

Protected Intersections at CArbonton Rd. and Hawkins Ave.

5

Planted and brick stamped medians along the corridor.

Bricked Medians in the Downtown Core.

Planted Medians along Carthage Avenue.

6.2 Costs & Phasing

Carthage Street and Charlotte Avenue Cost Estimates/Phasing

The ultimate success of this Feasibility Study rests on the ability of local and state officials and leaders to carry out the recommendations of the plan. This effort is made easier by describing a series of defined steps, or action items, to move the process forward. In addition, defining the cost and potential funding mechanisms will allow a framework or "blueprint" for implementation. From the outset of the study, a key objective was to develop cost-effective recommendations (at a variety of scales) that set the stage for additional improvements to Charlotte Avenue and Carthage Street in the future. Projects should focus on public spending that yields a return on investment from the private sector. The quality of private investment in both design and community amenities will have a profound impact on the attractiveness of the area, and successful and sustainable development will come only through a cooperative effort between public and private ventures.

The following table provides a breakdown of the construction costs associated with Carthage Street and Charlotte Avenue. These include items related to Complete Streets, landscaping, signal improvements, sidewalks, new pavement, structures, curb and gutter, traffic control, etc. The opinion of probable cost for transforming both corridors with transportation improvements is approximately $8.2 million.

Feasibility Study- Estimated Costs

Project	Description	Length (mi.)	Est. Construction Costs
Carthage Street Complete Streets project-Total	Work with NCDOT to reconstruct (i.e., road diet) Carthage Street from Wicker Street to Hawkins Avenue into a 2-3 lane divided Complete Street. with buffered/ protected bike lanes and medians. Includes resurfacing and mast arms at key intersections.	0.8	*$4,315,000
Charlotte Avenue Complete Streets project-Total	Work with NCDOT to reconstruct (i.e., road diet) Charlotte Avenue from Hawkins Avenue to Oakwood Avenue into a 2-3 lane Complete Street with dedicated bike lanes and medians. Includes resurfacing.	1.0	*$3,830,000
	*Complete Streets Projects Total:		*$8,145,000
Key Projects apart of the above Complete Streets Projects:			
Carbonton Intersection	Protected intersection with bike and pedestrian crossings. Resurfacing included in Complete Streets portion.	N/A	$90,000
Hawkins Intersection	Reconstruct the Hawkins Ave. and Charlotte Ave. Intersection to high visibility crosswalks with a pedestrian refuge, bike crossings, and pedestrian countdowns. Resurfacing included in Complete Streets portion.	N/A	$75,000
Charlotte Avenue Roundabout	Build one-lane roundabout at Oakwood Avenue and Charlotte Avenue with tree plantings or a monumental decorative gateway centerpiece.	N/A	$1,000,000
Multiuse Path along Carthage Street	Construct 10'-12' wide multiuse path along Carthage Street, starting at Horner Blvd. and ending at Kiwanis Park. Includes removal of existing sidewalk.	0.5	$940,000
Completing Sidewalks along Charlotte Avenue	Complete sidewalk gaps on south side of Charlotte Ave. from 3rd St. to Oakwood Ave. Complete Sidewalks on north side of Charlotte Ave from 5th St. to Oakwood Ave.	1.2	$510,000
Mast Arm Assemblies	Mast Arm Assemblies at the intersections of Carthage St. and Vance St and Gulf St. and Carthage St.	N/A	$400,000
Painted Bike Lanes along Carthage Street	Construct painted bike lanes along Carthage Street using buffers and protective planted islands on the south side of Carthage. Curbed medians/stormwater BMPs and bollards.	1.1	$680,000
Railroad pedestrian crossing and switchback ramp	Construct delineated path over both railroad tracks to encourage pedestrians to feel safe while crossing as well as meeting ADA compliance regulations. Construct switchback ramp.	N/A	$300,000*
Planted medians along corridor	Medians will provide beautification and protection to cyclists in the bike lanes, while also allowing trucks and delivery traffic to conduct business as normal.	N/A	$250,000

*cost estimates subject to change based on project specifications

6.3 Financing and Incentives

Grants & Programs

The City of Sanford will need to tackle the implementation of the plan recommendations as funding allows and by utilizing creative financing and incentive packages. The action plan matrix in this chapter outlines whether an action item it will be taken care of with private funding. *[Federal Grants: http://www.reconnectingamerica.org/resource-center/federal-grant-opportunities/]*

Building Improvement and Architectural Service Incentive Grants

Building Improvement and Architectural Service Grants assist business and property owners by helping to fund awnings and exterior improvement to properties, encouraging historic preservation, encouraging good design that meets current building code, and promoting projects that enhance the planned development of downtown. Downtown Sanford, Inc. (DSI), part of the NC Main Street Program, offers matching grants to business and property owners to provide incentives for exterior façade improvements, life & safety interior improvements, and design services. All require a 1:1 match by the applicant, with a maximum grant of $5000 per applicant. *[https://www.downtownsanford.com/grants/]*

Public Private Partnerships

Public/Private Partnerships are designed to accomplish a combination of goals related to economic and community development efforts, some of which have been identified in this plan. Public funds must only be made available to those projects determined otherwise unfeasible or unachievable "but for" the combined efforts of public and private participation. The overlay district boundaries should outline areas within the town determined to be key economic growth areas. The projects must comply with community adopted standards and program guidelines established for that area. *[Urban Land: https://urbanland.uli.org/development-business/nine-practices-successful-publicprivate-partnerships/]*

NCDOT Spot Safety and Hazard Elimination Funding

These funding programs represent smaller type projects (i.e., intersection safety, corridor access management, etc.) that do not necessarily require a lot of funding or acquisition of right-of-way. NCDOT uses a cost-benefit analysis to justify specific projects. Good examples of this type of project (from this plan) would be Horner Blvd./Carthage Street intersection, Oakwood Ave. roundabout or the Hawkins Avenue/Carthage Street intersection. *[https://connect.ncdot.gov/resources/safety/pages/nc-highway-safety-program-and-projects.aspx/]*

Small Business Revolving Loan Fund

The City of Sanford should consider the creation of a revolving loan fund for small businesses. Federal and state funds are often available to assist in funding this type of program which is set up as a competitive, low interest loan program. New or expanding small businesses that employ individuals that meet established goals and criteria would be eligible. *[U.S. EDA, Economic Development Administration: https://www.eda.gov/rlf/]*

NCDOT Strategic Transportation Investment law (STI)

STI allows NCDOT to use funding to enhance transportation infrastructure as well as supporting a higher quality of life for a municipality. STI established the Strategic Mobility Formula that allocates revenues through a factor-based scoring technique. The projects that are scored with the STI are within the current State Transportation Improvement Program (STIP). The STIP identifies funding information and scheduling for transportation projects statewide. While the travel time savings from the implementation of the Complete Streets Feasibility Study improvements are likely not sufficient to score well in the State's SPOT STI prioritization, it is possible that some smaller intersections or greenway/multi-use path projects could compete successfully. Sanford should coordinate with NCDOT and TARPO to align appropriate projects onto the State Transportation Improvement Program. *[https://www.ncdot.gov/strategictransportationinvestments/]*

Bond Referendum

Bonds are a borrowing technique used by local governments to fund public facilities and infrastructure. This type of financing allows the cost of a facility to spread over time so that generations of users contribute a proportionate share of the investments. Bonds generally have lower interest rates than private loans and they can also provide necessary local revenue to match state or federal sources. The City of Sanford has seen some success with municipal bonds and may want to consider using them in the future. *[https://www.sanfordnc.net/DocumentCenter/View/1130/Bond-Education-Pamphlet-PDF?bidId=]*

Main Street America

The NC Main Street Program works with municipalities to encourage preservation-based community revitalization. As a member of NC Main Street, Sanford may have an opportunity for resources, solutions and connections to build and revitalize the downtown area. [*https://www.nccommerce.com/about-us/divisions-programs/rural-economic-development/nc-main-street-rural-planning-center]*

Community Development Block Grants (CDBG)

This program provides communities with resources to address community needs. CDBG grants work to ensure affordable housing to vulnerable populations. Seventy percent of the CDBG grants must benefit low and moderate-income persons. *[https://www.hud.gov/program_offices/comm_planning/communitydevelopment/programs/]*

Feasibility Study - Action Plan Matrix

Project	Description	Est. Construction Costs	Funding Source	Time Frame
Carthage Street Complete Streets project-Total	Work with NCDOT to reconstruct (i.e., road diet) Carthage Street from Wicker Street to Hawkins Avenue into a 2-3 lane divided Complete Street. with buffered/protected bike lanes and medians. Includes resurfacing and mast arms at key intersections.	*$4,315,000	State and City	1-5 years
Charlotte Avenue Complete Streets project-Total	Work with NCDOT to reconstruct (i.e., road diet) Charlotte Avenue from Hawkins Avenue to Oakwood Avenue into a 2-3 lane Complete Street with dedicated bike lanes and medians. Includes resurfacing.	*$3,830,000	State and City	6-10 years
	Complete Streets Projects Total:	*$8,145,000		
Carbonton Intersection	Protected intersection with bike and pedestrian crossings.	$90,000	State, City, & TARPO	1-5 years
Hawkins Intersection	Reconstruct the Hawkins Ave. and Charlotte Ave. Intersection to high visibility crosswalks with a pedestrian refuge, bike crossings, and pedestrian countdowns.	$75,000	State, City, & TARPO	1-5 years
Charlotte Avenue Roundabout	Build one-lane roundabout at Oakwood Avenue and Charlotte Avenue with tree plantings or a monumental decorative gateway centerpiece.	$1,000,000	State and City	6-10 years
Multiuse Path along Carthage Street	Construct 10'-12' wide multiuse path along Carthage Street, starting at Horner Blvd. and ending at Kiwanis Park. Includes removal of existing sidewalk.	$940,000	State and City	6-10 years
Completing Sidewalks along Charlotte Avenue	Complete sidewalk gaps on south side of Charlotte Ave. from 3rd St. to Oakwood Ave. Complete Sidewalks on north side of Charlotte Ave from 5th St. to Oakwood Ave.	$510,000	State and City	6-10 years
Mast Arm Assemblies	Mast Arm Assemblies at the intersections of Carthage St. and Vance St and Gulf St. and Carthage St.	$400,000	City	6-10 years
Painted Bike Lanes along Carthage Street	Construct painted bike lanes along Carthage Street using buffers and protective planted islands on the south side of Carthage. Curbed medians/stormwater BMPs and bollards.	$680,000	State, City, Grant, & TARPO	1-5 years
Railroad pedestrian crossing and switchback ramp	Construct delineated path over both railroad tracks to encourage pedestrians to feel safe while crossing as well as meeting ADA compliance regulations. Construct switchback ramp.	$300,000*	State, City, Grant, & TARPO	6-10 years
Planted medians along corridor	Medians will provide beautification and protection to cyclists in the bike lanes, while also allowing trucks and delivery traffic to conduct business as normal.	$250,000	State, City, Grant, & TARPO	6-10 years

cost estimates subject to change based on project specifications

In order for this Feasibility Study to be successful, it needs to be enacted. Throughout the planning and design process, stakeholders were involved and were vocal in expressing their ideas, interests, and concerns surrounding the future of Carthage Street and Charlotte Avenue and the City of Sanford. Without the contribution and participation of individual residents, business owners, property owners, the emergency services community, City Planning Staff, City Steering Committee Members, and NCDOT Bike and Pedestrian Divison, this Plan would not have seen a successful outcome.

Moving forward, this study cannot be realized overnight, and it certainly can not get off the ground without local individuals owning this vision and championing these recommendations. It takes the actions of community members, business and property owners, and policy makers putting their collective efforts, dollars, votes, and their voices behind this plan to bring it to reality. With such action, the decision makers and stakeholders can work together with developers and government officials at the regional, state, and federal levels to revitalize Carthage Street and Charlotte Avenue as a healthy and vibrant community asset. Through this continued collaboration, Sanford can become a place where people want to live, shop, play, and visit for years to come.

Original Fire Department in Sanford, NC.

6.4 Carthage Street Phasing

What can we do right now for $1.9 Million...

In an effort to move forward with some of the initial improvements, the City (in cooperation with NCDOT), should consider phasing the completion of Carthage Street using the funded project STIP # EB-5863. The total funded amount is $1,913,000. The extents of this STIP project run from Wicker Street to Chatham Street.

Phase I: To use the funding approved for this project, pieces of the design have been omitted in order to reduce costs in the first phase of construction.

- Resurface Carthage Street from Wicker Street to Chatham Street.
- Construct textured concrete and planted median islands.
- Restripe road to accommodate road diet design.
- Paint green bike lanes and additional buffer in place of bumping out curb on north side where future mulituse path will be constructed in later phase.
- Install ADA ramps at sidewalk temini along project extents.
- High-visibility and stamped concrete crosswalk at major intersections.
- Flashing pedestrian beacon at Carbonton Rd. and at the Temple Theatre midblock crossing.
- (Approximate cost: $1.9MM).

Phase II: With more funding the project can move onto a second phase that includes:

- Construction of protected islands for bike lanes along the south side of Carthage St.
- Construction of multiuse path along Carthage St. starting at Horner Blvd to Wicker St.
- Mast arm assemblies at Vance St. and Gulf St.
- (Approximate cost: $2.4MM).

Multiuse path along Carthage Avenue would provide for pedestrians and cyclists.

6.5 How We Know We Have Succeeded

The next chapter of Sanford's story is one that puts people first. Looking ahead, several benchmarks will be strong indicators that the town has implemented the ideas set forth in this plan. They will be signs of success and vibrancy!

The secret to unlocking the potential of place is PEOPLE! Creating places where people want to dine, shop, play, relax, and make memories!

The gateways, or front porches, of Sanford are welcoming, beautiful spaces.

Every direction visitors enter the City of Sanford from will convey the message of a proud and welcoming community. High quality crosswalks, beautiful landscaping, and pedestrian amenities will be visual cues at each gateway. These community front porches will exude beauty and an invitation to stay and enjoy the unique, quaint appeal of Sanford, North Carolina!

Carthage and Charlotte are full of pedestrians and cyclists (and slow moving cars!).

Carthage and Charlotte will be Complete Streets where all modes of transportation coexist together in a safe environment. The sidewalks are bustling with people both walking and sitting on benches enjoying the historic downtown. Cyclists are pedaling to their destination with no fear and no hostility from their fellow road companions. The cars are moving slowly because it is clear that the right-of-way is not just for them alone, but it is a space to be shared by all!

Entrepreneurs will have opened 10 more businesses around Downtown Sanford.

The public investment into both downtown Sanford will yield a shift in small business success on what will be walkable, bikable corridors. New local businesses enhance the authenticity and success story of Sanford.

People of all ages, ethnicities and economic levels will be living in the Charlotte Ave neighborhood.

The area will flourish with diversity and yield the benefits of our multi-cultural heritage. Generational interdependence will be a trademark of the neighborhood.

People will CHOOSE to walk or bike instead of getting in their car.

Life is full of choices, and the transformation of these corridors will expand the ability for people to choose to live active lifestyles. Healthy citizens are a key ingredient to vibrant, successful communities.

Partnerships and old fashioned hard work will have made it happen.

Sanford's success will be built on the community's shoulders, and everyone will feel a sense of pride and ownership. Collaboration, dedication, and the relentless pursuit of building community will be hallmarks of the next chapter.


HOTEL
CAROLINA
COFFEE SHOP
RESTAURANT
RESTAURANT
INSURANCE
TELEVISION