Second Avenue **Corridor Study**

DATE: JUNE 2022

SILER CITY NC

Rendering of proposed roundabout at Fayetteville Avenue

SECOND AVENUE CORRIDOR STUDY

Acknowledgment

This corridor study was preparred by Stantec and would not be possible without the help from the following Siler City residents who devoted their time:

Scott Murphy
Chris McCorquodale
Richard Szary
Hannia Benitez
Angelynn Fox
Michael Feezor

And the many other townspeople of Siler City who volunteered their businesses, their time, their talents, and their thoughts in contributing to this Plan.

Thank you.

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Introduction

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Introduction.

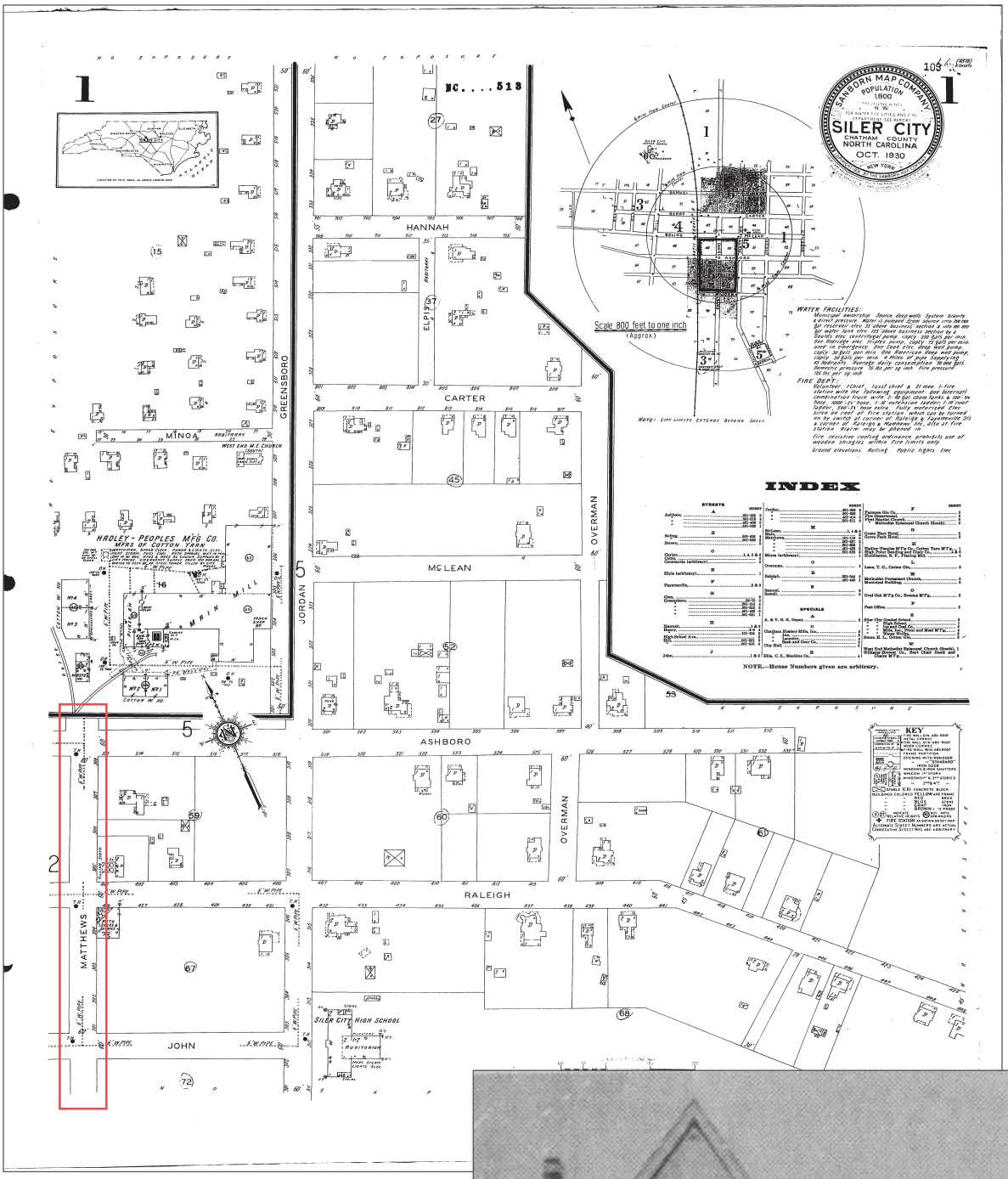
City Hall, Town of Siler City, at the corner of Second Avenue and Third Street.

Nestled in the North Carolina Piedmont in western Chatham County, Siler City is in the middle of it all. Located at the crossroads of two major highways, US 64 and US 421, the town lies between North Carolina's four most significant urban areas, just outside of both the Research Triangle and the Piedmont Triad.

The Second Avenue of today is just one iteration of a historic corridor for Siler City. In the early 20th century, Second Avenue -- then called Matthews Avenue -- was a core downtown street, and 1930s-era maps predate its designation as a US Highway. Development of the National Highway System connected Second Avenue to highway routes, leading to widening and the proliferation of highway-oriented commercial development. Photographs from this time period show numerous auto body shops, gas stations and storefronts catered to vehicles. During this era, Second Avenue brought a significant amount of traffic both to and through Siler City, which supported its economic growth. However, in the early 1990s completion of the US 421 Bypass saw traffic patterns shift, and volumes dwindle. **The design of Second Avenue no longer matched with its function for the community, nor with the needs of its users.**

In 2022, Siler City is changing once more. New development is occurring downtown, and regional industrial megasite development promises the influx of new residents, seeking the benefits of small-town living. With downtown development increasing, and furthering Siler City and Chatham County's recent planning efforts, Second Avenue needs to support bicyclists, pedestrians, deliveries, freight, and other users of the corridor. That is, to support Siler City into the future, the next version of Second Avenue must be a complete Second Avenue.

> ***"They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities."***
>
> *- Smart Growth America*



Sanborn Map of Siler City circa 1930. Second Avenue is highlighted.

A Pure Oil Station along Second Avenue in Siler City.

Background & Context.

This study takes place in the context of the previous planning efforts by the Town, Chatham County, and other organizations with a vision for Siler City and its transportation network.

Economic Development Strategic Plan & Downtown Strategic Plan (2021)

Siler City's recently adopted Economic Development Strategic Plan lays out an **actionable five-year plan for economic development** in the Town. Downtown and Second Avenue feature prominently among the Plan's strategies, which center around increasing investment in entrepreneurship and innovation, **connecting neighborhoods and improving mobility,** continuing to revive downtown Siler City, and promoting greater inclusion. Key strategies include:

- Implementing quarterly right-of-way maintenance
- Developing a Tree Planting program
- Adopting commercial design standards
- Continuing implementation of the Siler City Pedestrian Plan
- Installing Electric Vehicle Charging Units in downtown

The Plan also specifically calls for **improvements to parking** downtown, identifying both signage and marking improvements as well as a **road diet** for Second Avenue to reduce the total number of lanes to three.

Downtown Parking Study (2019)

The Downtown Parking Study examined usage patterns and recommended parking improvements in Siler City. The Study includes Second Avenue, and specifies recommendations for dimensions for on-street parking, both parallel, angled, and reverse-angle, along all downtown streets. It notes Second Avenue's importance as a through-route for traffic and its current lack of parking, despite supporting commercial and institutional uses. The potential impact for parking conditions is as follows:

- **N 300 Block:** less impact (substantial off-street parking)
- **N 200 Block:** moderate impact (some off-street parking)
- **N 100 Block:** moderate impact
- **S 100 Block:** moderate impact
- **S 200 Block:** low impact

Land Development Plan (2017)

The Land Development Plan lays the foundation for Siler City's land use and development, creating a vision for the community's future growth. The Plan notes **downtown development as a strategic focus of Siler City's land use and growth.** Relevant to Second Avenue, the Plan notes that the Siler City Commercial District and Town Hall are both listed on the National Register of Historic Places.

Breaking land use classifications into eight groups, the Plan recommends **Mixed-Use development for the Second Avenue corridor study area.** "Mixed Use" contemplates a variety of commercial, public, and residential uses, including retail, restaurants, offices, medical services, and automotive businesses. Residential in this use class is **typically higher-density** and may share a structure with other uses.

Downtown Master Plan (2013)

The Downtown Master Plan lays the modern foundation for Siler City's development efforts in the downtown area. The 2017 Land Development Plan, 2019 Parking Study and 2021 Economic Development Strategic Plan all build upon recommendations laid out in this Master Plan, the first of its kind since the 1980s for Siler City. The Master Plan develops concepts for a Second Avenue Road diet, which reduces the five-lane configuration to three-lanes.

Proposed road diet from the 2013 Downtown Master Plan.

- Three lanes: **one travel lane** in either direction with a **center turn lane**
- Outermost lanes in either direction **restriped** for:
  - Bike lanes
  - On-Street Parking
- **Street Trees** planted at back of curb to separate parked cars from pedestrians
- **Widen sidewalks** by 2', removing planting strip
- Shorten curb radii to **reduce turning speeds** and extend curb line at intersections to **reduce crossing distance**
- Driveway consolidation
- ADA-compliant curb ramps

Pedestrian Master Plan (2013)

The Pedestrian Master Plan guides the Town, Chatham County, and other community partners in the development of improved infrastructure, policies, and programs to **support pedestrian activity and the growth of walking in Siler City.** Specific goals of the Plan include:

- Increasing greenway and sidewalk mileage and connectivity
- Improve pedestrian and non-motorized transportation safety
- Increase overall pedestrian activity and connect new neighborhoods
- Increase funding for pedestrian facilities
- Complete construction of top-priority pedestrian projects.

The Plan notes Second Avenue's existing sidewalks, and recommendations impacting the corridor focus largely on **intersection improvements. Fayetteville Avenue, Raleigh Street, Second Street, Third Street,** and **MLK Boulevard** are all identified for intersection improvement projects, while completion of sidewalk segments up to the Greensboro Avenue intersection is recommended on both sides of the study area. Other recommendations impacting the corridor include a **proposed multi-use path** along Second Avenue beginning south of the Fayetteville Avenue intersection. Concept designs further illustrate the range of intersection improvements that are recommended, and include:

- High-visibility crosswalks
- Appropriately located stop bars
- ADA-compliant curb ramps
- Pedestrian countdown signals with timers
- Contiguous sidewalks

Chatham County Bike Plan (2011)

The Bike Plan lays out a plan for **strategic investment in the future bicycle program,** including both facilities, programs, and policy changes, for Chatham County and its communities. Despite its status as a county-wide plan, Siler City is a strategic focus of the Plan with many improvements targeted at the Town and its existing transportation facilities. Construction of the Loves Creek Greenway is a crucial short-term improvement that impacts Second Avenue south of the corridor; this phase of the greenway's construction has been completed. Long-term improvements are numerous and impact Second Avenue:

- **L1: 2nd Avenue Bike Lanes:** construction of bike lanes, with appropriate signage including "Share the Road" signs, through the study area.
- **L2: Raleigh Street Bike Lanes:** intersecting Second Avenue at Raleigh Street, this project would construct bike lanes through one of the key intersections in the study area by reallocating the existing pavement space within the curbs.
- **L35: MLK Boulevard Bike Lanes:** intersecting Second Avenue at MLK Boulevard, this project would construct bike lanes beginning at this key intersection by reallocating existing pavement space within the curbs.

The plan also makes recommendations for traffic calming improvements, though it does not specify locations for these improvements.

Tommy's Oil Station, located at the corner of Second Avenue and Third Street.

View of the corridor today, located at the corner of Second Avenue and Third Street.

Demographics.

As one of Siler City's most important thoroughfares, both a core downtown street and a cross-town connector, Second Avenue is a microcosm of Siler City. Its population relatively stable, the corridor is characterized both by its potential to serve as a multimodal gateway to downtown Siler City and connector for all residents – as well as its currently unmet need.

Around **one-fifth of corridor residents have income below the federal poverty level guidelines,** compared to nearly one-third of the Town. Despite living close to downtown and in close proximity to major employers, corridor residents overwhelmingly travel by automobile: **93% opt to travel by car, whether alone or shared.** This figure is high for a community of Siler City's size, and may reflect the lack of a transportation network that is safe and convenient for those who might otherwise choose to travel by foot or by bike.

Siler City is also home to a substantial, thriving Hispanic/Latine community. **Over 50% of Siler City's population identifies as Hispanic or Latine,** either alone or in combination with any race, many of whom are immigrants. Immigrant communities often have unique mobility needs, and may lack access to a vehicle entirely or at particular times of the day. During the planning process for Second Avenue, the design team took these considerations into account and deliberately sought out the input from members of the community in order to gauge challenges, needs, and opportunities along the corridor.

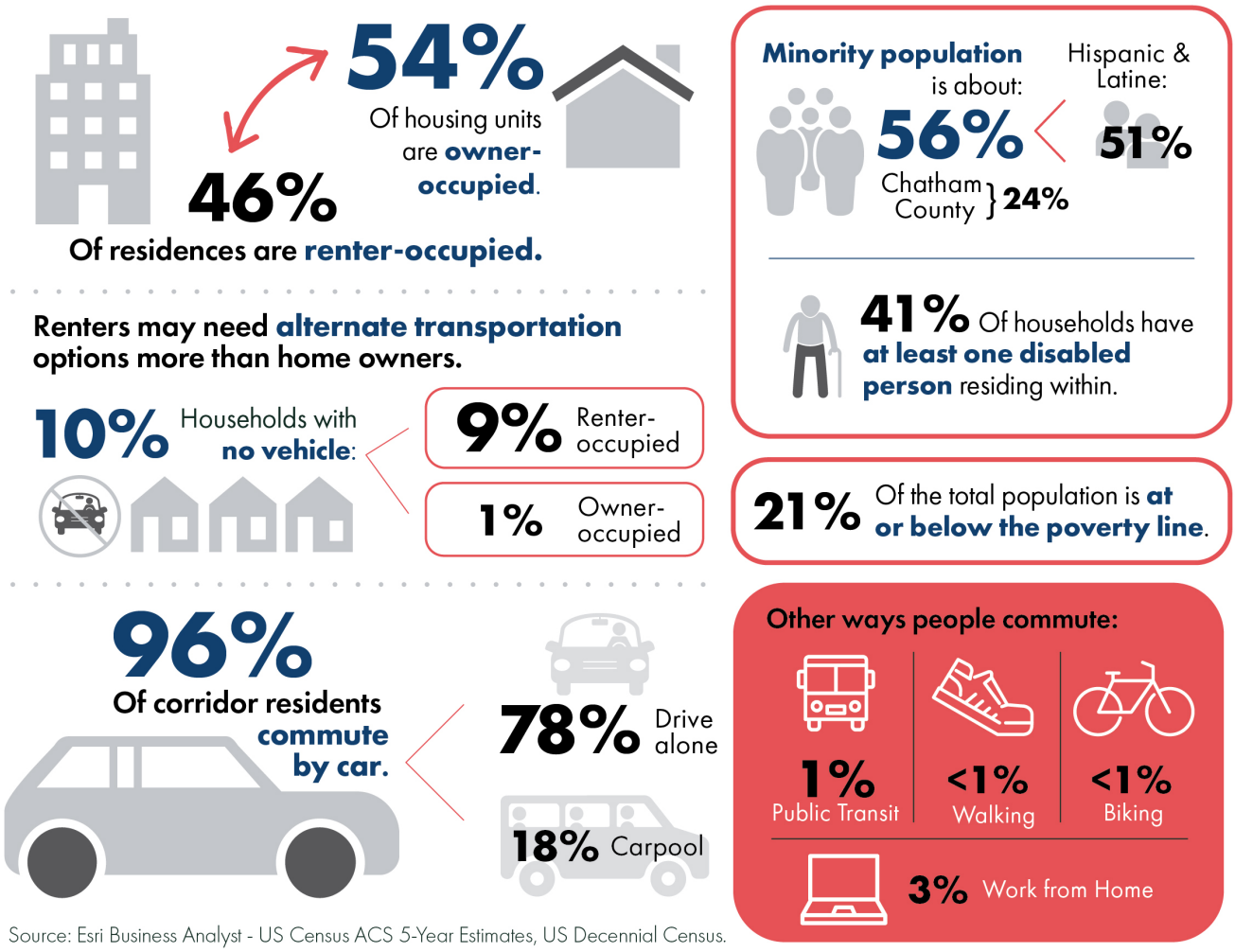


Figure 1.1: Siler City demographics.

Planning Process & Timeline.

The planning process was divided into three distinct phases:

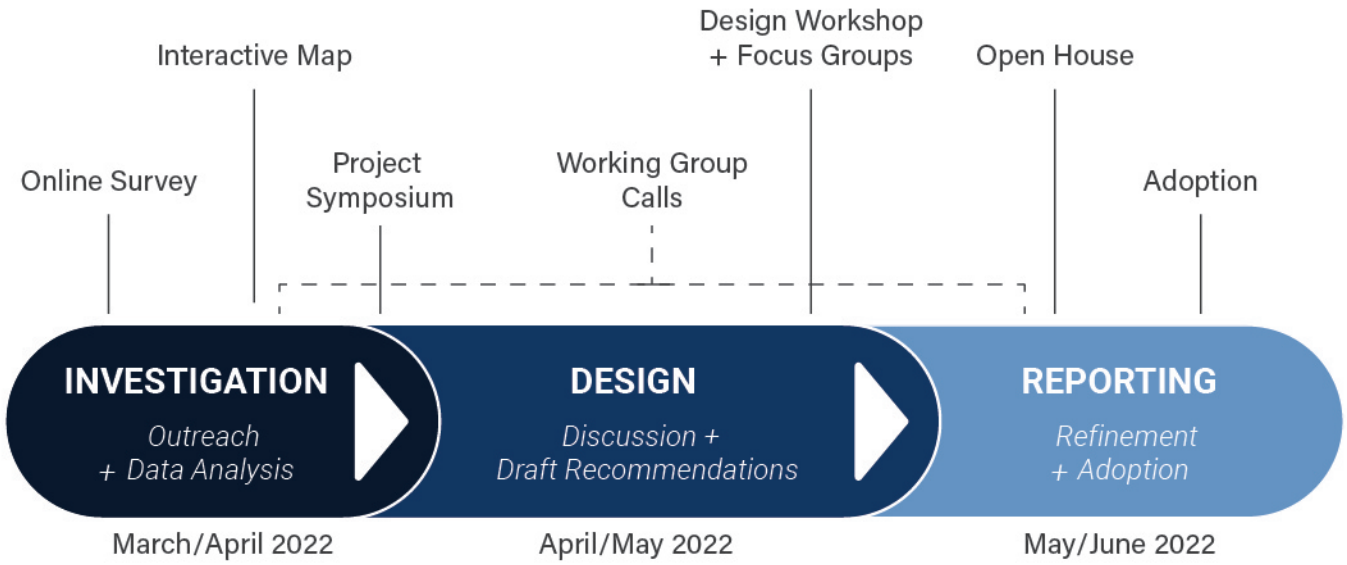


Figure 1.2: Process & Timeline for the Second Avenue Corridor Study, including public outreach efforts.

PHASE 1: INVESTIGATION

The first phase focused on analysis. The project team analyzed plans, policies, data and qualitative feedback from online engagement to conceptualize the Corridor's strengths, problems, opportunities and constraints. The **Project Symposium was held in April 2022,** the first major public outreach event, both to present the results of initial analyses and obtain further feedback. Key takeaways from this phase culminated in the **Preferred Access Plan (PAP),** the foundation for the concept design.

PHASE 2: DESIGN

The Design phase began immediately following Investigation. The team condensed data, public input, and background information to inform preliminary planning, engineering, and design recommendations. Many of these recommendations were developed during the **multi-day Design Workshop** in May 2022, an interactive planning event that provided stakeholders and the general public opportunities to review and influence concept designs in real-time. During this phase, **the concept design for the corridor was developed** and refined.

PHASE 3: REPORTING

The final phase documented the whole of the planning process. Using plans, materials and designs produced throughout the Study, this final planning document was prepared to reflect both the design recommendations, the data and analysis informing the recommendations, and the planning process itself. This document will guide the Town, the Triangle Area Rural Planning Organization (TARPO) and the North Carolina Department of Transportation (NCDOT) in subsequent design and engineering phases on the path to a constructed Complete Street. The Final Public Meeting was held during this period, presenting the final recommendations to the public, to close the project and celebrate the productive collaboration between the community and local planning agencies.

Guiding Principles.

As the function of Second Avenue has changed, so too should its design. Leading the project team in the planning and design process are Guiding Principles, derived from the continuous input, perspectives, and directions provided by the Siler City community through public participation from surveys, interactive mapping, symposiums, focus groups, and stakeholder outreach. The recommendations of this plan, developed through the Design Workshop, will be guided by and reflect these Principles.

Principle 1:

Right-size Second Avenue with maintainable infrastructure.

Principle 2:

Priority must be given to pedestrians & bicyclists.

Principle 3:

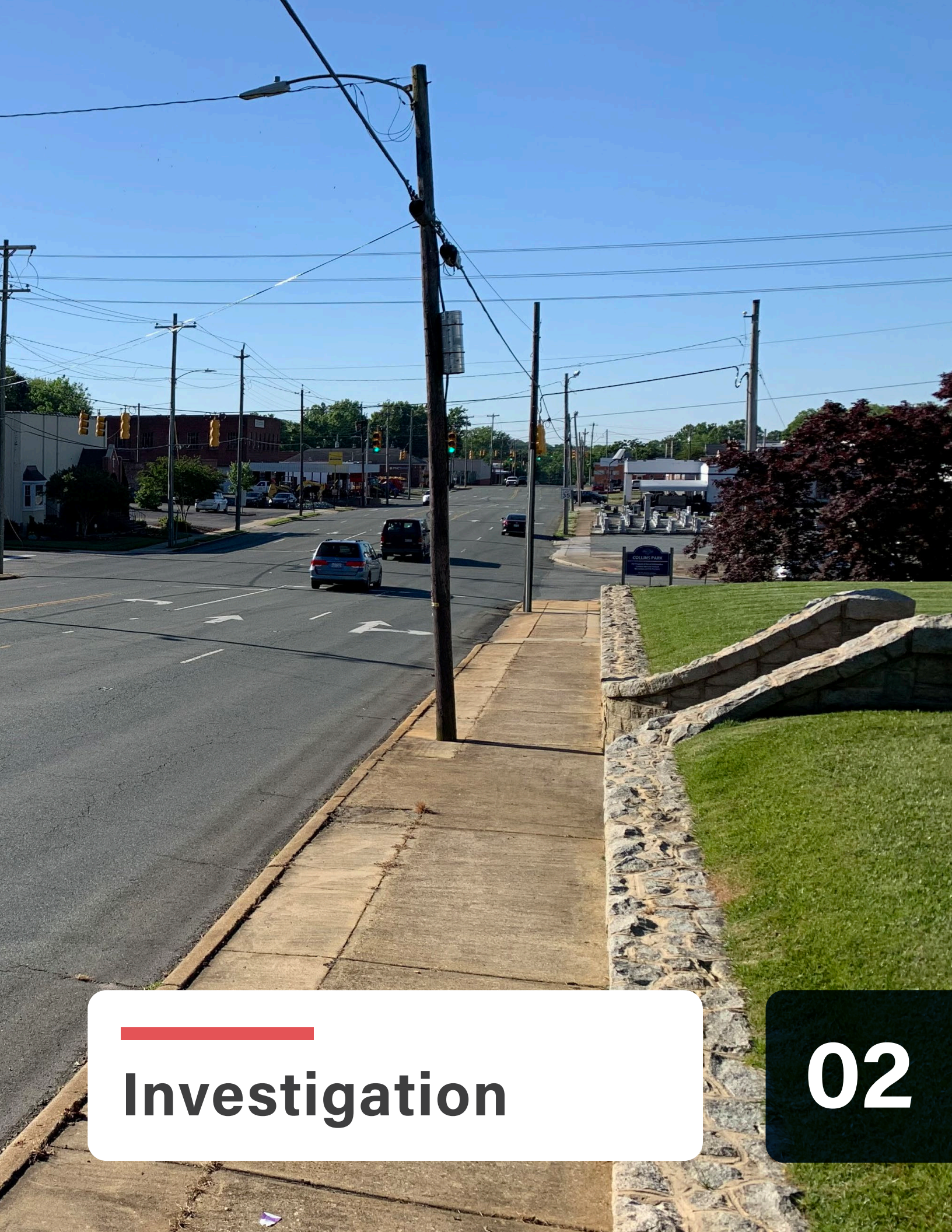
Safety of ALL users is a must.

Principle 4:

Integrate Second Avenue into downtown and its surroundings.

Principle 5:

Support surrounding uses through attractive design and human scale.



Investigation

02

Existing Conditions.

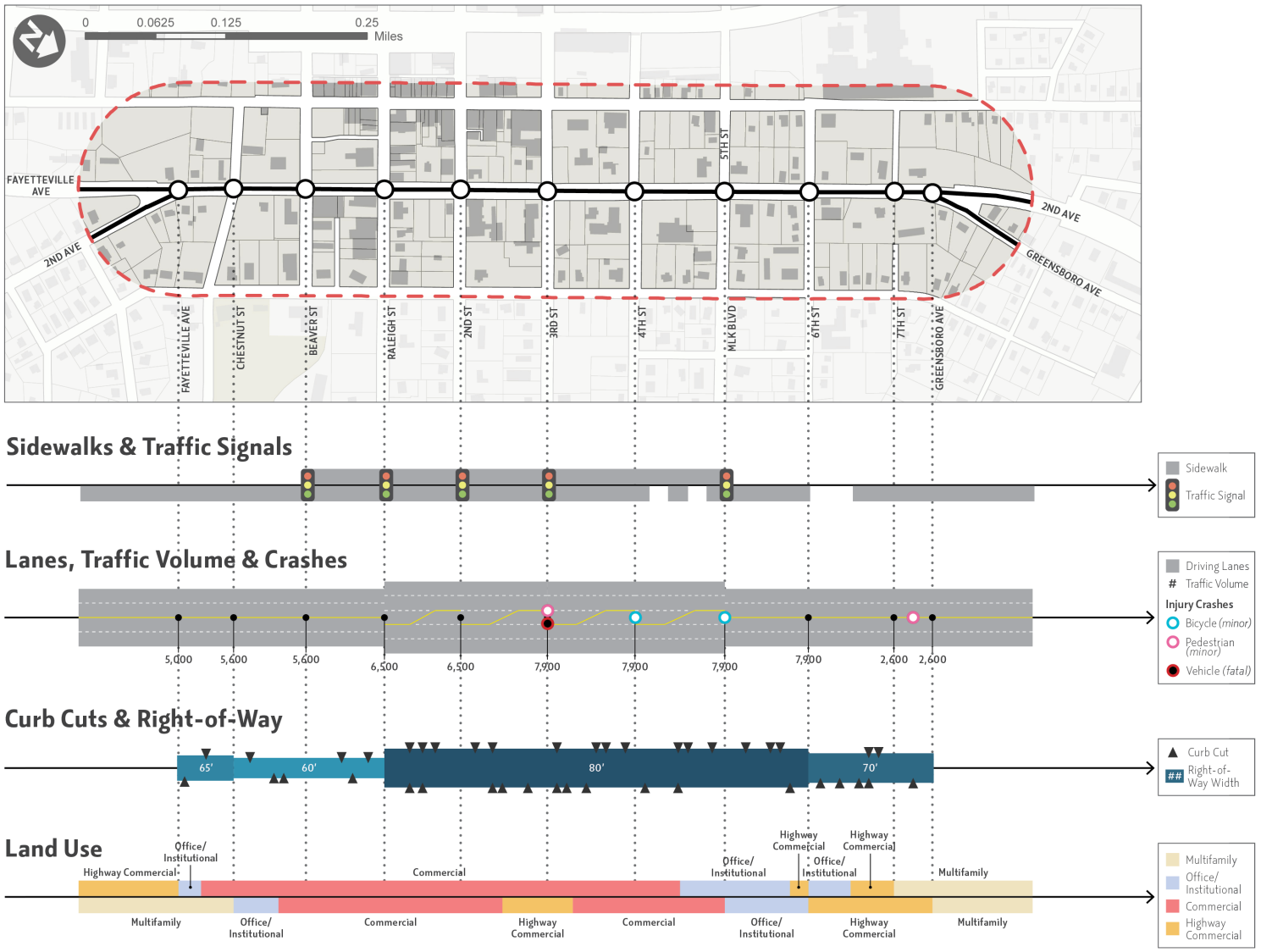
View of Second Avenue today (looking Northwest).

Planning efforts can only tell us so much about its context. Creating a street that is safe and efficient for all users, whether on two feet, two wheels or four, is accomplished only through understanding the road's current performance, from current infrastructure to safety and operations.

The Second Avenue study area encompasses a nearly 0.75 mile stretch extending from Greensboro Avenue in the north to Fayetteville Avenue in the south. North of the study area, US 64 connects Siler City to Ramseur, Asheboro, and I-73, while Second Avenue winds northward to Greensboro. South of the study area, the road splits, with Fayetteville Avenue continuing southeastward to Sanford and connecting to US 421. Second Avenue thus sits in the middle of everything: between a small but growing downtown and adjacent neighborhoods, as well as the midpoint in a grand connection between larger metropolitan areas.

> ***"If I were mayor for one day, I'd slow down the motorists and get them to stop and spend money!"***
>
> *- Symposium Attendee*

Figure 2.1: Second Avenue corridor profile.



Corridor Profile

Many of the issues that Second Avenue faces are found in its physical characteristics. The corridor's **cross-section is inconsistent**, changing from a four-lane undivided roadway to add a center two-way turn-lane between Raleigh Street and 5th Street. Signals at Beaver Street, Raleigh Street, 2nd Street, 3rd Street and 5th Street control traffic movement through downtown. **Curb cuts and driveways are numerous** for the 0.75 mile corridor, with the majority found in the downtown area between Raleigh Street and 5th Street; combined with the center two-way turn lane, this creates conflicts throughout the corridor and may contribute to the existing crash rate on Second Avenue, which is slightly higher than state average for similar corridors.

Noticeably absent from the corridor are modern multimodal facilities. No bike facilities are present, and while sidewalks are present for much of the corridor, they vary in width, condition, and separation from traffic. Moreover, **crosswalks are lacking** throughout the corridor, a problem for slower-moving users when crossing distances are 60 feet or more.

Second Avenue at Second Street.

Second Avenue near Seventh Street.

Utility poles within the sidewalk near Third Street.

Land Use & Urban Form

The corridor profile tells the story of Second Avenue's historical development as a US Highway route. Despite being located just one block from downtown, its **land use is remarkably automobile- and highway oriented**: zoning and land use for several key intersections along the corridor are identified as "Highway Commercial." In the core of Second Avenue closest to downtown, commercial uses predominate, gently fading to residential at the extents of the study area. With planned apartments and townhomes in downtown Siler City, residential uses are expected to increase. Most commercial properties have separate driveway entrances that lack internal connectivity, leading to a **large number of curb cuts** that break up the pedestrian network and increase conflict points.

Multimodal Conditions

LEVEL OF SERVICE

While drivers may experience relatively comfortable conditions along Second Avenue, circumstances are different for bicyclists and pedestrians. With no bike facilities present along the corridor, bicyclists must move with traffic. Higher speeds of 35 miles per hour create conditions that prevent most from riding a bike in a shared lane with vehicles, and so the **road's design may be suppressing bicycle and pedestrian activity**.

Pedestrians experience only slightly improved conditions. While sidewalks are present along Second Avenue, they may not provide separation from traffic at the back of the curb and vary in condition. Most importantly, crossing Second Avenue is a challenge. There are **no crosswalks along the corridor**, and only some intersections feature ADA-compliant curb ramps. A wide cross-section means that the crossing distance for those traveling on foot may be insurmountable. Improved pedestrian features such as refuge islands may help to improve these conditions.

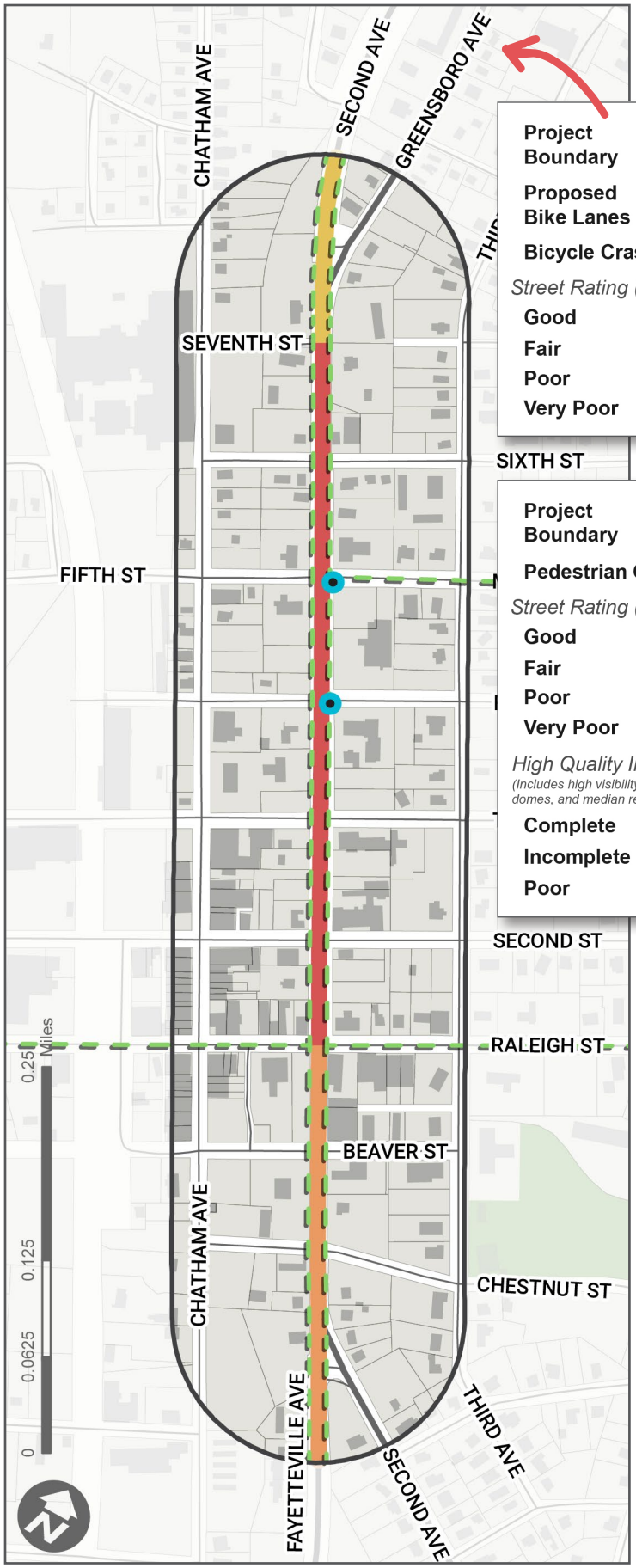


Figure 2.2: Bicycle Level-of-Service, Second Avenue.

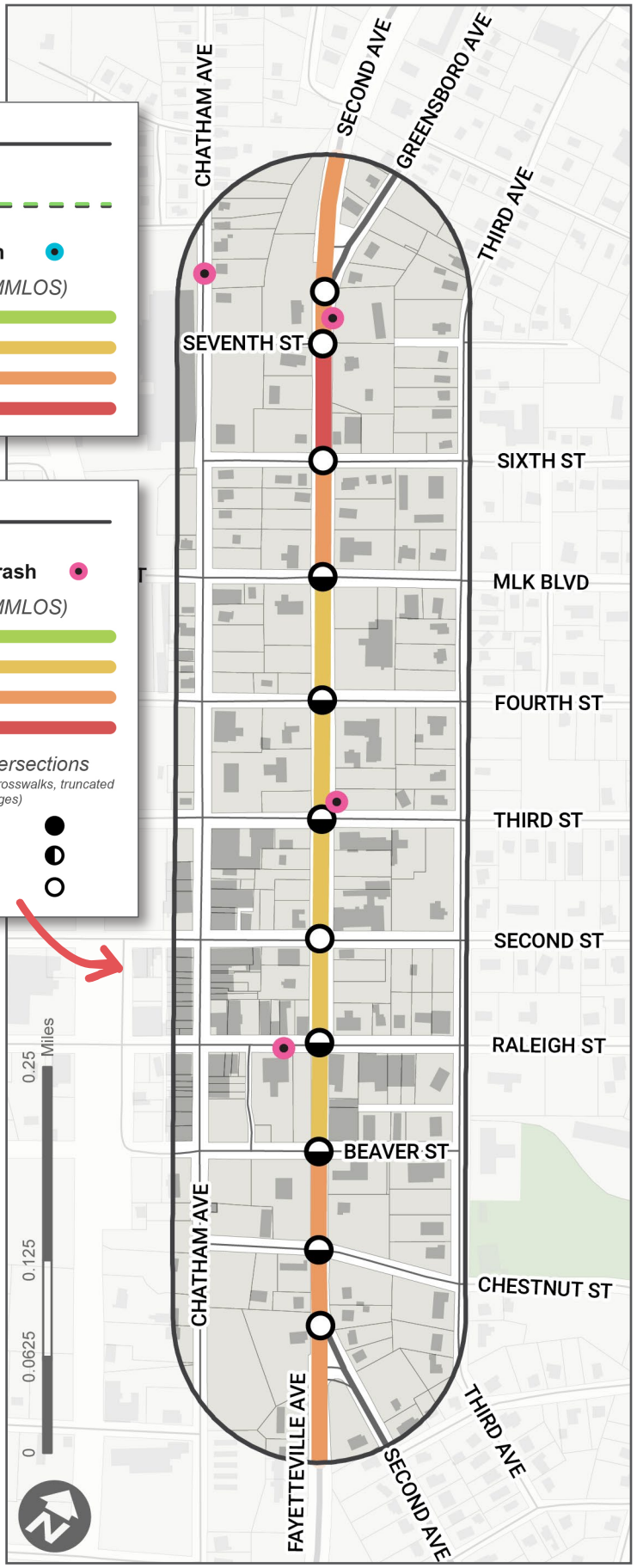


Figure 2.3: Pedestrian Level-of-Service, Second Avenue.

Vehicle Conditions

CRASHES & SAFETY

Crashes are a concern along Second Avenue, which despite its low volumes experienced a slightly **higher than average rate of crashes** in the study area from 2017 to 2021. Over the past five years, total crashes within the study area have been trending downward, from 22 in 2017 to just 13 in 2021. Of the 83 crashes in this time period, only one crash was fatal, with 17 non-fatal injuries. Nearly half (48%) of all crashes in the corridor were angled crashes, followed by left turn crashes (12%) and rear-end crashes (10%). With the number of uncontrolled driveways along this stretch of Second Avenue, the high rate of these crash types may suggest that controlling left turns and closing driveway points may help to reduce conflict points and improve safety here.

LEVEL OF SERVICE

Level of Service (LOS) categorizes corridor functionality for motor vehicles based on congestion and movement. Considering traffic speed and volume, roadway capacity, and other factors, LOS simplifies this data to rank users' perceived satisfaction with using the facility. This aids in understanding how differing conditions impact motorists, and can help to identify specific areas of concern for those users.

Drivers and passengers on Second Avenue experience comfortable conditions traveling along the corridor, which is designed to carry far higher volumes than the road has seen in many years. The corridor can carry approximately 22,000 vehicles per day, yet at its highest volume location (between 3rd and 5th Streets) sees just shy of 8,000. This means congestion is rarely if ever present in the study area; however, the **wide roadway may encourage higher speeds** and contribute to other safety issues.

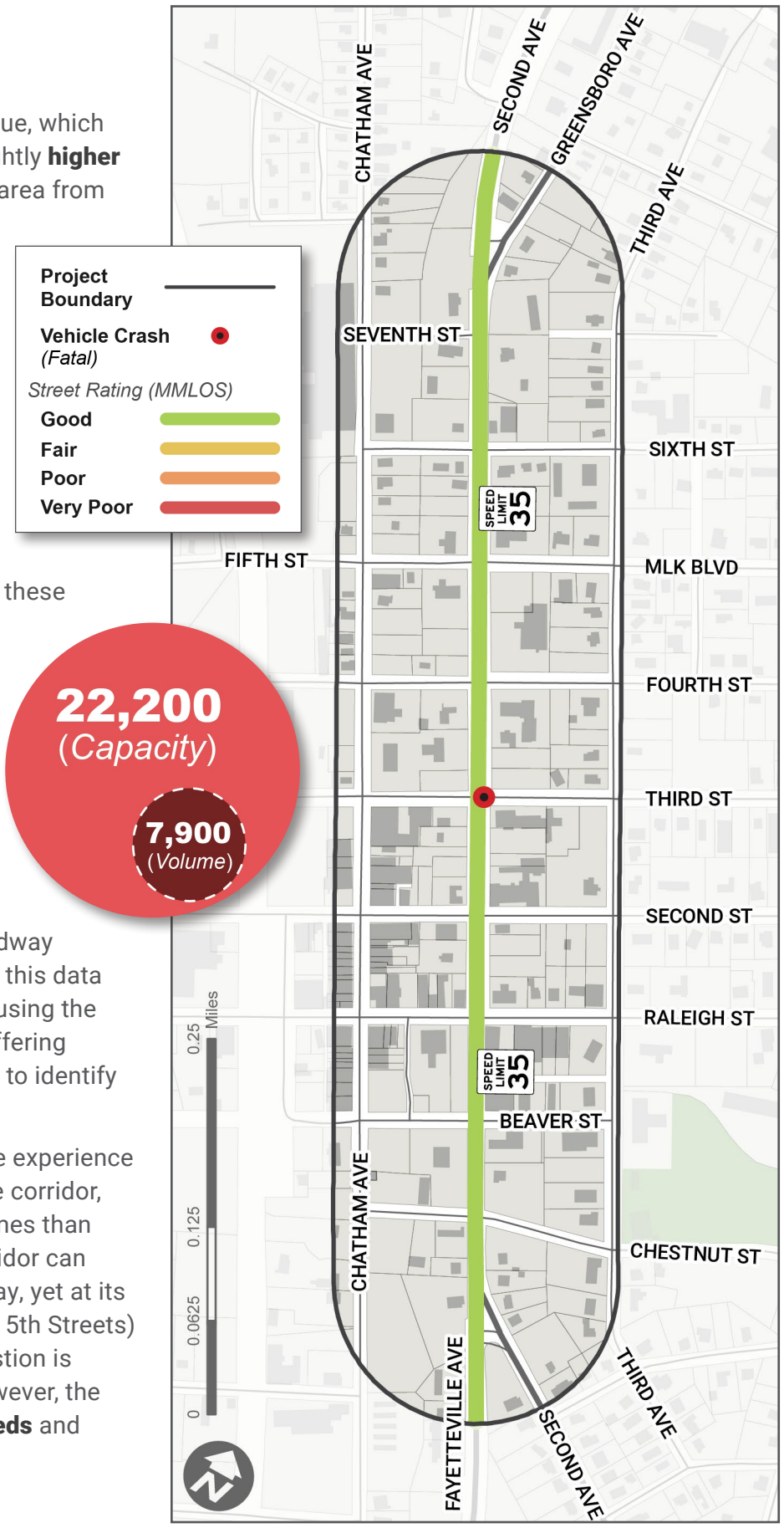


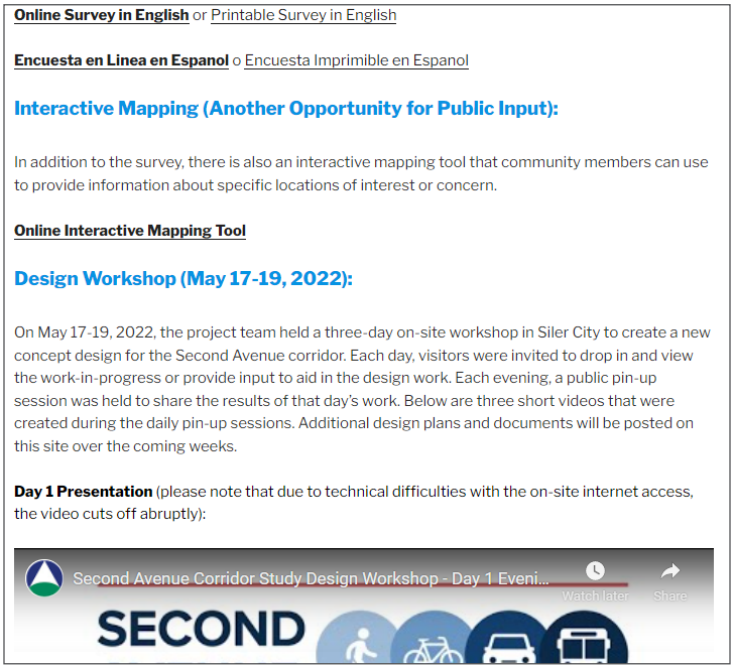
Figure 2.4: Vehicle Level of Service and Severe Crashes, Second Avenue.

Public Engagement.

Public engagement plays an integral role in any design or study, as its results will impact the daily lives of community members and local businesses. Planning for a community of any size is not as successful as planning with the community; meaningful engagement means stronger results, tighter community bonds, and its implementation is harder fought for. Furthermore, engagement provides invaluable feedback to planners, engineers, and designers regarding current conditions and problems that might not be fully understood looking at data alone; the human element and a diversity of perspectives helps to reframe the project team's view of the issues and provide better suggestions for improvement.

Project Website

Early in the process, the Town worked with the Triangle Area RPO to create a project website so residents, property owners, business owners and other stakeholders could access information and provide input on the discussions surrounding the plan's development. The website (***www.tarpo.org/2ndave***) featured information on project purpose, dates and locations of upcoming meetings, meeting results, related documents, and options to get involved with the project. Ahead of major public events, event notices were shared by email and social media alerting the public and inviting them to attend. When combined with the publicizing efforts of community members and news organizations, many people were able to hear about the Plan during its development.



*Views of the project website (**www.tarpo.org/2ndave**). Engagement opportunities and results were posted regularly.*

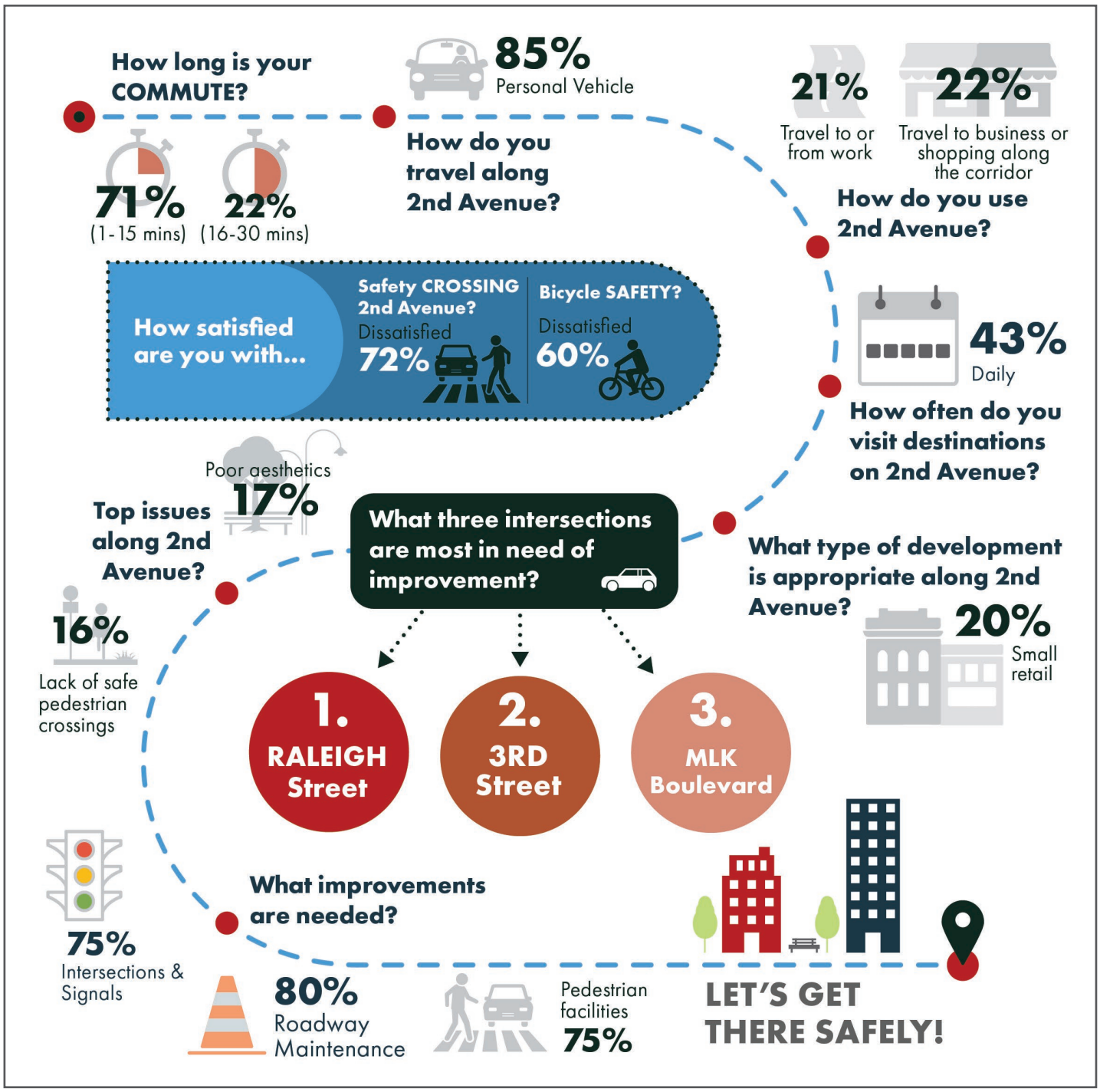


Figure 2.5: Online survey results.

Online Survey

The online survey measured the pulse of community sentiment regarding Second Avenue. It featured a series of 14 questions related to traveling conditions, needed improvements, safety, and growth. These broad, general questions and their responses complemented the specific, targeted discussions with focus groups. Major takeaways from the survey are summarized above.

Total # of surveys taken:
85

Interactive Map

The interactive map illustrated the public's collectively-identified problem areas and points of interest within the corridor. Using ArcGIS Online mapping capabilities, respondents identified a variety of features, including needed intersection improvements, safety hazards, flooding issues, barriers to walking or biking, among others, portrayed as points and icons on the interactive map. The web map provided a different and needed perspective on these corridor-level issues that could not be fully captured through traditional survey methods or focus group discussions. Representative comments can be seen below.

48 comments total

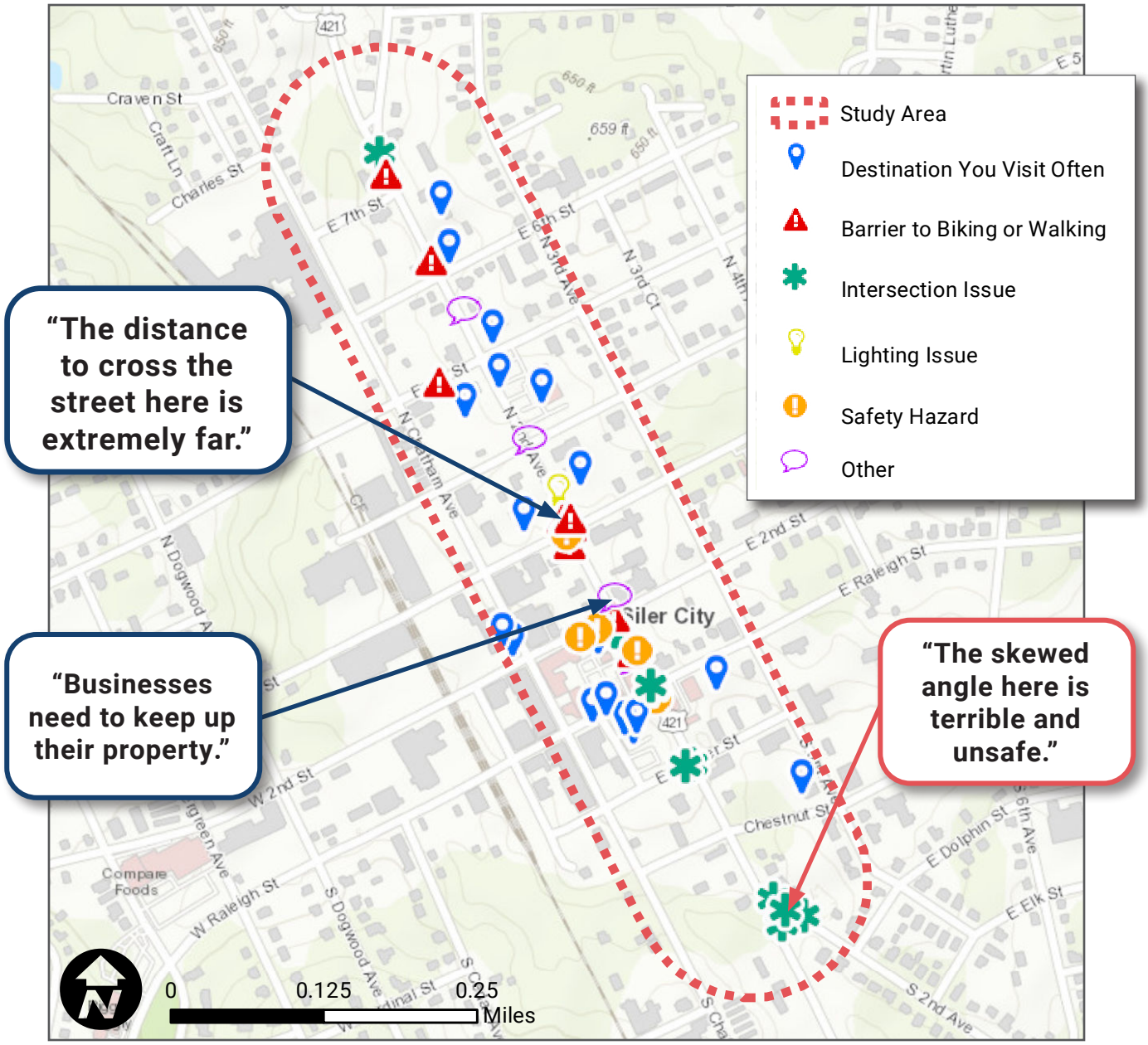


Figure 2.6: Interactive map results.

View of the Symposium in action (April 2022).

Project Symposium

The Symposium offered the first opportunity for the public to collaborate with the project team. In so doing the team received vital feedback on project principles and objectives, which was used to refine key themes and principles that guide subsequent design phases of the planning process. The Symposium was held in-person on April 19, 2022, with streaming options available over Zoom and YouTube Live (via TARPO's YouTube channel).

Digital flyer for the project Symposium.

Open House

The final public meeting of the planning process, the Open House, was held June 15, 2022. As with the Symposium and Design Workshop, the meeting was held at the Wren Memorial Library, on Second Avenue and familiar to all. Key feedback from those in attendance included **support for wide sidewalks supporting biking and walking, interest in on-street parking,** and **immediate need for crossing improvements.** This feedback on the final design helped inform final decisions on implementation and phasing of subsequent design and construction.

View of the Open House in action (June 2022). Quality feedback from the public throughout the study informed the concept design and produced a design that reflects Siler City's vision for the corridor.

Design Workshop

The Design Workshop, held in May 2022, was the largest and most coordinated effort for the Study. During the Workshop, a multidisciplinary team of planners, urban designers, and engineers collaborated to create new concepts for a redesigned, reimagined Second Avenue that responded to the concerns identified through data analysis and public engagement. Held over three days at the Wren Memorial Library and the NC Arts Incubator in downtown Siler City, public-facing sessions were regularly held to present concepts and receive feedback from stakeholders and the public. Meetings with stakeholders allowed the team to drill down into design nuances, while evening pin-up sessions invited the entire public to attend, provide feedback, and see the influence of their participation on designs over the course of the workshop. Following the workshop, **all materials produced during the week were viewable through the project website**.

Citizen input was especially valuable during the Design Workshop in May 2022. Attendees over three days provided input on the design as it was being developed.

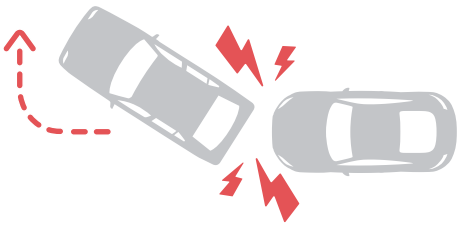
FOCUS GROUPS

During the Design Workshop, focus group interviews were held with representatives comprised of community stakeholders, including residents, agency representatives, community leaders, advocates, and elected officials. Meetings were held as a series of one-hour interviews centering on a single topic. Group members were identified by the steering committee and project team for their ability to provide different perspectives on the topic at hand representing different facets of the community. In total, **four focus groups** were conducted:

- Hispanic/Latine community
- Planning Board
- Downtown Advisory Committee
- Public Staff (Planning, Public Works, Emergency Services)

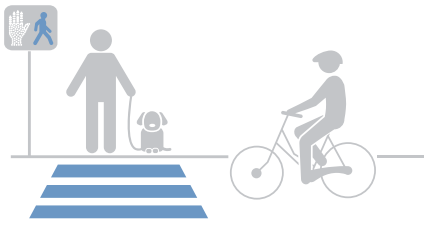
Key Takeaways.

This investigation chapter examined the corridor's current operations, as well as the public perception of Second Avenue, providing the project team with insight on how the corridor serves its residents. From this data, a select number of important issues and observations emerged. These issues, summarized below, represent the key takeaways of this investigative phase.



Second Avenue is over-designed, and it's causing problems.

With too many lanes for its traffic (or lack thereof) and confusing turn lanes, Second Avenue's design contributes to higher crashes and speeds that are avoidable.



Crossing Second Avenue is a major obstacle for users.

There are no crosswalks on Second Avenue in the study area. This makes it difficult to cross, especially for vulnerable users like children, the elderly, and persons with disabilities.

Second Avenue is unsafe for bikers and pedestrians.

The study area lacks safe bike facilities, and existing sidewalks are narrow, disconnected, and in a poor state of repair.

Second Avenue doesn't feel like it's part of downtown Siler City.

With crumbling infrastructure, vacant businesses and large surface parking lots, Second Avenue feels distant from downtown Siler City...despite being one block away.

Recommendations

03

Guiding Principles

The Second Avenue Corridor Study envisions a new corridor that embraces and **supports active transportation choices, promotes the safety and wellbeing of its residents, and attends to the needs of all users** – whether on two feet or two wheels. It is the Complete Streets process that has led the project team to the following recommendations, a process requiring the involvement of property and business owners, the immigrant community, emergency services, the development community, City representatives and elected officials. Public input, technical analyses by the project team, and the physical realities of Second Avenue all influenced the final elements of the corridor design. Through this process, the Siler City community has created a **holistic vision** for transforming this important corridor into a safe, active and attractive community asset.

The retrofitting of Second Avenue was led by five key objectives reflected in the **Guiding Principles**. These principles were borne from both the quantitative analyses conducted as well as the key takeaways that emerged from public engagement. The descriptions at right illustrate how the design team addressed stakeholders' concerns while respecting the desire to maintain an overall vision and physical "constructability" space for a separated multiuse path.

The concept design for Second Avenue integrates all of the data received, whether through corridor travel analyses or public engagement. From this data emerged key themes, which, in combination with Complete Streets principles, led to the creation of Guiding Principles for this project:

Right-size Second Avenue with maintainable infrastructure.

Priority must be given to pedestrians & bicyclists.

Safety of ALL users is a must!

Integrate Second Avenue into downtown and its surroundings.

Support surrounding uses through attractive design and human scale.

Principles of Complete Streets.

Complete Streets are streets designed for everyone. According to the National Complete Streets Coalition:

"They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities."

A Complete Streets version of Second Avenue would make it easier to cross the corridor, walk to businesses, and bike to and from locations along the street without feeling unsafe. These improvements would benefit everyone, from children walking to Jordan-Matthews High School to families biking to the Loves Creek Greenway, to neighborhood residents headed for a coffee at the Chatham Rabbit downtown.

A Complete Streets approach is not one size fits all – it's a process. A Complete Streets redesign of an existing roadway must be tailored to existing and future travel demands, surrounding development and land use, and to that specific community. What a Complete Street looks like in a small town will be different from an urban center - and it should be. The same is true for Complete Streets within the same town or city. For example, what might work along Third Street might not be right for Second Avenue.

A Complete Streets approach **considers every aspect of the roadway**, from the perspective of both policy and the physical construction. It is not just concerned with what occurs between curbs, but also what happens between and behind the walls of the buildings facing the street. A street that becomes safer to walk along and cross is **a street for all ages and abilities:** where kids can walk to school safely, older adults can retain independence if their driving ability is impaired, and those with physical or visual impairments can walk safely.

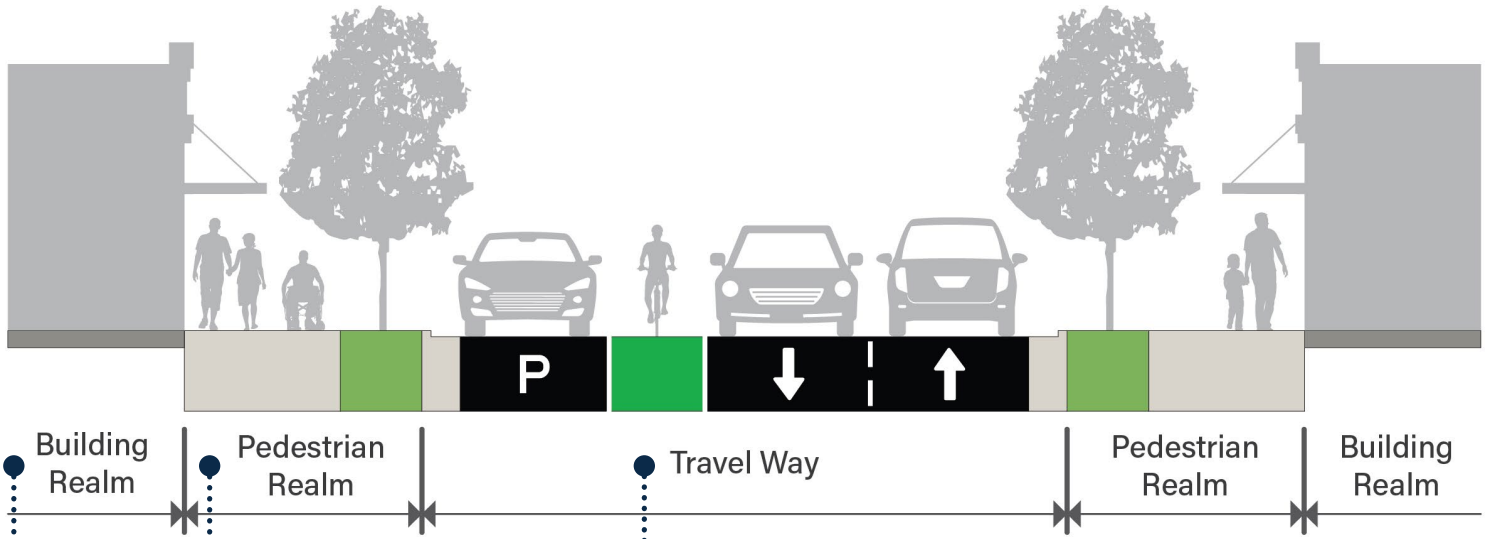
A COMPLETE STREET:

- Considers **all modes** and users
- Provides, safe travel options for users of **all ages and abilities**
- Accommodates both **present and future needs**
- Contributes to a community's environmental **sustainability and resiliency**
- **Values public spaces** and real estate holistically, considering both direct and indirect costs
- Is a vibrant, attractive people place in all seasons and contributes to an **improved quality of life**.

[1] Smart Growth America. Complete Streets. https://smartgrowthamerica.org/what-are-complete-streets/

Elements of a Complete Street

A Complete Streets approach breaks all streets into three zones, reflected in the graphic below: the **travel way**, the **pedestrian realm**, and **building realm**. Each of these zones serves different users and needs, with vehicle, bicycle, and pedestrian facilities responding to these needs.



1 *TRAVEL WAY*

The **travel way** is the area between curbs, and is dedicated to on-street travel. This traditionally considers motor vehicles, but for Complete Streets it may also include bikes, e-bikes, scooters, and other new forms of micromobility. On-street parking may also be found here.

2 *PEDESTRIAN REALM*

The **pedestrian realm** is the area adjacent to the **travel way**, a space typically dedicated to pedestrians. It also contains furnishings like outdoor seating, lighting, and street trees; and facilitates curbside uses like rideshare and delivery access.

3 *BUILDING REALM*

The **building realm** is adjacent to the **pedestrian realm** and home to the businesses, residences, and public spaces that give Second Avenue its identity.

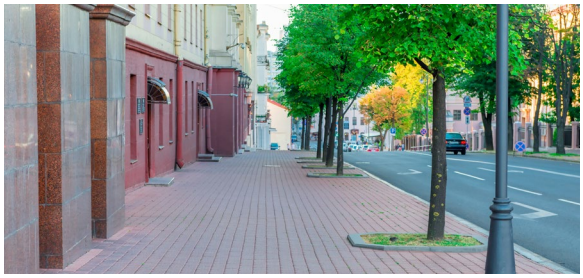
Example Complete Streets Treatments

HIGH-VISIBILITY CROSSWALKS

- Use solid white lines, 6 inches to 2 feet in width
- Ladder, zebra, continental markings preferred
- Minimum 6 feet width of walkway, and wider than the pedestrian facility it connects with

ON-STREET PARKING

- Lane width of 7 to 8 feet recommended
- Striped parking show drivers proximity to parked cars
- Creates “side friction” and reduces traffic speeds when parking meets demand



SIDEWALKS

- Minimum 8 - 12 feet pedestrian through zone recommended in downtown areas
- Wide space provides room for street trees, benches, bike racks, and other enhancements that separate pedestrians from traffic

PEDESTRIAN-LEVEL LIGHTING

- Install lighting on both sides of streets
- Use uniform lighting intensity
- Place lights in advance of midblock and intersection crosswalks on both approaches
- Space approximately 50 - 75 feet apart

CURB EXTENSIONS

- Extends sidewalk into the roadway to narrow crossing width
- Used with on-street parking to create protected parking bays with a lane reconfiguration
- Tighter curb radii reduces turn speeds at intersections

STREET TREES

- Space approximately 15 - 30 feet apart
- Shade cools the biking and walking environment
- Verticality creates “side friction,” slowing vehicle speeds
- Use tree wells and soil cells at back of curb to prevent root damage to sidewalks

Recommendations.

The design recommendations for Second Avenue were developed based on feedback received from the Siler City community including public staff, key stakeholders, and Siler City residents. The corridor has not changed much over the past three decades since the completion of the US 421 Bypass; however, **its purpose and function have changed**. No longer is Second Avenue the mobility carrier or truck route. In fact, fewer vehicles use this facility now than they did in 1995. This has created issues with speeding, lack of maintenance and stagnated economic development.

Many of the recommendations for the Second Avenue corridor are focused on right-sizing the roadway to better accommodate the changing needs of the downtown community. The corridor cross-section is a mix of four lanes and five lanes with limited treatments for bicycle, pedestrian and parking, which is no longer appropriate for its current traffic and creates new problems like wide crossing distances for pedestrians. **In fact, the number one problem expressed by the public was the lack of safe crossings.** There are no crosswalks located along this 0.75 mile section of Second Avenue. Through changes to the road's cross-section and redesign, this problem and others can be addressed and overcome.

The following describes concept design recommendations for the Second Avenue corridor along with proposed cross-sections, the Preferred Access Plan (PAP), and concept designs.

Preferred Access Plan

The Preferred Access Plan (PAP) forms the conceptual basis or "blueprint" for the concept design, providing the overall framework for how the entire corridor design treatments work together. At a high level, this perspective reflects key design elements like connectivity, access management (i.e., median treatments, driveway consolidation), and key nodes that create a continuous pedestrian walkshed. These nodes are intersections that are recommended for high quality intersection treatments, such as high visibility crosswalks, pedestrian countdown timers, ADA-compliant curb ramps, and pedestrian level lighting. Walksheds are important to any downtown: at a 1/8-mile radius (or 2-minute walkshed) distance, these improvements provide opportunities to cross the roadway safely. When applied to the entire corridor, this means that a person looking to cross the road will not need to walk more than 90 seconds to get to a safe crossing.

> ***"If I were mayor for one day, I'd make more pedestrian-friendly (quality!) sidewalks and crosswalks to get across [Second Avenue]."***
>
> *- Symposium Attendee*

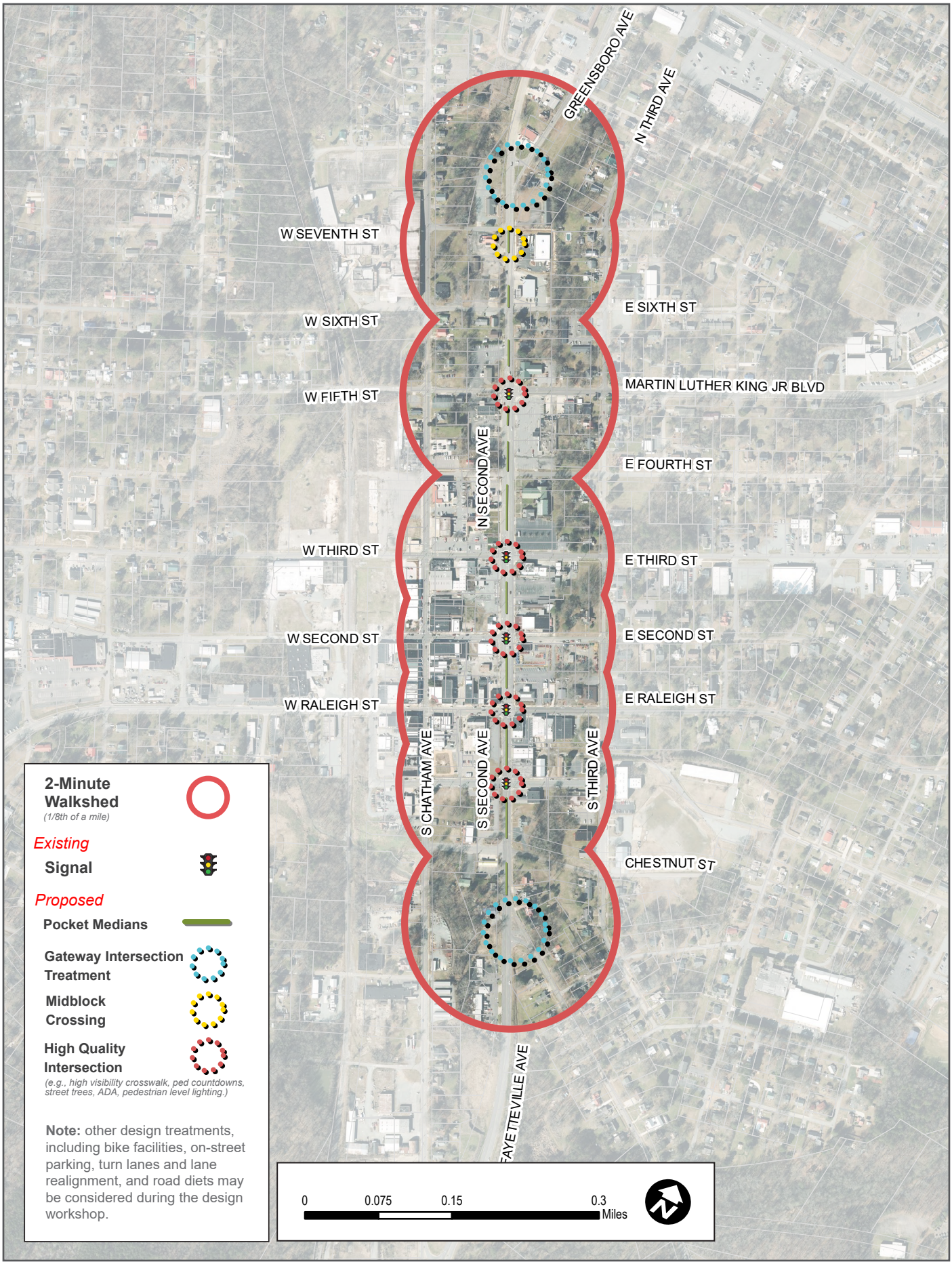


Figure 3.3: Preferred Access Plan.

Second Avenue Cross-Sections

EXISTING CROSS-SECTIONS

Second Avenue has two primary cross-sections in the study area, neither of which has continuous sidewalks, bikeways, or crossing opportunities for pedestrians as well as the differently-abled.

FAYETTEVILLE AVENUE TO RALEIGH STREET; 5TH STREET TO GREENSBORO AVENUE (~0.5 miles):

- Four-lane undivided cross-section
- 44 to 45 foot curb-to-curb distance, 60 to 70 foot Right-of-Way
- 11 foot travel lanes

RALEIGH STREET TO FIFTH STREET (~0.2 miles):

- Five-lane cross-section, two travel lanes with center two-way turn lane
- 65 foot curb-to-curb distance, 80 foot Right-of-Way
- 13’ travel lanes
- Lacks ADA-compliant curb ramps, crosswalks

PROPOSED CROSS-SECTIONS

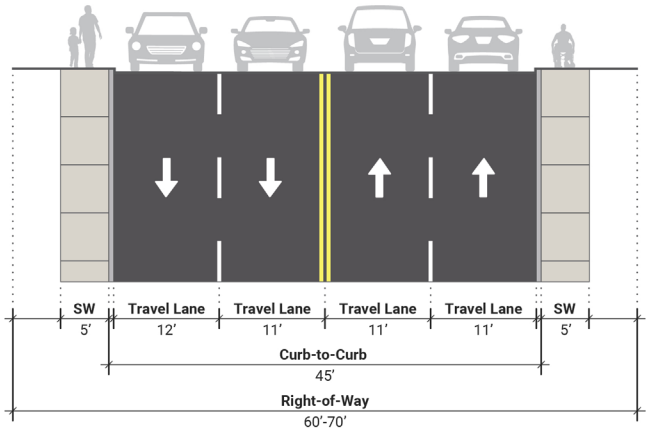
Maintaining a consistent cross-section throughout the corridor is critical to limit driver confusion and create predictability for all users. With more needs than space, however, trade-offs must be made. From engagement, key considerations in the proposed cross-sections were to improve roadway safety and operations; create safe, dedicated facilities for biking and walking; and avoid property impacts.

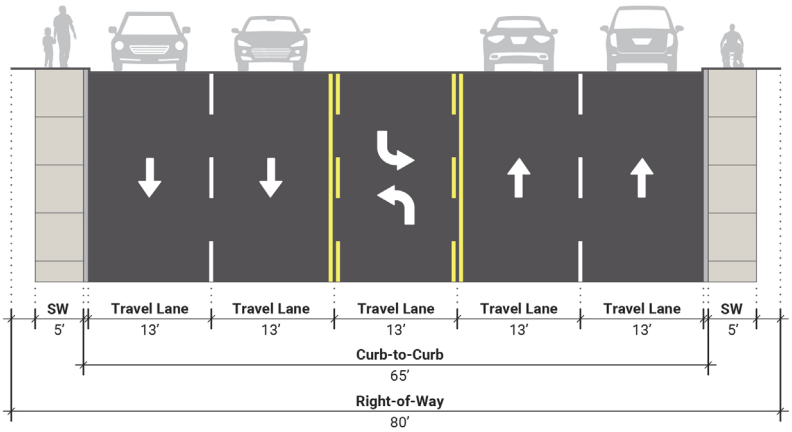
The proposed cross-section reimagines space *within* the existing curb lines. It creates a three-lane cross-section with a center turn lane throughout the corridor, with medians limiting left turns to designated areas and controlling speeds. Surplus lane width creates new space for on-street parking (select locations) and wide sidewalks serving multiple purposes. Street trees create shade during hot summer months. Staying within the existing right-of-way limits property impacts.

ON-STREET PARKING: On-street parking is proposed along both sides of the street between Raleigh Street and 5th Street. Priority should be given to the urban core area between Raleigh Street and 3rd Street. These two blocks are vitally important as development and redevelopment is expected to intensify. Stakeholder discussion on utility consolidation identified the need to consolidate utilities to one side of the corridor, proposed here to be the east side, as well as to bury the utilities within these two blocks.

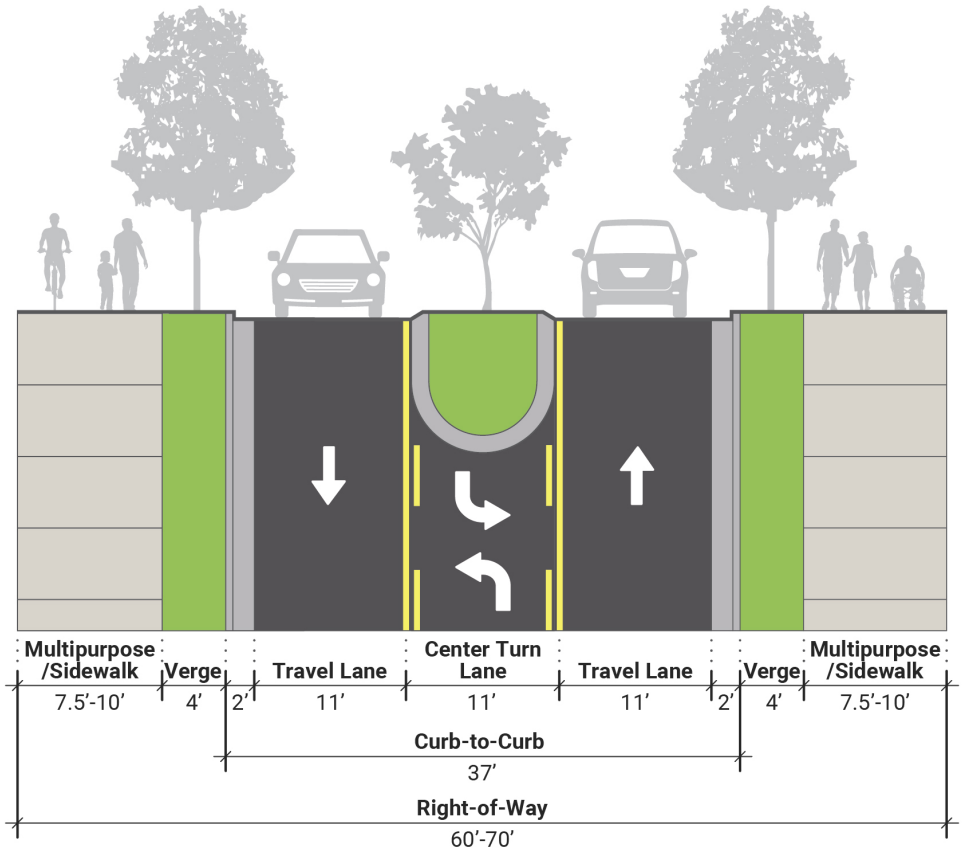
BIKE ACCOMMODATIONS: Public feedback identified separated and protected bike facilities as preferred. The proposed cross-section creates a wide, multi-use sidewalk through the existing five-lane cross-section, transitioning to a wide sidewalk/shared-use path at the extents of the corridor. Both facilities will accommodate beginner to moderate level of users.

EXISTING CROSS-SECTIONS:
***4-LANE** (LEFT) & **5-LANE** (RIGHT)*

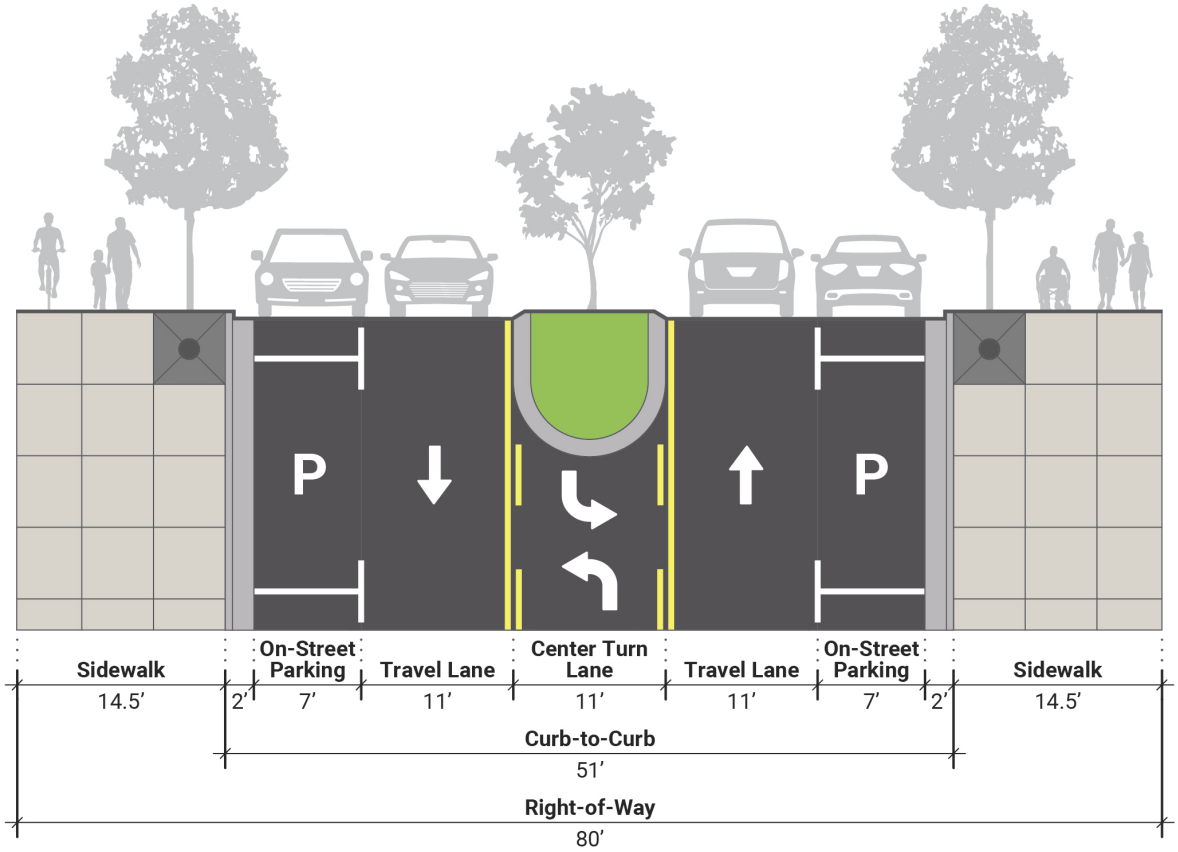




PROPOSED 2-3 LANE CROSS-SECTION



PROPOSED 2-3 LANE CROSS-SECTION (ON-STREET PARKING)



Concept Design.

The design considerations for the entire Second Avenue corridor study area are described first, followed by the concept design (10% level of detail), engineered using MicroStation software. This section shows graphically how the proposed cross-sections create a context-sensitive and seamless set of design solutions that address the specific needs of the entire corridor. This concept is designed to scale so that the physical footprint and potential impacts to utilities and ROW can be determined. It also provides specific intersection details. Photo simulations and Complete Street-oriented development opportunities follow the concept design. These visuals provide street-level perspectives of what the proposed results *might look like*, as well as imagery of built examples, where applicable.

Proposed intersection treatment for Raleigh Street.

Design Considerations & Specifications

- **Design vehicle:** WB-50 (Tractor Trailer)
- **Posted speed limit recommendations:**
  - Fayetteville Avenue to Beaver Street: 35 mph
  - Beaver Street to 5th Street: 25 mph
  - 5th Street to Greensboro Avenue: 35 mph
- **High-Quality Intersections:** featuring mast-arm or strain pole signals, high-visibility ladder-style or brick-stamped crosswalks, pedestrian signals and ADA ramps:
  - 5th Street/Martin Luther King Boulevard
  - 3rd Street
  - 2nd Street
  - Raleigh Street
  - Beaver Street
- **Roundabouts:** Greensboro Avenue and Fayetteville Avenue intersections:
  - Single-lane roundabout: 50’ splitter islands at all approaches; 10’ truck taper; 110’ diameter inscribed circle;
  - Gateway “welcome” monuments and landscaping at both intersections/ roundabout locations
- **Lane width:** 11’ to 12’ travel lanes, 11’ center turn lane with pocket medians (where indicated)
- **Wide Sidewalk:** 10’ to 14.5’ multiuse/wide sidewalks along both sides of Second Avenue (where possible) to accommodate pedestrians and bicyclists, outside seating and street furniture
- **Street Trees:** tree wells and/or 5’ wide planting strip to accommodate street trees (use soil cell technology to guide root system)
- **Mid-Block Crossings:** one located south of E. 7th Street (near Dollar General) with Rectangular Rapid Flashing Beacon (RRFB)

Connectivity and cross-access improvements can occur through private redevelopment throughout the corridor. Parcel cross-access provides great opportunities for allowing vehicles to access properties without using Second Avenue. Driveways can be installed between adjacent, complementary uses, while “back door” access can be created that allow access off of side streets to specific businesses.

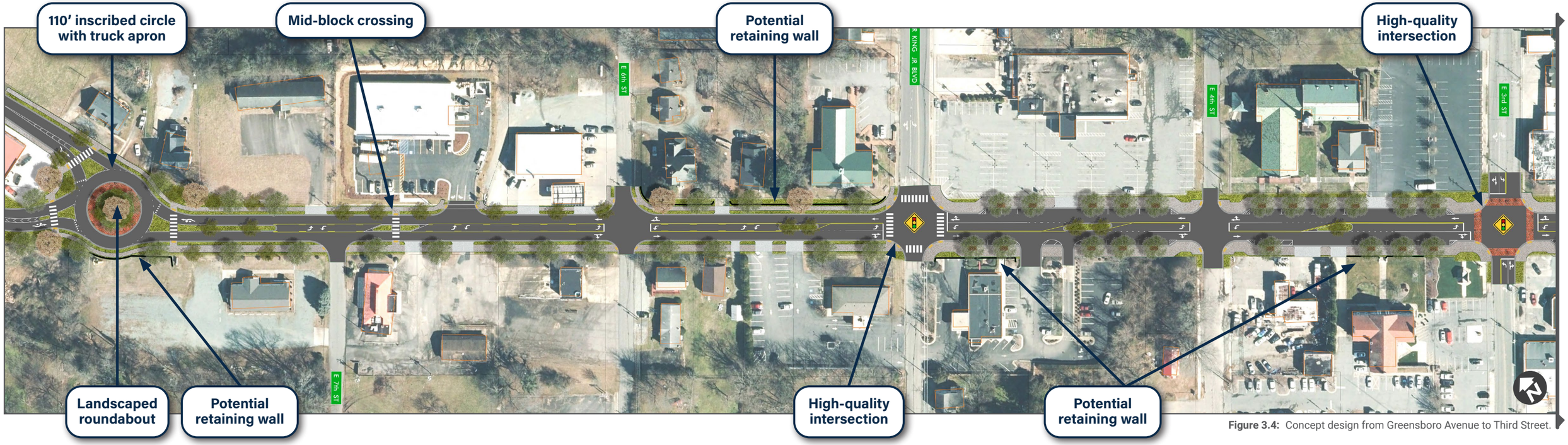


Figure 3.4: Concept design from Greensboro Avenue to Third Street.

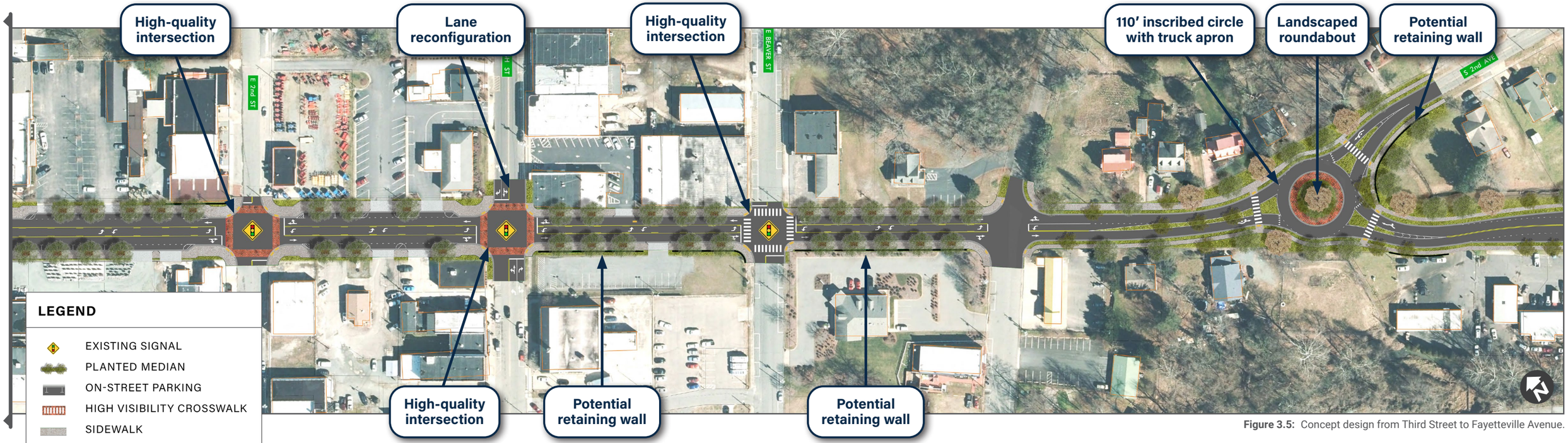


Figure 3.5: Concept design from Third Street to Fayetteville Avenue.

Seventh Street (Mid-block)

Fifth Street
(Conceptual Development)

Raleigh Street
(Intersection)

Seventh Street
(Mid-block)

Second Street
(Intersection)

Fayetteville Avenue
(Roundabout)

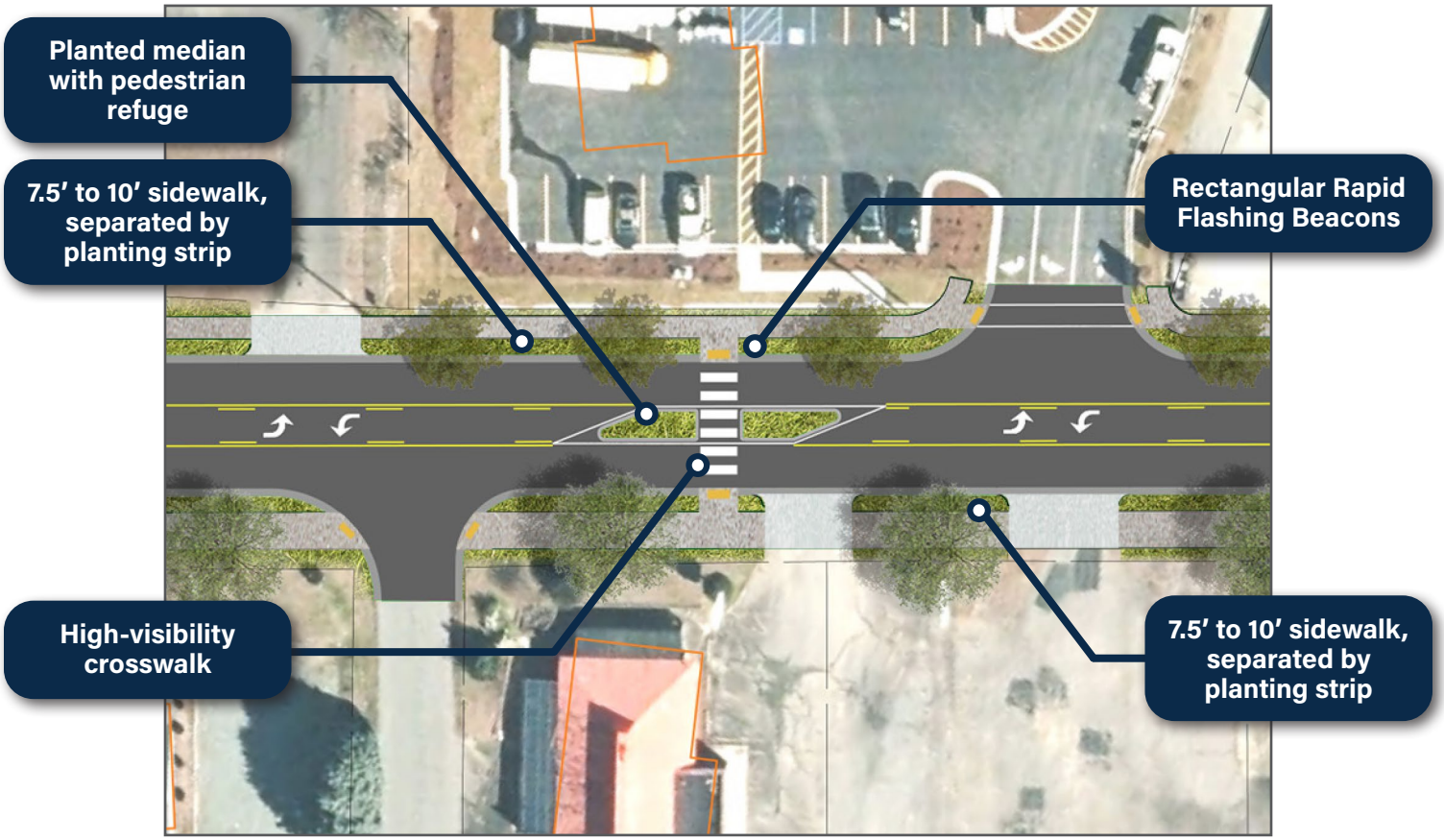


Figure 3.6: Conceptual design of Seventh Street mid-block.

Recommendations:

Improved mid-block crossing to feature:

- Three-lane cross-section with two 11’ travel lanes and an 11’ center turn lane
- 7.5’ to 10’ sidewalk on either side of Second Avenue as allowed, separated by planting strip and street trees or vertical plantings
- Install Rectangular Rapid Flashing Beacon (RRFB) at south side of Seventh Street intersection where indicated
- Planted median with pedestrian refuge
- High-visibility crosswalk
- ADA-compliant curb ramps
- Pedestrian-level street lighting on both sides

Looking NORTHWEST

Conceptual design of:
Seventh Street mid-block pedestrian crossing

Fifth Street (Conceptual Development Example)

Fifth Street
(Conceptual Development)

Raleigh Street
(Intersection)

Seventh Street
(Mid-block)

Second Street
(Intersection)

Fayetteville Avenue
(Roundabout)

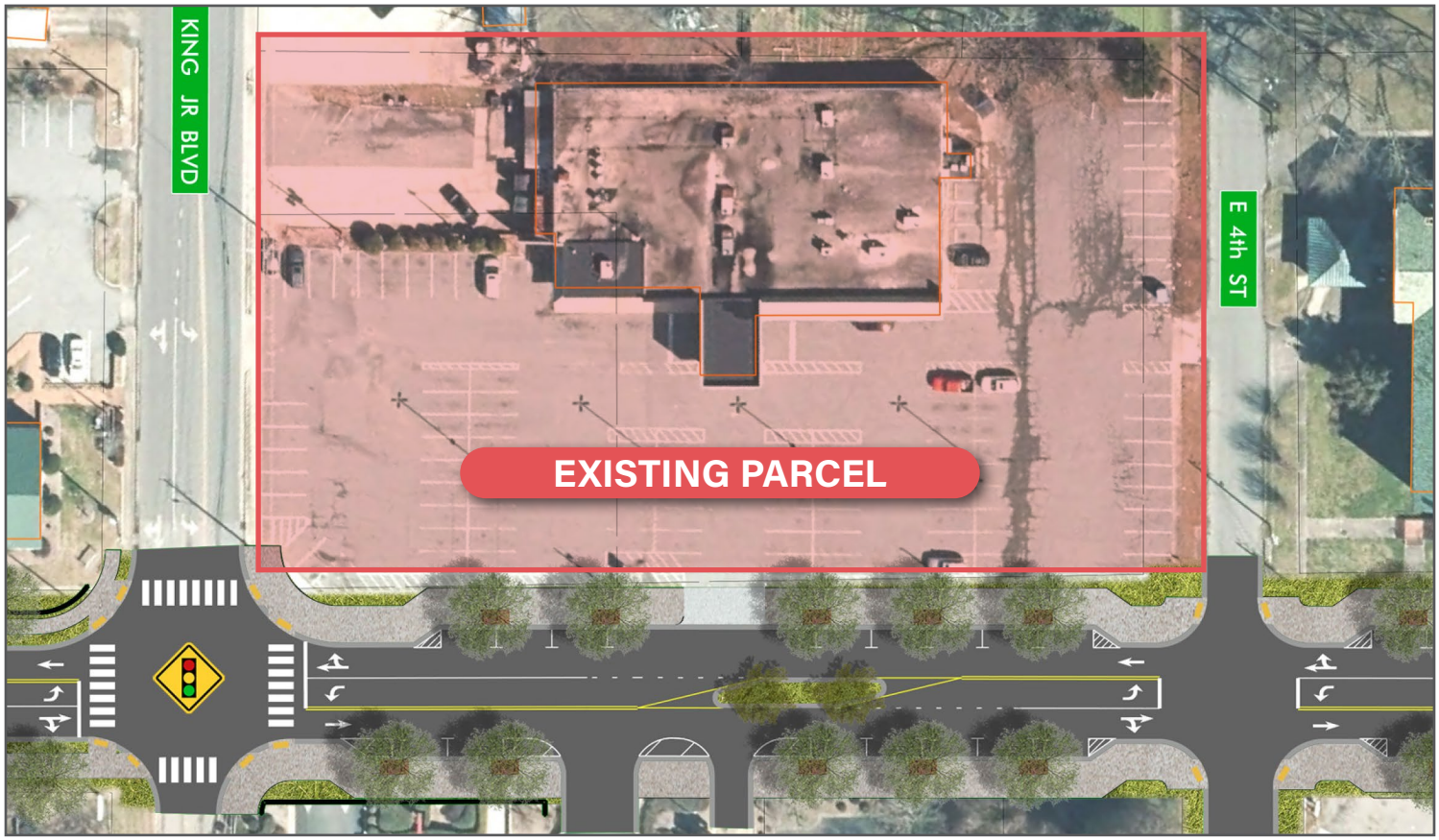


Figure 3.7: Location for conceptual redevelopment of Dry Dock Seafood lot between Fifth Street and Fourth Street.

Private reinvestment often follows public investment in roadways. The block between 4th Street and Martin Luther King Jr Boulevard was chosen to illustrate what this might look like along Second Avenue. This is only an example of the type of redevelopment that could be possible and is not intended to convey an actual redevelopment plan or proposal.

A potential future redevelopment of this site where buildings front the street and parking is moved to the rear could represent an opportunity for an active, mixed-use (commercial and residential) walkable development node, with new facilities able to support both existing and new businesses.

POTENTIAL	
RESIDENTIAL	70,400 Sq. Ft. *(70 Units)*
COMMERCIAL / RETAIL	16,000 Sq. Ft.
PARKING	118 Spaces
PARKING RATIO	1.5 Spaces/Unit
SITE TOTAL	86,400 Sq. Ft.
SITE AREA	1.64 Acres
FLOOR AREA RATIO	1.2
DENSITY	42 Dwelling Units/Acre

[1] Siler City - Unified Development Ordinance. https://siler.municipalcodeonline.com/

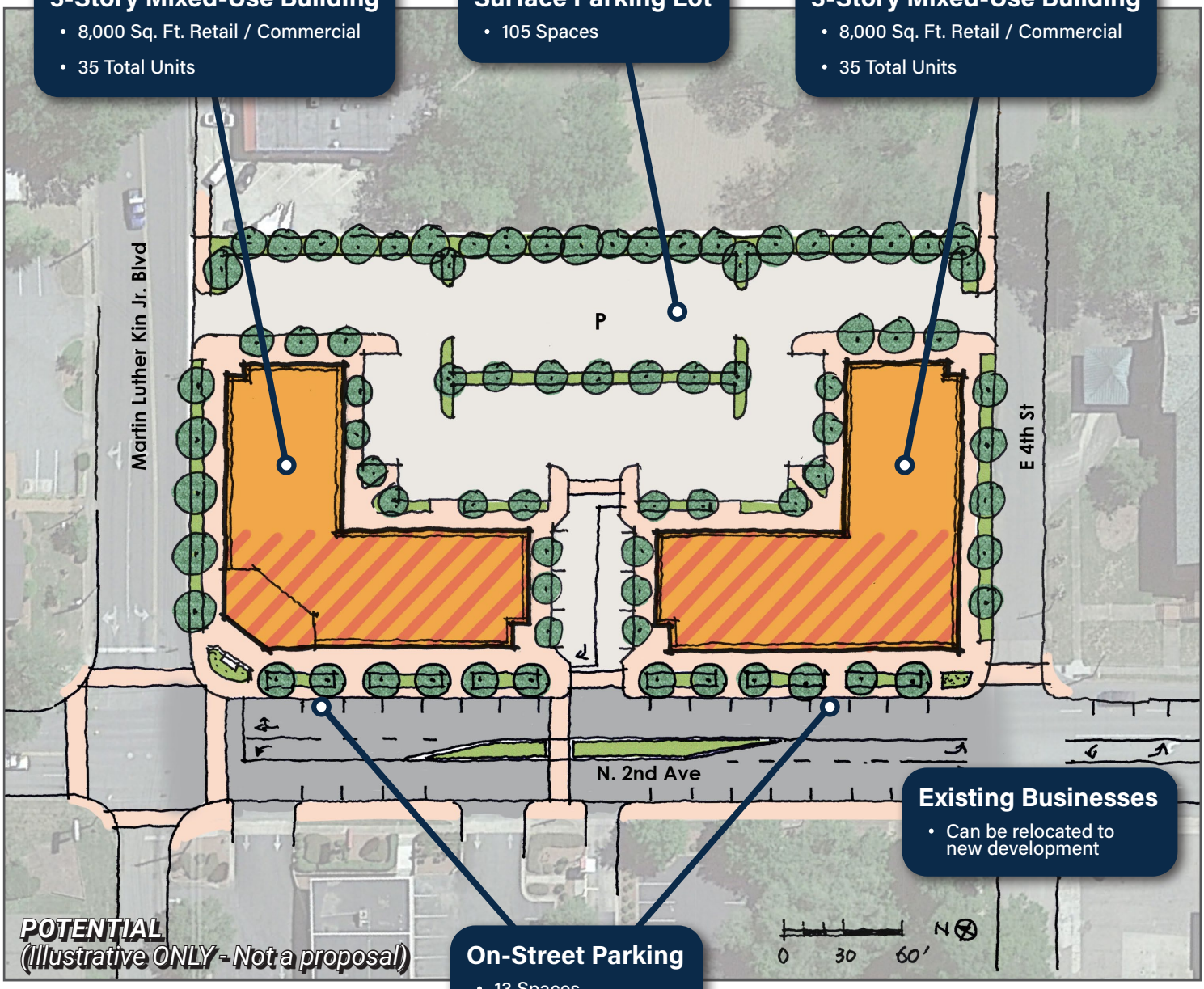


Figure 3.8: Conceptual redevelopment of Dry Dock Seafood lot between Fifth Street and Fourth Street.

Second Street (Intersection)

Fifth Street *(Concept Redevelopment)*

Raleigh Street *(Intersection)*

Seventh Street *(Mid-block)*

Second Street *(Intersection)*

Fayetteville Avenue *(Roundabout)*

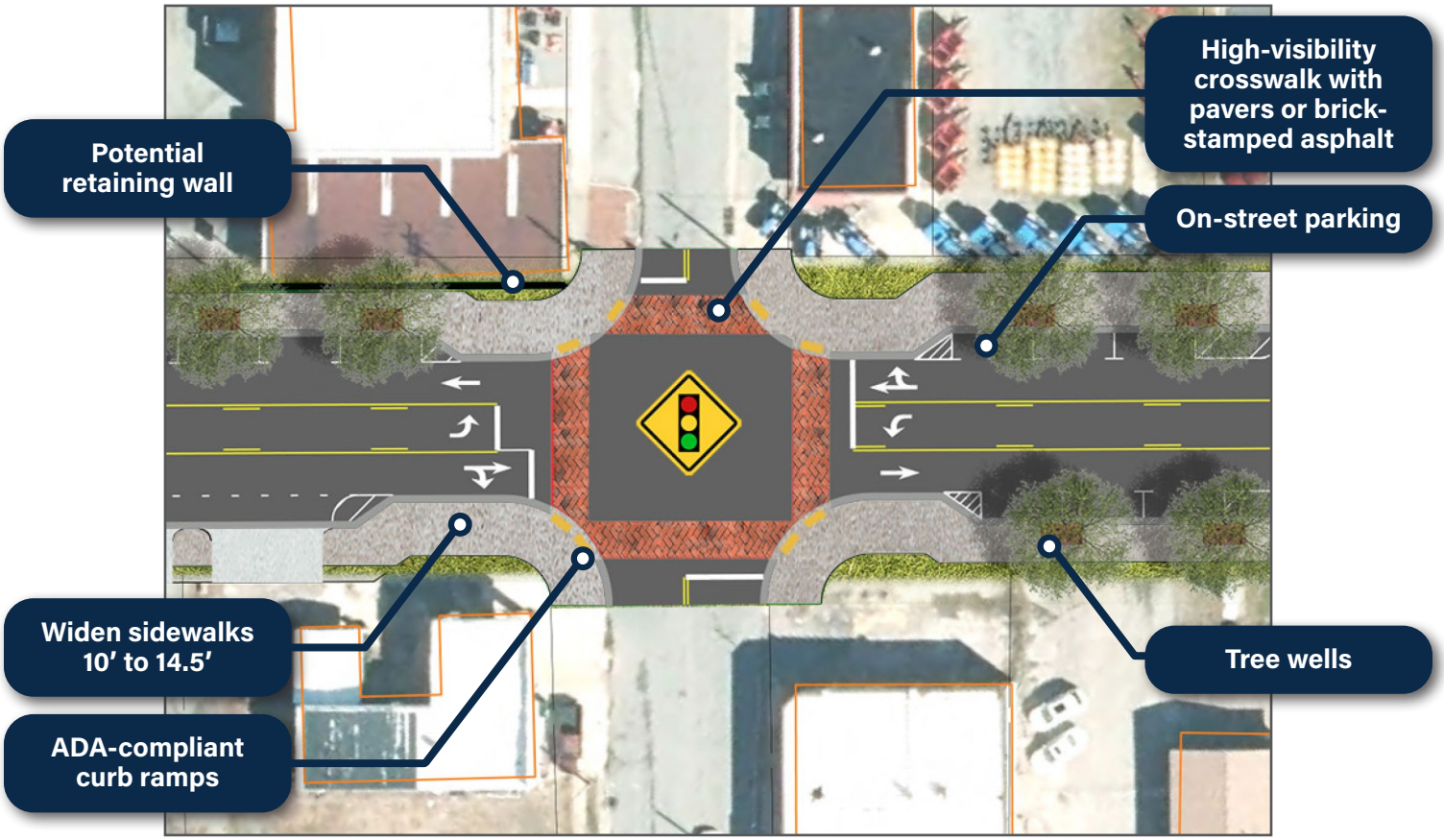


Figure 3.9: Conceptual design of Second Street intersection.

Recommendations:

Upgrade to high-quality intersection featuring:

- Widen sidewalks 10' to 14.5' as appropriate within existing right-of-way along both sides of Second Avenue to accommodate pedestrians and bicyclists, outside seating and street furniture
- On-street parking where indicated
- Mast-arm signals
- High-visibility crosswalk featuring pavers or brick-stamped asphalt
- Pedestrian countdown timers
- ADA-compliant curb ramps
- Pedestrian-level lighting
- Tree wells to accommodate street trees at minimum 15' to 30' spacing (use soil cell technology to guide root system)

Looking NORTHWEST
Conceptual design of:
Second Street intersection

Raleigh Street (Intersection)

Seventh Street *(Mid-block)* — Fifth Street *(Concept Redevelopment)* — Second Street *(Intersection)* — **Raleigh Street** *(Intersection)* — Fayetteville Avenue *(Roundabout)*

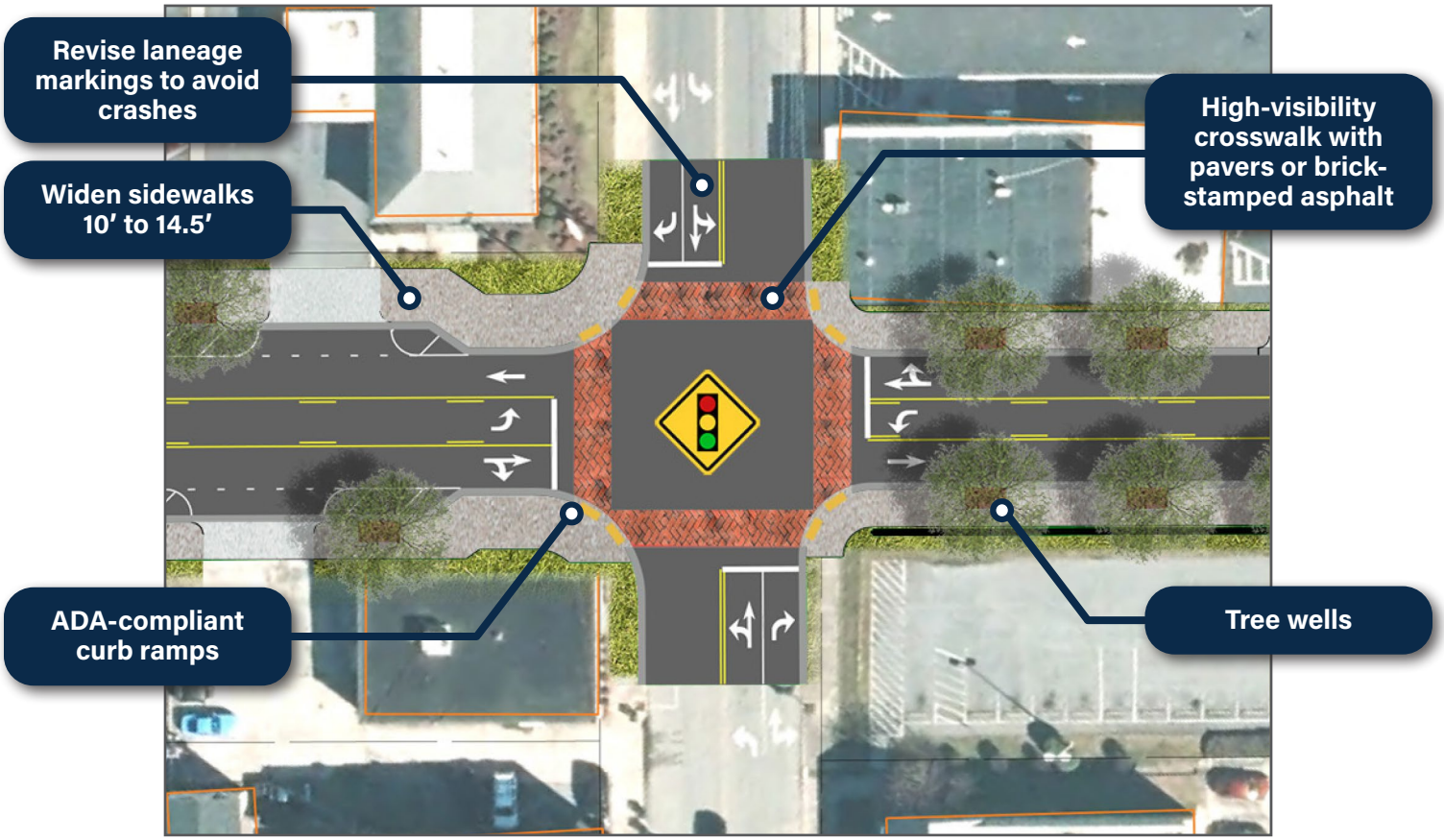


Figure 3.10: Conceptual design of Raleigh Street intersection.

Recommendations:

Upgrade to high-quality intersection featuring:

- Widen sidewalks 10′ to 14.5′ as appropriate within existing right-of-way along both sides of Second Avenue to accommodate pedestrians and bicyclists, outside seating and street furniture
- Revise laneage markings to avoid crashes along both Raleigh Street approaches
- On-street parking where indicated
- Mast-arm signals
- High-visibility crosswalk featuring pavers or brick-stamped asphalt
- Pedestrian countdown timers
- ADA-compliant curb ramps
- Pedestrian-level lighting
- Tree wells to accommodate street trees at minimum 15′ to 30′ spacing (use soil cell technology to guide root system)

Looking NORTH
Conceptual design of:
Raleigh Street intersection

Fayetteville Avenue (Roundabout)

Seventh Street *(Mid-block)* — Fifth Street *(Concept Redevelopment)* — Second Street *(Intersection)* — Raleigh Street *(Intersection)* — **Fayetteville Avenue** *(Roundabout)*

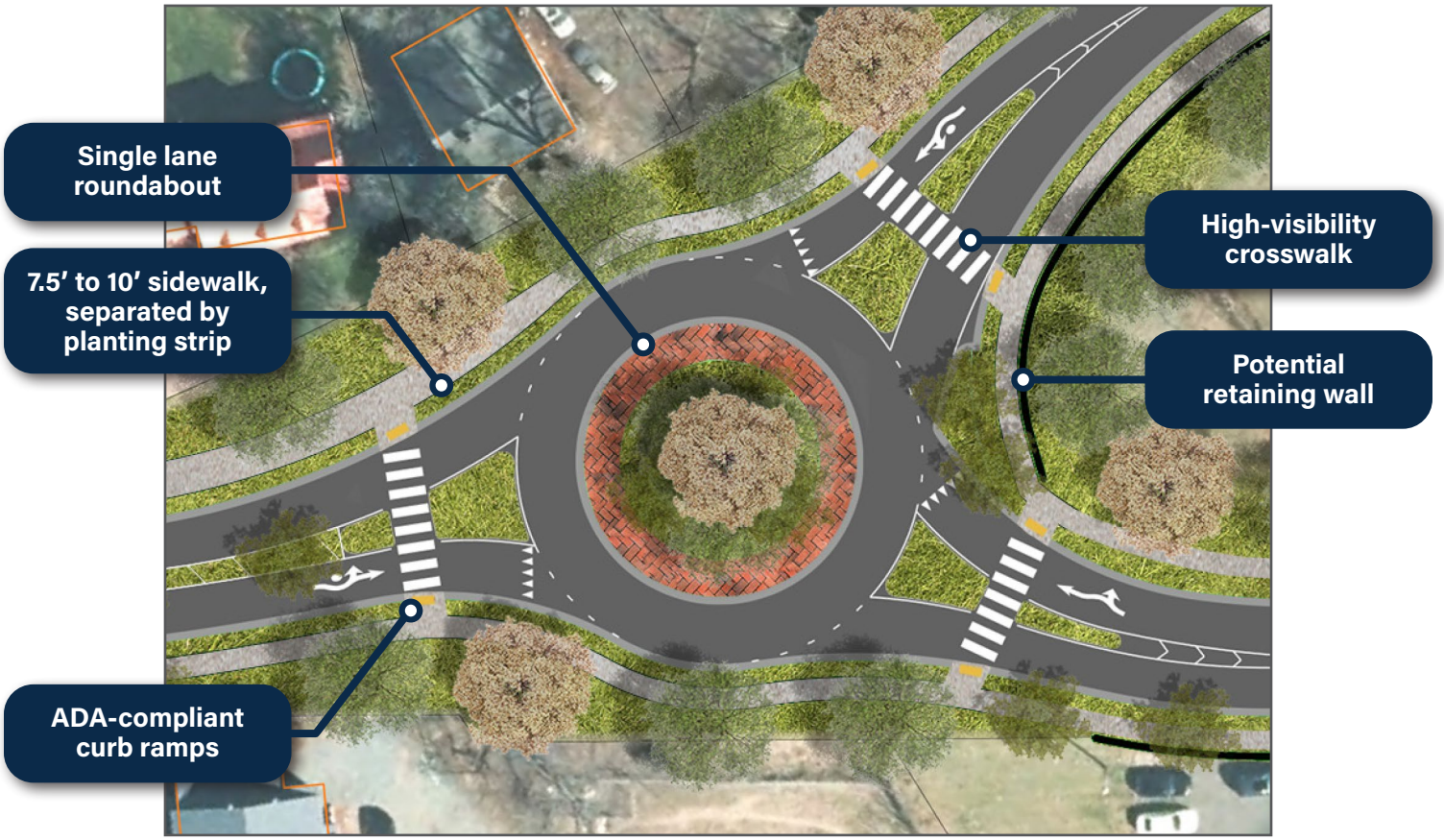


Figure 3.11: Conceptual design of Fayetteville Avenue roundabout.

Recommendations:

Upgrade to roundabout featuring:

- Single-lane roundabout, design to accommodate WB-50 design vehicle
  - 50’ splitter islands at all approaches;
  - 10’ truck taper;
  - 110’ diameter inscribed circle;
- Gateway “welcome” monument located within roundabout or as appropriate
- Street trees and landscaping as appropriate within roundabout and/or planting strip
- High-visibility crosswalks at all approaches
- ADA-compliant curb ramps at all crosswalk approaches
- 7.5’ to 10’ sidewalk with planting strip to accommodate pedestrian and bicyclist movement
- Further study needed during design to determine need for further vehicular-level lighting
- Pedestrian-level lighting

Looking SOUTH
Conceptual design of:
Fayetteville Avenue Roundabout

Validation

The proposed design must be able to support all users of the corridor into the future, including future vehicle traffic. To validate the concept, the design team analyzed population and traffic growth along Second Avenue and in Siler City based upon data provided by the NCDOT, and conducted a review of similar "road diet" projects within the region.

POPULATION GROWTH: Population growth trends help to validate the traffic growth trends which have an impact on forecasting future demand along the corridor. Two periods were analyzed using Siler City's population data reported in the US Decennial Census: from 2000 to 2020, and from 2010 to 2020. Annualized growth rates for each period are as follows:

- 2000-2020: **0.5%** per year
- 2010-2020: **-0.23%** per year

Based on these data, Siler City's early 21st century growth has begun to wane recently, though development activity in Siler City and nearby suggests the twenty-year trend is more reflective of its growth. Population growth does not reflect traffic growth, but can lend support for projections.

TRAFFIC GROWTH: There are four traffic stations within the Second Avenue corridor. Excluding 2020 counts (due to COVID conditions), the most recent traffic counts were betwen 2017 and 2019.
A historical growth rate was calculated based on the oldest year available (2002 or 2003): one excluding 2020 data, and one including 2020. The results of the trend analysis indicates **a negative traffic growth rate for the past two decades** for most of the corridor. To validate, a conservative growth rate of 1% annually was used to estimate 2040 corridor traffic volumes.

REGIONAL PRECEDENT: Within the region, there have been several similar road diet projects administered by NCDOT and municipalities. Hillsborough Street in Raleigh is one of the most high-profile road diet projects built within the region. When the decision was made to reduce the number of lanes on Hillsborough Street from four lanes to two lanes, it carried up to 22,000 vpd. Within NCDOT Division 8, another road diet (partially funded by NCDOT) is planned for the Carthage Street and Charlotte Avenue corridors in nearby Sanford. Carthage Street carries relatively the same volume of traffic as Second Avenue.

	STATIONS			
	Greensboro Avenue *(190000179)*	North of 3rd Street *(190000186)*	North of 2nd Street *(190000185)*	South of Raleigh Street *(190000372)*
Growth Rate *(annualized)*	-1.8%	-1.2%	-1.6%	0.3%
Growth Rate *(exclude 2020)*	-2.0%	-1.3%	-0.5%	1.5%
2040 Projected Volumes *(+1%)*	3,428	**10,412**	9,859	7,717

Table 3.12: Annualized growth rate & projected traffic volumes, Second Avenue.

KEY TAKEAWAYS: The described analysis for the population and traffic growth trends represents a conservative estimate for future growth rate.
A road diet along Second Avenue appears reasonable and justified considering, (1) population and traffic growth rates, (2) NCDOT's recommendation (county CTP), and (3) precedent road diets within the region. Other factors include:

- The core area where traffic volumes are highest has experienced a decline from 2002 to 2020, regardless of the pandemic.
- The decline is actually *more* pronounced without the pandemic north of Seventh Street.
- Growth south of the corridor is higher, but here traffic volumes do not exceed 5,200 vpd.

Assuming Siler City continues to grow in population and that Second Avenue reverses its trend of declining volumes along the corridor, a conservative estimate for 2040 traffic growth (assumed 1% annual growth rate) along Second Avenue would still be less than 10,500 vehicles per day. This volume is less than the carrying capacity (NCDOT – LOS D) of a three-lane roadway.

Implementation

04

Implementation.

The ultimate success of this Study rests on Siler City and NCDOT leaders' ability to implement its recommendations, turning a vision into reality.

Making this plan a reality requires the coordination, collaboration and combined efforts of many stakeholders and organizations. This effort is made easier by establishing an action plan for moving the process forward from planning to funding, design, and ultimately construction. Defining costs, tailoring phases of construction to meet funding projections and community needs, and defining subsequent steps in the transformation of Second Avenue will help create an environment conducive to a truly walkable, Complete Street.

Phasing & Cost Estimates

As project segments were identified, project construction quantities were developed based on the design concepts using measurements taken from MicroStation drawings. Construction cost estimates were calculated using standard unit cost values provided by NCDOT. While **the design team made all efforts to remain within the existing right-of-way and limit impacts to property owners**, there may be areas identified during the final design stage that require temporary or permanent easements during construction. A 10% design fee and 35% contingency were included in the cost assumptions. These estimates are for 2022 costs and subject to change following full surveys and final design computations. Tables 4.1 and 4.2 provide a summary of the construction costs associated with the proposed concept design, broken into segments for ease of understanding and potential construction phasing. The estimated construction cost for transforming Second Avenue in accordance with this plan is approximately **$7.1 million.**

SECTION/EXTENT	DESCRIPTION	LENGTH
SECTION 1: *ROUNDABOUTS AT GREENSBORO AND FAYETTEVILLE AVENUES*	• Two single-lane roundabouts, travel lane width of 11' • 110' diameter inscribed circle • Median splitter islands at all approaches • 10' truck apron	***0.1*** MILES
SECTION 2: *3RD STREET TO GREENSBORO AVENUE*	• Planted medians as indicated in concept design (See Chapter 3) • Midblock crossing with Rapid Rectangular Flashing Beacon (RRFB) and pedestrian refuge island at Seventh Street • 10' to 14.5' sidewalks with street trees and tree wells (3rd Street to 5th Street); 7.5' to 10' with street trees and pedestrian-level lighting 5th Street to Greensboro Avenue	***0.3*** MILES
SECTION 3: *RALEIGH STREET TO 3RD STREET*	• Planted medians as indicated in concept design (See Chapter 3) • 8' On-street parking where indicated • 10' to 14.5' sidewalks with street trees and tree wells • Improve 2nd Street and 3rd Street intersections • Street trees and pedestrian-level lighting • Underground utilities (costed separately)	***0.2*** MILES
SECTION 4: *FAYETTEVILLE AVENUE TO RALEIGH STREET*	• Planted medians as indicated in concept design (See Chapter 3) • 7.5' to 10' sidewalk and/or multi-use path on both sides • 4' planting strip where appropriate • Improve Raleigh Street intersection • Street trees and pedestrian-level lighting	***0.2*** MILES

Table 4.1: Proposed sections for construction.

SECTION/EXTENT	ENGINEERING DESIGN COST	CONSTRUCTION COST + CONTINGENCY	*COST TO UNDERGROUND UTILITIES*
SECTION 1: *ROUNDABOUTS AT GREENSBORO AVENUE AND FAYETTEVILLE AVENUE*	$189,128	$1,891,275	N/A
SECTION 2: *3RD STREET TO GREENSBORO AVENUE*	$180,271	$1,802,710	$8,000,000
SECTION 3: *RALEIGH STREET TO 3RD STREET*	$226,763	$2,267,627	$6,200,000 *PRIORITY*
SECTION 4: *FAYETTEVILLE AVENUE TO RALEIGH STREET*	$111,957	$1,119,565	$3,500,000
TOTAL **(DESIGN FEE + CONSTRUCTION COST + CONTINGENCY)**	***$708,118***	***$7,081,177***	***$17,700,000***

Table 4.2: Project costs per section, Second Avenue. Assumptions include the following:

35% Contingency
10% Mobility & Utilities
10% Engineering Design
$4,000/linear ft cost to underground utilities.

Right-of-Way acquisition costs not included. Total cost, including undergrounding utilities: **$25.5 million.**

Funding.

To implement this Study's recommendations, funding for design and construction must be secured. Though there is no dedicated source of funding for Complete Streets, there are numerous funding sources available at the federal, state, and local levels to help implement this plan. Implementing Complete Streets can be accomplished by using a combination of strategies that include shifting resources, leveraging new sources of funds, and/or securing grants or loans.

Local Funding Sources

There are various transportation funding opportunities available to local governments in North Carolina. Some funds are restricted to specific uses while other have the flexibility to be allocated for various needs. With many communities seeing a long-term decline in Motor Fuels Tax (MFT) funds as cars become more fuel efficient or drivers switch to electric vehicles, municipalities are seeking other revenue sources, including local sales tax and property tax to address transportation needs.

Shifting revenue from existing taxes or fees, Siler City could set aside funds and accumulate the total amount needed to implement a capital improvement project like Complete Streets. However, with other urgent local needs it could take a long time to accumulate the necessary funds. To speed up the process, Siler City could increase the rate of revenue sources like taxes up to the state limit (7.5% for sales tax, $15/1,000 for property tax) or create new revenue sources. In addition to these options, Siler City was awarded approximately $1.3 million through the American Rescue Plan Act (ARPA) of 2021. ARPA funds have many eligible uses and include a provision that funds can be used for government services up to the amount of revenue lost as the result of the COVID-19 pandemic. If any ARPA funds designated under the revenue lost provision were to be used to implement Complete Streets, the project would need to be obligated by December 31, 2024 and spent by December 31, 2026.

Some of the most successful methods for raising revenue for similar projects in North Carolina are the Municipal Service District (MSD, also known as Business Improvement Districts (BID) or Special Assessment Districts (SAD)) and Tax Increment Financing District (TIF). Both Municipal Service Districts and TIF Districts expire after a certain period of time. Depending on how quickly they are able to meet their objectives, these programs can be retired early or extended. At this time, Siler City does not have any active Municipal Service Districts or TIF Districts.

MUNICIPAL SERVICE DISTRICTS

A MSD is a property tax district. The city may levy an ad valorem tax within a designated geographic area, like a business district or main street, which is assessed in addition to the citywide ad valorem property tax. The added property tax only apply to the properties within the district's boundaries and the proceeds of that tax are **exclusively used to finance additional services or projects in the district**. Funds can be used to fund the capital costs of streets and sidewalks, which may include property acquisition, construction, expansion, and improvement of real property. A vote by affected landowners is required by law.

TAX INCREMENT FINANCING

North Carolina permits local governments to use TIF to issue bonds to help develop, in conjunction with private entities, defined territories within a locality for commercial use. TIFs essentially freeze the city's revenue from a designated district and allow any **increases in property value within the district to be set aside as strictly for use within that district**. The local government can apply for bonds to improve infrastructure, tear down buildings, or pay for other up-front development expenses to spur further private development. As security for the bonds, local governments pledge the additional ad valorem tax revenues expected from the redeveloped area's increased property values and commercial activity.

Grants and Loans

To implement this Study's recommendations, funding for design and construction must be secured. Though **there is no dedicated source of funding for Complete Streets**, there are numerous funding sources available at the federal, state, and local levels to help implement this plan. Implementing Complete Streets can be accomplished by using a combination of strategies that include shifting resources, leveraging new sources of funds, and/or securing grants or loans.

MATCHING FUNDS:
Most federal grants require a local cost-share, commonly known as a match. Different programs require a different level of local commitment ranging commonly from 20% to 50%. In some cases, in-kind contributions, like staff time or volunteer hours, can be used as match. Additionally, private partners, including local business or non-profit agencies can serve as project partners to provide matching contributions. As all programs change over time, it is recommended that Siler City reach out the grant agency for more information before applying.

Rebuilding American Infrastructure with Sustainability and Equity (RAISE)

United States Department of Transportation | Office of the Secretary

The RAISE program is a unique opportunity for the DOT to invest in road projects that promise to achieve national objectives. Previously known as the Better Utilizing Investments to Leverage Development (BUILD) and Transportation Investment Generating Economic Recovery (TIGER) discretionary Grants, Congress has dedicated nearly $9.9 billion for thirteen rounds of National Infrastructure Investments to fund projects that have a significant local or regional impact.

Rural Surface Transportation Grant (RURAL)

United States Department of Transportation | Federal Highway Administration

Newly created as part of the Bi-Partisan Infrastructure Bill, Rural Surface Transportation Grant Program is dedicated funding for rural communities to support projects to improve and expand the surface transportation infrastructure to increase connectivity, improve the safety and reliability of the movement of people and freight, and generate regional economic growth and improve quality of life.

Economic Adjustment Assistance and Public Works

United States Economic Development Administration

Assists state and local interests in designing and implementing strategies to adjust or bring about change to an economy. As the most flexible program, it will help hundreds of community's plan, build, and put people back to work through construction or non-construction projects designed to meet local needs.

Community Facilities Direct Loans, Grants, and Loan Guarantees

United States Department of Agriculture

The Community Facilities Direct Loans, Grants, and Loan Guarantees program provides affordable funding to develop essential community facilities in rural areas. An essential community facility is defined as a facility that provides an essential service to the local community for the orderly development of the community in a primarily rural area, and does not include private, commercial or business undertakings.

Spot Safety and Hazard Elimination Fund

North Carolina Department of Transportation

The Spot Safety and Hazard Mitigation funds smaller project types (i.e., intersection safety, corridor access management, etc.) that do not necessarily require significant funding or acquisition of right-of-way. NCDOT uses a cost-benefit analysis to justify specific projects. An example of eligible projects include the roundabout identified at Greensboro Avenue and Second Avenue.

Transportation Alternatives (Safe Routes to Schools)

North Carolina Department of Transportation

The Transportation Alternatives (TA) Set-Aside from the Surface Transportation Block Grant (STBG) Program provides funding for a variety of smaller-scale transportation projects, like pedestrian and bicycle facilities; construction of turnouts, overlooks, and viewing areas; community improvements, like historic preservation and vegetation management; environmental mitigation related to stormwater and habitat connectivity; recreational trails; safe routes to school projects; and vulnerable road user safety assessments. Safe Routes to School (SRTS) is a program within TA that enables and encourages children to walk and bicycle to school; makes walking and bicycling to school a safe and more appealing transportation option, and facilitates the planning, development and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools. These funds are accessed through the NCDOT STI process (see below).

Strategic Transportation Investment Law (STI)

North Carolina Department of Transportation

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 improvement proposed in the Second Avenue Complete Streets plan are not likely to score well in the State's STI prioritization process as a whole, it is likely that some smaller intersections, segments, or sidewalk/shared use path projects from this plan could compete successfully. Siler City should coordinate with NCDOT and TARPO to align appropriate projects onto the STIP.

Rural Transformation Grants

North Carolina Department of Commerce

The Rural Transformation Grant Fund provides local governments with grants and expert guidance to improve economic vitality and overcome the unique challenges many rural communities face. Rural Transformation Grants can support:

- Main Street and downtown investment and revitalization efforts;
- Initiatives that help create resilient neighborhoods;
- Community enhancements that spur economic growth; and
- Professional development and education programs to build local government capacity.

Tier 1 and Tier 2 counties, as well as qualifying census tracts in Tier 3 counties are eligible to apply. Census Tract 204.02 in Siler City where the project is located is eligible to Rural Transformation grants.

Federal Community Development Block Grants (CDBG) Economic Development Funds

North Carolina Department of Commerce

Community Development Block Grant (CDBG) funds are available to local municipal or county governments for projects to enhance the vitality of communities by providing decent housing and suitable living environments and expanding economic opportunities. These grants primarily serve persons of low- and moderate- incomes. State CDBG funds are provided by the U.S. Department of Housing and Urban Development (HUD) to the state of North Carolina. The economic development component of the CDBG Program is administered by the Rural Economic Development Division within the North Carolina Department of Commerce.

Community Challenge Grants

AARP

The AARP Community Challenge provides small grants to fund quick-action projects that can help communities become more livable for people of all ages. The program changes annually. In 2022, applications were accepted for projects to improve public spaces, housing, transportation and civic engagement; support diversity, equity and inclusion; build engagement for programs under new federal laws; and pursue innovative ideas that support people age 50 or older.

Additional Considerations

ENHANCING COMPETITIVENESS

As more and more communities fight for limited funding, Siler City has many opportunities to stand out and enhance its competitiveness. In addition to taking advantage of its priority status for federal grants, the following suggestions could increase the changes of securing federal and state funding:

- Incorporate **green infrastructure or stormwater best practices** into the final corridor design
- **Include EV readiness features** into the final corridor design
- Include or enhance features that address **environmental justice issues** related to air and water quality
- Provide and **document robust public input** throughout the planning and design process
- Collaborate with numerous partners from public, private, and non-profit organization to work together to achieve your complete streets vision
- Document your process and celebrate your progress.

NON-PROFIT PARTNERSHIP

There are several funding programs that exclusively support non-profit organizations and many do not require a match. *Siler City is ineligible to compete for these funding programs*, but could create a strategic partnership with a local nonprofit to work collaboratively toward implementing the Complete Streets vision and secure grant funding. The State of North Carolina offers robust support of rural communities and Main Street organizations. It is highly recommended that Siler City explore **establishing a Main Street organization** or similar nonprofit who can partner with the City, compete for funding, and administer placemaking and small business programs to supplement this effort.

Policy Recommendations

The following policy recommendations in Table 4.3 identify some policy items that can be used by the Town to guide future development along Second Avenue. Applying these recommendations, whether through ordinance revisions, design standards development, or policy modifications, would typically require partnership between landowners, developers, the Town of Siler City, the Triangle Area Rural Planning Organization (TARPO), and NCDOT.

CATEGORY	RECOMMENDATION
DRIVEWAYS	Review driveway design standards to reduce curb cuts and increase walkability.
	Sidewalk, not street surface material, should carry across the driveway and preferably at sidewalk height.
	Minimize curb radii to reduce vehicle entry and exit speeds.
	Consolidate driveways and require cross-access between adjacent parcels, especially complimentary uses, non-residential and multifamily development (present and future) on Second Avenue.
PARKING	Examine existing surface parking requirements and amend as necessary to require rear and/ or side parking with infill and/or redevelopment projects.
	Encourage the use of shared parking.
WAYFINDING, SIGNAGE & LIGHTING	Review wayfinding standards to include pedestrian and bicyclist wayfinding signage along the corridor to promote connection to and throughout Second Avenue, including downtown Siler City, Jordan-Matthews High School, and the Loves Creek Greenway.
	Limit the propensity of light pollution through the use of directional pedestrian-level lighting.
DENSITY	Review density restrictions to increase allowance and provide more opportunities for housing.
FRONTAGE ACTIVATION	Review and apply frontage requirements that reduce setbacks and provide a more engaging street edge.
	Initiate a street tree installation program where the City installs the tree on private property and the owners agree to maintain.
	Review regulations for building entrances to prioritize street-facing pedestrian access.
	Wider sidewalks (minimum of five feet) to attract and provide space for pedestrians, with paved connections to internal pedestrian circulation systems.
	Street tree and public seating requirements to create a comfortable environment

Table 4.3: Policy recommendations.

Best Practices for Transformation

Creating a walkable, Complete Street is more than making places easier to navigate on foot. Yes, the objective is to provide pedestrian facilities and connect them in a logical pattern to maximize access to a variety of places. However, **walkability** refers to all aspects of pedestrian comfort, including the scale of spaces, the proximity to (distance between) destinations, the availability of places to rest or escape from the elements, and the perception of safety. Addressing all these important attributes demands attention to the mix of uses, heights and setbacks of buildings, amenities, streetscape, site landscaping, lighting, and areas of potential vehicle-pedestrian conflict (street crossings and parking lots). Enhancing the pedestrian experience requires **placemaking,** which refers to a higher level of design that incorporates features that add interest and make the experience of a place more memorable. Retrofitting development that is auto-oriented and not designed with pedestrians in mind, such as the shopping centers pictured in the following three images, can be particularly challenging, especially where multiple property owners are involved.

The design presented in this plan is one giant step towards making Second Avenue a more walkable, bikeable, Complete Street. Beyond the scope of this Plan, however, the transformation of Second Avenue to more a walkable "place" will require the Town of Siler City to take steps to initiate and facilitate change within their respective planning and zoning jurisdictions. A combination of tools must be employed, including incentives that help offset redevelopment costs. The following are a set of steps to consider in order to realize types of changes the Siler City community has articulated during this Plan's development.

Best Practices for Retrofitting Second Avenue

Discussed in this chapter:

1. **Adopt the vision**
2. **Work with NCDOT in support of STI**
3. **Address infrastructure**
4. **Support quality redevelopment in phases**

1. Adopt the vision

Typical corridor in need of redevelopment

At its most basic level, a plan is a communication tool. It should clearly express the community-supported vision. Adoption is one way a local government can demonstrate its commitment to effecting change in accordance with the community's expectations. Publicly supported by elected and appointed leaders, an *adopted* plan carries more weight than one that is simply accepted or endorsed. It gives credence to local decision making and should be referenced when decisions stem from the plan recommendations. It can increase the chances of being awarded grant funding when attached to relevant grant applications, and it is essential in influencing the direction of projects funded by the North Carolina Department of Transportation (NCDOT).

2. Work with NCDOT in support of STI program

In support of the Vision, modifications to the roadway itself may be one of the most important steps in initiating change. However, since this street is state-owned, the recommended changes can be successfully accomplished only through their partnership -- and **in coordination with their strategic prioritization process (STI),** to ensure that this project can be funded through the State Transportation Improvement Program (STIP)**.** The following are two actions that the Town of Siler City should consider:

Coordinate with NCDOT

As Second Avenue is a state-owned road, NCDOT must be engaged in discussions about funding, design and construction of roadway design and streetscape elements. Implementing the full vision for Second Avenue may require financial or "in kind" contribution by Siler City. Once funded, local governments should utilize the adopted plan to provide input on a range of details, including facility type, cross-sections, access, and enhancements that address aesthetics, as well as safety for various modes.

Maintain enhancements within the ROW

Roadway improvements may include features that enhance the quality of the facility but contribute little to its functionality. Examples include specialty pavers at crosswalks, landscaping in the medians, and stone veneers and murals applied to bridges. Ongoing maintenance of such features may become an obligation of the local jurisdiction, because NCDOT may be unable to assume such responsibilities dependent upon state policy. For each enhancement incorporated within the right-of-way, a maintenance agreement, as well as a corresponding budget, should be established.

THE IMPORTANCE OF CROSS-ACCESS

One of the most important ways to ensure that Second Avenue operates in a safe manner after construction is to improve internal connections between businesses through **cross-access** requirements. Requiring complementary properties to connect allows vehicles to circulate between businesses without having to re-enter Second Avenue: Here are three ways to accomplish this in your land development ordinance:

- Require stub-outs for adjacent development projects
- Establish driveway spacing standards for new development and redevelopment, including minimum distances from intersections
- **Encourage cooperation between adjacent existing properties to develop shared driveways and parking**

Don't forget to require bike and pedestrian easements between compatible uses!

3. Address infrastructure

Redevelopment projects are more challenging than "greenfield" development, due to aging infrastructure. Typically, infrastructure must be upgraded or retrofitted to serve the intended development program. But the extent to which such improvements are needed is sometimes difficult to estimate. Therefore, the condition of existing infrastructure is often a major factor influencing location decisions. The provision of public infrastructure by the local government can make redevelopment projects more feasible and remove some of the uncertainty associated with it. By directing a portion of the Capital Improvements budget toward a corridor, that geography can become the focus of new private investment.

Upgrade existing road-way infrastructure

For roads maintained by NCDOT, engage NCDOT in discussions about roadway design. As each project is defined and funded, local governments should utilize the adopted plan to provide input on a range of details, including facility type, cross-sections, access, and enhancements that address aesthetics, as well as safety for various modes.

Provide supporting infrastructure, facilities, and amenities

The provision of—or improvements to—public infrastructure and facilities can eliminate the deterrents to reinvestment and, in some instances, bolster efforts to attract investment. With a clear delineation of targeted areas, local governments should prioritize public investments, directing funding toward these areas or making commitments to fund (in part or whole) specific projects within the areas. Projects should be considered that serve private development projects and address a public need, potentially reducing costs associated with development. Among them are the following:

- Parks and other public (or publicly accessible) open space, and reduce requirements for improved open space on site(s)
- Parking (on-street and public parking structures or lots), and reduce minimum off-street parking requirements
- Bicycle and pedestrian amenities

4. Support quality redevelopment in phases

Initial right-of-way improvement to encourage redevelopment

Making investments that demonstrate the local government's commitment to reinvestment in the area is of critical importance in the early stages of plan implementation. Visible improvements that can have an immediate, positive impact include **streetscape enhancements**, which should be accomplished in conjunction with planned roadway improvement projects. Think of the corridor edge (property frontages) as the foreground of the image created for investors as they visit the place and form their initial impressions. A well-planned, well-executed streetscape can upgrade the appearance of a corridor to a level that instills investor confidence. Guided by the concepts in the adopted plan, local governments should develop and implement streetscape plans that specify details for street trees, lighting, sidewalks, and other features that are consistent along the entire segment of the roadway. As needed, seek landscape easements on private property and establish maintenance agreements with NCDOT for areas within the NCDOT-maintained right-of-way.

Corridor Overlay

A corridor overlay district is one of the most powerful zoning tools Siler City can use to guide the walkable, bikeable future development of Second Avenue in a manner compatible with current and future development. The intent of the overlay ordinance is to regulate the built environment in a way that values form, with the specific purpose of creating high-quality, integrated development patterns that support the objectives of improving walking/bicycling environments; improving safety; and increasing the quality of the aesthetics along the corridor. Any overlay should address the following topics:

DEVELOPMENT PROCESS. Applicants should present a preliminary sketch plan to review with the City staff early in the design and planning process to work collaboratively to meet the overlay's requirements.

PARKING. Generally, parking shall be provided to the rear and sides of buildings.

STREETSCAPING. Generally, property owners and developers should be responsible for installing and maintaining street trees, benches, and other facilities.

SIGNAGE. Signage standards should be developed for the entire corridor; signs should be unobtrusive and complimentary with the City's historic character.

DRIVEWAYS. Generally, streets in the Corridor Overlay District are to be oriented towards both pedestrian traffic and persons in motorized vehicles that park and walk to their destinations. Limitations on the number of driveways is crucial to maintaining continuity of streetscaping and reducing vehicular conflicts and crashes. Shared driveways for complementary uses should be highly encouraged.

CROSS ACCESS. Cross-access between complementary uses should be a requirement for redevelopment.

Focus on Connectivity & Retrofit/Placemaking

The conceptual site plan in Chapter 3 explores just one potential private investment catalyzed by the public investments along Second Avenue. There are several locations along Second Avenue, however, where this type of infill development may take place with renewed investment. The existing auto-centric development pattern is very common; however, communities across the country are reimagining these areas by creating more pedestrian-scaled blocks and facilitating incremental infill that includes a mix of uses. Improved multimodal facilities and on-street parking create opportunities for successful activity centers supporting and expanding downtown that focus on walkability and bikeability to housing, services, and amenities. Cross-parcel connections along the corridor frontage begin to create more cohesion and highlight placemaking opportunities such as public art, open-air markets, and outdoor dining. Side streets and blocks away from downtown can transition to a variety of housing typologies and densities that ultimately tie directly into the existing neighborhoods, giving people more choices in how they move around the community.

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