

Walkable Midtown:

The Midtown-St. Albans Area Plan

May 2020

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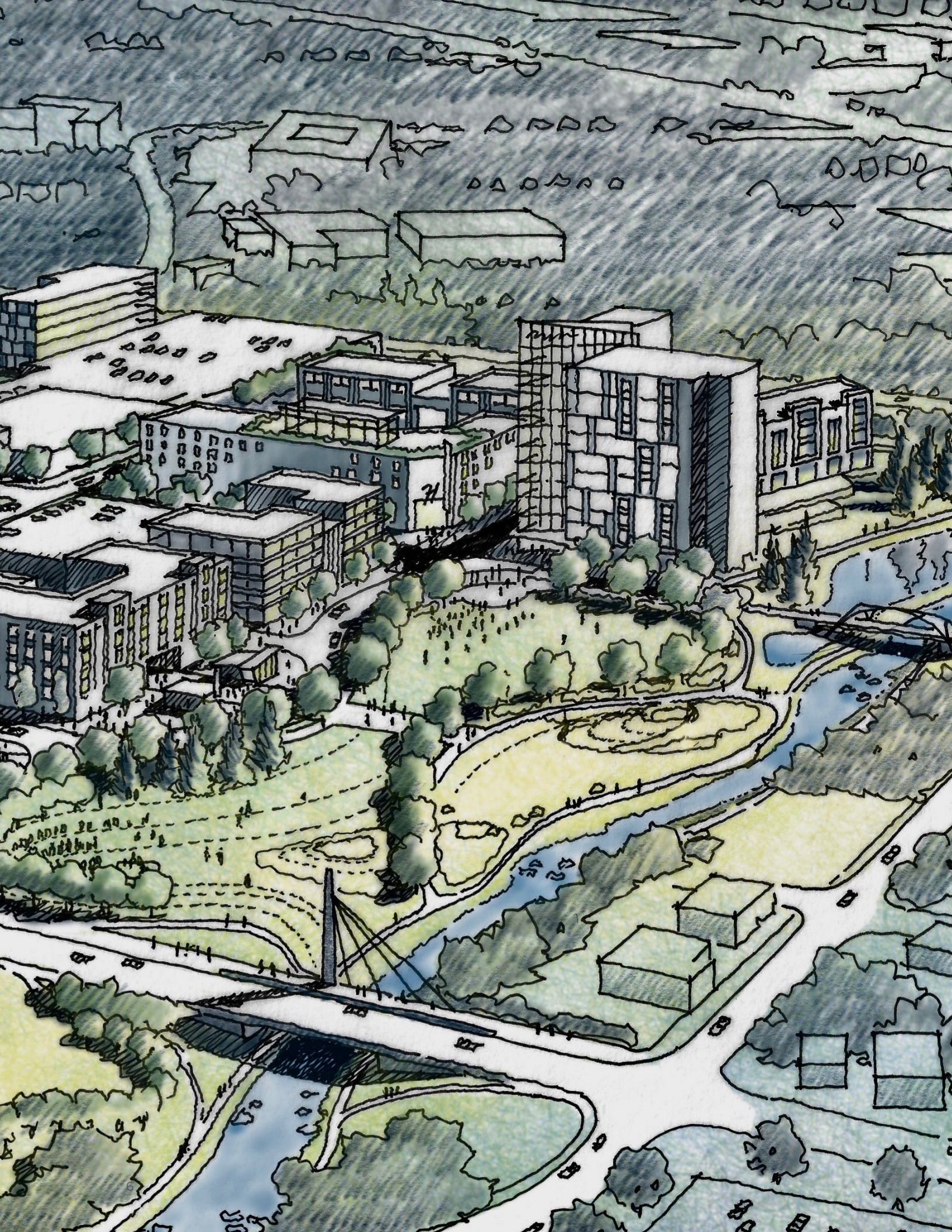
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Walkable Midtown: The Big Picture

For ease of understanding, this document is divided into two primary sections:

Walkable Midtown: The Big Picture. This section provides a quick, easy-to-read overview of all the key ideas and recommendations of the plan.

Walkable Midtown: Detailed Analysis. This section is intended for those who wish to dive in more deeply into the study analysis and recommendations. It serves as the full plan report and is a standalone document. It contains all the plan's recommendations, along with more detailed technical analysis and description.

The Big Picture: Plan Overview

Walkable Midtown, the final name for the Midtown–St. Albans area plan, was completed in 2020 to create guidance for this dynamic commercial and residential district for the next decade. Recommendations resulting from the plan include multi-modal transportation, streetscape, urban design, and land use guidance. They are aimed at addressing issues and taking advantage of opportunities related to the area's growth and development. In addition to traffic congestion and safety, the study recommendations highlight opportunities to manage stormwater and flooding issues, promote open space, bolster housing affordability, improve pedestrian and bicyclist mobility, and support expanded transit.

The Big Picture: Seven Big Moves

The previous section described the Planning Principles that guided the identification and revision of numerous potential changes and improvements to how residents, visitors, and employees live, navigate, and experience the Midtown–St. Albans area. This chapter describes the plan recommendations and associated tradeoffs. There were some options considered in the planning process that were ultimately not recommended; they are also described in this section of the report. The recommendations are organized by seven categories of improvements, known as the “Big Moves,” that will support safer streets, economic activity, infrastructure development, and transportation and housing options. The Big Moves are:

1. Crossing the Beltline
2. Green Streets
3. Connectivity and Travel Reliability
4. Serious Transit
5. The Midtown Ring
6. Midtown Living/Midtown Works: Land Use Guidance
7. The Midtown Waterfront District and Park

Together, these recommendations work to increase travel options and improve travel reliability for the growing Midtown–St. Albans area compared to a “do nothing” approach. They also address needs for public space, additional infrastructure, and housing and employment opportunities. Each recommendation has an accompanying estimated cost and timeline for implementation that are described in the Detailed Analysis section. Additional details from the transportation analyses are included in the Appendix.

Seven Big Moves

This plan is guided by a vision that is achieved by many supporting projects, all described in detail in this report and appendices. There is a lot to digest and consider. However, if residents and policymakers want the big picture, described clearly and concisely, it is here. Understand the following seven transformative projects, and one understands the plan.



1. Crossing the Beltline

Crossing the Beltline

The I-440 Beltline is arguably Raleigh's most impactful single piece of infrastructure, and it helps connect people with opportunity in Midtown and elsewhere across the City. It also funnels trips into a few congested intersections and essentially acts as a moat dividing the Midtown St.-Albans area in half for people walking and biking.

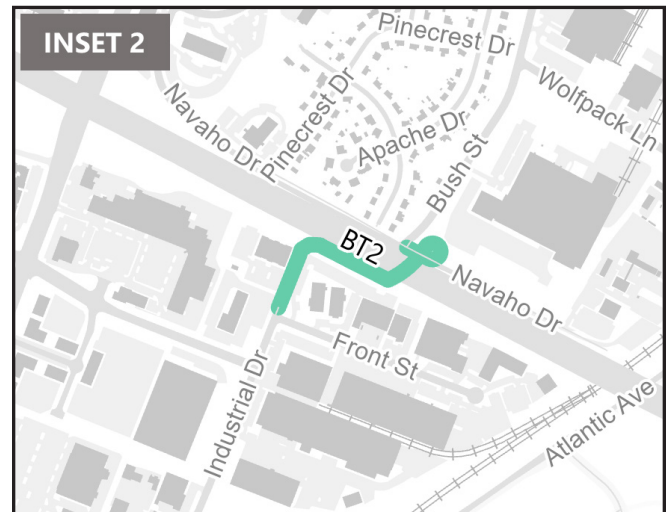
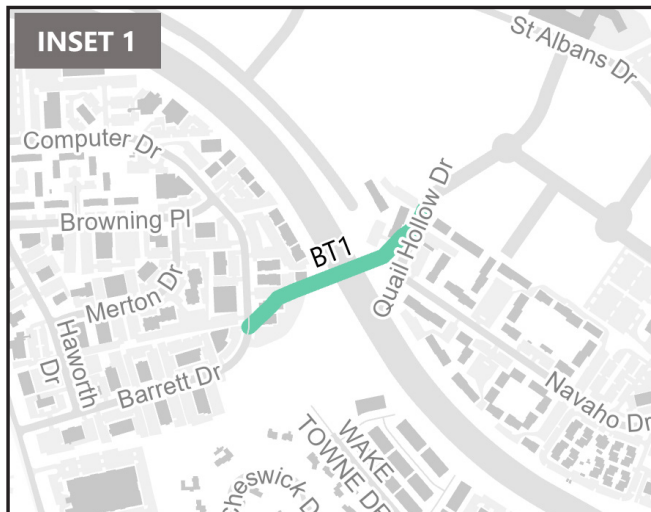
Walkable Midtown envisions overcoming the barrier with two new Beltline crossings: one for cars and pedestrians, and one for people walking and biking only, providing transportation options that currently do not exist.



In Your Words: Midtown 2040

"A place where many people can find housing, groceries, access to transit, and access to jobs without needing a car."

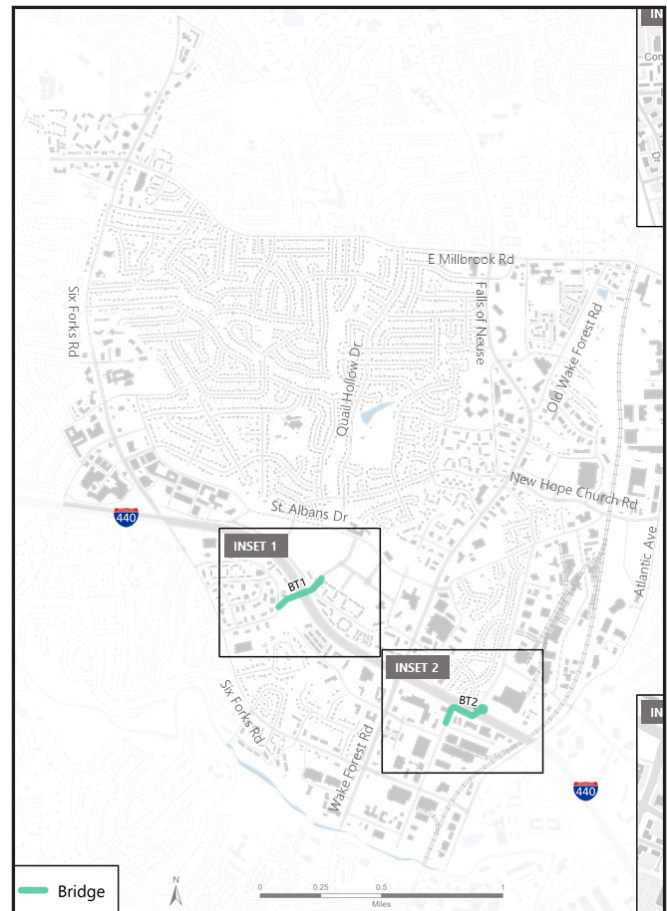
Figure 3: Bridge Projects



— Bridge Project

BT1 - Multimodal bridge connecting
Barrett Drive and Navaho Drive

BT2 - Pedestrian bridge connecting
Industrial Drive and Bush Street



Bridge Projects

The study recommends two new bridges (**Figure 3**) to cross I-440:

- A Multimodal Bridge (BT1) for walkers, bicyclists, and drivers that connects Navaho Drive and Barrett Drive. This bridge has two lanes for cars, sidewalks, and bicycle lanes.
- A Pedestrian Bridge (BT2) for walkers and bicyclists that connects Bush Street and Industrial Drive. This bridge would be part of the Midtown Ring described in later sections.



A 440 bridge provides the opportunity to create a gateway to Midtown (left); example of a pedestrian-bicycle bridge (below).





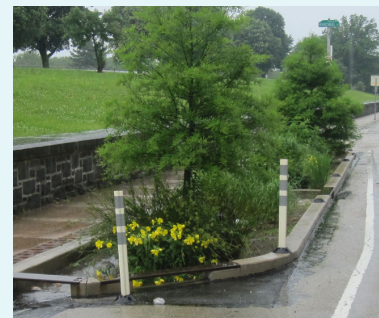
2. Green Streets



Midtown Green and Blue: Green Streets/Stormwater Infrastructure

Nature and infrastructure weave together in the plan's vision for a network of "Green Streets." These streets will perform quadruple duty:

- Taming vehicle speeds on wide streets with potentially growing traffic volumes.
- Providing safer, more comfortable places for people to walk or bike.
- Retaining stormwater before it goes places where it can cause flooding.
- Greening and beautifying area streets.

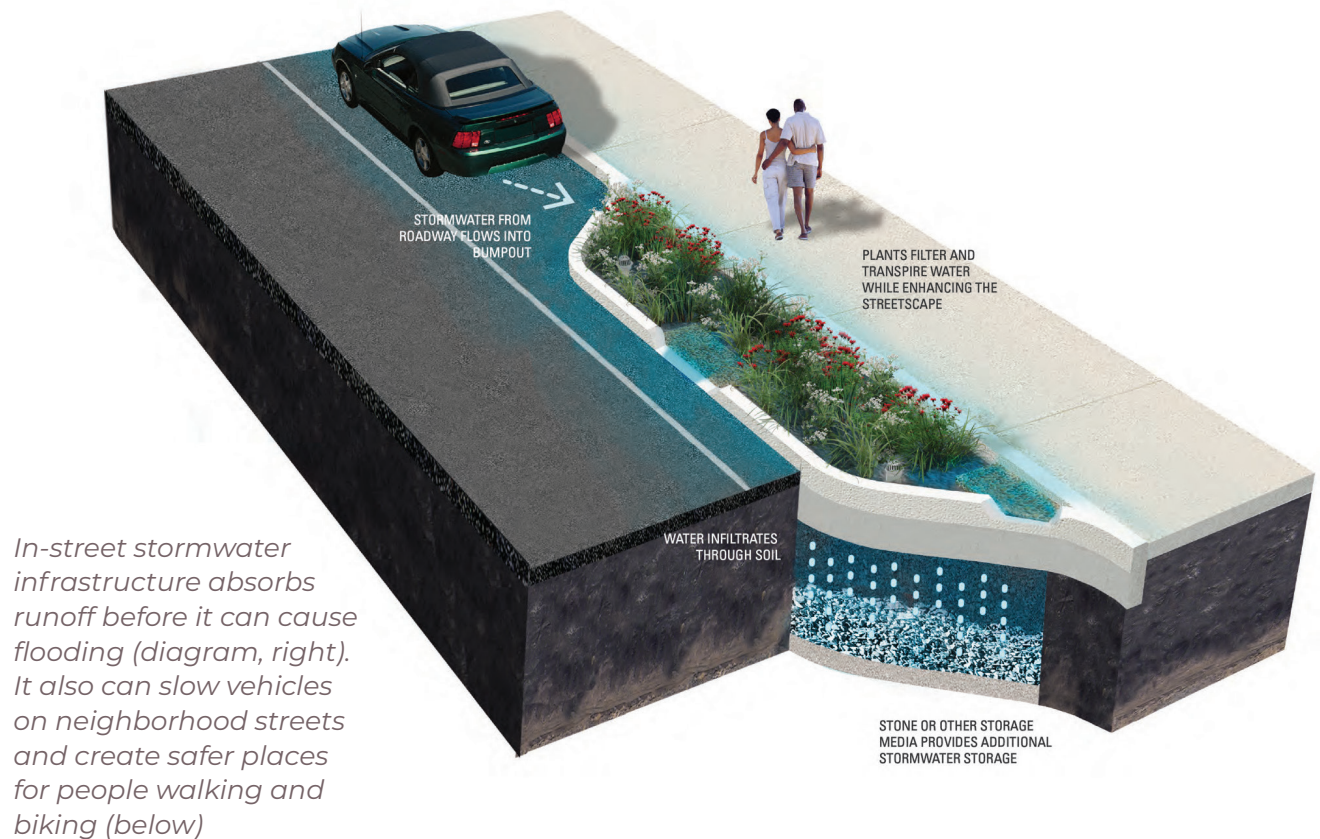


In Your Words: Midtown 2040

"Walkable, inclusive, safe."



Green Streets Benefits: Stormwater, Traffic Calming, Safe Places for Walking and Biking



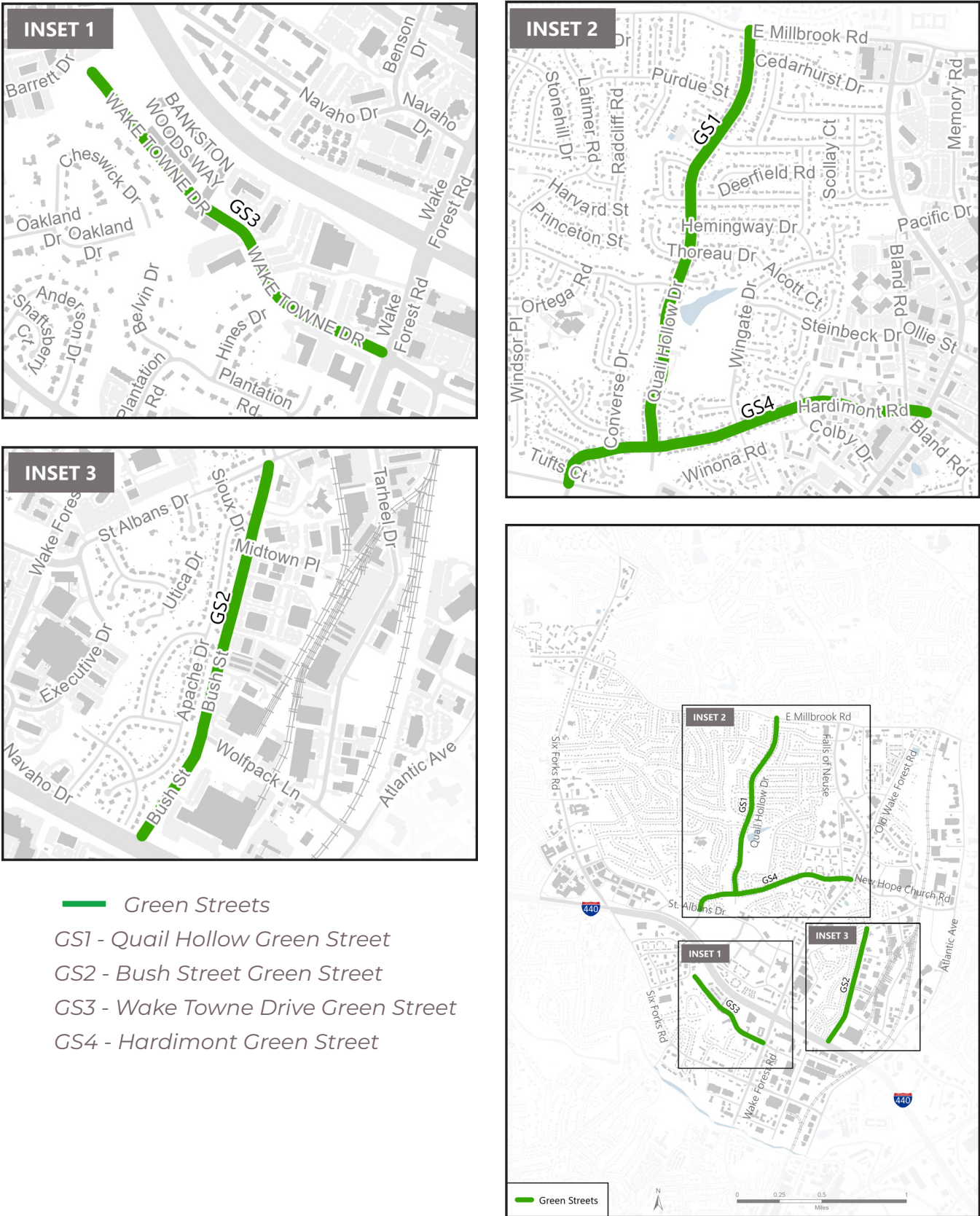
Examples of stormwater infrastructure

Types of stormwater infrastructure include rain gardens (top right), planters with trees (middle) and, in more urban areas, planters in sidewalks.

Permeable paving materials can add to stormwater infiltration capacity.



Figure 4: Green Streets



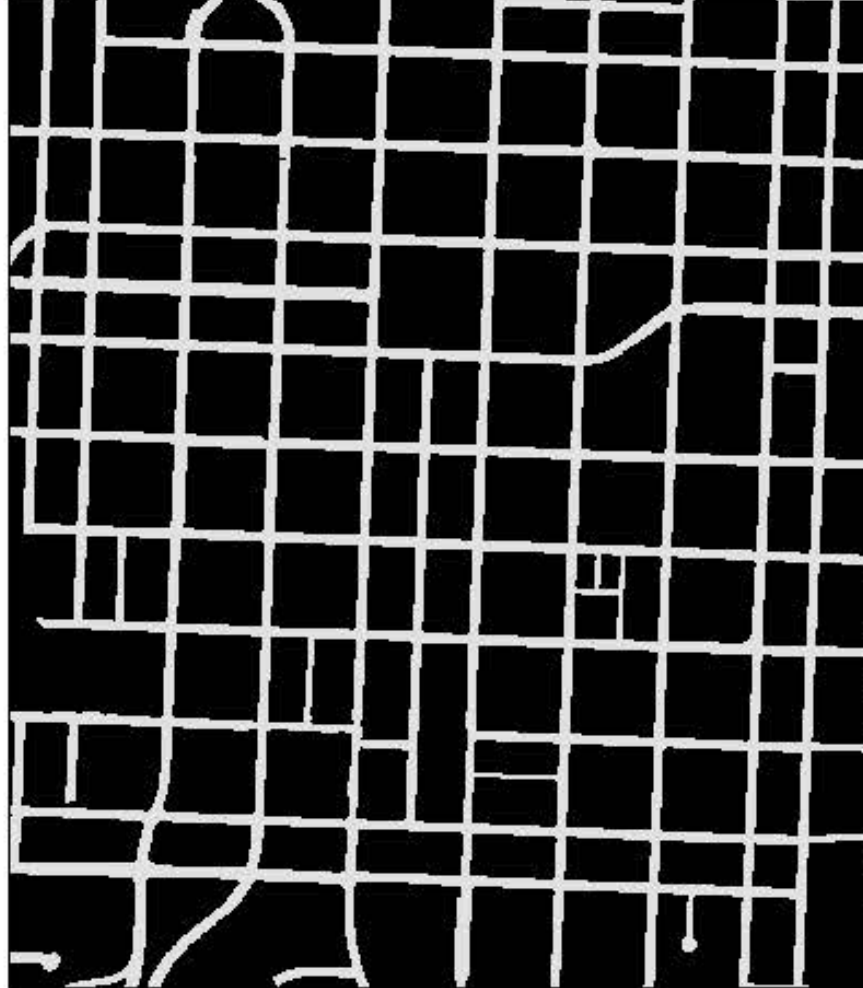
Green Streets

Green Streets are roads with specific improvements that reduce stormwater runoff, slow down vehicles, and include a mix of expanded sidewalks, bicycle lanes, and shared-use paths. These streets (**Figure 4**) include:

- Quail Hollow Drive (GS1) from East Millbrook Road to Hardimont Road. Potential redesigns include a shared-use path on the east side (connecting to the Eastgate Park), separated bike lanes on both sides with sidewalks, or another combination that achieves low stress walking and biking.
- Bush Street (GS2) from St. Albans Drive to Navaho Drive. Potential redesigns could include a two-way separated bike lane on the west side with a sidewalk on the east side.
- Wake Towne Drive (GS3) from a new Multimodal Bridge on Barrett Drive to Wake Forest Road. Potential redesigns could include on-road bicycle lanes or separated bicycle lanes, in addition to existing sidewalks.
- Hardimont Road (GS4) from St. Albans Drive to Wake Forest Road. Potential redesigns could include on-road bicycle lanes or separated bicycle lanes, in addition to existing sidewalks.

Together, the four Green Streets expand low-stress biking and walking options across the study area, connect to key destinations and neighborhoods, and complete the Midtown Ring.

Other stormwater improvements would be identified by a Drainage Basin Study (LU3), conducted on the drainage basins in the Midtown–St. Albans study area.



3. Connected Streets

Connected Streets and Travel Reliability

The goal for future Midtown transportation is not speed. It is reliability and safety. Midtown is not a place to pass through as fast as possible – it is a distinct place. Future traffic speeds will be slower than those of the past decades, but the plan’s vision is to improve travel time reliability and predictability by providing alternatives to the places where congestion is worst. A key strategy is creating, for the first time, a true street network in Midtown.

Raleigh’s older neighborhoods and commercial centers are characterized by a close-knit grid of streets. By contrast, the street network in the heart of Midtown is fragmented and connects only in a few congested and pedestrian-hostile intersections. This plan creates a friendly street grid that provides new options, whether for driving or walking.



In Your Words: Midtown 2040

“Somewhere that my children can safely navigate by bike or foot with public transportation options. urban and green with open space.”

New Local Road Connections

This plan recommends several new local road connections (**Figure 5**). The goal of these new connections is to produce a parallel street network to busy corridors, including Wake Forest Road, the Beltline, and others. These new connections include:

- Benson Drive Extension (SC1) between Dresser Court and St. Albans Drive.
- Benson Drive Extension (SC2) connecting Benson Drive to Hardimont Road.
- Bland Road Complete Street Improvements (SC3), including bicycle lanes and transit amenities between Falls of Neuse Road and Hardimont Road.
- Craftman Drive Extension (SC4) between Sorghum Court and N Market Drive.
- Pacific Drive Extension (SC5) between Old Wake Forest Road to Craftsman Drive Extension.
- Wake Towne Road Extension (SC8) to Barrett Drive.
- Navaho Drive Realignment (SC9) between Quail Hollow Drive and Benson Drive.
- Future Benson Drive Extension (SC10) between Hardimont Road and Bland Road/Pacific Drive.

Midtown's street grid (upper left) currently lacks connectivity compared to those in downtown (upper right) Oberlin Village (lower left), and Five Points (lower right). Compared to a strategy of widening streets, a better-connected grid can improve transportation while not sacrificing walkability.





Other Roadway Improvements

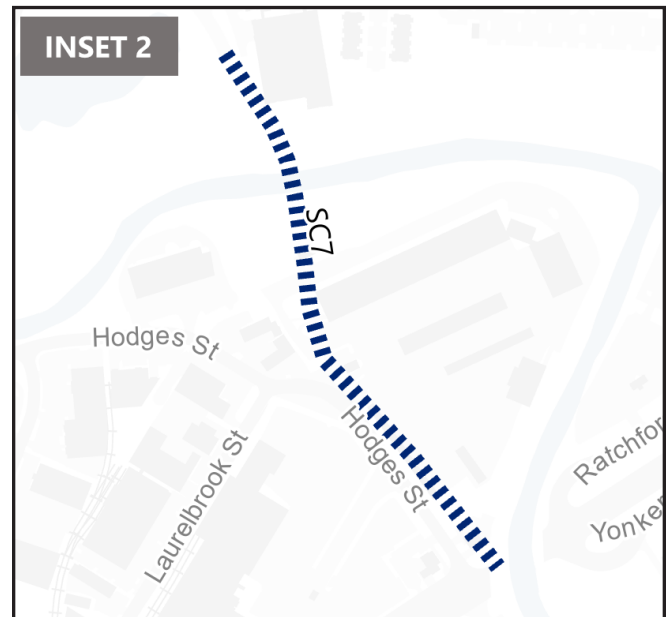
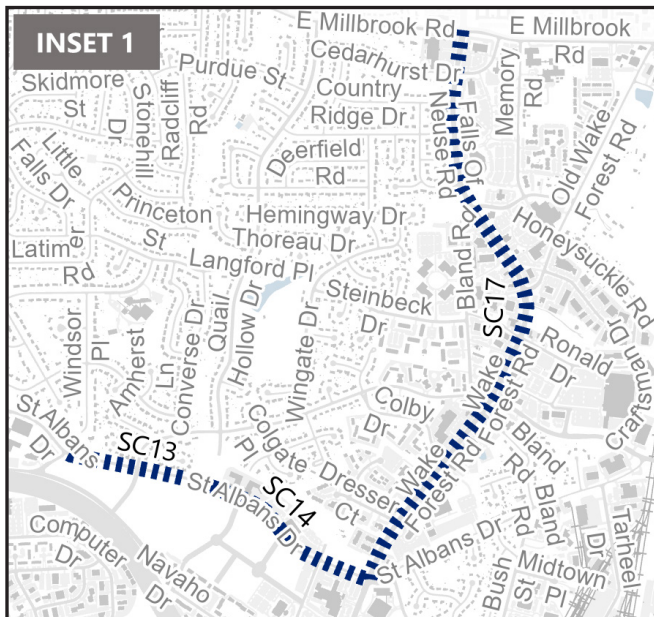
This plan also contains recommendations for changes to St. Albans Drive between North Hills Street and Wake Forest Road (**Figure 6**). These changes will increase safety, comfort, and travel options for non-drivers, as well as support bus service on these streets.

- St. Albans Drive Widening A (SC12) widens St. Albans Drive between Benson Drive and Wake Forest Road to a four-lane divided avenue.
- St. Albans Drive Widening B (SC13) widens St. Albans Drive between Church at North Hills Street and Hardimont Road to a two-lane avenue, divided with a center turn lane.
- St. Albans Drive Widening C (SC14) widens St. Albans Drive between Midtown East Access Road and Benson Drive to a two-lane avenue, divided with a center turn lane.
- St. Albans Drive and Hardimont Road Intersection Improvements will identify interim options to improve existing three-way stop.

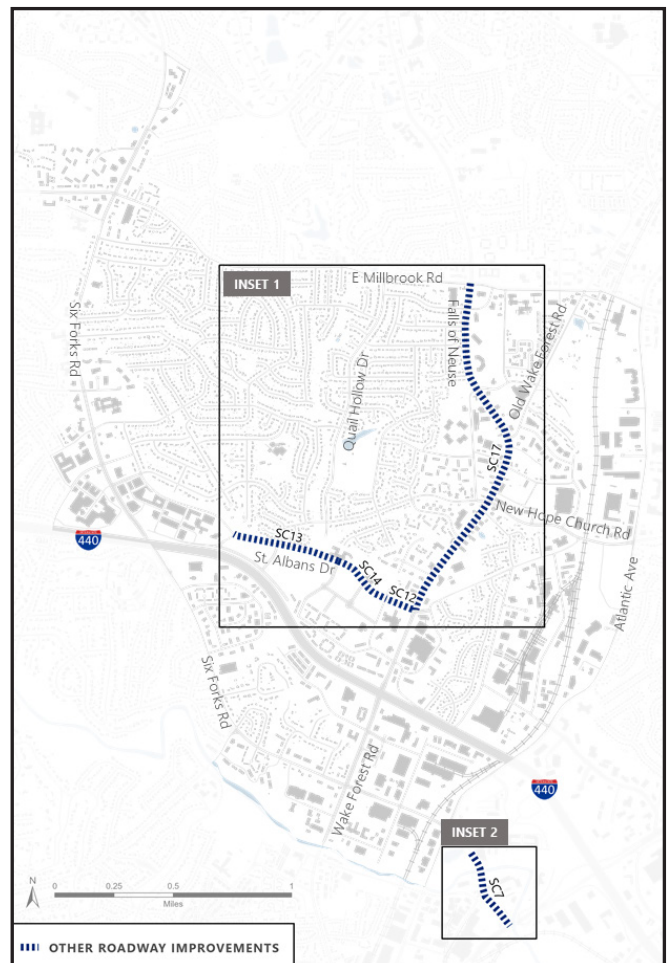
This plan recommends a Six Forks Road Extension (SC7) between Atlantic Avenue and Capital Boulevard. The new road would be a four-lane avenue with a median.

This plan also recommends a Wake Forest Road Corridor Reconditioning Study (SC17) to study options for improving this area. In the interim, this plan recommends working with NCDOT to reduce the speed limit to 35 mph.

Figure 6: Other Roadway Improvements



- Other Roadway Improvements
- SC7 - Six Forks Road Extension
 - SC12 - St Albans Drive Widening A
 - SC13 - St Albans Drive Widening B
 - SC14 - St Albans Drive Widening C
 - SC17 - Wake Forest Road Corridor
Reconditioning Study



Roadway Intersection Improvements

This plan recommends intersection improvements (**Figure 8**) to reduce vehicle delays and to increase access to the nearby hospital. These recommendations include improvements at several intersections along Wake Forest Road (I1):

- Wake Forest Road at Navaho Drive, changing the lanes to create a left-only turn lane.
- Wake Forest Road at St. Albans Drive, adding turn lanes. In addition, a signal is recommended to be added to St. Albans Drive at Executive Drive. This signal should be coordinated with the intersection of Wake Forest Road and St. Albans Drive.

The recommendations also include improvements at intersections along Bush Street (I2):

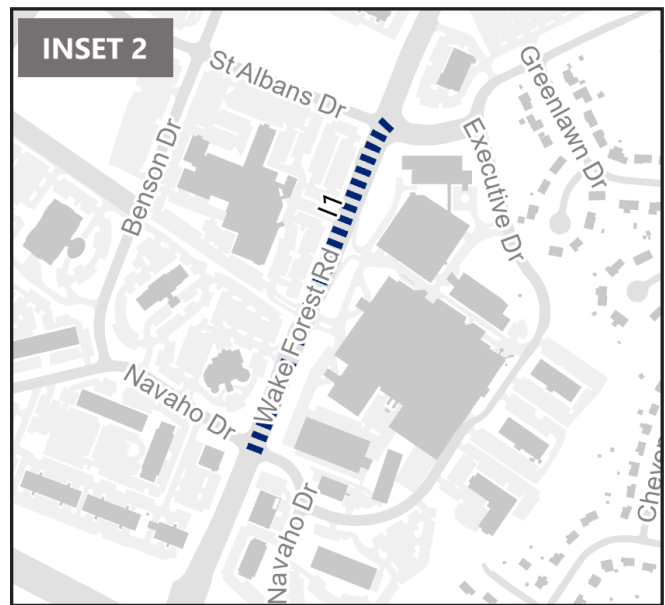
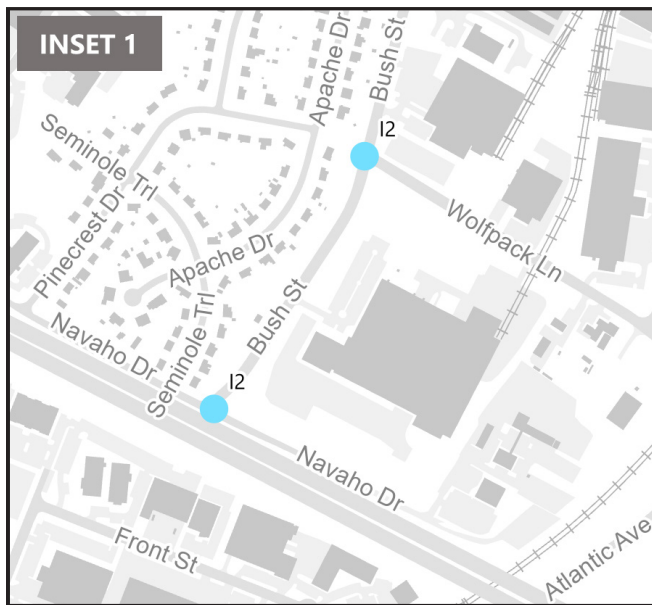
- A pair of roundabouts at the intersection of Bush Street and Navaho Drive and Bush Street and Wolfpack Lane. These are single-lane roundabouts with marked crosswalks.

Bicycle and Pedestrian Improvements

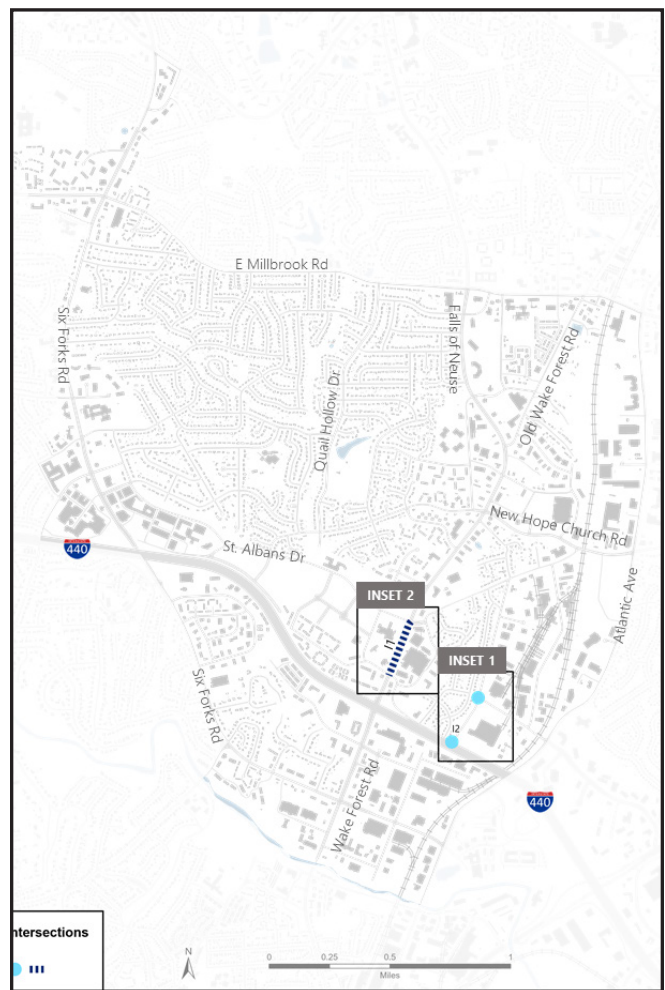
The project recommends improvements to bicycle and pedestrian connections in the study area (**Figure 10**). These improvements include some neighborhood bicycle and pedestrian-only connections:

- Cheyenne Road (BP5), connecting Cheyenne Road east to Bush Street.
- Pinecrest Drive (BP6), connecting east to Apache Drive and the improved intersection at Wolfpack Lane.
- Utica Drive (BP7), connecting south to Manovill Place and Cheyenne Road.
- Hines Drive (BP9), connecting north to Wake Towne Drive.

Figure 8: Roadway Intersection Improvements



- Intersection Improvement
- ||||| Intersection Improvement
- I1 - Wake Forest Road at St Albans and Navaho Drive
- I2 - Wolfpack Lane and Navaho Drive connections

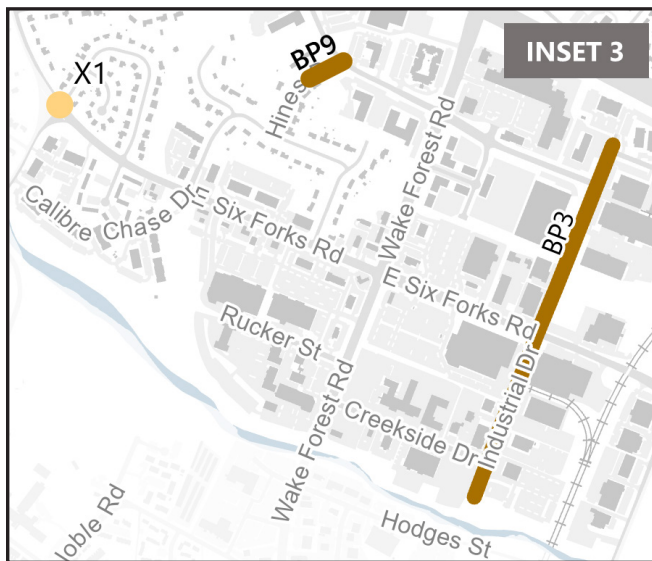
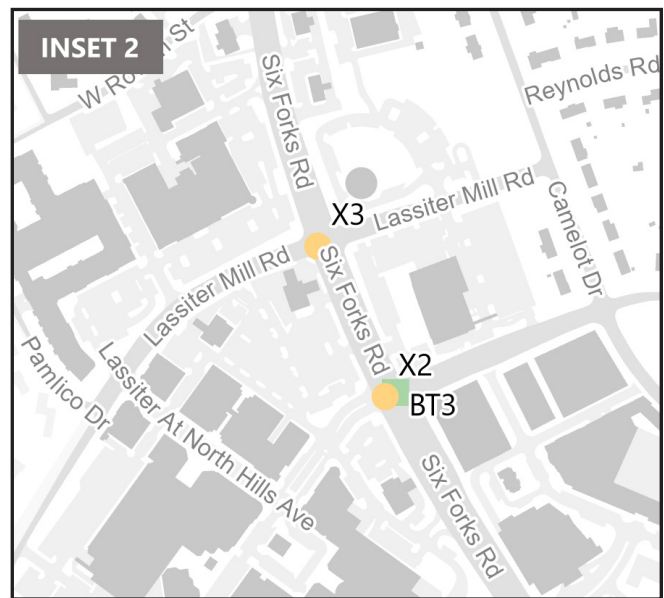
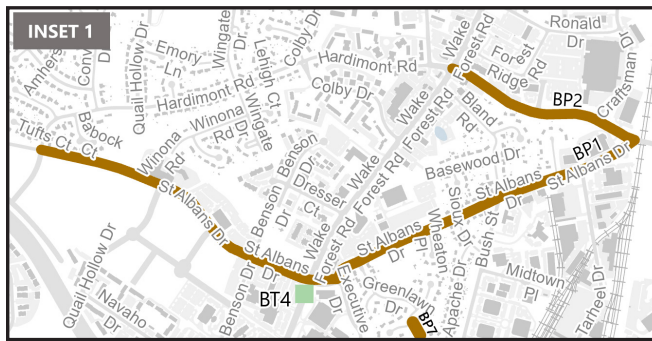


This project also recommends safety improvements for pedestrians crossing existing streets in specific locations. These may include high visibility crosswalks, curb radiuses that discourage fast turns by cars, signage, lighting, pedestrian refuge islands, changes to road markings, bridges (and other grade separations), and other elements. This study does not include detail on the combination of improvements at individual locations; further studies are needed to understand the most appropriate measures given the land use, pedestrian activity, and traffic conditions.

The plan supports bicycle and pedestrian intersection improvements at the following key locations:

- Six Forks Road near Dartmouth Road (BT3), including a new pedestrian bridge across Six Forks Road.
- Wake Forest Road near St. Albans Drive (BT4), including a new pedestrian bridge across Wake Forest Road.
- Six Forks Road at Anderson Drive (X1), adding pedestrian improvements to counter high vehicle speeds and poor visibility.
- Six Forks Road at Dartmouth Road (X2), adding pedestrian improvements such as restricting vehicle turning options, signals that allow pedestrians to begin crossing before cars, a larger pedestrian refuge island, and other elements.
- Six Forks Road at Lassiter Mill Road (X3), adding pedestrian improvements such as restricting vehicle turning options, signals that allow pedestrians to begin crossing before cars, a larger pedestrian refuge island, and other elements.
- East Millbrook Road (X4, X4, X6, X7), adding pedestrian crossing improvements.

Figure 10: Bicycle and Pedestrian Improvements



● ● Intersection Improvement

— Connection Improvement

BP1 - St. Albans Drive

BP2 - New Hope Church Road

BP3 - Industrial Drive

BP4 - Millbrook Road

BP5 - Cheyenne Road

BP6 - Pinecrest Drive

BP7 - Utica Drive

BP9 - Hines Drive

BT3 - Six Forks Road

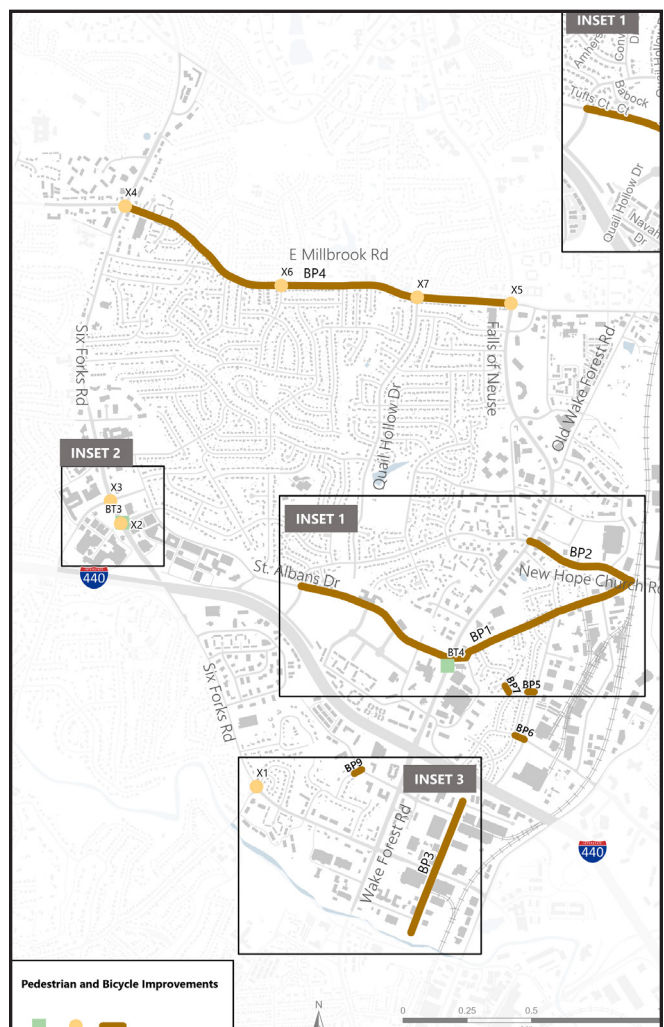
BT4 - Wake Forest Road

X1 - Six Forks Road / Anderson Drive

X2 - Six Forks Road / Dartmouth Road

X3 - Six Forks Road / Lassiter Mill Road

X4 through X7 - East Millbrook Road



Other bicycle and pedestrian improvements that improve mobility, increase safety, and provide lower stress biking and walking are recommended along significant roads in the study area:

- St. Albans Drive (BP1), adding on-road bicycle facilities and a continuous sidewalk or a shared-use path along St. Albans Drive between Hardimont Road and New Hope Church Road.
- New Hope Church Road (BP2), improving bicycle facilities on New Hope Church Road between Wake Forest Road and St. Albans Road. A separated facility, either on or above the curb, is recommended.
- Industrial Drive (BP3), adding bicycle and pedestrian facilities and traffic calming measures on Industrial Drive between the I-440 Pedestrian Bridge and the Crabtree Creek Trail. Bicycle facilities could include on-road bicycle lanes, separated two-way bicycle lanes, or a shared-use path. Traffic calming measures could include on-street parking and curb bump-outs.
- Millbrook Road (BP4), adding bicycle facilities along Millbrook Road between Six Forks Road and Falls of Neuse Road. Bicycle facilities could include buffered on-road bicycle lanes or separated bicycle lanes, but will depend on the car lane configuration.
- Other major intersection, such as Wake Forest Road and Six Forks Road, should receive additional pedestrian improvements.

In addition, a Roadway Speed Setting Review is recommended to be conducted. This is a uniform review of posted speed limits in the study area, conducted by the City of Raleigh and NCDOT.



In locations where very wide streets exist, pedestrian overpasses can provide a solution.

Pedestrian-scaled streets improve safety and comfort for people walking and biking.





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4. Serious Transit

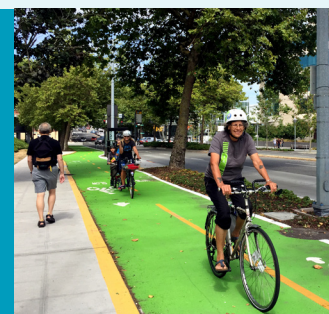
Serious Transit

A successful transit system works when it is easy and comfortable for the rider, the vehicle arrives on time, travels to the right destinations, and operates on a schedule compatible with its riders. The future of Midtown–St. Albans transit is a network that lets riders throw away the schedule, because the next bus is always coming soon. Connections to Downtown, to N.C. State, and job and shopping centers along the Beltline are frequent and easy. And a future bus rapid transit (BRT) connection between Midtown and Downtown ties together the biggest employment centers in the City with the highest levels of bus service possible.



In Your Words: Midtown 2040

“A well-planned, pedestrian-friendly urban/residential area with great parks and great transportation (light rail, bus, bike lanes).”



Transit Recommendations

Currently, transit services are limited, infrequent, and do not create a desired alternative to driving. This plan recommends major improvements (**Figure 12**) to the study area's transit system, including:

- Multiple-high frequency routes to connect to downtown, N.C. State, and major destinations along the Beltline.
- A future Bus Rapid Transit (BRT) connection between downtown and Midtown.
- Collaboration with privately-operated transit services.

To achieve this, the study recommends route realignments, transit station and stop amenities, and phased expansion of more frequent service with eventual BRT access to the center of the study area.

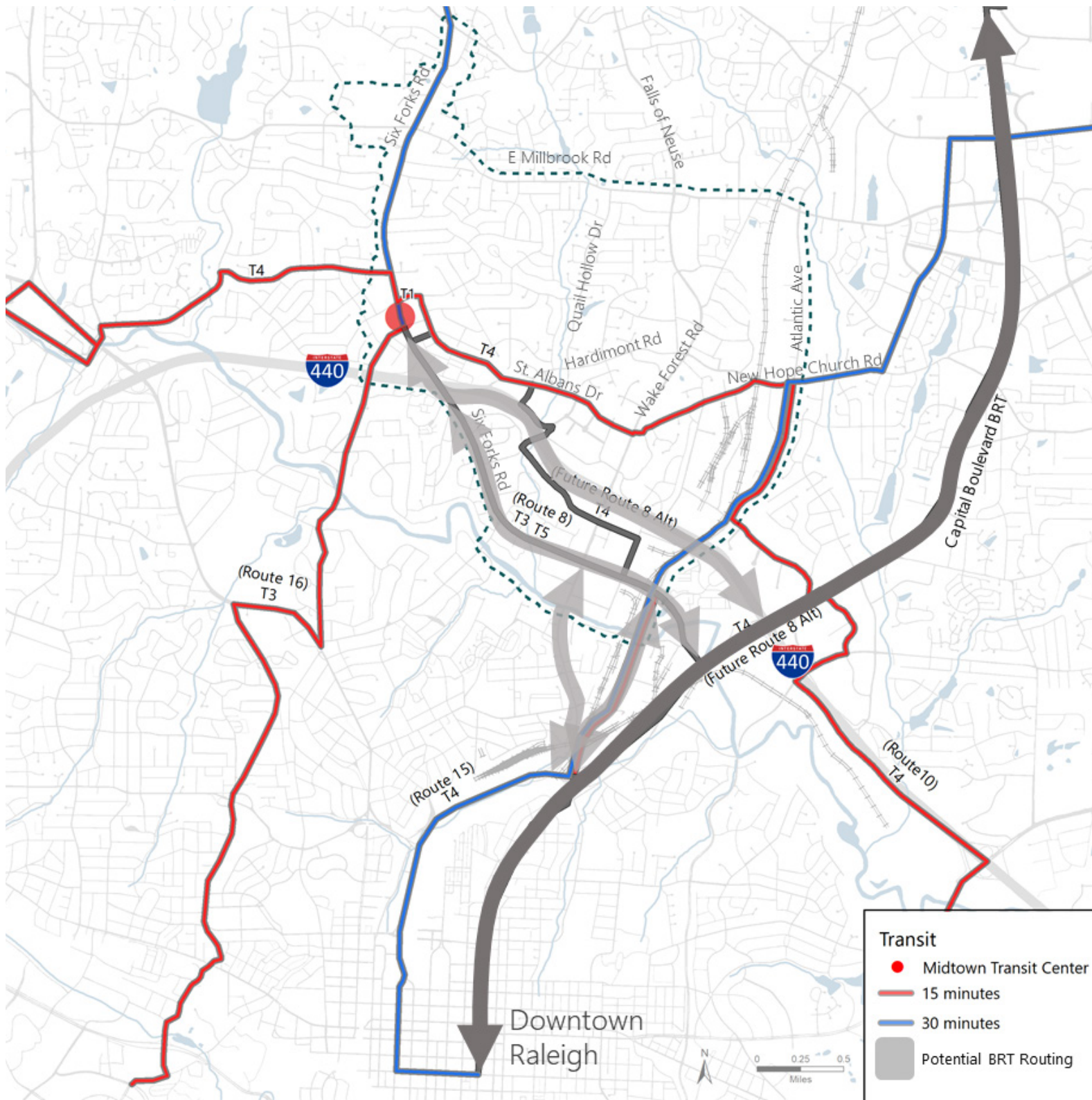
Phase II: High Frequency Transit

Phase I of this recommendation (T3) is to support the expansion of bus service connecting to the Midtown–St. Albans area. By 2024, two routes are proposed to run at 15-minute service, and by 2027 an additional route will run at 15-minute service in the study area. This recommendation will help build transit ridership and allow for potential BRT expansion in Phase II.

Phase II: Midtown BRT

BRT is a form of enhanced transit service and infrastructure that is proposed to run along Capital Boulevard between downtown Raleigh and Crabtree Boulevard. Phase II of this recommendation (T5) is to study the feasibility of an extension of the BRT network to serve Midtown after build out of the high frequency network.

Figure 12: Transit Recommendations, Expanded



T1 - Transit Center

T2 - Bus Stop Improvements

T3 - Expansion of bus service

T4 - Transit Route Realignment

T5 - BRT Extension

Transit Route Realignment

This recommendation (T4) is to study transit route alignment throughout the Midtown–St. Albans study area as other recommendations come to fruition and determine if changes to routes would improve service.

Regional Transit Station Location and Bus Stop Improvements

The Wake Transit Plan proposes a Transit Center to be located near the North Hills Shopping Center and bus stop improvements across the bus system. These improvements could include concrete pads, benches, bicycle racks, access ramps, and sidewalks. This study recommends the Transit Center's general location (T1) and endorses the improvements to bus stops (T2).





The first phase of the plan's approach to transit involves multiple high-frequency routes running through Midtown (GoRaleigh bus shown on facing page).

The second phase calls for study of bus rapid transit, or BRT, to Midtown (example station shown above).

For all forms of transit, enhanced crosswalks and other amenities are critical to provide safe places for riders and other pedestrians (right).





5. The Midtown Ring

The Midtown Ring

Midtown is packed with major job centers, shopping and dining options, educational facilities, and natural places. But for many people who would like to walk or bike, they are out of reach. The Beltline and wide, busy roads such as Wake Forest Road and Six Forks Road divide a large section of the city into small, disconnected islands.

This plan imagines a safe, comfortable facility that guarantees safe passage for people walking or biking. That is the Midtown Ring (**Figure 13**) – a complete loop of greenways, green streets, separated bike lanes and paths that connects every major destination in the area with each other and the residential neighborhoods nearby.



In Your Words: Midtown 2040

"Easy to navigate, on car and on foot. Safe. Full of trees and benches."



The Ring will include both off-street (above) and protected off-street segments (below).





The Little Sugar Creek Greenway in Charlotte

Figure 13: Bicycle and Pedestrian Infrastructure in the Midtown Ring



1 On-street one-way separated bike path and sidewalk



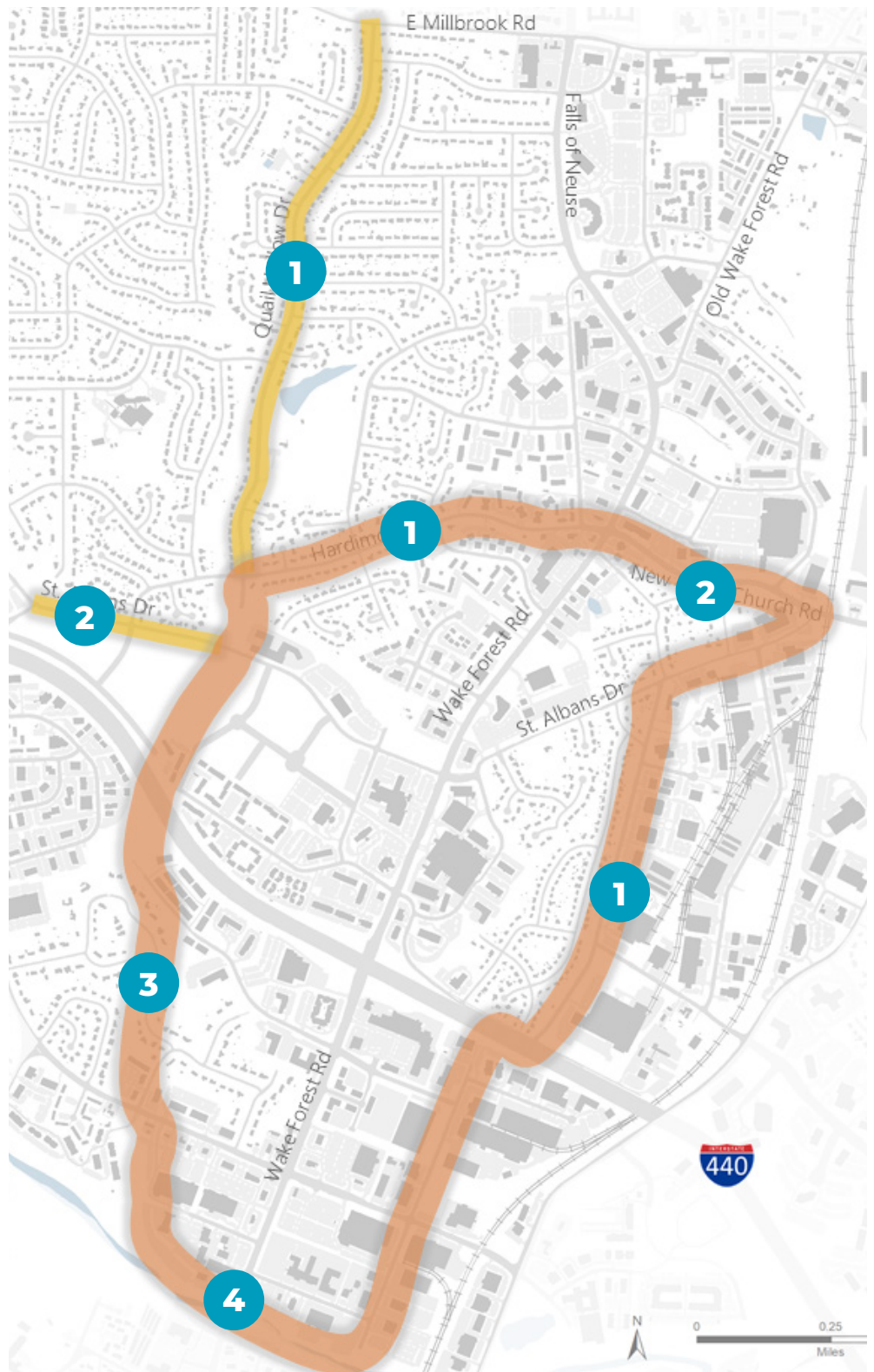
2 On-street two-way separated bike path and sidewalk



3 Off-street multi-use path



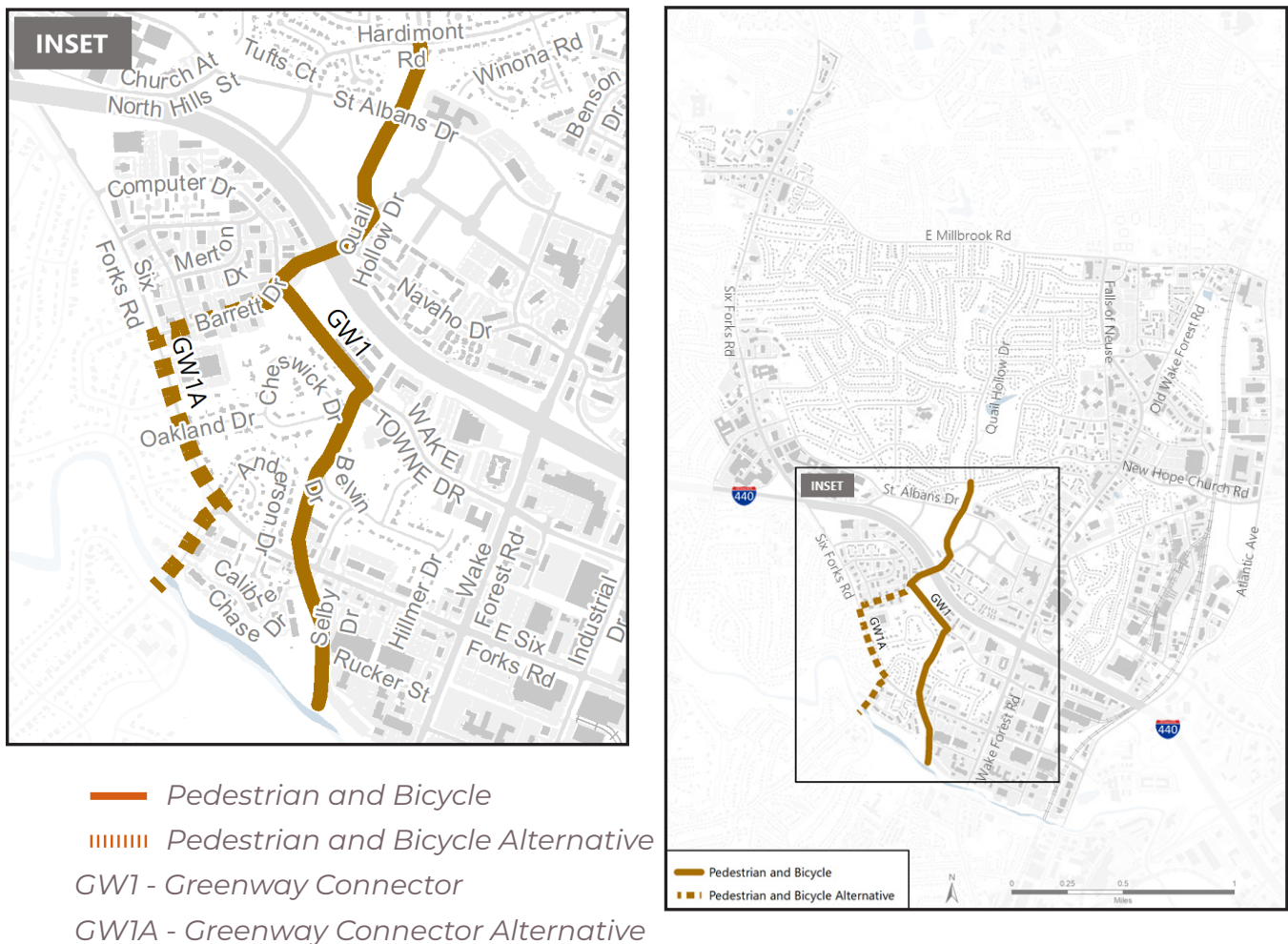
4 Greenway



Crabtree Creek Greenway Connector

This recommendation (GW1) is a new section of greenway from the southern end of Quail Hollow Drive across I-440 to the existing Crabtree Creek Greenway (**Figure 14**). The greenway would align with the City of Raleigh's Capital Area Greenway Planning & Design Guide and is intended for bicyclists and pedestrians. It serves as the western leg of the Midtown Ring.

Figure 14: Crabtree Creek Greenway Connector



An aerial photograph of a city skyline. In the foreground, there's a large parking lot filled with cars. To the left, a modern glass-walled building stands out. In the center, a tall building is under construction, with a red crane visible on its roof. To the right, a multi-lane road runs parallel to the buildings. The background shows a dense forest and a distant horizon under a blue sky with scattered clouds.

6. Midtown Living/ Midtown Works

Midtown Living/Midtown Works

Raleigh continues to be a city of opportunity – a place that provides both existing residents and newcomers the chance to make a living and to live in a welcoming, diverse city. As a growing hub of employment, Midtown has played an important role in providing jobs and housing opportunities. This plan includes attention to ensuring new mixed-use development respects the scale of older residential neighborhoods. But it also finds targeted new locations where additional office and housing space can add opportunity in a location where future transit service, walkability, and other infrastructure means a lower carbon impact than in farther-flung areas of the region.



In Your Words: Midtown 2040

“Somewhere that my children can safely navigate by bike or foot with public transportation options. urban and green with open space.”

The need for a wider variety of housing options emerged as a consistent theme throughout the study process. While the City's population continues to grow, average households are substantially smaller than during the post-World War II period. This transition is shifting demand for housing options from larger-lot detached houses to other options. The plan's recommendations include allowing a larger variety of housing types and accommodating more housing near transit and other amenities like parks and bicycle and pedestrian facilities.

Redevelopment Opportunities from Transportation Improvements

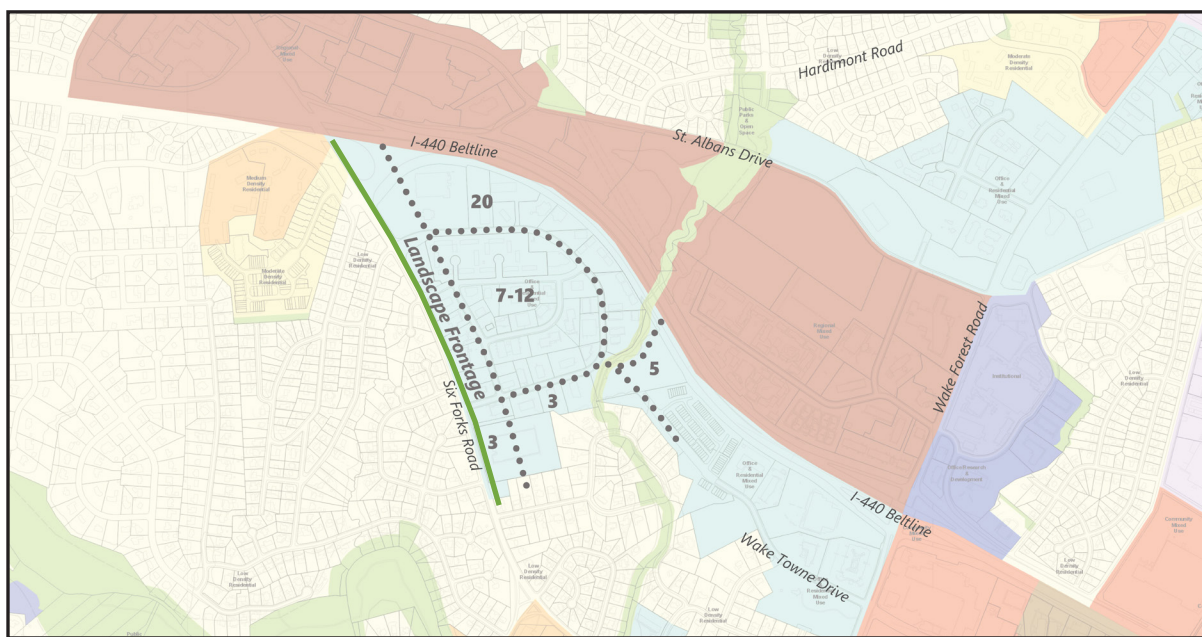
As the area evolves, the plan's recommended transportation improvements are expected to translate into significant changes in land use and urban form. Key areas include:

- I-440 Multimodal Bridge area (**Figure 15**) – Two of the key transportation and transit improvement recommendations would bring new access and mobility and serve as catalysts for redevelopment. The study envisions high densities and building heights (up to 20 stories), office and residential uses immediately adjacent to I-440, along with more moderate height (7-12 stories) and density in the center or interior of the office park. More modest height (3 stories) and density is recommended immediately adjacent to Six Forks Road, including the conservation of the existing tree-lined buffer along much of the road frontage. Additional frontage requirements north of I-440 along Six Forks Road are illustrated in Figure 18.
- Wake Forest Road / Falls of Neuse Road (**Figure 16**) – As this area undergoes increasing growth pressure, it would benefit from zoning and land use guidance that would facilitate moderately higher development intensities with

more mixed land uses. This study recommends greater land use intensities and building heights up to 7 stories with transitions to lower heights and densities immediately adjacent to single-family neighborhoods. Land use recommendations include the conversion from Industrial Mixed Use and Office Mixed Use to Community Mixed Use for selected areas.

- Atlantic Avenue/St. Albans Drive (**Figure 17**) – A market analysis performed as part of this study projected declining demand for industrial uses in the area and increasing demand for housing and office space. This recommendation would allow a transition from industrial space along the railroad to other uses, while including a height transitions to lower-scale residential areas nearby.

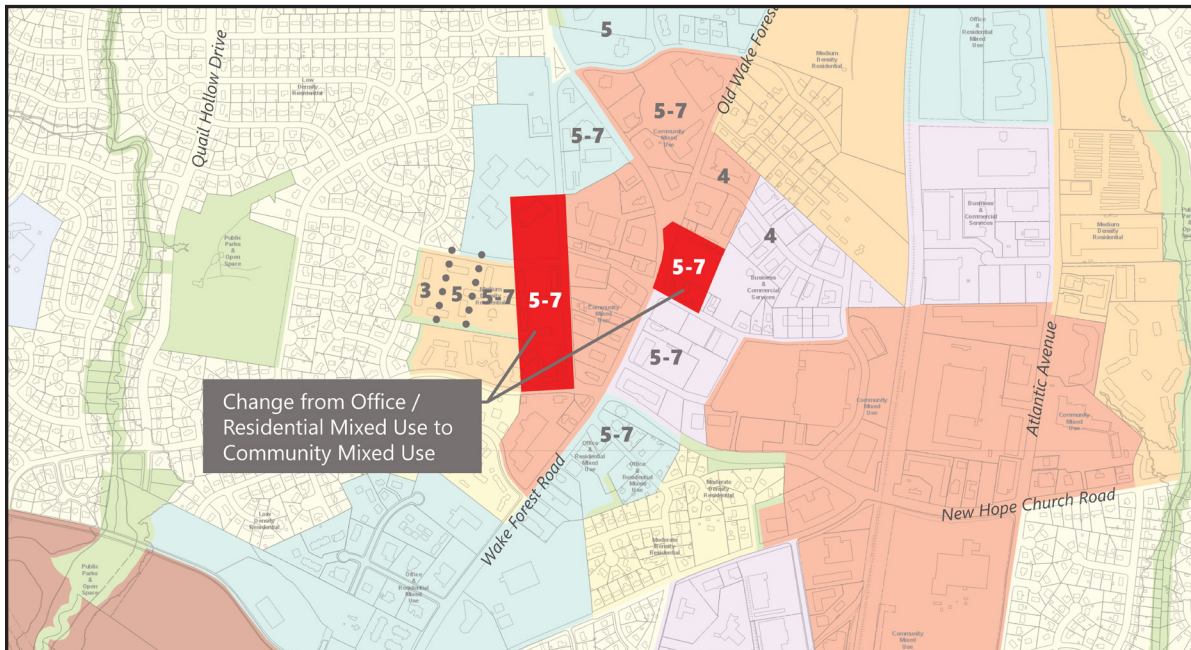
Figure 15: Frontage, Scale, Transitions Near I-440



— Green Frontage (GR)

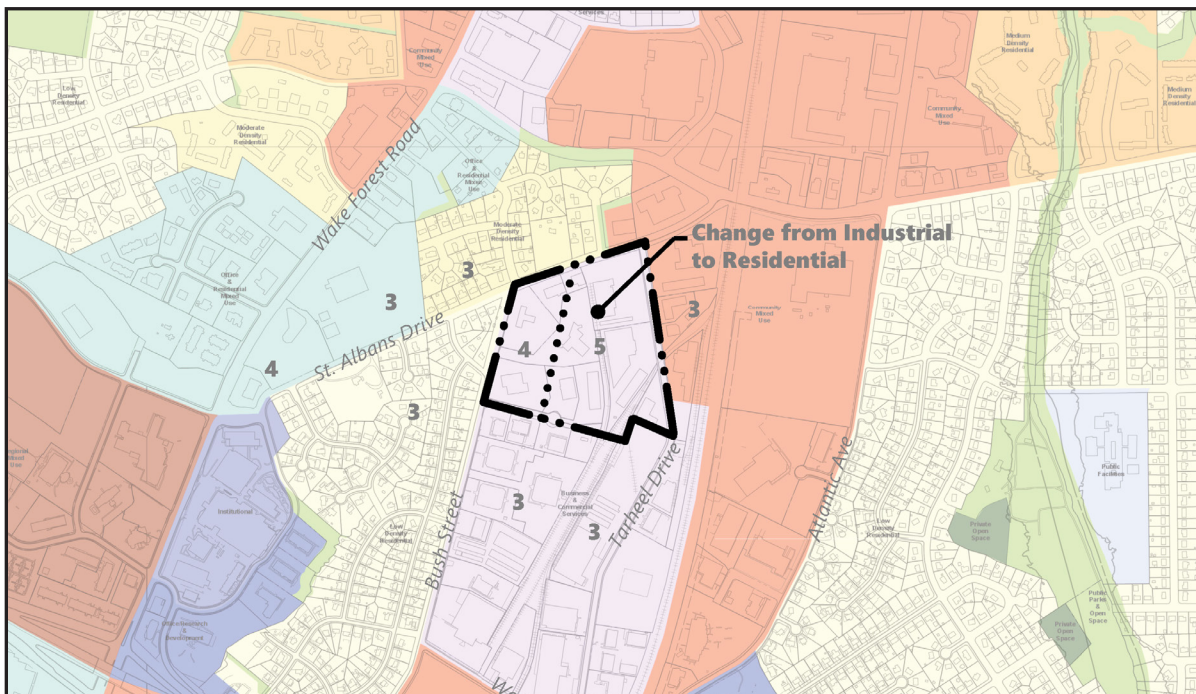
Numbers indicate recommended maximum building height.

Figure 16: Wake Forest Area Land Use Recommendations



Numbers indicate recommended maximum building height.

Figure 17: Atlantic and St Albans Land Use Recommendations

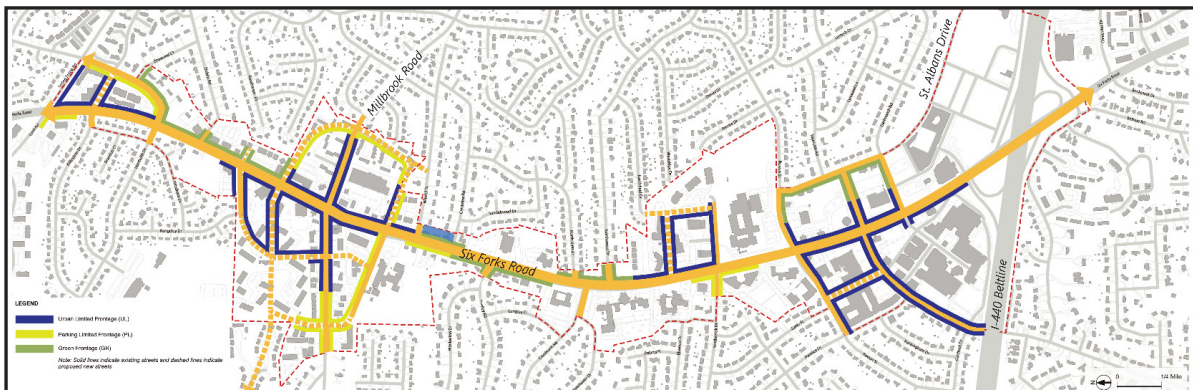


Numbers indicate recommended maximum building height.

Six Forks Road Urban Design

Both the Six Forks Corridor Plan and this study considered the question of "frontage," which is the relationship of buildings to the street (see examples on following pages) In recent years, the City of Raleigh has focused on encouraging walking and creating a sense of place by requiring buildings to be closer to the street in areas that are emerging as new centers. The Six Forks Corridor Plan made frontage recommendations on the portion of Six Forks Road north of I-440 (**Figure 18** and **Figure 20**). This plan reviewed these concepts and also considered Six Forks Road south of I-440 to Oakland Drive (**Figure 15**).

Figure 18: Frontage Recommendations



See Figure 20 for larger image.

Six Forks Road Corridor Study Recommendations Revisited

The Six Forks Road Corridor Study, completed and adopted by the City Council in 2018, provided urban design recommendations for building heights as well as building frontage types. These proposals were reviewed a second time as part of the Midtown–St. Albans Area study. This study recommends that maximum building heights remain as recommended by the Six Forks Corridor study with one exception: the mixed-use retail complex located in the

Urban Design, Frontage, and Walkability





Building frontage defines the relationship of buildings to the street. It significantly determines not just the appearance of an area, but whether it is likely to be used by pedestrians.

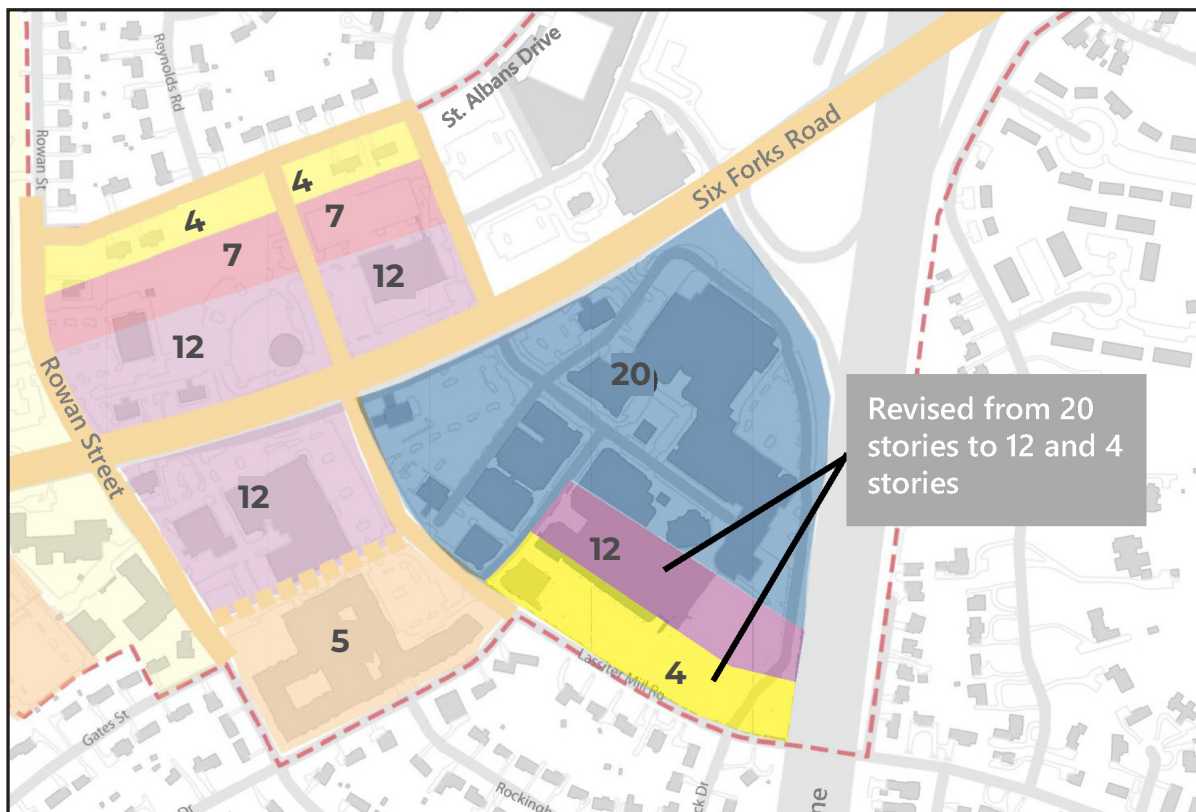
Much of the mixed-use and commercial portions of the Midtown area are characterized by buildings set far back from the street, with large parking areas in between the street and sidewalk (opposite page). This tends to create uncomfortable spaces for pedestrians. The Six Forks corridor study recommended a different approach. In larger mixed-use areas, it recommended a more urban approach (see above); in other areas, a more landscaped frontage is recommended (below).



northwest quadrant of the Six Forks Road / I-440 interchange (**Figure 19**). This study recommends a reduction in maximum building height for the area fronting Lassiter Mill Road adjacent to existing single-family residences. Specifically, the recommended building height is a maximum of four stories along Lassiter Mill Road, transitioning to twelve stories in the core of the property.

This study also recommends two changes to the road network improvements in the Six Forks Road Corridor Study (**Figure 20**). The first is the elimination of the proposed extension of Westridge Drive to Six Forks Road. The second is the development of a pedestrian connection, rather than the proposed roadway connection, between the retail center paring north to Rowan Street.

Figure 19: Six Forks Corridor Height Recommendations



Numbers indicate recommended maximum building height.

Figure 20: Six Forks Corridor Study Connection and Land Use Modifications

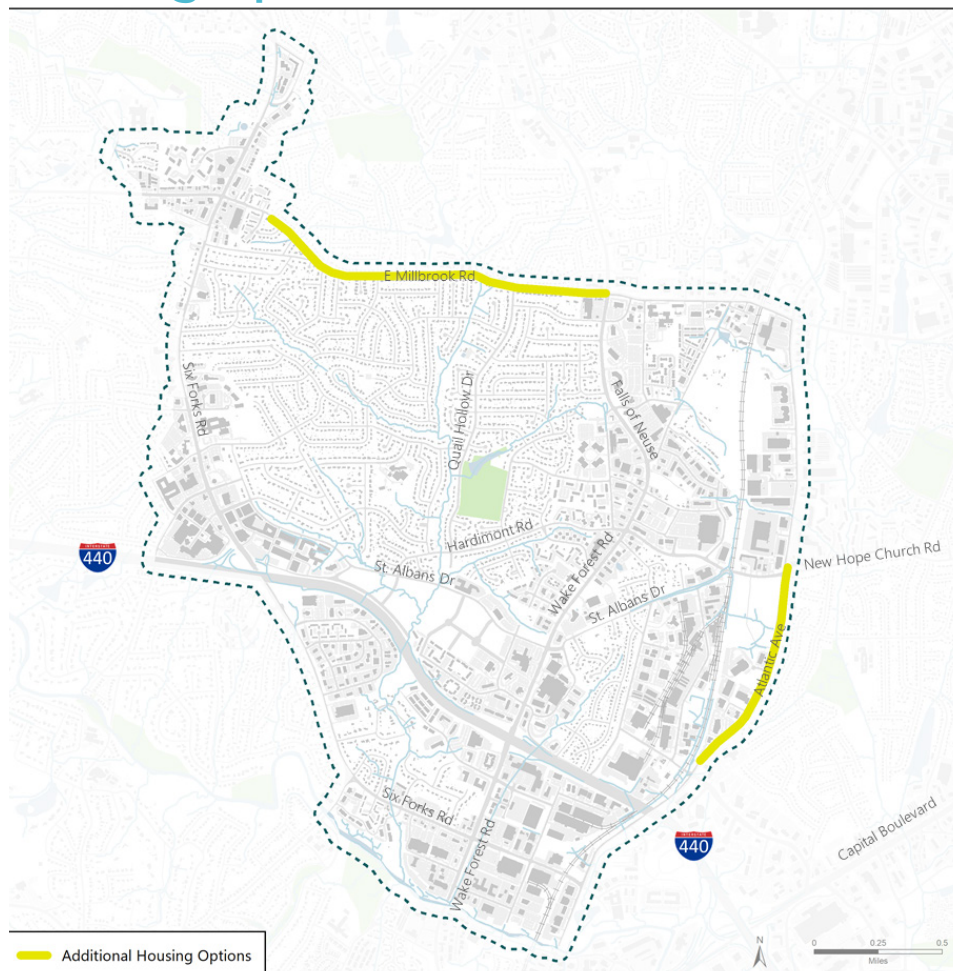


The remaining height and land use recommendations from the Six Forks Corridor Study received relatively little comment during the public engagement process, and the noted feedback was largely positive.

Missing Middle Housing Options

This study recommends facilitating "Missing Middle" housing options, such as duplexes, triplexes, and fourplexes, along the east side of Atlantic Avenue and both sides of Millbrook Road (**Figure 21**). This means a change on the Future Land Use Map to Moderate Density Residential. Future studies may suggest a broader area where these types should be accommodated.

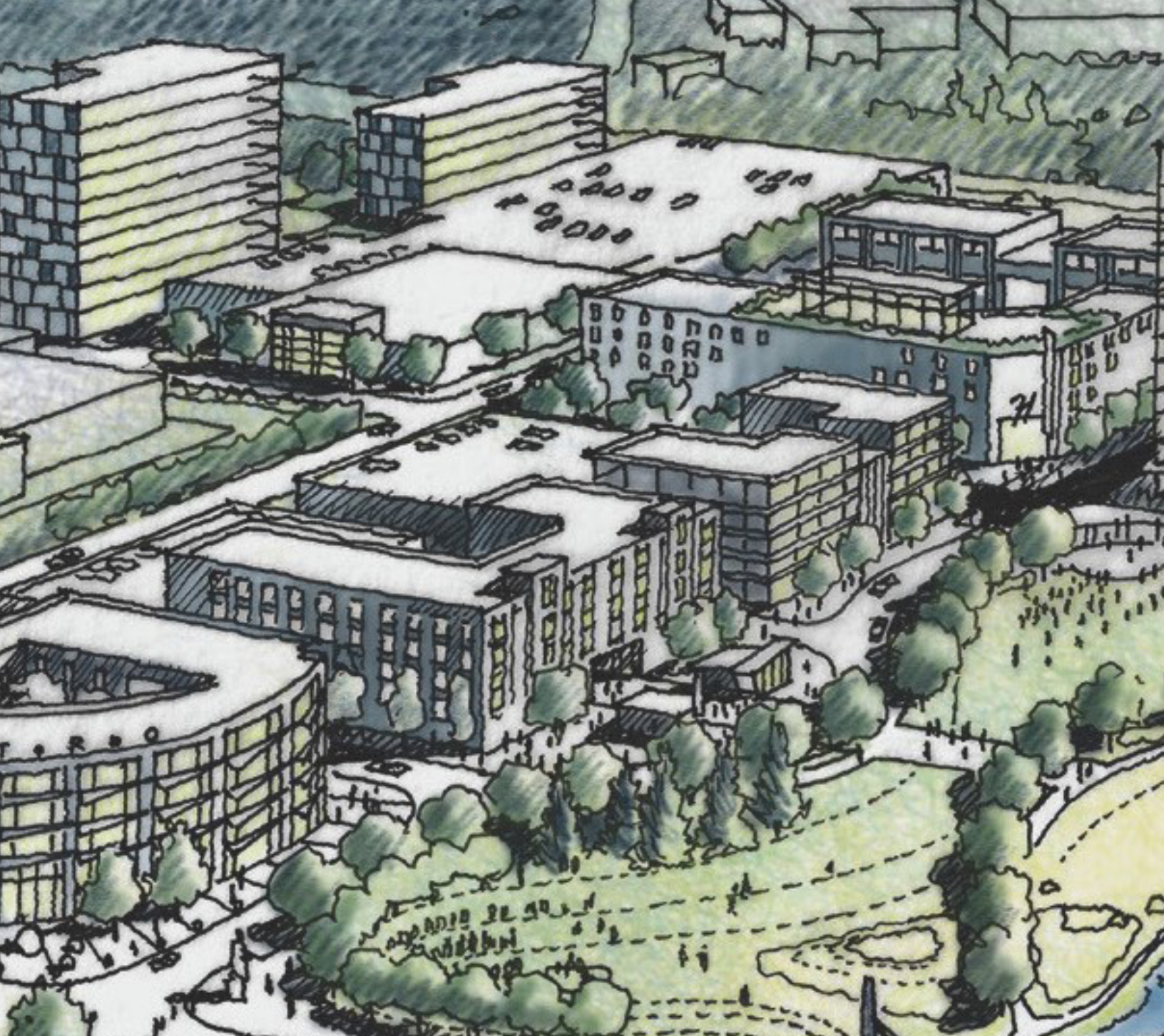
Figure 21: Recommended Areas for "Missing Middle" Housing Options





Examples of "Missing Middle" housing types





7. Midtown Waterfront District



The Midtown Waterfront District



The decision to locate the state's capital on a backwoods farm instead of the bustling Town of Fayetteville means Raleigh has long been a city without a waterfront. However, a perfect opportunity exists

along the banks of the Crabtree – a waterway larger than many of the state's rivers – to change that fact.

The Midtown Waterfront District is where urban life and activity occur along the water's edge, a place that serves as a destination for Midtown residents and beyond. New crossings of the Crabtree, a restored and opened-up waterway, and a storm-resistant and runoff-absorbing park combine with housing and retail to make a place unlike any other in the City.



In Your Words: Midtown 2040

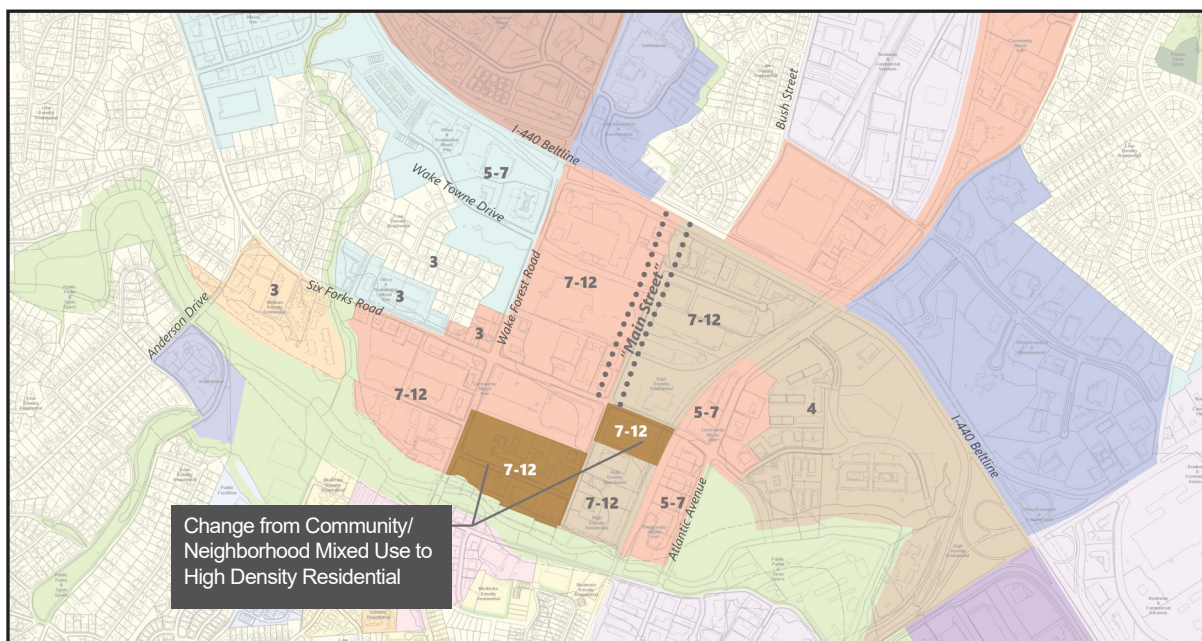
"A fun and exciting place to live."



The Midtown Waterfront District includes properties directly north of Crabtree Creek on both sides of Wake Forest Road including Creekside Drive, Industrial Drive and Rucker Drive.

The study recommends a stronger emphasis in this area for moderate- to high-density residential as the preferred option to replace land currently utilized by light industrial, specialty retail, and car lot sales. To facilitate this, the study recommends (**Figure 22**) changing much of this area from the current Industrial zoning and Community Mixed Use land use designations to a Residential Mixed Use zoning (RX) classification and to High Density Residential land use. That designation still envisions retail and other commercial uses, but not as the dominant use in the district. Higher density and building heights (7 – 12 stories) are also recommended. These policy changes will help to realize the plan’s vision for this area.

Figure 22: Crabtree Creek Land Use Recommendations



Numbers indicate recommended maximum building height.

In addition, three City initiatives are recommended to be explored to facilitate this transition:

- Acquire and construct an urban park along Crabtree Creek on flood-prone property.
- Determine the feasibility of public/private investment strategies to promote the development of mixed income and/or affordable housing units on appropriate properties.
- Establish a new public street grid along Creekside Drive and Industrial Drive to support residential use with service retail development patterns, particularly along the frontage of the proposed park. Industrial Drive becomes the "Main Street" of the district.



View of Waterfront District looking north. Industrial Drive (highlighted in blue) can serve as the new walkable main street of the district, connecting to the Crabtree in the south and across the Beltline to Wake Tech in the north.



Three views of the Waterfront District

The district is currently characterized by large-format retail uses and warehouses. It turns its back to the Crabtree, which is bordered by vacant lots and overgrown vegetation. This plan recommends reorienting the district to connect with the waterway.

Above: Looking south, the downtown skyline is visible in the background, with the Crabtree defining the southern border of the district.

Facing page, top: Looking northwest, underused properties visible in the foreground, with Duke Raleigh Hospital (upper right) and North Hills (upper left) visible in the background.

Facing page, bottom: The Crabtree itself is wide and scenic, but in need of a restoration effort.

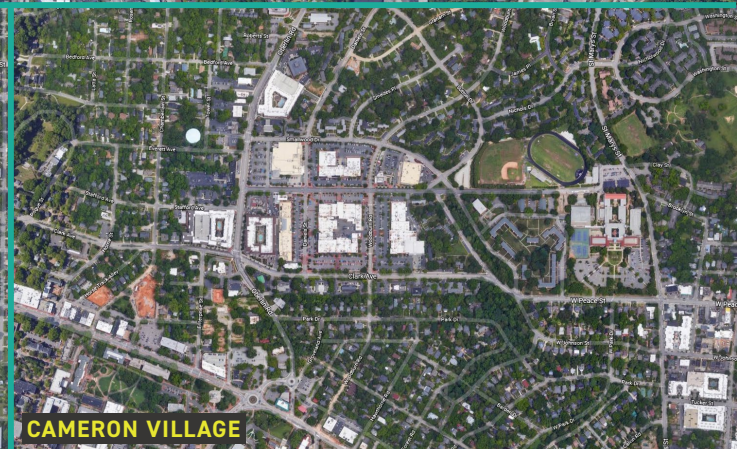
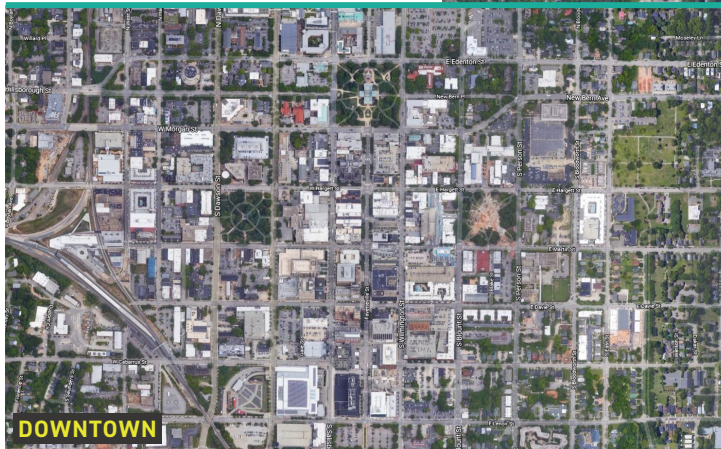
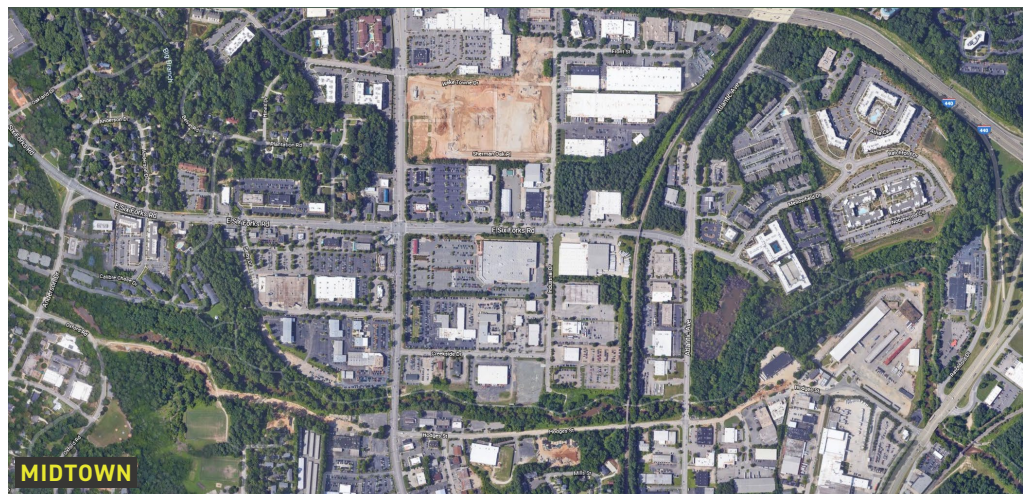


The Midtown Waterfront District: Street Grids and Walkability



Street Grids

The images show the Midtown Waterfront District at the same scale as downtown and Cameron Village. Midtown today has a street network that reflects industrial and large-format retail uses: major streets connect to the highway, with few other streets and little grid. In Downtown and Cameron Village, more urban mixed-use areas of the city, tighter street grids handle transportation demand on smaller blocks with more pedestrian-friendly streets.

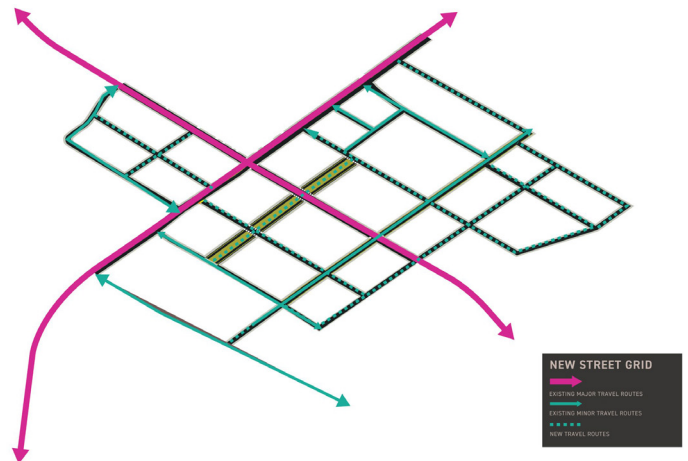




Creating the Grid

The images below show the existing Waterfront District grid (below), and a new, connected street grid (right and below right).

Industrial Drive becomes the new "Main Street" of the area, similar in function and form to Fayetteville Street in downtown Raleigh (above). It connects to the Crabtree Greenway in the south and across 440 in the north via a new pedestrian bridge. Smaller streets begin to break up the large blocks over time.



Re-envisioning the Crabtree Waterfront



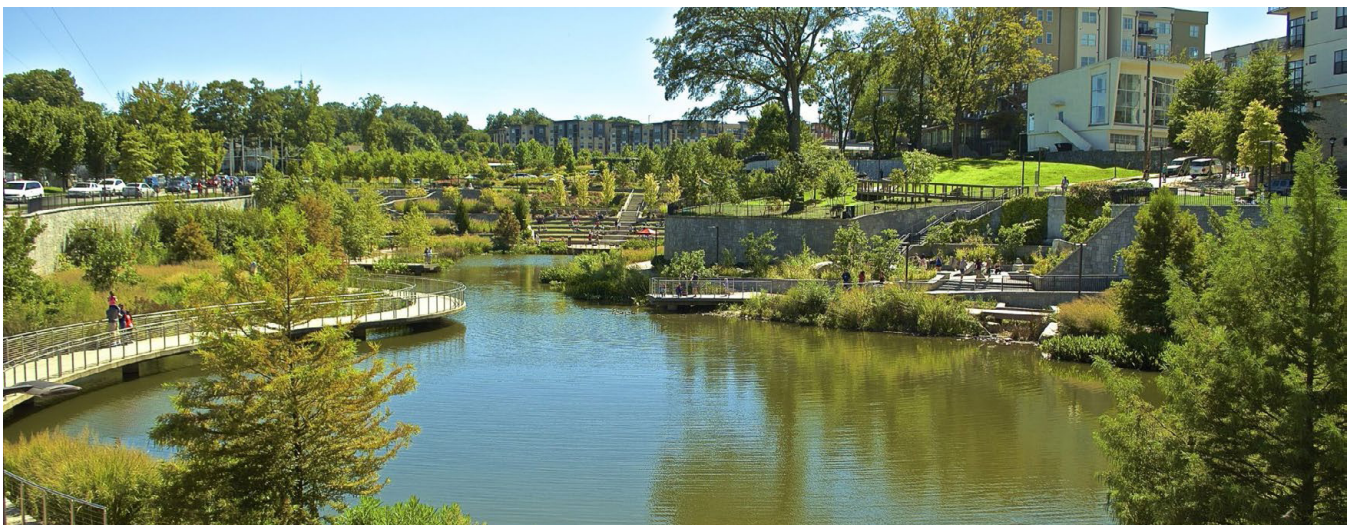
The Crabtree waterfront edge currently (above). The current conditions suggests the outlines of a place where water, greenway, and urban space all meet.

Rapids on the Crabtree (right). A waterway restoration project can improve the health and flow of the waterway and can include aesthetic improvements as well.





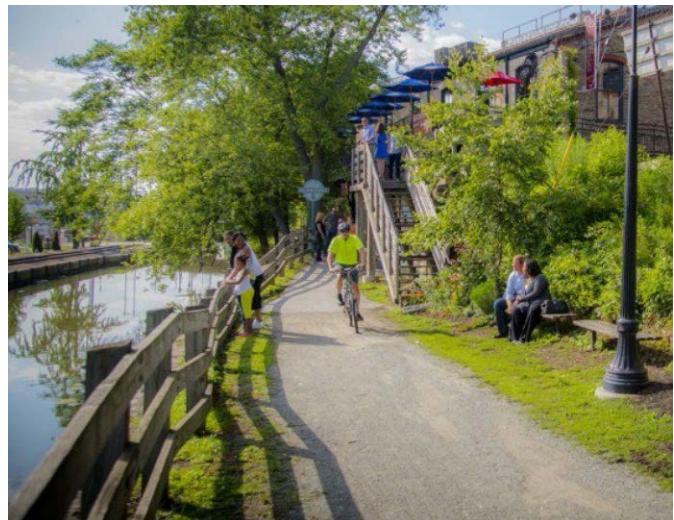
Buffalo Bayou Trail in Houston. The design connects to adjacent amenities, providing areas for observation and interaction with natural resources adjacent to urban places. h-gac.com



Historic Fourth Ward Park in Atlanta, GA. The park's 2-acre lake also acts as a stormwater retention pond. This design feature addressed flooding issues.. beltline.org



Tanner Springs Park in Portland. Active/passive spaces layered on top of rainwater infiltration and detention wetlands.



Manayunk Canal Towpath in Philadelphia,. Buildings embrace the greenway and incorporate active and passive spaces.

Existing Greenway and future connection to North Hills

Wake Forest Road

Creekside Drive

Pedestrian Bridge

Greenway-facing restaurant and retail

Waterfront Park

Crabtree Greenway

South Side Greenway (future)

Pedestrian Bridge

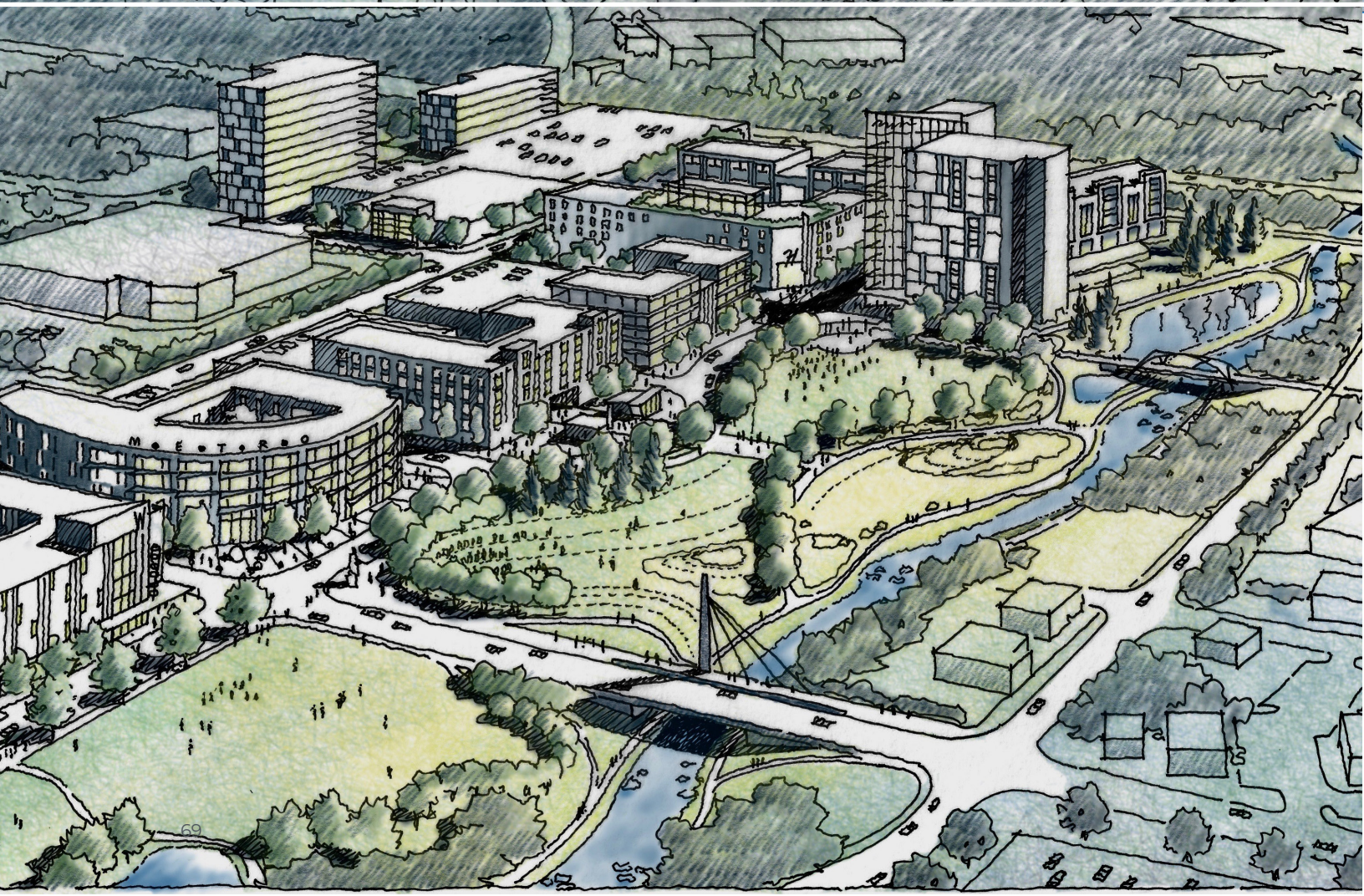


Six Forks Road

Industrial Drive "Main Street"

The Midtown Waterfront District

*The Midtown
Waterfront District:
Before and After*

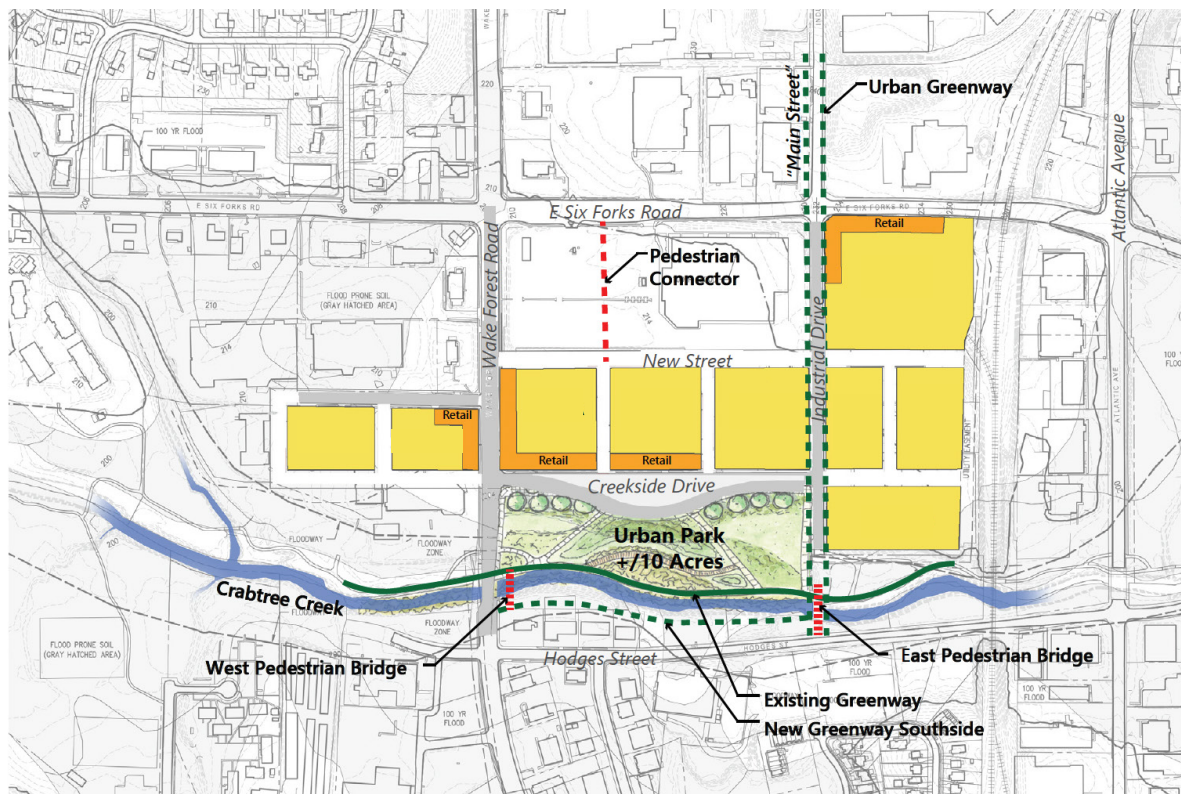


Midtown Waterfront Park

The Midtown Waterfront Park offers the potential to create a signature new public space (**Figures 23 and 24**). The acquisition and conversion of flood-prone parcels along Crabtree Creek create a “storm-resistant park.” The Crabtree Creek Greenway would access this neighborhood and the Park with a new pedestrian bridge extending from Industrial Drive and across Crabtree Creek to the south bank. A second pedestrian crossing at Wake Forest Road would allow for a safer, more comfortable experience for pedestrians there as well.

This project creates the possibility for "greenway-adjacent development" that encourages active uses near the water (see examples to the right) It also involves a waterway restoration effort that improves the appearance and function of the Crabtree.

Figure 23: Midtown Waterfront Park Concept



Potential Layout and Pedestrian Connections for Waterfront Park.



A waterfront park is a place where dense urban life transitions into a beautiful and welcoming public space (example above). The Midtown Waterfront Park will serve as place for active living, contemplation, and connection with water and nature.

A new pedestrian bridge can connect the Waterfront District to points south and provide a signature public place along the waterfront (example below from Greenville, South Carolina). The Midtown plan recommends two bridges, one continuing south from Industrial, the second paralleling Wake Forest Road in order to provide a safer crossing there.

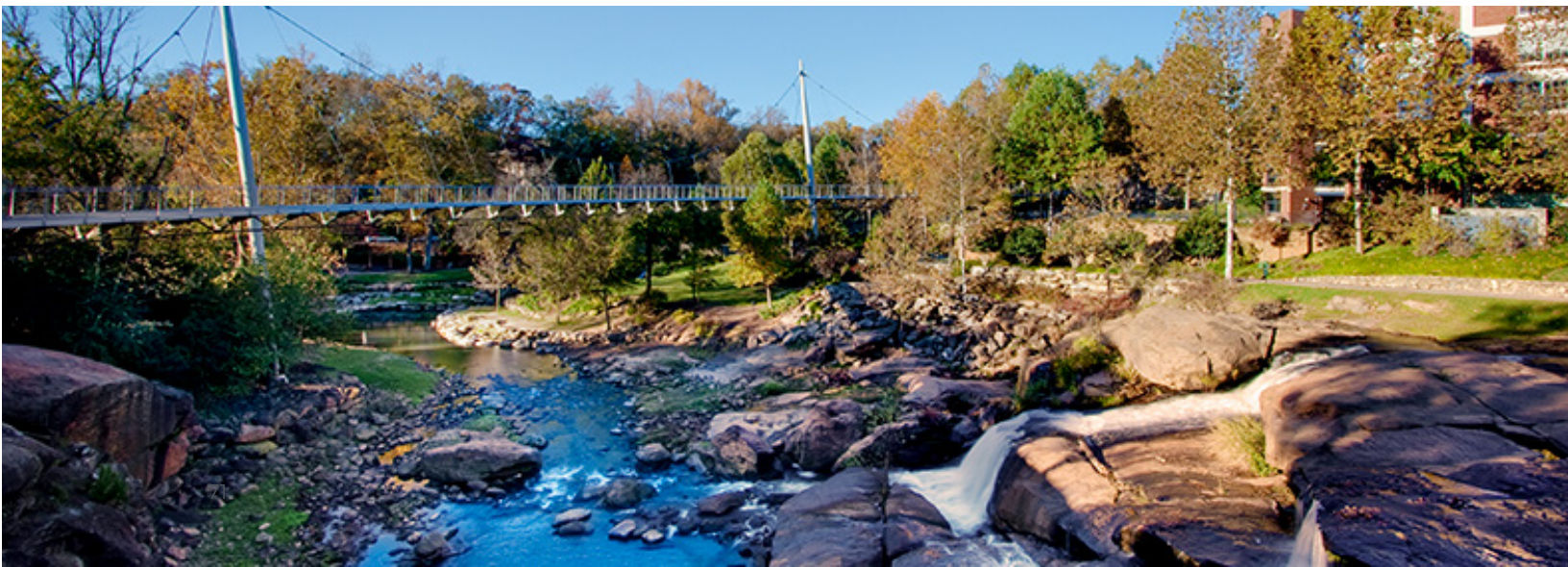


Figure 24: Midtown Waterfront Park Rendering





Walkable Midtown: Implementation

Implementation Priorities and Phasing

Project prioritization is determined (and constrained) by several factors. This process attempts to assess the relative importance of each project, its feasibility, and the ability to fund it. Issues of equity, policy, and interdependencies among projects (such as one project being contingent on another) must also be weighed and balanced.

In terms of implementation schedule, three windows or phases are identified in the matrix on the following pages:

- 0 – 3 years (short-range)
- 3 – 7 years (medium-range)
- 7+ years (long-range)

Being designated a medium- or long-range project does not necessarily indicate less importance than a short-range project; it may be that other projects needed to be completed first; that the later project requires more time to plan, design, and build; or that funding was not available sooner.

Figure 26: Implementation and Funding Sources

	ID	Project	Description	Status	IMPLEMENTATION PRIORITY			Contingency	Responsibility / Funding Source
					0-3 YRS	3-7 YRS	7+ YRS		
	BT1	I-440 Multimodal Bridge <i>Navaho Dr - Barrett Dr at Big Branch</i>	2-lane avenue w/ sidewalks and bike lanes, connection with Church at North Hills Drive			HIGH		Realignment of Navaho Dr & Barrett Dr	Raleigh possibly w/ NCDOT
	BT2	I-440 Pedestrian-Bicycle Bridge <i>Navaho Dr - Industrial Dr at Bush St</i>	Pedestrian-bicycle only bridge			Medium	Medium	Ped/bike improvements on Bush St & Industrial Dr	Raleigh
	BT3	Six Forks Rd Pedestrian Bridge <i>Near Dartmouth Rd</i>	Pedestrian bridge			HIGH	HIGH	Redevelopment; PPP	Raleigh + Private
	BT4	Wake Forest Rd Pedestrian Bridge <i>South of St Albans Dr</i>	Pedestrian bridge				low	Redevelopment; PPP	Raleigh + Private
	BT5	New Hope Church Rd RR Overpass	Railroad overpass Evaluate realigning St Albans west to Craftsman Dr	STIP (2020-23)	HIGH				NCDOT
	BT6	Wolfpack Ln RR Overpass	Railroad overpass	MTP		HIGH			NCDOT
	BT7	Millbrook Rd RR Overpass	Railroad overpass	STIP (2021-22)	HIGH				NCDOT
	BT8	Six Forks Rd RR underpass widening	Widen railroad bridge for more tracks	MTP			Medium		NCDOT
	GS1	Quail Hollow Drive <i>E Millbrook Rd - Barrett Dr at Big Branch</i>	Stormwater BMPs, traffic calming measures, and improved bicycle facilities or shared-use path		HIGH	HIGH			Raleigh DOT w/ Stormwater & Parks
	GS2	Bush St <i>St Albans Dr - Navaho Dr</i>	Stormwater BMPs, traffic calming measures, and improved bicycle facilities		HIGH	HIGH			Raleigh DOT w/ Stormwater & Parks
	GS3	Wake Towne Drive <i>Barret Dr - Wake Forest Rd</i>	Stormwater BMPs, traffic calming measures, and improved bicycle facilities or shared-use path			Medium		I-440 crossing emphasizes need	Raleigh DOT w/ Stormwater & Parks
	GS4	Hardimont Rd <i>St Albans Dr - Wake Forest Rd</i>	Stormwater BMPs, traffic calming measures, and improved bicycle facilities			Medium	Medium		Raleigh DOT w/ Stormwater & Parks
	GW1	Crabtree Greenway Connector <i>Quail Hollow Dr - Crabtree Creek Trail</i>	Extension of bicycle and pedestrian facility to existing greenway			HIGH		I-440 crossing	
	BP1	St Albans Dr <i>Hardimont Rd - New Hope Church Rd</i>	Improved bicycle facilities and continuous pedestrian facilities or shared use path		HIGH			Coordinate with development	Raleigh & Private
	BP2	New Hope Church Rd <i>Wake Forest Rd - St Albans Dr</i>	Improved bicycle facilities (separated preferred)			Medium		Coordinate with development	Raleigh DOT
	BP3	Industrial Dr <i>Front St - Crabtree Creek Trail</i>	Traffic calming measures, bicycle facilities, and pedestrian facilities		HIGH	Medium		Coordinate with development	Raleigh DOT
	BP4	Millbrook Rd <i>Six Forks Rd - Falls of Neuse Rd</i>	Improved bicycle facilities (separated preferred)		HIGH				Raleigh DOT
	BP5	Cheyenne Rd Connection <i>Apache Dr - Bush St</i>	Bicycle and pedestrian connection				low		Raleigh DOT

	ID	Project	Description	Status	IMPLEMENTATION PRIORITY			Contingency	Responsibility / Funding Source
					0-3 YRS	3-7 YRS	7+ YRS		
	BP6	Pinecrest Dr Connection <i>Apache Dr - Bush St</i>	Bicycle and pedestrian connection				low		Raleigh DOT
	BP7	Utica Dr Connection <i>Manovil Pl - Cheyenne Dr</i>	Bicycle and pedestrian connection				low		Raleigh DOT
	BP9	Hines Dr Connection <i>North to Wake Towne Dr</i>	Bicycle and pedestrian connection			low			Raleigh DOT
	X1	Six Forks Rd & Anderson Dr Crossing	Improved pedestrian crossing		HIGH				Raleigh DOT
	X2	Six Forks Rd & Dartmouth Rd Crossing	Improved pedestrian crossing	Included in Six Forks Corridor Study	HIGH			Six Forks Widening	Raleigh DOT
	X3	Six Forks Rd & Lassiter Mill Rd Crossing	Improved pedestrian crossing	Included in Six Forks Corridor Study	HIGH			Six Forks Widening	Raleigh DOT
	X4	Six Forks Rd & Millbrook Rd Crossing	Improved pedestrian crossing	Included in Six Forks Corridor Study	HIGH			Millbrook ped/bike improvements (BP4)	Raleigh DOT
	X5	Falls of Neuse Rd & Millbrook Rd Crossing	Improved pedestrian crossing			Medium		Millbrook ped/bike improvements (BP4)	Raleigh DOT
	X6	Sweetbriar Dr @ Millbrook Rd Crossing	Improved pedestrian crossing			Medium		Millbrook ped/bike improvements (BP4)	Raleigh DOT
	X7	Quail Hollow Dr @ Millbrook Rd Crossing	Improved pedestrian crossing			Medium		Millbrook ped/bike improvements (BP4)	Raleigh DOT
	--	Wake Forest Rd <i>I-440 to St Albans</i>	Improved bicycle and pedestrian facility (shared use path)		HIGH			Diverging diamond, Navaho & St Albans intersection improvements (I1)	NCDOT
	--	Other crossing improvements	Suite of pedestrian visibility enhancements for intersections with noted safety concerns. Inclusive of high visibility crosswalk markings, inroad signage, advance warning signage, curb bump outs, lighting, and other elements.		HIGH	Medium	low		Raleigh possibly w/ NCDOT
	--	Six Forks Rd Corridor Study Recommendations	Separated bike lanes along both sides of Six Forks Road from Lynn Rd to Dartmouth Rd. Pedestrian refuge islands at North Clift, Loft, Millbrook, Windel, Shelley, Northbrook, Lassiter Mill, Dartmouth, and Front at N Hill St.	Phase I Planning & Design 2019	HIGH			Six Forks Widening	Raleigh DOT
	T1	Midtown Transit Center	The Transit Center, planned to be located near the North Hills Shopping Center and Six Forks Road, will accommodate multiple routes with enhanced amenities	Planning & Design FY 2020 Construction FY 2021	HIGH				GoRaleigh
	T2	Bus Stop Improvements	Bus stop improvements could include concrete pads, benches, bike racks, access ramps, and sidewalks.	Ongoing	HIGH	Medium	low		GoRaleigh
	T3	Wake County Transit Plan - Bus Service Improvements	Route 8 (Six Forks Midtown) - 15 min. headways Route 8L (Six Forks North) - 30 min. headways Route 16 (Centennial-Midtown) - 15 min.	FY 2024 FY 2024 FY 2024		Medium	low		GoRaleigh

	ID	Project	Description	Status	IMPLEMENTATION PRIORITY			Contingency	Responsibility / Funding Source
					0-3 YRS	3-7 YRS	7+ YRS		
	T4	Midtown High Frequency Bus Service <i>Study future Route 8 Alternatives or additions</i>	St Albans/I-440 Crossing/Wake Towne/Industrial/Six Forks Ext			Medium	Medium	Implementation of frequent routes; adequate ridership	GoRaleigh
	T5a	Future Midtown Rapid Transit <i>BRT extension from Capital Blvd</i>	Study feasibility, routing options, and related considerations.			Medium			GoRaleigh
	T5b	Future Midtown Rapid Transit <i>BRT extension from Capital Blvd</i>	Some combination of Six Forks, Wake Forest, Atlantic, and I-440 corridor options				low	Six Forks Rd Extension (SC7)	GoRaleigh
	SC1	Benson Dr Extension <i>Dresser Ct - St Albans Dr</i>	Avenue 2-Lane Undivided		Medium			Development assisted	Raleigh & Private
	SC2	Benson Dr Extension <i>North to Hardimont Rd</i>	Avenue 2-Lane Undivided			Medium	Medium	Development assisted	Raleigh & Private
	SC3	Bland Rd Complete Street Improvements <i>Falls of Neuse Rd - Hardimont Rd</i>	Road diet			HIGH			Raleigh
	SC4	Craftsman Dr Extension <i>Sorghum Ct - N Market Dr</i>	Avenue 2-Lane Undivided	Raleigh St Plan		Medium	Medium	Development assisted	Raleigh & Private
	SC5	Pacific Dr Extension <i>Old Wake Forest Rd - Craftsman Dr Ext</i>	Avenue 2-Lane Undivided	Raleigh St Plan		Medium	Medium	Depends on Craftsman Rd ext (SC4) Development assisted	Raleigh & Private
	SC6	Pacific Dr Extension <i>Craftsman Dr Ext - Atlantic Ave</i>	Includes RR overpass	Raleigh St Plan			low	Depends on Pacific & Craftsman Rd exts (SC5, SC6). Development assisted	Raleigh & Private
	SC7	Six Forks Rd Extension to Capital Blvd	Avenue 4-Lane, Divided	Raleigh St Plan		HIGH			Raleigh possibly w/ NCDOT
	SC8	Wake Towne Rd Extension <i>West to Barrett Dr</i>	Avenue 2-Lane Undivided	Raleigh St Plan		HIGH		I-440 crossing adds importance	Raleigh
	SC9	Navaho Dr Realignment <i>Quail Hollow Dr - Benson Dr</i>	TBD (development-dependent)			HIGH		Development driven I-440 crossing adds importance	Private
	SC10	Future Benson Dr Extension <i>Hardimont Rd - Bland Rd/Pacific Dr</i>	Avenue 2-Lane Undivided				low	Development-driven	Raleigh & Private
	SC12	St Albans Dr Widening A <i>Benson Dr - Wake Forest Rd</i>	Avenue 4-Lane, Divided			HIGH		Development-driven	Raleigh & Private
	SC13	St Albans Dr Widening B <i>Church at N Hills St - Hardimont Rd</i>	Avenue 2-Lane, Divided/Turn lanes	Raleigh St Plan		low		Development-driven	Raleigh & Private
	SC14	St Albans Dr Widening C <i>Midtown East Access Rd - Benson Dr</i>	Avenue 2-Lane, Divided/Turn lanes	Raleigh St Plan		low		Development-driven	Raleigh & Private
	SC15	Millbrook Road Diet Study	Possible 2-laning depending on anticipated traffic demands		low	Medium			Raleigh
	SC16	Six Forks School & Connectivity Study <i>North of Rowan St</i>	Detailed study of school and connectivity issues		HIGH				Raleigh

	ID	Project	Description	Status	IMPLEMENTATION PRIORITY			Contingency	Responsibility / Funding Source
					0-3 YRS	3-7 YRS	7+ YRS		
	SC17	Wake Forest Rd Corridor Study <i>St. Albans to E Millbrook</i>	Complete Streets upgrade: access management; lane-width increase; streetscape; bike-ped & transit accomodation			Medium	Medium		Raleigh
	I1	Wake Forest Rd & Executive Dr Intersection Improvements at St Albans Dr & Navaho Dr	Signal and lane configuration changes; pedestrian accomodations; internal cirulation changes		HIGH	Medium		Wake Forest Rd Diverging Diamond	Raleigh
	I2	Bush St Roundabouts <i>Wolfpack Ln & Navaho Dr</i>	Single-lane roundabouts with bike-ped accomodations			low	Medium	Bush St ped-bike improvements (GS2)	Raleigh
	LU1	Midtown Waterfront Park Acquisition	Acquisition of parcels adjacent to Crabtree Creek for new public park space		HIGH				Raleigh
	LU2	Midtown Waterfront Park Study	Formal study of the park space, uses, necessary improvements, and coordinated development		HIGH			Park acquisition (LU1)	Raleigh
	LU3	Stormwater Drainage Basin Study	Updated review of the stormwater drainage basins in the Midtown-St. Albans study area and implications for existing and planned stormwater infrastructure		Medium				Raleigh
	LU4	Comprehensive Plan Amendments	Adopt Future Land Use Map, Urban Form Map, and other area-specific guidance		HIGH				Raleigh

