Southern Gateway
Corridor Study

DRAFT
FINAL REPORT

Raleigh, NC | November 2016

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SOUTHERN GATEWAY CORRIDOR STUDY FINAL REPORT

ACKNOWLEDGMENTS

This study is dedicated to the vision and leadership of late Councilman Thomas G. Crowder, District D.

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Fuller Heights Neighborhood
Shaw University
Wake Tech Community College
Strayer University
Healing Place of Wake County
Oleander Park Neighborhood
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Hertford Village Neighborhood
West Parkland Neighborhood
Cherryridge Neighborhood
Washington Elementary School

Meeting Venue Hosts
Wake Tech Public Safety Campus
Peach Road Community Center
Renaissance Park Community Center
Caraleigh Baptist Church Fellowship Hall
Vernon Malone Career Academy
Ray Price Harley-Davidson Conference Center

RALEIGH
URBAN
DESIGN
CENTER

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EXECUTIVE SUMMARY

GUIDING PRINCIPLES FOR THE SOUTHERN GATEWAY CORRIDOR STUDY

- Build on the 2013 Vision Document
- Engage in targeted community outreach
- Establish an urban identity for the corridor
- Emphasize market-driven development opportunities
- Identify strategic infrastructure investments
- Integrate transportation, transit, urban design and land use recommendations
- Strengthen connections to established neighborhoods
- Provide implementable solutions
- Align recommendations with city's Strategic and Comprehensive Plans

INTRODUCTION

The Southern Gateway corridor, of S. Saunders and S. Wilmington Streets, into Raleigh provides one of the best skyline views of the city. However, those roadways and adjacent land uses along this approach to downtown lack a cohesive character and identity. Recognizing the importance of this gateway into downtown Raleigh, the city's Urban Design Center conducted a Visioning Workshop in the Summer 2013 as Phase 1 of the Southern Gateway Corridor study. Community workshops were convened to develop a vision for the character of the roadways and adjacent land uses. The community's input and observations were clearly documented in a Visioning Summary and Briefing Book.

Building on the 2013 Visioning Document, the City of Raleigh's Urban Design Center embarked on Phase 2 of the Southern Gateway Corridor Study in March 2015. The multi-disciplinary consultant team, led by JDavis, was commissioned to carry out specific directives that emerged from the 2013 Vision Document.

The following report outlines the process, analysis, framework ideas, and focus area development strategies that resulted from an iterative design effort that included the Raleigh Urban Design Center, city departments, members of the Southern Gateway district business community, and area residents. From March through November of 2015, approximately 8 meetings were held with over 200 participants.

The resulting recommendations reflect not only the input of the engaged public, but the thoughtful analysis of the consultant team, evaluating the existing image and character; the transportation and street network; the bike, pedestrian and greenway connections; the market realities of this district and the region as a whole; the interface between the district and the future Dorothea Dix Park and, the potential for transformation with new private development and infrastructure improvements. The plan also identifies how plan recommendations correspond to specific elements of the city's Strategic Plan and Downtown Experience Plan document.

The following pages describe the major recommendations that came out of this process and examine the primary goal of any vision study: to implement improvements and transform this district into an area worthy of the title, Raleigh's Southern Gateway.

District Portrait
The Southern Gateway district includes a large land area south of downtown, primarily focused on corridor improvements along a 3-mile stretch of the S. Saunders and S. Wilmington Street corridors, highlighted in red on the graphic above.

"STATE OF THE DISTRICT"

The study area encompasses a large land area, extending south from downtown Raleigh from MLK Boulevard to the intersection of S. Wilmington and Tryon Road, and from Lake Wheeler Road east to Hammond Road. The large study area boundary is intended as a contextual boundary for influential land uses that impact the 3-mile corridor. The scope of this study is focused on physical improvements one "block" or large parcel deep along the S. Saunders and S. Wilmington Street corridors while identifying planning responses to enhance accessibility and connectivity to the surrounding neighborhoods.

A number of neighborhoods exists within the corridor; however the urban fabric has been eroded by a lack of investment and the overwhelming focus on the transportation needs of commuters and visitors to downtown Raleigh from outlying areas. The focus of this plan is to generate strategies for connectivity, infrastructure investment, public realm improvements, and protection of natural resources in order to support growth and reinvestment.

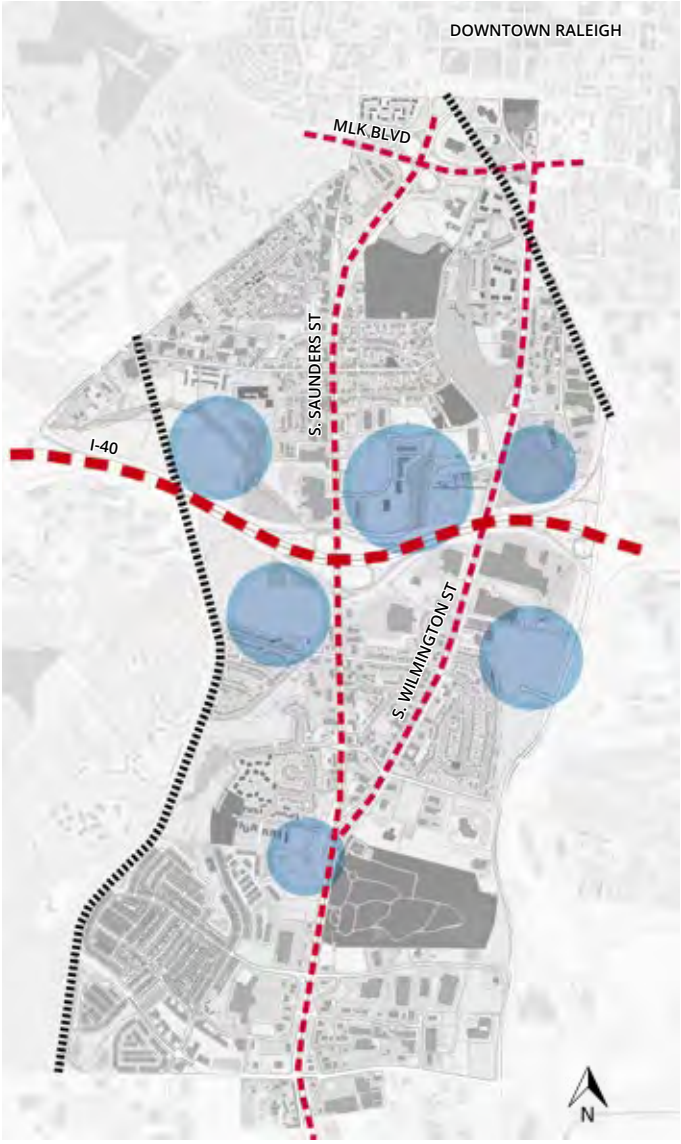
Throughout the planning process, analysis and input highlighted the many attributes of the Southern Gateway district. Most notably, stable residential neighborhoods north of I-40 have seen an increasing amount of private reinvestment in the past several years; two major branches of the Capital Area Greenway system have been constructed; easy access to the State Farmers Market and Dorothea Dix Park, and proximity to downtown.

There are several neighborhoods located south of I-40, including Carolina Pines, Robinwood, Hertford Village and Renaissance Park. Of these, Renaissance Park in particular represents a recent and successful investment in the near-town housing market. The success and scale of this development bodes well for the demand for housing in this area, especially when it has succeeded despite the absence of greenway connections, the strip/commercial character of the corridor's main thoroughfares, and limited, safe pedestrian access and efficient transit options.

Ironically, the street connections that make the Southern Gateway district so accessible are also the barriers to new development, roadway, and greenway connectivity. I-40 and MLK Boulevard divide the study area and limit north-south access, which is only available via major arterial roads S. Saunders, S. Wilmington, Lake Wheeler, and Hammond. Additionally, the vacant, underutilized, or undevelopable land within the study area has contributed to the negative character and perception of this area. Despite the large traffic counts generated by the I-40 / S. Saunders Street interchange, diverse commercial development along the corridor is limited. Additionally, the northern part of the district has the potential to become an extension of downtown Raleigh, but the large interchanges at MLK Boulevard limits access and transition to the downtown street grid.

Additionally, the S. Saunders and S. Wilmington Street corridors, rail lines, and floodplain act as significant barriers to east-west movement. For residents and businesses of the area, the existing roadways substantially limit local travel options while also making it more difficult to utilize public transit and non-motorized forms of transportation. The character of the auto-oriented commercial uses along these roads are a mix of well-maintained businesses and others that have been neglected or vacated. The overall feel is tired and in need of updating.

District Assets
Proximity to downtown and the Greenway are two key assets of this district. The established neighborhoods (orange) and destinations (yellow) are also incredible benefits, but, when mapped next to the barriers (at right), one can see how the roadways and underdeveloped properties isolate the communities from each other and from adjacent assets.



District Barriers
There are major physical and perceived barriers in the district. This is further reinforced by several underutilized or undevelopable properties at key locations (indicated by blue circles above). The I-40 and MLK roadways limit north-south connectivity and the rail corridors, S. Saunders and S. Wilmington Streets limit east-west connectivity for all modes of travel.

RECOMMENDATIONS SUMMARY

- Identify key opportunity sites.
- Identify commercial development partners.
- Create mixed use centers at key locations to capitalize on infrastructure investment.
- Develop a branding strategy for each center in order to recruit new businesses to the area. Consider economic investment incentives.
- Develop a range of housing types to complement, not compete, with the current and developing neighborhoods. Specifically target high-quality rental and workforce housing near transit hubs in new commercial centers.
- Build on the success of Renaissance Park and vibrancy of Tryon Road commercial zone.
- Explore redevelopment opportunities along Lake Wheeler Road corridor to complement the future Dorothea Dix Park.
- Establish a new transit-oriented neighborhood in the S. Wilmington / Rush Street Focus Area.
- Create a focus area for start-up businesses in the Caraleigh / Old Saunders warehouse district.

DEVELOPMENT

The Southern Gateway, in theory, has many development advantages: proximity to downtown and the future Dorothea Dix Park; a mix of historic character and new, high-quality construction; and unparalleled access to I-40 (and therefore the rest of the Triangle Region). However, as a pedestrian walking along S. Wilmington Street, or a motorist stuck on S. Saunders Street during rush hour, it is hard to picture incremental investments undoing the years of auto-oriented development and, in some areas, neglect.

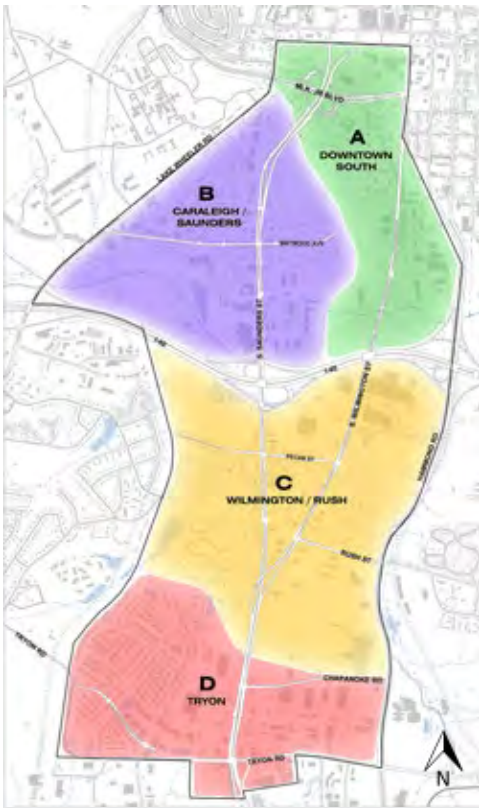
One of the first steps in transforming the development potential and image of the Southern Gateway district is identifying opportunity sites. This plan considered sites that are underdeveloped or vacant and are easily paired with significant infrastructure investment. Public/private partnerships will be critical to catalyzing major projects in these areas.

This report identifies four major development areas that can emerge in this district by drawing on different targeted markets in the region. For example, there are tremendous opportunities to reuse warehouse and raw spaces in the Caraleigh/ Saunders area in order to attract start-up businesses in the emerging "maker" industry. It would be advantageous for these businesses, such as tech shops, brewers, alternative/indoor farming, to be located close to downtown and yet in an area that also presents opportunities for inexpensive, perhaps forgotten spaces in which to build new businesses and a community. There is also great potential for redevelopment of the Lake Wheeler Road corridor to complement the future Dorothea Dix Park.

Another potential opportunity exists along S. Wilmington Street near the existing Cargill plant. This large land area, tucked between the railroad and S. Wilmington Street, supports industrial-type businesses which are incompatible with the surrounding residential land uses and a reemerging Downtown. This area presents a clear opportunity to expand the southern edge of downtown. In order to capitalize on this opportunity, future policy might lead towards relocating these businesses and redeveloping the area for mixed use with downtown-adjacent competitive rental office buildings. New housing can bridge the gap and provide much needed context for a transformation of the housing in the area.

South of I-40 along S. Wilmington Street, the street cross-section can be re-conceived as a neighborhood serving main street with improved sidewalks, bike lanes, and dedicated transit. New, mixed-use buildings along the frontage will provide the neighborhood-level services long awaited by residents. These commercial uses would greatly benefit from the development of high-quality competitive rental housing in the floors above commercial spaces in order to attract young professionals, workforce and other urban renters looking for space near and accessible to downtown.

Finally, there is a tremendous opportunity to build on the success of the Renaissance Park development by making it a southern hub for the S. Wilmington Street transformation at Tryon Road. New retail development will serve commuters and residents alike. Depending on the scale of transit funneled through this location (park and ride, bus rapid transit, etc), there may be a market office space and institutional uses.



Four Sub-districts in Southern Gateway

Downtown South

Sub-district A character sketch of commercial / office urban development.

Caraleigh / Saunders

Sub-distrct B character sketch of "makers" market.

Wilmington / Rush

Sub-distrct C character sketch of urban scale development along S. Wlimington Street.

Tryon

Sub-distrct D character sketch of town center development.

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RECOMMENDATIONS SUMMARY

> Transform S. Wilmington Street into a transit-oriented, walkable, and bikable spine that unites and defines the district.

> Improve key intersections along S. Saunders Street to address bike / pedestrian safety and access to transit.

> Improve and augment east-west road connections to link neighborhoods to each other and to the redesigned S. Wilmington Street.

> Evaluate the district's connection to the southern edge of downtown by urbanizing the interchanges along MLK Boulevard and by providing a better bike / pedestrian connection to downtown (at Fayetteville Street).

> Transform the S. Wilmington Street flyover to accommodate transit connections south to Tryon Road.

> Establish Lake Wheeler Road as a bike / pedestrian corridor.

TRANSPORTATION / TRANSIT

One of the major design recommendations, a redesign and repurposing of Wilmington Street, for the Southern Gateway Corridor effectively addresses several of the primary constraints of the area:

- Traffic on S. Saunders Street makes north-south travel very difficult at rush hour for local residents and businesses;
- Transit stops are difficult to access because of safety concerns and limited east-west mobility within the district;
- I-40 and MLK Boulevard act as barriers limiting non-motorized access to downtown; and,
- Auto-oriented development patterns have made safe and efficient pedestrian and bicycle mobility a near impossibility.

While S. Saunders Street is appropriately sized for the current volume of traffic, S. Wilmington Street is drastically over-sized. Because S. Wilmington Street also lacks interchange access to I-40, it becomes a perfect candidate for redesign to better accommodate local needs over regional transportation demands.

Therefore, the first major recommendation of this process is to transform S. Wilmington Street into a complete street that maintains two lanes for vehicle traffic, and establishes separated bicycle facility, and dedicated transit lanes (for Bus Rapid Transit [BRT]). By reconfiguring the cross-section and ultimately continuing S. Wilmington Street over S. Saunders Street and across the frontage and commercial areas of Renaissance Park, S. Wilmington Street becomes a new transit-oriented, walkable, neighborhood-serving spine. This new cross-section and alignment will be much more conducive to mixed-use development, can incorporate retail, office, and housing into its frontage buildings, and provide a greater range of housing options to serve people desiring to live closer to downtown.

The second major transportation / transit recommendation is one that can be initiated immediately. Critical intersections along S. Saunders Street must be improved to ensure pedestrian and bicycle safety. Specifically, the intersections at Maywood Avenue, Pecan Road, and Chapanoke Road, which serve multiple neighborhoods and provide significant east-west connectivity, should be upgraded.

New neighborhood street connections have the ability to greatly improve the access and movement within for residents of the district. A connection from Renaissance Park, north to Rush Street as well as a connection from Rush Street to Carolina Pines Avenue, along with upgrades to Carolina Pines Avenue and Rush Street, could provide alternate and safe routes to I-40, Lake Wheeler Road, S. Wilmington Street and beyond without having to access S. Saunders Street during peak hours.

Finally, in order to blur the edge between downtown and Southern Gateway, thereby transforming the access to downtown from the south, MLK Boulevard interchanges with S. Saunders and with S. Wilmington both need to be urbanized to increase access downtown from the south by bike and on foot. This not only improves the approach to downtown, it also effectively increases development opportunities in the study area, a key recommendation of the Raleigh Downtown Plan.

RECOMMENDATIONS SUMMARY

> Improve or add on-road bicycle lanes and markings on key east-west connections within the district, particularly south of I-40.

> Add at least one new bike/ pedestrain facility (on- or off-road) connection linking the Walnut Creek Trail south to Tryon Road.

> Improve visibility and safety along Walnut Creek Trail, through patrolling and maintenance, but also by encouraging new development to engage with the greenway.

> Provide pedestrian bridge for access across MLK, Jr Boulevard for a safer, more direct connection to downtown.

CONNECTIVITY

The connectivity issues within the district are two-fold and greatly impact one another. First, the secondary street network within district is disjointed and impedes the ability for both north-south and east-west movement except on major corridors. The second is the simple lack of bike, pedestrian, and greenway connections south of I-40 coupled with the perceived safety of the existing facilities north of I-40.

This plan recommends on- and off-road connections that provide enhanced connectivity for cyclists and pedestrians within the district. These 'major' routes create the main framework for connectivity. There are many other opportunities for minor connectors within this framework that will emerge as these larger connections are realized.

The proposed connections are primarily on- and off-road bike / pedestrian infrastructure improvements that correlate with this study's street improvement recommendations. The specific design criteria for these connectors should follow design guidelines appropriate for the street typology and use (i.e., on-road bike lanes, shared use paths along roadways, sign and pavement markings, etc.) and as outlined in the Capital Area Greenway Planning & Design Guide and the BikeRaleigh plan. These connections will significantly increase non-motorized options for downtown bike / pedestrian commuters.

Regarding the safety of the existing trails, many of the targeted development areas actually coincide with the trails that were identified as “unsafe” by meeting participants. Potential reasons for this include the lack of visibility of the trails due to their alignment behind vacant and unused properties, lack of traffic, and poor neighborhood visibility. Additionally, the presence of the homeless shelter on S. Wilmington Street has given rise to loitering and vagrancy along the trails. While further discussion about a city-wide comprehensive approach to homeless services is warranted, greater enforcement of code violations and criminal activity along the major corridors should be explored in the meantime.

These recommendations correspond with the Parks, Recreation and Cultural Resources System Plan goals and objectives for greenways[1] including:

- *Greenway Goal #2, objective 2A*: Prioritize an implementation schedule to complete the system of greenway trails, including connectors with a focus on inter-connectivity among neighborhoods, parks, schools, commercial areas, cultural and civil institutions and other regional destinations.
- *Greenway Goal #2, Objective 2C*: Strengthen and prioritize connections to public transportation, streets, sidewalks, and other transportation corridors by closing gaps in connectivity to the greenway network.
- *Greenway Goal #2, Objective 2D*: Provide increased accessibility and provide connectivity of greenway trails to growth areas.
- *Greenway Goal #2, Objective 2F*: Develop a regional trail system.

1 *City of Raleigh Parks, Recreation and Cultural Resources System Plan, 2014, http://www.raleighnc.gov/content/extra/Books/PRecRecreation/PRCRSystemPlan/#*

Street Connectivity
Potential street connections and improvements

Bike / Pedestrian Connectivity
Potential on- and off-road bike / pedestrian connections

IMPLEMENTATION

"Creating implementable plans" and "identifying early wins" were the highest priorities listed by city staff and community members who participated in the process. The following Implementation Matrix is a summary of critical initiatives that will, each in its own way, transform the Southern Gateway district over time. A more detailed implementation matrix can be found in the Appendix.

Each task is defined incrementally as near-term (0-3 years), mid-term (4-7 years), or long-term (8-10+ years) projects. It was also determined that some of these concepts will require further study to understand the feasibility and cost, such as the engineering of the S. Wilmington Street extension and flyover. Many land owners, city departments, and design professionals will need to work together to push that project forward. The upside, of course, is the amount of transit-oriented development that can be generated, including land unlocked by these infrastructure improvements.

There are a mix of infrastructure projects, development projects, and maintenance projects in all of the study's focus areas. Several of the near-term efforts focus on capitalizing on money, programs, and emergent issues. Mid- and long-term efforts are generally construction projects that require time to design, fund, and implement.

Finally, plans so often sit on shelves when there is no champion to continue to advance the initiatives. It is hoped that because this plan was developed with participation from the Southern Gateway business owners and residents that a community corridor coalition or alliance advocacy group will be established. This group could be organized to interface with city department liaisons and political leadership to advance the key strategic initiatives. This is particularly critical in the period following this plan's approval.

The elements of the city's Strategic Plan[1], Downtown Plan[2], and 2030 Comprehensive Plan[3] which are supported by the corridor study recommendations are as follows:

Strategic Plan Elements

Arts & Cultural Resources, Objective 2	Protect, enhance and develop unique places that reflect the city's character, history, and values.
Economic Development & Innovation, Objective 4	Maintain and develop amenities and infrastructure specifically attractive to economic development.
Growth & Natural Resources, Objective 2	Increase the connected network of green spaces that conserve natural resources and promote outdoor activity.
Growth & Natural Resources, Objective 4	Facilitate improvements to the built environment that preserve and create neighborhoods of choice.
Safe, Vibrant & Healthy Community, Objective 2:	Preserve and increase the supply of housing for all income groups, including those with supportive services needs.
Safe, Vibrant & Healthy Community, Objective 3	Endorse targeted redevelopment through walkable, mixed use, and mixed-income neighborhoods
Transportation & Transit, Objective 2	Enhance the safety, maintenance, convenience and appearance of the transportation network in order to give more people more choices.
Transportation & Transit, Objective 3	Connect the city's transportation network to the region through partnerships.

1 City of Raleigh Strategic Plan, 2015, http://www.raleighnc.gov/government/content/BudgetManagement/Articles/StrategicPlan.html
2 Downtown Experience Plan, September 2015, http://www.raleighnc.gov/business/content/PlanDev/Articles/UrbanDesign/DowntownPlan.html
3 2030 Comprehensive Plan, 2009, http://www.raleighnc.gov/business/content/PlanDev/Articles/LongRange/2030ComprehensivePlan.html

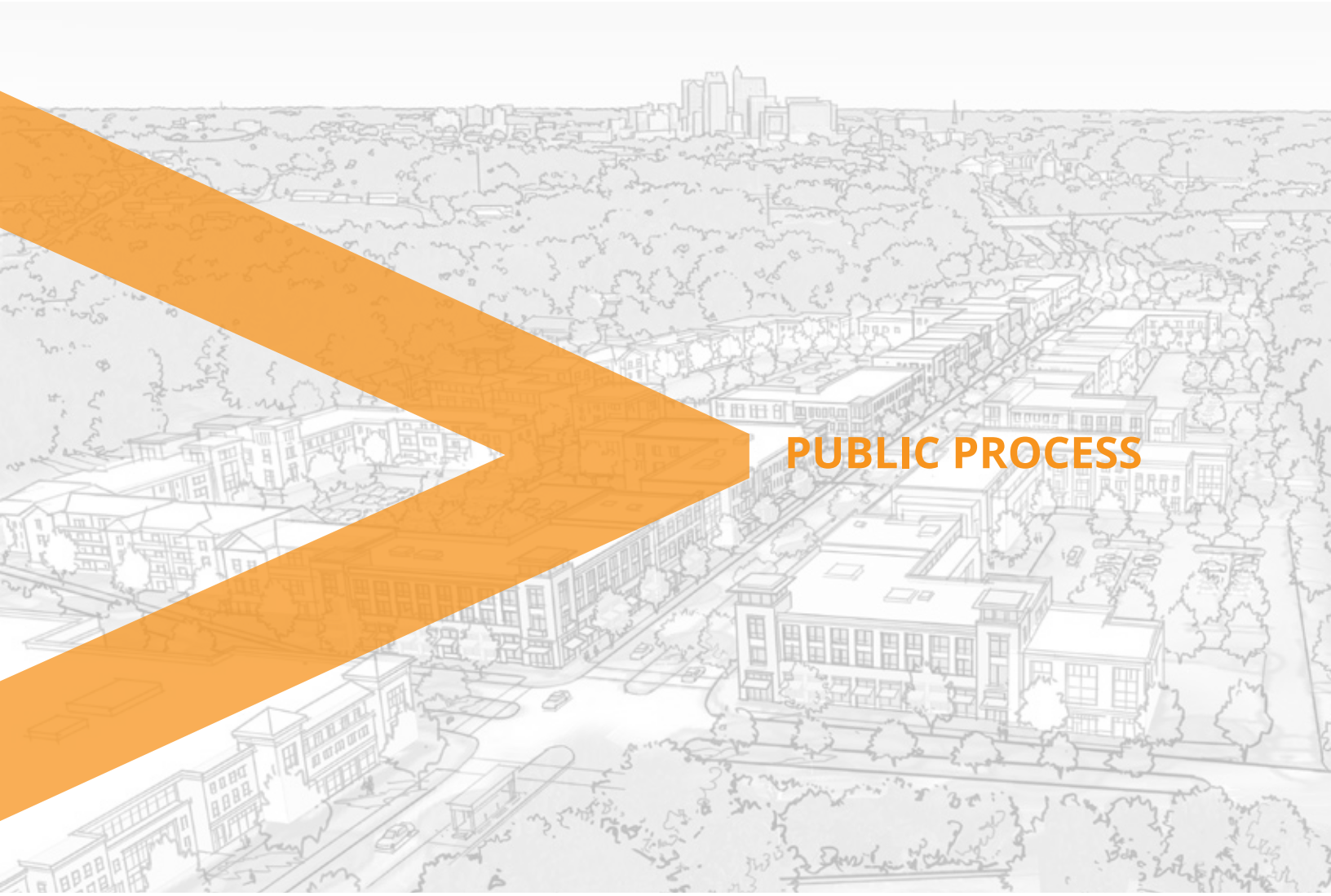
Downtown Plan Elements

BREATHE, Goal BG-3, Action BA-22	Improve bicycle and pedestrian access points from downtown to the Rocky Branch Greenway and the Dix Hill property.
MOVE, Goal MG-2, Action MA-13	Increase bike lanes throughout downtown, notably along Wilmington and Salisbury Streets.
MOVE, Goal MG-3, Action MA-25	Identify and direct transit users to transit network nodes with enhanced amenities and increased wayfinding and passenger information.
MOVE, Goal MG-4, Action MA-30	Study the realignment of South Salisbury Street at Martin Luther King Jr. Boulevard.
MOVE, Goal MG-4, Action MA-31	Redesign intersection at South Boylan, South Saunders, South Dawson, South Wilmington Streets, Martin Luther King Jr. Boulevard, and the intersection at Peace and Halifax Streets to improve pedestrian safety and reduce barriers to north-south travel.
MOVE, Goal MG-4, Action MA-37	Study Wilmington and Salisbury Streets to consider the restoration of two-way traffic.
STAY, Goal SG-7, Action SA-34	Develop a public-private partnership and a plan for the mega-block between Martin Luther King Jr. Boulevard and South Street that includes a shared vision, development phasing, and financing mechanisms.
LINK, Goal LG-4, Action LA-19	Partner with the property owners to create a development strategy for the Gateway Center mega-block between South Saunders Street, Martin Luther King Jr. Boulevard, and Salisbury and South Streets.

2030 Comprehensive Plan Elements

A.4	Land Use and Transportation Coordination	All Policies
A.5	Land Use Compatibility	All Policies
A.6	Mixed Use Development	All Policies
A.7	Commercial Districts and Corridors	All Policies
A.8	Neighborhood Conservation and Development	Policy LU 8.1 - LU 8.13
A.9	Research and Development/Institutional Land Uses	Policy LU 9.1
A.10	Retail Land Uses	All Policies
A.11	Industrial Land Uses	Policy LU 11.4
B.1	Land Use and Transportation Coordination	Policies T1.1, T1.3 - T.6
B.3	Complete Streets: Hierarchy and Design	Policies T3.2, T3.4, T3.5
B.4	Public Transportation	Policies T4.1, T4.2, T4.5, T4.7 - T4.10
B.5	Pedestrian and Bicycle Circulation	Policies T5.1 - T5.7, T5.11, T5.13
B.6	Parking Management	Policies T6.2, T6.5
B.7	Transportation Safety Improvements	Policies T7.1, T7.2, T7.4
C.1	Energy Security and Climate Change Preparedness	Policy EP1.8
C.2	Design with Nature	Policy EP2.1 - EP2.3, EP2.5, EP2.6
D.1	Commercial Corridor Reinvestment	Policies ED1.1 - 1.4
D.2	Neighborhood Reinvestment	All Policies
D.5	Economic Development and Land Use	All Policies
F.3	Greenway System Land and Trails	Policy PR3.1, PR3.6, PR3.8, PR3.9
I.2	Design of Mixed-Use Developments	Policy UD2.2
I.3	Appearance and Function of Raleigh's Corridors	Policy UD3.1
I.5	Designing Successful Neighborhoods	Policies UD5.2 - UD5.4
I.6	Pedestrian-Friendly Design	Policy UD6.1

ACTION PLAN				
	NEAR	MID	LONG	AGENCY RESPONSIBILITY
DEVELOPMENT STRATEGY				
Examine Long-Term Goals and Options for Affordable Housing/ Homeless Services within Industrial Corridor South of Downtown		Study	X	Raleigh (Hsg & N'hoods, Planning, Econ Dvlpmt)
Establish Strategic Partnerships to Develop Workforce Housing Opportunities	X			Raleigh (Hsg & N'hoods, Planning)
Establish Grants for Facade and Property Improvement or Redevelopment in Targeted Investment Areas	X	X		Raleigh (Econ Dvlpmt, Planning)
Create Business Districts to Manage Redevelopment, Reinvestment, and Targeted Leasing	X	X		Raleigh (Econ Dvlpmt, Planning)
Identify Zoning Changes and Adjust where Needed	X			Raleigh (Planning)
Form Public Private Partnership in Tryon Area	X	X		Raleigh (Econ Dvlpmt, Planning)
Promote Existing Applicable city Programs: Historic Credits, Facade Grants, etc.	X			Raleigh (Econ Dvlpmt, Planning, Hsg & N'hoods, Historic Preservation)
Small Area Plan for Caraleigh/Maywood to Identify Growth and Conservation Opportunities	Study			Raleigh (Planning, Historic Preservation)
Small Area Plan for Fuller Heights/Wheeler Crossing/Old Saunders Businesses	Study			Raleigh (Planning)
Enforce Code Violations Regarding Exterior Maintenance	X			Raleigh (Hsg & N'hoods, Inspections)
Implement Green Infrastructure and/or Other LID Solutions in New Development	X	X	X	Raleigh (Planning, Stormwater, Public Works)
TRANSPORTATION / TRANSIT				
S. Wilmington Street Engineering Study	Study			Raleigh (Transp. Planning), NCDOT
S. Wilmington Street Transit, Ped., and Bike Improvements	X	X		Raleigh (Transp./Transit Planning), NCDOT
S. Wilmington Street Access Management	X	X		Raleigh (Transp. Planning), NCDOT
New S. Wilmington Extension (S of flyover)	Study		X	Raleigh (Planning), NCDOT
New S. Wilmington Flyover	Study		X	Raleigh (Planning), NCDOT
Grenelle Street Extension/Junction Blvd Improvement		Study	X	Raleigh (Transp. Planning)
Pecan Road Transit Stop Enhancement	X			Raleigh (Transp./Transit Planning)
Lake Wheeler/S. Saunders Intersection Improvements	Study	X		Raleigh (Transp. Planning)
S. Saunders Alignment/X-Section Maywood to MLK	Study		X	Raleigh (Transp. Planning)
S. Saunders Ped. Safety Improvements	X	X		Raleigh (Transp. Planning)
S. Saunders Access Management	X	X		Raleigh (Transp. Planning)
MLK Modifications at S. Saunders and Wilmington	Study	X	X	Raleigh (Transp. Planning), NCDOT
Ped./Bike Connection over MLK Blvd. (Fayetteville St Ext.)	Study		X	Raleigh (Transp. Planning)
BIKE / PEDESTRIAN CONNECTIVITY				
Ped./Bike Connection from Tryon to Walnut Creek Trail	X	X	X	Raleigh (PR&CR, Transp. Planning)
Ped./Bike Connection from Maywood to Walnut Creek Trail	X	X	X	Raleigh (PR&CR, Transp. Planning)
Improve Wayfinding at Trail/Street Intersections	X	X		Raleigh (PR&CR)
Align Ped/Bike Improvements at S. Saunders/Lake Wheeler with Rosengarten Multi-Use Path	X	X		Raleigh (PR&CR, Transp. Planning)



PUBLIC PROCESS

District Portrait
The Southern Gateway Study Area includes a large land area south of downtown. The project focus was primarily on the future of the S. Saunders Street and S. Wilmington Street Corridors.

The public outreach strategy for Southern Gateway unfolded over four phases, each marked by an opportunity to interact with the residents and business leaders within the district. These meetings allowed the city representatives and the design team the opportunity to share thoughts and ideas as well as receive feedback. The public input process kicked off in March 2015 and was completed in August 2016.

Phase 1: Inventory and Analysis

The public process began by listening to the community and getting a better understanding of what issues most deeply affect their daily lives. Public input was solicited during a series of mobile workshops for both business owners and the community. The feedback from these workshops informed the direction of the development strategy.

Phase 2: Development Strategy

Using the Phase 1 input and urban design analysis, the design team identified broad framework recommendations for the district with a focus on Development Strategy, Image and Character, Transportation and Transit, and Connectivity. A public meeting was held to review these large framework ideas.

Phase 3: Focus Areas

Phase 3 drilled deeper into recommendations for the four key focus areas. These locations were identified based on community input and team knowledge of where infrastructure improvements and investment would have the greatest positive impact for the community. Once again, a public meeting was held to illustrate the vision for each study area and gather public input.

Phase 4: Implementation

In this phase, the findings of the public process were summarized and critical path items for infrastructure, policy, and budget consideration were identified in collaboration with city staff and political leadership. A 30-day public comment period preceded the final presentation to the Planning Commission and City Council for approval.

The focus of this design effort was established initially during the 2013 Vision Plan, a community-based effort led by the Raleigh Urban Design Center.

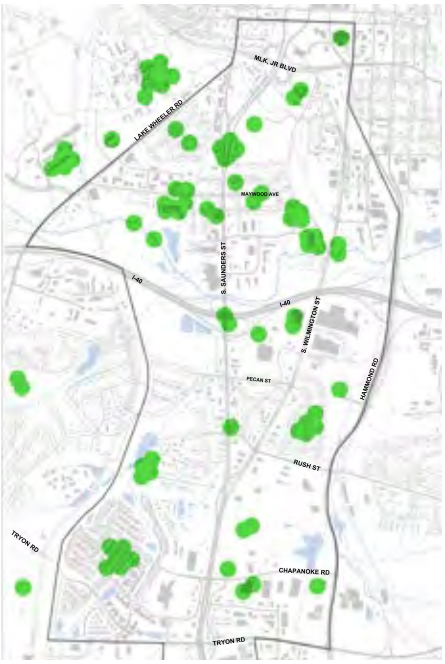
Phase 1: Inventory & Analysis

It was important to the city and the design team that this process build on the previous work done in the district. However, there was concern that certain aspects of the district had been under-represented in the initial visioning process (City of Raleigh, 2013), specifically, business owners along the corridors.

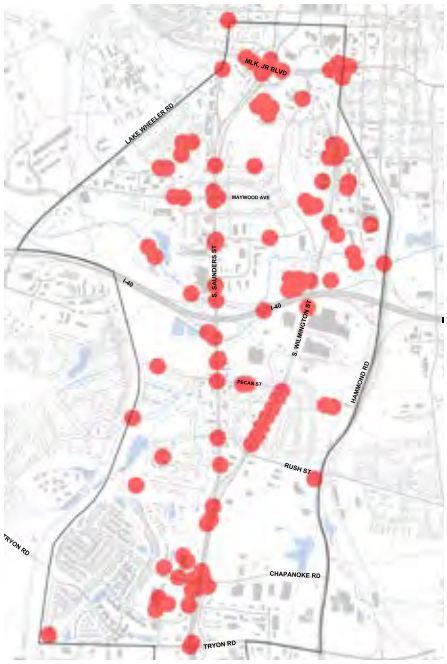
The first major public outreach for this effort entailed a series of six Mobile Information Sessions held at sites throughout the Southern Gateway district in March 2015. The city distributed bilingual flyers to notify the community of the workshops. Half of the sessions were specifically targeted towards business owners and investors in the corridor in order to better understand what drew them to locate their business to this part of the city and their unique concerns and needs.

In summary, many of the same assets and issues that local business owners experience daily also resonate within the broader community and neighborhood residents.

ASSETS	ISSUES
• Proximity and access to downtown	• Speeding and cut-through traffic in some areas
• Available development opportunities	• Lack of sidewalks and/or poor pedestrian safety
• Historic neighborhoods and architecture	• Unsafe bike connections to downtown
• Views of downtown from S. Saunders & S. Wilmington Streets	• Lack of street connections in some areas
• Transit access via bus system	• Unsafe intersections along S. Saunders Street
• Parks and community centers	• Interchanges act as barriers
• Access to greenway [North of I-40]	• Crime and safety
• New housing at Renaissance Park	• Homeless camps and panhandling
• Easy access to I-40	• Lack of neighborhood-serving retail
• Proximity to the State Farmer's Market and the future Dorothea Dix Park	• Some blighted commercial and residential areas
• Cheap gas	• Properties "held hostage" by ramps and fly-overs
• Wake Tech campus	• No greenway connections south of I-40
• Diversity	
• Streams, wetlands, and natural areas	
• Specialty businesses and services	

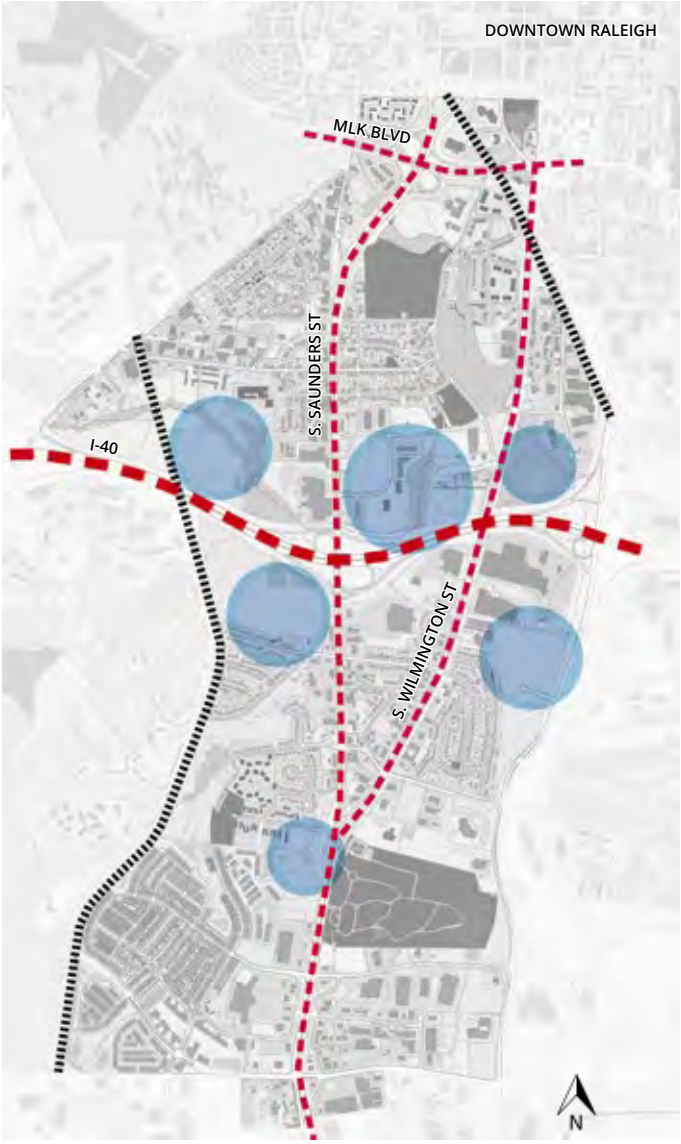


Assets Summary Diagram



Issues Summary Diagram

District Assets
Proximity to downtown and the Greenway are two key assets of this district. The established neighborhoods (orange) and destinations (yellow) are also incredible benefits, but, when mapped next to the barriers (at right), one can see how the roadways and underdeveloped properties isolate the communities from each other and from adjacent assets.



District Barriers
The are major physical and perceived barriers in the district. This is further reinforced by several underutilized or undevelopable properties at key locations (indicated by blue circles above). The I-40 and MLK roadways limit north-south connectivity and the rail corridors, S. Saunders and S. Wilmington Streets limit east-west connectivity for all modes of travel.

Phase 2: Development Strategy

During the second phase of public outreach, the design team translated the community input and the design analysis from Phase 1 into district-wide strategies. Initial thoughts were grouped into the following categories: Development Strategy, Image and Character, Transportation and Transit, and Connectivity.

In order to have meaningful conversations about each topic, a public workshop was convened in May 2015. After a brief introductory presentation by the design team, the audience members were asked to circulate through a series of "stations" where a design team member and Urban Design Center representative facilitated emerging ideas for a specific topic in order to inform the next phase of design.

Development Strategy: Concentrate on Key Centers

- Leverage proximity to Downtown
- Link development with infrastructure investment
- Create mixed-use centers
- Mix of neighborhood-oriented retail and services

Key Centers for Development
The design team learned that one of the concerns from the neighborhoods was "how are you going to pay for all of this?". The Development Strategy outlined in Phase 2 sought to match up transportation infrastructure improvements with development opportunities. This led to the idea of identifying mixed use centers, differentiating their market potential, and understanding their unique advantages.

Photo from Public Meeting

Public Feedback: Development Strategy
1. Future site for a park exists at vacant parcel just south of I-40 at S. Saunders St. (NC Equipment Company land).
2. I-40 underpasses feel unsafe for cyclists and pedestrians.
3. S. Wilmington and S. Saunders both have a significant amount of unsavory and blighting businesses creating safety concerns for cyclists and pedestrians.
4. Concerns about the area around the industrial use at S. Wilmington St. and Walker St.
5. Prevalence of homeless persons and the existing homeless shelter could adversely affect the potential for development/improvement in certain areas.
6. Importance of housing affordability while pursuing new and redevelopment.

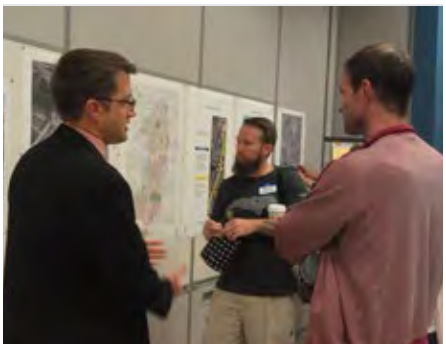
Image and Character:
Create "Real" Places

- Celebrate and reuse historic resources
- Conscientiously transition scale of development at edges
- Not a "one size fits all" solution for the whole district.
- Proactive approach for beautifying public spaces and street edges.
- Focus on Housing

Photos from Public Meeting

Image and Character
One of the biggest concerns voiced by residents within the district was the image and character of not only the deteriorating commercial uses and housing, but also the scale and configuration of proposed development. In order to create a palette of styles and scales that the design team could use to develop concepts, the Phase 2 process introduced some different types of development that could be appropriate here: Town Center, Neighborhood Mixed use, Urban Mixed use, Industrial Conversion, and Boulevard Commercial.

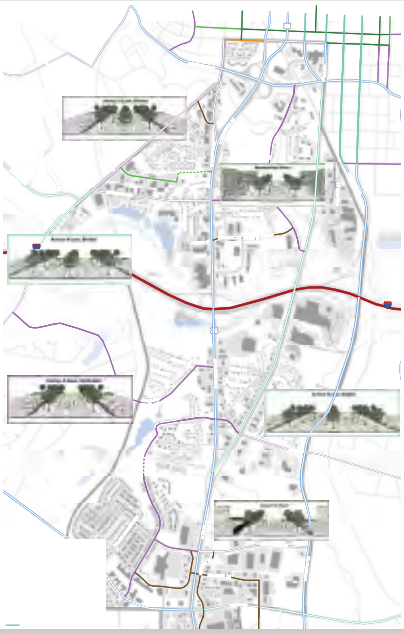
Public Feedback: Image and Character
1. Be sensitive to the character and scale of the Caraleigh community with any new development.
2. Explore tax abatement programs or other means to attract the "right" businesses.
3. Examine possibility of generating higher lease rates, possibly with higher quality architecture.
4. Look at best practices from other towns and cities, too - no need to reinvent the wheel here.
5. Retrofit Bain Water Treatment building for active use.
6. Rebrand area by changing the name of S. Saunders St. to "Downtown Boulevard".
7. Consider the area all the way down to I-40 as "Downtown South", perhaps this can change the mindset toward new investment south of MLK Blvd.
8. Determine if we should be building more residences to support businesses that "follow rooftops" before pursuing commercial development.



Photos from Public Meeting

Transportation and Transit: Improving options

- Improve safety
- Provide options and different modes of travel (bike, car, transit)
- Transform S. Wilmington Street
- Reduce impact of roadways on surrounding community
- Improve access to transit
- Improve bus stops, transit facilities, and service



Transportation / Transit
The key themes centered around improving safety and providing options, while not negatively impacting the traffic flows through the district. The design team evaluated the overall framework and identified places in which excess capacity could be turned into improved options for bike, pedestrian, and transit opportunities.

Public Feedback: Transportation and Transit
1. Improve safety on Maywood Ave. - issues include speed and visibility.
2. Intersection of S. Wilmington St. and Chapanoke Rd. needs to be looked at carefully for improvements to all transportation modes.
3. Traffic peaks at morning and evening rush hours, but is pretty quiet in between.
4. Analyze traffic crashes/fatalities, especially at intersections and implement design solutions.
5. Look at Tryon Rd. bus routing to NCSU.
6. Connect Granite St. to Lake Wheeler Rd. (Old Carolina Pines)
7. Crosswalk needed at Ileagnes Rd. and S. Saunders St.
8. S. Wilmington St. and Hammond Rd. are currently “safe” north-south connections. This should be maintained.
9. Look into adding a street car.
10. Need east-west bikeway crossings and connections.

Improve Connectivity :
Greenways and Local Streets

- East/West street connections
- Address safety concerns
- Expand greenway linkages
- Improve access to transit

Photo from Public Meeting

Connectivity
This theme outlined strategies for connecting east-west streets to improve neighborhood connectivity, addressing safety concerns at key intersections, expanding the greenway south of I-40, and improving access to transit for the district. (illustration shown at public workshop, above).

Public Feedback: Improve Connectivity
1. Consider bike / pedestrian connection from Prospect Ave. "dead end".
2. Safety concerns on Rocky Branch Trail: Keeter Center Dr. trailhead, tunnel under Hammond Rd., and dangerous at-grade crossing at S. Wilmington St.
3. Need better and safer connections from neighborhoods to downtown.
4. Steep hill at Lake Wheeler Rd. and S. Saunders St. is bad for bikes.
5. Five-way intersection at S. Wilmington St. / MLK Jr Blvd. / S. Salisbury St. is confusing and unsafe for bike and pedestrian traffic.
6. Carolina Pines Ave. is unsafe for pedestrians and transit riders (no sidewalks) and is not conducive for bike connection to Carolina Pines Park.
7. Hertford Village desires an improved greenway connection.
8. Road diet is needed on S. Wilmington St., opportunity to improve bicycle, pedestrian and transit facilities.
9. Possibly use utility easement for greenway connection from Renaissance Park to NCSU.

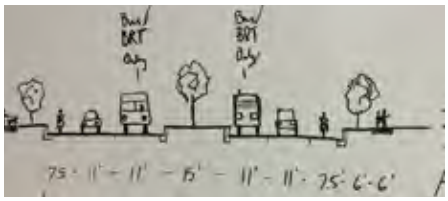
Phase 3: Focus Areas

After presenting the general strategies for Southern Gateway, the design team spent the summer of 2015 identifying and testing catalytic and transformative development plans for the focus areas within the district. The purpose of these plans was to test the capacity for transformation, the impact of the transportation improvements, and the potential for private development to contribute meaningfully to the overall improvement of the district.

The public workshop conducted in September, 2015 was geared towards sharing these emerging vision plans and seeking input from attendees. The workshop was divided, this time, not by topic, but rather by focus area. This allowed residents to concentrate their input on the areas that most directly impacted them. After a comprehensive presentation of the design concepts, the community was asked to visit the different stations set up around the room and organized according to location: S. Wilmington / Rush, Tryon, Cargill, and Old Saunders.

The feedback was generally positive and focused most on how development and infrastructure improvements would get funded and be implemented. This became the focus of the last phase of the process.

The following two pages summarize the concepts presented to the community about each vision plan and the feedback received.



Photos (and sketches) from Phase 3 Public Workshop.

Public Feedback: S. Wilmington / Rush Focus Area
1. Improvements to S. Wilmington St. for bike, pedestrian & transit should be paired with improvements to the east-west streets to improve linkages to downtown.
2. Focus area as site for workforce housing close to downtown.
3. Sidewalks and lighting will be important to improving the safety and character of the area.
4. Improvements (i.e. sidewalks) to Carolina Pines Ave. should be prioritized.

S. Wilmington / Rush Focus Area

The S. Wilmington / Rush development vision has two major components: A) a significant transformation of S. Wilmington Street to better accommodate bikes, pedestrians, and transit, and, B) the redevelopment of commercial parcels to take better advantage of this walkable, mixed use district. Auto-oriented commercial is replaced with ground floor shops and upper-story apartments.

Public Feedback: Tryon Focus Area
1. The UDO calls for 4-lane avenue with 17' median and bike lanes.
2. Existing 3-story residences at the edge of Renaissance Park, north of Chapanoke Rd., will be affected by the extension of S. Wilmington St. - need to review carefully.
3. "I'm for it!" and "Start tomorrow".
4. Addition of a crosswalk at Chapanoke and Tryon Rds.
5. Potential connection to Ileagnes Rd / Carolina Pines Ave. could provide additional way in/out for Renaissance Park (in order to avoid S. Saunders St./Tryon).
6. "Park and Ride" facility.

Tryon Focus Area

A significant amount of development has occurred around the intersection of S. Wilmington Street and Tryon. The vision for this area suggests capitalizing on the energy and market potential here by extending the S. Wilmington Street flyover south as a central spine for new, commercial, and transit-oriented development. A fresh mix of regional retail, office, and apartments could complement the Renaissance Park development with a bustling town center, replete with services, shops, and a viable transit hub.

Cargill Focus Area

The development strategy at the Cargill site envisions what could happen if the plant were to relocate its existing operations. One strategy suggests that the area could be used to help alleviate continued pressure for office space in/near downtown Raleigh.

Public Feedback: Cargill Focus Area
1. Explore TIF district funding opportunities.
2. Re-use of Cargill as an important site that should be better utilized.
3. New use at Bain Water Treatment Plant.
4. Explore tax advantages for Cargill, possibly move to another county.
5. Possibility of connection west between Cargill and Fayetteville St.
6. Bike / pedestrian bridge crossing MLK Blvd.

Old Saunders Focus Area

The Old Saunders development vision includes renovating existing warehouses and targeting "maker"-oriented and start-up businesses seeking cheap raw spaces close to downtown and transit. Some selective new infill development, roadway improvements, and a plaza/ events space can improve the gateway to downtown Raleigh.

Public Feedback: Old Saunders Focus Area
1. Support for redevelopment/realignment of S. Saunders / S. McDowell / S. Dawson intersection.
2. Incorporate street art and murals.
3. Lake Wheeler Rd. realignment makes sense, do it right away!
4. Concern about blocking the visibility of the Harley Davidson from S. Saunders St., ensure visibility of existing businesses.
5. Support for the plaza and events space.
6. Support for the Fayetteville St. connection over MLK into downtown.
7. Assistance to expedite these recommendations.

ANALYSIS

Existing Conditions
Above: Photos showing some of the existing conditions along the S. Saunders and S. Wilmington Street Corridors.
Right: Aerial Photograph of the study area.

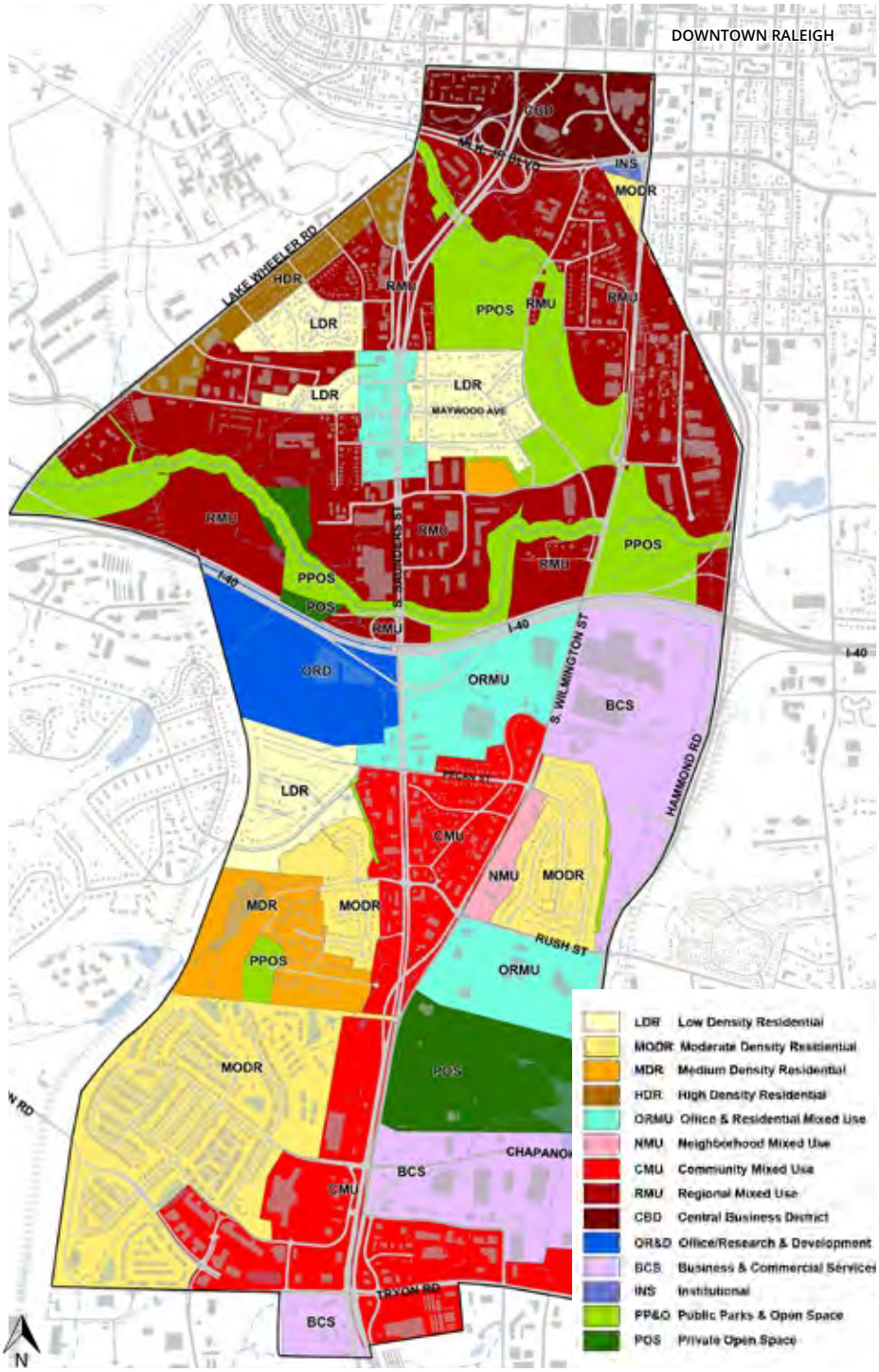
EXISTING CONDITIONS

The existing conditions of the Southern Gateway district greatly impact the strategy to improve and transform this area. Despite a fair amount of residential and retail investment over the past decade in some of the historic neighborhoods, Renaissance Park, and the active "strip" retail at the intersection of Tryon Road and S. Wilmington Street, much of the two main corridors are lined with vacant, underutilized, or dilapidated buildings. Similarly, there are imbalances in traffic distribution and areas in which non-motorized transportation is difficult along the 3-mile corridor.

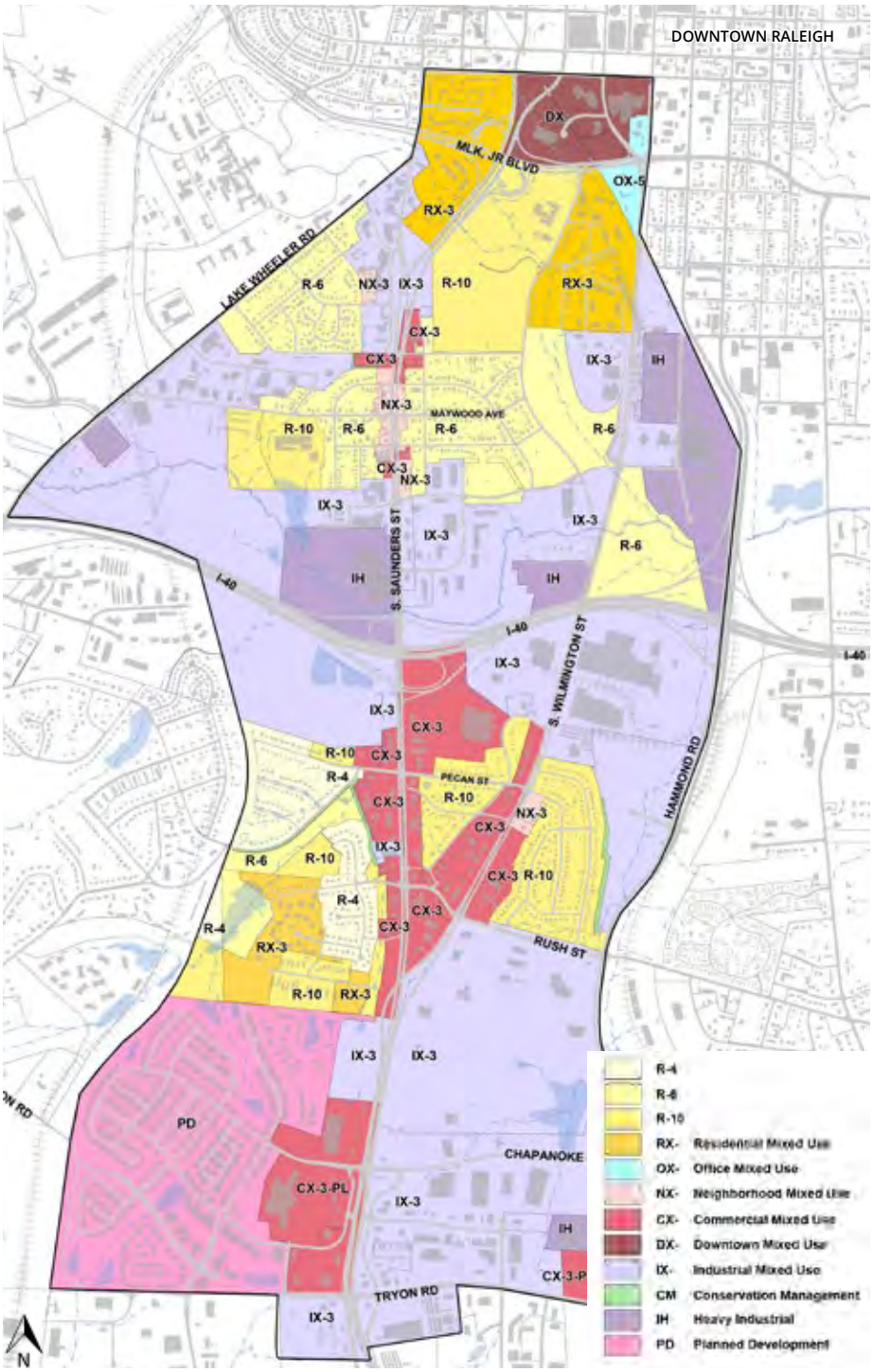
In this section, the existing characteristics of Southern Gateway are explored by looking in greater detail at land use patterns, opportunity sites, commercial and residential markets, street network, traffic, safety, transit, and bike / pedestrian connections.

ZONING / FUTURE LAND USE

The city of Raleigh approved a new Unified Development Ordinance (UDO) in 2015 which reassigned zoning designations within the corridor. Most of the new zoning designations within the study area are consistent with and supportive of the previous zoning classifications. The zoning classifications within the Corridor have been static for a number of years. The city's FLUM (Future Land Use Map) designations for the corridor have remained unchanged with the advent of the UDO. The FLUM and older zoning assignments reflect the light industrial and strip commercial deployment land uses that have historically characterized the S. Saunders and Wilmington Street corridors. Broadly considered, the FLUM and zoning show a concentration of Regional Mixed Use (RMU) and Industrial Mixed Use (IX-3), respectively, north of I-40 and a large concentration of Community Mixed Use (CMU) with Commercial Mixed Use (CX-3) zoning south of I-40.



2016 Future Land Use Map (FLUM)



2016 UDO Zoning Map

The development recommendations along the corridor are largely consistent with the land uses and intensity of uses environed under the current UDO and FLUM. There are a few inconsistencies, primarily with the Heavy Industrial (IH) zoning designation found north of I-40. More specifically, the large land area on the east side of S. Wilmington Street adjacent to the rail line where the Cargill plant and other commercial businesses currently operate constitutes a significant portion of the Cargill Focus Area recommendation. The proposed vision for the Cargill Focus Area is a mix of medium to high density residential, office, and commercial uses which area not supported by a Heavy Industrial zoning designation.

Generally, the Heavy Industrial zoning classification north of I-40 is incongruent with the FLUM Regional Mixed Use (RMU) category.

In addition, the land use intensity of the FLUM Regional Mixed Use (RMU) designation is consistent with specific areas immediately adjacent to the MLK Boulevard and the downtown core. However, that intensity is not supportive of the report's recommendation for much of the corridors north of I-40 where the Community Mixed Use (CMU) designation might be a more appropriate to guide a future emphasis on appropriately scaled mixed use development.

DEVELOPMENT AND MARKET ANALYSIS

Much of the current land use in the study area is commuter-oriented, strip-style commercial development. There are also many underutilized or undeveloped parcels, resulting from years of little reinvestment and limited market demand. Physical barriers (rail, roadways, and floodplain), blight, and perceptions of crime depress market interest in the corridor.

The study area's regional location and real estate characteristics, however, offer clear development opportunities, including:

- Proximity to economically-vibrant, downtown core and unique views of the downtown skyline.
- Large undeveloped and underutilized parcels under single ownership.
- A strong residential foundation of established and historic neighborhoods on which to leverage.
- High level of access and visibility from regional corridors.

Among the districts' other assets are the demographic and employment characteristics. The population and households within the study area are projected to grow by 3% over the next 5 years, and residents are generally well-educated with 30% having a Bachelor's Degree.

EMERGING MARKET: Key points

> Encourage new residential development particularly workforce housing.

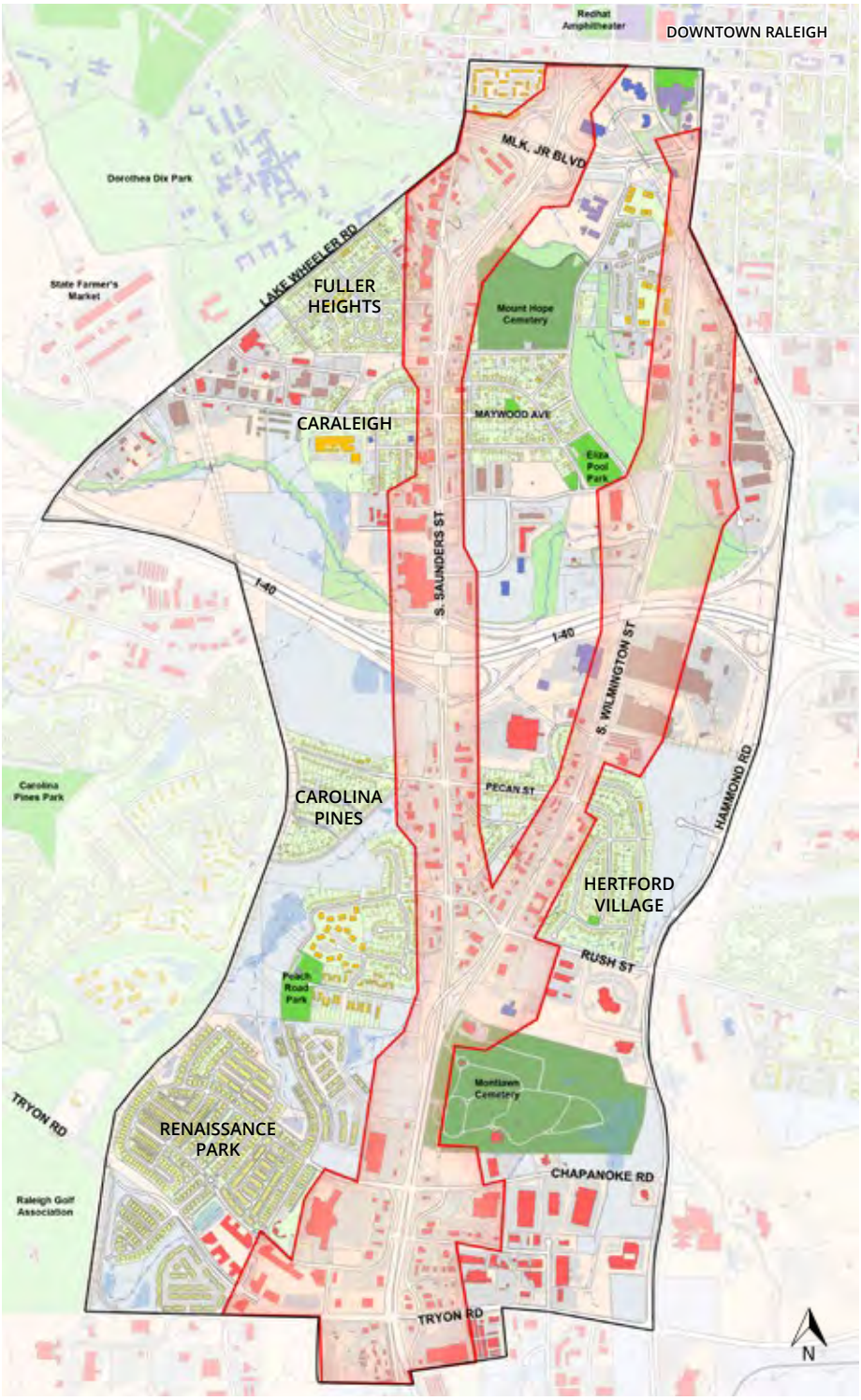
> Facilitate interconnectivity for cyclists and pedestrians.

> Shape strategic vs. tactical development plans and concepts.

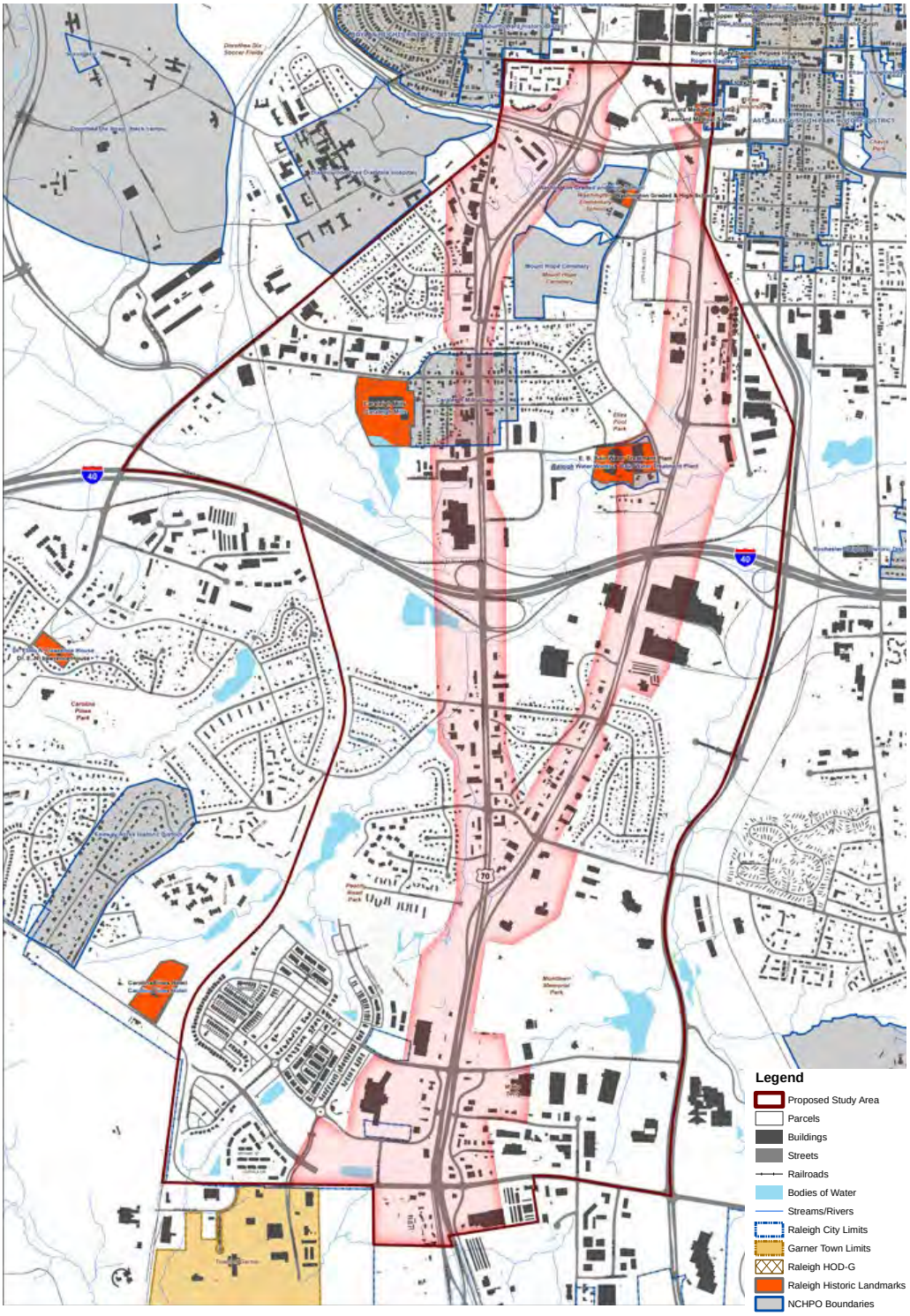
> Nurture infill residential development.

> Demonstrate market potential.

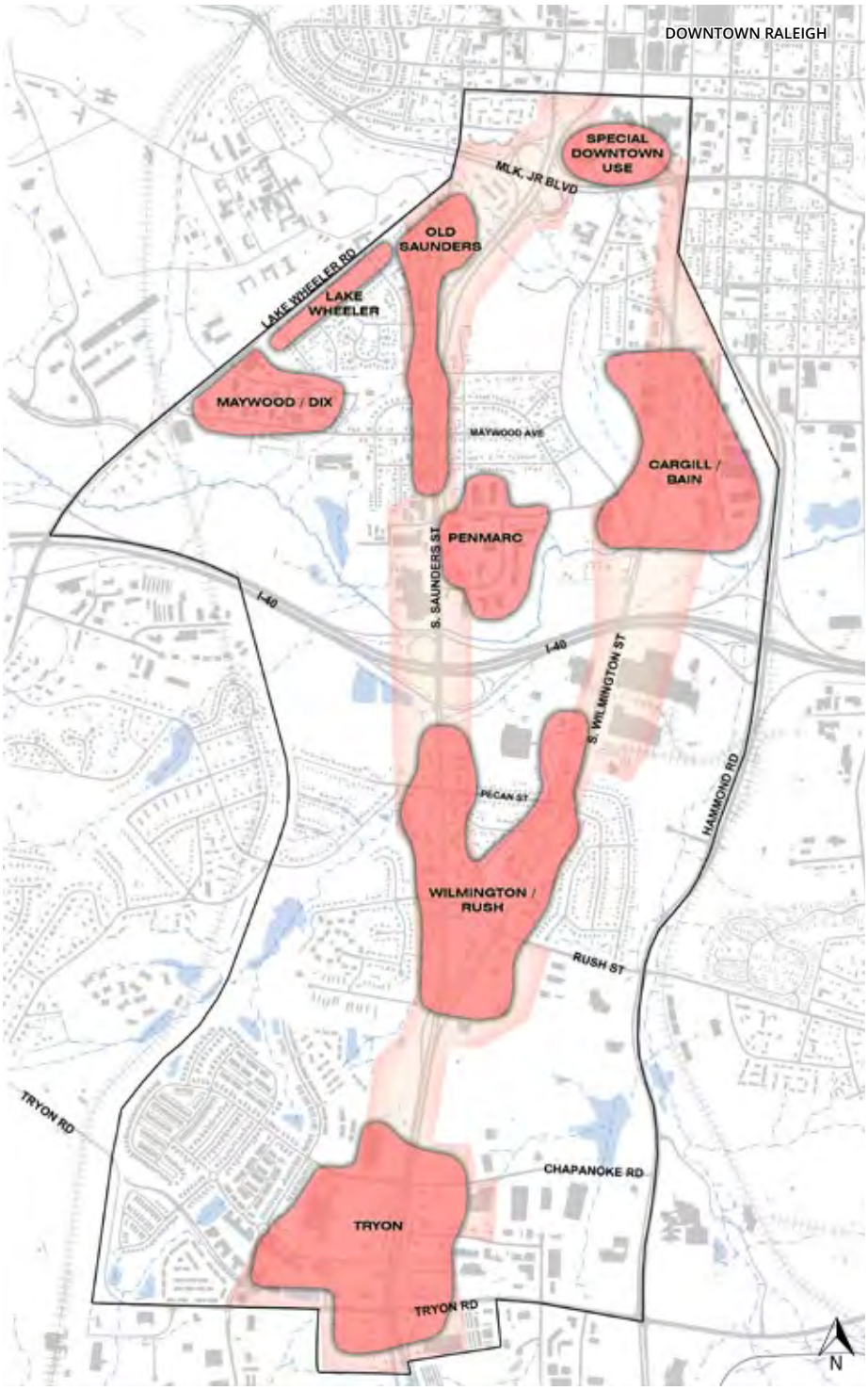
> Identify key city infrastructure investments.



Land Use Portrait
The main spines through the district, S. Saunders and S. Wilmington, are lined with low-density, auto-oriented commercial, and light industrial uses (shown in red). Several strong neighborhoods (yellow buildings on light green background) are isolated by these corridors, and suffer from lack of meaningful connections to each other, to transit, and to the Capital Area Greenway System.



Historic Resources



Opportunity Sites Diagram
Negative perceptions in the District have much to do with the amount of vacant, underutilized, or outdated buildings/properties. This diagram identifies areas in which future development could not only bring new businesses and new life into the district, but also serve to transform the image and character of S. Saunders and S. Wilmington Streets.

The study area is also home to more than 800 businesses employing approximately 5,900 people (45% professional or "white collar," 30% service, and 25% "blue collar" jobs).

Further, the competitive development context for a wide range of potential uses—residential, retail, and office—is favorable. That is, given the proven appeal and convenience of living in and around downtown Raleigh, there are very few locations within the entire region that offer this scale of opportunities for downtown-proximate living.

Even the southern-most edge of the study area has demonstrated the appeal of the corridor as a residential location. The Renaissance Park community—itself a redevelopment project—closed 110 new homes in 2014 at an average price of $230,000.

While market-driven development opportunities certainly exist, the study area faces obvious challenges, and it is likely that market forces alone will not be sufficient to stimulate the revitalization (see table on following pages). Municipal investment in roadways, transit, and bike / pedestrian system will be needed to support private reinvestment. It is likely that private-sector development interests may require assistance in clearly identifying these opportunities.

MARKET ANALYSIS: Summary Table

	CONTEXT / OBSERVATIONS	OPPORTUNITIES	CHALLENGES
Rental Apartments	Region is approaching multi-family rental saturation; nearly 8,000 units to be delivered over the next 18 months (as of March 2015). Of those, approx. 4,000 are in downtown.	Lots of jobs proximate to study area; easy access to downtown & regional employment centers.	Big roads; I-40 psychological & physical barrier.
		Few competitive / comparable apartment development sites with similar downtown proximity.	Development costs vs. attainable rents.
		Improving residential services.	Perceptions of safety / security.
		View of downtown skyline.	
For-Sale Residential	Wake County new closings up 24%.	High demand for in-town / proximate living.	No market identity, regional position unclear.
	New condo closings improving.	"Urban-Suburban" living = best of both worlds.	Current quasi-industrial context; not an "upscale" address.
	Little for-sale pipeline proximate to Central Business District.	View of downtown skyline.	Development costs vs. attainable rents.
			Perceptions of safety / security.
Retail	Household growth will drive increased retail demand, pushing retail development into new locations.	Other uses - apartments, office, single family development - will drive retail demand in the study area.	Image / current industrial context.
	Study area is a "food desert".	Large sites under single ownership (possibly) receptive to redevelopment.	Current income levels & density does not reflect future market demand.
		High visibility.	Development costs vs. attainable rents.
		Potential inflow from commuters.	Perceptions of safety / security.
			Limited walkability / foot traffic.
Office	Regional job growth indicates continued office demand.	Vibrant, naturally occurring tech / start-up / creative industry employment clusters.	Big roads; I-40 psychological & physical barrier.
	Central Business District is location of choice for region's prestigious office address.	Several development sites of scale in the study area; appealing to office developers looking for downtown proximity without development complexities.	Development costs vs. attainable rents.
	Limited in-town development sites, high development costs present challenges for any sizable office user that wants to be in Central Business District.	Views of downtown skyline.	Not an established / prestigious office address. (This also means an opportunity for the right, forward-thinking developer / user).
Other Uses / Civic	A growing & healthy region is driving demand for variety of uses (biking, walking trail, parks, event venues).	Central location within the region & great regional access.	Study area is vast - how to achieve greatest impact unclear.
		Potentially well-positioned for a variety of destination uses.	Development costs.
			Current industrial context.
			Perceptions of safety / security.

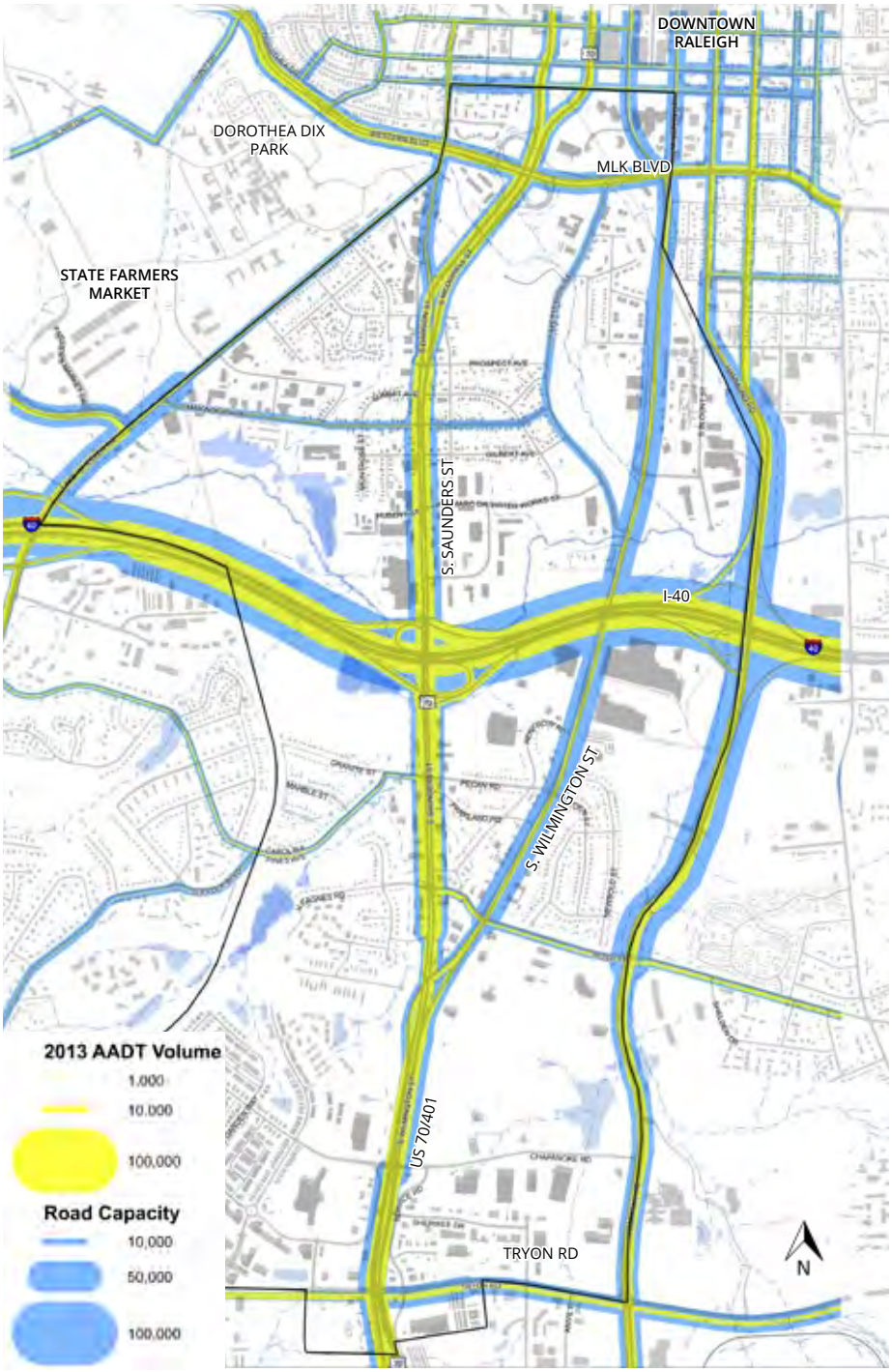
TRANSPORTATION / TRANSIT

The transportation system in Southern Gateway serves automobile traffic through the area more effectively than it serves the needs of the community itself. Although maintaining efficient access to downtown Raleigh, I-40, Garner and other destinations is important, these benefits must be weighed against the impact on the residents and businesses of the surrounding community. These impacts include localized noise and air pollution, neighborhood fragmentation/ isolation, and reduced safety for pedestrians and bicyclists. If these communities are to share in Raleigh's economic growth, a major shift in the area's transportation system and available options is an essential prerequisite.

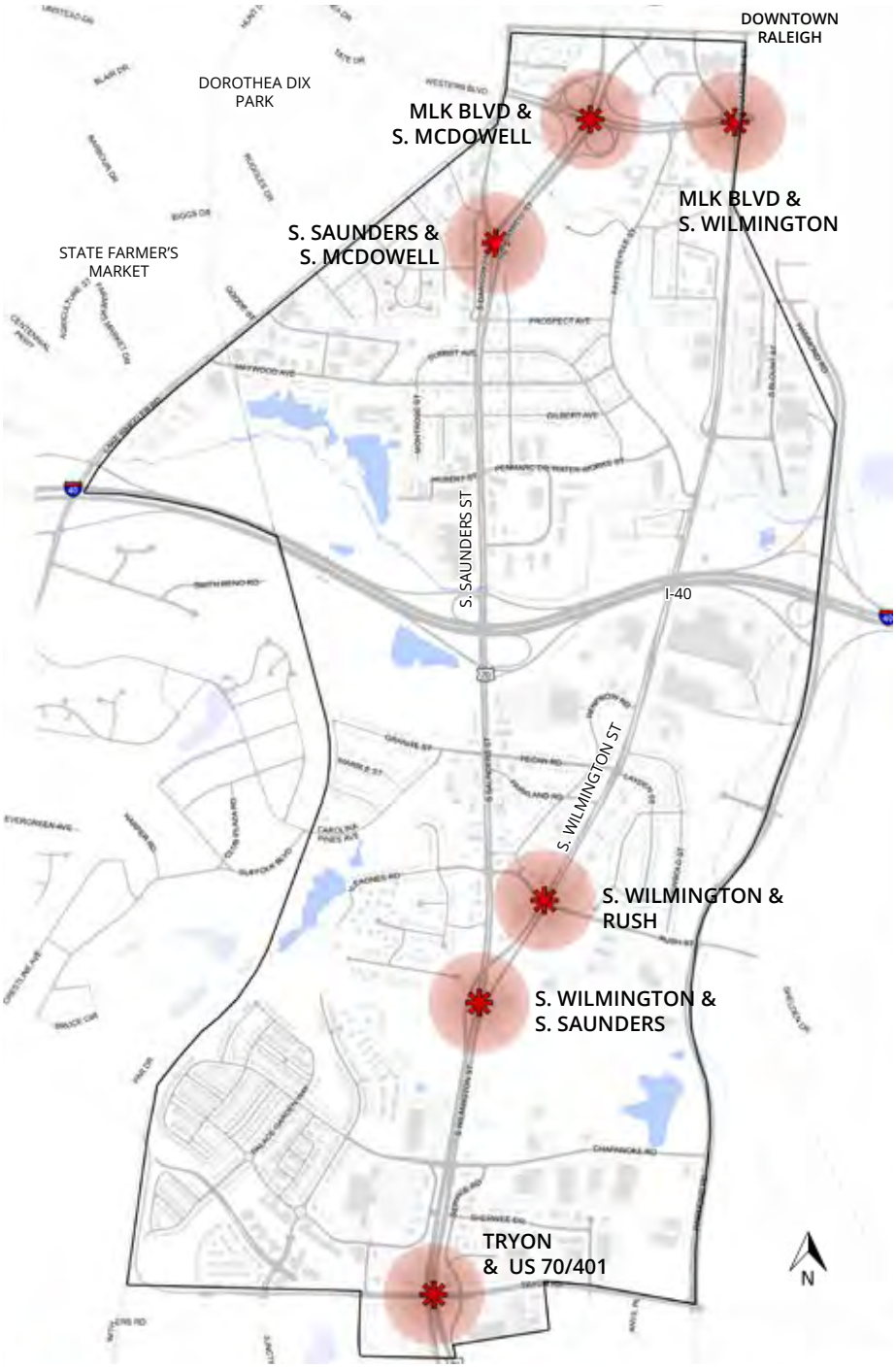
Street Network

The existing street network substantially subdivides the district into quadrants. North-south traffic flows facilitate downtown commuting, and east-west connectivity within the district is severely lacking.

S. Saunders Street (US 70/401) serves the majority of north-south traffic between downtown and points south of Tryon Road. S. Wilmington Street and Hammond Road have much greater capacity than they currently carry, but generally don't serve traffic heading west or north of downtown. To the south, US 401 and US 70 conveniently feed S. Saunders Street from both the southeast and southwest, while Hammond Road only serves a relatively small market. Finally, a substantial share of traffic on S. Saunders Street is accessing I-40 while S. Wilmington Street lacks an interchange and is not a viable option for this traffic. Lake Wheeler Road functions as another north-south connection, but its capacity is limited by a narrow cross-section.



Traffic Volumes and Available Capacity
This graphic compares traffic demand in 2013 against estimated roadway capacity. The availability of unused north-south capacity is initially striking, given the congestion along the S. Saunders / US 70/401 corridor. S. Wilmington Street lacks access to I-40, which diminishes its usefulness to commuters. Significant deficiencies in the capacity and continuity of streets serving east-west traffic are also apparent.



Key Intersections
The intersections noted represent critical junctions in the transportation network and/or potentially important nodes for future development. Key considerations include large volumes of traffic, heavy congestion/long delays, high crash rates, inefficient use of land, and redevelopment potential. Alternate configurations are being evaluated for ways to enhance safety, accessibility, and land use.

For east-west travel, I-40 carries a high volume of traffic through the study area, with Martin Luther King, Jr. Boulevard to the north and Tryon Road to the south serves as the primary east-west thoroughfares. All represent significant major barriers to north-south bicycle and pedestrian travel and neighborhood connectivity.

Access Management

Access management is critical to both S. Saunders and S. Wilmington Streets in terms of traffic capacity and safety. Long segments of these roads have partial or full control of access. S. Saunders and S. Wilmington Streets have densities of 50-100 driveways per mile, resulting in driveways comprising 20%-30% of the curb. Although medians restrict left turns along most of the length of these corridors, the confusion and "friction" introduced by these closely-spaced driveways has negative effects on all modes of travel. Additionally, the abrupt transitions between highly-controlled access to uncontrolled access violate driver expectations, increase frustration, and contribute to the high crash rate.

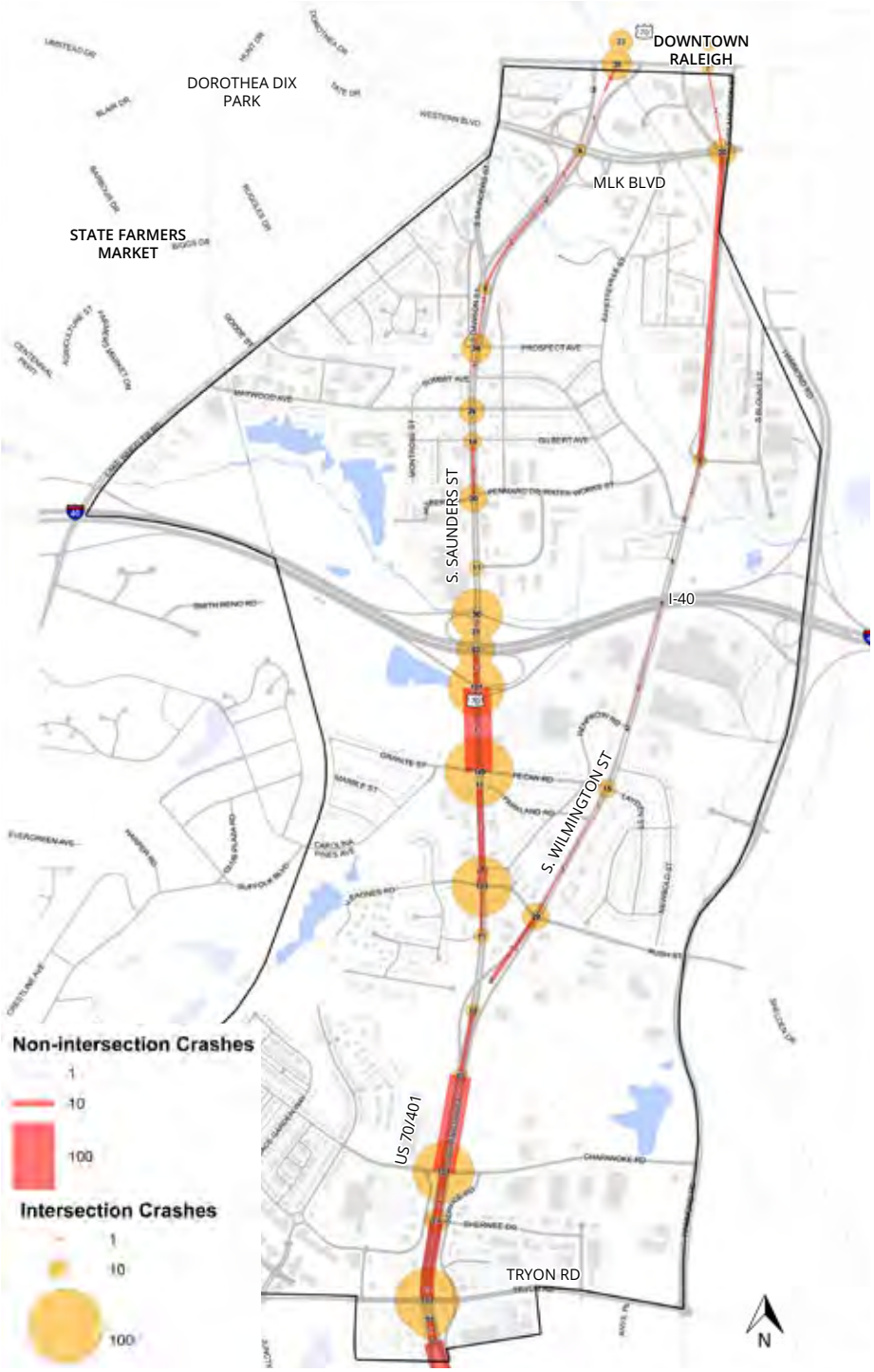
Crashes - Vehicular

Travel safety is a major concern in the study corridor, as expressed both by public input and analysis of crash data. During the five-year period ending in February 2015, approximately 5.5 crashes occurred each week, or approximately one crash every 30.5 hours along the portion of US 70/401 in the study area.

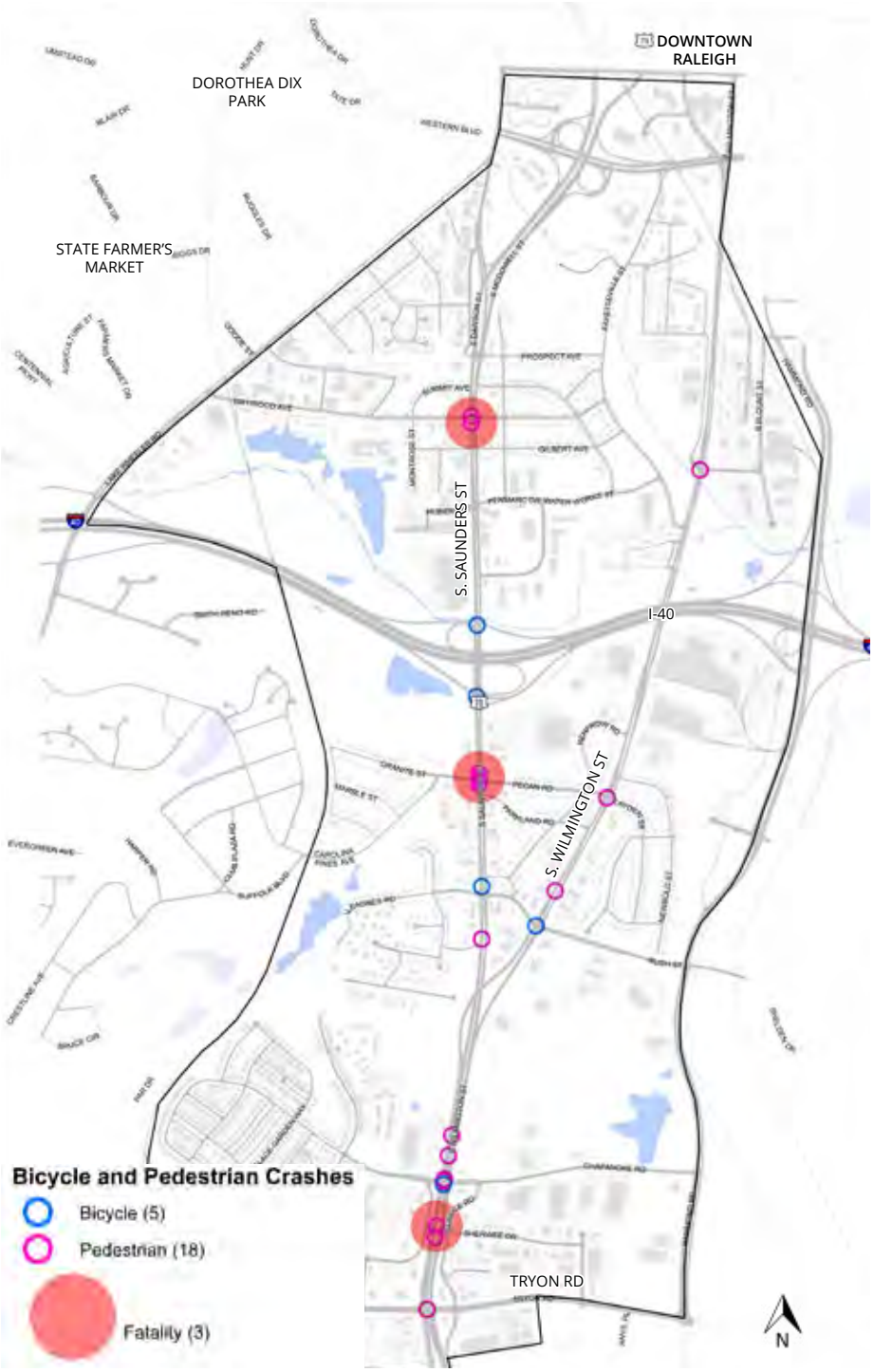
In the case of US 70/401, crashes occur significantly more frequently than the statewide average for the following indexes: among similar classification of road (3.5x state average), crashes resulting in fatality (2.5x), non-fatal injury and nighttime crashes (both 3x), and crashes in wet conditions (3.5x).

The total crash rate for S. Wilmington Street north of S. Saunders Street was nearly double the average rate for comparable facilities statewide, but with no fatal crashes reported.

There is a concentration of crashes in the segment of S. Saunders Street between I-40 and Ileagnes Road attributable to high traffic volumes and numerous conflicts (i.e., heavy turning movements and frequent driveways). Farther south, another cluster of crashes between S. Wilmington Street and Tryon Road results from traffic merging at higher speeds, heavy weaving movements, and congestion at the Chapanoke Road and Tryon Road intersection. Although speed does not appear to be the primary cause of most crashes, transitions between segments with differing design speeds could be a significant factor. These speed differentials create difficulties in consistently judging vehicle speeds which may also contribute to pedestrian and bicycle crashes.



Vehicle Crashes
This image dramatically illustrates the frequency and location of crashes over a recent 5-year period, distinguishing between crashes located at intersections (which tend to be more severe), and those occurring away from intersections.



Bicycle and Pedestrian Crashes
This figure highlights the danger of traveling the study corridor on foot or by bicycle. Many of these crashes occurred at intersections or other locations where pedestrians have compelling reason to cross the street but lack safe and convenient crosswalks, signals, or other appropriate pedestrian treatments.

Crashes - Bike / Pedestrian

The number and severity of bike and pedestrian crashes along S. Saunders and S. Wilmington Streets is even more striking than the vehicular crash data. During the five years investigated, there were 5 bicycle and 18 pedestrian crashes, including 3 fatalities. A lack of adequate bicycle and pedestrian accommodations (location, quantity, and adequacy of crosswalks and signals) contributes to a more hazardous environment. Crossings associated with bus stops and frequent driveways also present significant hazards to both cyclists and pedestrians.

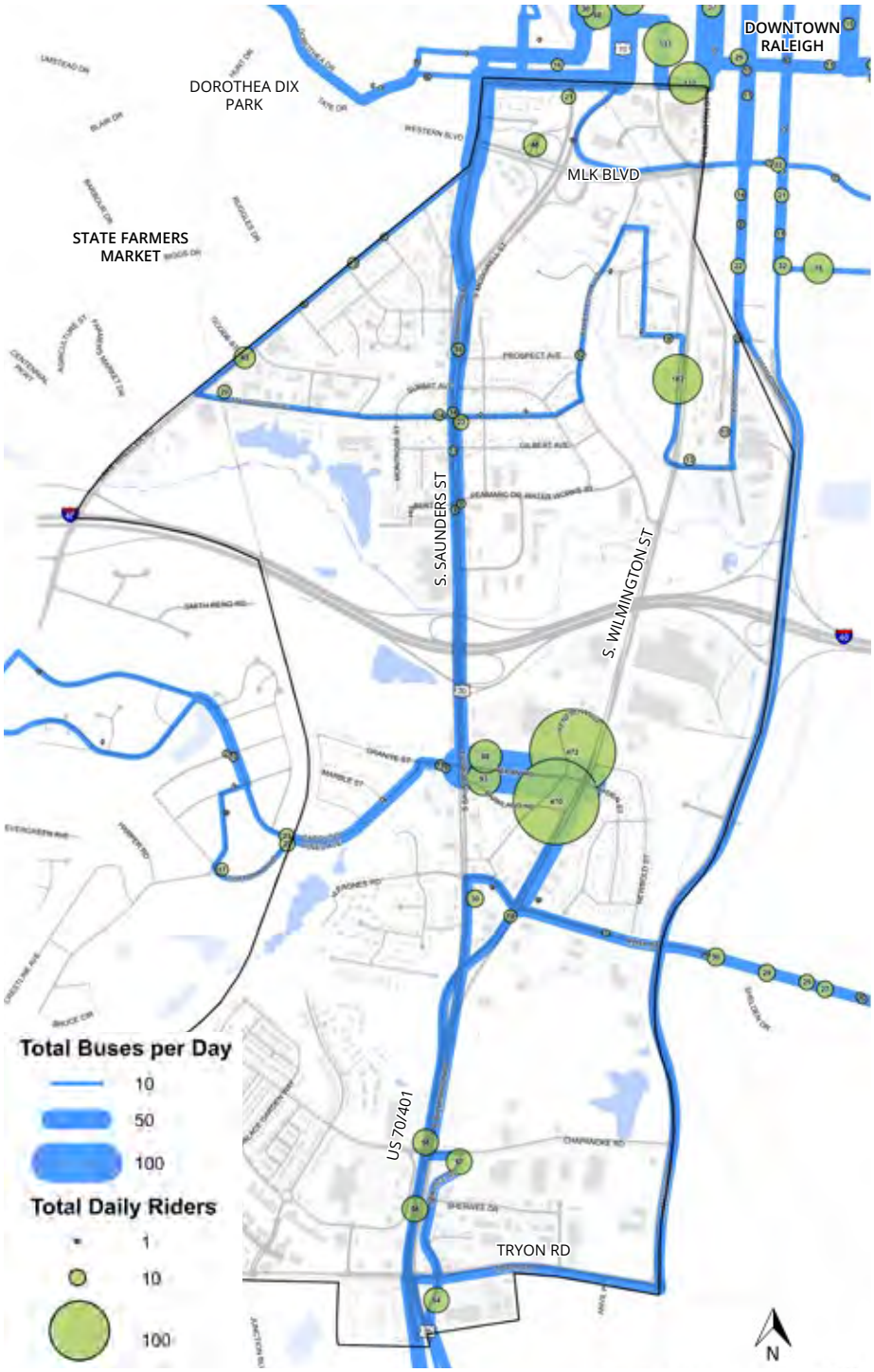
Most of the pedestrian crashes occurred where sidewalks currently exist which indicates that the mere presence of sidewalks is not enough to ensure safety. Pedestrian crashes are concentrated at intersections and other locations where pedestrians cross multiple lanes of high-volume, higher-speed traffic.

In addition to injury and damage costs, the high frequency of crashes has a significant negative impact on travel times since every incident uses up capacity and introduces delays that can persist long after the crash has been cleared. This also reduces the reliability of the corridor for vehicular travel, since travel times become highly variable and unpredictable.

Transit

The study area is served by a number of GoRaleigh routes, some of which are among the most heavily-used in the entire system. GoTriangle also provides some service along the study area's eastern fringe. Although existing transit routes are within one-quarter mile of most residents and establishments, this greatly overstates access to transit within the study area, due to the lack of pedestrian access. Bus stops are numerous, but rarely improved, and often lack sidewalks. Poor pedestrian access and indirect east-west connections reduce the attractiveness of local transit service as an alternate mode of travel. Additionally, frequent stops increase travel times, and long looping routes are less convenient for patrons and less efficient for operators.

Passenger demand (in terms of the number of people getting on and off buses) is highest on Pecan Road between S. Saunders and S. Wilmington Streets where numerous transfers between routes occur. Although bus shelters are present at this location, they are inadequate for the volume of passengers served, and upgraded facilities are planned. Other high-demand stops are clustered along the US 70/401 corridor in the vicinity of Chapanoke and Tryon Roads. Keeter Training Center is also a significant generator of transit trips.



Existing Transit Service and Demand
This figure depicts the levels of transit service and demand. Transfers help explain the high concentration of riders along Pecan Road between S. Saunders and S. Wilmington Streets. The circuitous routing of buses is a result of the study area's lack of an efficient grid-like network of interconnected roads.

Existing Open Space and Trail Network
The Walnut Creek and Rocky Branch Trails are tremendous assets that serves the northern part of the district and links neighborhoods to Dorothea Dix Park and the State Farmer's Market as well as the broader trail network. The southern half of the study area, however, lacks access to the greenway as well as connections between its open spaces.

Greenway / Open Space

The existing Walnut Creek and Rocky Branch Trails provide strong east-west off-road trail connections. These greenway trails are adjacent to riparian corridors and provide access to the larger Capital Area Greenway System and other natural resource assets within the region. However, no linkages exist to access these trails from the neighborhoods and parks south of I-40. Strong on- and off-road linkages directly into downtown are also lacking.

There are a number of parks and open spaces within the study area including Peach Road Park, Eliza Pool Park, Mount Hope Cemetery, and Montlawn Cemetery (privately owned). Destinations closely adjacent to the study area include downtown, Dorothea Dix Park, the State Farmer's Market, Carolina Pines Park, and Raleigh Golf Association (privately owned).

Public input highlighted the absence of trails and lack of connections to existing trails from areas south of I-40. Public feedback also indicated concern regarding safety along portions of the trail (i.e. trail flooding, lack of lighting, presence of homeless camps, and social deviance).

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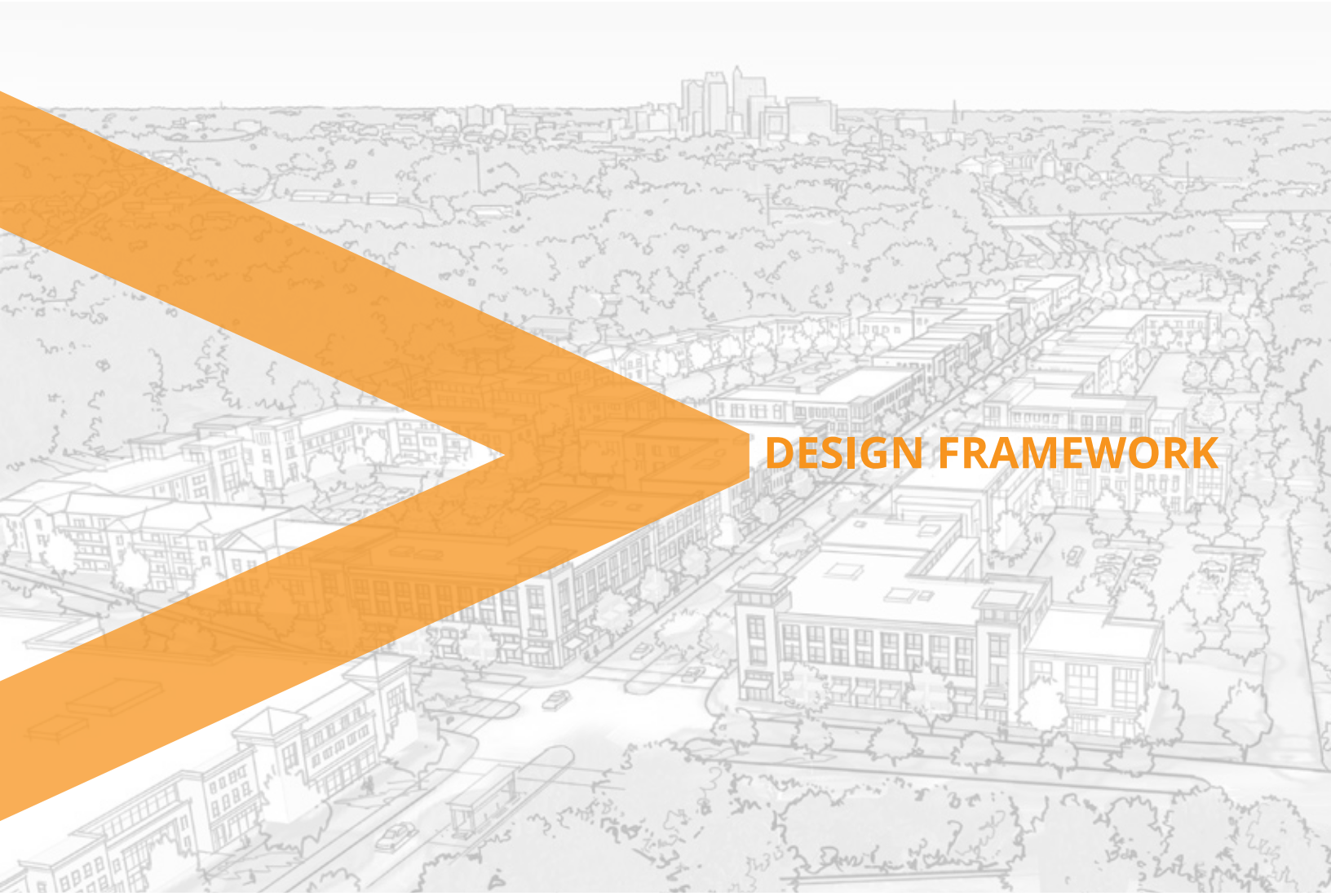


DESIGN FRAMEWORK

MAJOR FRAMEWORK IDEAS

> Establish a development strategy that maximizes the study area's economic potential.

> Develop an attractive image and character that protects, enhances and transforms the corridor.

> Improve transportation & transit to address local interconnectivity while continuing to serve a regional role.

> Improve connections to the Capital Area Greenway System with the incorporation of green infrastructure.

In order to identify implementable ideas and projects for the Southern Gateway Corridor, the design team examined the overall frameworks for the district, encompassing development, image and character, transportation, and connectivity. Several "big ideas" came out of this design effort, each of which has the capacity to transform the Southern Gateway.

First, development opportunities must be targeted toward strategic and transformative locations. Re-balancing the streets and transportation systems to support development will require significant public investment. Ideally, this investment will be coupled with substantial redevelopment that will increase variety of residential options, provide neighborhood-serving commercial, and generally improve the image and character. This section will identify locations that have the potential to catalyze investment and improvement in the district.

Secondly, the excess capacity on S. Wilmington Street has great potential for relieving the ailments of S. Saunders Street. By diverting transit, bike, pedestrian, and local traffic to S. Wilmington Street, using its generous right-of-way, the district can gain a safe, walkable, and dynamic address for new mixed use development as well as expanded transit options. To make this work, east-west connectivity throughout the district must be expanded, and enhanced with improved intersections, additional sidewalks, and better connections to the Capital Area Greenway system. This will help improve transit convenience and efficiency, and reduce traffic along S. Saunders Street. This traffic reduction is a critical element in an overall strategy to improve the level of traffic service by providing attractive alternate routes and modes.

Thirdly, there is an incredible opportunity with new development to create new and better connections from one neighborhood to the next, building an expanding bike/pedestrian connectivity to the greenway system that links areas south of I-40 to each other and to downtown, Dorthea Dix Park, and the State Farmers Market.

Establish a Development Strategy

Identify Development Focus Areas

Currently, Southern Gateway does not promote a strong sense of place, neither as a destination nor a district, and it lacks retail services to support existing residential neighborhoods. Therefore, the most fundamental organizing element of this study effort was to establish localized centers to help concentrate investment, development, and create a sense of place. These centers would promote a mix of residential, office, and retail uses adjacent to established neighborhoods.

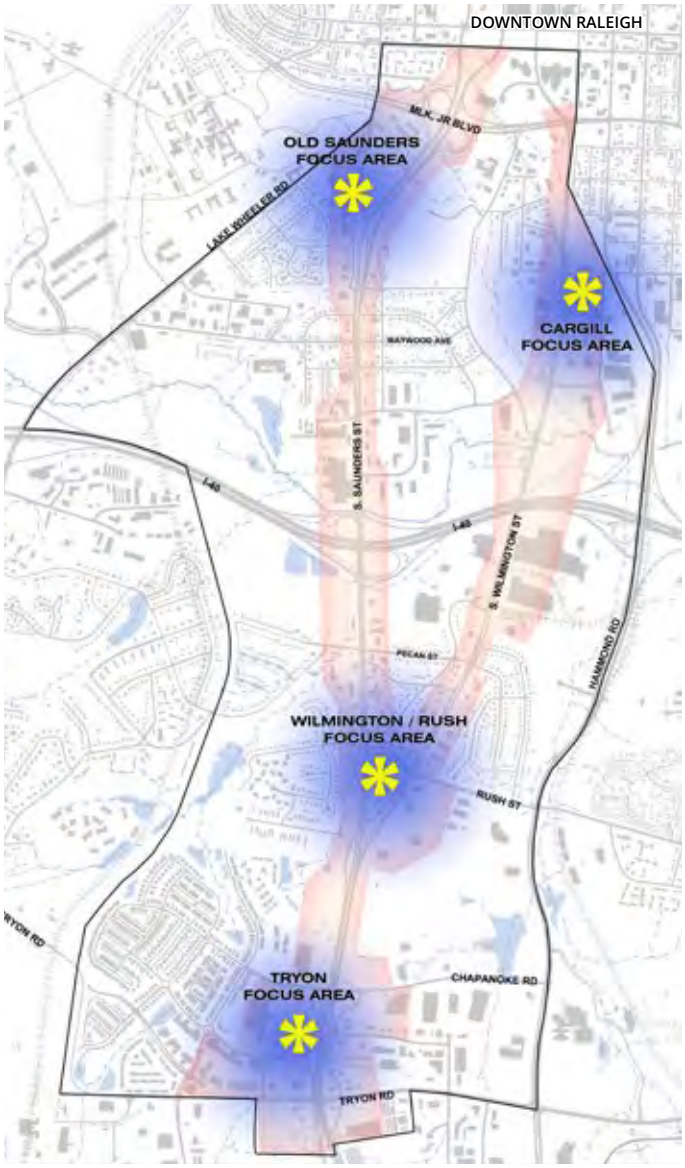
Four target locations, each with its own scale and character, are identified as focus areas for development. Each focus area can take various physical forms in scale, complexity, and architectural style depending on their location and context.

Old Saunders will borrow character and scale from the existing warehouses and adjacent historic neighborhoods. A special "makers" district with entrepreneurial start-up businesses would encourage new investment in this area. Special consideration should be given to protect and complement the historic character of the adjacent Caraleigh neighborhood.

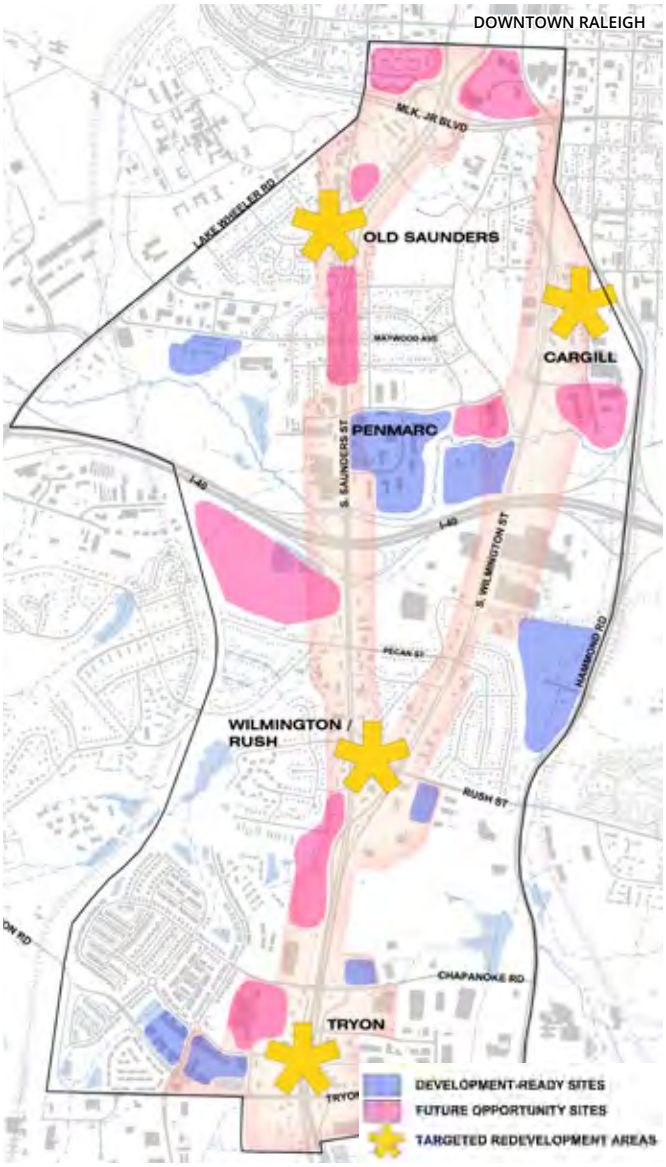
S. Wilmington / Rush will capitalize on the convergence of S. Saunders and S. Wilmington Streets to create a vibrant core, linking several isolated communities and breathing new life into this part of the study area. The strategy for this area focuses on market rate workforce housing and local service retail.

Tryon will continue to capitalize on the large number of commuters passing by each day, while better serving the Renaissance Park community. The Tryon focus area enjoys the most dynamic retail environment within the corridor. A development strategy embraces a more robust commercial and mix of uses.

Cargill represents a long-term opportunity for mixed use, primarily office, but could include light warehouse, residential, a special single use or a special civic use. Its close proximity to the downtown core represents a unique opportunity to provide quality office space at rates less costly than downtown.



Focus Areas



Opportunity and Development Sites

Concentrate Investment in Key Areas

To support the strategy of creating focus areas, public and private capital investment should be directed to selected areas to catalyze future development. This involves identifying opportunity sites within the district where development can be implemented more easily and limited funds can be channeled. The study area offers many investment opportunities for redevelopment. Four areas (indicated by yellow asterisks in the accompanying graphic) have been identified as key locations for concentrated infrastructure improvements and targeted private investment.

It is likely that investment here will continue to further market interest within the study area, and, therefore, is a priority. The diagram identifies opportunities for redevelopment of existing commercial sites, repositioning of smaller parcels into larger development parcels, and the development of raw or underdeveloped land.

Development Strategy Initiatives:

> Leverage the study area's proximity to downtown.

> Link city infrastructure investments with redevelopment priorities.

> Promote market driven development opportunities.

> Encourage new residential development.

> Introduce neighborhood retail and services at targeted focus areas.

> Concentrate public infrastructure investments around focus area locations.

Develop Image and Character

Support District Character with Urban Design Typologies

In order to reinforce the character of individual sub-districts and provide guidance for larger redevelopment projects, the following general design typologies have been identified as appropriate for different applications within the study area: Neighborhood Scale, Urban Scale, Industrial Conversion, Town Center, and Commercial Beautification.

Each of these typologies describe a character and scale of development that can accommodate a variety of uses, respond to changing market conditions, and provide flexibility. These typologies can be accommodated within the city's existing UDO zoning and street typology designations. They also inform the character of public investment in streetscape, public open space, and transit facilities.

NEIGHBORHOOD SCALE

Mid-scale development adjacent to existing neighborhoods, providing local services, entertainment, and residential development to capitalize on bike / pedestrian and transit connections. This typology strives to maintain compatibility with adjacent historic neighborhoods.

URBAN SCALE

Larger scale walkable development screens the noise and traffic from roadways. Opportunities include the Penmarc redevelopment site and other large sites along S. Wilmington Street.

INDUSTRIAL CONVERSION

Areas that can capitalize on local "maker" movement by re-purposing warehouse and light-industrial buildings at the northern edge of the district to provide unique character.

TOWN CENTER

Build on existing retail/commercial center that is emerging at Tryon Road and S. Wilmington Street with placemaking to create a more concentrated multi-modal and mixed use experience.

COMMERCIAL BEAUTIFICATION

Remaining S. Saunders Street frontage is improved by employing landscape standards, improved streetscaping, and access management to enhance safety and aesthetics.

Improve Local Interconnectivity while serving Regional Functionality

The existing transportation system presents opportunities for improving not only safety, mobility and access, but also economic vitality, neighborhood cohesiveness, environmental stewardship, and a more vibrant and healthy community via connectivity.

The imbalance between traffic load and capacity of the north-south roads within the district is the most critical realization of this study. While traffic volumes and congestion along S. Saunders Street are relatively high, they have remained stable for more than a decade. Traffic volumes have also remained steady along S. Wilmington Street and Hammond Road, the nearest parallel facilities. These two facilities, however, have significant excess capacity, with minimal or isolated occurrences of recurring congestion, which is an incredible opportunity for improving movement within the district.

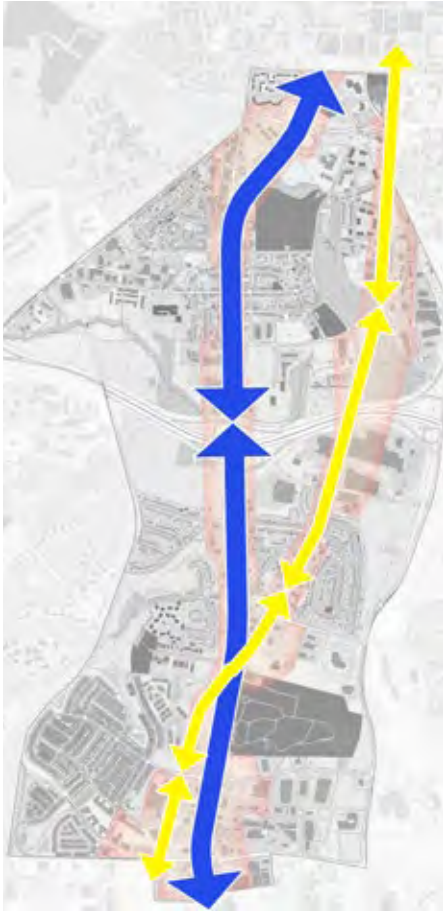
In addressing the north-south roads, there are several other issues to solve with transportation recommendations. These include reducing crashes, improving bicycle and pedestrian safety, improving the function of existing facilities, and improving east-west connections.

Past emphasis on vehicular mobility over personal accessibility can be corrected through careful coordination between transportation and land use, and thinking differently about transportation goals. During this planning process, the team examined the objectives of transportation within the corridor. For example, is the objective to move more vehicles faster and farther, or to increase access to jobs, goods, and services for more people? To what extent should environmental, social, and economic objectives be considered in addition to traditional measures of transportation system performance?

In some parts of the corridor, the existing roadway occupies large land areas and may not provide as much usable capacity as was originally intended. The land tied up in providing this "false capacity" may yield more value when reallocated for pedestrians, cyclists, transit, parking, green space, or development. Alternative designs were considered for the intersections of S. Wilmington/MLK Jr. Blvd, S. Saunders/S. McDowell/S. Dawson, and Ileagnes/S. Saunders/S. Wilmington. Opportunities between Ileagnes and Chapanoke Roads also were investigated to improve access to underutilized parcels.

S. Wilmington Street Transit Corridor

S. Wilmington Street will become a transit-intensive corridor by extending a new connection south to Tryon Road and beyond via the existing fly-over. Concentrating transit-oriented development at three appropriately-spaced nodes along this corridor (the Tryon, S. Wilmington/Rush, and Cargill Focus Areas) creates an efficient and attractive



- Commute & through trips
- Longer car & truck trips
- Higher speeds & volumes
- I-40 access
- Mobility for vehicles

- Local & commute trips
- Shorter transit, bike & walk trips
- Lower speeds & volumes
- Avoid I-40 barrier
- Access for people

alternative for commuting to downtown Raleigh and other employment areas. This concept takes advantage of S. Wilmington Street's existing, underutilized infrastructure and right-of-way, which also allows for the addition of the pedestrian and bicycle facilities needed to support transit and compatible development. The lack of an I-40 interchange becomes an advantage, eliminating associated congestion and delay.

With careful planning and design, this transit concept can be implemented in phases and can provide the basis for both local and express service, as well as feeder routes, park-and-ride, and other options.

Safety

A number of factors have led to higher-than-average rates of crashes and fatalities along the study corridor. Contributing factors include speeding traffic, abrupt changes in roadway design, numerous driveways and conflict points, and inadequate bike/pedestrian facilities and connections, especially at intersections. Reducing the number and severity of crashes, especially involving pedestrians and bicycles should be a top priority. Fortunately, many solutions that reduce safety hazards associated with traffic also yield improved walkability, community health and cohesiveness, alternative travel modes, street aesthetics, and economic vitality. In order to reduce crash rates, a number of specific steps have been identified to address this issue:

1. enhance pedestrian crossings via pedestrian-responsive intersection signal enhancements and crosswalk improvements; improved signage, markings, and lighting; enhanced bicycle and pedestrian facilities;
2. minimize conflicts through access management;
3. reduce and modulate vehicle speeds through signal coordination and narrowing of travel lanes;
4. modify transit routes and stops to reduce risk exposure in accessing transit.

It is important to maximize the safe and efficient use of existing infrastructure before adding to it. Simply adding traffic capacity will not address existing and anticipated deficiencies, and could have negative local impacts on safety, accessibility, economic vitality, environmental quality, and community character.

One obvious and effective strategy involves improving access management along the corridor by closing and consolidating driveways. This is typically accomplished in conjunction with redevelopment, but can also be implemented as part of other transportation improvement projects. Traffic capacity can also be preserved or increased by restricting turn movements, which can also benefit pedestrians and bicyclists. Traffic signals should be designed to maintain traffic steady flow at reasonable speeds, while promptly responding to pedestrian and bicycle calls with adequate crossing phases.

Improve Connectivity

It is clear from the input of residents and other stakeholders that providing a range of options for traveling to work, shopping, education, recreation, healthcare and other services is a common goal. Balanced connectivity provides alternate routes that can increase efficiency, convenience, and resilience for all modes of travel.

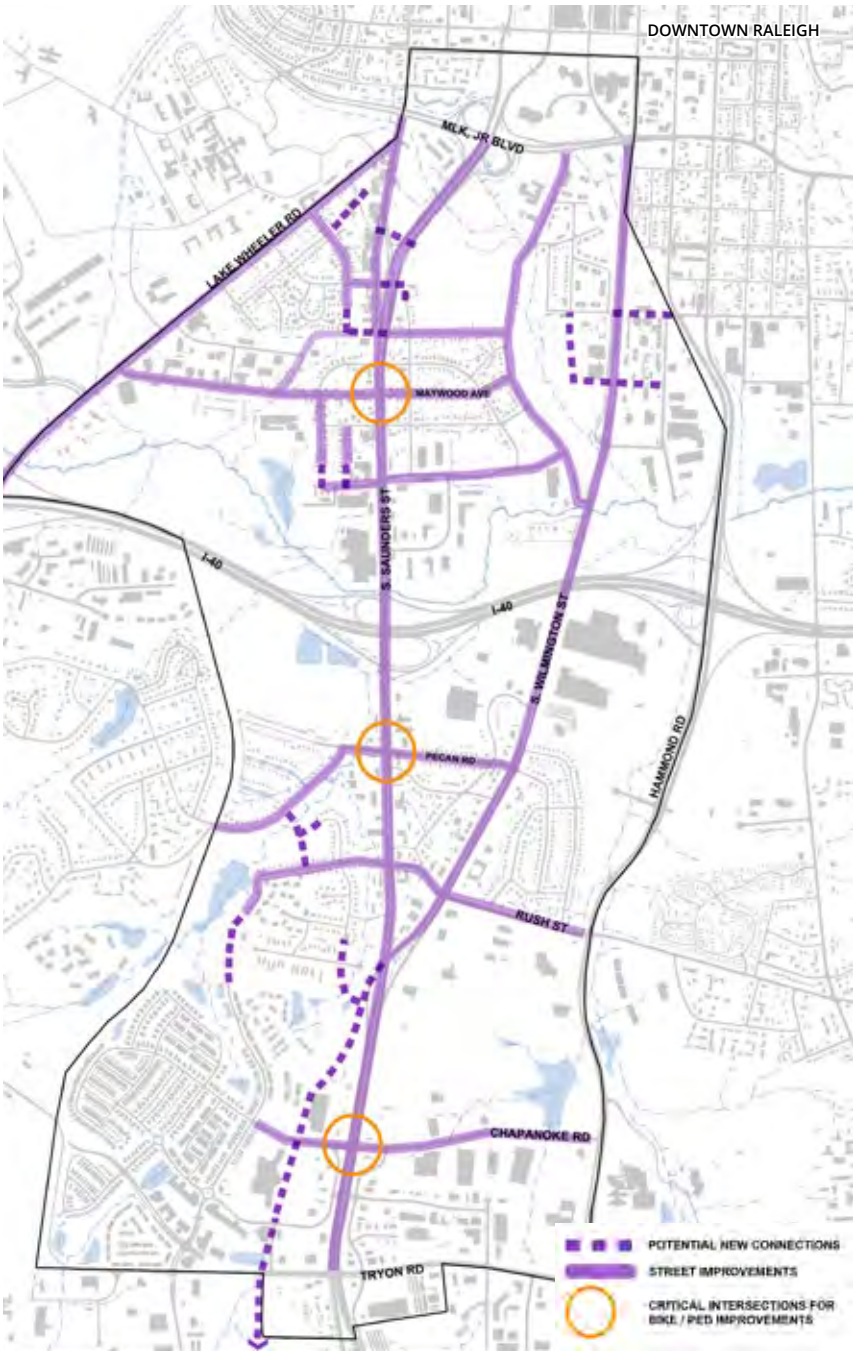
Increasing street connectivity can reduce vehicular travel, and keep local trips off major thoroughfares. This supports the addition of continuous parallel streets one block off of S. Saunders Street. This could also provide access management for businesses along S. Saunders Street, relocating turning movements to safer, more convenient signalized intersections at appropriate side streets. In addition to traffic benefits such designs also provide for more pedestrian and bicycle routes along narrower, lower speed, lower volume roads, while allowing for more efficient bus access, routing, and stop locations.

A more complete local and collector street system can also be created by extending, connecting, and supplementing the existing streets, especially with respect to east-west connectors with the intention of:

- lessening vehicle-trips and conflicts on US 401;
- creating more efficient transit routing and access; and
- providing better bicycle and pedestrian opportunities.

These efforts will increase and improve options for local access to downtown, especially for alternative modes of travel, as well as improving circulation within the broader district.

Another way to improve the north-south connectivity in the district is to enhance connectivity of pedestrian and bicycle networks. This includes adding/improving sidewalks, shared-use trails, bicycle lanes, crosswalks, grade separations, and other types of facilities and treatments.



Potential Street Connections
Increasing or improving east-west connections while also adding improved neighborhood connections will benefit safety, walkability, and connectivity within the district, while taking some burden off of the main roads.

Bike / Pedestrians Connections
Potential On- and Off-Road Bike/Pedestrian Connections.

Examples of improved access include potential bike/pedestrian links across MLK Jr. Boulevard, new sidewalks, and improved crossings. Such projects can make walking and cycling more convenient and safe, as well as improving access to transit. Other aspects of this effort involve improvements to east-west connectivity throughout the corridor for all modes of travel, and enhancing north-south connections parallel to S. Saunders Street, typically one block back.

While most opportunities for enhancing pedestrian access involve the elimination of gaps, some require overcoming the more difficult and expensive challenges posed by physical barriers, such as streams and floodplains, rail lines, I-40, MLK Boulevard, and S. Saunders Street. Careful planning and design are needed to ensure that infrastructure improvements draw enough users to justify the expense, and are attractive additions to the urban landscape.

Improve Connectivity of Trails, Parks, and Open Spaces

The existing greenway trails within the study area are a distinct asset. However, residents south of I-40 lack access to this significant amenity. In order to improve greenway and open space connectivity, linkages should be created among neighborhoods, parks, and development areas. As potential alignments and connections are identified, both public and private development can participate in the realization of on- and off-road connections to the greenway system.

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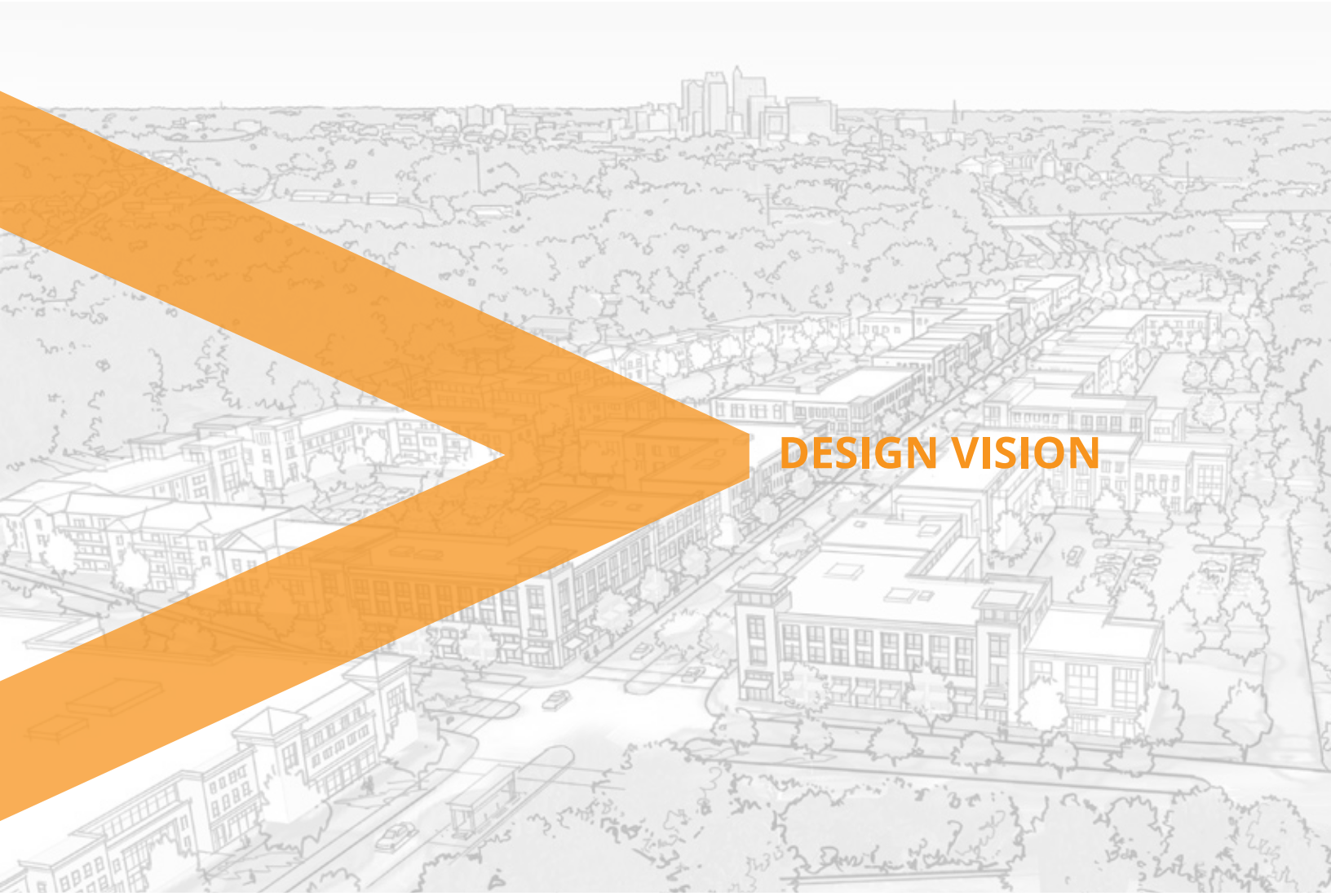
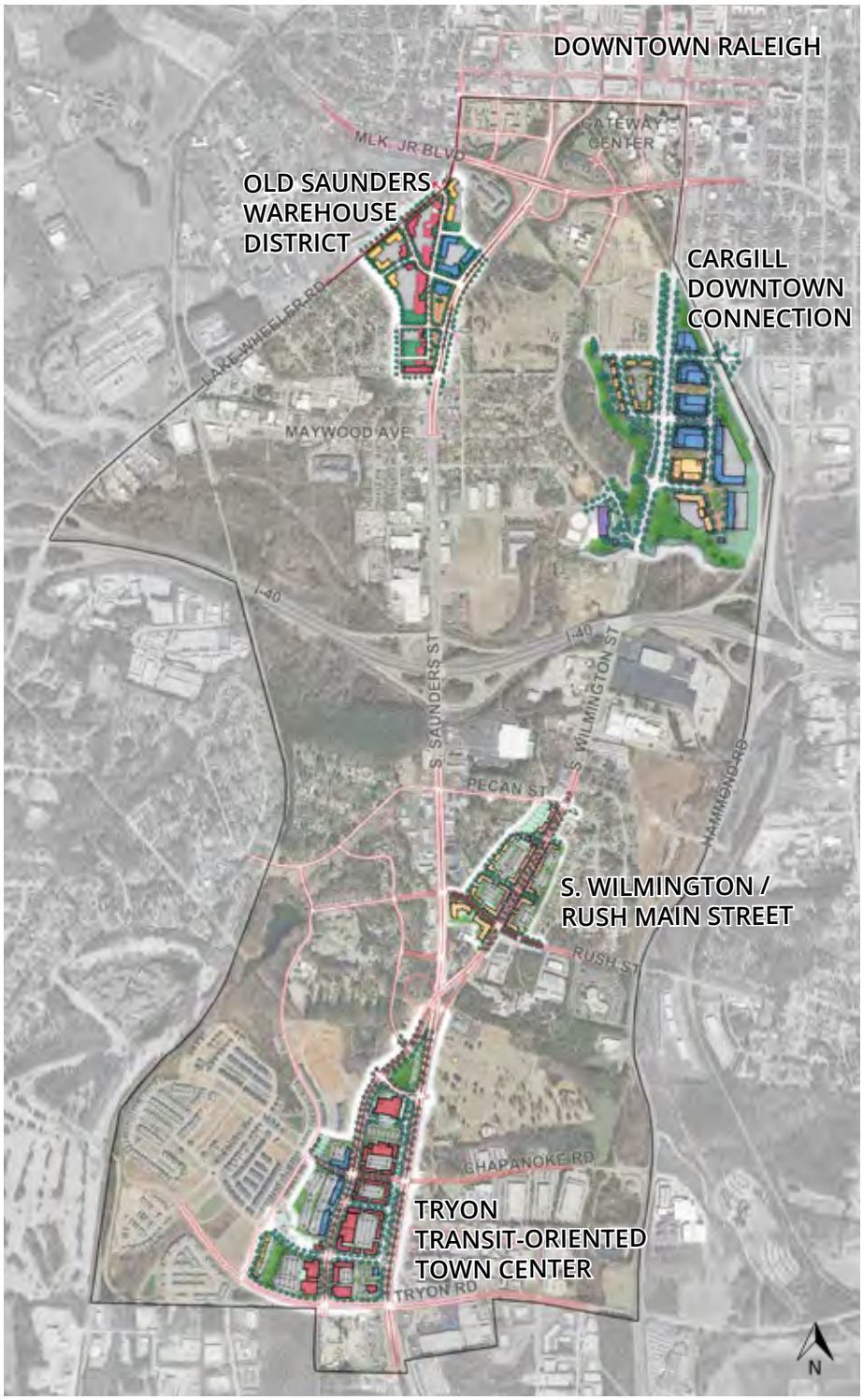


DESIGN VISION

In order to test the framework ideas developed in the previous chapter, the design team identified four nodes within the district that: 1) represent distinct development opportunities, 2) contain key transportation or infrastructure improvements, and 3) could significantly transform the image of the district.

The areas that were tested in greater detail are illustrated in the map to the right and include the old Saunders Warehouse District, Cargill Downtown Connection, S. Wilmington / Rush, and Tryon Transit-Oriented Town Center. These areas are described in greater detail with respect to their infrastructure strategy, development concept, and overall vision in the following pages.



Proposed Development Opportunities

Key recommendations:

> Conduct a more detailed feasibility study of the proposed S. Wilmington Street transit corridor, with the goal of determining:

- Potential passenger demand;
- Appropriate technology (BRT, LRT, streetcar);
- Cross-sections and ROW limits;
- Stop locations and configurations;
- Options for S. Wilmington Street flyover;
- Alignment of southward extension of S. Wilmington St;
- Service/operational characteristics;
- Traffic impacts;
- Estimated costs;
- Implementation and phasing options.

> Enhance bicycle and pedestrian connectivity along (and to) the proposed transit corridor.

> Determine appropriate building setbacks in anticipation of transit-way.

> Prepare and execute access management strategy to reduce conflict potential.

> Narrow the cross-section of S. Saunders Street to what exists south of Maywood Avenue, transform this segment of S. Saunders Street from an expressway to a boulevard, free up land east of Old Saunders, encourage slower traffic speeds, and improve conditions for pedestrian, bicycle, and transit modes.

S. Wilmington Street Transit Corridor

The idea of a dedicated transit corridor along S. Wilmington Street has been explored in the Wake Transit Investment Strategy and Plan, and the City of Raleigh's 2015 Transit Technology Feasibility Study with encouraging results. Following a successful sales tax referendum in November 2016, a consultant lead study will evaluate how best to invest in and deploy transit service in this corridor as well as implementing the entire transit plan. The Southern Gateway Corridor Study differs from these previous efforts in that it is not primarily a transit (or even a transportation) study. Instead, it focuses on redevelopment and urban design as means to enhance livability and economic vitality throughout the study area. Transportation is considered with respect to its role in promoting—or obstructing—the desired transformation. Nevertheless, the findings of this study suggest that the nature, magnitude, and locations of the desired development are supportive of high-quality service along the S. Wilmington Street corridor.

This study reaffirms earlier findings that S. Wilmington Street provides certain advantages over S. Saunders Street as a potential transit corridor. (Note that a proposed commuter rail line along the eastern edge of the study area would serve a distinctly separate market.) Existing development, heavy traffic volumes, numerous access conflicts, and right-of-way constraints limit the potential effectiveness of S. Saunders Street as a dedicated transit corridor, and greatly increase costs. S. Wilmington Street presents better opportunities for transit-supportive redevelopment, fewer access conflicts, wider existing right-of-way, and lower existing and future traffic volumes. The lack of a direct interchange with I-40 is actually an advantage for effective transit service in this corridor, eliminating associated congestion and delays. Rather than competing with traffic on S. Saunders Street, more efficient transit service along S. Wilmington Street would help divert trips off S. Saunders Street. A dedicated transit-way along S. Wilmington Street could better integrate with and enhance the overall transit system, and should be able to do so more cost-effectively.

Previous studies have considered various transit technologies in the corridor: bus rapid transit (BRT), light rail transit (LRT), and trolley. This discussion focuses on BRT; due to its flexibility, lower typical cost, and suitability for anticipated demand levels, this technology seems most appropriate given the length and nature of the corridor. The flexibility of BRT results in a far greater

range of options in terms of configuration and implementation, key elements of which are described. Evaluation of various technologies is beyond the scope of this plan (and is addressed in other studies). However, the BRT concept developed here is highly consistent with LRT or streetcar service; this compatibility would allow for other technologies to be introduced with minimal alteration or additional impacts. While more detailed analysis will be needed to refine designs and make a final decision, the concept presented in this study captures the critical issues encountered in planning for any such project.

The Southern Gateway Corridor Study introduces a critical new element to the S. Wilmington Transit Corridor concept: extending S. Wilmington Street southward after it crosses S. Saunders Street at the existing flyover, which would be reconfigured to maintain existing connectivity. While additional analysis is required to determine how best to achieve this crossing, and to what degree the existing bridge could be adapted for interim or long-term use, the concept appears feasible. Ideally, the southward extension of S. Wilmington Street west of S. Saunders Street would be integrated with transit-oriented redevelopment of commercial and vacant properties east of Renaissance Park. This would provide a competitive option for commuters, helping to relieve congestion on S. Saunders Street by both generating less traffic and providing an alternate local traffic route. This location could also provide convenient park-and-ride service. Eventually, this transit corridor could be extended further south to serve western Garner and points beyond.

For the purposes of this discussion, a center lane bus-way system is assumed, with stops in the Tryon, S. Wilmington/ Rush, and Cargill Focus Areas. The distance between the proposed stops is approximately 1 mile, as is the distance from a potential Cargill stop and Moore Square Station. Proposed stops would be located near key intersections to facilitate pedestrian access. To minimize overall facility width, platforms could be directionally staggered, located on the far side of each intersection, between the bus lane and the adjacent general traffic lane of the same direction, as shown in the accompanying photo and rendering. Alternatively, stations could be paired at the same location, increasing the corridor width.

Depending on traffic volumes, only a single general traffic lane may be required in each direction, with additional turn lanes at intersections. This would require minimal construction beyond the existing edge of pavement. Adding a traffic lane and/or

Proposed S. Wilmington Street Transit Corridor

features such as a wide median, on-street parking, bike lanes, wider sidewalks, or planted buffers would obviously extend beyond the existing footprint; however, available right-of-way (typically 200'-250' throughout the corridor) could accommodate many combinations of these features. In addition to minimizing bus conflicts with turning traffic, the flexibility to incrementally add such features without disrupting BRT infrastructure is a significant advantage to initially locating bus lanes and platforms in the center of S. Wilmington Street.

Another potential advantage is that the bus way preserves a corridor that could someday be converted to LRT, should such a change ever be desired. However, it is not clear that the existing bridges over S. Saunders Street and the Norfolk Southern rail line are structurally sufficient to carry LRT loads.

The proposed BRT service could evolve in a number of ways, depending on how development proceeds. Given the relatively low volume of traffic on this 4-lane facility, buses could initially run in mixed traffic, possibly with queue jumping or signal preemptions to minimize delay at intersections. Faster, higher-frequency service could be implemented, but stops would be spaced further apart, and would require better pedestrian access and comfortable, well-designed, carefully-located bus shelters.

The next step could be conversion of the two center lanes to dedicated bus lanes. This could be accomplished with pavement markings and coloration plus signage to delineate bus lanes, or by installing physical barriers such as medians, bollards, or Jersey-barrier type walls. Treatments could vary along the corridor, and the entire length of the corridor would not need to be converted to provide benefits; incremental implementation of key segments could add substantial value in terms of reliability and reduced travel times. The ultimate design could conceivably incorporate a mix of center lane, mixed traffic, and/or outer lane treatments, depending on local context. Special intersection and signal designs would be required in most cases.

Examples of Dedicated Bus Lanes & Stations
(top) US Route 1, Alexandria, VA Source: NACTO Credit: BeyondDC[1]
(middle top) RUTA Puebla[1]
(middle bottom) Healthline BRT stations on Euclid Avenue, Cleveland, OH[1]
(bottom) Median bus stop, Minneapolis, MN

1 *Sources: NACTO; Transit Street Design Guide,* National Association of City Transportation Officials, April 2016 - see more at: http://islandpress.org/book/transit-street-design-guide#sthash.Wzg2WeEn.dpuf

Concentrating on the S. Wilmington Street corridor's three proposed development nodes allows for rapid, high-quality transit service with minimal stops. At the same time, local bus service could also benefit from BRT infrastructure by sharing the dedicated bus-way or interlining routes. Implementing this transit corridor concept would lead to substantial changes to bus service in the study area, especially if other recommendations from this study are implemented. Improved connectivity in the street network would allow for more efficient bus routing outside of the transit way.

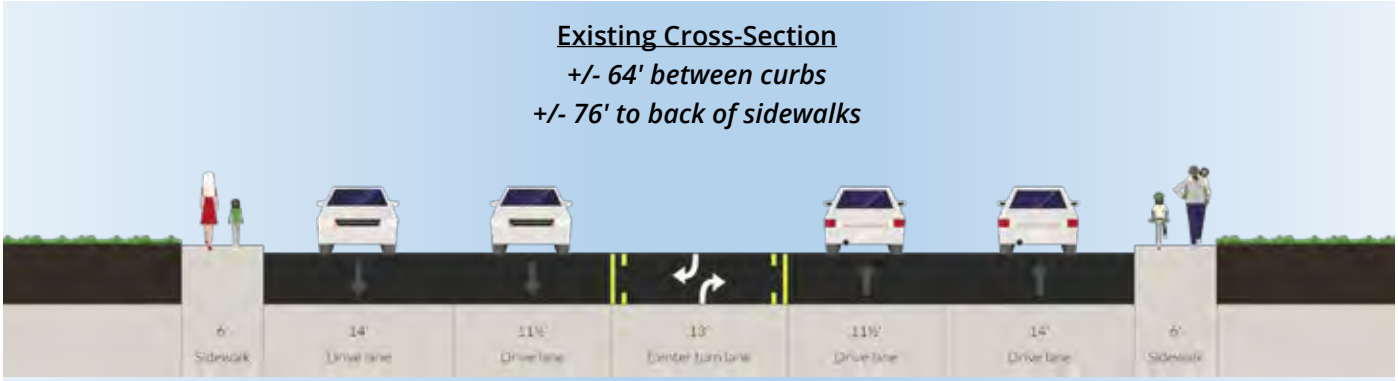
Bicycle and pedestrian enhancements are essential to the success of the proposed S. Wilmington Street Transit Corridor. Not only are safe and convenient bike and pedestrian access critical to transit ridership, they are key to the vitality of the denser mixed use development intended for the focus areas. Therefore, bicycle and pedestrian connectivity must be integrated into planning and design of both the transit system and its adjacent development, and this access must be sustained throughout the various stages of implementation. Accomplishing this may require interim or short-term measures, and appropriate solutions may vary along the corridor, depending on surrounding conditions.

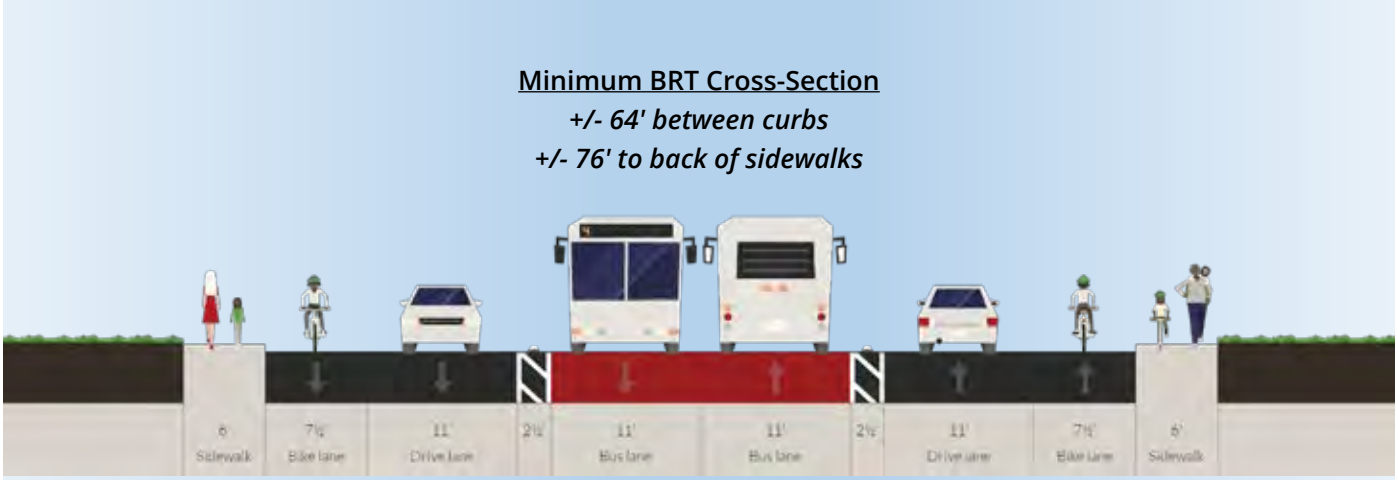
For example, bike lanes or cycle tracks may be suitable along developed segments with adequate width and reasonable traffic volumes and speeds. A side path/multi-use trail along only one side of the roadway may be more appropriate in other areas. Bikes may share lanes with general traffic in more densely developed "urban" areas with low traffic speeds and on-street parking; or bike routes could follow parallel streets a block off of S. Wilmington Street, where vehicle speeds and volumes would be even lower.

Examples of possible interim and ultimate cross-sections follow. These cross sections depict typical existing conditions and potential future configurations along four segments of S. Wilmington Street. The examples shown are simple representations intended to demonstrate relative impacts and "proof of concept." Final details will be determined through the design process.

North of Cargill

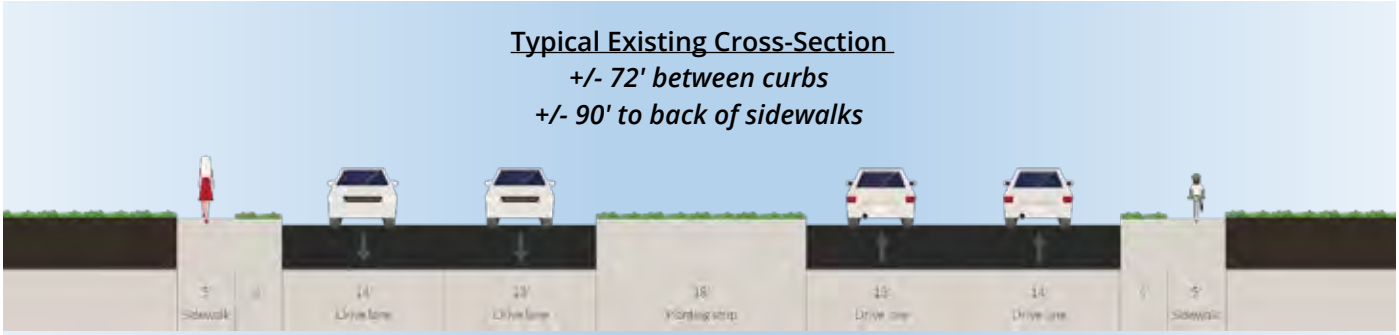
The cross-section of S. Wilmington Street between MLK, Jr Blvd and the Cargill plant entrance is constrained by the width of the railroad overpass. Combined with limited redevelopment and access opportunities, there is little benefit gained by widening the existing roadway cross-section, although there are opportunities for enhanced streetscape and sidewalks. Two general-purpose travel lanes are shown, with appropriate turn lanes included as needed at intersections. Four general traffic lanes could be accommodated, if warranted; however the indicated bicycle lanes would be sacrificed.

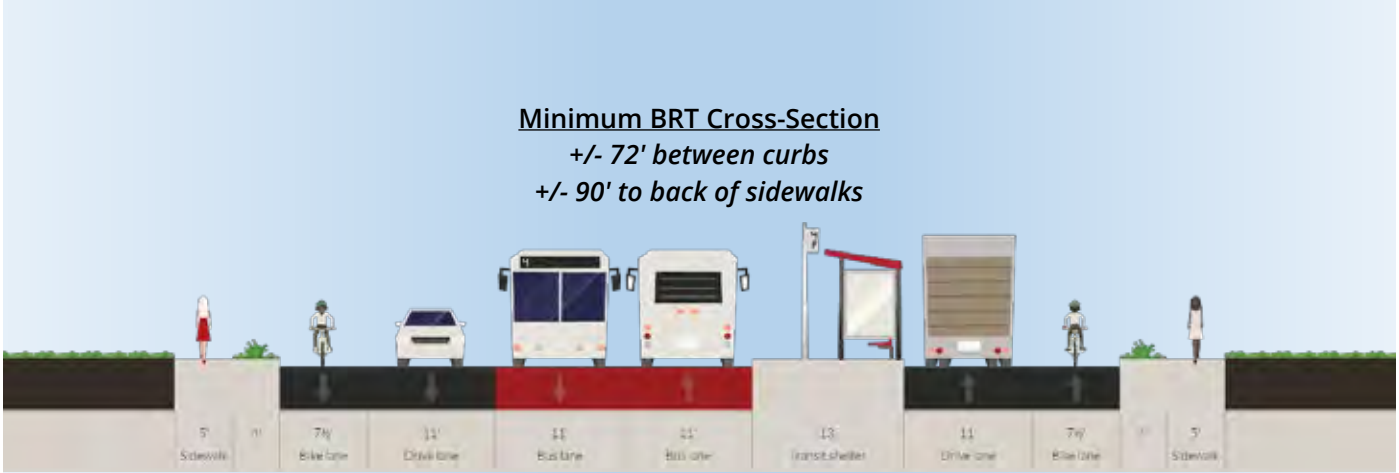


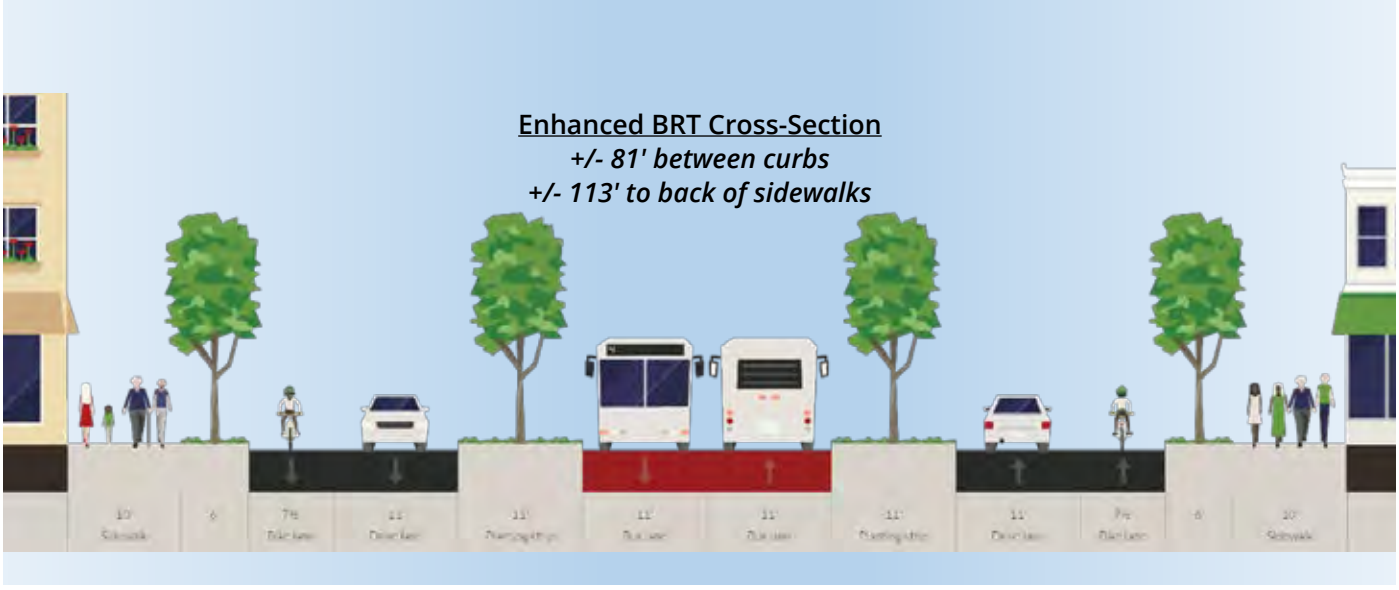


Cargill to Walker Street

Dedicated bus lanes and in-street/median stations could be accommodated within the existing S. Wilmington Street cross-section between the Cargill entrance and Walker Street. With minor widening, significant improvements could be introduced, as indicated in the "Enhanced BRT" versions below. Two general-purpose travel lanes are shown, with appropriate turn lanes included as needed at intersections. Four general traffic lanes could be accommodated within the available right-of-way, if warranted, as could on-street parking and/or off-street bicycle facilities.

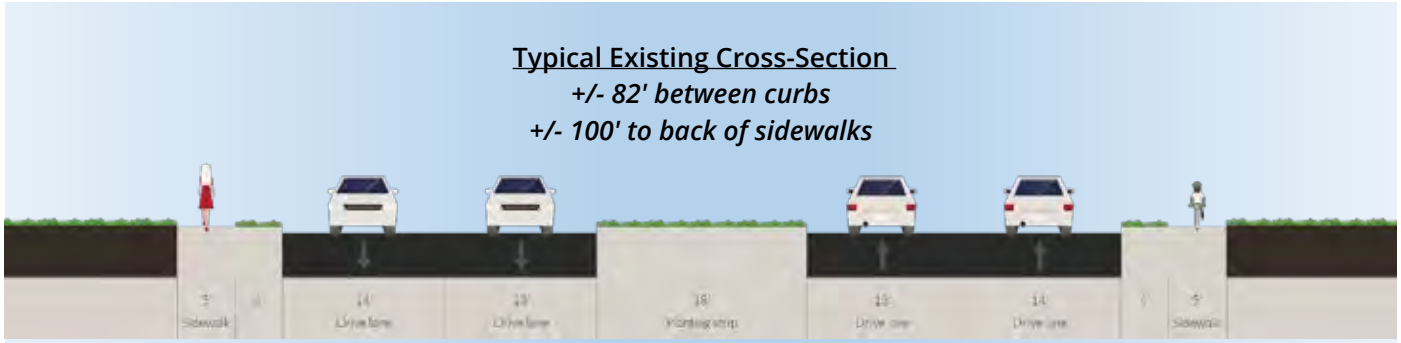


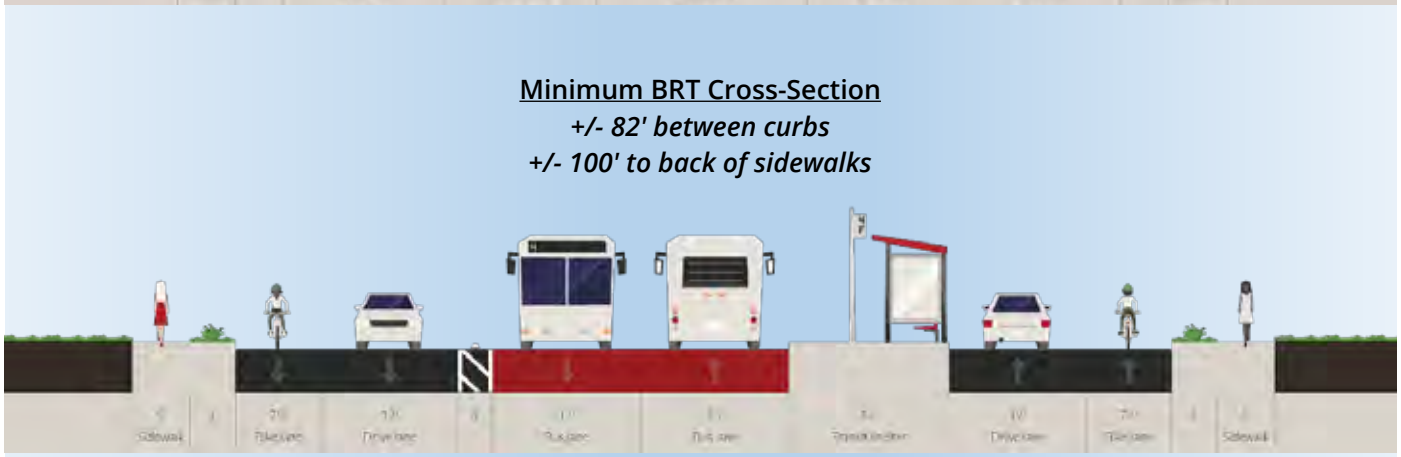


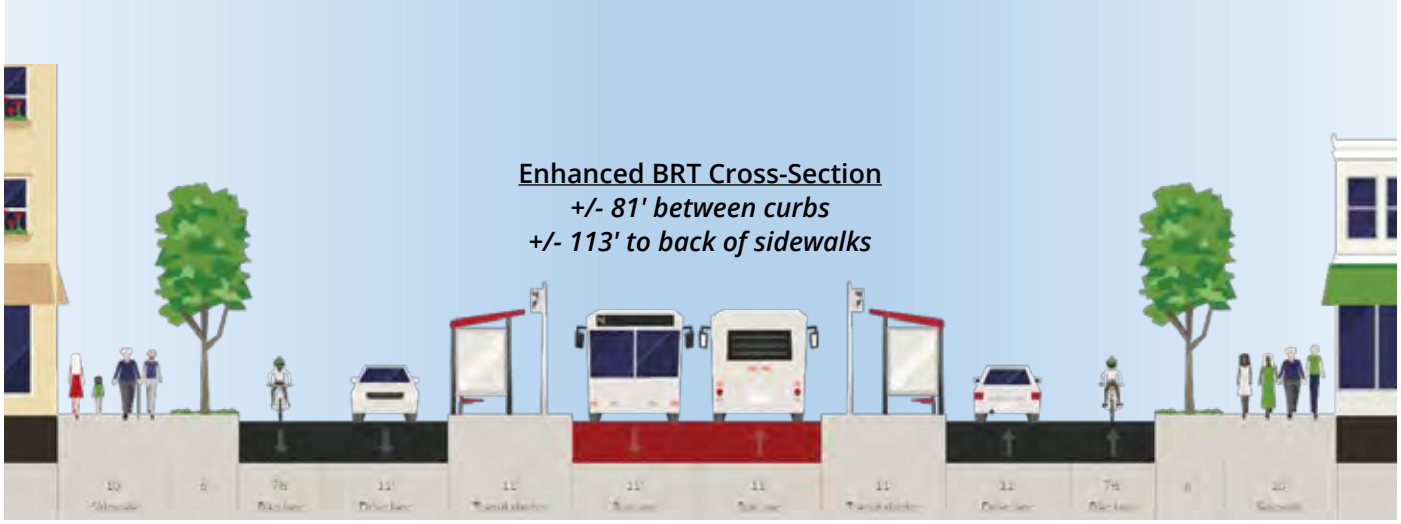


Walker Street to S. Saunders Street

Dedicated bus lanes and in-street/median stations could be accommodated within the existing S. Wilmington Street cross-section between Walker Street and S. Saunders Street. With minor reconstruction, significant improvements could be introduced, as indicated in the "Enhanced BRT" versions below. Two general-purpose travel lanes are shown, with appropriate turn lanes included as needed at intersections. Four general traffic lanes could be accommodated within the available ROW, if warranted, as could on-street parking and/or off-street bicycle facilities.



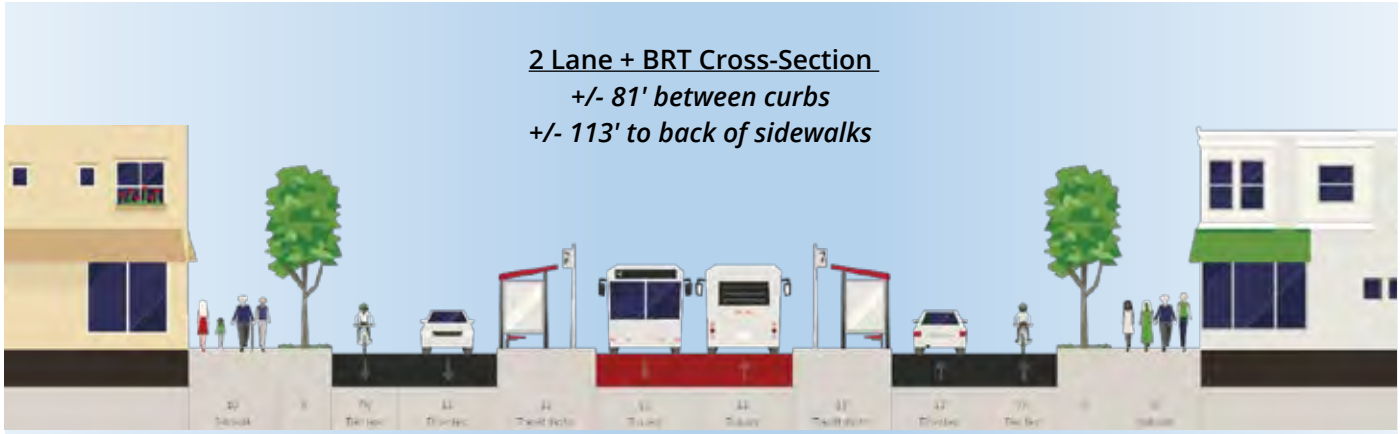


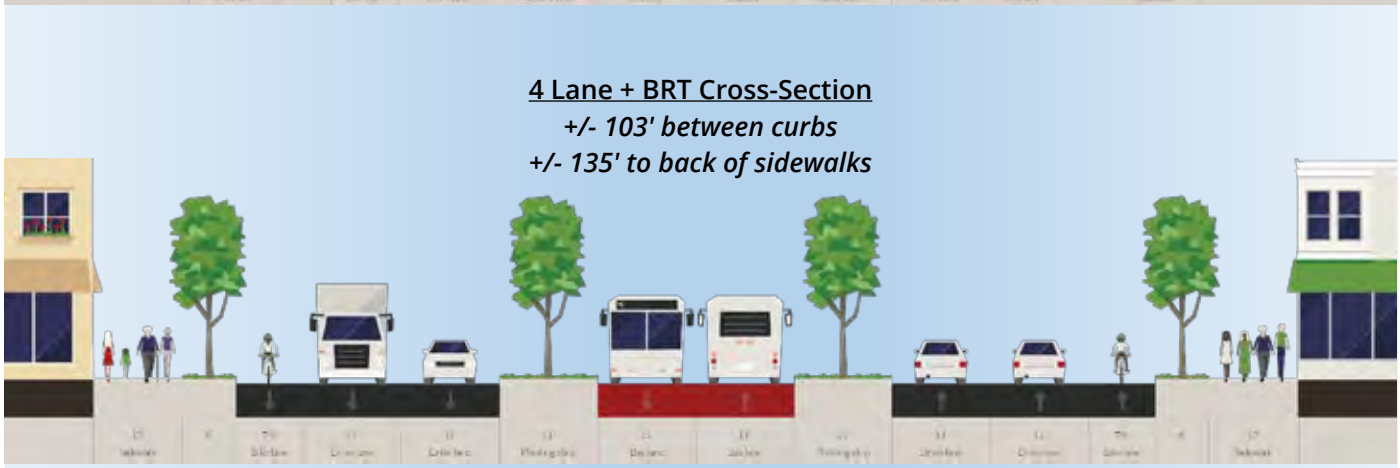


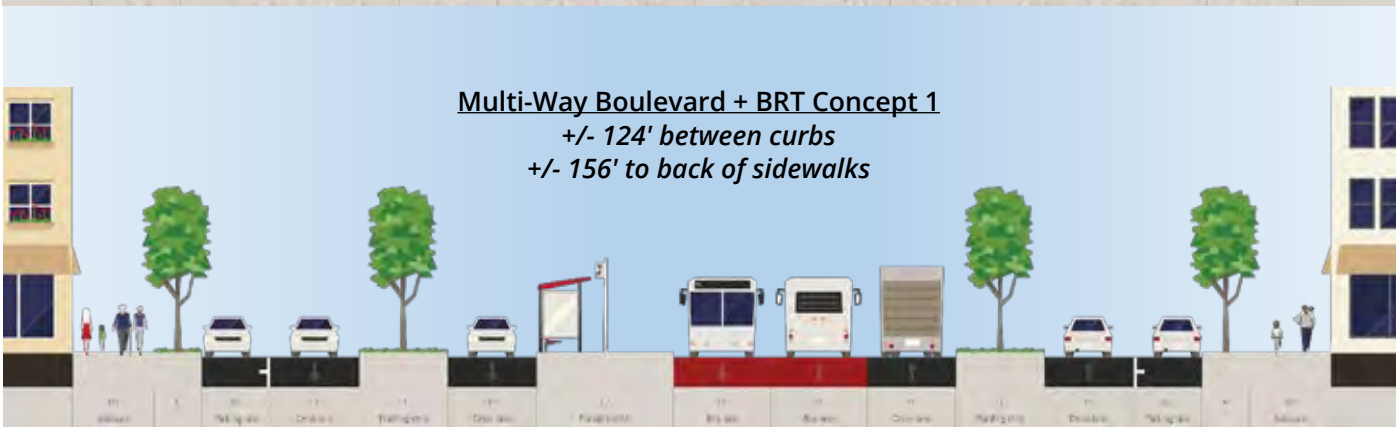
S. Saunders Street to Tryon Road (S. Wilmington Street Extension)

The proposed extension of S. Wilmington Street on new alignment provides a range of options for street cross-sections and busway/station configurations. The upper two alternatives shown below illustrate ROW requirements for 2 and 4 general traffic lanes.

The two lower alternatives depict the much wider cross-sections associated with the Raleigh UDO's Multi-Way Boulevard classification. These cross-sections could also be implemented between S. Saunders Street and I-40, if desired.







Old Saunders: Warehouse District

Transportation

The potential transformation of Old Saunders focus area hinges on the "taming" of S. Saunders Street between Maywood Avenue and the Martin Luther King, Jr Boulevard interchange. The current expressway-type design of this short segment severely limits opportunities for redevelopment of the Old S. Saunders area by imposing a number of detrimental impacts:

- High traffic speeds and substantial acceleration /deceleration create noise and deter pedestrian travel.
- The existing intersection of S. Saunders Street / S. McDowell Street / S. Dawson Street does not provide full access for all traffic movements, occupies a substantial land area, and is both difficult and unsafe for pedestrian and bicycle travel.
- The high-speed design limits access and provides limited opportunity for crossing, whether by foot, bicycle, or automobile. The broad median, long tapers, and wide lanes and paved shoulders consume considerable land, and locate high-speed traffic closer to existing/potential development.

The redevelopment of the Dorothea Dix Property as a major destination park will place additional pressure on the west side of this focus area. Lake Wheeler Road will serve as both a boundary and a main access route to the park, and is envisioned as a major bicycle and pedestrian corridor.

Key recommendations:

> Extend and connect neighborhood streets, such as Fuller Street, Curfam Street, Grissom and Prospect Avenue, to create smaller blocks and a well-connected street grid.

> Redesign the S. Saunders Street / S. Dawson Street / S. McDowell Street intersection to create a signalized T-intersection, reducing the footprint of the intersection while providing fully-directional vehicular access and better crossing opportunities for bicyclists and pedestrians.

> Create a four-legged intersection at Hammell Drive and S. Saunders Street.

> Convert old S. Saunders Street between Lake Wheeler Road and Prospect Avenue to a 2-lane urban street with on-street parking and re-brand as "Old Saunders".

> Extend and connect Fuller Street to Summit Avenue and Prospect Avenue to Fuller Street to create an additional block and increase connectivity in the Old S. Saunders neighborhood grid.

> Extend Grissom and Green Streets eastward to provide partial access to S. Saunders Street.

> Reconfigure the intersection of Lake Wheeler Road and S. Saunders Street to favor the heavier through movement along Lake Wheeler Road and include access to Dorothea Dix Park via a realigned Umstead Drive.

> Improve Lake Wheeler Road north of Maywood Avenue in conjunction with the proposed Dorothea Dix Park project, creating a compatible roadway with enhanced bicycle and pedestrian connectivity.

> Provide bike / pedestrian facilities along Lake Wheeler Road.

> Provide a shared-use path east of S. Saunders Street, connecting the Rocky Branch Trail with Prospect Avenue and points south.

> Determine the preferred configuration of Hammell Drive in conjunction with planning for Dix Park.

Proposed Roadway Changes
The changes detailed above strive to improve access for all modes of travel into downtown from the study area.

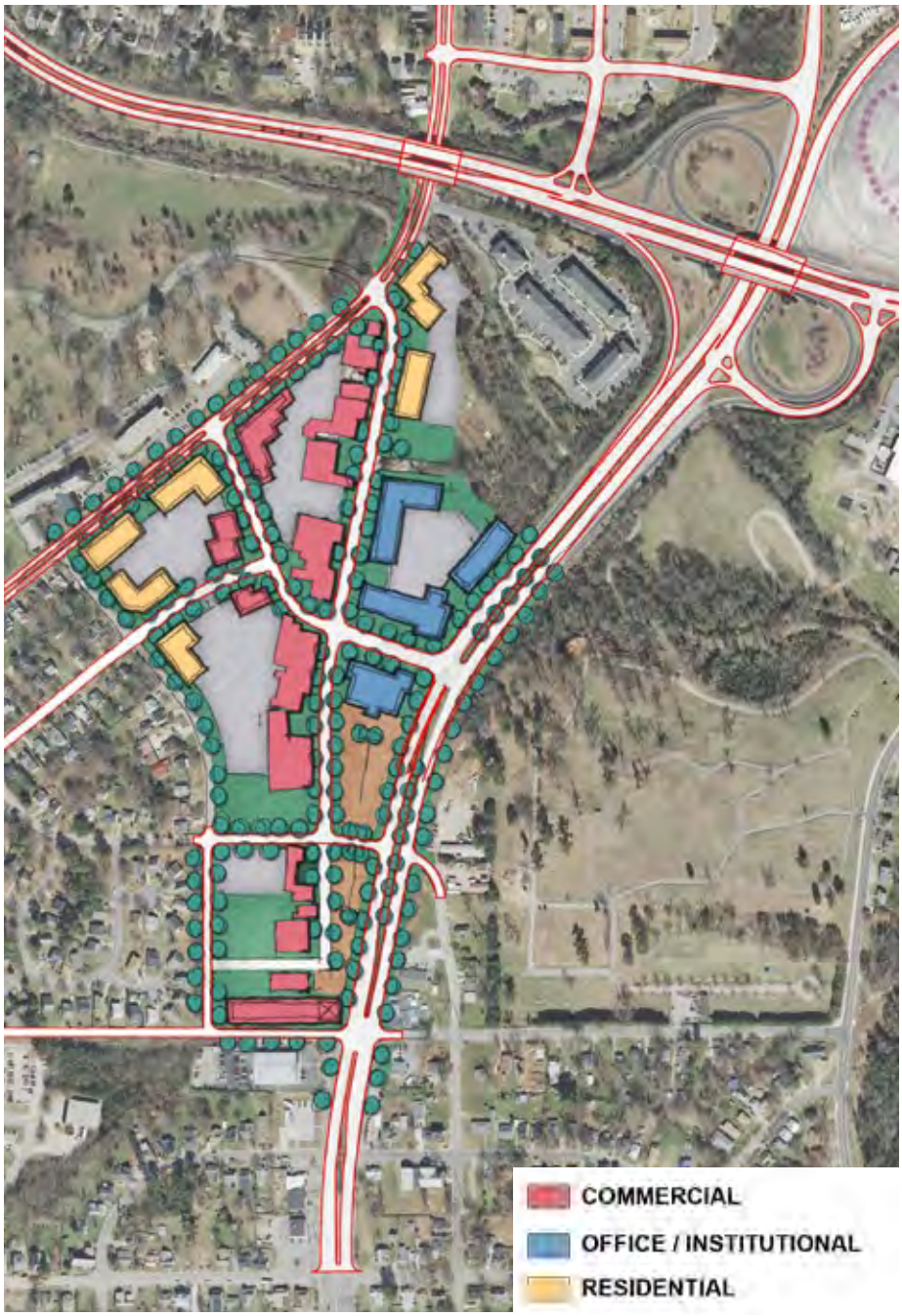
Development

The development concept for the Old Saunders focus area is to capitalize on the new open space created by the realignment of streets to improve redevelopment options, provide a 2-lane "main street" with parallel parking and bike lane along S. Saunders Street and create a plaza / event space fronting S. Saunders Street that can also serve as off-street public parking to support adjacent retail and office uses. Establishing a new street section will support the creation of a substantial and programmable public market square that can also double for parking. This not only serves as a forecourt to the existing businesses along Old Saunders, but can also help attract "maker"-oriented businesses seeking inexpensive raw space close to downtown and transit.

Additional developable parcels between Old S. Saunders Street and S. Dawson Street (southbound) can be built out with a mix of office and service uses, creating an attractive backdrop to the plaza /event space as well as a welcoming gateway to downtown Raleigh.

Parcels along Lake Wheeler Road could be developed with high-density multi-family housing as a complementary use to take advantage of the proximity to Dorothea Dix

Development Yield - Saunders Focus Area		
Use	***Est. Yield***	
Commercial	30,000	GSF
Office / Institutional	200,000	GSF
Residential	350	DU
Adaptive Re-Use	110,000	GSF



Illustrative Perspective of a 'Maker's Market' in the plaza / event space created by the reworking of roadways in this focus area.

Design Characteristics:

> Industrial "chic" warehouse conversion

> "Maker" / Tech start-up district

> Downtown gateway opportunity

> Specialty Retail / Office anchor

> Shared programmable plaza / parking / event space

> High density residential along Lake Wheeler Road / Dorothea Dix Park frontage

> Lake Wheeler as major bike / pedestrian corridor

Cargill: Downtown Connection

Transportation

While bounded by S. Wilmington Street, Hammond Road, and I-40, access to the Cargill site is limited by railroad tracks, streams, terrain, and driveway connectivity constraints. Successful redevelopment as envisioned in this plan will require significant access improvements, especially for pedestrians, bicycles, and transit.

Key Recommendations:

> Convert S. Wilmington Street to a major transit corridor and locate a major transit stop in this immediate vicinity.

> Improve bicycle and pedestrian connectivity along, across, and to/from S. Wilmington Street linking to routes proposed in BikeRaleigh plan. This could include a grade-separated bike and/or pedestrian crossing in the long-term at Hoke Street under S. Wilmington Street or a future pedestrian/bike connection or roadway connection below elevated Wilmington Street.

> Provide alternative bicycle and pedestrian routes outside the immediate Wilmington Street corridor, including convenient connections to Fayetteville Street and its potential grade-separated crossing of MLK, Jr Boulevard.

> Connect and extend the existing street grid to enhance continuity.

Illustrative perspective of the shared common space within the office cluster.

Development

Of all the study areas, this is the most speculative from a development timing perspective. While development may be many years out, this site represents one of the last few major redevelopment areas within the downtown catchment. Moreover, redevelopment along this stretch of S. Wilmington Street has the potential to provide a much more positive context for the Walnut Terrace housing redevelopment and neighborhoods to the east. Development of this scale can have a positive effect on the safety of the Rocky Branch Trail by providing increased traffic and visibility. Much of the property is currently in industrial use by Cargill and in warehouse use by commercial businesses. The City of Raleigh has operational uses on significant parcels in the land area.

Development Yield - Cargill Focus Area		
Use	***Est. Yield***	
Office / Institutional	700,000	GSF
Residential	200	DU
Industrial / Adaptive Re-Use	30,000	GSF

Design Characteristics:

> Office alternative proximate to CBD at more competitive rents.

> Mixed use with a high density residential component.

> Flex space opportunities / office / light warehouse.

> Connect to city street grid.

> Transit stop and bike / pedestrian corridor.

> Potential civic use.

S. Wilmington / Rush: Main Street

Transportation

The recommended transportation improvement with the greatest potential for catalyzing redevelopment of the S. Wilmington Street Focus Area is the conversion of S. Wilmington Street to a major transit corridor, with greatly enhanced bicycle and pedestrian facilities and connections. This concept takes advantage of S. Wilmington Street's existing wide right-of-way and underutilized roadway capacity to allow for redevelopment that supports alternative transportation modes. This proposal cannot be viewed as a single project, but must be treated as an integrated system.

Key recommendations:

> Reduce the roadway cross-section to primarily one through-traffic lane per direction, with additional turn lanes as needed.

> Dedicate a transit travel-way for bus rapid transit (BRT), or other technology. Transit way and stations could be located either in the median or along the outsides of the roadway cross-section.

> Develop a major transit hub and supporting access infrastructure in the vicinity of Pecan Road or Rush Street.

> Construct wider sidewalks and appropriate bicycle accommodations, whether on-street or off-street in accordance with the BikeRaleigh Long Term Bikeway Plan.

> Provide on-street parking where suitable.

Development

Once the S. Wilmington Street Extension has been redesigned to better accommodate automobiles, bicycles, pedestrians, and transit riders, the framework will be in place to develop a mixed use, walkable district. Auto-oriented commercial uses could be replaced with urban scale development, adding ground-level store fronts that can provide much needed services for the adjacent neighborhoods. Upper stories of these buildings can be used for multi-family residential to provide high-quality rental housing that can attract tenants interested in a short commute to downtown.

Development Yield - S. Wilmington / Rush Focus Area	
Use	***Est. Yield***
Commercial	140,000 GSF
Residential	500 DU

Illustrative perspective of the pedestrian-oriented streetscape with residential units over retail

S. WILMINGTON/RUSH: MAIN STREET
AERIAL PERSPECTIVE

Aerial perspective of S. Wilmington Street Main Street character: pedestrian-oriented streetscape with center bus-way with median platforms

Key recommendations:

> Achieve a better balance in serving through-traffic versus local motorized/non-motorized trips by more safely and effectively managing conflicts at driveways and intersections. Recognizing that higher speeds do not ensure greater capacity, use techniques such as adaptive signal timing to help maintain steady traffic flow at reasonable speeds. Access management and restricting/eliminating critical turning movements can reduce both pedestrian and vehicular conflicts. By preserving throughput at lower speeds, a comprehensive package of such measures can support narrower lane widths and smaller intersection footprints with shorter pedestrian crossing distances.

> Support NCDOT plans to convert the intersection of Timber Drive and US 70 to an interchange to reduce recurring delay at this location. Use wayfinding to encourage use of Hammond Road as a convenient alternative to S. Saunders Street.

> Develop a major transit hub and supporting access infrastructure with the conversion of the flyover to facilitate the S. Wilmington Street Extension to Tryon Road, and potentially to Garner Station Boulevard.

> Create a more robust street network providing alternate routes and reducing the need for short or east-west trips to use US 401. Bicycle and pedestrian options would also be improved, and more efficient transit routing and access provided. Specific recommendations with direct impacts on the Tryon Road Focus Area include:

- Completing the connection of Ileagnes Road
- Connecting Ileagnes Road and Carolina Pines Avenue
- Improving and extending Junction Boulevard and/or Grennell Street southward to Garner Station Road
- Extending Wyncote Drive to S. Wilmington Street Extension
- Conduct a detailed study of the Wilmington Street extension to determine how the interchange with S. Saunders should be configured and if grade separations

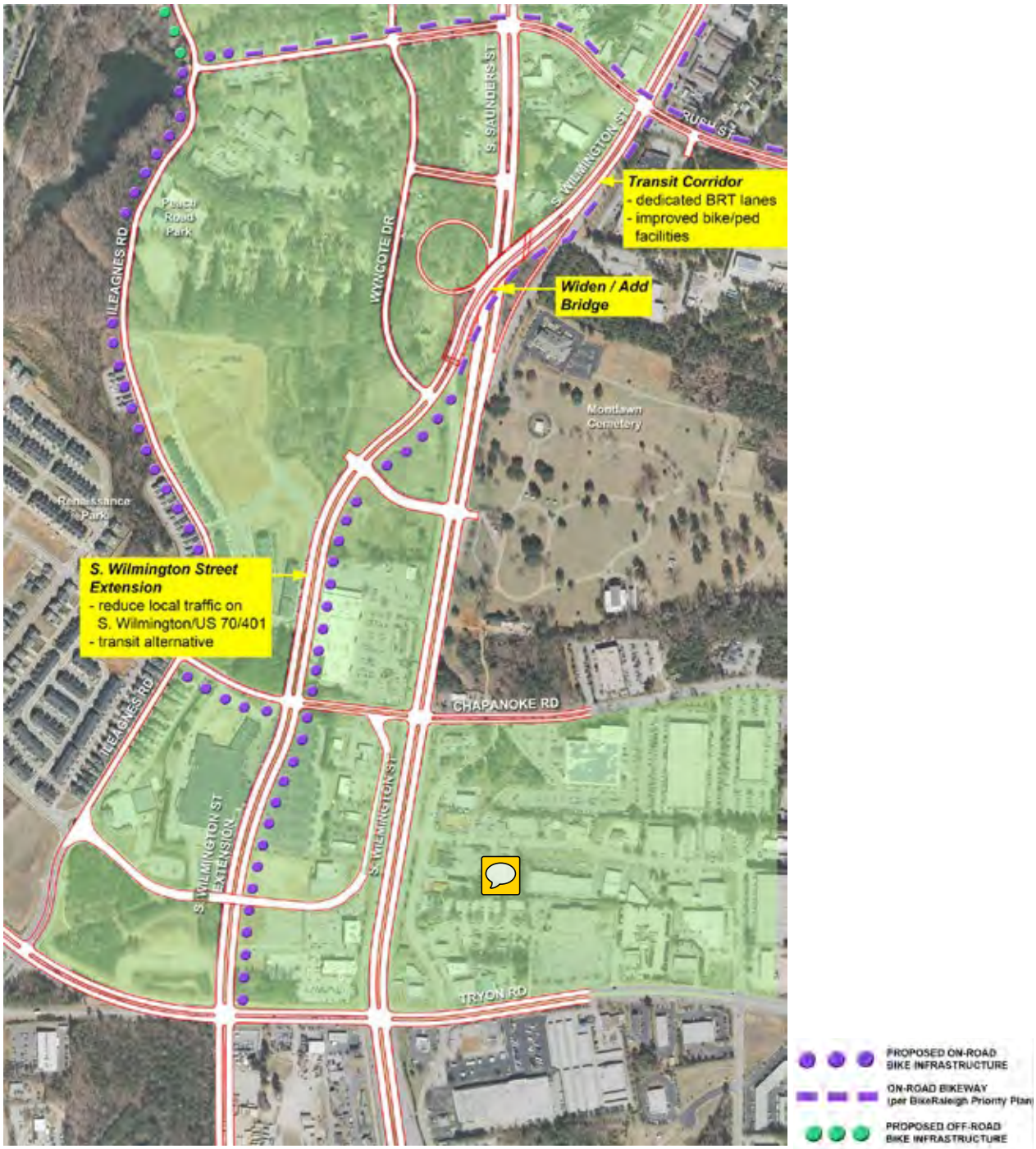
Tryon: Transit-Oriented Town Center

Transportation

The one location in the study area experiencing significant traffic growth--and severe delays due to congestion--is the intersection of Tryon Road and US 70/401. Improvements to Tryon Road, coupled with additional development, are expected to further increase traffic in the future. Although the capacity of this intersection could be increased by widening or conversion to an interchange, such a solution would be very expensive in terms of construction costs and negative impacts on adjacent development, both existing and future. Furthermore, capacity bottlenecks immediately north and south of this intersection (at Chapanoke Road and Garner Station Boulevard) would severely temper any benefits to traffic flow.

Eliminating congestion at Tryon Road would have the perverse effect of delivering more traffic to these choke-points in less time, in effect merely relocating the congestion. To be effective, major capacity improvements would be needed along the entire length of US 70/401 in the study area. Such a solution would be prohibitively expensive and disruptive to the surrounding community, impairing access and development, and ultimately undermining the goals of this planning effort. The end result would be a significant increase in the volume and density of traffic arriving in downtown Raleigh, where options for increasing roadway capacity are even more constrained.

A more effective strategy for dealing with this traffic involves a coordinated set of diverse measures to distribute traffic across parallel facilities to reduce traffic congestion and volumes on US 70/401. The most critical element of this approach is the extension of S. Wilmington Street on new alignment south to Tryon Road. This facility would cross S. Saunders Street at the existing flyover location, continuing southward on the western side. Not only does this new facility divert local traffic from US 70/401, it also provides an alternate route for northwest Garner traffic. The conversion of S. Wilmington Street to a dedicated transit corridor with enhanced bicycle and pedestrian facilities provides yet another option for reducing traffic on US 70/401.



Proposed Roadway Changes
The changes detailed above are intended to improve access for all modes of travel at the southern end of the corridor.

Development

There is already much development underway around the intersection of S. Wilmington Street and Tryon Road. The vision for this area suggests capitalizing on the energy and market potential here by extending S. Wilmington Street as a central spine for new, commercial, and transit-oriented development. A fresh mix of retail, office, and apartments could complete the Renaissance Park development with a bustling town center, replete with services, shops, and a viable transit hub including a park-and -ride facility.

Development Yield - Tryon Focus Area	
Use	***Est. Yield***
Commercial	575,000 GSF
Office / Institutional	250,000 GSF
Residential	400 DU

Illustrative perspective of the Town Center pedestrian-oriented streetscape, variety of building heights to accommodate regional retail as well as neighborhood services

Design Characteristics

> Destination Town Center.

> Commuter Park-and-Ride.

> S. Wilmington Street extension as central spine.

> Future transit to encourage additional office or employment uses.

TRYON FOCUS AREA AERIAL PERSPECTIVE

Aerial perspective of Tryon Road Town Center character.

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IMPLEMENTATION

One of the primary goals of this plan was to yield an actionable strategy for transforming the study area. In our experience, we know that implementable plans require several items:

1. The plan must lay out a **clear vision** for the future of the district, developed in concert with the residents, businesses, stakeholders, and policy-makers.

2. The plan should focus energy and investment on **catalytic projects** that not only create amenity and value for that specific site, but also attract investors to develop other projects within the area. These projects either prove an untapped market, or create a new market for the district.

3. The plan needs to identify **early wins**, or projects that can be executed within the first two to three years, with relatively little investment, addressing some of the deferred issues in the community. These early wins also require prioritization of projects to capitalize on current development momentum.

4. Even the best of plans will flounder "on a shelf" without a **champion** to advocate, fund raise, organize, lobby, and generally nurture projects into life.

This report thus far has outlined a clear vision for the Southern Gateway district. An entire section has been dedicated to the focus areas that are crucial to driving change throughout the district. In the following pages, we will look more closely at the near-term (0-3 years), mid-term (4-7 years) and long-term (8+ years) projects for each of these detail study areas, identifying "early win" projects. The Action Plan that completes this chapter summarizes tasks for realizing this vision, with a more detailed implementation matrix included in the Appendix. Ultimately, the successful implementation of these strategies hinges on the continued involvement and commitment of the community stakeholders and the city. The formation of a citizen's alliance group to assist the city in achieving the recommendation contained herein is essential.

Overall Development Opportunity

It is important to discuss the existing likelihood of development in each of these nodes before looking in greater detail at the phasing and action items associated with each focus area. In order to determine the likelihood of private investment the focus areas were evaluated to balance current market and demand within the region, required investment, scale of project, and projected political desirability. The following indicates the likelihood of private investment in order of priority:

Tryon

Most likely the first area to develop. Private development already planned for this area. Work with developer partners to create dynamic commercial development which sets the table for transit to follow.

Old Saunders

Early priority due to its location and approach to downtown Raleigh and proximity to Dorothea Dix Park. This area is only a few of years away from dramatic transformation.

S. Wilmington / Rush

This area has great of potential, but requires significant transformation to the S. Wilmington Street right-of-way before redevelopment is likely to take place. Unless there is a major unforeseen push from private development, or a significant transit initiative (BRT) this is likely a mid-term effort.

Cargill

The greatest opportunity for transformation in this area comes at the cost of relocating industrial users. This move could free up a substantial piece of developable land with close proximity to downtown, along rail and future transit lines, and serve to unify Raleigh's southern neighborhoods. This is a longer-term opportunity.

Transportation

The major road infrastructure in the study area not only includes the City of Raleigh's departments, but also the State Department of Transportation, and possibly federal funding. We have proposed two areas where highway flyovers are being either removed or re-purposed. And, have suggested the wholesale re-conception of the S. Wilmington Street corridor as a transit spine.

While these projects may seem ambitious, they hold the potential to drastically transform and catalyze new development within the district.

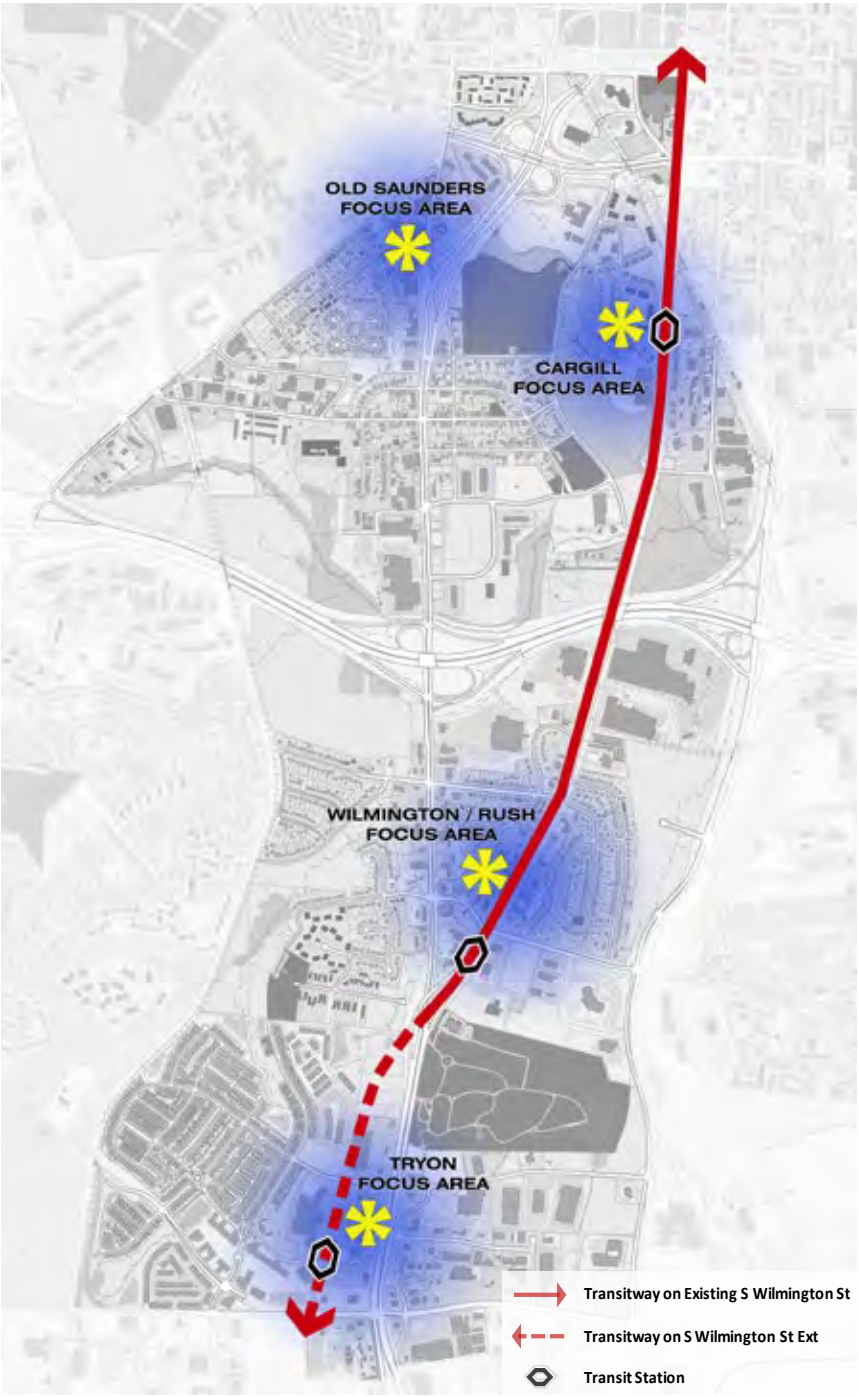
In the meantime, there are some "early win" efforts that can be implemented while larger projects await further study and funding:

S. Saunders Street

Limited changes to the right-of-way, but early efforts to improve pedestrian safety and access management should be planned throughout the corridor.

S. Wilmington Street

Ideally, the future of this corridor as a transit spine could be funded and realized in its whole. But, in the meantime, the Tryon Road portion and the area between the flyover and I-40 could be built and improved to serve the adjacent neighborhoods, pedestrians, and cyclists alike.



Proposed S. Wilmington Street Transit Corridor

Old Saunders

Given the presence of existing businesses and the nature of the future plans, the full build-out of this area may take more time. However, the importance of improving this area lies in its proximity to Dorothea Dix Park, its prominent location at the gateway to downtown, and the potential for reusing vacant warehouse space in new and creative ways.

Phase 1 should focus on supporting existing businesses and the surrounding neighborhood by investing in pedestrian safety mechanisms within the focus area and at key intersections with S. Saunders Street. Additionally, grant programs for facade improvements and redevelopment are encouraged at this stage.

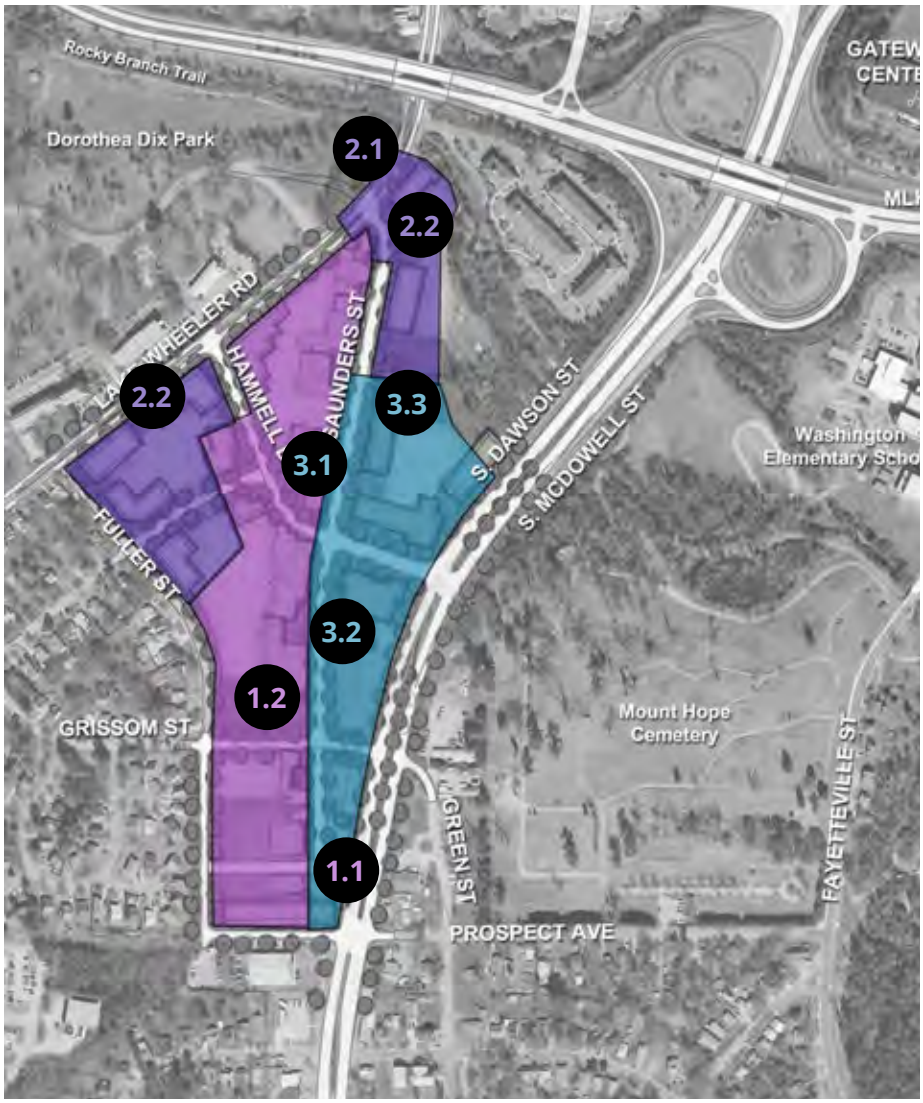
Phase 2 should begin to capitalize on the formation of redevelopment plans for Dorothea Dix Park by staging improvements to Lake Wheeler Road, its intersection with Old Saunders, and beginning to infill multi-family residences on vacant or underutilized parcels. The Dix Park planning process is underway. This process will flesh out or modify some of this plan's recommendations regarding future land use and access adjacent to the Dix Park.

Phase 3 would see the reconstruction of the S. Saunders / S. McDowell / S. Dawson interchange into an urban boulevard. The taming of this interchange will free up land to be re-purposed as public space and allow for new development.

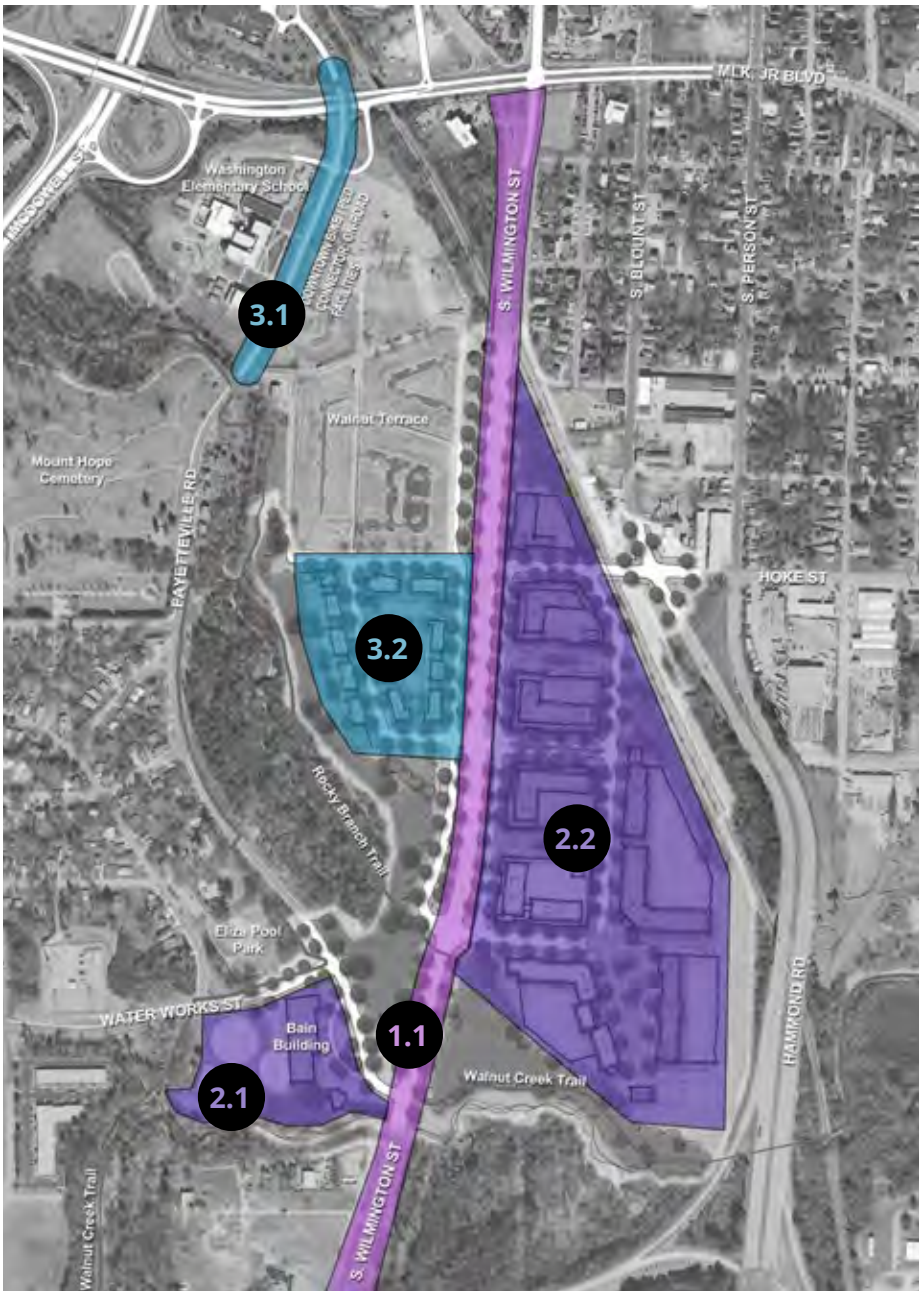
Early Win

> Improve pedestrian safety at S. Saunders Street intersections with Prospect Avenue and Maywood Avenue.

Phase 1	Phase 2	Phase 3
1: Pedestrian Safety	1: Lake Wheeler / Old Saunders Intersection	1: Old Saunders realignment
2: Facade Improvements / redevelopment	2: New multi-family residential development	2: Public plaza
		3: New Office Development



Phase 1	Phase 2	Phase 3
1: S. Wilmington Street Improvements	1: Bain Water Treatment Building Renovation/Reuse 2: Cargill Redevelopment	1: Fayetteville Street Pedestrian Connection 2: Private Development



Cargill

This section of S. Wilmington Street is in serious need of improvement. It is proximate to downtown, is the front door for a multi-million dollar housing investment (Walnut Terrace), and an access point for the Rocky Branch and Walnut Creek Trails. The E.B. Bain Water Treatment Plant has remained unused since the late 1980s, and there are several unsightly buildings and uses along the road. Transformation here is the most speculative and long-term. There are currently no plans to relocate the operations of the existing land uses including, the Cargill plant, the fire training facility and the men's homeless shelter. Further consideration of the goals and long-term options for affordable housing, homeless services, and public safety training is recommended.

Phase 1 seeks to complete the transformation of Wilmington as it connects to downtown by installing bike lanes and improving safety.

Phase 2 seeks to make changes to the land use pattern along this stretch of Wilmington with the re-purposing of the Bain Water Treatment facility which should be viable following Phase 1 infrastructure improvements. This phase also envisions the relocation of Cargill plant operations and the full mixed use redevelopment of that site.

Phase 3 anticipates a connection of Fayetteville Street across MLK Jr. Boulevard that would provide a safe route for the cycle-commuters to downtown. The extension of housing to the south of the Walnut Terrace neighborhood could provide additional in-town housing options if the current uses relocate.

Early Win

> S. Wilmington Street improvements to provide safe bicycle and pedestrian connections into downtown.

S. Wilmington / Rush

The S. Wilmington / Rush focus area will require significant investment to achieve the envisioned urban scale main street, but this area is an example of how infrastructure investment can spur private investment. The success of establishing S. Wilmington Street as a transit corridor is predicated on a BRT commitment.

Phase 1 is focused on transforming the right-of-way of Wilmington into a multi-modal cross-section that improves the safety and accessibility for cyclists and transit riders. One option for this involves working within the existing curbs so that the cost is low and can be an "early win" for this area.

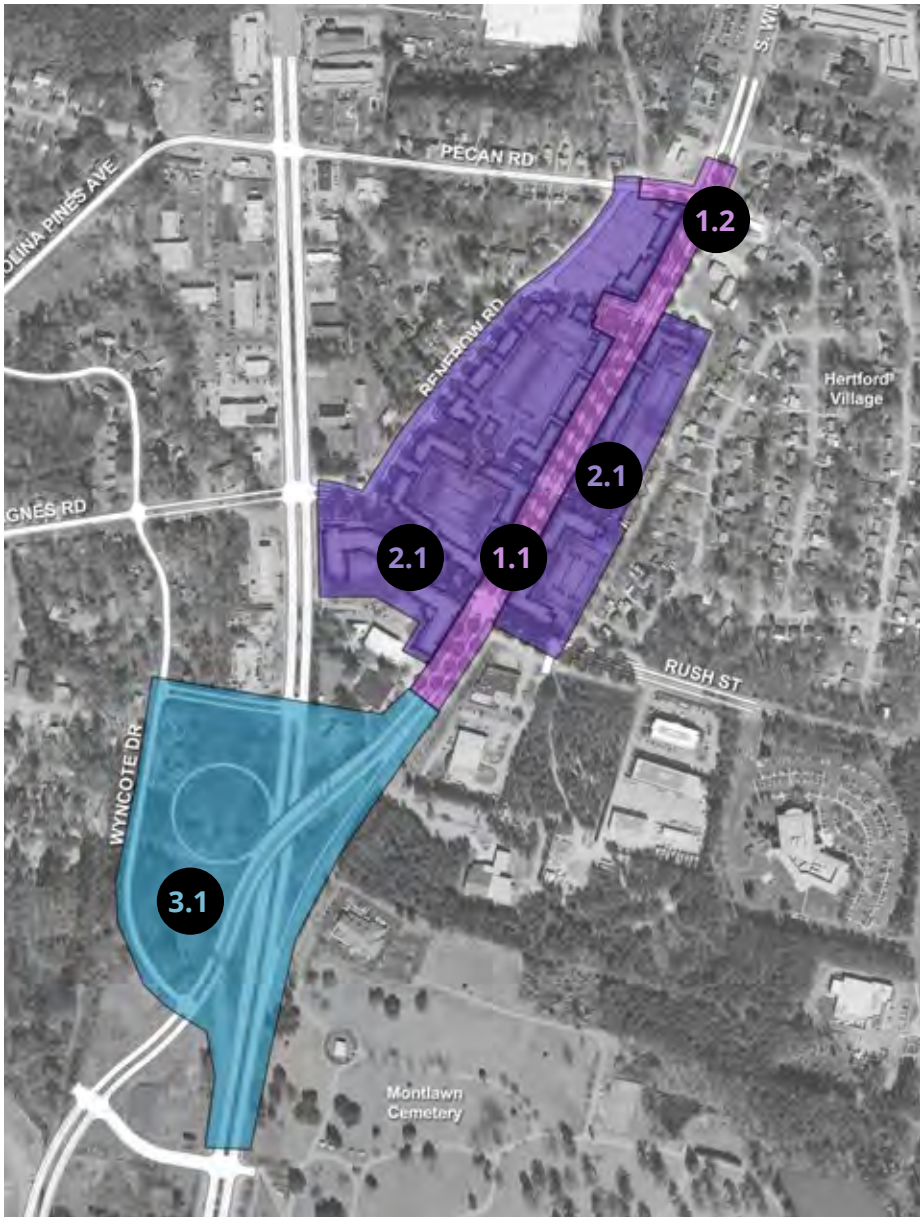
Phase 2 anticipates that infrastructure improvement will spur private investment. As in-town housing becomes even more desirable, the proximity of new multi-family, mixed use, and even attached townhouses in a walkable urban form will prove marketable.

Phase 3 will see the completion of the S. Wilmington Street extension to the south. This would be the final link in completing the transit spine, making this area well positioned as a key transit node.

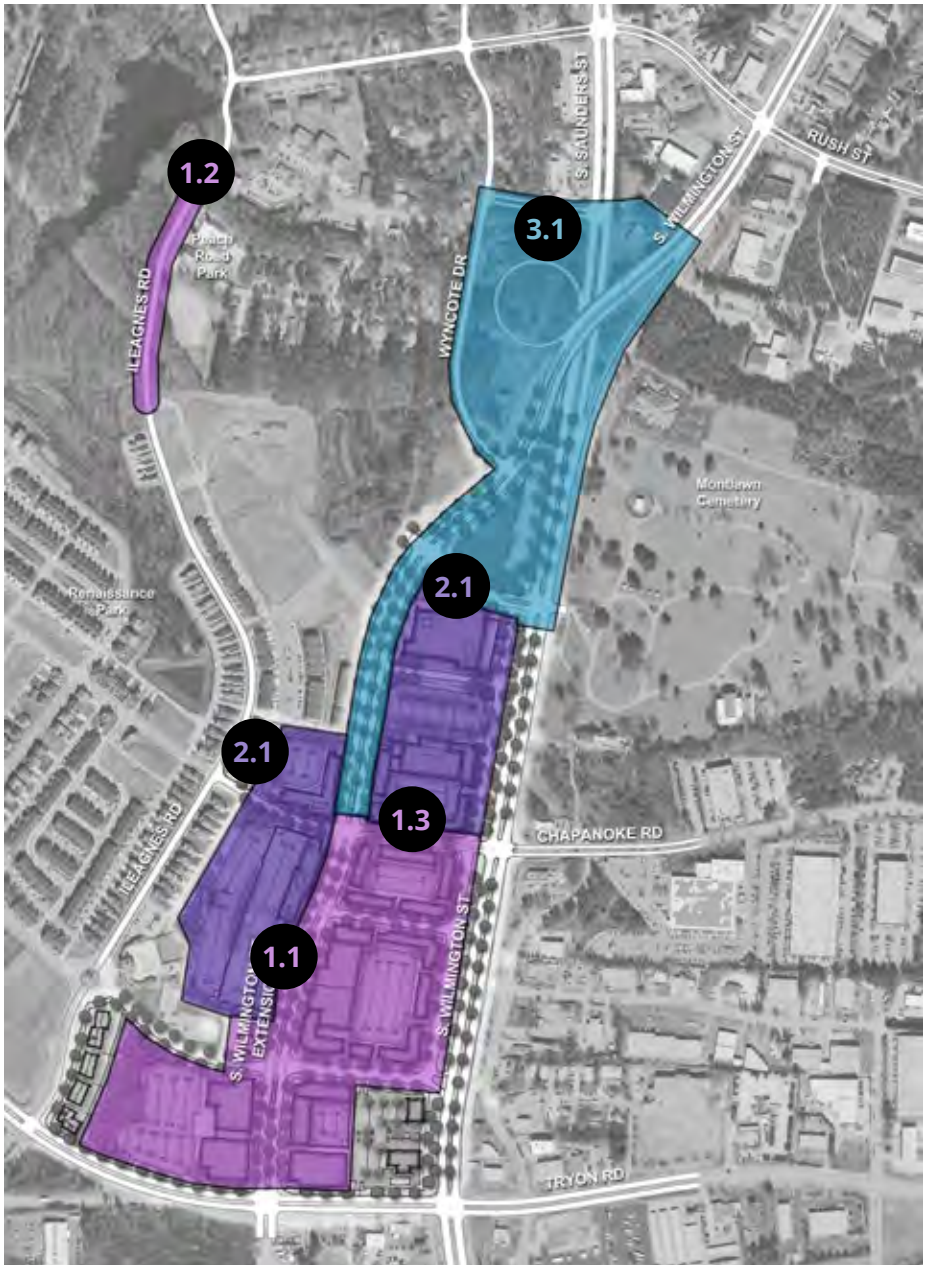
Early Win

> S. Wilmington Street Transit Corridor transformation within existing right-of-way as a demonstration of commitment to complete streets and catalyst for private investment.

Phase 1	Phase 2	Phase 3
1: S. Wilmington Street improvements 2: Improvements to Pecan Road transit stop (short term solution)	1: Private Development	1: S. Wilmington Fly-over



Phase 1	Phase 2	Phase 3
1: S. Wilmington Extension 2: Ileagnes Extension 3: Private Development	1: Private Development	1: S. Wilmington Fly-over



Tryon

There is so much development already taking place in the Tryon area, with the continued success of Renaissance Park, the growth of Garner and points south, and the easy access to I-40. This study area, therefore, is the most likely to see early change, with or without major public infrastructure investment. A BRT commitment is assumed for the complete realization and success of the town center concept.

Phase 1 of this development should focus on redevelopment of surface parking areas to create a high-quality retail and dining environment that feels like the town center for Renaissance Park, but with the ability to draw traffic and customers from the traffic on S. Saunders Street / US 70. Additionally, the Ileagnes Road connection is a critical "early win" by providing additional safe pedestrian and bicycle routes for transit riders and commuters.

Phase 2 should target the redevelopment of the old terminal building and the northernmost parcels.

Phase 3 would see the reconstruction of the S. Wilmington Street fly-over in order to connect the new commercial spine with the transit and cycle-friendly transformation of S. Wilmington Street itself. This final phase will position Tryon as a critical transit node as well as provide additional safe cycle-commuting opportunities for Renaissance Park residents.

Early Win

> Tap into existing momentum with additional commercial development along frontage of S. Saunders Street / US 70/401 between Tryon Road and Chapanoke Road.

Action Plan

The facing page is a compiled Action Plan of the key follow-up items from this study. Many were items highlighted on the previous phasing plans, but several indicate policies that the City of Raleigh should consider as ways to help spur, encourage, or ease private investment moving forward. A more detailed Implementation Matrix and preliminary costing can be found in the Appendix.

Funding

Much of the Southern Gateway corridor study area falls within the city's targeted Economic Development program area. Properties and businesses in the corridor may qualify for economic incentives such as Building Up-fit Grant (BUG), the Business Investment Grant (BIG) and the Façade Grant Program. The city may explore other funding strategies such as establishing Tax Increment Financing, Municipal Services District, Public Private Partnerships, securing grants and through other community economic development funding sources. Funding for many of infrastructure recommendations may come from traditional city capital improvement funds or state transportation funding.

ACTION PLAN				
	NEAR	MID	LONG	AGENCY RESPONSIBILITY
DEVELOPMENT STRATEGY				
Examine Long-Term Goals and Options for Affordable Housing/ Homeless Services within Industrial Corridor South of Downtown		Study	X	Raleigh (Hsg & N'hoods, Planning, Econ Dvlpmt)
Establish Strategic Partnerships to Develop Workforce Housing Opportunities	X			Raleigh (Hsg & N'hoods, Planning)
Establish Grants for Facade and Property Improvement or Redevelopment in Targeted Investment Areas	X	X		Raleigh (Econ Dvlpmt, Planning)
Create Business Districts to Manage Redevelopment, Reinvestment, and Targeted Leasing	X	X		Raleigh (Econ Dvlpmt, Planning)
Identify Zoning Changes and Adjust where Needed	X			Raleigh (Planning)
Form Public Private Partnership in Tryon Area	X	X		Raleigh (Econ Dvlpmt, Planning)
Promote Existing Applicable City Programs: Historic Credits, Facade Grants, etc.	X			Raleigh (Econ Dvlpmt, Planning, Hsg & N'hoods, Historic Preservation)
Small Area Plan for Caraleigh/Maywood to Identify Growth and Conservation Opportunities	Study			Raleigh (Planning, Historic Preservation)
Small Area Plan for Fuller Heights/Wheeler Crossing/Old Saunders Businesses	Study			Raleigh (Planning)
Enforce Code Violations Regarding Exterior Maintenance	X			Raleigh (Hsg & N'hoods, Inspections)
Implement Green Infrastructure and/or Other LID Solutions in New Development	X	X	X	Raleigh (Planning, Stormwater, Public Works)
TRANSPORTATION / TRANSIT				
S. Wilmington Street Engineering Study	Study			Raleigh (Transp. Planning), NCDOT
S. Wilmington Street Transit, Ped., and Bike Improvements	X	X		Raleigh (Transp./Transit Planning), NCDOT
S. Wilmington Street Access Management	X	X		Raleigh (Transp. Planning), NCDOT
New S. Wilmington Extension (S of flyover)	Study		X	Raleigh (Planning), NCDOT
New S. Wilmington Flyover	Study		X	Raleigh (Planning), NCDOT
Grenelle Street Extension/Junction Blvd Improvement		Study	X	Raleigh (Transp. Planning)
Pecan Road Transit Stop Enhancement	X			Raleigh (Transp./Transit Planning)
Lake Wheeler/S. Saunders Intersection Improvements	Study	X		Raleigh (Transp. Planning)
S. Saunders Alignment/X-Section Maywood to MLK	Study		X	Raleigh (Transp. Planning)
S. Saunders Ped. Safety Improvements	X	X		Raleigh (Transp. Planning)
S. Saunders Access Management	X	X		Raleigh (Transp. Planning)
MLK Modifications at S. Saunders and Wilmington	Study	X	X	Raleigh (Transp. Planning), NCDOT
Ped./Bike Connection over MLK Blvd. (Fayetteville St Ext.)	Study		X	Raleigh (Transp. Planning)
BIKE / PEDESTRIAN CONNECTIVITY				
Ped./Bike Connection from Tryon to Walnut Creek Trail	X	X	X	Raleigh (PR&CR, Transp. Planning)
Ped./Bike Connection from Maywood to Walnut Creek Trail	X	X	X	Raleigh (PR&CR, Transp. Planning)
Improve Wayfinding at Trail/Street Intersections	X	X		Raleigh (PR&CR)
Align Ped/Bike Improvements at S. Saunders/Lake Wheeler with Rosengarten Multi-Use Path	X	X		Raleigh (PR&CR, Transp. Planning)

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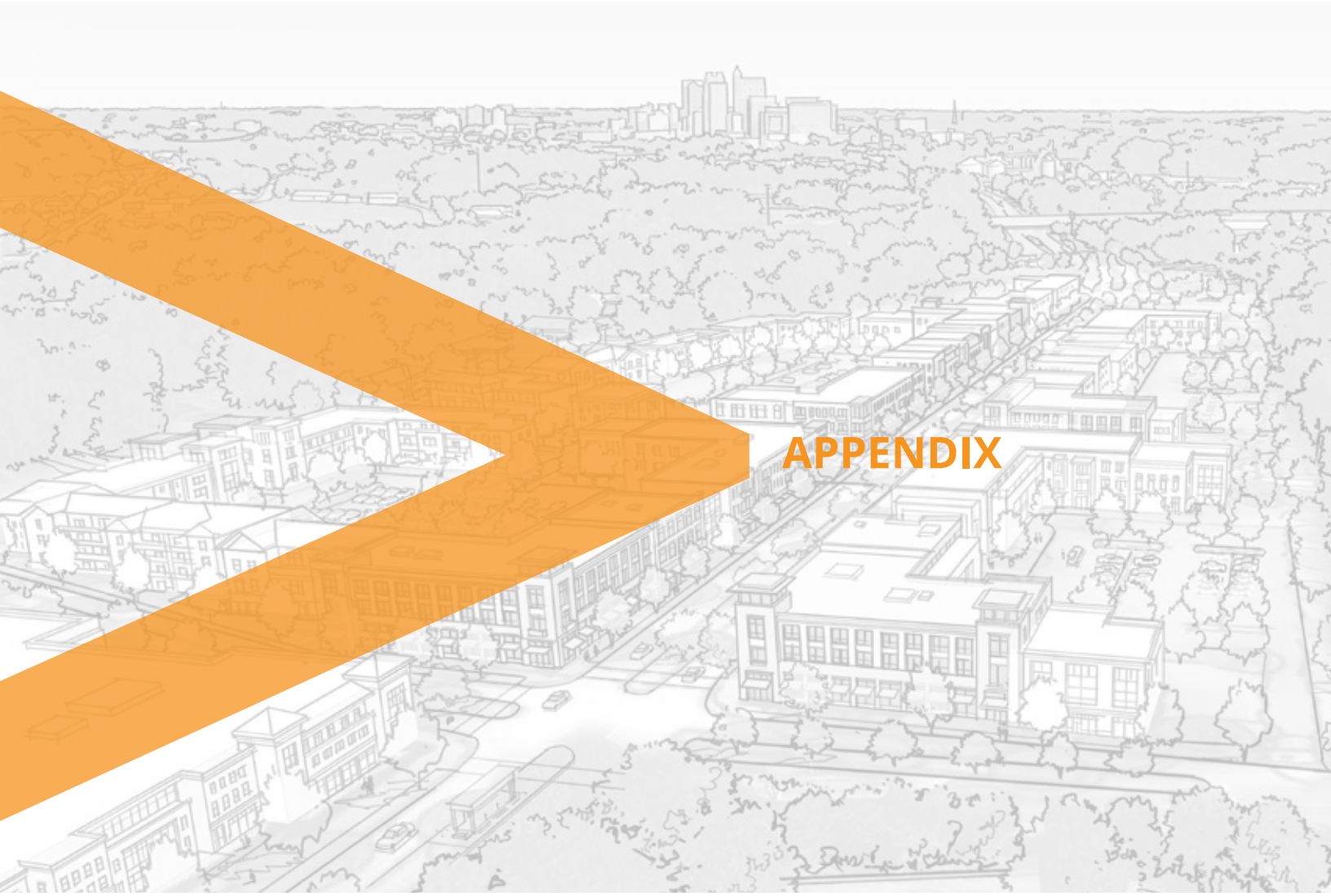

APPENDIX

Appendix

Implementation Matrix

Implementation of many of this reports' recommendations will take place incrementally over a number of years. Many of the improvements, both large and small, will require significant public funding. Public funding should be used strategically to leverage multiple funding sources and to facilitate private economic investment.

Cost Estimates

The following high-level estimates of probable costs are intended for general planning purposes only. Detailed design work and field investigation are required to obtain more precise estimates of probable costs.

In particular, the wide range of options and unknowns associated with the South Wilmington Street BRT concept result in potentially large variations. Note that estimates of probable BRT costs assume only three stations, and do not include operating or fleet costs, or costs resulting from changes to other transit routes. The BRT concepts considered minimize ROW impacts, and do not include extensive streetscape improvements.

No right-of-way costs are included in any of the estimates performed for this study.

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ID	PROJECT	FOCUS AREA*	IMPLEMENTATION PRIORITY			Contingency	Agency Responsibility	PROJECT IMPACT ON … (0=none, 1=low, 2=some, 3=high)						Comments
			0-3 YRS	4-7 YRS	8+ YRS			Transport.	Safety	Aesthetics	Connectivity	Econ. Devel.	Natural Resources	
DEVELOPMENT STRATEGY														
D1	Examine Long-Term Goals and Options for affordable housing / homeless service resources within the industrial corridor south of downtown	Cargill	X	X	X	POLICY & PLANNING	Raleigh (Hsg & N'hoods, Planning, Econ Dvlpmt)	**2**	**1**	**2**	**0**	**2**	**1**	
D2	Establish strategic partnerships to encourage mixed income and workforce housing in select focus areas	All	X	X			Raleigh (Hsg & N'hoods, Planning)	**2**	**1**	**1**	**1**	**2**	**0**	
D3	Share opportunistic development plans / concepts with targeted land owners, businesses and development community - Property owners w/major interests for mixed use center @ S. Wilmington - State legislature reinstated Historic Preservation Tax Credits	All	X	X			Raleigh (Econ Dvlpmt, Planning)	**1**	**1**	**3**	**1**	**3**	**0**	
D4	Target redevelopment of commercial properties in disrepair	All	X	X			Raleigh (Econ Dvlpmt, Planning)	**0**	**1**	**3**	**1**	**3**	**0**	
D5	Demonstrate market potential for residential / office / retail / services	All	X	X	X		Raleigh (Econ Dvlpmt, Planning)	**0**	**0**	**1**	**1**	**3**	**1**	
D6	Develop a "pitch book" to communicate market potential, including use of 3D modeling tools	All	X	X			Raleigh (Econ Dvlpmt, Planning)	**0**	**0**	**2**	**1**	**3**	**1**	
D7	Conduct a detailed visioning study for the Cargill area for civic use feasibility, including an examination of Hoke St connection west to Walnut Terrace under S. Wilmington St.	Cargill	***Study***			Brownfield Site	Raleigh (Planning)	**2**	**2**	**3**	**2**	**3**	**0**	
D8	Evaluate Comp Plan & UDO zoning for support / alignment with proposed development concepts	All	X	X		PLANNING	Raleigh (Planning)	**2**	**0**	**1**	**2**	**2**	**0**	
D9	Examine opportunities to incentivize land owners and developers to catalyze development / redevelopment in targeted areas	All	X	X			Raleigh (Econ Dvlpmt, Planning, Hsg & N'hoods)	**0**	**0**	**2**	**1**	**3**	**1**	
D10	Promote existing City programs / funding mechanisms to encourage and nurture residential development and buisness investment	All	X	X			Raleigh (Econ Dvlpmt, Hsg & N'hoods, Planning)	**0**	**0**	**2**	**0**	**3**	**0**	
D11	Evaluate safety & welfare efforts to address resident / business safety perception	All	X	X			Raleigh (Police, Hsg & N'hoods, Planning)	**0**	**2**	**2**	**0**	**3**	**1**	
URBAN DESIGN / IMAGE & CHARACTER														
U1	Develop focus areas as "places" to establish an identity	All	X				Raleigh (Planning)	**0**	**0**	**0**	**0**	**0**	**0**	
U2	Establish targeted citizen alliance groups and/or business districts for implementation support and continued citizen engagement	All	X	X	X	POLICY	Raleigh (Planning, Hsg & N'hoods-Comm Eng)	**0**	**0**	**0**	**0**	**0**	**0**	
U3	Small Area Plan with design guidelines for Caraleigh / Maywood to conserve & support character while allowing for appropriately scaled growth	Old Saunders	***Study***				Raleigh (Planning / Historic Pres)	**1**	**1**	**3**	**1**	**2**	**1**	
U4	Small Area Plan for Fuller Heights / Wheeler Crossing / "Old Saunders" businesses	Old Saunders	***Study***				Raleigh (Planning)	**2**	**1**	**3**	**1**	**3**	**0**	
U5	Adopt a proactive approach for beautifying public spaces, street edges, underdeveloped properties	All	X	X			Raleigh (Planning, PR&CR)	**2**	**1**	**3**	**1**	**1**	**1**	
U6	Educate business & land owners about existing tools offered by the City to enhance aesthetics / condition of property	All	X	X			Raleigh (Planning)	**0**	**0**	**3**	**0**	**0**	**0**	
U7	Neighborhood / community education about existing programs for improvement and maintenance including code enforcement tools, home improvement grants, SeeClickFix program, etc.	All	X	X	X		Raleigh (Planning, Hsg & N'hoods-Comm Eng)	**0**	**1**	**3**	**0**	**0**	**1**	
U8	Implement Green infrastructure / L.I.D. solutions with new development	All	X	X	X		Raleigh (Planning, Public Works)	**2**	**0**	**2**	**1**	**1**	**3**	

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				0-3 YRS	4-7 YRS	8+ YRS			Transport.	Safety	Aesthetics	Connectivity	Econ. Devel.	Natural Resources	
		TRANSPORTATION & TRANSIT													
	T1	S. Saunders (b/w Maywood & S Wilmington flyover) - Ped safety initiatives incl. x-walks, lighting, signage	Saunders Business, +	**X**	**X**			NCDOT, Raleigh	**2**	**3**		**2**	**1**	**0**	1`Q
	T2	S. Saunders (b/w Maywood & S Wilmington flyover) - Access Management	Saunders Business, +	**X**	**X**		Redevelopment helps	NCDOT, Raleigh	**2**	**3**	**1**			**0**	Could be subdivided N/S of I-40
	T3	Wilmington (b/w Rush & Pecan) - Ped safety initiatives incl. x-walks, lighting, signage	Wilmington	**X**	**X**			NCDOT, Raleigh	**2**	**3**		**2**	**1**	**0**	Could be subdivided N/S of I-40
	T4	Wilmington (b/w Rush & Pecan) - Access Management	Wilmington	**X**	**X**		Redevelopment helps	NCDOT, Raleigh	**2**	**3**	**1**			**0**	Could be subdivided N/S of I-40
	T5	Ileagnes Rd connection between Renaissance Park & Carolina Pines (Carolina Pines widening & improvement project and street connections	Tryon	**X**	**X**			Raleigh	**3**	**2**		**3**		**1**	
	T6	Caolina Pines widening & improvmement project												**1**	
	T7	Lake Wheeler Rd improvements incl. Saunders realignment & Fuller St extension	Old Saunders	*Study*	**X**	**X**	Dorthea Dix plans	Raleigh	**2**	**2**	**1**	**2**	**1**	**0**	
	T8	S Saunders alignment/X-section/intersection changes (N of Maywood to S of MLK)	Saunders/ McDowell; Old Saunders	*Study*		**X**		Raleigh, NCDOT		**1**	**2**	**1**	**3**	**0**	
	T9	Street & Ped/Bike connection over MLK Blvd @ Fayetteville Rd extension	Gateway Cntr, Cargill	*Study*		**X**	MLK changes (T9); Gateway Center; bike/ped connections	Raleigh, NCDOT	**1**	**3**		**3**	**1**	**0**	
	T10	MLK & interchange modifications	Gateway Cntr, Cargill	*Study*	**X**	**X**	Redevelopment plans	Raleigh, NCDOT	**0**	**1**	**1**	**2**	**2**	**0**	
	T11	Pecan Rd Transit stop enhancement - Superceded by transit plan: see below	Wilmington	X				Raleigh	**1**	**2**	**1**	**2**	**1**	**0**	Includes pedestrian improvements
	T12	Misc transit stop & route enhancements		X	X		Some road & ped projedcts will enable more efficient routing Contingent on T1 & T3	Raleigh	**1**	**2**	**1**	**2**	**1**	**0**	Includes pedestrian improvements
South Wilmington St Transit Corridor	**TW1**	***Wilmington St Transit Corridor Study***		***Study***				*Raleigh, NCDOT, TT*	*3*	*1*	*1*	*2*	*2*	*0*	
	TW2	S. Wilmington - transform ex. right of way for **transit**/ped/bike improvements (S of I-40)	Wilmington	X	X		Redevelopment helps	Raleigh, NCDOT	**1**	**2**	**1**	**2**	**2**	**0**	
	TW3	S. Wilmington - transform ex. right of way for **transit**/ped/bike improvements (N of I-40)	Cargill	X	X		Redevelopment helps	Raleigh, NCDOT	**1**	**2**	**1**	**2**	**2**	**0**	
	TW4	Salisbury/Wilmington/MLK intersection realignment - Option A w/ 2-way Salisbury - Option B w/ 1-way Salisbury	Gateway Cntr, Cargill	*Study*	X	X	Redevelopment plans; MLK changes (T9) -Downtown Operations Study	Raleigh, NCDOT	**1**	**2**	**1**	**1**	**1**	**0**	
	TW5	Grenelle St extension/Junction Blvd improvement	Tryon		*Study*	X		NCDOT, Garner, Raleigh	**2**	**1**		**1**	**1**	**0**	Traffic diversion/relief
	TW6	Construct new S. Wilmington St Extension - **assumes BRT funding**	Tryon	*Study*	X	X		Raleigh, NCDOT	**3**	**1**		**2**	**3**	**0**	
	TW7	Reconstruct S. Wimington St. flyover	Tryon	*Study*	X	X		NCDOT, Raleigh	**3**	**1**		**2**	**3**	**1**	

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			0-3 YRS	4-7 YRS	8+ YRS			Transport.	Safety	Aesthetics	Connectivity	Econ. Devel.	Natural Resources	
BIKE/PEDESTRIAN CONNECTIVITY														
C1	Connect existing greenway corridors and trails to underserved areas south of I-40	Tryon, Wilmington, Gateway Cntr	X	X	X		Raleigh (PR&CR)	**2**	**1**	**1**	**3**	**1**	**2**	
C2	Improve wayfinding at trail intersections and road crossings	Cargill, Old Saunders	X				Raleigh (PR&CR)	**1**	**3**	**1**	**2**	**1**	**1**	
C3	Establish priority planning efforts for land acquisition and/or easements to provide access from neighborhoods to existing parks, Walnut Creek Trail and Rocky Branch Trail (N'hoods: RenPark, West Parkland, Twin Lakes, Robinwood, Carolina Pines)	Tryon, Wilmington, Old Saunders	X	X		PLANNING	Raleigh (PR&CR)	**2**	**1**	**2**	**3**	**1**	**2**	
C4	Align proposed pedestrian / bicycle improvements at S. Saunders St / Lake Wheeler intersection with the Rosengarten Multi-use Path on S. Saunders.	Old Saunders	X				Raleigh (PR&CR)	**2**	**2**	**1**	**3**	**1**	**1**	

OLD SAUNDERS

Project	Limits	Feet	Miles	Cost/Mile[1]	Cost	Signals $80k-$250k each	Utilities[2,3] Widening = $30k/mi	Bridge[4] $120-$300/SF	TOTAL	Misc (+30%)	E&C (+15%)	Subtotal	TOTAL	ROUNDED TOTAL
Improve L Wheeler Rd - 2-lane w/median + sidewalks + bike lanes	Maywood to Umstead	4050	0.767	$3,600,000	$2,761,364		$23,011		$2,784,375	$3,619,688	$4,162,641	$4,162,641	$4,162,641	**$4,200,000**
Realign L Wheeler/S Saunders Intersection													$1,001,741	**$1,100,000**
- 3-lane w/ sidewalks		800	0.152	$3,010,000	$456,061		$14,000		$470,061	$611,079	$702,741	$702,741		
- Signal						$200,000			$200,000	$260,000	$299,000	$299,000		
Improve S Saunders	Prospect to L Wheeler												$636,508	**$700,000**
- Add 2 sidewalks		2300	0.436	$210,000	$91,477				$91,477	$118,920	$136,759	$136,759		
- Realign 4-lane C&G		500	0.095	$3,500,000	$331,439		$2,841		$334,280	$434,564	$499,749	$499,749		
Reconfigure Hammel/Saunders/Dawson Intersections													$863,566	**$900,000**
- 3-lane C&G w/ sidewalks+bike lanes	S Saunders to S McDowell	500	0.095	$3,810,000	$360,795		$2,841		$363,636	$472,727	$543,636	$543,636		
- Signal						$200,000	$14,000		$214,000	$278,200	$319,930	$319,930		
Improve Hammel - 2-lanes + 1 sidewalk	S Saunders to L Wheeler	750	0.142	$2,800,000	$397,727		$4,261		$401,989	$522,585	$600,973	$600,973	$600,973	**$600,000**
Connect Fuller & Prospect - 2-lane +sidewalks & bike lanes/parking	Grissom to S Dawson	1000	0.189	$3,410,000	$645,833		$7,000		$652,833	$848,683	$975,986	$975,986	$975,986	**$1,000,000**
Add sidewalk to Fuller (1 side)	L Wheeler to Grissom	1400	0.265	$105,000	$27,841	$105,000			$132,841	$172,693	$198,597	$198,597	$198,597	**$200,000**
Extend Grissom - 2-lane +sidewalks & bike lanes	S Saunders to McDowell	250	0.047	$3,410,000	$161,458		$14,000		$175,458	$228,096	$262,310	$262,310	$262,310	**$300,000**
Add sidewalk to Grissom (1 & 2 sides)	L Wheeler to S Saunders	1900	0.360	$105,000	$37,784	$105,000			$142,784	$185,619	$213,462	$213,462	$213,462	**$200,000**
Narrow & realign S Dawson/S McDowell													$4,149,305	**$4,200,000**
- 3-lane on new alignment + sidewalks	Maywood to Rocky Branch	3000	0.568	$4,010,000	$2,278,409		$17,045		$2,295,455	$2,984,091	$3,431,705	$3,431,705		
- 2 signals			0.000		$0	$480,000			$480,000	$624,000	$717,600	$717,600		
			0.000		$0				$0	$0	$0	$0	$0	
TOTAL					$7,550,189	$1,090,000	$99,000	$0	$8,739,189	$11,360,946	$13,065,088	$13,065,088	$13,065,088	**$13,400,000**

All rates Doug Lane, NCDOT and other NCDOT sources.

[1]Typical cost/mile for incremental widening or new construction.

[2]Rough estimate. Not included in **Misc** or **E&C** calculations.

[3]$14k/major intersection for new location

[4]1815/ft for box culvert

CARGILL

Project	Limits	Feet	Miles	Cost/Mile[1]	Cost	Signals $80k-$250k each	Utilities[2,3] Widening = $30k/mi	BRT Station w/ improvements	Bridge[4] $120-$300/SF	TOTAL	Misc (+30%)	E&C (+15%)	Subtotal	TOTAL	ROUNDED TOTAL
S Wilmington center BRT	Pecan to MLK													$18,614,925	**$28,000,000**
- 2-lane center BRT (use existing lanes)		2400	0.455	$200,000	$90,909					$90,909	$118,182	$135,909	$135,909		
- 2-lane center BRT (build new lanes in median)		5600	1.061	$4,500,000	$4,772,727		$31,818			$4,804,545	$6,245,909	$7,182,795	$7,182,795		
- BRT Station + road & signal improvements			0.000		$0		$14,000	$3,500,000		$3,514,000	$4,568,200	$5,253,430	$5,253,430		
- 3 Signals & intersections (~$1.2 M for BRT)			0.000		$0	$4,000,000	$42,000			$4,042,000	$5,254,600	$6,042,790	$6,042,790		
- Widening (2 lanes + bike lanes/parking + new sidewalks)		*5600*	*1.061*	*$4,000,000*	*$4,242,424*	*$1,500,000*	*$31,818*			*$5,774,242*	*$7,506,515*	*$8,632,492*	*$8,632,492*	*$8,632,492*	
Fayetteville St Extension over MLK														$3,289,074	**$3,300,000**
- Bridge ($150/SF)		200	0.038		$0				$1,560,000	$1,560,000	$2,028,000	$2,332,200	$2,332,200		
- New road (2-lane + sidewalks + bike lanes)	Kindley to Fayetteville	750	0.142	$3,710,000	$526,989					$526,989	$685,085	$787,848	$787,848		
- Access to MLK (2-lane + sidewalks)		200	0.038	$2,800,000	$106,061		$7,000			$113,061	$146,979	$169,026	$169,026		
			0.000		$0					$0	$0	$0	$0		
			0.000		$0					$0	$0	$0	$0		
			0.000		$0					$0	$0	$0	$0		
TOTAL					$9,739,110	$5,500,000	$126,636	$3,500,000	$1,560,000	$20,425,746	$26,553,470	$30,536,491	$30,536,491	$30,536,491	**$31,300,000**

All rates Doug Lane, NCDOT and other NCDOT sources.

[1]Typical cost/mile for incremental widening or new construction.

[2]Rough estimate. Not included in **Misc** or **E&C** calculations.

[3]$14k/major intersection for new location

[4]1815/ft for box culvert

S. WILMINGTON

Project	Limits	Feet	Miles	Cost/Mile[1]	Cost	Signals $80k-$250k each	Utilities[2,3] Widening = $30k/mi	BRT Station w/ improvements	Bridge[4] $120-$300/SF	TOTAL	Misc (+30%)	E&C (+15%)	Subtotal	TOTAL	ROUNDED TOTAL
S Wilmington center BRT	Pecan to Rush													$9,377,116	**$14,000,000**
- 2-lane center BRT		1800	0.341	$ 4,500,000	$1,534,091		$10,227			$1,544,318	$2,007,614	$2,308,756	$2,308,756		
- BRT Station + road & signal improvements			0.000		$0		$14,000	$3,500,000		$3,514,000	$4,568,200	$5,253,430	$5,253,430		
- 1 Signal & intersection (~$1.2 M for BRT)			0.000		$0	$1,200,000	$14,000			$1,214,000	$1,578,200	$1,814,930	$1,814,930		
- Widening (2 lanes + bike lanes/parking + new sidewalks)		*1800*	*0.341*	*$4,000,000*	*$1,363,636*	*$1,200,000*	*$10,227*			*$2,573,864*	*$3,346,023*	*$3,847,926*	*$3,847,926*	*$3,847,926*	
			0.000		$0					$0	$0	$0	$0		
			0.000		$0					$0	$0	$0	$0		
			0.000		$0					$0	$0	$0	$0		
TOTAL					$2,897,727	$2,400,000	$48,455	$3,500,000	$0	$8,846,182	$11,500,036	$13,225,042	$13,225,042	$13,225,042	**$14,000,000**

All rates Doug Lane, NCDOT and other NCDOT sources.

[1]Typical cost/mile for incremental widening or new construction.

[2]Rough estimate. Not included in **Misc** or **E&C** calculations.

[3]$14k/major intersection for new location

[4]1815/ft for box culvert

TRYON

Project	Limits	Feet	Miles	Cost/Mile[1]	Cost	Signals $80k-$250k each	Utilities[2,3] Widening = $30k/mi	BRT Station w/ improvements	Bridge[4] $120-$300/SF	TOTAL	Misc (+30%)	E&C (+15%)	Subtotal	TOTAL	ROUNDED TOTAL
Complete Ileagnes connection - 3-lane + sidewalks		550	0.104	$3,710,000	$386,458				$80,000	$466,458	$606,396	$697,355	$697,355	$697,355	**$700,000**
Add sidewalk to Illeagnes (1-2 sides)		1000	0.189	$105,000	$19,886					$19,886	$25,852	$29,730	$29,730	$29,730	**$50,000**
Extend Ileagnes to Carolina Pines - 2-lane + sidewalks + bike lanes		700	0.133	$3,710,000	$491,856		$7,000		$80,000	$578,856	$752,513	$865,390	$865,390	$865,390	**$900,000**
Connect Wyncote to S Wilmington Ext - 3-lane + sidewalks + bike lanes		1300	0.246	$4,210,000	$1,036,553					$1,036,553	$1,347,519	$1,549,647	$1,549,647	$1,549,647	**$1,600,000**
Improve Wyncote - add sidewalk to 1 side		950	0.180	$105,000	$18,892					$18,892	$24,560	$28,244	$28,244	$28,244	**$50,000**
Extend Cherry to Carolina Pines - 2-lane + sidewalks + bike lanes		500	0.095	$3,710,000	$351,326		$7,000		$80,000	$438,326	$569,823	$655,297	$655,297	$655,297	**$650,000**
Improve Cherry - add sidewalk to 1 side		800	0.152	$105,000	$15,909					$15,909	$20,682	$23,784	$23,784	$23,784	**$50,000**
Extend S Wilmington with BRT														$21,714,195	**$22,000,000**
- 4-lane w/ center BRT + sidewalks + bike lanes	Overpass to Tryon	4000	0.758	$7,200,000	$5,454,545					$5,454,545	$7,090,909	$8,154,545	$8,154,545		
- 5 Signals & intersections (~$1.2 M for BRT)			0.000		$0	$5,000,000	$70,000			$5,070,000	$6,591,000	$7,579,650	$7,579,650		
- BRT Station + road & signal improvements			0.000		$0			$4,000,000		$4,000,000	$5,200,000	$5,980,000	$5,980,000		
Reconstruct bridge & interchange														$14,689,366	**$15,000,000**
- New bridge ($200/SF)		400	0.076		$0				$8,000,000	$8,000,000	$10,400,000	$11,960,000	$11,960,000		
- Modified bridge ($200/SF)		*400*	*0.076*		*$0*				*$4,000,000*	*$4,000,000*	*$5,200,000*	*$5,980,000*	*$5,980,000*		
- Reconstruct S Wilmington - +2 lanes +BRT +sidewalks +bike lanes	Overpass to Rush	900	0.170	$5,000,000	$852,273		$5,114			$857,386	$1,114,602	$1,281,793	$1,281,793		
- Remove ramps		1200	0.227	$100,000	$22,727					$22,727	$29,545	$33,977	$33,977		
- New ramps		1000	0.189	$1,700,000	$321,970					$321,970	$418,561	$481,345	$481,345		
- Replace lost access east of S Saunders		1400	0.265	$2,000,000	$530,303		$7,955			$538,258	$699,735	$804,695	$804,695		
- Modify S Saunders	Fenwick to Chapanoke	850	0.161	$500,000	$80,492		$4,830			$85,322	$110,919	$127,556	$127,556		
New Connector - 3-lane + sidewalks + bike lanes	S Wilmington Ext to S Saunders	600	0.114	$3,710,000	$421,591		$14,000			$435,591	$566,268	$651,208	$651,208	$651,208	**$700,000**
			0.000		$0					$0	$0	$0	$0	$0	
			0.000		$0					$0	$0	$0	$0	$0	
TOTAL					$10,004,782	$5,000,000	$115,898	$4,000,000	$8,240,000	$27,360,680	$35,568,884	$40,904,216	$40,904,216	$40,904,216	**$41,700,000**

All rates Doug Lane, NCDOT and other NCDOT sources.

[1]Typical cost/mile for incremental widening or new construction.

[2]Rough estimate. Not included in **Misc** or **E&C** calculations.

[3]$14k/major intersection for new location

[4]$2k/ft for box culvert

MLK, JR. BOULEVARD

Project	Limits	Feet	Miles	Cost/Mile[1]	Cost	Signals $80k-$250k each	Utilities[2,3] Widening = $30k/mi	Bridge[4] $120-$300/SF	TOTAL	Misc (+30%)	E&C (+15%)	Subtotal	TOTAL	ROUNDED TOTAL
Reconstruct MLK Interchange													$2,995,414	**$3,000,000**
- Modify Dawson/McDowell		1500	0.284	$750,000	$213,068		$8,523		$221,591	$288,068	$331,278	$331,278		
- Remove ramps		4000	0.758	$100,000	$75,758				$75,758	$98,485	$113,258	$113,258		
- New Ramps		1000	0.189	$4,500,000	$852,273		$14,000		$866,273	$1,126,155	$1,295,078	$1,295,078		
- 4 Signals			0.000		$0	$840,000			$840,000	$1,092,000	$1,255,800	$1,255,800		
Modify MLK	S Saunders to S Wilmington												$670,983	**$700,000**
- Remove tapers/turn-lanes; modify intersections		2000	0.379	$750,000	$284,091	$42,000	$11,364		$337,455	$438,691	$504,495	$504,495		
- Add sidewalks/sidepath		2800	0.530	$210,000	$111,364				$111,364	$144,773	$166,489	$166,489		
Extend Dorthea - 2-lane + sidewalks	Eastward to MLK	600	0.114	$3,110,000	$353,409		$14,000		$367,409	$477,632	$549,277	$549,277	$549,277	**$600,000**
Extend West - 2-lane + sidewalks + parking	South St to MLK	850	0.161	$3,710,000	$597,254		$14,000		$611,254	$794,630	$913,824	$913,824	$913,824	**$1,000,000**
Realign Salisbury - 2-lane + sidewalks	South St to MLK	1000	0.189	$3,110,000	$589,015		$5,682		$594,697	$773,106	$889,072	$889,072	$889,072	**$900,000**
			0.000		$0				$0	$0	$0	$0	$0	
			0.000		$0				$0	$0	$0	$0	$0	
			0.000		$0				$0	$0	$0	$0	$0	
TOTAL					$3,076,231	$882,000	$67,568	$0	$4,025,799	$5,233,539	$6,018,570	$6,018,570	$6,018,570	**$6,200,000**

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[2]Rough estimate. Not included in **Misc** or **E&C** calculations.

[3]$14k/major intersection for new location

[4]1815/ft for box culvert