

Suburban Corridor Transformation: From Car-Centric to Multi-Modal



SESSION TAKEAWAYS

- ✓ **OPEN:** Be open minded and flexible
 - ✓ **FOCUS:** Have clear goals and a thorough understanding of the priorities
 - ✓ **COORDINATE:** Include decision makers and champions throughout the process
 - ✓ **ENGAGE:** Value the feedback/input of the general public, stakeholders, as well as elected officials
-



NCDOT STIP No. U-2509 US 74 (Independence Blvd.) From Conference Drive to I-485

Presented by
Don Brown, AICP

April 6, 2017



Independence Blvd.

- Runs from Uptown Charlotte, southeast through Charlotte, Matthews, and into Union County
- Planned for more than 30 years to be upgraded to Expressway or Freeway
- Portion closest to Uptown Charlotte has been converted to Freeway



Feasibility Study

- 2010, Reevaluation 2013
- Studied
 - Freeway with Express Lanes
 - Expressway with Express Lanes
 - Elevated Express Lanes



Express Lanes

- What are express lanes?
 - Limited-access lanes
 - Typically located in the middle of non-tolled highways
 - Provide a free-flowing travel alternative for those who wish to pay a fee for a reliable travel time
 - Fee is variable dependent on congestion of general purpose lanes and volume of express lane

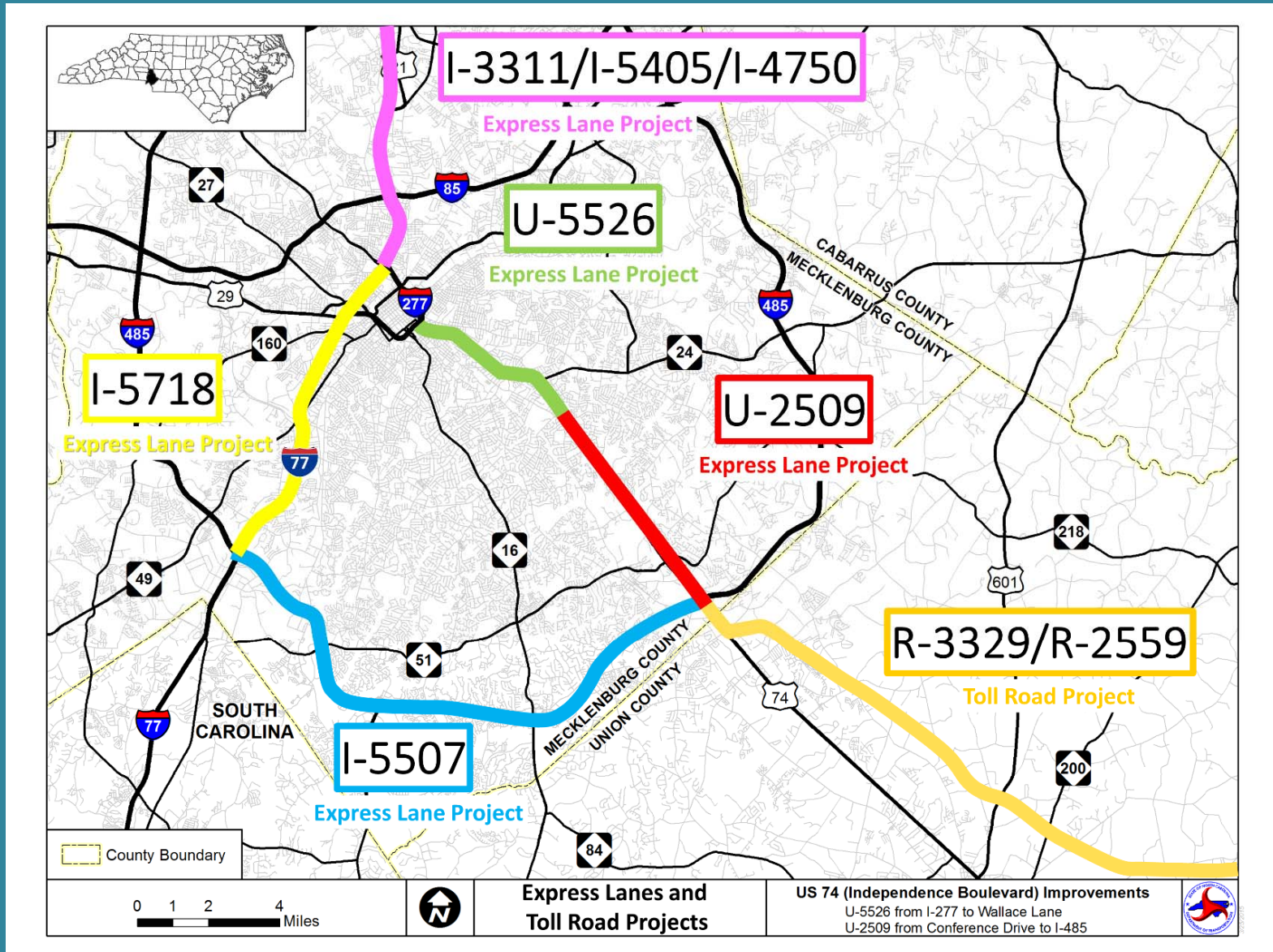


Express Lane Benefits

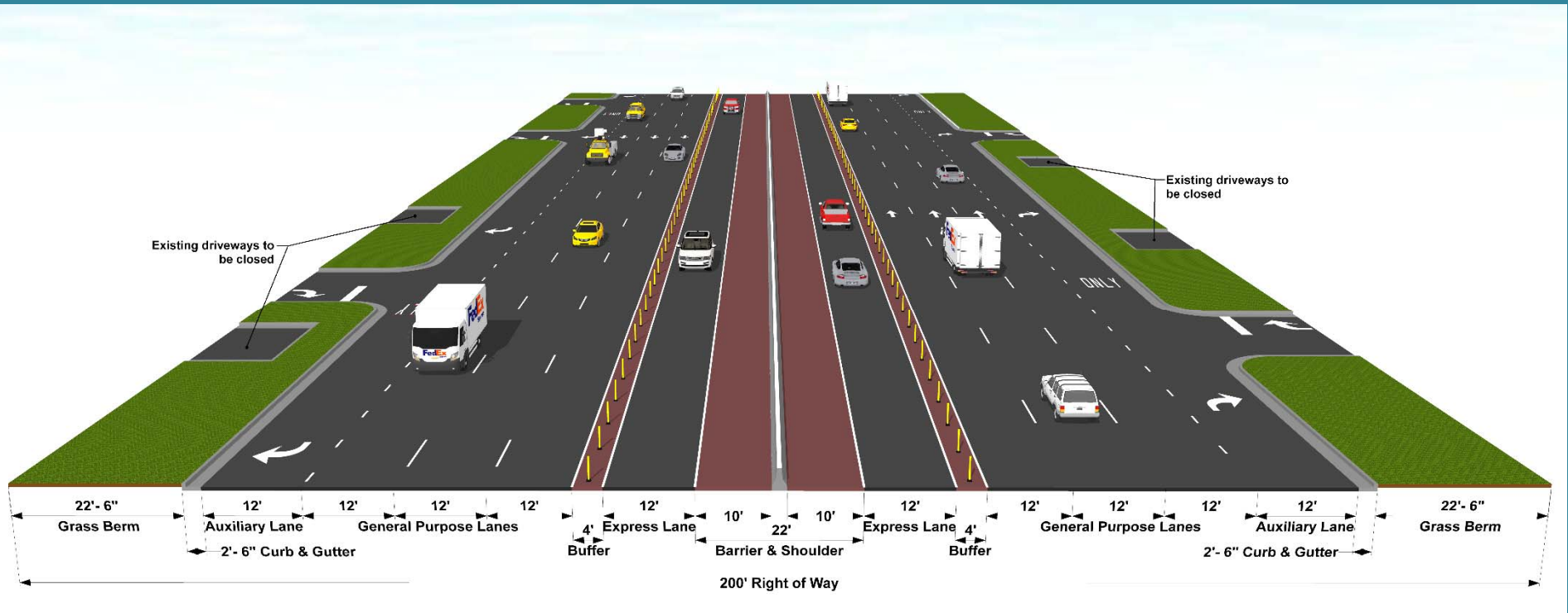
- A growing population in North Carolina means increased demand on infrastructure
- Cost-effective, highly viable transportation alternative
- More reliable trip times when you need it



Express Lanes



US 74 Typical Section



Collaboration, Communication, Compromise



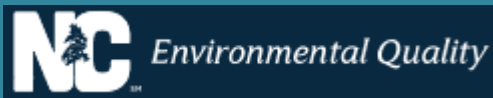
© Break

Stakeholder Coordination

- City of Charlotte
- Town of Matthews
- Mecklenburg County
- CRTPO
- CATS
- NCTA
- NEPA/404 Merger Team
 - FHWA, USACE, NCDWR, USEPA, USFWS, NCSHPO, NCWRC, CRTPO, NCDOT

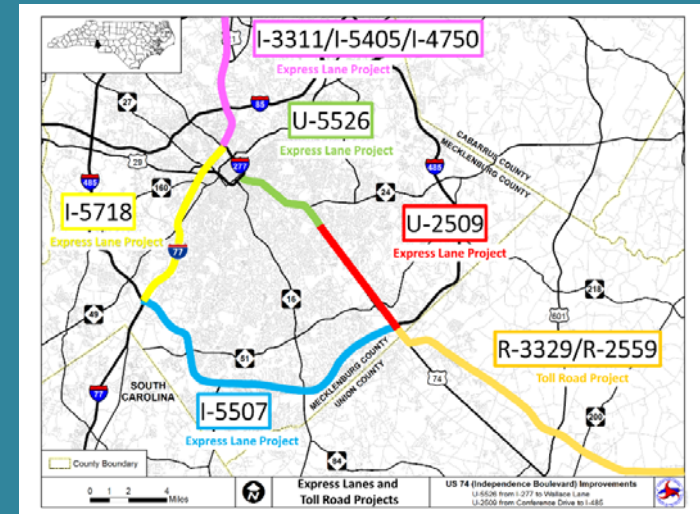


US Army Corps of Engineers



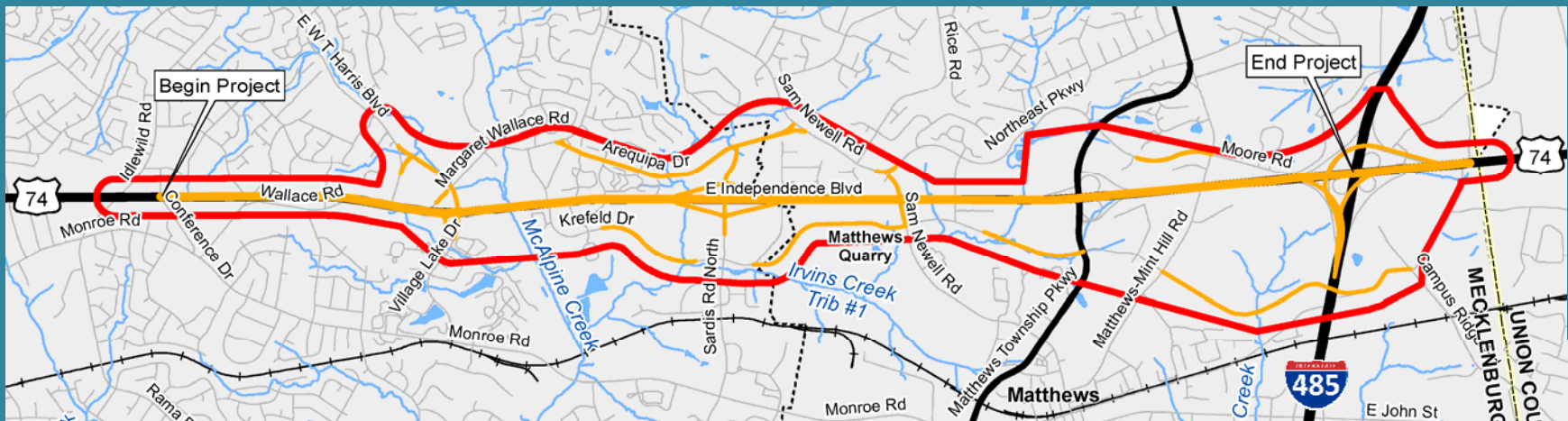
Development of Project

- System of Express Lanes
- How will it affect the local community?
- Only Express Lanes in US on Expressway



Merger Team – Purpose for the Proposed Action

- To provide reliable travel time and improve mobility along the US 74 corridor, provide system sustainability, and maintain and improve connectivity across and along US 74 to, from, and between adjacent communities within the study area.



Grade Separations and Interchanges Village Lake Drive



Grade Separations and Interchanges Sam Newell Road

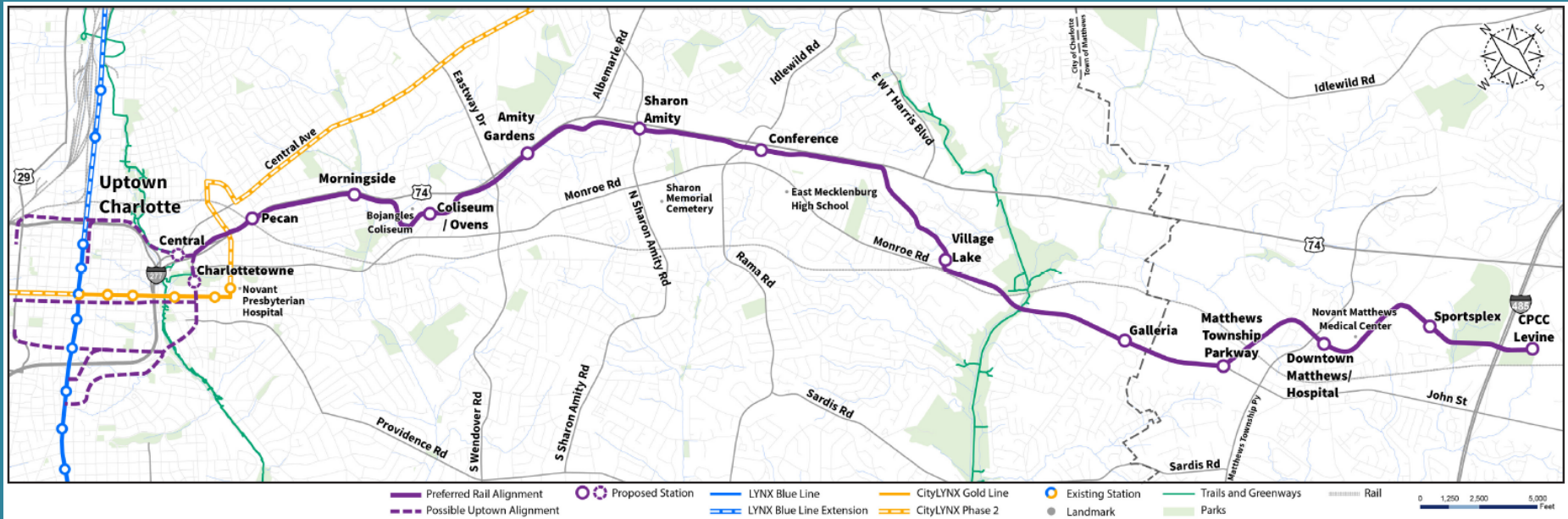


Grade Separations and Interchanges Matthews-Mint Hill Road



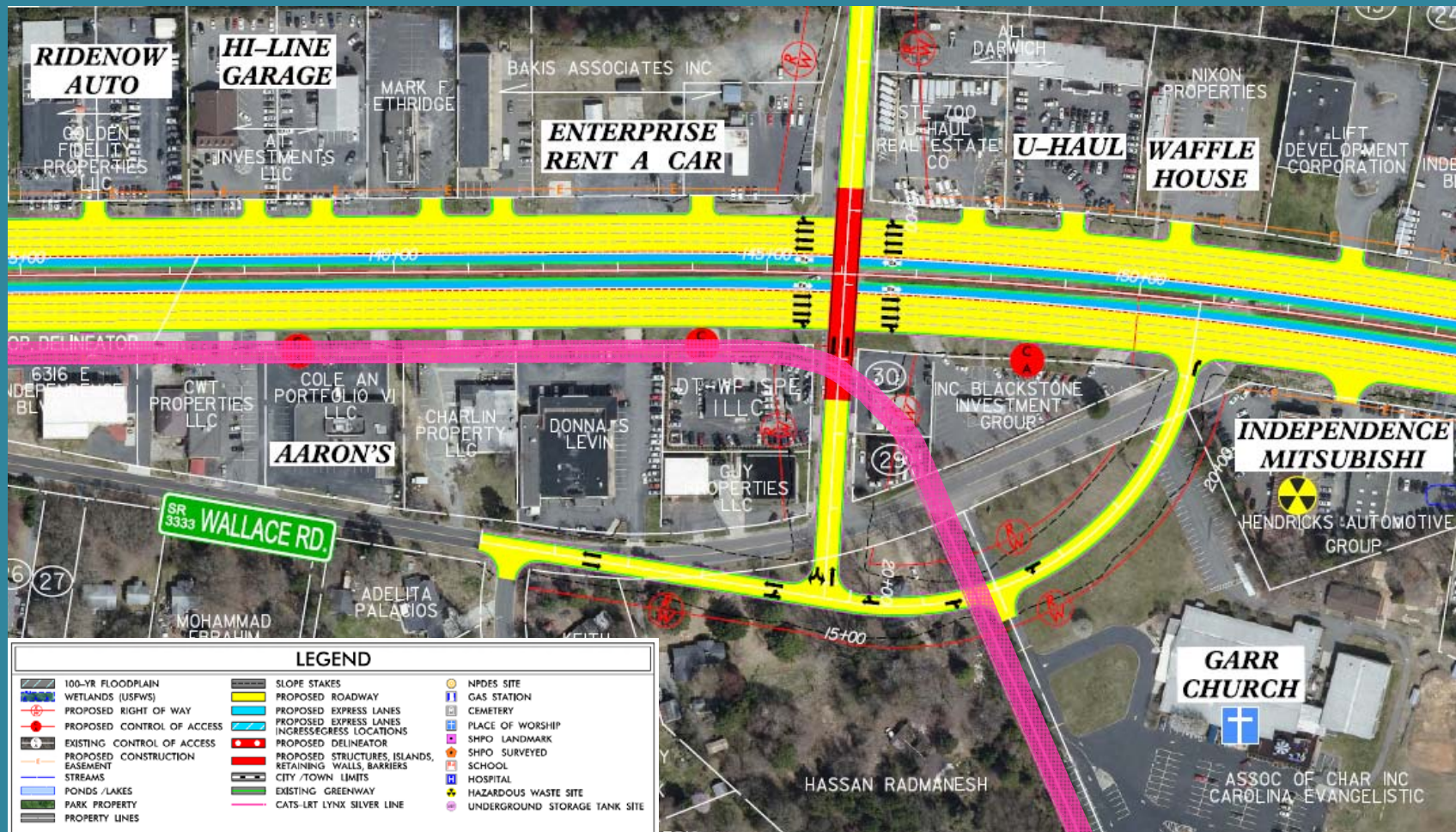
Multimodal - Transit

- Southeast LRT – Silver Line



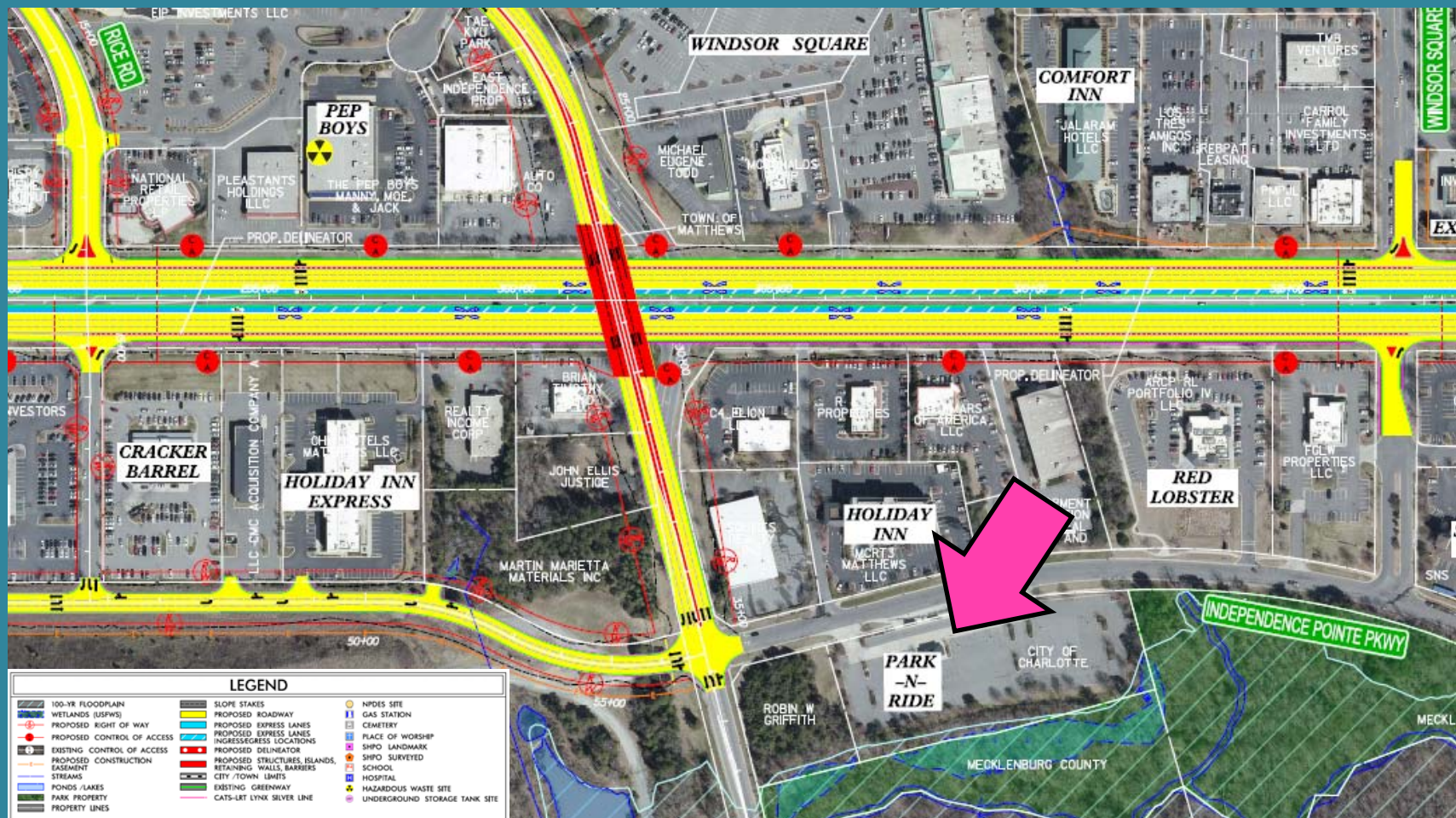
Multimodal - Transit

- CATS Southeast LRT – Silver Line



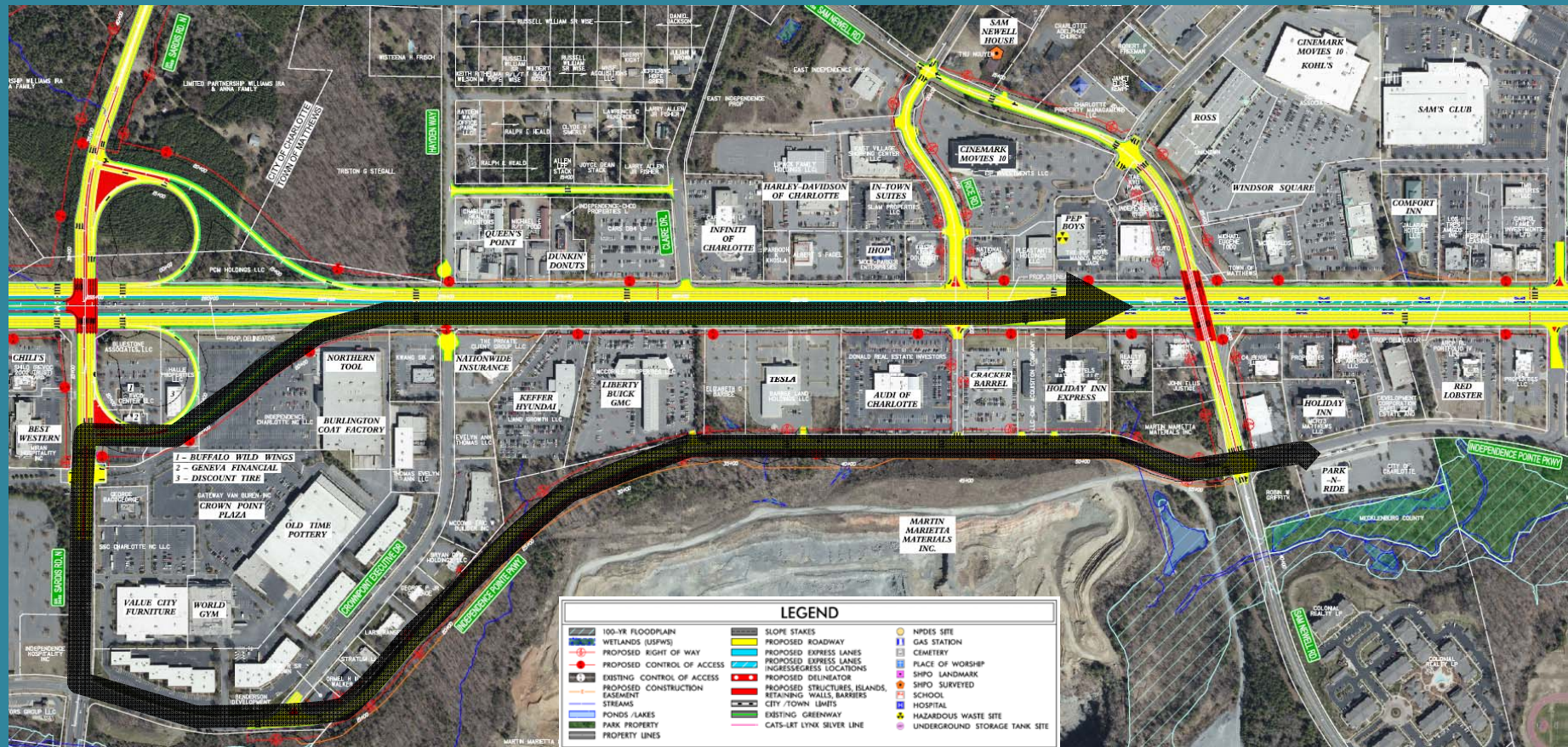
Multimodal - Transit

- Park and Ride
- Locations of ingress/egress and direct connectors – collaboration with CATS, Charlotte, and Matthews



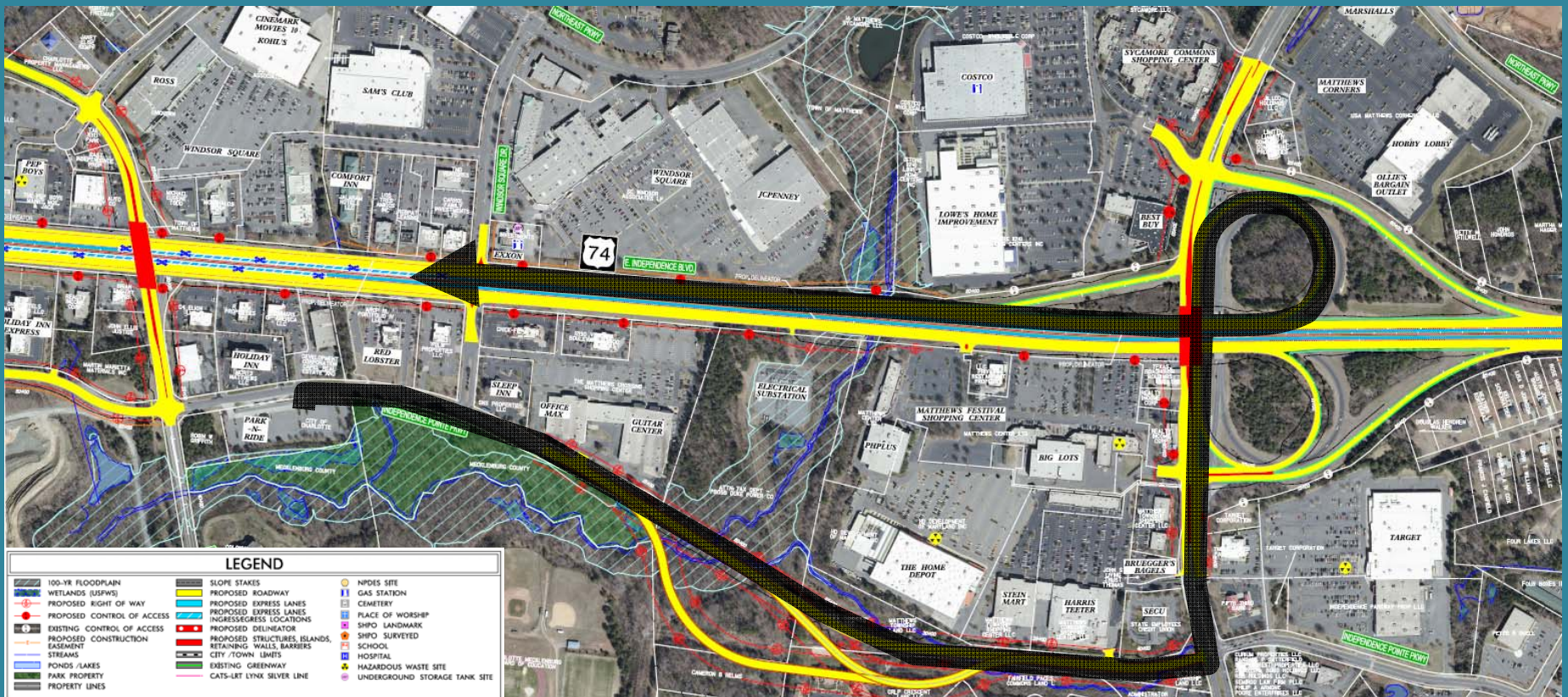
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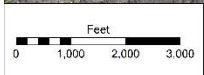
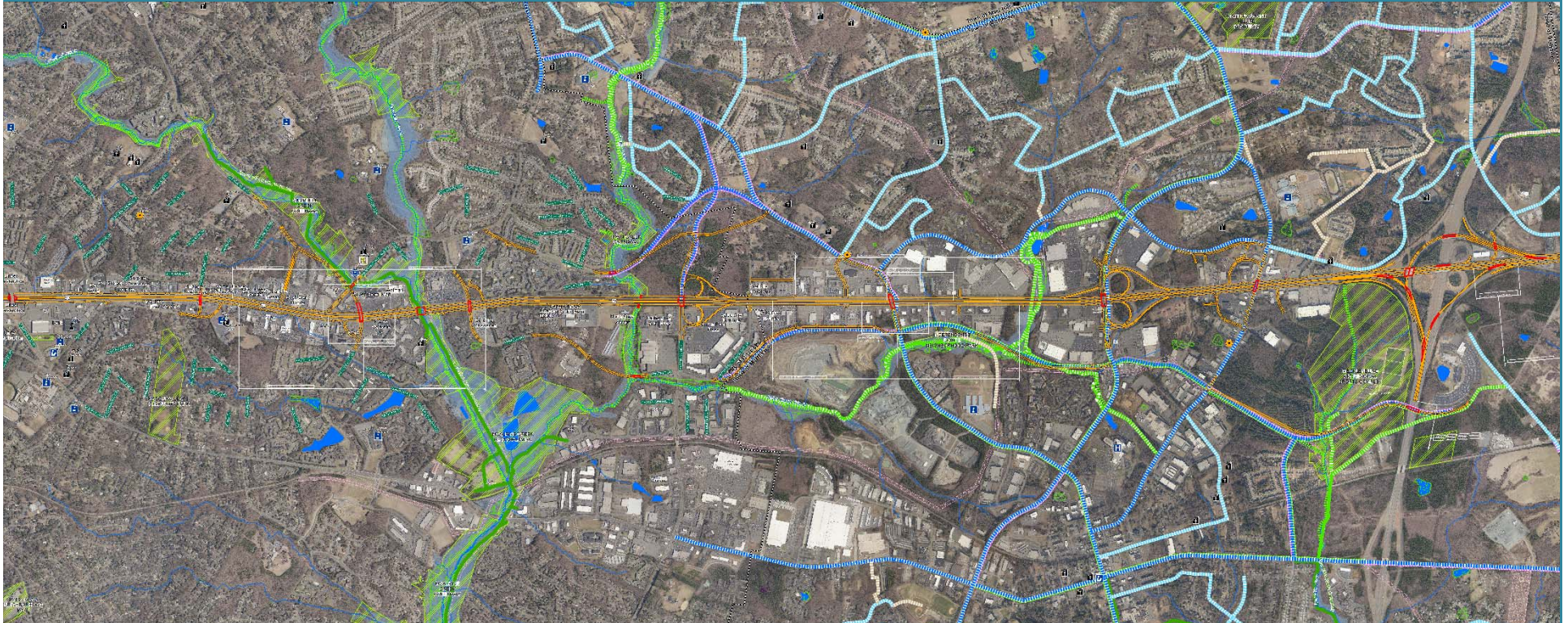


Multimodal - Transit

- Park and Ride
- Locations of ingress/egress and direct connectors – collaboration with CATS, Charlotte, and Matthews



Multimodal – Bicycle and Pedestrian



U-2509, US 74 (Independence Blvd)
From Conference Drive to I-485

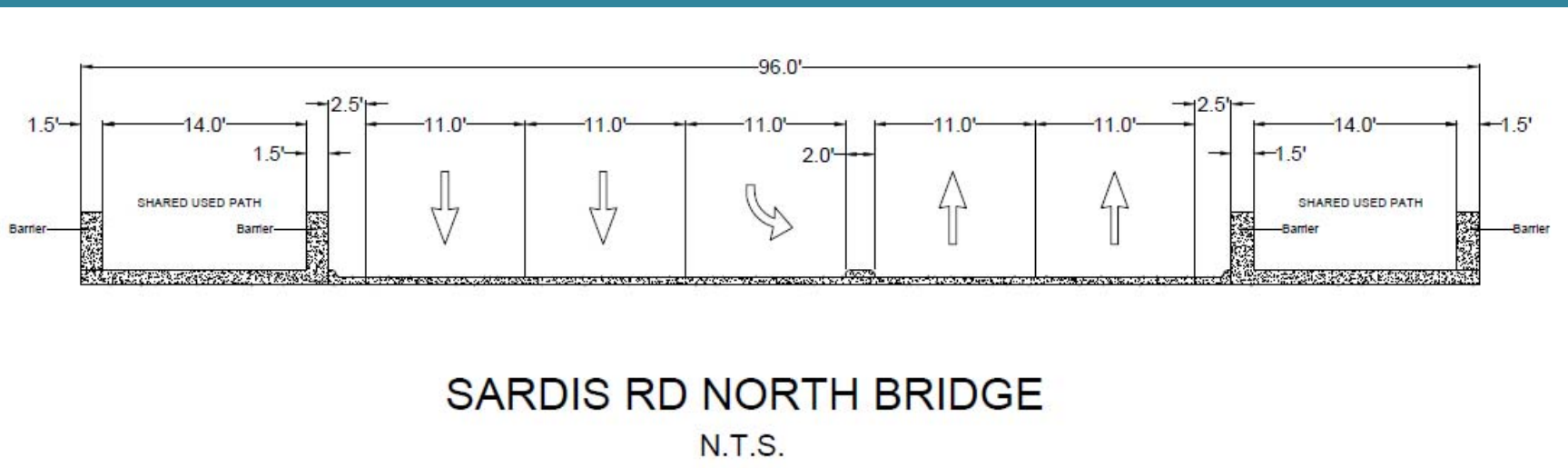
Boundary	College	Future Bicycle Project	Existing Greenway	Sidewalk
Place of Worship	Fire Station	Bike Lane	Proposed Greenway	Proposed Sidewalk
Bicycle Accessible	Bus Stop	Bike Lane with Greenway	Bike Lane with Sidewalk	Proposed Sidewalk with Greenway
Bicycle Accessible	Bus Stop	Bike Lane with Sidewalk	Bike Lane with Sidewalk	Proposed Sidewalk with Greenway
Bicycle Accessible	Bus Stop	Bike Lane with Sidewalk	Bike Lane with Sidewalk	Proposed Sidewalk with Greenway

Bicycle/Pedestrian Coordination
October 3, 2016



Multimodal – Bicycle and Pedestrian

- Coordination with Town of Matthews, City of Charlotte, and Mecklenburg County
- Created list of bicycle and pedestrian accommodations requested based on local plans
- Project team in the process of designing with and without accommodations to determine cost share estimates and evaluation of additional impacts



Parallel Collector Road Development



- Coordination with Town of Matthews, City of Charlotte, CRTPO, Mecklenburg County, and CPCC

Independence Pointe Parkway - ENT District



Graphic provided by CRTPO

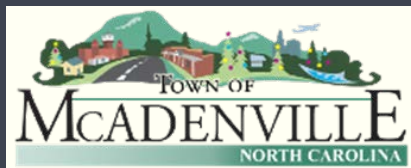
Continued Public Involvement

- Webpage
- Newsletters
- Small Group Meetings
- Additional Public Meetings
- <https://www.ncdot.gov/projects/U-2509/>

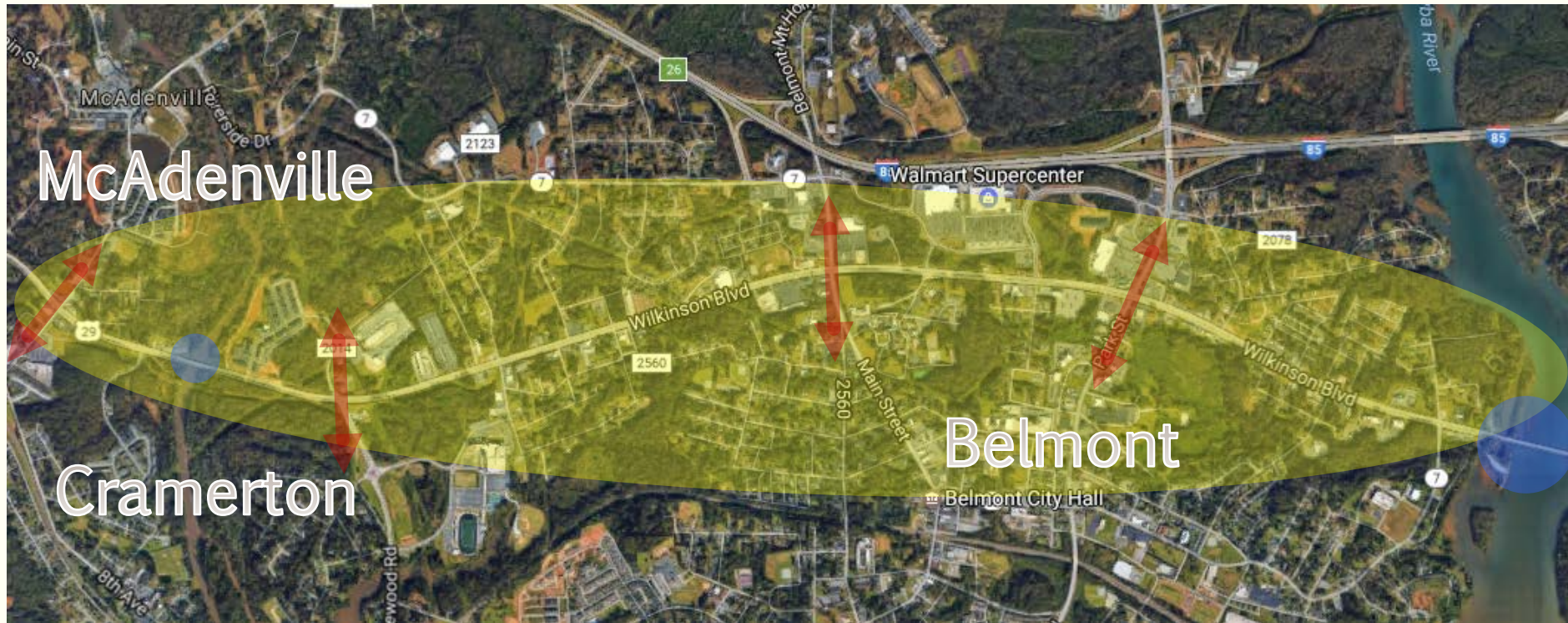


Suburban Corridor Transformation: From Car-Centric To Multi-Modal

Build A Better Boulevard:
The Wilkinson Boulevard Corridor Study



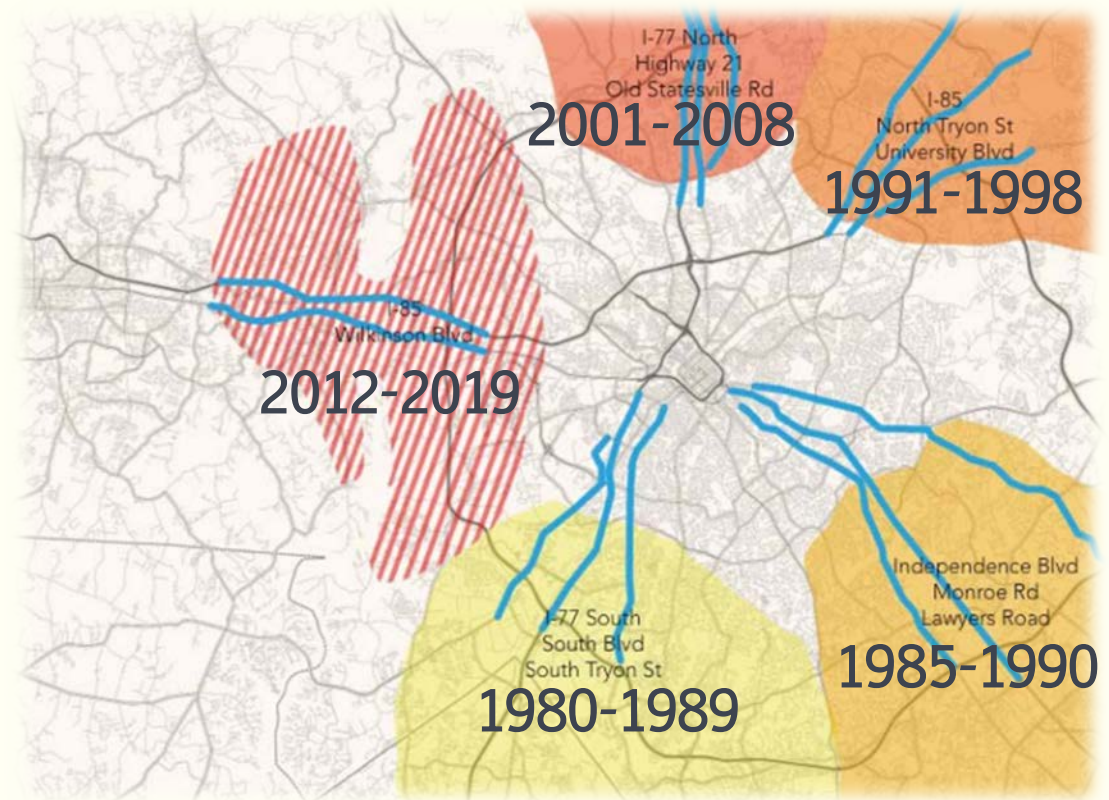
Wilkinson Boulevard Corridor



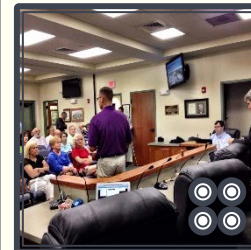
Congestion vs. Safety
Capacity vs. Development

History – Growth Corridors

- Wilkinson Blvd is one of 5 corridors that radiate from Uptown Charlotte.
- Each corridor consists of a combination of Interstates, Boulevards, Streets, and Roads.
- In the western corridor, Wilkinson Blvd is paired with I-85.
- In each corridor, growth patterns are dictated by local access and connectivity.
- The Wilkinson Blvd Corridor is next in line to receive growth and development from the latest economic expansion.



Public Involvement is Crucial



PLEASE ATTEND THE PRESENTATION OF RECOMMENDATIONS FOR
BUILD A BETTER BOULEVARD



A COLLABORATION BETWEEN
BELMONT, CRAMERTON, AND MCADENVILLE
TO IMPROVE

WILKINSON BOULEVARD

THURSDAY, JANUARY 15th
CRAMERTON TOWN HALL
6:00 - 7:30 PM

Wilkinson Corridor Tools & Strategies



Management

- Traffic Management systems (Adaptive Signal System)
- NCDOT electronic information signs
- Written and approved protocol between HP, PD, and NCDOT to coordinate traffic management during exceptional conditions (accidents, McAdenville Christmas Lights)



Policy

- Alternate Parallel System
- I-85 Interchange redesigns
- Multi-way design for Park St
- Relocation of N Main St
- Square-Back-Access for Lakewood Intersection
- Comprehensive Plan and Zoning Updates



Design

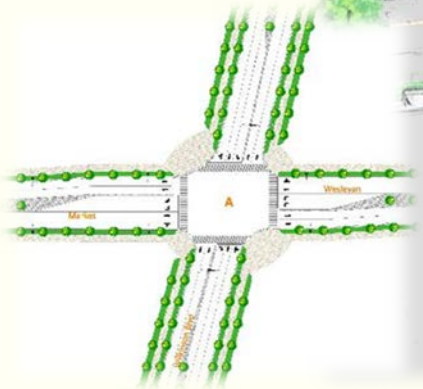
- Wilkinson Blvd. cross section – six travel lanes, 5 ft planted center median w/lighting, 16 ft landscaped shoulders, cyclist + sidewalk facilities, & pedestrian scaled lighting
- Improved intersections along the corridor w/turn lanes and sidewalk/landscape/paver treatment

Wilkinson Blvd – Typical Section



Wilkinson Blvd – Existing vs. Proposed

(Market St/Wesleyan Rd Intersection)



Wilkinson Blvd – Existing vs. Proposed

(Lakewood Rd Intersection)

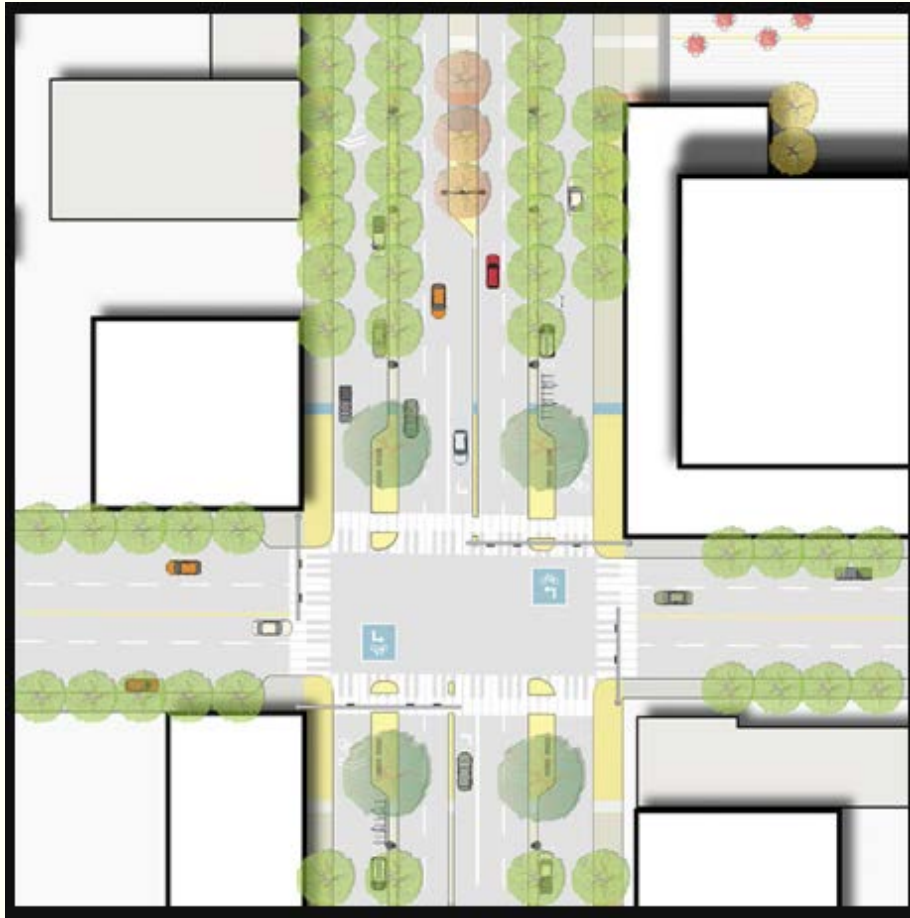


Wilkinson Blvd – Existing vs. Proposed

(Wilkinson Blvd & N Main St)



Multi-Way Boulevards



Central Lanes	Provide traffic through movement.
Side Medians	Park-like medians – beginning of the pedestrian realm. Provide shade & protection for pedestrians, cyclists.
Access Lanes	Provide a quiet, pedestrian friendly street for the storefronts facing the boulevard.
Wide Sidewalk	Allows pedestrian traffic to circulate freely between storefronts & buildings. Sidewalks at least 10 ft wide provide necessary space for pedestrian mobility.
Store fronts	Provide economic viability. Development located adjacent to the sidewalks is accessible via all modes.

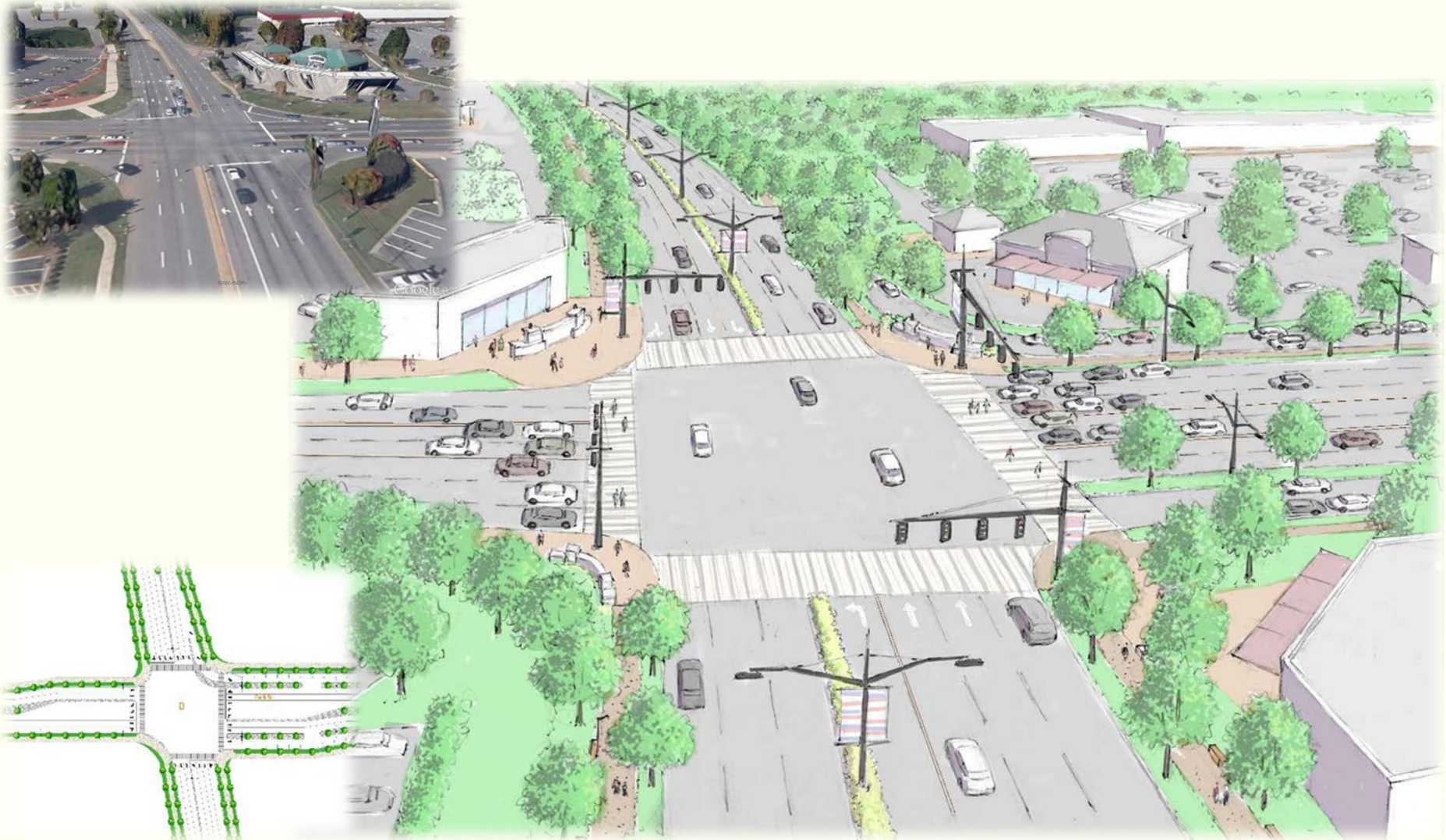
Wilkinson Blvd – Existing vs. Proposed

(between E Catawba & Park)



Wilkinson Blvd – Existing vs. Proposed

(Park Street Intersection)



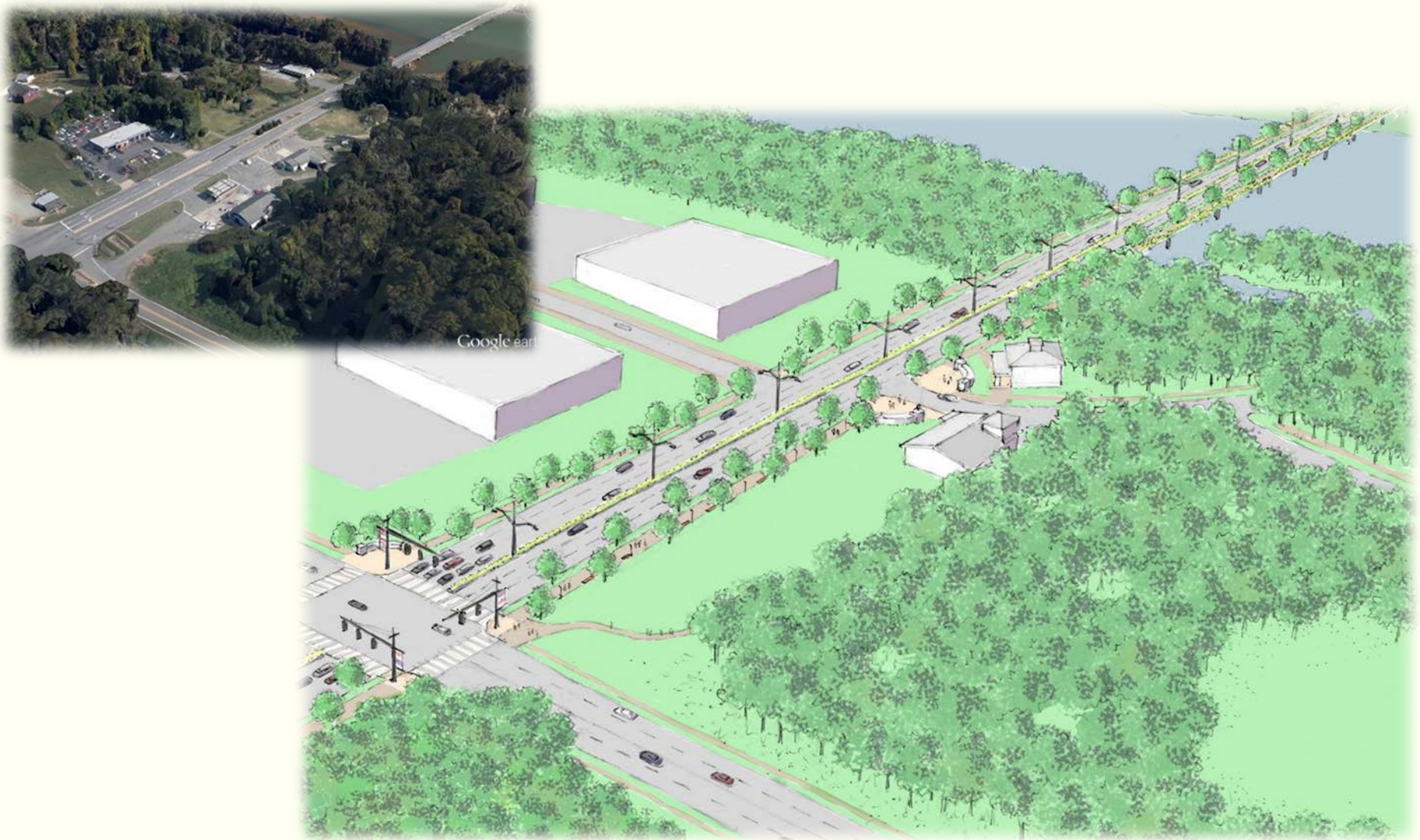
Wilkinson Blvd – Existing vs. Proposed

(E Catawba St and E McAdenville Rd Intersection)



Wilkinson Blvd – Existing vs. Proposed

(Catawba River crossing)

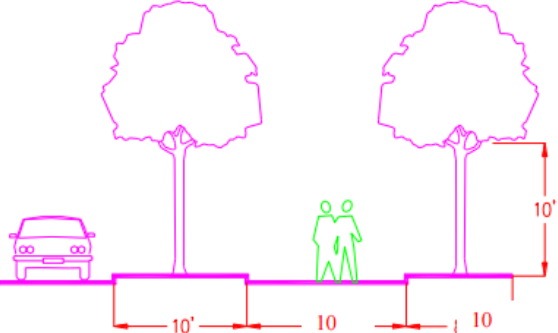


Implementation Tools – Land Development Code

CHAPTER 5: DISTRICT PROVISIONS

5.15 HIGHWAY CORRIDOR OVERLAY (HC-O)

This District is coded to preserve and improve the transportation efficiency, non-motorized mobility, and aesthetics of the Wilkinson Boulevard corridor. All provisions of the underlying district shall be effective except those specifically stated in this chapter.

<p>1. Streetscape Requirements</p>	<p>All development shall provide the following improvements across the frontage:</p> <ul style="list-style-type: none"> • 10 foot landscape strip between the curb and multi-use path • 10 foot wide multi-use path • 10 foot (minimum) landscape strip behind the sidewalk • Canopy Trees planted 40 feet on-center on both sides of the multi-use path staggered every 20 feet (Where aerial utility lines prohibit the installation of Canopy Trees, Small Maturing Trees may be substituted with permission of the Planning Director) 	<p>2. Access Management</p> <p>1. Driveways shall be limited in accordance with the following standards. Where the NC DOT Driveway Manual conflicts, the stricter of the two standards shall prevail.</p> <table border="1" data-bbox="1304 564 1816 664"> <thead> <tr> <th><u>Frontage (feet)</u></th> <th><u>Number of Driveways Allowed</u></th> </tr> </thead> <tbody> <tr> <td>≤ 500</td> <td>1</td> </tr> <tr> <td>501-999</td> <td>2</td> </tr> <tr> <td>>1000</td> <td>3</td> </tr> </tbody> </table> <table border="1" data-bbox="1284 685 1796 763"> <thead> <tr> <th><u>Development Type</u></th> <th><u>Minimum Spacing (feet)</u></th> </tr> </thead> <tbody> <tr> <td><u>Residential</u></td> <td>100</td> </tr> <tr> <td><u>Commercial</u></td> <td>400</td> </tr> </tbody> </table> <p>2. The minimum distance between a driveway and an intersection shall be as follows. Where the NC DOT Driveway Manual conflicts, the stricter of the two standards shall prevail.</p> <table border="1" data-bbox="1255 906 1796 978"> <thead> <tr> <th><u>Street Type</u></th> <th><u>Minimum Distance (feet)</u></th> </tr> </thead> <tbody> <tr> <td><u>Major/Minor Thoroughfare</u></td> <td>500</td> </tr> <tr> <td><u>Local/Collector Street</u></td> <td>200</td> </tr> </tbody> </table> <p>3. The Minimum Spacing between median openings shall be 1000 feet. Where the NC DOT Median Crossover Guidelines conflict, the stricter of the two standards shall prevail.</p>	<u>Frontage (feet)</u>	<u>Number of Driveways Allowed</u>	≤ 500	1	501-999	2	>1000	3	<u>Development Type</u>	<u>Minimum Spacing (feet)</u>	<u>Residential</u>	100	<u>Commercial</u>	400	<u>Street Type</u>	<u>Minimum Distance (feet)</u>	<u>Major/Minor Thoroughfare</u>	500	<u>Local/Collector Street</u>	200
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<p>2. General Provisions</p>	<p>1. Minimum lot frontage: 200 feet</p> <p>2. Minimum Lot Area: 2 acres (applicable for Automotive/Boat/Heavy Equipment/Mobile Home Sales and/or Services, Mini-Storage Facilities, and Hotels/Motels only)</p> <p>3. Lot Provisions: The HC overlay shall exist along the entire length of the Wilkinson Boulevard corridor within the city's zoning jurisdiction (including the ETJ). The HC overlay shall consist of lots fronting along the boulevard for a depth measured from the center-line of the right-of-way to the rear of the affected property, but not to exceed 500 feet in length (depth).</p>																					

Implementation through Development – A Work in Progress



Working with the Gaston-Cleveland-Lincoln MPO



Comprehensive Transportation Plan (CTP)

- Long-range (30+ years)
- Formerly the “Thoroughfare Plan”



Metropolitan Transportation Plan (MTP)

- 25-year, fiscally constrained plan
- Formerly the “Long Range Transportation Plan “(LRTP)



NCDOT Current STIP March 2017

State Transportation Improvement Program (STIP)

- Short-range (10 years), fiscally constrained plan
- Identifies funding and scheduling of projects



Working with the Gaston-Cleveland-Lincoln MPO

Project	Benefit by Type	Timeframe	Sponsor (who administers project?)	Next Steps	Impact on Existing Plans or Proposed Projects	Submit as Project in SPOT 4.0?
Parallel road system north and south of Wilkinson Blvd.	Traffic flow, land use	As development occurs	Municipalities	Incorporate in CTP	None	No
"Square back" system for Park and Lakewood intersections	Traffic flow, land use	As development occurs	Municipalities	Incorporate in CTP	None	No
Adaptive signal system along Wilkinson Blvd	Traffic flow	Near-term (by 2020)	NCDOT	Confirm sponsorship and maintenance requirements	Yes- I-85 widening and diversion traffic	Yes
I-85 interchange at Exit 26	Traffic flow	Concurrent with I-85 widening (mid-2020s)	NCDOT	Incorporate in CTP	Yes- I-85 widening	No
Deploy Intelligent Transportation System along I-85	Traffic flow	Mid-term (by 2025)	NCDOT	Consider ranking in SPOT 4.0, if necessary	Yes- I-85 widening	Yes
Multi-way design for Park Street btw E. McAdenville and Wilkinson and SPUI with I-85	Traffic flow, land use	Mid-term (by 2025)	NCDOT	Incorporate in CTP and submit in SPOT 4.0	None	Yes
Wilkinson Blvd modified typical cross section	Non-motorized users, property owners	Mid-term (by 2025)	Municipalities	Confirm municipal interest, NCDOT concerns, and costs	None	No
Catawba/ McAdenville Road intersection improvements	Traffic flow, land use	Mid-term (by 2025)	NCDOT	Confirm scope and submit in SPOT 4.0	None	Yes
Park Street intersection improvements	Traffic flow, land use	Mid-term (by 2025)	NCDOT	Confirm scope and submit in SPOT 4.0	None	Yes
Lakewood intersection improvements	Traffic flow, land use	Mid-term (by 2025)	NCDOT	Confirm scope and submit in SPOT 4.0	None	Yes
Market/Wesleyan intersection improvements	Traffic flow, land use	Mid-term (by 2025)	NCDOT	Confirm scope and submit in SPOT 4.0	None	Yes
Replacing two bridges along Wilkinson Blvd	Non-motorized users	Long-term (after 2025)	NCDOT	Incorporate in CTP	Yes- Wilkinson Blvd modified cross section	No
N. Main Street intersection improvements	Traffic flow, land use	Long-term (after 2025)	NCDOT	Incorporate in CTP	None	Yes
Relocated N. Main Street btw Wilkinson and McAdenville Rd and relocated SPUI with I-85	Traffic flow, land use	Mid-term (by 2025)	NCDOT	Incorporate in CTP and submit in SPOT 4.0	Yes- I-85 widening	Yes



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IMPORTANT CONCEPTS

- ❖ Preserve the function of the existing transportation system.
 - ❖ *Purposefully* incorporate elements of the transportation system that benefit ALL modes
 - ❖ Develop a multimodal transportation system that provides access to all destinations.
 - ❖ Fully integrate connections within and between communities
 - ❖ Support the economic vitality through the connection of transportation and land use
-

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QUESTIONS??

