



Metropolitan Transit Commission



May 25, 2022

METROPOLITAN TRANSIT COMMISSION

Wednesday, May 25, 2022

5:30pm

Charlotte-Mecklenburg Government Center

WebEx

AGENDA

- I. Call to Order Mayor John Higdon
 - Attendance (Roll Call)
- II. Approval of the April 19, 2022 Summary (p.5-10) Mayor John Higdon
- III. Report from the Chair of the Transit Service Advisory Committee (TSAC)Krissy Oechslin
- IV. Report from the Chair of the Citizens Transit Advisory Group (CTAG) Adam Paisak
- V. Public Comments
- VI. Informational Item
 - CityLYNX Gold Line Phase 3 Design Study (p.12-23)David McDonald
- VII. Action Items
 - Regional Coordinated Human Services Plan (p.25-82)Arlanda Rouse
 - Envision My Ride – Bus Priority Study (p.84-98)..... Bruce Jones
 - MetroRapid North Corridor BRT Staff Recommendations (p.100-109) ..Brian Nadolny
- VIII. MTC Commissioners’ Business
 - None
- IX. Chief Executive Officer’s Report (p.111-114) John Lewis, Jr
- X. Other Business
- XI. Adjourn

METROPOLITAN TRANSIT COMMISSION
MEETING SUMMARY
April 27, 2022
(Approved on May 25, 2022)

Presiding: Commissioner Leigh Altman, Mecklenburg County Board of Commissioners

Present:

Mayor Vi Lyles (City of Charlotte)	Mayor John Higdon (Town of Matthews)
Andrew Grant (Town Manager, Cornelius)	Mayor Jack Edwards (Town of Pineville)
Mayor Rusty Knox (Town of Davidson)	Randy Hemann (Town Manager, Mooresville)
Jamie Justice (Town Manager, Davidson)	Randi Gates (GCLMPO, Gastonia)
Mayor Melinda Bales (Town of Huntersville)	L. J. Weslowski, (City of Concord)
Anthony Roberts (Town Manager, Huntersville)	

CATS Chief Executive Officer: John Lewis, Jr

I. Call to Order

The regular meeting of Metropolitan Transit Commission was called to order via WebEx conferencing at 5:01pm by Mecklenburg County Commissioner Leigh Altman.

II. Review of Meeting Summary

The meeting summary of March 23, 2022 was approved.

III. Transit Services Advisory Committee (TSAC) Chairman's Report

Krissy Oechslin (Chairwoman) reported the following recap: In our April TSAC meeting we heard the Silver Line Rail Trail presentation that we heard here in last month's MTC meeting. There were several suggestions to improve accessibility and wayfinding along the trail, as well as how to prioritize and protect trail users where the trail crosses streets. We also reviewed the upcoming June service changes which TSAC had previously approved, including some schedule and route adjustments.

We also heard about the Route 9 QR Code bus stop sign pilot. CATS will be placing QR Codes at bus stops all down Route 9, which is down Central Avenue, which passengers can scan, and they'll then be prompted to download the CATS Pass app, which shows real-time bus information. TSAC members were very enthusiastic about this. I think it's a great way to use the technology that most people are familiar with. There were a couple of questions about how to accommodate passengers who maybe don't have smartphones or who don't have enough data to download the app, but overall, we think this is a great idea, and I for one am excited to see it when I get on the Route 9 bus most mornings.

One issue that came up during our monthly discussion of service issues was the timing of trains after sporting events and other big events that have a start and end time, or estimated end time. While we are glad that the Blue Line is at 15-minute headways most of the time nowadays, it's not always running that often late at night once sports events and concerts let out, which can result in long waits for the train and may discourage casual writers from taking public transit again. We hope CATS is working to continuously improve its service after scheduled events.

IV. Citizens Transit Advisory Group (CTAG) Chairman's Report – No Report

V. Public Comments – None

VI. Informational Item

A. Envision My Ride – Bus Priority Study Update

Bruce Jones

Bruce Jones – CATS Transportation Planner – made a presentation providing an update on Envision My Ride-Bus Priority Study, based on pages 12-32 in the MTC Agenda packet for April 27th, 2022 meeting.

Discussion:

CATS CEO LEWIS: This study was commissioned in 2017 as a result of some input that we received from passengers, riders, and a study that was released outlining how the top 50 transit systems across the country fared in terms of frequency and access. In reading that study CATS didn't score as high as we would have liked. We took a step back and directed with the MTC to take a look at our service levels.

Envision My Ride is the outcome of that year-long consulting study that is focused on building a better bus network. Those outcomes in 2018 were centered around three pillars:

1 - Restructuring our bus system to move away from an outdated public hub and spokes system to more of a grid system that didn't require so many of our customers to take a bus from the outskirts of our service area into Uptown at the transit center, get off one bus, get onto another just to leave the Uptown area. We redesigned our bus system in 2018 to coincide with the opening of the Blue Line Extension.

2- Investing in more frequent service, and that has been an issue that we have tried to address over the last couple of years incrementally by adding more funding to our budget as the current sales tax would allow. I will admit that current funding sources are not robust enough to really meet the requirements and the recommendations of the Envision My Ride program, which essentially states that no bus route outside of our express service should operate on headways greater than 15 minutes. That kind of investment and frequency would require over \$100M in capital expenses. We would need to increase our bus fleet by over 100 vehicles and also the increased cost of hiring more operators and mechanics and additional fuel for those services. That is something that the MTC has been trying to address while under the current funding restraints, but in order to reach that goal we would need a new funding source.

3- Increasing reliability. We got the system right when we went to changing our bus routes. We continue to invest in more frequent service, but that being said, if we put more vehicles on the street and more frequent service and they're still stuck in the same congestion that everyone else is, we would have fallen short of the mark. Finding ways that we can add the reliability that our rail system brings to our bus system through enhancements that will be outlined in Bruce's presentation I think will round out the Envision My Ride study. This has been a multi-year effort. We're excited to present to the MTC tonight the outcome of the third and final phase of this three-pillar approach.

Bruce and his team have been working very hard over the last year to 18 months to bring these recommendations before you and we'll look forward to a robust discussion on that.

MAYOR BALES (Town of Huntersville): I do have a quick question for you in regard to the outreach that has been done so far. First of all, let me say I certainly do like the micro transit zones that you're creating, especially in the north end. I have a lot of residents talking about needing the ability to move around, especially with our senior population continuing to

grow and senior apartments, senior developments that we're developing and building in Huntersville specifically. But looking at the outreach that you have done up to date, would it be more successful if you spoke to the residents who currently did not have access to transit, who didn't need the bus rapid transit or the express but who needed to be able to get across town to their doctors, to the pharmacy, to the grocery stores. And I'm wondering if, to kind of circle back, wondering if pop-up events, pop-up opportunities like our festivals or our farmers markets, etc., wouldn't be an opportunity for you to garner more information from the residents that you could potentially serve.

MR. JONES: Yes. We took the initial outreach, or we sent out a survey. We didn't just target transit riders with that service, we sent it out to everyone within the area. We did develop those zones based on that initial outreach of recommendations that we learned from that. In terms of next steps forward, as we begin to develop that operational strategy, I do think that we will continue for sure the outreach portion of that, so you bring up a good point. How can we reach those populations that may not currently use the village rider service or the BRT service, but they still have a need for accessing some sort of flexible service within that specific part of town but then also throughout the network? I think as we continue to develop that operational strategy and go into the next steps of the micro transit piece, that's where we'll begin to do more targeting outreach to address what you just mentioned.

MAYOR BALES (Town of Huntersville): I think that would be great. I don't know if you saw it in the paper, but we had a student who not only was kicked out of their home, was homeless, but she was taking Uber to school, to Hopewell High School because there's no transit opportunities there, there's no bus stop, and then also having to take an Uber to work as well. And it's those people, whether it's students, whether it's our senior population, and Huntersville specifically and as the north end continues to grow, the need for reliable transit is there. I just want to make sure that you're hearing from those folks and making sure that you're reaching out to them.

MR. JONES: Definitely, and then also to speak to, when we go back to the initial work with the mobility hub concept, that will tie directly into the work that we're doing with the micro transit piece, and we'll definitely be conducting engagement around that so the individuals can see holistically how we can connect individuals from the micro transit zones to the mobility hubs, to the frequent transit options. I say all that to say that outreach will continue definitely. We'll make sure that we do more targeted outreach specifically in the towns as well.

MS. OECHSLIN (TSAC Chairwoman): Bruce, thanks for the presentation. You're a frequent guest in our TSAC meetings and we've heard about your work on the study for many months, and I think we're all very excited about these recommendations. And even though you know well the bus lanes are near and dear to my heart and they're not in the immediate recommendations, I'm still excited about it.

You mentioned that obviously to do all these things would take some money that doesn't exist right now but that some of the frequency in bus stop improvements could be funded out of the existing sources of funding that you already have. I was wondering if you could talk about that a little bit more. I think frequency improvements across the system would be a huge win. How much of that could be funded without raising additional money?

MR. LAWRENCE: First, I think what Bruce is referring to are, we do have bus stop improvements funded with our budget cycle, and incrementally we can do some of those improvements he's mentioning. Some of the larger, like mobility hubs, mobility centers, would require additional partnerships to bring this to fruition. Then through our just normal service level increases we can incrementally make some of those changes to some of the frequency that we talked about. I'll remind you that, just before the pandemic we did start doing some of that 15-minute frequency, and I think we can just do that on an incremental basis now. Additional funding can certainly help us to do the whole plan, but it will take just us longer with our existing funding structure.

ANDREW GRANT (Town Manager-Cornelius): I think it's great that you guys are thinking out of the box with micro transit. The one thing I'm digging into the operations here. I would assume that CATS would do a pilot program somewhere before totally removing the village rider in the north region.

MR. JONES: Yes. We would definitely do a piloted approach. It would involve, of course, extensive outreach. We simply want to make sure the community knows what micro transit is, what exactly it can do for individuals. We want to make sure that we do that process. We wouldn't just come in and turn the switch and say okay, you're converted to village rider service tomorrow. We do want to do, of course, a piloted approach, make sure that we have that outreach in place before making that determination and just also to make sure that we collect enough data to see that it's a success. I think that that's going to be a process definitely that we'll take on before we could make a solution.

ANDREW GRANT (Town Manager-Cornelius): Thank you. The other concern I wanted to express is on BRT, and I've mentioned this before. When I see the maps that Bruce showed, what I've seen before in terms of where future BRT stations are, there's one that's currently identified on the maps for the Catawba Avenue Corridor in Cornelius, but I continue not to see one for the Westmoreland Road Corridor. I want to express that concern again because I know it's something for the future obviously, but if we don't put it on the map, we can't plan for it.

MR. JONES: I'll make sure that we take note of that. We can coordinate with Brian Nadolny, who is the project manager over that, and therefore we can make sure that we take note of that.

CATS CEO LEWIS: Yes. We've certainly heard your comments, and I think this is an issue of different project maps and delineations not coordinating. It is certainly part of our North Corridor BRT study, and that has been added. I think we just need to do a little better job coordinating between the two studies and the outcomes, but conceptually we are there.

ANDREW GRANT (Town Manager-Cornelius): Okay. When Bruce brings the maps back in May, I'm assuming BRT is going to be noted on the Westmoreland Corridor as well, is that correct?

MR. JONES: Yeah, will make sure that that's incorporated.

MAYOR KNOX (Town of Davidson): Bruce, I really appreciate the presentation. I looked at it preemptively and only a couple questions, and I think Andrew alluded to one of them, is

making sure that this process when we look at the capital program, you know, when I see your timeline here and the corridor level treatments in implementing the capital program is 10 years out. I know that's not true, but when I see that it gives me pause because I know that we've got the BRT study going on right now, and I just hope and pray that we're not looking 10 years before we get capital funding for the enhanced BRT as we move forward.

I like the six corridors. I would like to see expansion of those six corridors, knowing that the current ridership that we have, both now and pre-pandemic with the volume that we generate from North Mecklenburg. I would appreciate some sensitivity to that as we move forward.

CATS CEO LEWIS: Let me address the capital program issue. We know in pre-pandemic we were running a very successful express bus program in North Mecklenburg. We know that will continue. But when we go take that to the next level of the bus rapid transit, that will take some significant capital improvements to implement that program, more park-and-rides, direct connects, etc. That is going to take an infusion of funding that the current half cent sales tax can't support. We will be aggressive in going after grants and other programs, but right now the current capital program doesn't have the funding to support that. We'll continue to take bites of this very large apple, but that's the reality where we are.

COMMISSIONER ALTMAN (Mecklenburg County Board of Commissioners): We all need to be talking to our constituents and educating them about what it's going to take to have the kinds of transit in this community that as we grow, we need, we have to have, and it's going to take all of us and our constituents supporting that so that we can meet these goals.

B. Regional Coordinated Human Services Plan Update **Arlanda Rouse**
Arlanda Rouse – CATS Civil Rights Officer, with Lyuba Zuyeva, VHB Inc., Senior Transportation Planner – made a presentation an update on Regional Coordinated Human Services Plan, based on pages 34-50 in the MTC Agenda packet for April 27th, 2022 meeting.

VII. Action Item

A. FY2022 Amended Operating and Debt Service Budget **Blanche Sherman**
FY2022-2026 Amended Capital Investment Plan (CIP)
Blanche Sherman -CATS Chief Finance Officer – presented the FY2022 Amended Operating and Debt Service Budget and FY-2022-2026 Amended Capital Investment Plan for action; based on pages 52-58 in the MTC Agenda Packet for April 27th, 2022 meeting.

Resolution: A motion to accept the FY2022 Amended Operating and Debt Service Budget and FY2022-2026 Amended Capital Investment Plan (CIP) was made by **Mayor Vi Lyles (City of Charlotte)**; seconded by **Mayor Rusty Knox (Town of Davidson)**. Motion carried unanimously.

B. FY2023 Proposed Operating and Debt Service Budgets **John Lewis, Jr.**
FY2023-2027 Capital Investment Plan (CIP) **Blanche Sherman**
John Lewis, Jr. – CATS Chief Executive Officer and Blanche Sherman - CATS Chief Finance Officer – presented the FY2023 Proposed Operating and Debt Service Budgets and FY2023-2027 Proposed Capital Investment Plan (CIP) for action; based on pages 60-113 in the MTC Agenda Packet for April 27th, 2022 meeting.

Resolution: A motion to adopt the FY2023 Proposed Operating and Debt Service Budgets and FY2023-2027 Proposed Capital Investment Plan (CIP) was made by **Mayor Vi Lyles (City of Charlotte)**; seconded by **Mayor John Higdon (Town of Matthews)**. Motion carried unanimously.

VIII. MTC Commissioners' Business - None

IX. Chief Executive Officer's Report - None

X. Other Business

COMMISSIONER ALTMAN (Mecklenburg County Board of Commissioners): I would like to congratulate John Lewis and the whole CATS team on a very successful battery electric bus kickoff last Friday (April 22, 2022). It was a beautiful day. I was glad to be there. It very appropriately occurred on Earth Day, and it was wonderful to join with so many in that celebration.

XI. Adjourn

The meeting was adjourned at 6:52 p.m. Mecklenburg County Commissioner Leigh Altman – MTC Chairwoman.

NEXT MTC MEETING: WEDNESDAY, MAY 25TH, 2022; STARTS AT 5:30 P.M.

**METROPOLITAN TRANSIT COMMISSION
INFORMATION ITEM
STAFF SUMMARY**

SUBJECT: CityLYNX Gold Line Phase 3 Design Study

DATE: May 25, 2022

1.0 PURPOSE/SCOPE: CATS will present an overview of the CityLYNX Gold Line project and the proposed study to advance the Gold Line Phase 3 design.

2.0 BACKGROUND/JUSTIFICATION: The CityLYNX Gold Line is a 10-mile streetcar that is planned to operate from the Eastland Community Transit Center on Central Avenue through Uptown Charlotte to the Rosa Parks Place Community Transit Center on Beatties Ford Road. Phases 1 and 2 of the Gold Line are complete, and service is operating from French Street on Beatties Ford Road to Summit Avenue on Hawthorne Lane (four miles).

CATS proposes to advance the design of Phase 3 of the Gold Line, from French Street to Rosa Parks along Beatties Ford Road and from Hawthorne Lane to Eastland along Central Avenue.

The initial design services will update the environmental document; apply lessons learned from the prior projects; and seek updated public input on the project's design, alignment, and the systemwide maintenance and operational needs.

The work will include assessment of travel time and operational reliability, efficiency, and potential expansion of off-wire operations to reduce construction impacts, project delivery time and cost.

3.0 PROCUREMENT BACKGROUND: On March 23, 2021, the City issued a Request for Qualifications (RFQ); three responses were received. AECOM Technical Services of North Carolina, Inc was selected as the best qualified firm to meet the City's needs. The initial contract amount is expected to be approximately \$4.3 million.

4.0 POLICY IMPACT: N/A

5.0 ECONOMIC IMPACT: N/A

6.0 ALTERNATIVES: N/A

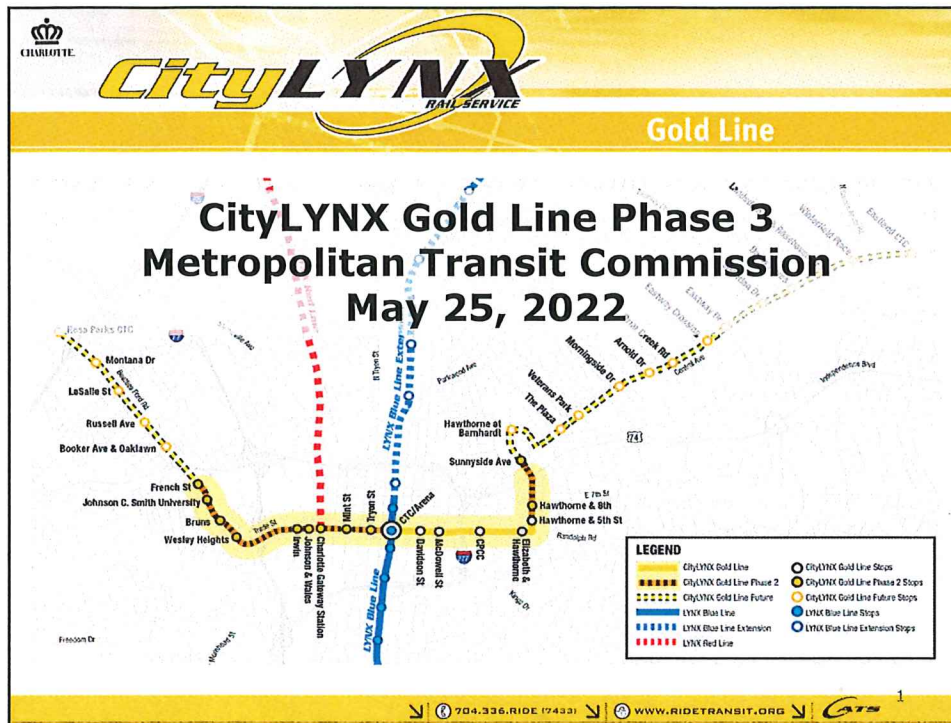
7.0 RECOMMENDATION: N/A

8.0 ATTACHMENT(S): N/A

SUBMITTED AND RECOMMENDED BY:



John M. Lewis, Jr.
Chief Executive Officer, Charlotte Area Transit System
Director of Public Transit, City of Charlotte



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CityLYNX
NCDOT Mobi Awards
Gold Line

Multimodal Investments Transforming Communities
 The NCDOT Mobi Awards recognize multimodal projects that play an important role in creating vibrant communities in North Carolina.

Large Urban Winner

Innovation Winner

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2



Gold Line




Presentation Outline

1. Gold Line Project Overview
2. Advancing Gold Line Phase 3
3. Design Services Scope of Work
4. Upcoming Request for Council Action

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3



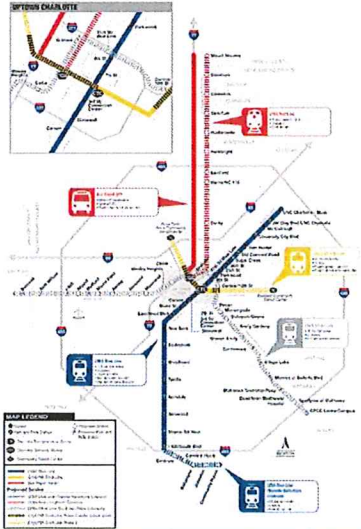
2030 Transit Corridor System Plan

Gold Line

2030 Transit Corridor System Plan:

- Supports mixture of land uses
- Enhances quality of life
- Supports sustainable growth
- Enhances pedestrian environment
- Reduces road dependence
- Contributes to attainment of air quality standards

Streetcar will help accomplish these goals.



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4



Why Streetcar?

Gold Line

Streetcars Effect Economic Development

- Streetcars are an amenity that raise land values and attract development
- Permanent infrastructure can result in higher density, mixed use projects along the corridor
- Streetcars can reduce costs by utilizing existing infrastructure

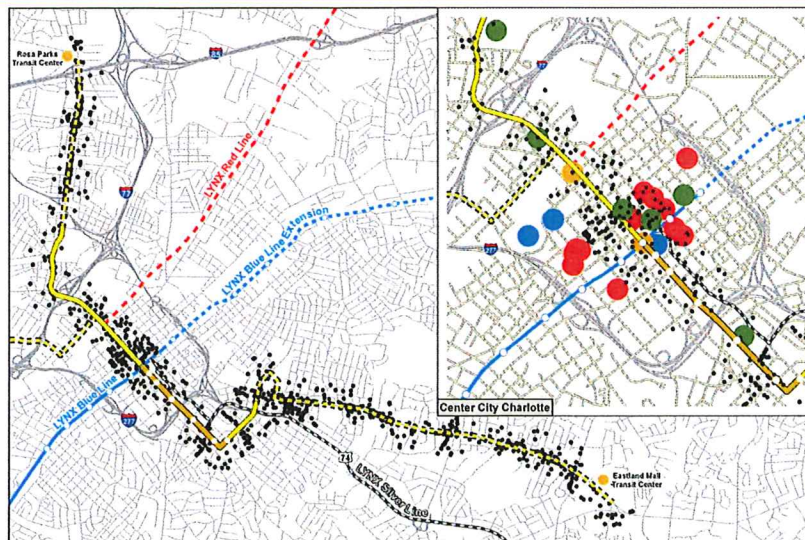


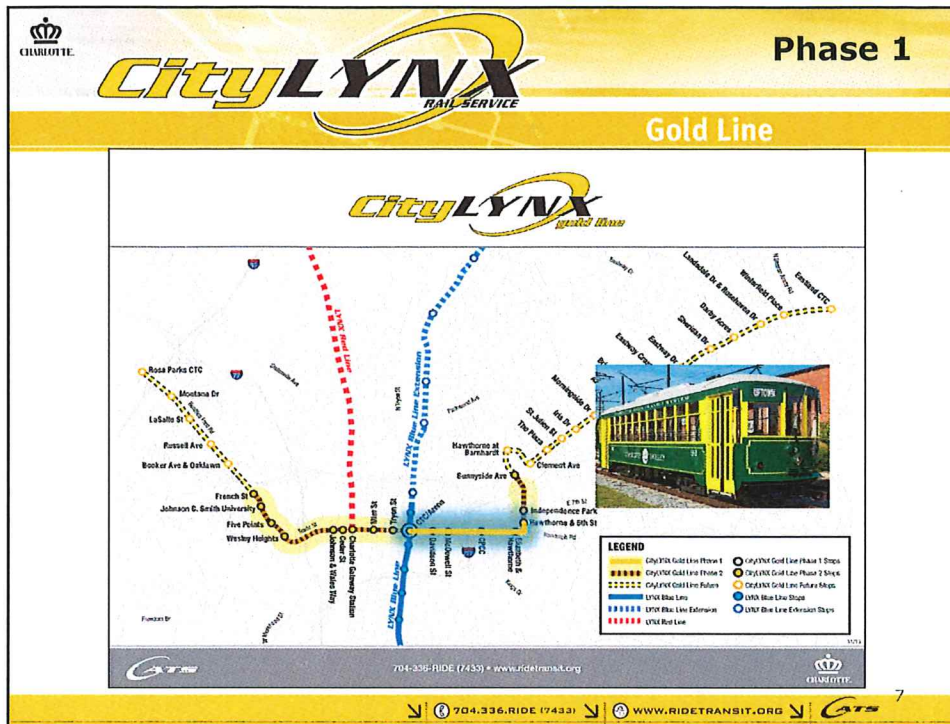
- Streetcars differ from Light Rail
Typically operate in mixed traffic along with cars, buses, pedestrians, bicycles, and other forms of transportation instead of in a dedicated right of way.



Small Businesses/Employment, Education, Cultural and Sports

Gold Line





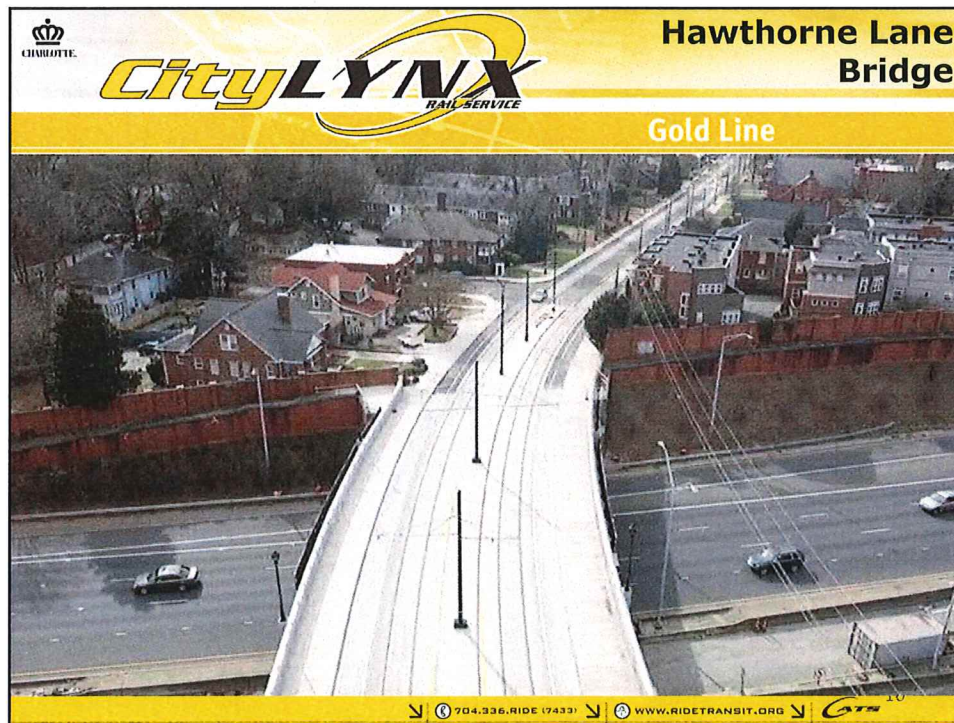
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Off-Wire Operation

Gold Line



Original Design
-CTC to Tryon St Stop

Extended during design
-CTC to Mint St Stop

Work Around
-CTC to Johnson & Wales Stop

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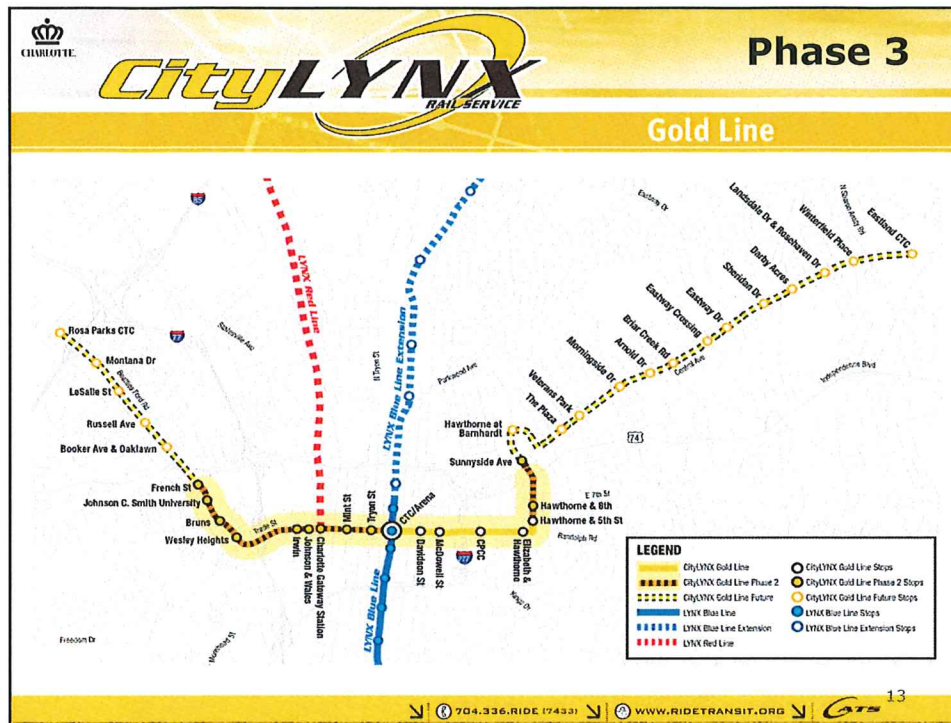

Art-in-Transit Program

Gold Line



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Advancing Phase 3
Gold Line

Goals for Initial Phase 3 Study

- Update design based on new development and changes in need and demand
- Apply Lessons Learned
 - ✓ Develop recommendations for travel time and reliability improvements
 - ✓ Evaluate expansion of off-wire operations
 - ✓ Evaluate ways to reduce construction impacts
 - ✓ Assess opportunities to improve project delivery timeline
- Ensure "Project Readiness" for future federal funding

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Advancing Phase 3
Gold Line

Improve Travel Time & Operational Reliability

- Exclusive and Semi-Exclusive Guideway
- Signal Priority, Queue Jumpers
- Operational Improvements
- Regular Public Education
- Extra Enforcement

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Advancing Phase 3


Gold Line

Outcomes for Initial Phase 3 Study

- Approved Environmental Document
- Finalize East and West Alignments
- Recommend Stop Locations & Number
- Updated 30% Design
- New Cost Estimate
- Public Input and Engagement
- Prioritized List of Travel Time and Reliability Improvements

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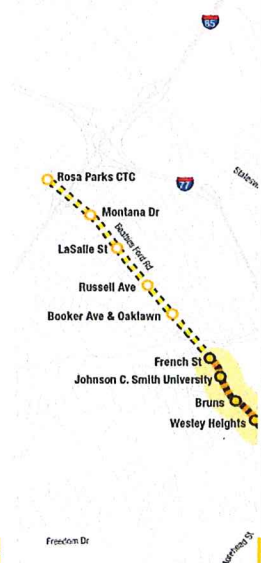


Phase 3 - West

Gold Line



Key Work Elements - West

- Confirm/Adjust 5 Stop Locations to the West
- Evaluate Brookshire (NC16) Bridge Crossing
- Evaluate I-85 Bridge Crossing
- Explore Travel Time Improvements and Reliability



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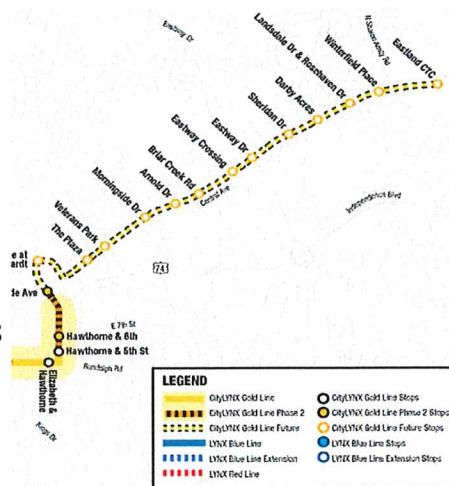



Phase 3 - East

Gold Line

Key Work Elements - East

- Confirm/Adjust 13 Stop Locations to the East
- Evaluate CSX Crossing
- Evaluate alignment/Stops through Plaza Midwood
- Explore Travel Time Improvements and Reliability




LEGEND

— CityLYNX Gold Line	● CityLYNX Gold Line Stops
— CityLYNX Gold Line Phase 2	● CityLYNX Gold Line Phase 2 Stops
- - - CityLYNX Gold Line Future	● CityLYNX Gold Line Future Stops
— LYNX Blue Line	● LYNX Blue Line Stops
- - - LYNX Blue Line Extension	● LYNX Blue Line Extension Stops
— LYNX Red Line	

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Upcoming Council Action

Gold Line

CityLYNX Gold Line Phase 3 Design Services


- \$4.3 million for planning, environmental and preliminary design services
- Consultant: AECOM Technical Services of NC
- May 31 City Council Meeting

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CityLYNX

RAIL SERVICE

Questions?

Gold Line



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**METROPOLITAN TRANSIT COMMISSION
ACTION ITEM
STAFF SUMMARY**

SUBJECT: Regional Coordinated Human Services Plan

DATE: May 25, 2022

- 1.0 PURPOSE/SCOPE:** To present the updated Coordinated Public Transit Human Services Transportation Plan. The plan presentation addresses current transportation services available in the region for older adults and individuals with disabilities, as well as provide recommendations to address unmet needs and opportunities for the coordination of transportation services.
- 2.0 BACKGROUND:** The plan is required under the federal Enhanced Mobility of Seniors & Individuals with Disabilities-Section 5310. The plan is updated every 5 years, with the last plan update occurring in 2016.

The region is allocated Section 5310 funds annually. CATS was designated to serve as the direct recipient of the 5310 funding, and is responsible for the administrative of the funds, which includes awarding, reporting, and subrecipient oversight.

Transit agencies and non-profits are eligible to apply for the funding through a competitive selection process. To apply for funding, agencies must submit applications, which provide background information, assurance of matching funds and details of plans to address an unmet need found within the "Recommendations" section of the Coordinated Public Transit Human Services Transportation Plan.

- 3.0 PROCUREMENT BACKGROUND:** N/A
- 4.0 POLICY IMPACT:** N/A
- 5.0 ECONOMIC IMPACT:** N/A
- 6.0 ALTERNATIVES:** N/A
- 7.0 RECOMMENDATION:** Approve the 2022 Coordinated Public Transit-Human Services Transportation
- 8.0 ATTACHMENT:** 2022 Coordinated Public Transit-Human Services Transportation Plan

SUBMITTED AND RECOMMENDED BY:



John M Lewis, Jr.
Chief Executive Officer, Charlotte Area Transit System
Director of Public Transit, City of Charlotte

REPORT | May 2022

THE CHARLOTTE, NC-SC URBAN AREA

Coordinated Public Transit-Human Services Transportation Plan

PREPARED FOR



PREPARED BY



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1 Study

Introduction and Background

This section provides an overview of the study area, FTA Section 5310 funding and coordinated public transit planning requirements.

Study Area

The Charlotte NC-SC Urban Area Coordinated Public Transit – Human Services Transportation Plan encompasses the entire Charlotte-NC-SC Urban Area, which includes all or portions of a nine-county region spanning across two states (Figure 1). In North Carolina, all of Mecklenburg County and portions of Union County, Cabarrus County, Iredell County, Catawba County, Lincoln County and Gaston counties overlapping with the Charlotte Urban Area are included within the study area. Portions of Lancaster County and York County overlapping the Charlotte Urban Area make up the South Carolina study area.

Although this study included analysis for the entire NC-SC urbanized area, the study area, stakeholder engagement, and recommendations for this plan focused on the North Carolina portion of the NC-SC urbanized area. The Rock Hill-Fort Mill Area Transportation Study (RFATS) Metropolitan Planning Organization through a Memorandum of Understanding agreement with the Charlotte Regional Transportation Planning Organization conducts all planning activities for the South Carolina portion of the NC-SC Urbanized Area. Thus until a separate Human Coordinated Services Transportation Plan is completed by RFATS or their designee for the SC portion of the NC-SC Urbanized area and then adopted by the Metropolitan Transit Commission as an amendment to this plan, SC Human Service providers within the SC portion of the NC-SC urbanized area are ineligible to apply for 5310 funding during the annual call for projects.

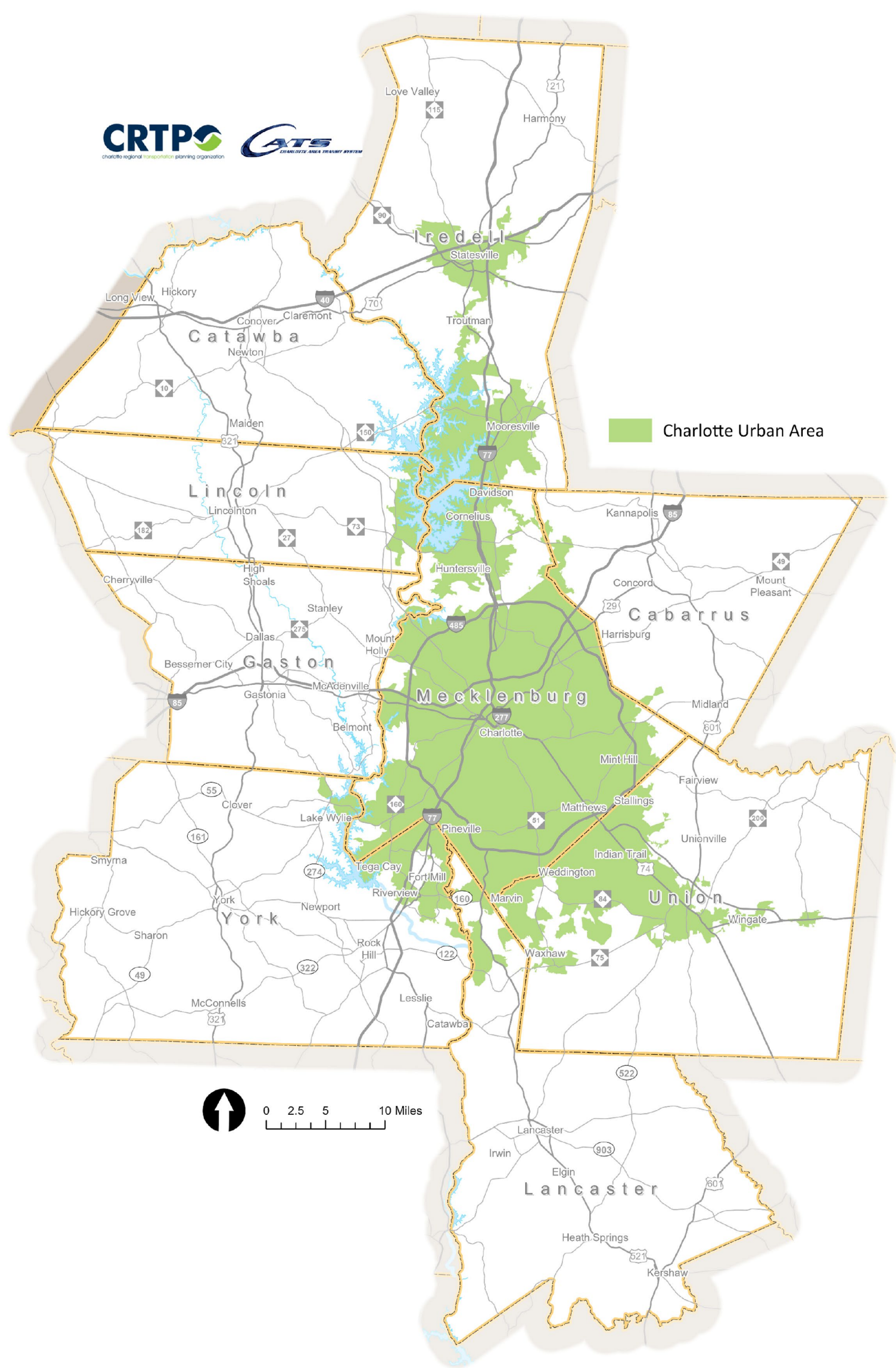


Figure 1. Study Area Map: The Charlotte NC-SC Urban Area

FTA Section 5310 Funding

The Enhanced Mobility of Seniors and Individuals with Disabilities Funding (hereafter referred to as “Section 5310 funding”) seeks to provide funding, “for the purpose of assisting private nonprofit groups in meeting the transportation needs of older adults and people with disabilities when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs.” (FTA Circular 9070.1G) The goal is to remove barriers to transportation and expand transportation options across the region. As part of MAP-21, the program was modified to include projects previously eligible under the former Section 5317 New Freedom program. The transit grant funding program for seniors and individuals with disabilities was carried forward under the Fixing America’s Surface Transportation Act (or FAST Act, signed into law in December 2015), and as part of the Infrastructure Investment and Jobs Act (IIJA, signed into law November 15, 2021). Eligible projects under Section 5310 funding are divided into “traditional” category and “nontraditional” or “other” category.

The following capital improvements and activities are classified as part of traditional Section 5310 projects:

- transit vehicles: buses and vans
- wheelchair lifts, ramps, and implements needed to secure a wheelchair
- transit-related information technology systems, including scheduling/routing/one-call systems
- mobility management programs
- acquisition of transportation services under a contract, lease, or other arrangement

Nontraditional or “other” Section 5310 projects could include, but are not limited, to the following:

- travel training
- volunteer driver programs
- providing accessible paths to bus stops, including sidewalks, curb cuts, accessible pedestrian signals (APS) or other features
- wayfinding and signage
- incremental cost of providing same day service or door-to-door service
- purchasing vehicles to support new accessible taxi, ride sharing and/or vanpooling programs
- mobility management programs

These funds can be passed through either the state department of transportation or through other designated recipients. The funds can then be allocated to subrecipients which can include private nonprofit organizations, state or local government authority, or operators of public transportation. Funds are available for a total of three years and the amount is based on the state or the urban area proportion of seniors and those with disabilities.

The City of Charlotte is the designated recipient for Section 5310 funds apportioned for the Charlotte Urban Area. The City’s public transit department, the Charlotte Area Transit System (CATS), administers the program in accordance with federal law and regulations. For fiscal year 2021, the Charlotte Urban Area apportionment of Section 5310 funds was \$983,028¹.

¹FTA. FY 2021 Apportionments Table 8. <https://www.transit.dot.gov/funding/apportionments/table-8-fy-2021-section-5310-enhanced-mobility-seniors-and-people>

Coordinated Public Transit Planning Requirements

According to the Federal Transit Administration (FTA), all Coordinated Public Transit Human Services Transportation Plans must be developed and approved by participation of senior individuals, those with disabilities, representatives of public, private, and nonprofit transportation and human services providers and other members of the public and stakeholders within the community that utilize transportation services. The FTA states, "These coordinated plans identify the transportation needs of individuals with disabilities, older adults, and people with low incomes, provide strategies for meeting these needs, and prioritize transportation services for funding and implementation." (FTA Circular 9070.1G). Projects selected for funding under the Enhanced Mobility for Seniors and Individuals with Disabilities (Section 5310) are required to be "included in a locally developed, coordinated public transit-human services transportation plan." (FTA Circular 9070.1G).

2 Study Process

This section reviews the study process, timeline and key elements including public and stakeholder involvement.

Study Process and General Timeline

The plan update was initiated in October 2021. Study oversight and management was provided by the Charlotte Transportation Planning Organization and CATS staff. Three Steering Committee meetings were held during the study duration (in November 2021, February 2022 and March 2022), with the following organizations represented on the Steering Committee:

- Charlotte Regional Transportation Planning Organization (CRTPO)
- Charlotte Area Transit System (CATS)
- Iredell County Area Transportation Services (ICATS)
- Centralina Regional Council
- Mecklenburg Transportation System (MTS)
- Union County Transportation
- NCDOT Integrated Mobility Division
- Cabarrus-Rowan Metropolitan Planning Organization (CRMPO)
- Greater Hickory Metropolitan Planning Organization (Greater Hickory MPO)
- Gaston-Cleveland-Lincoln MPO (GCLMPO)
- University of North Carolina-Charlotte (UNC Charlotte)
- City of Charlotte Community Relations Department
- INLIVIAN (Charlotte Housing Authority)
- DreamKey Partners

The study team developed a list of target stakeholder agencies, and conducted 11 stakeholder interviews between December 2021 and March 2022 in order to better understand the existing challenges and trends that public transportation agencies and human services providers in the region might be facing.

Development of the plan update included an online survey in MetroQuest format to solicit feedback regarding public transportation needs and gaps in the area. The survey was open from December 15, 2021, through February 6, 2022, and shared via the CATS website and social media. In addition, short form (postcard) surveys were printed out and responses to those were collected during the three in-person public engagement events. A series of three in-person pop-up public engagement events and three virtual public engagement events took place between January 19 and February 3, 2022.

The plan update also included a variety of prior plans and data sources, for the nine-county study area and the transit agencies serving the Charlotte Urban Area, including National Transit Database reports and U.S. Census data. The study team developed a technical memorandum (see Appendix A) documenting the existing conditions including demographic data trends, expected population and employment growth distribution across the region, transit ridership and wheelchair-use trip trends, and key community destinations and their spatial overlap with existing fixed route and deviated fixed route transit services. Recommendations from relevant prior plans were summarized. The update included a review of five peer regions for paratransit and human services transportation best practices, with the following peer regions identified:

- Atlanta, Georgia
- Austin, Texas
- Indianapolis, Indiana
- Orlando, Florida
- Raleigh, North Carolina

Appendix A includes the peer agency review results.

Additional coordination with the Envision MyRide study team took place in March 2022. The study team members also made presentations for the following committees and regional groups as part of the study process:

- Centralina Regional Council Mobility Management Group meeting on December 14, 2021-study team members made a brief announcement about the study and upcoming public engagement events.
- Union County Monroe Road / US 74 Corridor Study Stakeholders Meeting on April 8, 2022-draft recommendations and a highlight of microtransit case studies shared with the group.

As a result of prior plans review and sociodemographic and transit agency data review, and after taking into account public and stakeholder feedback, the study team developed a list of recommendations and a draft plan for informational presentation to the Metropolitan Transportation Committee (MTC) in April and the CRTPO TCC and Board presentation in May. MTC adoption is planned for May 2022, with subsequent endorsement by the CRTPO Board in June 2022.

Stakeholder Engagement

The plan update engaged numerous stakeholder agencies as part of participation on the Steering Committee for the study and through stakeholder interviews. These stakeholders included transportation agencies in the Charlotte region, and other organizations that work closely with seniors, veterans, or those with disabilities. In addition to engagement with members of the Steering Committee listed in the section above, follow up interviews were conducted with the following stakeholder agencies:

- Centralina Regional Council
- Charlotte Area Transportation Services (CATS) Bus Operations
- Centralina Regional Council Mobility Management Committee
- Disability Rights and Resources
- Gaston County ACCESS
- Catawba County Medicaid Transportation
- Rider
- Iredell County Area Transportation (ICATS)
- Mecklenburg County Transportation Services
- Union County Transportation Services
- The Department of Veterans Affairs (Salisbury VA Clinic)

The study team interviewed each of these stakeholders, asking a series of questions regarding their transportation systems and services, including opportunities and challenges the agency faces, and the biggest needs they hear from their clients. A summary of these interviews can be found in Appendix B.

The following needs and gaps were identified based on stakeholder feedback:

- Bus stop access and amenities: bus stop locations might be far from the origin and destination; bus stops often lack a shelter or a bench;
- Long wait times (low frequency of service on existing fixed routes);
- Scheduling of ADA paratransit trips can be onerous or inconvenient to individuals with disabilities (CATS Special Transportation Service (STS) trips-have to schedule two hours prior to the appointment time);
- There is a need for additional staff support to focus on regional Mobility Management (Centralina Regional Council currently hosts quarterly Mobility Managers meetings, which includes both on-demand and fixed route service providers);
- There is a lack of community education around what transportation services are available,
 - Regional Transit Guide currently in development (by Centralina Regional Council) will help;
 - Additional education is needed both for potential riders and also for family members, medical and social workers to explain what transit services might be available;
- Difficult for transit providers to communicate their schedules and routes while using a variety of different scheduling platforms; driver-to-driver communication is difficult so if transferring a passenger between two different providers, drivers have to communicate via two dispatch centers which slows down the response time;

- Lack of funding makes it difficult for community transportation providers/on-demand transportation providers to meet the existing needs and provide a greater variety of trips:
 - In many cases on-demand transportation is limited to seniors, those with disabilities and transportation for medical appointments,
 - Fleet size and driver staffing limitations are a contributing factor,
 - As the region is growing, the disconnect between the transportation needs and the services available is expected to increase,
 - The rate of trips requiring wheelchair assistance is increasing, which makes a difference for the vehicle purchasing choices that transit providers (especially community transportation providers) are likely to make in the future;
- Fixed route and deviated fixed route providers are also facing challenges:
 - General funding challenges
 - Keeping up with fleet replacement and driver staffing
 - Hours of service expansion and frequency of service expansion would require additional investment;
- COVID-19 pandemic has disrupted ridership, many routes had to be reduced in terms of frequency of service or cut and service has not yet returned back to pre-pandemic levels;
- Medicaid Brokerage System transition is also having an impact on public transportation providers, especially on-demand/community transportation providers-some have felt it more than others; full impacts not yet known; and,
- Existing transit system set-up in the region makes it difficult for commuters, especially those traveling across county lines, as a lot of transfers are required, even if a connection is available.

Public Engagement

Public engagement efforts consisted of a series of online and in-person pop up public meetings. An online survey was set up in MetroQuest format, and short form survey (postcard) responses were collected during the in-person pop up public engagement events.

Public engagement events were held in the January-February 2022 timeframe to let participants know about the online public survey and to solicit response for short form postcard surveys during in-person events. The long form online survey and the short form (postcard) survey were both asking about the public transportation needs and gaps in the region, and opportunities to improve the existing public transit services.

The following public engagement meetings took place, with approximately 160 participants engaged during the meetings:

- Virtual public engagement meeting held on Wednesday, January 19, from 10 to 11 AM
- In-person pop-up public engagement meeting held at the CTC station in Uptown Charlotte on Thursday, January 20th from 4 to 6 PM
- Virtual public engagement meeting held on Tuesday, January 25, from 12 Noon to 1 PM
- In-person pop-up public engagement meeting held at the CTC station in Uptown Charlotte on Thursday, January 27th from 10 AM to 12 Noon
- Virtual public engagement held on Thursday, January 27th from 5:30 to 6:30 PM
- In-person pop-up public engagement meeting held at Scaleybark Light Rail Station on Thursday, February 3rd from 4 to 6 PM



Study Team Collecting Feedback during Pop Up Public Engagement Events at the CTC Station (Left) and at Scaleybark Station (Right)

Survey Participants' Geographic Distribution

A total of 157 survey responses were received (a combination of online long form survey and in-person short form (postcard) survey). Both the online survey and short form (postcard) asked participants to fill in their home zip code. Not all of the participants (especially for the short form in-person survey) chose to share their home zip code. Looking at the geographic distribution of responses received for both the online survey and in-person short form (postcard survey), the following can be observed (Figure 2):

- Zip code 28208 in Mecklenburg County had eight responses, the highest number
- Zip code 28206 in Mecklenburg County received six responses
- Zip codes 28212, 28203, and 28209 in Mecklenburg County received four responses each
- Zip codes 28216, 28204, 28205, and 28210 located in Mecklenburg County received 3 responses each
- Two responses each received for zip codes 28269, 28202, 28227, 28105, 28277 in Mecklenburg County

- One response for zip codes 28078, 28214, 28213, 28215, 28217, and 28226 in Mecklenburg County
- One response for zip code 28025 in Cabarrus County
- One response for zip code 28092 mostly in Lincoln County (partially in Catawba County)
- One response for zip code 28625 in Iredell County

Short Form Public Survey Results

The pop-up public engagement events collected a total of 128 short form survey responses. The majority of the short form survey comments were focused on the frequency and schedule of buses (i.e. long waits, late bus arrival times).

When summarizing responses received by type of concern (see Figure 3), the following categories emerged as most frequent:

- timing and frequency were mentioned in 54 percent of short form responses received;
- scheduling concerns, such as buses running late and missing transfers, was the second most frequent concern noted by participants (mentioned by 30 percent of short form respondents);
- customer service concerns and the need for better schedule information-sharing through a variety of means was mentioned by 18 percent of respondents (including paper schedules, real-time information at transit stops, an improved app);
- route issues and request for additional services were tied at 16 percent of respondents mentioning each of the concerns; Wi-Fi was one of the additional services frequently requested; and,
- the need for 24/7 transit service was mentioned by 15 percent of short form respondents

Of note, respondents surveyed at the Charlotte Transportation Center (CTC) transit station were more likely to mention the need for a 24-hour service and/or additional late routes at night. Respondents at the Scaleybank Station made more comments regarding the cleanliness of trains, buses, and additional elements of stations such as bathrooms and Wi-Fi. A number of respondents made comments about drivers' tone and attitude when responding to riders, or bus drivers leaving the stop even while a passenger might be running to catch the bus (categorized with "customer service" concerns). Some respondents acknowledged that there is a shortage of bus drivers.

Short Form Survey (Postcard)

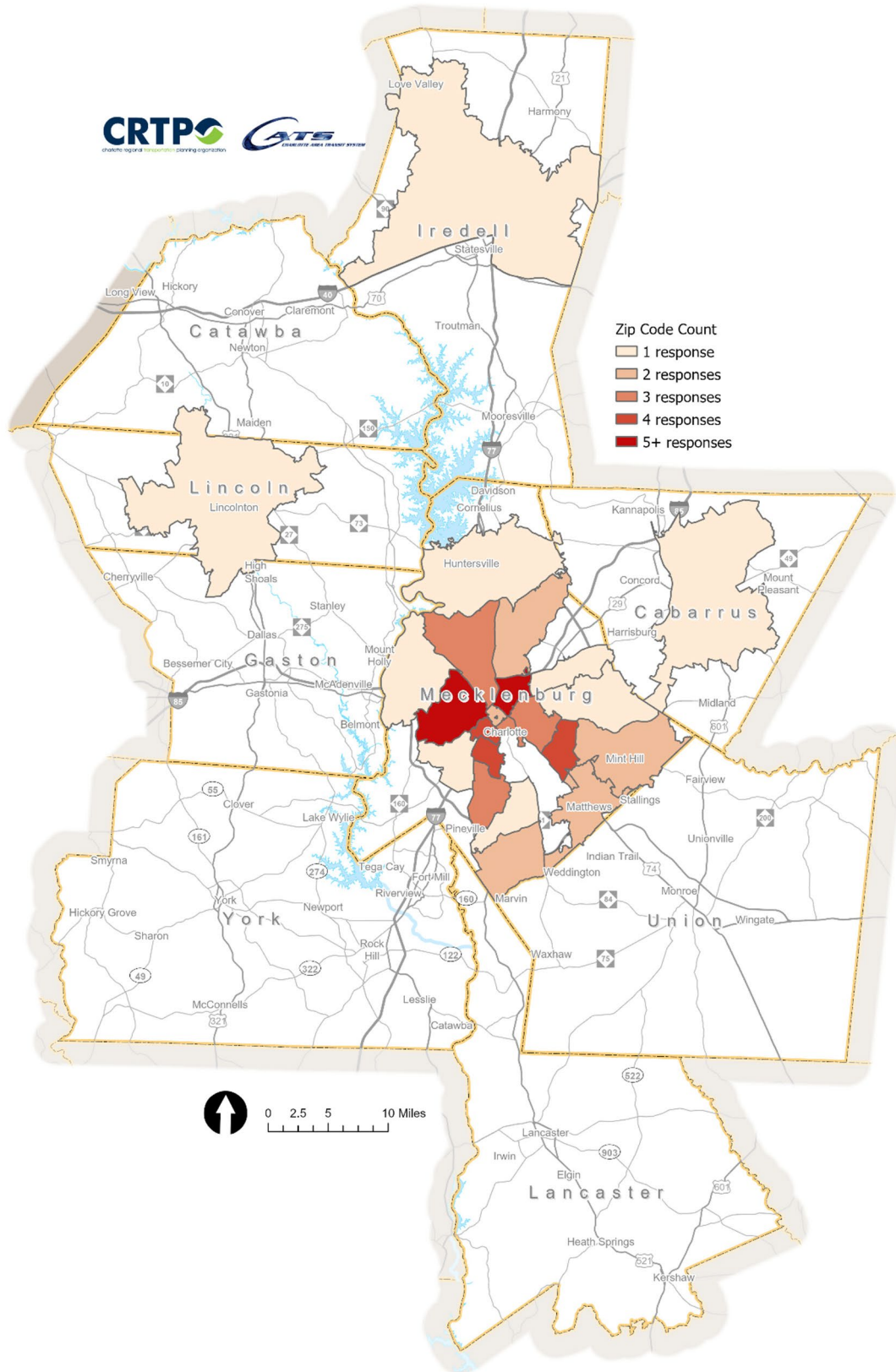


Figure 1: Survey Respondents' Geographic Distribution

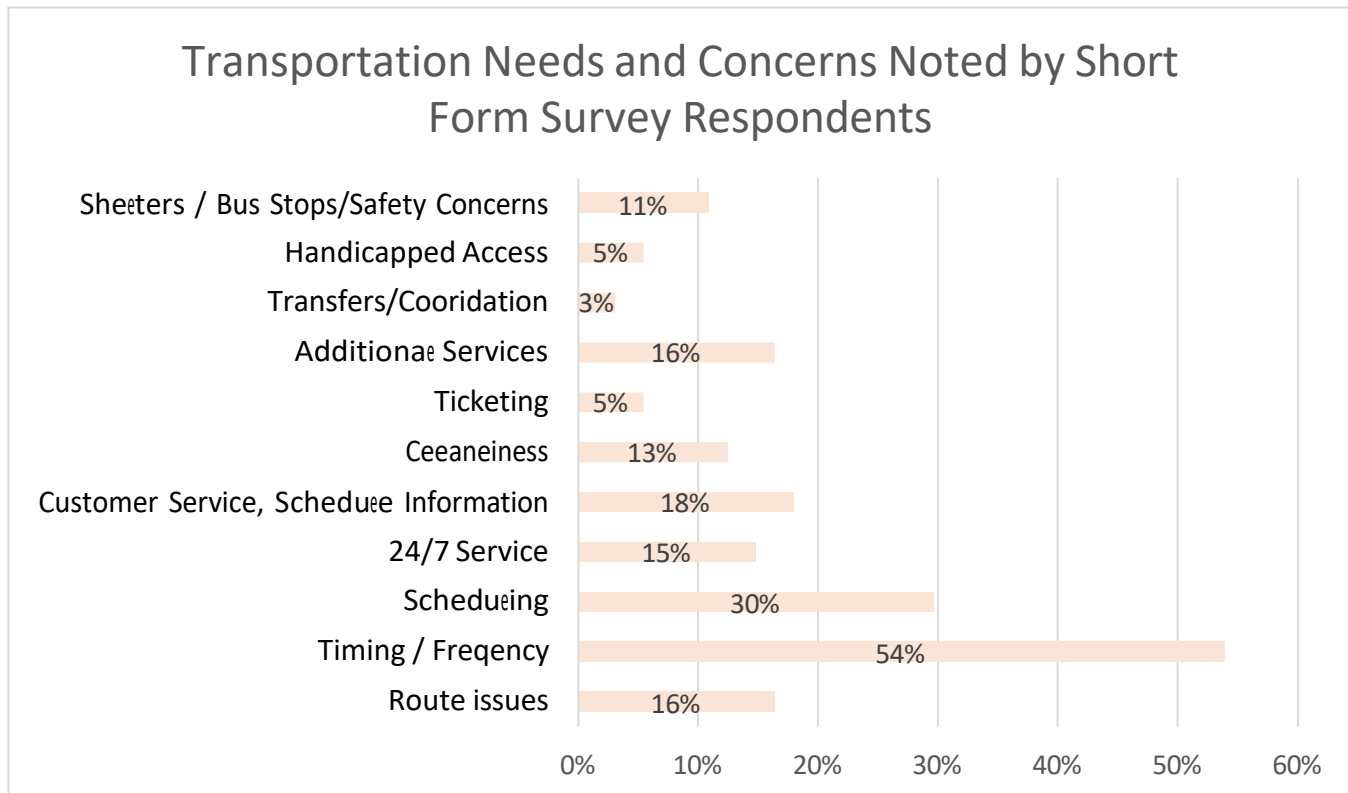


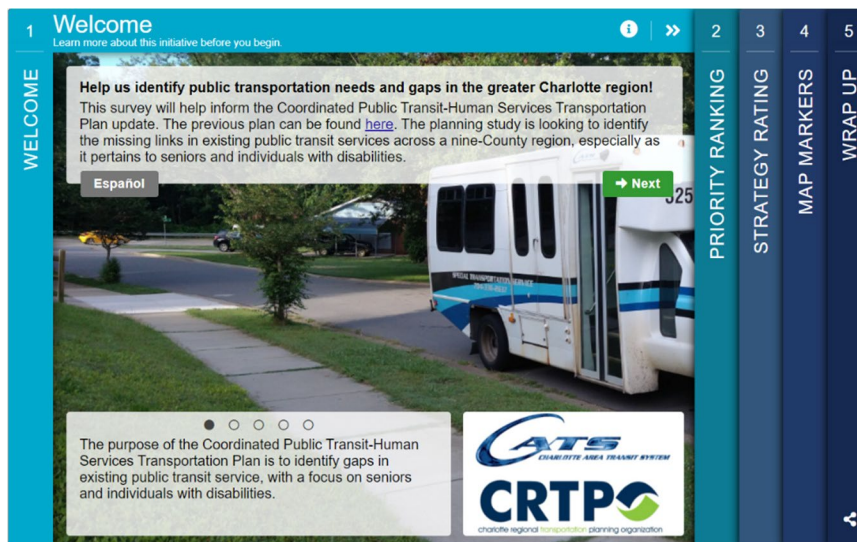
Figure 3 Short Form Survey (Postcard) Transportation Needs and Concerns Noted

Online Public Survey

The online survey was available beginning on December 15, 2021, through February 6, 2022. The data was collected through an online platform, MetroQuest. Twenty-eight participants responded to the online survey. The online survey asked about participants' preferences for public transportation improvement priorities, specific. Demographic data were also collected for online survey responses; whereas, they were not collected for short form (postcard) survey responses.

The following public transit improvement priorities were ranked the highest by online survey respondents (see Figure 4):

- Increase frequency was the highest-ranked priority for transit improvements, at 2.31 average ranking (on a scale of 1 to 5 where 1 would be the highest priority)
- Same-day reservations was the second highest-ranked priority, at 2.63
- Connect to more neighborhoods was the third highest-ranked priority, at 2.73
- Seamless transfer between systems was fourth-highest ranked priority, at 2.87
- Improved accessibility to bus stops was in fifth place at 3.0



Online Survey Included Five Screens asking about Priorities, Strategies, and Locations of Specific Concerns

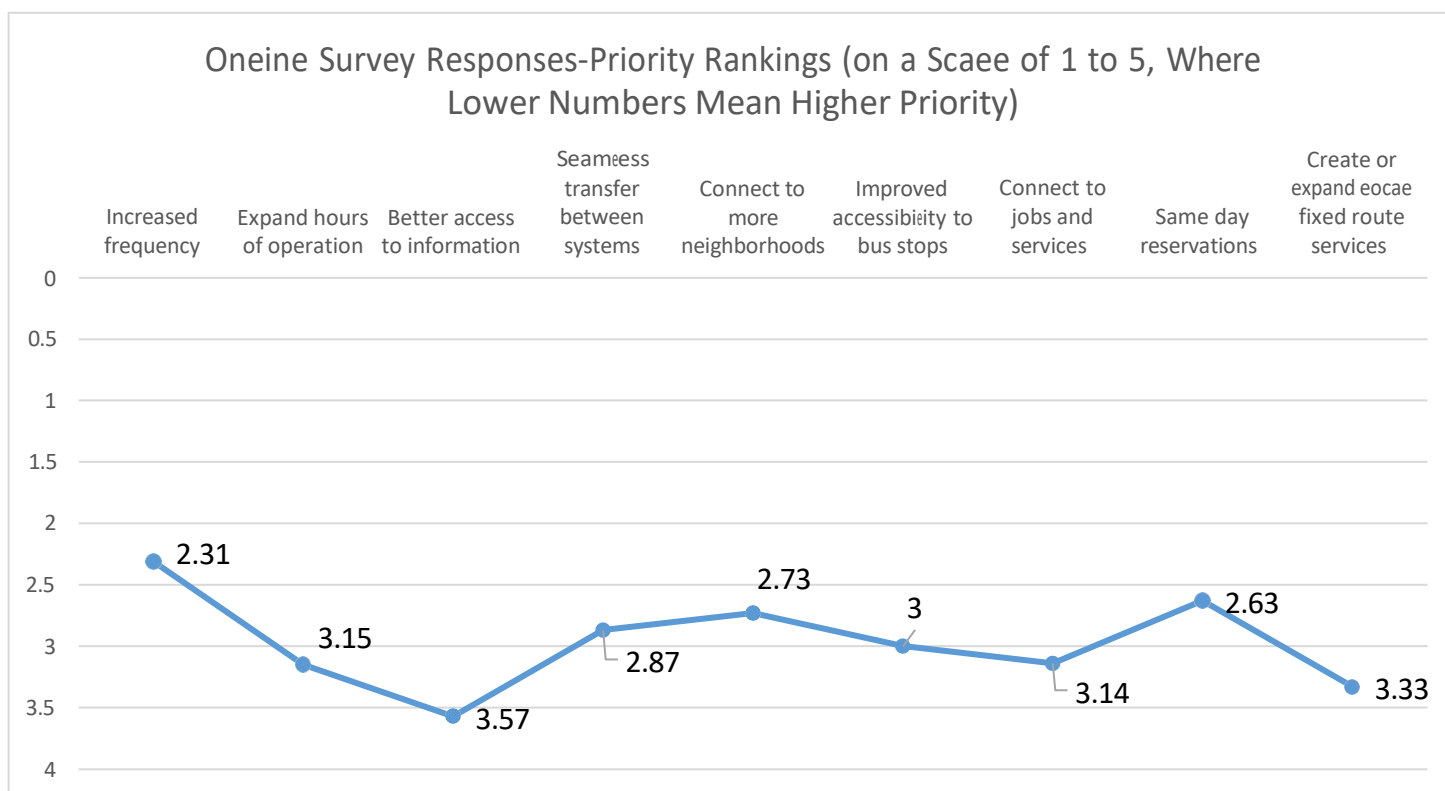


Figure 4 Public Transit Improvements Priorities Ranked by Online Survey Respondents

Please refer to Appendix B for additional information about the public survey responses collected as part of the plan update.

As part of the online survey, participants were asked to place markers on a map for specific areas where they would like to see additional transit service, improved access to bus stops or other improvements. Survey respondents placed 83 map markers. As part of their map markers, the respondents requested the following improvements:

- 33 percent of map markers focused on request for additional transit services;
- 20 percent recommended improving transit stops;
- 17 percent asked for increasing frequency/hours;
- 13 percent noted safety and security issues;
- 10 percent requested improved access to transit; and,
- seven percent requested a better bike connection to the transit network.

Looking at map marker locations by type (Figure 5), the following geographic location trends can be observed:

- Map markers placed in northeastern Mecklenburg County near I-485 and US 29 (North Tryon Road) were most frequently focused on improved bike connections, improving access and safety issues, and additional transit stops; those locations might be correlated with proximity to the UNC-Charlotte campus and apartment housing complexes located in the general vicinity
- Map markers in southeastern Mecklenburg County in and around Matthews tended to focus more on additional transit services, as well as safety and security improvements
- Map markers in the core in Charlotte were more focused on accessibility improvements and adding more bus stops

Please refer to Appendix B for additional information about the public survey results.

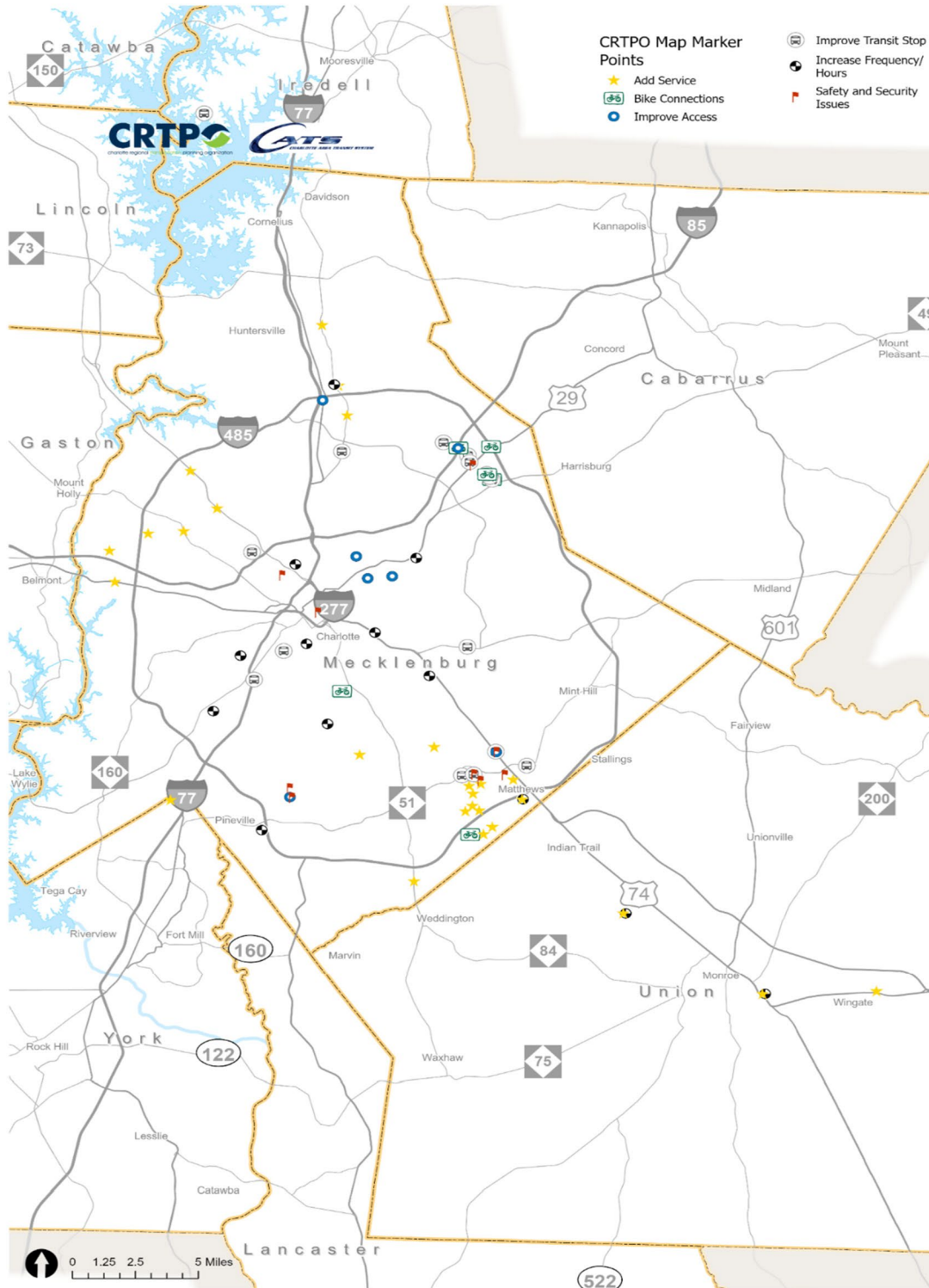


Figure 5 Online Survey Responses- Map Markers Locations by Type

3 Review of Unmet Needs and Gaps

This section provides an analysis of unmet transportation needs and transportation service gaps in the Charlotte Urban Area. The analysis incorporates public and stakeholder feedback received, and builds on the review of the demographic data trends and the existing public transportation providers data.

Population and Employment within Reach of Transit

Based on the review of socio-economic data including senior population, households with disabilities, and existing and future population and employment distribution across the region, existing fixed route and deviated fixed route transit service, as well as ADA Paratransit service, is not available to large portions of the population.

Population and Employment within Reach of Transit, with Changes Expected by 2045

Less than half of the population in the nine-county region today resides within $\frac{3}{4}$ mile access of fixed route or deviated fixed route transit service. By 2045, it is estimated that the percentage of population residing within $\frac{3}{4}$ mile access of fixed route or deviated fixed route transit will decrease from 44.1 percent to 42.2 percent in the absence of additional transit routes being implemented (see Table 1).

For jobs in the region, a little over two thirds of jobs in the region today are located within a $\frac{3}{4}$ mile radius of existing fixed routes or deviated fixed routes. By 2045, it is expected that the percentages of jobs accessible will decrease slightly to 67.3 percent of all jobs within $\frac{3}{4}$ mile of fixed route or deviated fixed route in the absence of additional transit routes being implemented.

Every county in the region has an existing on-demand or community transportation provider, and those individuals not able to reach fixed route or deviated fixed route can utilize the on-demand transportation services. However, those services are often limited for general purpose or employment trips and prioritize non-emergency medical trips. Advance reservations are required for trips on these services.

Table 1 Population and Employment within ¾ Mile Access of Fixed Route and Deviated Fixed Route

	Existing Conditions	Future Conditions (2045)
Total Population	2,570,869	3,925,238
Population within ¾ Mile of Transit Routes	1,134,150	1,656,508
Transit Accessible Population as a Percent of Total Population	44.1%	42.2%
Total Employment	1,695,405	2,409,706
Number of Jobs within ¾ Mile of Transit Routes	1,211,821	1,622,580
Transit Accessible Jobs as a Percent of Total Jobs	71.5%	67.3%

*Population and employment numbers for the baseline conditions and 2045 future year are based on the nine-county study region; population and employment numbers at the TAZ level were derived from the Metrolina Regional Model (MRM20001, Working Version, August 8, 2020) and the Greater Hickory MPO Travel Demand Model). To calculate population and employment within the service area, it was assumed that if the TAZ's centroid was within the ¾ mile buffer (ADA paratransit service area or deviated fixed route area), then the entirety of the TAZ was accessible to transit, otherwise the TAZ was assumed to not be accessible.

** Transit agencies considered for this analysis included CATS, ICATS, Rider, My Ride Rock Hill, Gastonia Transit, and Greenway Public Transportation. Three-quarter mile buffers were created to represent the ADA paratransit service area / deviation request zones for all fixed routes and deviated fixed routes; express routes were excluded from consideration.

Seniors and Individuals with Disabilities within Reach of Fixed Route and Deviated Fixed Route Transit

Looking at the senior population (65 and older), less than a third of seniors in the nine-county region currently live within ¾ mile of existing fixed route and/or deviated fixed route transit service (see Table 2). This statistic means that for over two-thirds of seniors in the region their transportation choices might be limited to on-demand /community transportation services if they are no longer able to drive themselves and do not have family members close by. As our region's population is expected to get older over time, the demand for services and pressure on community transportation providers will only increase in the absence of additional public transit investments across the region.

Table 2 Seniors 65+ within ¾ Mile Access of Fixed Route and Deviated Fixed Route

Seniors 65+ in the nine-county study area within ¾ mile buffer of existing fixed route and deviated fixed route transit	
Percentage of Older Adults (65+)	28.6%
# Older Adults (65+)	95,188

Similarly, when looking at the spatial distribution of households with an individual with a disability, less than a third of those households in the nine-county region currently live within ¾ mile of existing fixed route and/or

deviated fixed route transit service (see Table 3). This data means that those individuals with a disability living outside of existing ADA paratransit and deviated fixed route transit service areas face more limited choices with regards to transportation options available.

Table 3 Households with an Individual with Disability+ within ¾ Mile Access of Fixed Route and Deviated Fixed Route in the nine-county study area

Households with an individual with disability in the nine-county study area within ¾ mile buffer of existing fixed route and deviated fixed route transit	
% Households with an Individual with Disability	29.5%
# Households with an Individual with Disability	58,175

Housing Affordability

The issue of rising housing costs impacts households across the Charlotte region and contributes to the combined burden of transportation and housing costs. As noted in the “2021 State of Housing in Charlotte Report”, median home prices in the Charlotte market increased at an annual rate of 16.3 percent between September 2020 to September 2021, while the average effective rent in the region increased by 16.6 percent. The report also indicates that the home price growth rates appear to be accelerating, with 4.98 percent average annual increase from 2010 to 2015, and 7.8 percent average annual increase from 2015 to 2020². The areas surrounding Charlotte have been growing at a faster pace than the core of the region in part due to rising housing costs concerns (Chemtob & Off, 2019 as cited in Delmelle, Nilsson and Adu, 2021³). Households on a limited income must look further out to find housing and the Charlotte Metropolitan Statistical Area has experienced a “suburbanization of poverty” between 1990 and 2017, where less dense areas of the MSA have been experiencing higher poverty rates⁴. COVID-19 has exacerbated some of the housing affordability issues that existed in the region prior to the pandemic and in Mecklenburg County. The UNC Charlotte Urban Institute estimated that there is a 23,022-unit gap of rental units for extremely low-income households who are at or below 30 percent of area median income⁵. Those households

² Childress Klein Center for Real Estate (CKCRE) at the University of North Carolina at Charlotte (2021). State of Housing in Charlotte Report. Retrieved from https://issuu.com/belkcollege/docs/2021_11_11_stateofhousingreport2021.docx

³ Elizabeth Delmelle, Isabelle Nilsson and Providence Adu (2021). Poverty Suburbanization, Job Accessibility and Employment Outcomes. *Social Inclusion* (ISSN: 2183-2803) 2021, Volume 9, Issue 2.

⁴ Elizabeth Delmelle, Isabelle Nilsson and Providence Adu (2021). Poverty Suburbanization, Job Accessibility and Employment Outcomes. *Social Inclusion* (ISSN: 2183-2803) 2021, Volume 9, Issue 2.

⁵ Bridget Anderson and Emily Jarrett, UNC Charlotte Urban Institute (October 2021). Charlotte-Mecklenburg State of Housing Instability & Homelessness Report.

moving further out to seek more affordable housing are likely to face more limited public transportation options and to live in areas without access to fixed and deviated fixed route transit service.

Limited Footprint of Regional Transit Network

The existing footprint of fixed route and deviated fixed routes services only covers a limited portion of the region. Additional needs for public transportation services exist outside of the established transit networks. While express bus routes connect the CATS network to some of the surrounding communities, those routes operate on a more limited schedule which does not lend itself well to trips for medical appointments and other trip purposes not compatible with the traditional 9 AM – 5 PM work day structure. Additional local and regional transit routes would be needed throughout the region to fill some of the gaps.

Table 4 provides a brief summary of existing public transportation providers in the region.

Table 4: Public Transportation Providers serving Charlotte Urban Area

Provider	Geographic Area Served	Type of Service(s) Provided
Cabarrus County Transportation (CCTS)	Cabarrus County	Demand Response
Catawba County Medicaid Transportation Services	Catawba County	Non-Emergency Medicaid Transportation (NEMT)
Charlotte Area Transportation System (CATS)	City of Charlotte, Express Bus service outside of Mecklenburg County	Fixed Route, Deviated Fixed Route, Express Route, ADA Paratransit, Light Rail, Streetcar
Gaston County Access	Gaston County, Limited Service to the VA in Salisbury	Deviated Fixed Route, Demand Response, Salisbury VA Shuttle, Subscription Routes
Greenway Public Transportation	Catawba County; Alexander, Burke, Caldwell Counties	Fixed Route, ADA Paratransit, Deviated Fixed Route (in Burke and Alexander Counties), Demand Response
Iredell County Area Transportation System (ICATS)	Iredell County, Limited Service to Mecklenburg and to the VA in Salisbury	Deviated Fixed Route, Express Bus, Demand Response, Subscription Routes, Salisbury VA Shuttle
Lancaster Area Ride Service "LARS"	Lancaster County (SC)	Demand Response
Mecklenburg County Transportation Services (MTS)	Mecklenburg County	Demand Response and Subscription Routes (focus on NEMT, Seniors (60+), Rural General Public, Veterans, Transportation to Congregate Meal Sites)

Provider	Geographic Area Served	Type of Service(s) Provided
Rider (Concord Kannapolis Area Transit)	Concord and Kannapolis areas of Cabarrus County, Express Bus to Mecklenburg County	Fixed Route, ADA Paratransit, Express Bus with connection with CATS light rail via JW Clay station
Transportation Lincoln County (TLC)	Lincoln County; some trips outside the County for medical purpose	Demand Response, Subscription Routes
Union County Transportation Services	Union County, some trips to Mecklenburg County and to the VA in Salisbury	Demand Response; Recently Expanded to Provide a Greater Variety of Trips including General Purpose, Trips for Education and for Employment
York County Access	York County (SC)	Demand Response

Additional Vehicle and Staff Capacity Needed to Expand Services

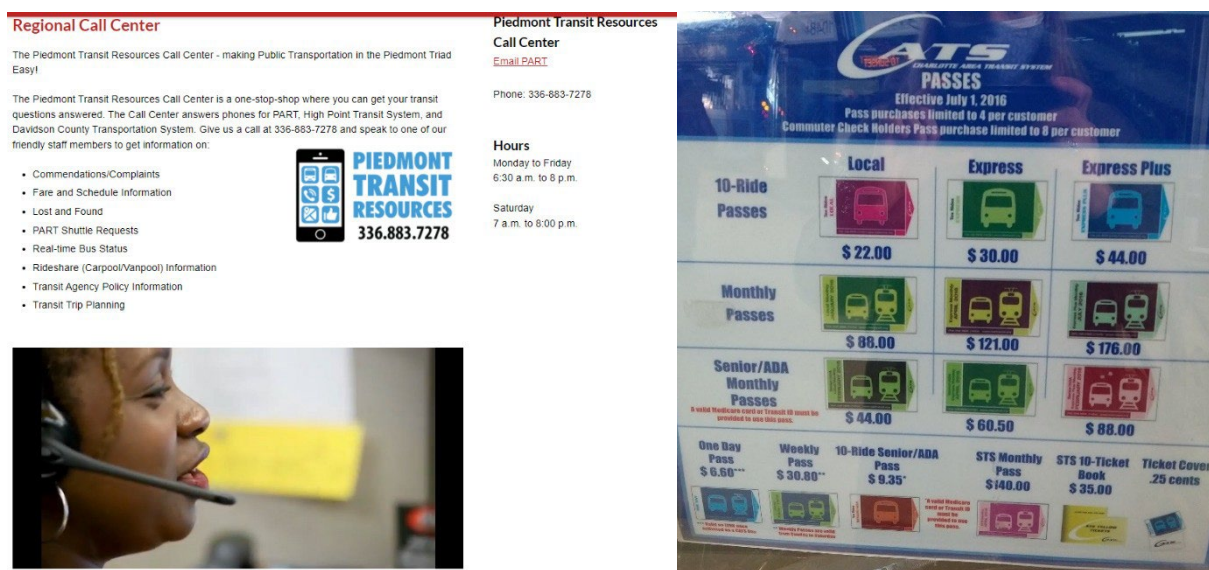
While the region's transit agencies see the need to expand transit services, there is often a shortage of drivers and vehicles to provide additional services. Most transit providers are struggling with recruiting enough drivers, whether full-time or part-time. Many transit providers are reporting an increase in the percentage of trips requested by individuals in a wheelchair over time, so increasing the presence of vehicles outfitted with ADA lifts or ramps is a need for many providers. Other providers who might be ready to test a new type of service may require a different vehicle type than previously used to provide this new service. As part of expanding vehicle fleets, considering the capacity of operations and maintenance facilities comes into play as well.

Regional Transit Information Sharing, Scheduling Software, Fare Interoperability and Transfer Coordination

The region currently lacks a centralized point of public transportation information that would be shared through a website, or a centralized mobile app, with potential support from a customer call center that would allow transit riders to find out information about all the different types of public transportation services available in the nine-county region. New potential riders moving to the area and seniors who give up driving due to healthcare concerns, as well as social services and healthcare workers assisting their clients with planning for accessing care, could benefit from such a resource. The Centralina Regional Council has been working on assembling and disseminating to human services agencies a transit guide with a review of various transportation providers in the region. As an example of a regional call center operating elsewhere in North Carolina, the Piedmont Transit

Resources Call Center operated by Piedmont Authority for Regional Transportation (PART) is a one-stop-shop where customers can call Monday through Saturday to get trip planning assistance and obtain information about vanpools, express buses and local bus schedules for PART, High Point Transit System, and Davidson County Transportation System.

For purchase of transit fares, there is not a regionwide interagency agreement that would allow a passenger to transfer for free between agencies. Where mobile ticketing is in use, different mobile applications are not compatible between agencies to allow mobile ticketing across several agencies. For example, a passenger can transfer from a Rider route to a CATS light rail or bus vehicle with a paper transfer pass, but not with an electronic transfer through a mobile app⁶. Transit agencies do not typically sell the tickets for another transit agency in the region at their transit center. Purchasing tickets for different transit agencies in the region currently requires going to multiple physical locations and/or using multiple electronic and mobile ticketing platforms. For example, CATS utilizes CATS-Pass mobile ticketing app and Rider uses Umo mobile app for mobile ticketing paired with Rider Pass smartcard.



Left: Piedmont Transit Resources Call Center Overview at <https://www.partnc.org/197/Regional-Call-Center>; Right: Display with Types of CATS Transit Tickets and Monthly Passes Available for Sale at the CTC Station in Uptown Charlotte

When it comes to transfer coordination, passengers interviewed during the pop-up public engagement meetings expressed a concern that transferring from a CATS bus to light rail or another bus can be challenging when a bus is delayed or has very limited frequency. Transferring to another system is even more challenging due to limited points of connection. For community transportation providers in counties outside of Mecklenburg who have to bring passengers to Charlotte for medical appointments, some are able to coordinate on transferring passengers to maximize efficiency for longer trips. Transit agencies cited a concern with lack of a good central transfer

⁶ Rider. Fares, Passes and Transfers. <https://ckrider.com/fares-and-passes/#1592232658540-bea690e4-d22d>

locations (especially in Mecklenburg County) and driver-to-driver communication challenges around passenger transfers. When the operator of one agency has to call their dispatch center to relay information to another dispatch center which then communicates with the other operator, there is a communication delay that results in longer wait times for passengers. Existing scheduling software platforms are different from one transit agency to another, which makes it challenging to share and compare schedules to find opportunities to transfer passengers and share the cost of longer trips.

COVID-19 Impacts and Medicaid Brokerage Transition Impacts for Public Transit Agencies

The COVID-19 pandemic has had a profound impact on how individuals, governments and businesses operate on an everyday basis. Public transportation providers in North Carolina saw a dramatic decrease in ridership and fare revenues starting in March 2020, and faced a significant increase in operating costs due to increased cleaning costs, personal protective equipment, protective equipment on fleet vehicles, and other related increases in operating expenses. COVID-19 federal relief funds through several programs (Coronavirus Aid, Relief, and Economic Security (CARES) Act; Coronavirus Response and Relief Supplemental Appropriations Acts 2021 (CRRSAA) and American Rescue Plan Act (ARP) funds) have allowed transit operators in the region to cover and offset some of the losses. However, as of spring 2022, most transportation agencies in the region are not back to pre-pandemic ridership levels or levels of service. Frequency has been reduced on many routes and some of the routes have been eliminated. CATS proposes to return service to pre-pandemic levels of operations in FY 2023, as measured in revenue hours. CATS ridership numbers are expected to take longer to return to pre-pandemic levels. Apart from ridership trends, COVID-19 has exacerbated an employee shortage and nationwide, nine in ten public transportation agencies are indicating that they have a hard time hiring new employees to fill the bus operator positions and other transit employee vacancies⁷.



Image: Passengers Getting Ready to Board the Airport Shuttle at the CTC Station in Uptown Charlotte while Wearing Face Coverings (January 2022).

⁷ APTA (March 2022). Policy Brief: Workforce Shortages Impacting Public Transportation Recovery. Retrieved from <https://www.apta.com/wp-content/uploads/APTA-SURVEY-BRIEF-Workforce-Shortages-March-2022.pdf>

In addition to facing COVID-19 impacts, North Carolina has been going through a Medicaid managed care transition over the past several years. As of July 2021, Medicaid Prepaid Health Plans (PHPs) began providing non-emergency medical transportation (NEMT) and non-emergency ambulance transportation (NEAT) services for PHP members; PHPs contract with transportation brokers that work with public and private transportation providers to provide the trips for PHP members. Medicaid Transportation brokers used by PHPs in North Carolina are as follows:

- ModivCare: broker for AmeriHealth Caritas of North Carolina, Carolina Complete Health, Healthy Blue and UnitedHealthcare of North Carolina; and,
- MTP (previously One Call): broker for WellCare of North Carolina.^{8 9}

Some of the Medicaid customers are signed up as NC Medicaid Direct recipients, in which case the local Departments of Social Services (DSS) offices continue to contract and schedule for NEMT and NEAT services.¹⁰ As a result, local community transportation providers often have separate contracts with Medicaid Transportation brokers and county DSS offices to provide trips for subgroups of Medicaid clients. In interviews with transportation agencies in the region, some have seen a significant impact (decrease in trips) from Medicaid brokerage transition; for others the number of NEMT trips remained the same but the amount of administrative paperwork has increased. The full impacts of the Medicaid brokerage transition on community transportation providers in the state are not yet known. The Medicaid brokerage transition is expected to help reduce the per-trip costs for NEMT clients; however, this does not take into account the efficiencies of a coordinated trip model where human services transportation clients whose trips might be covered through various programs are pooled together for travel on the same vehicles for improved overall efficiency and decreased per passenger cost. When NEMT trips are taken out of the coordinated trip equation, the resulting per trip costs for other human services agencies and public transportation providers might increase.

⁸ NCDHHS (July 20, 2021). Non-Emergency Transportation for NC Medicaid Managed Care. Retrieved from <https://medicaid.ncdhhs.gov/blog/2021/07/20/non-emergency-transportation-nc-medicare-managed-care>

⁹ NCDHHS (April 29, 2022). Non-Emergency Medicaid Transportation Updates-April 29, 2022. Retrieved from <https://medicaid.ncdhhs.gov/blog/2022/04/29/non-emergency-medicare-transportation-updates-april-29>

¹⁰ NCDHHS (July 20, 2021). Non-Emergency Transportation for NC Medicaid Managed Care. Retrieved from <https://medicaid.ncdhhs.gov/blog/2021/07/20/non-emergency-transportation-nc-medicare-managed-care>

4 Recommendations

This section provides an overview of recommendations developed as part of the Coordinated Public Transit-Human Services Transportation Plan update for Charlotte Urban Area.

Recommendation Key Themes

Recommendations for the Charlotte Urban Area are organized around the following six key themes:

- Mobility Management and Agency Coordination
- Organizational Assessments
- Customer Service
- Facility Improvements and Safety
- Connectivity
- Service Expansion

Mobility Management and Agency Coordination

Mobility Management and Agency Coordination refers to the variety of interagency coordination activities, committees, and technology and communication solutions that would help transit agencies communicate and coordinate with each other while also improving information-sharing with passengers. Establishing a formalized Mobility Manager position within a regional organization (at least one dedicated staff position, and possibly multiple in the future) would be key to being able to implement other mobility management and agency coordination activities. As part of FTA Section 5310 funding requirements, mobility management activities are eligible for an 80/20 federal/local cost share split. The recommendations that fall under the Mobility Management and Agency Coordination are as follows:



- Establish and hire a Regional Mobility Manager position(s). The Regional Mobility Manager promotes public transit, working with multiple Community Transportation Providers.
- Establish a Paratransit Working Group that is made up of representatives from each Community Transportation Provider in the region and is coordinated by the Regional Mobility Manager.
- Develop and Implement Travel Training Programs in the Region.
- Improve Marketing and Information Sharing about Existing Services.
- Expand Mobility Choices: Promote Regional Coordination on Emerging Mobility Technology.
- Establish a Unified Regional Paratransit Scheduling Software.

Organizational Assessments

Organization assessment recommendations are more internal-facing for the transit agencies, and are intended to support follow-up studies and evaluations for the agencies to continue develop their staff and financial capacity to address the growing transportation needs in the region. The recommendations that fall under the Organizational Assessments theme are as follows:

- Review the Impacts of Medicaid Managed Care on Transportation Providers in the Region.
- Perform a Regional Paratransit and Community Transportation Scheduling Integration Study.
- Evaluate additional funding options and next steps to generate additional public transportation revenue streams to support future service expansion.



Customer Service

Customer Service recommendations are intended to improve the passenger experience through supporting improved information-sharing, reduced wait times to schedule a trip and a more seamless ticket-purchasing and transfer process across multiple transit agencies. The recommendations that fall under the Customer Service theme are as follows:

- Establish a Regional Information Center: this could take many different forms, from a call-in customer service center similar to the Piedmont Transit Resources Call Center, to an interactive website and mobile app platform that would check a passenger's home location and destination and direct them to what transportation services might be available to them for that trip.
- Improve service times: this is particularly important for seniors and individuals with disabilities who are traveling via on-demand transportation options and might be especially tired from a long trip due to medical concerns that they might have.
- Reduce reservation wait times for on-demand transportation and ADA Paratransit: while STS (ADA Paratransit) services for CATS allow an ADA Paratransit trip reservation for the following day, many on-demand transportation providers require several days prior notice to schedule a trip.



- Develop a regional fare strategy which would include fare interoperability agreements and a shared mobile ticketing platform.
- Adopt a regional platform for demand response trip scheduling and dispatching.
- Develop a standardized ADA certification process across all agencies and reciprocity agreements.
- Provide disability sensitivity training for private providers.

Facility Improvements and Safety

Facility Improvements and Safety set of recommendations are focused on upgrading transit stops to make them ADA-accessible and more comfortable to passengers. The following recommendations are grouped as part of the Facility Improvements and Safety theme:

- Develop a comprehensive transit safety and convenience program to review issues in proximity to transit stops and address them.
- Upgrade bus stops with highest ridership with bus shelters, improve ADA compliant bus stop pads and upgrade lighting. Add Braille to fixed-route bus stops signs.
- Upgrade bus stops with ADA accessible loading pads and walk access routes as part of roadway projects design and construction (NCDOT Complete Streets policy implementation).



Connectivity

Connectivity recommendations are related to first-mile last-mile access to transit stops, and are focused on additional transportation options, such as microtransit, community shuttles and connecting passengers to other transportation options once they arrive at the transit stop closest to their destination. Connectivity recommendations include the following:

- Develop a Microtransit / Community Shuttle Pilot Program.
- Develop a Mobility Hub Pilot Program to learn best practices on mobility hubs and identify the highest priority locations for Mobility Hub implementation; identify funding partners.
- Establish a Volunteer Transportation Services Program in the region to help close the gaps between transportation needs and existing services.
- Expand mobility choices.
- Establish connecting service procedures between transit providers, including identifying and establishing additional and improved transfer locations, working through communication protocols for improved communication from operator to operator when possible, and establishing protocols for how the scheduling software reports can help communicate potential shared trip information between multiple agencies.



- Strengthen rural to urban connections; involve community transportation providers in CONNECT Beyond service planning workgroup.

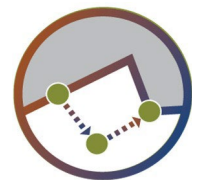


A mobility hub concept speaks to better connecting transit passengers to first mile-last mile transportation options via improved information sharing and amenities such as e-scooter share and WiFi at key transit stops.

Service Expansion

Service Expansion recommendations are focused on expanding the number of transit routes in the region, as well as improving their reach, hours of operation and frequency. The Service Expansion recommendations include the following:

- Increase service: this recommendation has a particular focus on increasing trips availability for on-demand non-emergency trips through community transportation providers.
- Expand on-demand /community transportation service hours to provide more evenings and weekends service.
- Improve existing service:



- Expand medical appointments transportation including dialysis transportation.
- Purchase additional ADA-accessible vehicles including larger vehicles to accommodate over-sized mobility aids.
- Improve transportation options for employment and related needs.
- Improve access to transportation for veterans and other individuals with disabilities and visual impairment.
- Upgrade vehicle fleets to include more fuel-efficient, environmentally-friendly options.

Table of Recommendations

The table below includes provides a list of recommendations with suggested timeframe (near-term, mid-term or long-term) for implementation.

Table 3 Recommendations

Charlotte Urban Area Coordinated Public Transit-Human Services Transportation Plan Recommendations			
Implementation Period	Type	Recommendation	Recommendation Description
Near-Term	Mobility Management and Agency Coordination	Establish Regional Mobility Manager position(s) (CONNECT Beyond C-09)	The Regional Mobility Manager would help coordinate on policies that support public transit, build local partnerships and help coordinate transportation services across service providers and funding agencies in the region. The Regional Mobility Manager would also support the development of information tools and trip planning tools for transit riders.
Near-Term	Mobility Management and Agency Coordination	Establish a Paratransit Working Group (CONNECT Beyond D-03)	Establish a Paratransit Working Group that is made up of representatives from each Community Transportation Provider in the region and is coordinated by the Regional Mobility Manager. The objective of this Working Group should be to coordinate paratransit policies and operations region-wide and to work together to implement CONNECT Beyond recommendations related to Community Transportation Services.

Implementation Period	Type	Recommendation	Recommendation Description
Near-Term	Mobility Management and Agency Coordination	Travel Training	Establish transportation kiosks in senior / low income housing and social service locations, create a demonstration bus, create a mobile classroom, and provide one-on-one instruction, as well as group instruction, to target populations for “first and last mile” access
Near-Term	Organizational Assessments	Review the Impacts of Medicaid Managed Care on Transportation Providers in the Region (CONNECT beyond C-03)	Community Transportation Providers should assess the impact of Medicaid Managed Care by maintaining records for system ridership and financials to determine impacts on system operations.
Near-Term	Customer Service	Regional Information Center (CONNECT Beyond D-37)	One-Click One-Call Center or Regional Transit Information Website
Near-Term	Customer Service	Improve service times	Reduce reservation wait times and expand eligibility and frequency for on-demand trips in areas served by Community Transportation Providers (outside of existing fixed route and deviated fixed route service areas).
Near-Term	Facility Improvements and Safety	Develop a comprehensive transit safety and convenience program (CONNECT Beyond D-26)	Develop a comprehensive safety and convenience program for transit users, operators, other staff, and the public (a systematic approach to review issues in proximity to transit stops and address them through lighting, access improvements, safety officers, etc.).
Near-Term	Facility Improvements and Safety	Improve access to existing public transit stops	Upgrade bus stops with highest ridership with bus shelters, improve ADA compliant bus stop pads and upgrade lighting. Add Braille to fixed-route bus stops signs.

Implementation Period	Type	Recommendation	Recommendation Description
Near-term	Mobility Management and Agency Coordination	Improve marketing and information sharing about existing services (short-term)	Help seniors and individuals with disabilities connect with existing transit services, coordinate with travel training for seniors and individuals with disabilities to help them navigate transit services.
Mid-Term	Connectivity	Microtransit /Community Shuttle Pilot Program	Test a pilot and implement microtransit /on-demand community shuttle services with ADA-accessible vehicles and same day reservation capabilities in high demand areas to expand the reach of existing fixed route and deviated fixed route transit
Mid-Term	Connectivity	Mobility Hubs pilot program	Test a pilot and implement mobility hubs at key station areas to improve transfer and waiting areas with access to a variety of last-mile solutions including pedestrian access, ride sharing, microtransit/shuttles and taxi services
Mid-Term	Customer Service	Reduce reservation wait times for on-demand transportation and ADA Paratransit	Provide same-day on-demand transportation services including ADA Paratransit /Special Transportation Service (STS)
Mid-Term	Service Expansion	Increase Service	Increase trips for on-demand non-emergency trips
Mid-term	Service Expansion	Expand service	Expand On-Demand and Community Transportation Service Hours (Evenings and Weekends)
Mid-Term	Connectivity	Volunteer Transportation Services Program (CONNECT Beyond C-20)	Launch a redesigned regional Volunteer Transportation Services Program for older adults and people with disabilities. This program is intended as a safety net service for those who do not qualify or cannot access other transit services.

Implementation Period	Type	Recommendation	Recommendation Description
Mid-term	Connectivity	Expand Mobility Choices (CONNECT Beyond B-21)	Identify small area or station area plans that coincide with mobility hub candidate areas and incorporate hub elements into the area plans. This should be completed after the alternatives analysis study for future HCT and in coordination with existing fixed-route and human services plans.
Mid-Term	Connectivity	Establishing connecting service procedures between transit providers	Create new and improved transfer locations, improve communication methods, and schedule software, and improve agreements between agencies to be able to transfer passengers for longer trips
Mid-Term	Connectivity	Strengthen Rural to Urban Connections (CONNECT Beyond C-01)	Involve Community Transportation Providers in CONNECT Beyond Service Planning Working Group to ensure service improvements are coordinated at a regional level (2-3 times/year)
Mid-Term	Customer Service	Regional Fare Strategy (CONNECT Beyond B-19)	Develop fare interoperability agreements between CATS, Rider, ICATS and other connecting agencies. Implement a shared regional mobile ticketing platform that allows for access by under-banked individuals and individuals with disabilities
Mid-Term	Customer Service	Regional Platform for Demand Response Trip Scheduling and Dispatching (D-53)	Integrate demand response trip scheduling and dispatching systems into a single regional platform.
Mid-Term	Customer Service	Develop a standardized ADA certification process across all agencies and reciprocity agreements (CONNECT Beyond D-19)	A standardized process and reciprocity agreements would greatly improve user experience by eliminating unnecessary transfers.

Implementation Period	Type	Recommendation	Recommendation Description
Mid-Term	Customer Service	Sensitivity Training	Provide disability sensitivity training to taxi and limousine drivers.
Mid-term	Mobility Management and Agency Coordination	Expand Mobility Choices-Promote Regional Coordination on Emerging Mobility Technology (CONNECT Beyond B-06)	In coordination with the existing Connected and Autonomous Vehicle Task Force convened by Centralina Regional Council Regional Council, establish an Emerging Mobility Working Group. The Group will engage transit stakeholders to understand current and future technology needs and set a path for the effective integration of emerging mobility initiatives and programs with current and future transit services, including mobility hubs identified by CONNECT Beyond. The Emerging Mobility Working Group will pilot and implement first-mile/last-mile solutions, ride-share coordination, electric vehicle technologies, innovations for seniors/persons with disabilities, and other relevant mobility recommendations presented by CONNECT Beyond.
Mid-term	Organizational Assessments	Regional Paratransit and Community Transportation Scheduling Integration (CONNECT Beyond D-09)	Perform a regional Paratransit and Community Transportation Scheduling Integration and Implementation Study.
Mid-Term	Service Expansion	Improve Existing Services-Community Transportation and On-Demand Transportation Services	<ol style="list-style-type: none"> 1. Expand medical appointments transportation including dialysis transportation. 2. Purchase ADA-accessible vehicles including larger vehicles to accommodate over-sized mobility aids. 3. Improve transportation options for employment and related needs. 4. Improve access to transportation for veterans and others with disabilities and visual impairments. 5. Upgrade vehicle fleets to include more fuel-efficient, environmentally-friendly options.

Implementation Period	Type	Recommendation	Recommendation Description
Long-Term	Mobility Management and Agency Coordination	Unified Regional Paratransit Scheduling Software (CONNECT Beyond D-69)	CONNECT Beyond recommends the region Community Transportation Providers adopt a unified regional community transportation and paratransit scheduling software to help better coordinate paratransit services throughout the region.
Long-Term	Organizational Assessments	Evaluate additional funding options	Expand additional public transportation funding options in the region. Review next steps to generate additional public transportation revenue streams to support future service expansion
Long-Term	Facility Improvements and Safety	Upgrade bus stops with ADA accessible loading pads and walk access routes as part of roadway projects design and construction (Complete Streets implementation).	As part of Complete Streets policy implementation, ensure bus stops in the region are upgraded with ADA accessible loading pads and walk access routes during roadway projects design and construction.

5 Microtransit and First/Last Mile Study Areas

Follow up Study Areas for Microtransit and First/Last Mile Service for Elderly and Disabled Populations

Microtransit or General Public Demand–Response Transit Services: State of the Practice (TCRP Synthesis 141)¹¹, defines microtransit as, “shared public or private sector transportation services that offer fixed or dynamically allocated routes and schedules in response to individual or aggregate consumer demand, using smaller vehicles and capitalizing on widespread mobile GPS and internet connectivity.” For the purposes of this report, microtransit (or community shuttle) services are assumed to require public support in those areas of the Charlotte Urban Area where they might be most needed to help provide trips for seniors and individuals with disabilities (outside of South End and Uptown Charlotte), with a variety of service models and vehicle types possible. Microtransit is seen as a way to expand the reach of existing fixed route transit services and deviated fixed route services while giving riders the flexibility of requesting a trip the same day, through a phone call or an app, similar to requesting a ride sharing service.

To identify potential microtransit and first/last mile service areas for the elderly and people with disabilities, a GIS analysis was conducted. First, the study team selected all Census block groups that are in the top tier for the following criteria:

- percentage of households with elderly population (65+);
- percentage of households with disabled populations; and,

¹¹ Transit Cooperative Research Program (2019). TCRPO Synthesis 141. The National Academies of Sciences, Engineering and Medicine. Retrieved from <https://www.trb.org/Main/Blurbs/178931.aspx>

- percentage of households without a vehicle.

The Census block groups that met all three criteria were identified as “Target Microtransit Areas.” As part of the next phase of analysis, the study team incorporated the existing express bus route system and light rail system with stations. CONNECT Beyond CATS Mobility Hubs and other CONNECT Beyond Mobility Hubs were incorporated as well as CONNECT Beyond-planned High-Capacity Transit Corridors. These corridors were identified in CONNECT Beyond as ready for high-capacity transit service today. After reviewing these parameters, five target study areas for potential microtransit, community shuttle service and/or other first/last mile services were identified:

- West Mecklenburg County
- Mint Hill
- North Mecklenburg County with Phase 2 Potential Expansion into Iredell County
- South Mecklenburg County
- Union County

Figure 6 displays the Target Microtransit Areas (based on percentage of elderly, disabled, and zero vehicle households) in relation to the current CATS express routes and light rail locations. Ultimately, this is where a microtransit system or a community shuttle would likely best serve elderly and disabled populations without access to a vehicle. The Census blocks in green are those that have the highest percentage of elderly population (+65) and has the highest percentage of households with disabled people and has the highest percentage of households without vehicles. The map also includes CATS and Regional Mobility Hubs and planned High-Capacity Transit Corridors as described in CONNECT Beyond report.

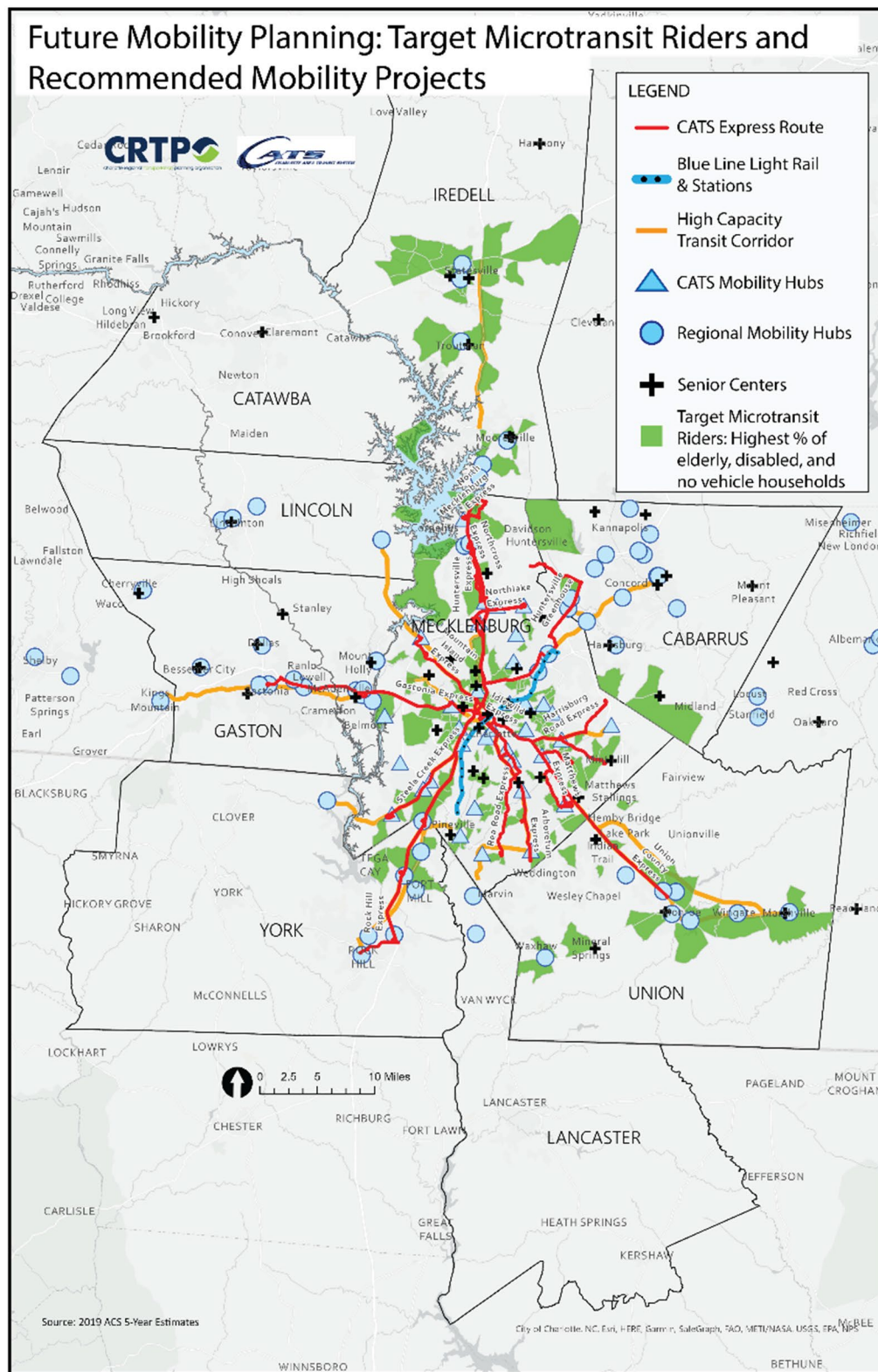


Figure 6 Microtransit Target Areas

For the microtransit study areas identified, additional follow-up studies would be required to review the feasibility, coverage, frequency, vehicle type and operational model that would be most appropriate to provide a microtransit or community shuttle option. A same-day scheduling and trip reservation mobile app paired with a call-in reservation option is expected to be the most convenient way to allow potential riders to schedule a trip. Expected wait times for passengers would be subject to the service area and number of vehicles and drivers dedicated to the service. Additional service and operating details that would need to be developed to include accommodating riders that use a wheelchair or another mobility device. Some of the smaller microtransit vehicles (minivans) can be retrofitted to accommodate a passenger in a wheelchair; however, this results in a very limited capacity for only one additional passenger on the same trip where an individual is using a wheelchair. A mixed vehicle fleet with at least some cutaway buses (or LTV vehicles) and/or larger passenger vans in addition to minivan vehicles would likely be the most appropriate to accommodate passengers with a range of mobility limitations. In addition to the vehicle mix, the service model (for example curb-to-curb, corner-to-corner or between designated pick-up and drop-off points only) would need to be explored. Limiting service to designated pick-up and drop-off locations only can reduce the operating costs and the number of drivers required. On the other hand, older riders and riders with mobility limitations might be more comfortable with curb-to-curb service where they do not have to travel to get to a pick-up location. Finally, some of the study areas may be best served by breaking them up into multiple service zones, especially those that offer the potential of including multiple mobility hubs.

West Mecklenburg Study Area

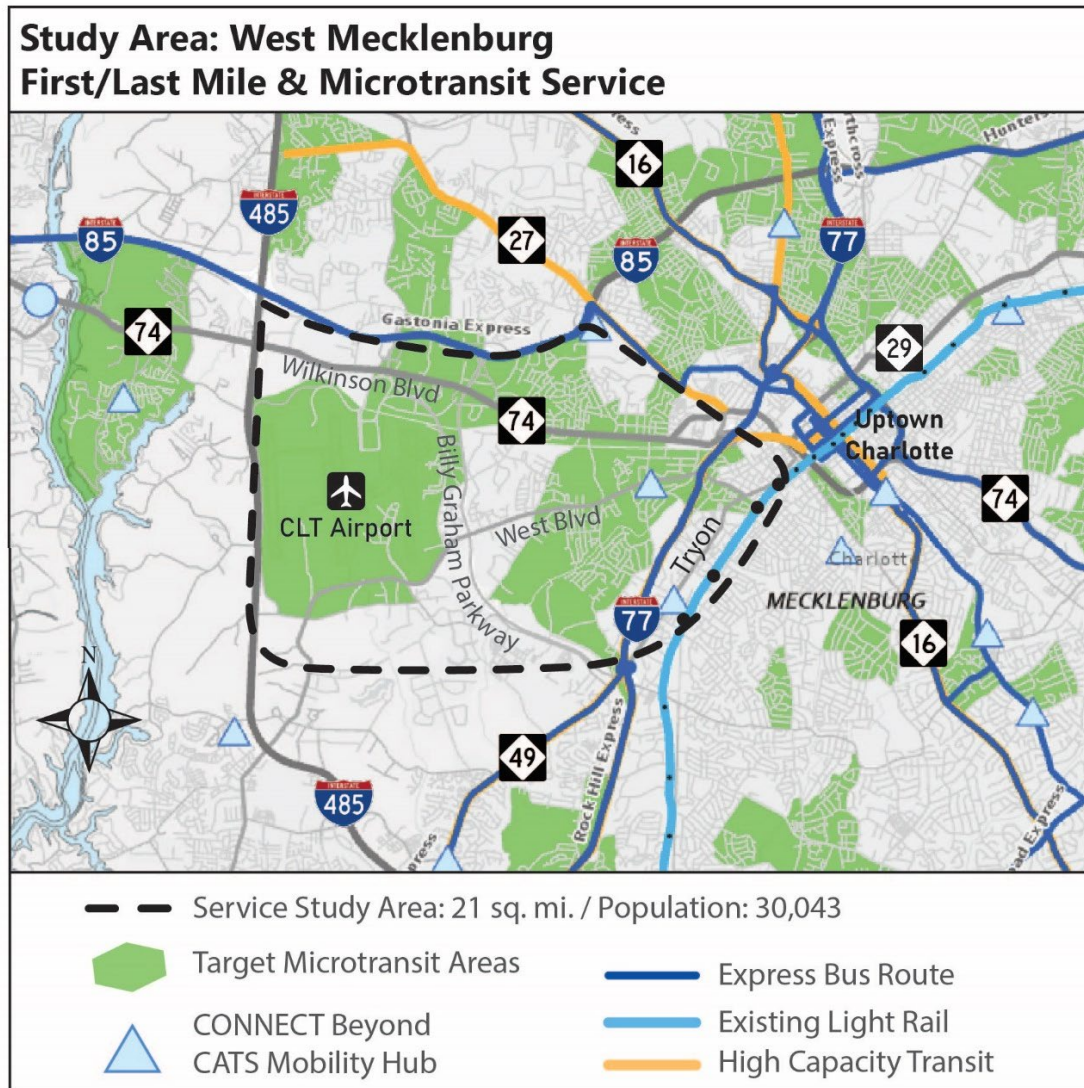


Figure 7 West Mecklenburg Study Area

The West Mecklenburg Study Area is unique in that it includes the Charlotte Douglas International Airport (CLT). Airport. The study area also includes four light rail stations. It is bordered by I-85 to the north and I-485 to the west and includes connections to the Gastonia Express and Rock Hill Express routes. This study area is approximately 21 square miles and includes a population of 30,043. In this potential microtransit service study area, if riders are able to get to a light rail station, they would have the ability to take microtransit from a light rail station to the airport, providing front door service to the airport terminal and eliminating the need for parking, which could also be helpful for elderly and disabled populations. In addition, the area around the airport has a variety of warehouse and logistics jobs clusters where employees tend to work in shifts and microtransit service could accommodate a greater variety of work schedules. For example, Amazon packaging and warehouse facilities on Todd Road and Tuckaseegee Road could potentially be served within this microtransit service area.

North Mecklenburg and Iredell County Study Area

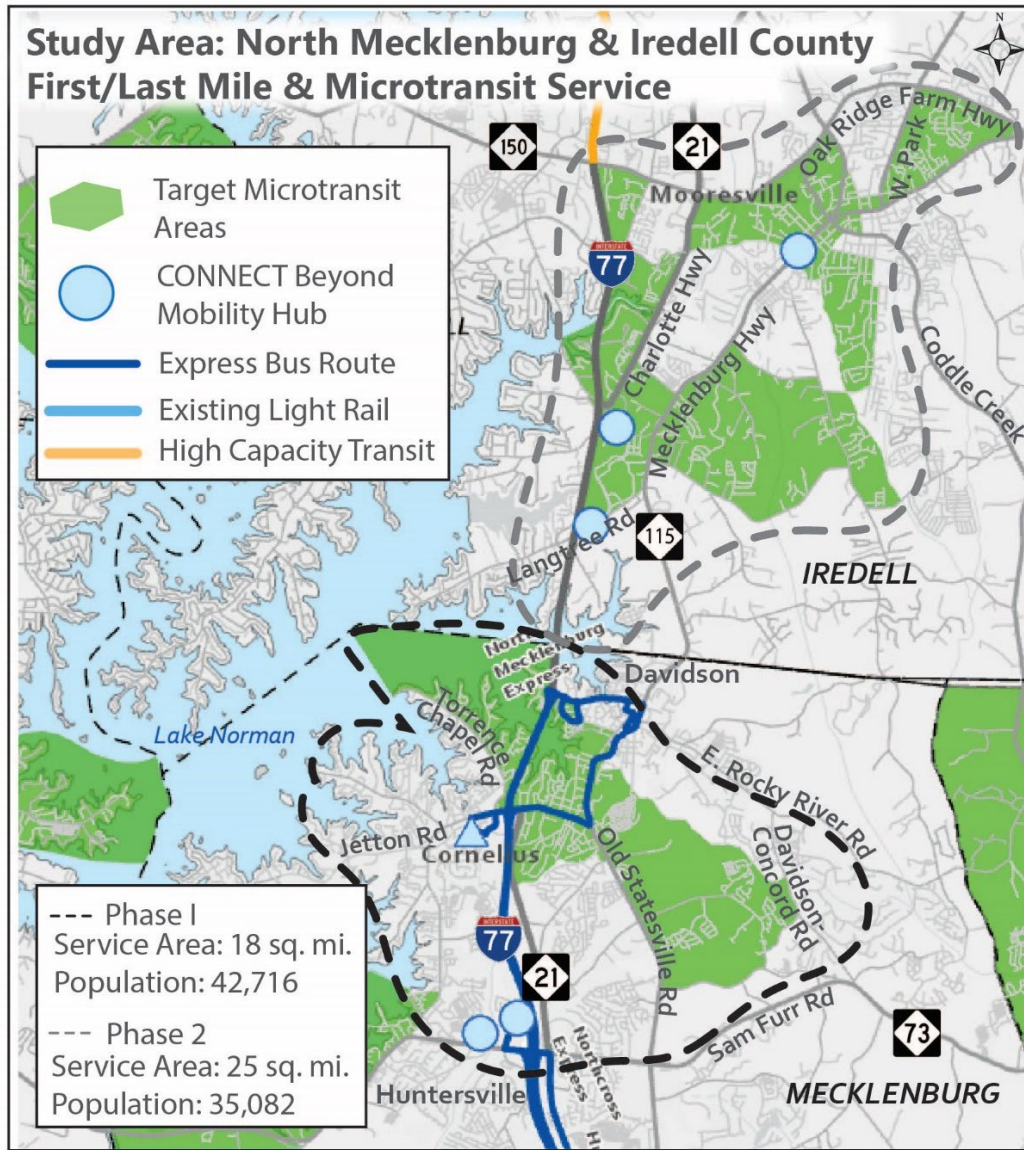


Figure 8 North Mecklenburg and Iredell Study Area

The North Mecklenburg and Iredell County Study Area could be reviewed and implemented in two phases, split at the county line. In terms of administration and operations for a new service, stopping the services at the county line and picking up on the other side would allow two different agencies to provide the oversight and funding for those services. The Phase I Study Area is targeting northern Mecklenburg County, surrounding the I-77 corridor. It would provide service to those living in Davidson and Cornelius and the northern tip of Huntersville and would connect to the North Mecklenburg Express bus route and the Northcross Express bus route. Phase I is approximately 18 square miles and would serve a population of 42,716.

The Phase 2 Study Area is in Iredell County, also following the I-77 corridor. It will provide service to those living in Mooresville. This study area is approximately 25 square miles and includes a population of 35,082.

Mint Hill Study Area

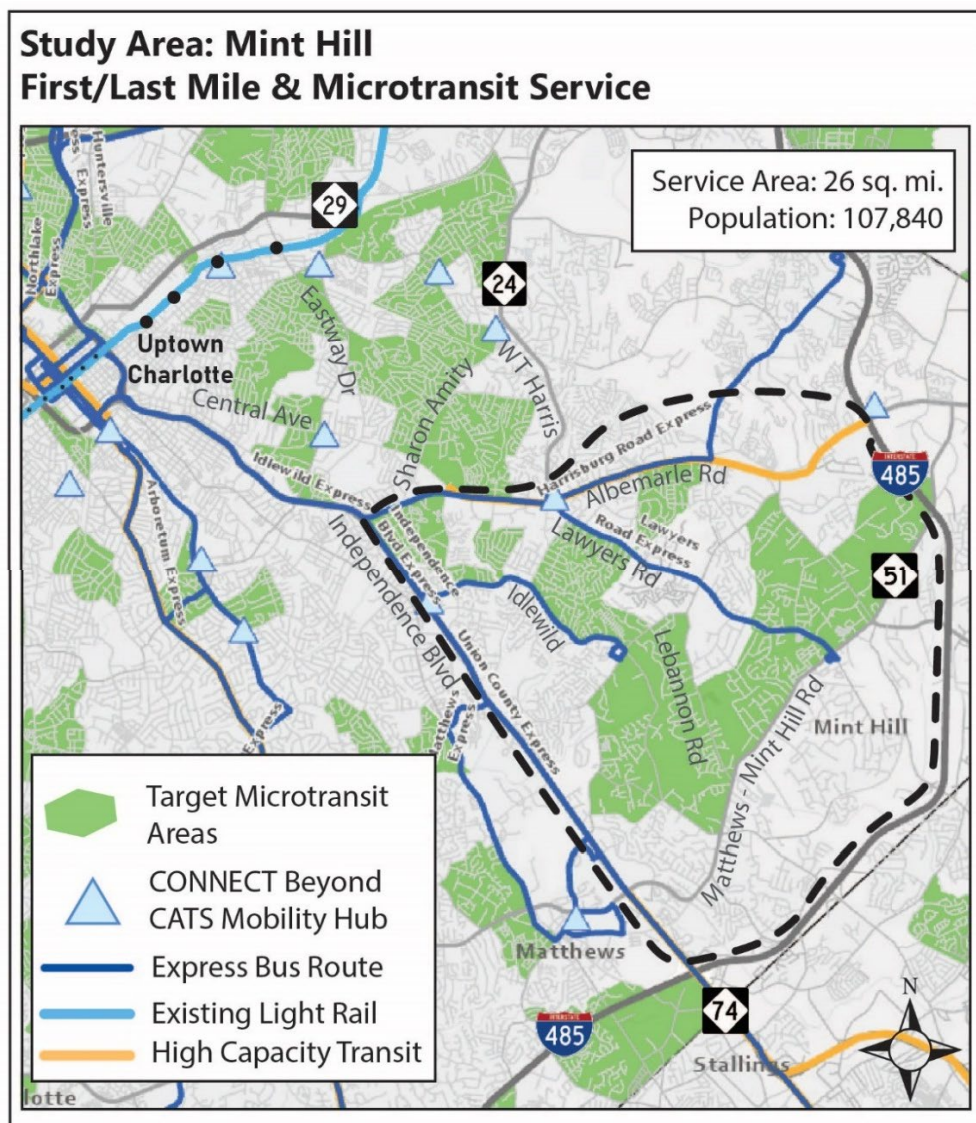


Figure 9 Mint Hill Microtransit Study Area

The Mint Hill Study Area is located in east Mecklenburg County, targeting the wedge bordered by US 74 (Independence Boulevard) to the west, I-485 to the southeast, and Albemarle Road to the north. This potential study area would include connections to the Independence Boulevard Express route, the Union County Express route, the Harrisburg Express route, and the Lawyers Road Express route (40x). The study area would cover a potential service area of 26 square miles and a population of 107,840.

Union County Study Area

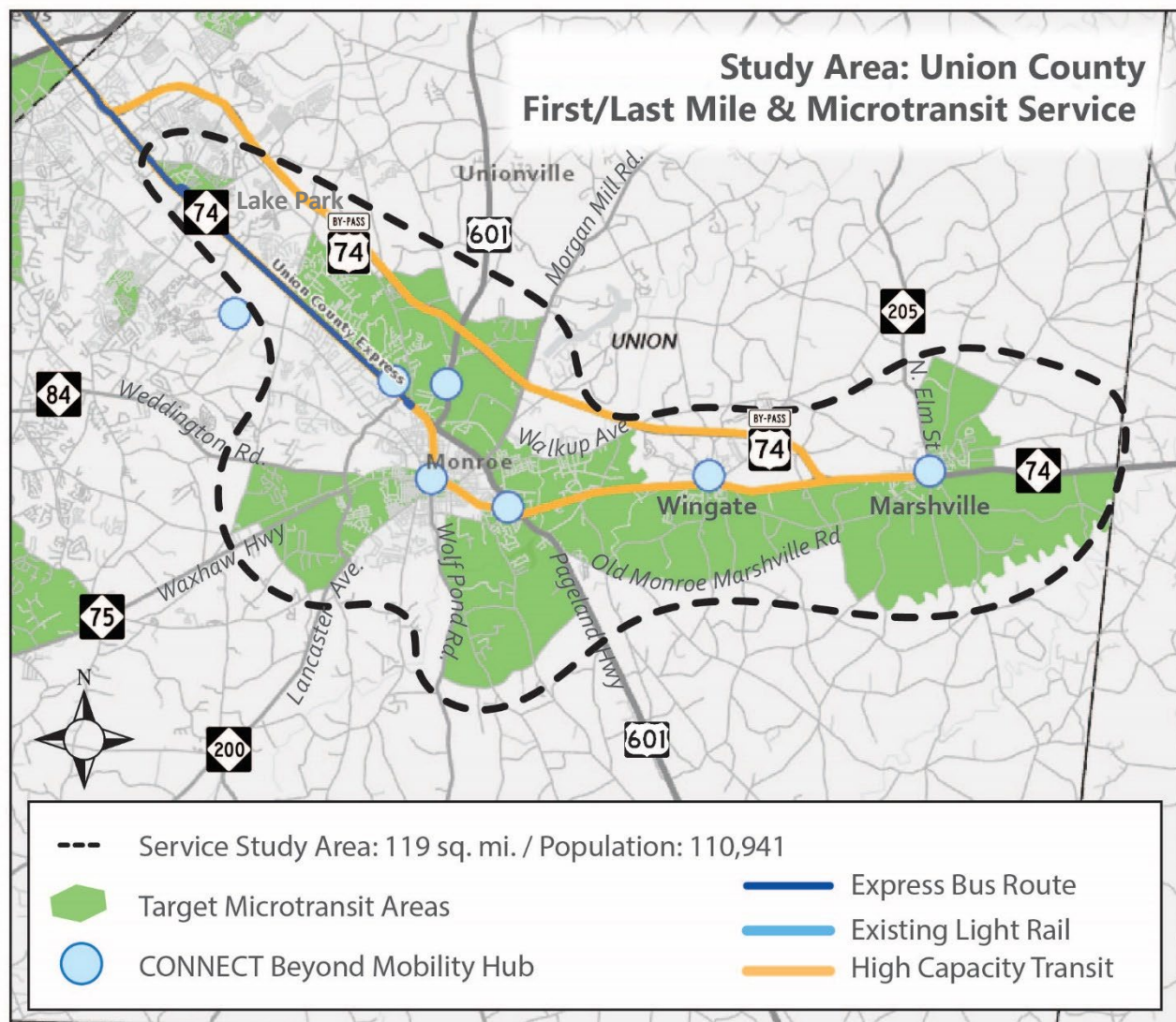


Figure 10 Union County Microtransit Study Area

The Union County Study Area is the largest study area of the five, encompassing 119 square miles. It follows the US 74 corridor from Lake Park south of the bypass through Monroe, Wingate, and Marshville. It includes connections to the Union County Express route. This study area would serve approximately 110,941 people. As the largest study area, options for providing microtransit and first/last mile service include more vehicles operating at once and/or splitting the potential service area (possibly dividing the service area along Highway 601).

South Mecklenburg Study Area

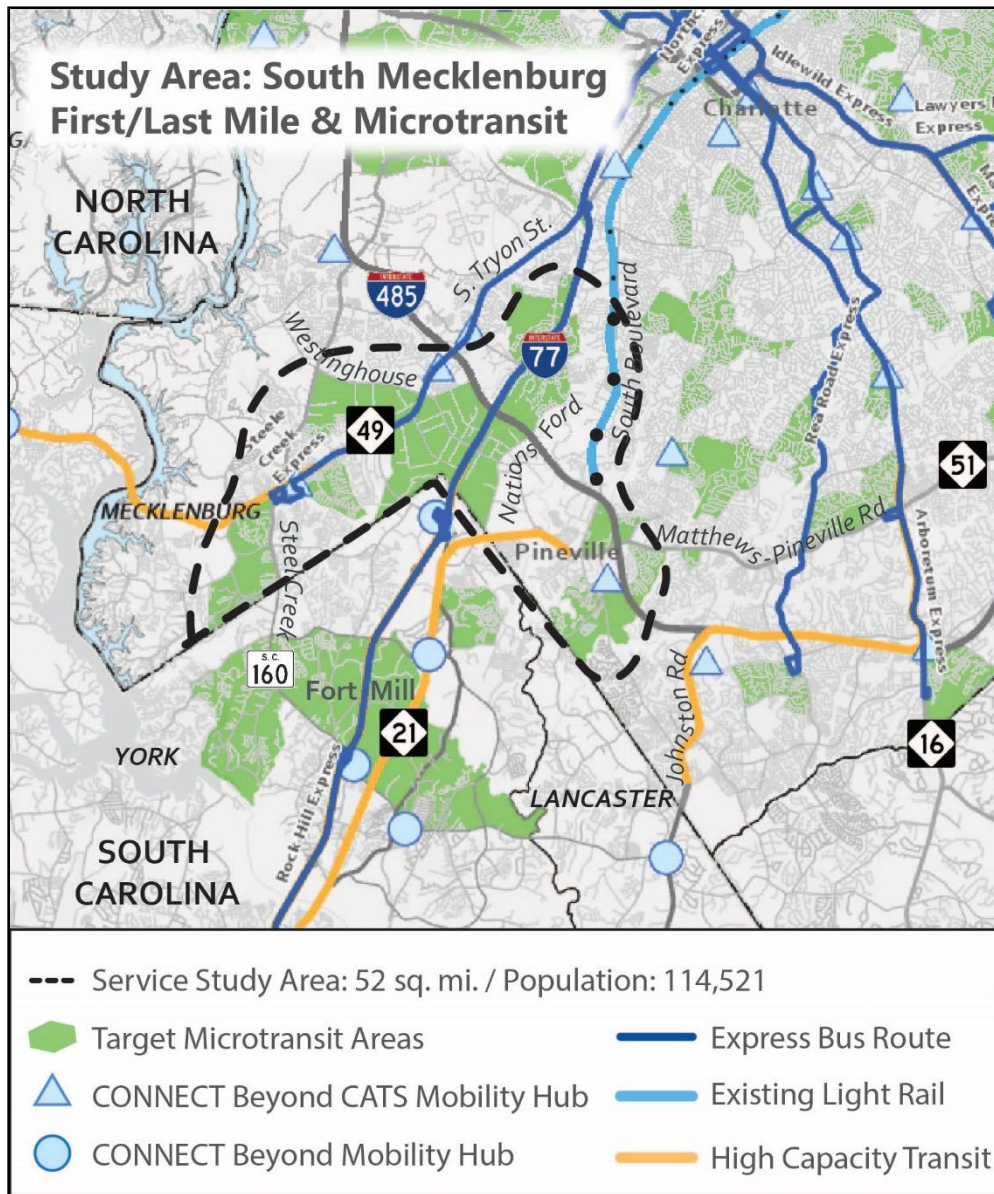


Figure 11 South Mecklenburg Microtransit Study Area

The South Mecklenburg Study Area follows the I-77 corridor encompassing four light rail stations and a portion of I-485. This study area would provide access for residents of Pineville. It provides connections to the Steel Creek Express route and the Rock Hill Express route. This study area is approximately 52 square miles and will serve approximately 114,521 people.

THE CHARLOTTE, NC-SC URBANIZED AREA

Coordinated Public Transit-Human Services Transportation Plan

MTC Presentation



May 25, 2022

1

Agenda

- Study Purpose and Area
- Study Key Steps
- Recommendations
- Next Steps

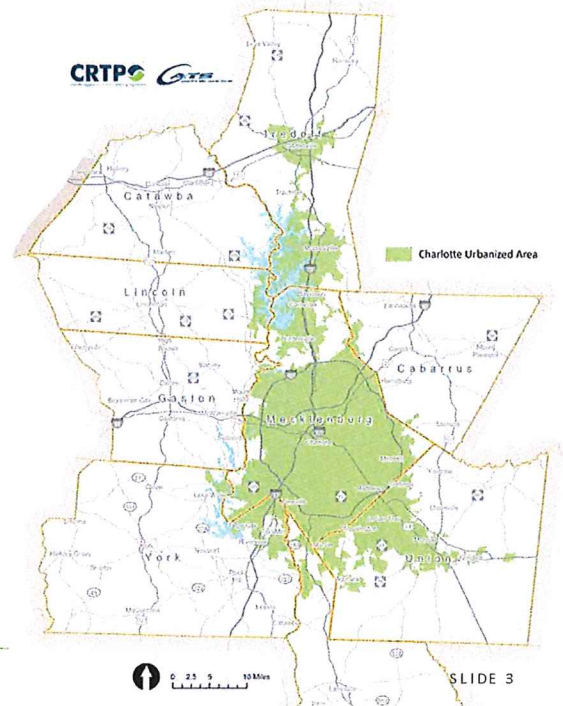


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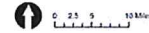
Study Region and Project Oversight

- CRTPO managing the study
- CATS participation and oversight
- MTC approval and CRTPO Board endorsement
- Urbanized Area overlaps with 9 Counties, spans multiple MPOs and two states

Iredell County, NC
 Mecklenburg County, NC
 Union County, NC
 York County, SC
 Lancaster County, SC
 Cabarrus County, NC
 Gaston County, NC
 Lincoln County, NC
 Catawba County, NC



CRTPO



SLIDE 3

3

What is a Coordinated Public Transit-Human Services Transportation Plan

- A federally required plan focusing on the transportation needs of older adults and individuals with disabilities
- The Coordinated Plan:
 - (1) assesses the transportation services currently available
 - (2) identifies unmet transportation needs
 - (3) identifies coordination opportunities and needs to eliminate or reduce duplication in services
 - (4) develops strategies, activities, and/or projects to address unmet needs
- The Coordinated Plan will help guide the selection process for Section FTA 5310 grant funding allocated to the Charlotte Urbanized Area
 - FY 2021 allocation of FTA 5310 for Charlotte region: \$983,028 + rural 5310 funding passed through NCDOT



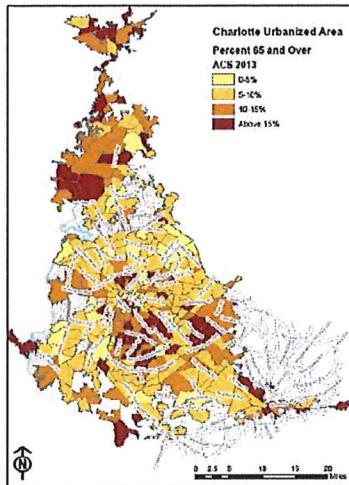
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SLIDE 4

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Previous Plan

- 2016-2021 timeframe
- Charlotte Urbanized Area



Coordinated Human Services Transportation Plan for the Charlotte Urbanized Area FY2016-FY2021



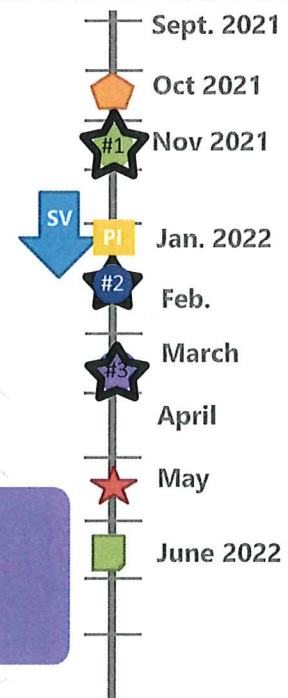
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Project Schedule

Kick-off meeting with Project Team
Assemble Steering Committee, First Meeting
Review Existing Plans and Demographic Data
Identify and Evaluate Existing Transit Service
Stakeholder Interviews

Online Survey (MetroQuest) to help identify service needs and gaps
Hold Public Involvement Meetings and 2nd Steering Committee Meeting
Prioritized List of Transportation Needs and Strategies

Draft Plan
Steering Committee Meeting #3
CRTPO Board and MTC Presentations Informational in April 2022
MTC Adoption in May 2022
CRTPO Endorsement and Project Close-Out June 2022



6

Public and Stakeholder Engagement

- Stakeholder interviews and Steering Committee meetings held
- Three virtual public meeting held in January
- Three pop up public engagement events
 - Two at the CTC station
 - One at Scaleybark station (light rail, high bus ridership)
- Approximately 155 participants in public meetings
- MetroQuest online survey finished February 6, 2022
- Short form questionnaires collected during pop up engagement
- 157 survey responses total



CRTPO

GMA

SLIDE 7

7

Stakeholder Interviews

- 11 interviews conducted with transit agencies and non-profit agencies
- Consensus that the region is quite large and difficult to coordinate transportation needs
- Needs and gaps identified, including the following:
 - Lack of funding to support services expansion
 - A need for a more coordinated scheduling software
 - A need for additional staff support to focus on regional Mobility Management
 - There is a lack of community education around what transportation services are available
 - COVID-19 pandemic has disrupted ridership, many routes had to be reduced in terms of frequency of service or cut and not yet fully back to normal
 - Medicaid Brokerage System transition is also having an impact on public transportation providers, especially community transportation providers



CRTPO

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SLIDE 8

8

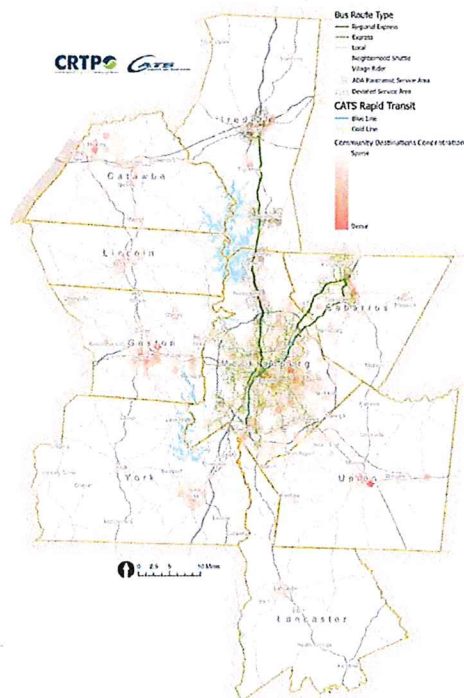
Socioeconomic Data and Existing Agency Data Collection



9

Existing Transit Service and Community Destinations

- Portions of Mecklenburg County, Cabarrus County, Gaston County and Iredell County served by fixed route and deviated fixed route service
- Catawba County, York County, Gaston County-existing fixed route transit service outside of Charlotte Urbanized Area
- Remaining gaps between population centers and destinations and existing transit



CRTPC

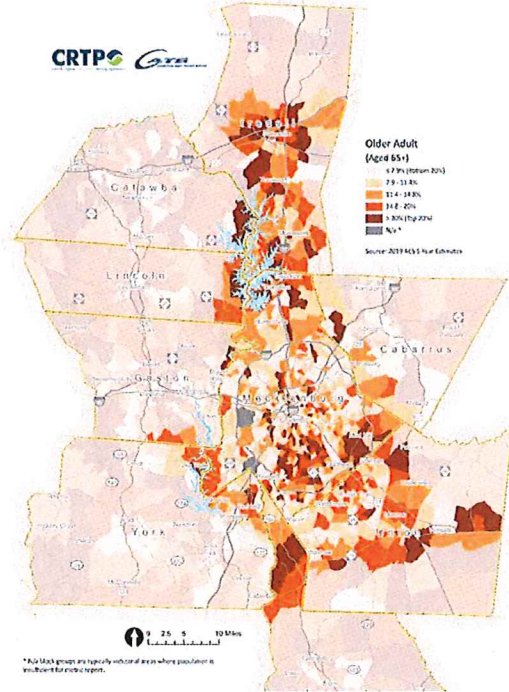
SLIDE 10

10

Seniors 65+

Overlap with ADA Paratransit and Deviated Fixed Route Service Area

% Older Adults (65+)	28.6%
# Older Adults (65+)	95,188



CRTPS

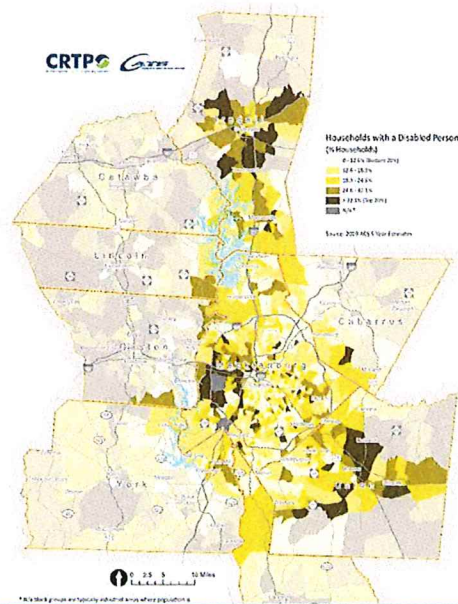
SLIDE 11

11

Households with Disabilities

Overlap with ADA Paratransit and Deviated Fixed Route Service Area

% HH with Disability	29.5%
# HH with Disability	58,175



CRTPS

SLIDE 12

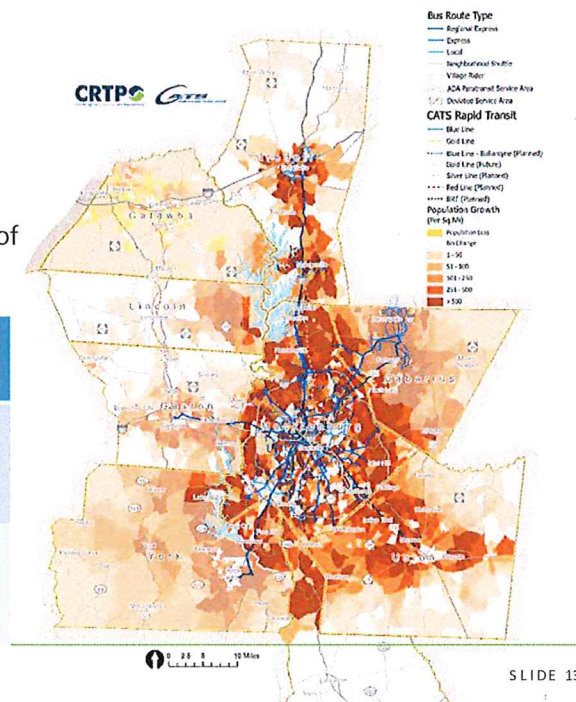
12

Future Population Growth

- Based on Regional Travel Demand Model Data
- Population growth per square mile 2018-2045
- Significant population growth expected outside of I-485 loop

	Existing Conditions	Future Conditions (2045)
Population	1,134,150	1,656,508
Within ¼ mi of Fixed and Deviated Fixed Route Transit (% of Total Population)	44.1%	42.2%
Employment	1,211,821	1,622,580
Within ¼ mi of Fixed and Deviated Fixed Route Transit (% of Total Jobs)	71.5%	67.3%

CRTPO



13

Recommendations



14

Needs and Gaps Assessment-Key Themes

- Recognition that with the regional growth and housing costs escalation more people will be living outside of the reach of existing fixed route transit
- Existing transit providers have limited budgets to keep up with increased demand
- Improve information-sharing across the region to make it easier to find what services an individual can sign up for
 - Regional Mobility Manager recommendation in CONNECT Beyond
- The need for improved communication between existing transit providers and availability of additional connection points
- Increase the reach of existing transit service to reach a larger percentage of transportation-disadvantaged populations
 - Increased frequency and hours for existing transit routes
 - Mobility hubs, improve walk access to transit and upgrade transit stops to be ADA accessible
 - Continue to work towards implementing CONNECT Beyond recommendations



CRTPO

CONNECT

SLIDE 15

15

Recommendations

- Mobility Management and Agency Coordination
- Organizational Assessments
- Customer Service
- Facility Improvements and Safety
- Connectivity
- Service Expansion



CRTPO

CONNECT

SLIDE 16

16

Recommendations-Mobility Management and Agency Coordination

- Establish and hire a Regional Mobility Manager position(s). (CONNECT Beyond C-09). The Regional Mobility Manager promotes public transit, working with multiple Community Transportation Providers
 - Mobility Management eligible for capital project 80/20 funding
- Establish a Paratransit Working Group (CONNECT Beyond D-03) that is made up of representatives from each Community Transportation Provider in the region and is coordinated by the CONNECT Beyond Regional Mobility Manager.
- Travel Training
- Improve Marketing and Information Sharing about Existing Services
- Expand Mobility Choices-Promote Regional Coordination on Emerging Mobility Technology (CONNECT Beyond B-06)
- Unified Regional Paratransit Scheduling Software (CONNECT Beyond D-69)



17

Recommendations-Organizational Assessments

- Review the Impacts of Medicaid Managed Care on Transportation Providers in the Region (CONNECT beyond C-03)
- Perform a Regional Paratransit and Community Transportation Scheduling Integration Study (CONNECT Beyond D-09)
- Evaluate additional funding options and next steps to generate additional public transportation revenue streams to support future service expansion



18

Recommendations-Customer Service

- Regional Information Center (CONNECT Beyond D-37)
- Improve services times
- Reduce reservation wait times for on-demand transportation and ADA Paratransit
- Regional Fare Strategy (CONNECT Beyond B-19): fare interoperability agreements and shared mobile ticketing platform
- Regional Platform for Demand Response Trip Scheduling and Dispatching (CONNECT Beyond D-53)
- Develop a standardized ADA certification process across all agencies and reciprocity agreements (CONNECT Beyond D-19)
- Disability Sensitivity Training for private providers



19

Recommendations-Facility Improvements and Safety

- Develop a comprehensive transit safety and convenience program (CONNECT Beyond D-26) to review issues in proximity to transit stops and address them
- Upgrade bus stops with highest ridership with bus shelters, improve ADA compliant bus stop pads and upgrade lighting. Add Braille to fixed-route bus stops signs.
- Upgrade bus stops with ADA accessible loading pads and walk access routes as part of roadway projects design and construction (Complete Streets implementation).



20

Recommendations-Connectivity

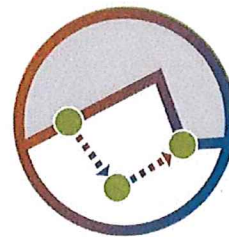
- Develop a Microtransit/Community Shuttle Pilot Program
- Develop a Mobility Hub Pilot Program (CONNECT Beyond B-18)-to learn best practices on mobility hubs and identify highest priority locations for Mobility Hub implementation; identify funding partners
- Volunteer Transportation Services Program (CONNECT Beyond C-20)
- Expand Mobility Choices (CONNECT Beyond B-21)
- Establish connecting service procedures between transit providers (transfer locations, communication)
- Strengthen rural to urban connections; involve community transportation providers in CONNECT Beyond service planning workgroup



21

Recommendations-Service Expansion

- Increase service: increase trips for on-demand non-emergency trips
- Expand service: expand on-demand /community transportation service hours (evenings and weekends).
- Improve existing service
 - Expand medical appointments transportation including dialysis transportation
 - Purchase larger vehicles to accommodate over-sized mobility aids
 - Improve transportation options for employment and related needs
 - Improve access to transportation for veterans and others with visual impairment
 - Upgrade vehicle fleets to include more fuel-efficient, environmentally-friendly options



22

Microtransit/Community Shuttle Target Locations for Follow-up Study

- Several locations identified
 - Based on a combination of demographic data (BGs with highest concentration of seniors, disabilities, zero vehicle households)
 - Proximity to key transit routes, identified mobility hub locations
- Follow-up feasibility study would be required for any of those target areas to implement a community shuttle or microtransit service
- A variety of service models possible



23

Next Steps:

- Draft Recommendations and Plan Materials available at <https://charlottenc.gov/cats/transit-planning/Pages/coordinated-services-plan.aspx>
- Informational presentations
 - Present to MTC April 27
 - CRTPO TCC May 5
 - CRTPO Board May 18
- MTC Approval in May 2022
- CRTPO Board endorsement in June 2022
- Future FTA 5310 Calls for Projects would be impacted by the plan

24

Questions?

- CATS: Arlanda Rouse,
arlanda.rouse@charlottenc.gov
- CRTPO: Jerrel Leonard
jerrel.leonard@charlottenc.gov
- VHB Study Team: Lyuba Zuyeva
lzuyeva@vhb.com



**METROPOLITAN TRANSIT COMMISSION
INFORMATION ITEM
ACTION ITEM**

SUBJECT: Envision My Ride: Bus Priority Study

DATE: May 25, 2022

1.0 PURPOSE/SCOPE: CATS provided information on the ongoing Envision My Ride Bus Priority Study during the April 2022 meeting and is now seeking MTC plan adoption during the May 2022 session. The presentation will provide a summary of the study recommendations which include the future high frequency bus network, priority bus treatment types, mobility hub locations, a bus stop and ADA improvement plan, policy updates to improve the bus stop amenity rollout process, and microtransit zones to support first / last mile connections.

BACKGROUND/JUSTIFICATION: As a continuation of the Envision My Ride (EMR) effort, CATS began a Bus Priority study in 2021. This study will develop speed and reliability recommendations for the proposed EMR high frequency network. This analysis will include an evaluation of the following: queue jumpers, signal priority/preemption, dedicated bus lanes and related bus priority treatments. Additional deliverables will include proposed system wide bus stop amenity improvements, mobility hub locations, first / last mile solutions, and recommendations to improve the customer experience.

2.0 PROCUREMENT BACKGROUND: N/A

3.0 POLICY IMPACT: N/A

4.0 ECONOMIC IMPACT: N/A

5.0 ALTERNATIVES: N/A

6.0 RECOMMENDATIONS:

- Adoption of the Envision My Ride Network which includes a future high-frequency bus network, new bus route connections, mobility hub locations, and recommended microtransit zones (Attachment A)
- Adoption of six focus corridors to include a higher level of priority treatment investments including transit signal priority (TSP), queue jump locations, and bus stop adjustments (Attachment B)
- Adoption of the bus stop improvement plan which includes ADA design improvements, recommended mobility hub locations, enhanced bus stop amenities, and a new amenity rollout strategy
- Advance a microtransit strategy that includes on-demand services within recommended zones as well as first/last mile strategies to the LYNX Blue Line
- Apply the strategies and amenity improvement recommendations identified in the Envision MY Ride effort to develop a formal bus capital program

7.0 ATTACHMENT(S):

A: Future Network Recommendations Map

B: Focus Corridor Recommendations Map

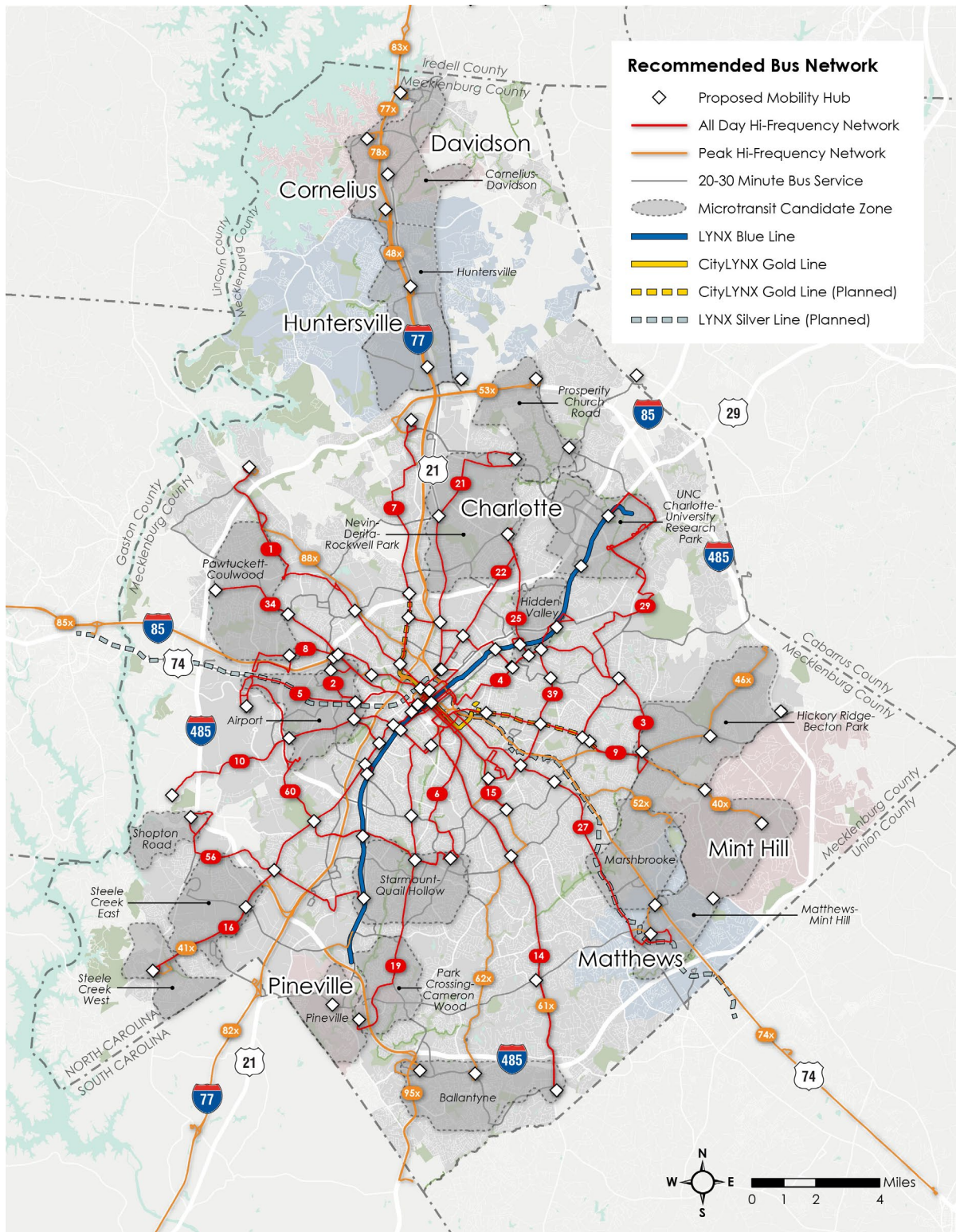
SUBMITTED AND RECOMMENDED BY:

A handwritten signature in black ink, appearing to read "John M. Lewis, Jr.", written in a cursive style.

John M. Lewis, Jr.
Chief Executive Officer, Charlotte Area Transit System
Director of Public Transit, City of Charlotte

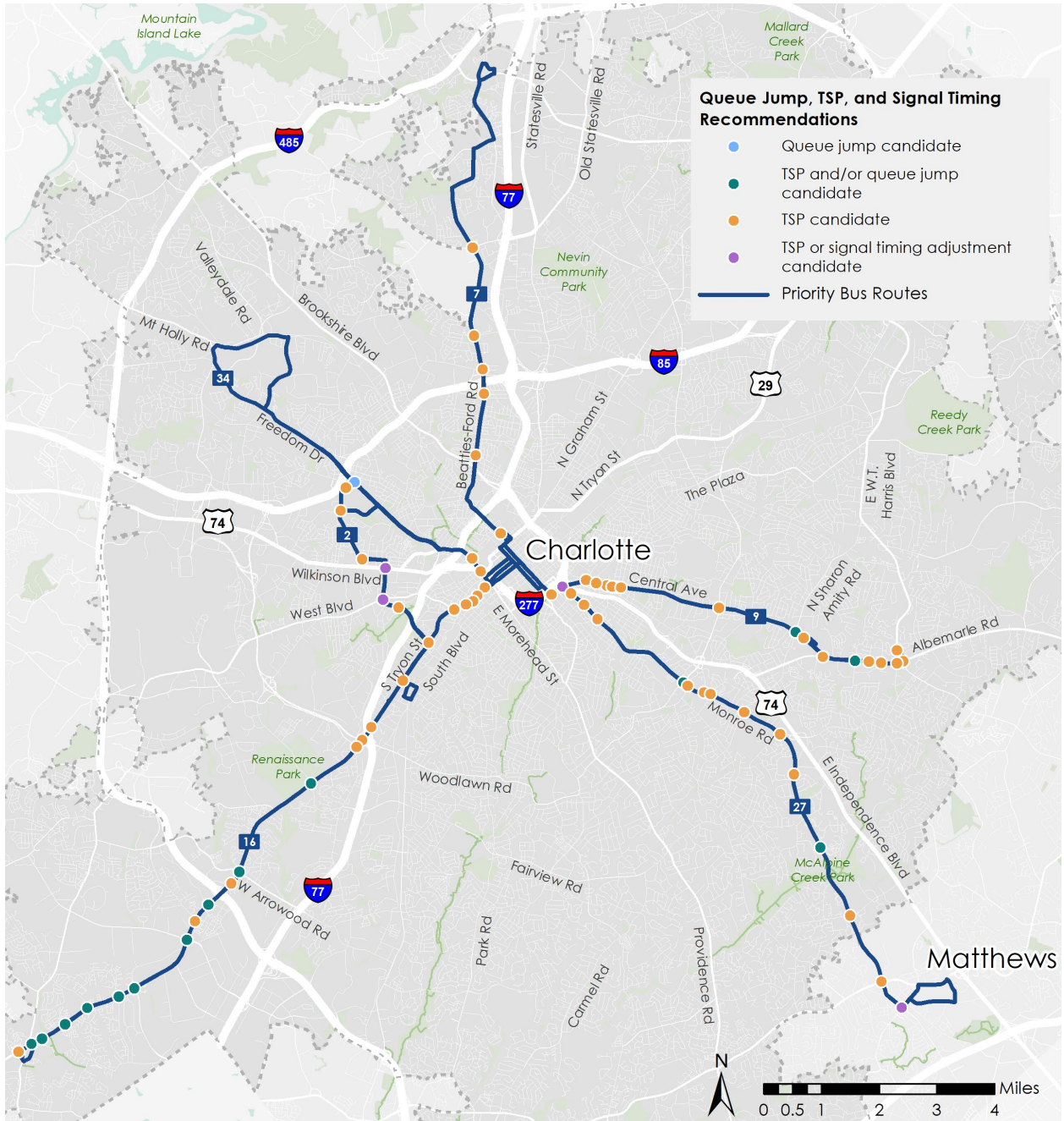
Attachment A:

Future Network Recommendations Map



Attachment B:

Focus Corridor Recommendations Map



RESOLUTION
No. 2022-03

ADOPTION OF ENVISION MY RIDE STAFF RECOMMENDATIONS

A motion was made by **Mayor Vi Lyles (City of Charlotte)** and seconded by **Mayor Rusty Knox (Town of Davidson)** for the adoption of the following resolution and upon being put to a vote was duly adopted.

WHEREAS the Metropolitan Transit Commission was formed by Mecklenburg County and its municipalities located herein to review and recommend public transportation plans as well as to guide the planning, financing and implementation of an accountable transit system, and

WHEREAS in 2016 CATS began work on Envision My Ride to redesign the existing bus network to improve route structure, frequency, and connectivity

WHEREAS in March 2018 CATS implemented the first stage of Envision My Ride to integrate bus services with the LYNX Blue Line Extension in northeast Charlotte

WHEREAS in October 2018 CATS implemented the second stage of Envision My Ride to improve route structure throughout the network and implement more bus crosstown connections

WHEREAS in February 2020 CATS improved weekday route frequency on several core routes and implemented the MetroRapid BRT service to the North Mecklenburg communities

WHEREAS in January 2021 CATS began a Bus Priority Study to continue the work of Envision My Ride and develop recommendations to improve speed and reliability as well as develop a capital improvement plan strategy that focuses on bus network improvements, bus stops, mobility hubs, and microtransit services.

NOW, THEREFORE, be it resolved by the Metropolitan Transit Commission that:

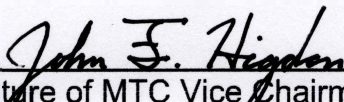
- 1) The staff recommendations for the Envision My Ride Bus System Plan as detailed in Attachment A and Attachment B are hereby adopted. The plan includes the following:
 - a) A future high frequency network with 15-minute or better service
 - b) A priority network consisting of six focus corridors to include a higher level of priority treatment recommendations
 - c) New network and crosstown connections to key hubs and destinations
 - d) Mobility hub locations to facilitate transfers between high frequency bus routes and other modes of travel
 - e) Microtransit zones to support on demand transit services as well as first/last mile connectivity to frequent transit routes and key destinations
- 2) CATS establish a microtransit strategy that includes on-demand services within recommended zones along with first/last mile connections to the LYNX Blue Line

- 3) CATS apply the strategies and amenity improvement recommendations as identified in the Envision My Ride Bus Priority Study to develop a bus capital program
- 4) This resolution shall take effect immediately upon its adoption.

Attachment A–Envision My Ride: Bus Priority Study, Future Network Recommendations Map

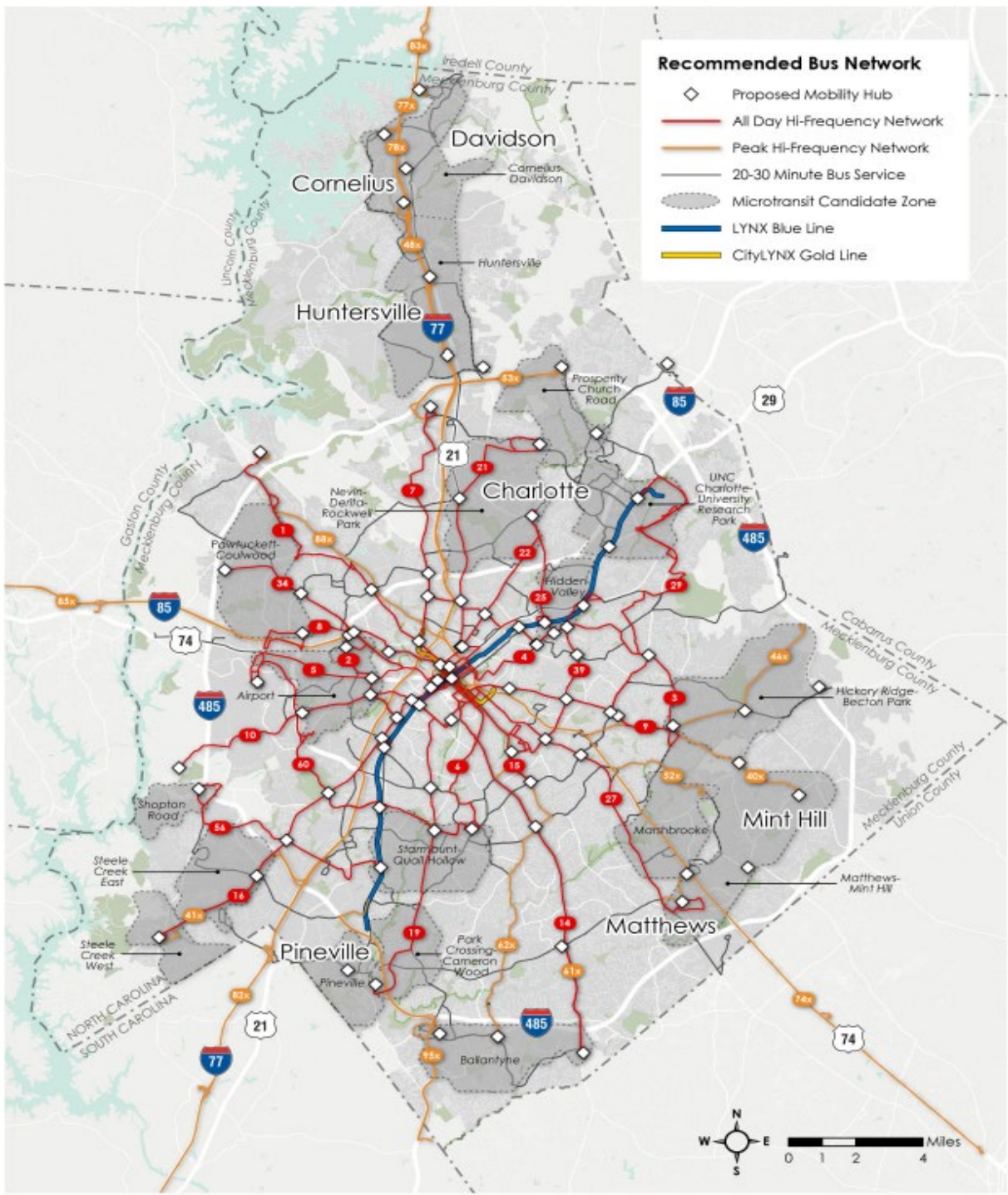
Attachment B-Focus Corridor Recommendations Map

I, **Mayor John Higdon (Town of Matthews)**, MTC Vice Chairman do hereby certify that the above is a true and correct copy of an excerpt from the minutes of a meeting of the Metropolitan Transit Commission, duly held on May 25, 2022.

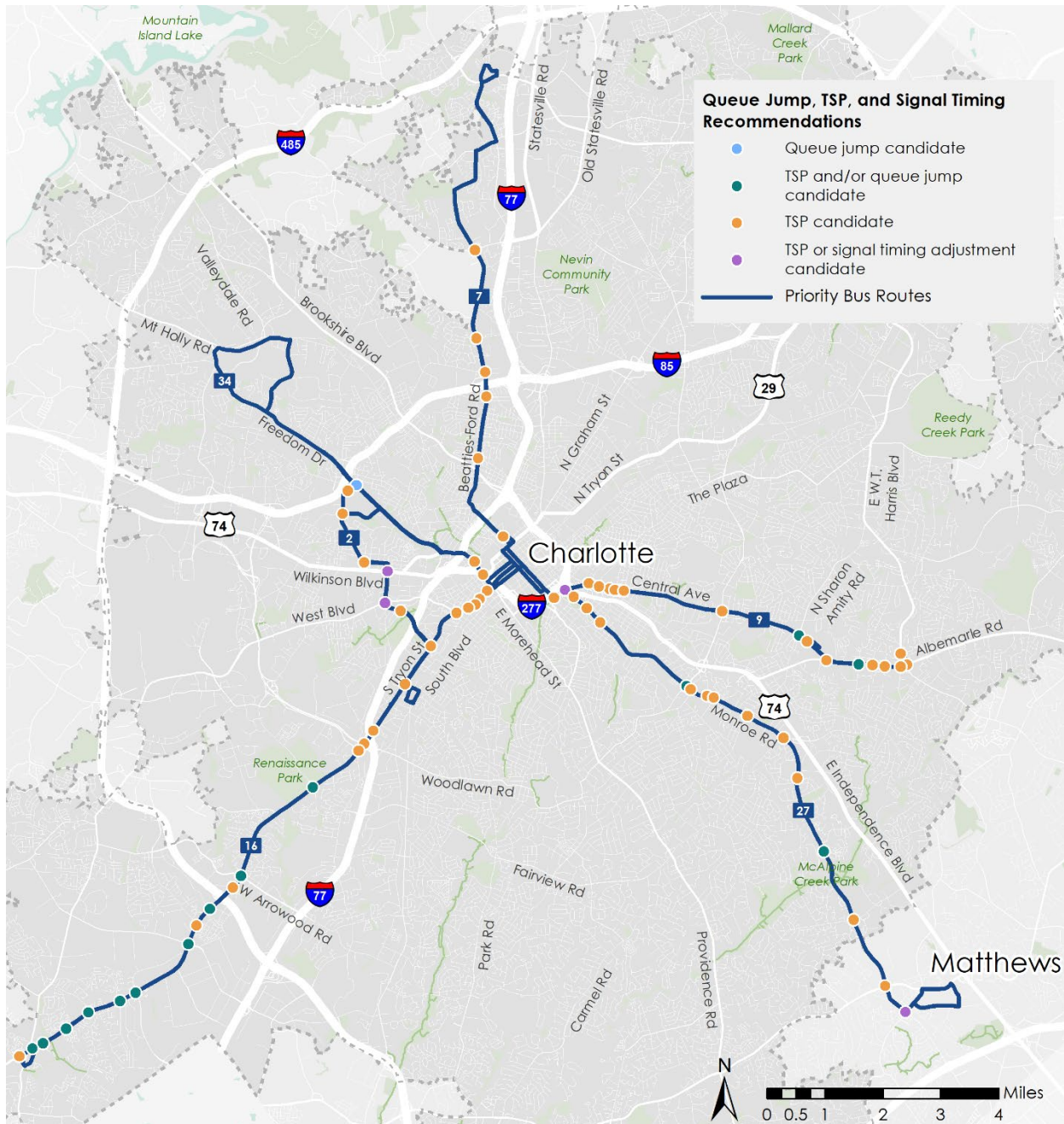


Signature of MTC Vice Chairman

Attachment A
Envision My Ride: Bus Priority Study
Future Network Recommendations Map



Attachment B Focus Corridor Recommendations Map





1

ENVISION MY RIDE: BUS PRIORITY STUDY

Building a Better Bus Network

Envision My Ride developed the plan:

Create more frequent bus service

Create more direct bus service

Develop more crosstown connections

Greater connectivity between different routes

The Bus Priority Study is recommending capital improvements that:

Makes bus trips faster, more reliable, and more enjoyable.

Improves connections to other transit lines, bikeshare, park & rides, and other mobility options

Improves the bus stop system-wide.

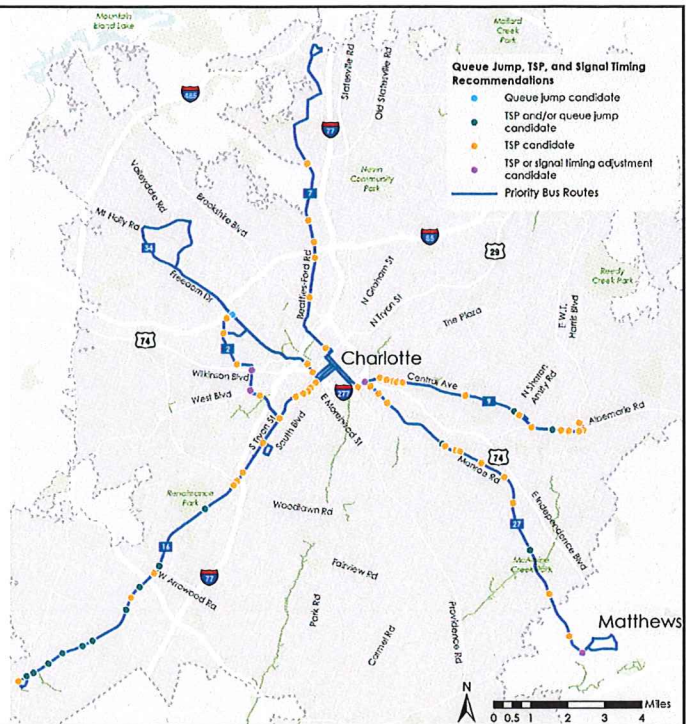
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Focus Corridors

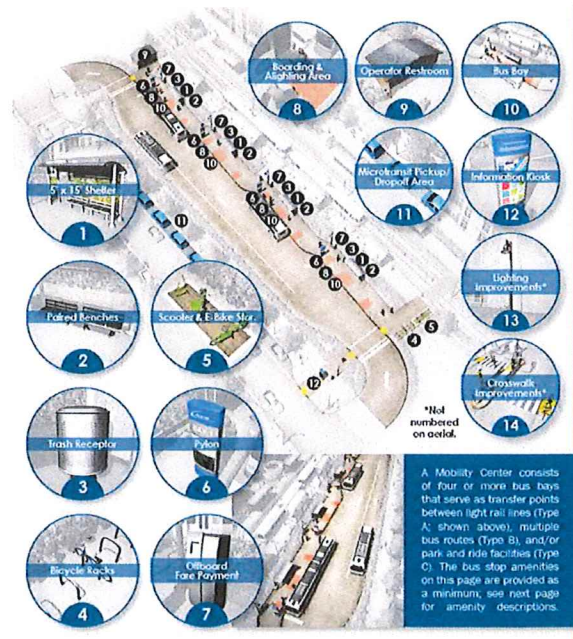
- Evaluated future high-frequency network to determine 6 focus corridors
- Evaluation metrics included:
 - Current bus delay
 - Population & employment density
 - Equity
 - Charlotte 2040 Comp Plan goals
- Selected corridors include the following bus routes:
 - **Route 9: Central/Albemarle**
 - **Route 7: Beatties Ford**
 - **Route 16: S. Tryon**
 - **Route 27: Monroe**
 - **Route 34: Freedom**
 - **Route 2: Ashley/Scaleybark**
- Recommendations will be used to develop a capital program that can be applied along additional corridors



5

BUS STOP IMPROVEMENTS

- **Standard Bus Stop Improvements:**
 - Upgraded designs to improve accessibility
 - Enhanced amenities
- **Mobility Hubs:**
 - Designed to connect users to transit and other forms of mobility (i.e. bike, microtransit, rideshare)



*Not
numbered
on aerial.

A Mobility Center consists of four or more bus bays that serve as transfer points between light rail lines (Type A; shown above), multiple bus routes (Type B), and/or park and ride facilities (Type C). The bus stop amenities on this page are provided as a minimum; see next page for amenity descriptions.

6

6

NEW BUS STOP AMENITY ROLLOUT STRATEGY

- New “scoring” approach to determine amenity type for each bus stop
- Higher score reflects need for additional improvements and amenities
- Scoring used to identify set of near-term bus stop improvements

Evaluation Category	Evaluation Criteria	Score Unit
Ridership	Boardings	1 per Boarding
	On Bus Priority Corridor	Yes/No
Wait Time	Transfers	Yes/No
	Wait Time (Not on BPC)	Yes/No
Rider Profile	Equity Populations	Greater than 50%
	Reliant Populations	Greater than Average
Activity Generator	Human Service Facility	Yes/No
	Activity Destinations	Yes/No
	Major Employer	Yes/No
	Operator Relief	Yes/No



7

7

Proposed Amenities by Stop Type

Stop Amenity	Standard Bus Stop (Level 0)			Mobility Hubs		
	Type A	Type B	Type C	Enhance Stop Pair (Level 1)	Mobility Plaza (Level 2)	Mobility Center (Level 3, Types A, B, C)
5'X10' Or 5'X15' Shelter						
Bench						
Simme Seats						
Trash Receptor						
Bicycle Rack						
Scooter & E-Bike Storage						
Bus Stop Marker: Signpost With Sign						
Bus Stop Marker: Pylon						
Sidewalk Wayfinding						
Boarding & Alighting Area						
Crosswalk Improvements						
Operator Restroom						
Bus & Sidewalk Bulb						
Bus Bay						
Offboard Fare Payment						
Public Wifi						
Microtransit Pickup/Dropoff Area						
Lighting						
Information Kiosks						

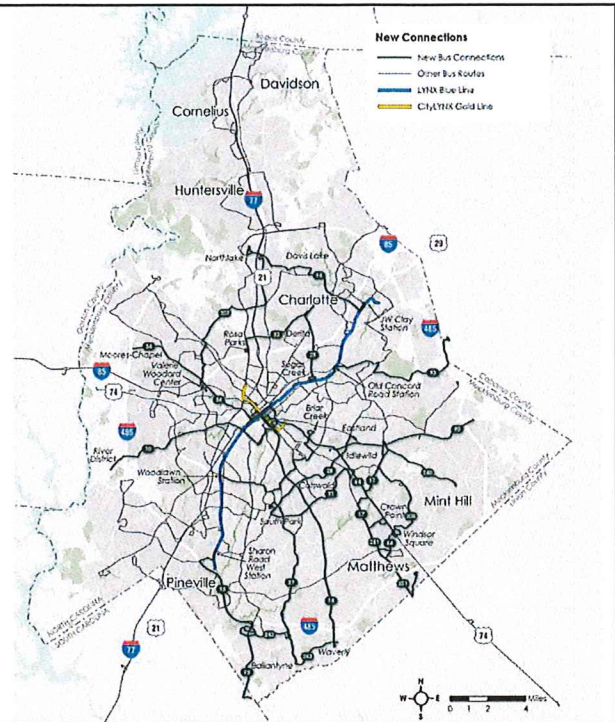


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8

New Connections

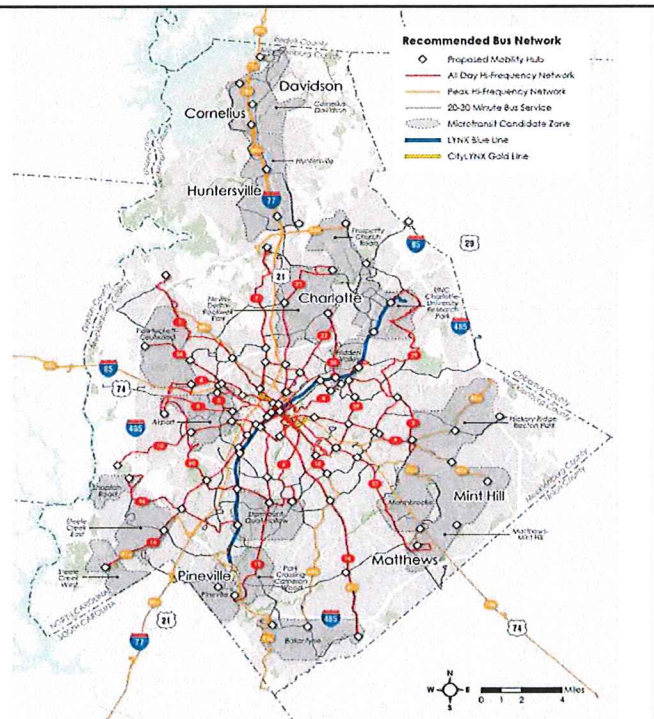
- New bus connections including:
 - WT Harris between JW Clay & Northlake
 - Albemarle Rd to I-485
 - Sugar Creek Rd to Derita
 - Waverly to Ballantyne
 - Ballantyne to LYNX Sharon Rd West Station
 - Mint Hill – All day local route along Lawyers Rd
- Increased crosstown coverage
- On-demand and micro-transit zones



9

Recommended Microtransit Zones

- Candidate Zones feed into High Priority Network and future Mobility Hubs
- Opportunities for zones to serve as first mile/last mile connections to LYNX Blue Line
- Future study to develop operational strategy



10

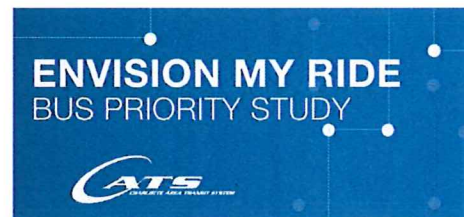
3 ROUNDS OF OUTREACH: 5,500 PEOPLE ENGAGED



11

• Board & Stakeholder Presentations

- **Mint Hill (Stakeholder Outreach)**
 - March 2022
- **Huntersville Town Board**
 - May 2nd and May 11th, 2022
- **Pineville Town Council**
 - May 10th, 2022
- **Cornelius Town Board**
 - May 16th, 2022
- **City of Charlotte Transportation & Planning Committee**
 - May 9th, 2022
- **Matthews Board of Commissioners**
 - May 23rd, 2022
- **City of Charlotte Planning Commission**
 - June 6th, 2022
- **Davidson Board of Commissioners**
 - June 14th, 2022



12

ACTION ITEMS

- 1) The staff recommendations for the Envision My Ride Bus System Plan are hereby adopted. The plan includes the following:
 - a) A future high frequency network with 15-minute or better service
 - b) A priority network consisting of six focus corridors to include a higher level of priority treatment recommendations
 - c) New network and crosstown connections to key hubs and destinations
 - d) Mobility hub locations to facilitate transfers between high frequency bus routes and other modes of travel
 - e) Microtransit zones to support on demand transit services as well as first/last mile connectivity to frequent transit routes and key destinations
- 2) CATS establish a microtransit strategy that includes on-demand services within recommended zones along with first/last mile connections to the LYNX Blue Line
- 3) CATS apply the strategies and amenity improvement recommendations as identified in the Envision My Ride Bus Priority Study to develop a bus capital program
- 4) This resolution shall take effect immediately upon its adoption.



13

13

Q&A



14

14

**METROPOLITAN TRANSIT COMMISSION
ACTION ITEM
STAFF SUMMARY**

**SUBJECT: MetroRapid North Corridor Bus Rapid Transit
Staff Recommendations**

DATE: May 25, 2022

1.0 PURPOSE/SCOPE: The purpose of this action item is to provide a summary of the public and stakeholder engagement as well as to propose the approval of a new MetroRapid BRT park and ride in the town of Cornelius.

2.0 BACKGROUND/JUSTIFICATION:

On February 27, 2019, the MTC approved a new Locally Preferred Alternative (LPA) for the North Corridor. The LPA established a North Corridor public transportation strategy that includes near- term and medium-term Bus Rapid Transit improvements in the I-77 corridor while continuing a long-term vision confirming the Norfolk Southern O-Line as an important regional transportation corridor for future regional rapid transit/local mobility options.

In 2020, CATS implemented the short-term transit strategy by rolling-out a new Bus Rapid Transit (BRT) service called MetroRAPID. MetroRAPID service provides direct Express bus service from four park and ride locations in North Mecklenburg (Cornelius, Northlake, Huntersville-Gateway, Huntersville-Northcross) to Uptown Charlotte utilizing the I-77 Express Lanes at no additional cost to the rider. There are currently four MetroRAPID routes including: 48X Northcross, 53X Northlake, 63X Huntersville and 77X North Mecklenburg.

In May 2021, CATS held a kick-off meeting, embarking on a study to expand MetroRAPID service as part of the LPA for the North Corridor in the towns of Cornelius, Huntersville, Davidson, Mooresville and the city of Charlotte. The MetroRAPID BRT Improvement Program, utilized the data collected during the LYNX System Update to identify capital projects for North Mecklenburg and MetroRAPID service enhancements aimed at improving travel time, expanding economic opportunity, creating pathways to jobs, and building community partnerships.

The North Corridor BRT Study focused on alternative analysis planning, station location and park and ride evaluation, and implementation strategy. The initial findings were presented at the October 27, 2021 MTC meeting and the planning phase was completed at the end of November 2021. A virtual public meeting was held on November 18, 2021, and presentations were made to the Towns of Cornelius, Davidson, Mooresville, and Huntersville from November 2-5, 2021.

3.0 PROCUREMENT BACKGROUND: CATS selected the firm HDR Engineering, Inc. of the Carolinas to perform the planning and design work. HDR received a Notice to Proceed in April 2021. The Project Kick-off Meeting was held in May 2021.

4.0 POLICY IMPACT: N/A

5.0 ECONOMIC IMPACT: N/A

6.0 ALTERNATIVES: N/A

- 7.0 **RECOMMENDATION**: Adopt a new MetroRapid BRT station near Westmoreland and I-77 as part of the 2030 System Plan.
- 8.0 **ATTACHMENT**: CATS Resolution #2022-04 with Attachment A: MetroRapid North Corridor BRT Staff Recommendation.

SUBMITTED AND RECOMMENDED BY:



John M. Lewis, Jr.
Chief Executive Officer, Charlotte Area Transit System
Director of Public Transit, City of Charlotte

**RESOLUTION
No. 2022-04**

**ADOPTION OF METRORAPID NORTH CORRIDOR BUS RAPID TRANSIT STAFF
RECOMNDATIONS**

A motion was made by **Mayor Rusty Knox (Town of Davidson)** and seconded by **Mayor Vi Lyles (City of Charlotte)** for the adoption of the following resolution and upon being put to a vote was duly adopted.

WHEREAS the Metropolitan Transit Commission was formed by Mecklenburg County and its municipalities located herein to review and recommend long-range public transportation plans as well as to guide the planning, financing and implementation of an accountable regional transit system, and

WHEREAS the Metropolitan Transit Commission adopted its 2030 Transit Corridor System Plan in 2002, which was amended in 2006, 2016, 2019, 2021, and 2022 to develop primary transportation corridors, linking our area's key centers of economic activity, and

WHEREAS the MTC directed CATS staff in 2017 to update the 2030 Transit System Plan through an effort called the LYNX System Update and

WHEREAS beginning in July 2017 the LYNX System Update Project team worked with staff from the City of Charlotte, Town of Huntersville, Town of Cornelius, Town of Davidson, Town of Mooresville, City of Belmont, City of Gastonia, North Carolina Department of Transportation, and the residents in the study area to determine the transit technology, optimally locate station sites, and validate alignment issues in an open, fair, comprehensive, and impartial manner, and

WHEREAS the Metropolitan Transit Commission adopted the LYNX System Update recommendations at the January 27, 2019 Metropolitan Transit Commission meeting that included Bus Rapid Transit as part of the North Corridor Public Transportation Strategy, and

WHEREAS beginning in March 2021 CATS initiated a study to further define the MetroRapid North Corridor Bus Rapid Transit project and worked with staff from the Town of Huntersville, Town of Cornelius, Town of Davidson, and Town of Mooresville.

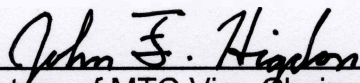
WHEREAS CATS presented to the members of the Metropolitan Transit Commission the recommendations and findings of the MetroRapid North Corridor Bus Rapid Transit study at the October 27, 2021 Metropolitan Transit Commission meeting and,

NOW, THEREFORE, be it resolved by the Metropolitan Transit Commission that:

1. The MetroRapid Bus Rapid Transit Project as adopted by the MTC in 2019 is hereby amended to include a Westmoreland Station as detailed in Attachment A.
2. This resolution shall take effect immediately upon its adoption.

Attachment A—MetroRapid North Corridor BRT Staff Recommendation

I, **Mayor John Higdon (Town of Matthews)**, MTC Vice Chairman do hereby certify that the above is a true and correct copy of an excerpt from the minutes of a meeting of the Metropolitan Transit Commission, duly held on May 25, 2022.


Signature of MTC Vice Chairman

Attachment A MetroRapid North Corridor BRT Staff Recommendation



MetroRAPID BRT North Corridor



Metropolitan Transit Commission
May 25, 2022 | 5:30 p.m.

1



LYNX System Update – North Corridor Recommendations

Short Term

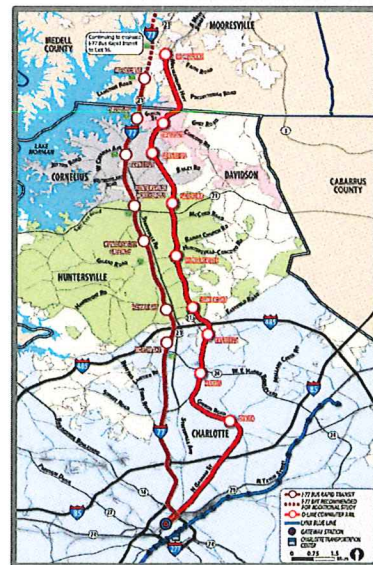
- Village Rider and Express bus stop amenity improvements
- Continued express lane bus service improvements

Medium Term

- Implementation of an I-77 Bus Rapid Transit service from Charlotte Gateway Station to Mooresville to include:
 - All day service including nights and weekends
 - Additional park and rides and express lane direct connects
 - Integrated BRT stations into mixed use developments that also incorporate emerging mobility technologies for first/last mile.

Long Term

- Continue dialogue with Norfolk Southern on use of the "O" Line corridor for a Rapid Transit project



www.ridetransit.org | 704-336-7433 | CATS

2



New MetroRapid BRT Express Service

Implemented February 2020



www.ridetransit.org | 704-336-7433 | 

3



What is BRT?



Freeway-based BRT



Arterial-based BRT

BRT = BUS RAPID TRANSIT


A bus-based transit mode with greater reliability and faster travel time than a conventional bus route.

BRT aims to combine the:

capacity and speed of rail
+
flexibility of bus service

www.ridetransit.org | 704-336-7433 | 

4



Project Overview

New or Expanded Park and Rides/Stations:

- Langtree (Mooresville)
- Davidson
- Cornelius
- Westmoreland (Cornelius)
- Huntersville Northcross
- Huntersville Gateway
- Hambright
- Northlake

New Direct Connects / Access Improvements:

- Catawba (bus access to station)
- Huntersville Northcross (bus direct connect)
- Huntersville Gateway (bus direct connect)
- Hucks Rd at Northlake (direct connect)

Use of Existing Direct Connects:

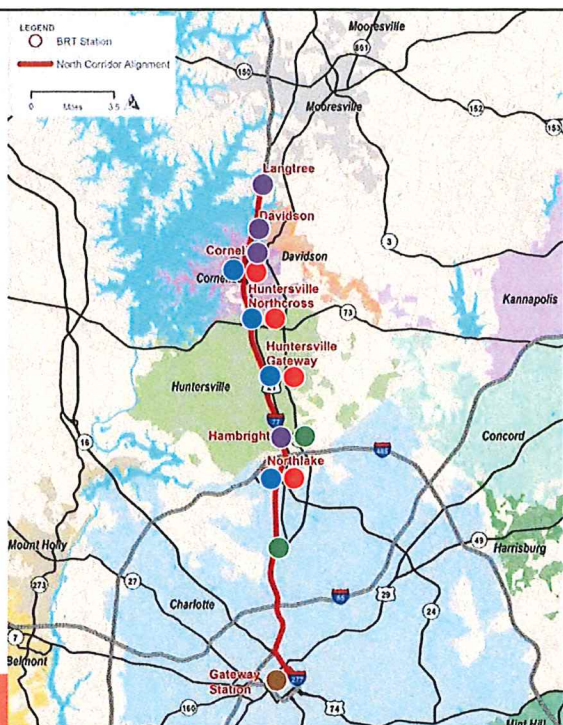
- Hambright
- Lakeview

On-Street Transit Prioritization/Amenities:


- Center City Charlotte

First/Last Mile Opportunities:

- On demand service zones
- Emerging technologies

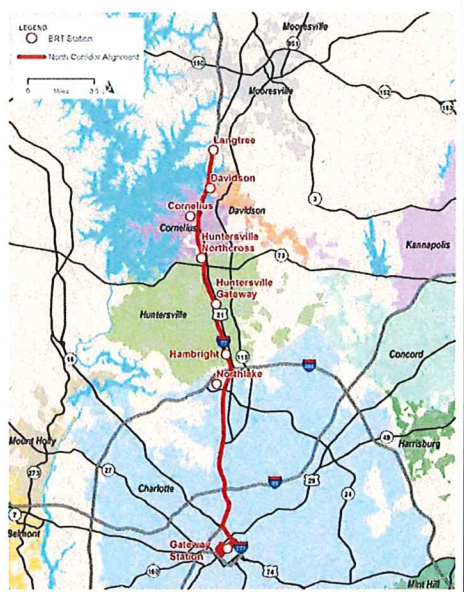



5



Analysis and Engagement Overview

- Travel Market Analysis
- Park and Ride Sizing Methodology
- Review Existing and Future Land Use Plans and Roadway Projects
- Develop Site Evaluation Criteria
- Stakeholder Outreach and Public Engagement
- Technical Advisory Team Meetings with Towns, DOTs, CRTPO, and Parks & Recreation to review designs and preferred options
- Project concepts presented to public in November 2021
- Final Technical Advisory Meetings:
 - Charlotte November 2, 2021
 - Cornelius November 3, 2021
 - Davidson November 5, 2021
 - Huntersville November 2, 2021
 - Mooresville November 4, 2021



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Public Meeting Summary

November 18, 2021

via YouTube Live

Public Q&A Topic Overview:

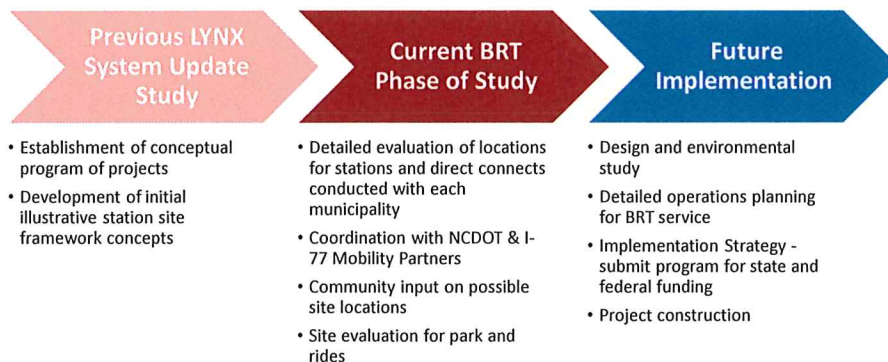
- Station amenities
 - Covered pedestrian access and station areas
 - Electric bicycles
- Bus technologies
 - Articulated buses
 - Planning for fleet electrification
- Service
 - Pick up around Charlotte Transportation Center
 - Plans for MetroRapid service to Gastonia, Rock Hill and Monroe
 - Integration with current bus operations and local services for First/Last Mile connections and Special Transportation Services
- Equity:
 - *"How will the needs of people of color and low-income residents, as well as physically challenged individuals, be served?"*
 - ADA accessibility, active transportation

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Implementation Strategy



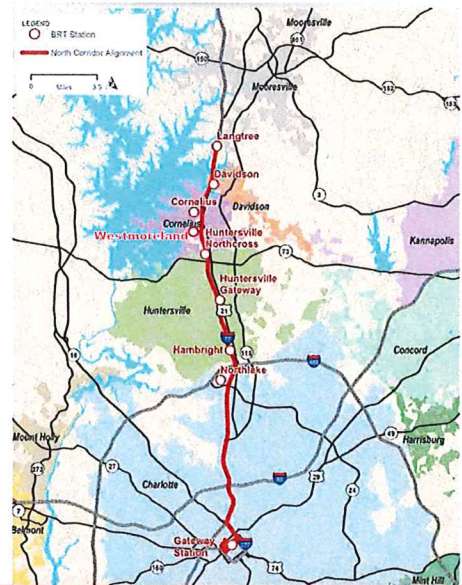
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Action

- Through engagement with Cornelius Town Staff and Leadership a new BRT park and ride was proposed at Westmoreland and I-77
- CATS Staff recommends to add a MetroRapid BRT Station with a Park and Ride at Westmoreland and I-77
- CATS Request the MTC take Action to add the new stop to the 2030 Transit System Map



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Metropolitan Transit Commission
Charlotte Area Transit System Ridership Report
Apr-22

Mode / Service	Apr-22	Apr-21	Percent Increase/Decrease	YTD FY 2022	YTD FY 2021	Percent Increase/Decrease	Avg Daily Ridership per Month		
							WeekDay	Saturday	Sunday
Local									
BOD Local	432,637	459,175	-5.8 %	4,587,125	4,644,415	-1.2 %	17,185	11,050	6,737
Subtotal	432,637	459,175	-5.8 %	4,587,125	4,644,415	-1.2 %	17,185	11,050	6,737
Local Express									
Harrisburg Road Express	899	316	184.5 %	5,858	2,909	101.4 %	45	-	-
Northcross Express	2,007	177	1,033.9 %	7,756	2,488	211.7 %	100	-	-
Idlewild Road Express	633	166	281.3 %	5,623	2,845	97.6 %	32	-	-
Independence Blvd Express	1,932	162	1,092.6 %	7,925	1,246	536.0 %	97	-	-
Lawyers Road Express	947	309	206.5 %	4,936	3,016	63.7 %	47	-	-
Northlake Express	1,561	281	455.5 %	6,156	2,227	176.4 %	78	-	-
North Mecklenburg Express	3,115	268	1,062.3 %	14,273	2,219	543.2 %	156	-	-
Huntersville Express	2,563	460	457.2 %	12,434	3,616	243.9 %	128	-	-
Rea Road Express	1,216	246	394.3 %	6,509	2,799	132.5 %	61	-	-
Huntersville Greenhouse Express	125	176	-29.0 %	1,358	1,293	5.0 %	6	-	-
Subtotal	14,998	2,561	485.6 %	72,828	24,658	195.4 %	750	-	
Regional Express									
Gastonia Express	1,138	417	172.9 %	7,029	5,076	38.5 %	57	-	-
Rock Hill Express	921	263	250.2 %	4,889	2,488	96.5 %	46	-	-
Union County Express	719	188	282.4 %	3,828	2,236	71.2 %	36	-	-
Subtotal	2,778	868	220.0 %	15,746	9,800	60.7 %	139	-	
Community Circulator									
Neighborhood Shuttles	13,110	13,410	-2.2 %	124,155	146,637	-15.3 %	546	304	136
Eastland Neighborhood Shuttle	7,778	7,892	-1.4 %	72,916	83,948	-13.1 %	279	271	166
Pineville-Matthews Road	1,473	1,413	4.2 %	12,698	14,292	-11.2 %	60	56	-
Village Rider	3,342	3,420	-2.3 %	32,393	35,811	-9.5 %	136	79	45
Subtotal	25,703	26,135	-1.7 %	242,162	280,688	-13.7 %	1,021	710	347
Human Services Transportation									
Special Transportation Services	12,810	12,957	-1.1 %	133,419	115,507	15.5 %	534	198	148
DSS	548	801	-31.6 %	19,663	15,137	29.9 %	26	-	-
Subtotal	13,358	13,758	-2.9 %	153,082	130,644	17.2 %	560	198	148
Rideshare Services									
Vanpool	3,714	2,174	70.8 %	31,714	30,315	4.6 %	159	42	42
Subtotal	3,714	2,174	70.8 %	31,714	30,315	4.6 %	159	42	42
Rail									
LYNX Blue Line	409,310	217,888	87.9 %	3,101,510	2,118,363	46.4 %	14,111	13,908	10,859



Metropolitan Transit Commission
Charlotte Area Transit System Ridership Report

Apr-22

Mode / Service

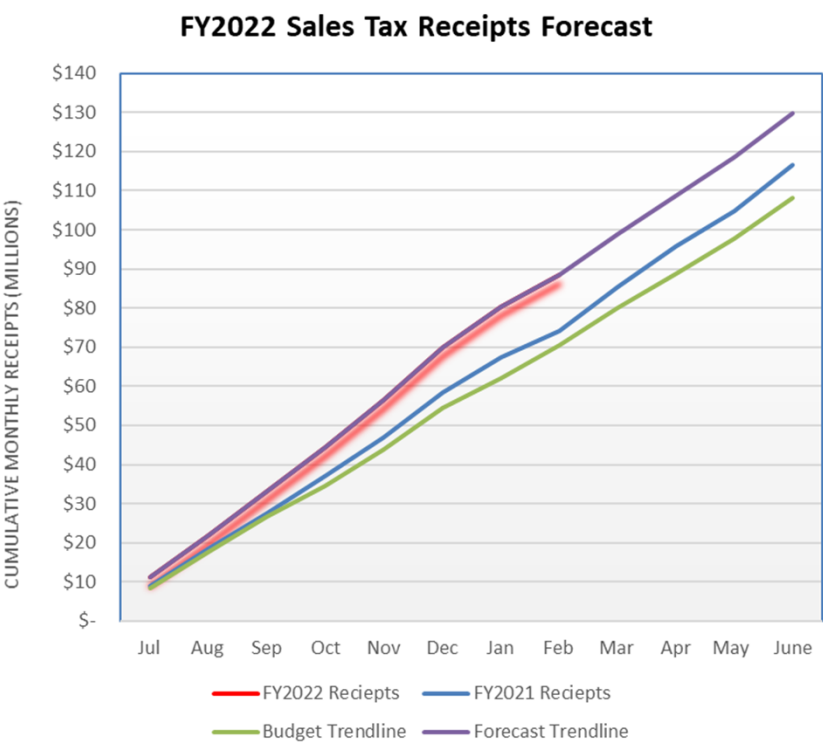
	Apr-22	Apr-21	Percent Increase/Decrease	YTD FY 2022	YTD FY 2021	Percent Increase/Decrease	Avg Daily Ridership per Month		
							WeekDay	Saturday	Sunday
CityLynx Gold Line	40,894	-	n/a	264,045	-	n/a	1,479	1,267	872
Subtotal	450,204	217,888	106.6 %	3,365,555	2,118,363	58.9 %	15,590	15,175	11,731
Total	943,392	722,559	30.6 %	8,468,212	7,238,883	17.0 %	35,404	27,175	19,005



April | CATS Sales Tax Report FY2022

February Receipts

- Sales Tax Collections and Distribution – February 2022
- The February 2022 receipts of \$8,315,108 were -\$7,159 (-.1%) below budget target for the month
 - The February 2022 receipts were -\$763,524 (-8.4%) below forecast for the month.
 - The February 2022 receipts were \$1,529,112 (22.5%) above February of 2021
- Sales Tax Budget Data
- FY2022 sales tax budget is \$108,235,200
 - The FY22 model forecasts year-end receipts of \$129,941,889 which is \$21,706,689 (20.06%) above the FY22 budget target of \$108,235,200
 - FY2021 actual sales tax was \$116,669,192
- Local Government Sales and Use Tax Distribution
- Source: North Carolina Department of Revenue Sales & Use Distribution Report for the month March 31, 2022
 - Published by NC Secretary of Revenue on 5/11/2022 with actual receipts through February 2022
 - CATS sales tax report only includes Mecklenburg County Article 43 sales tax



FY2022 Budget Sales Tax Receipts (Actuals and Forecasts)

Jurisdiction		Population	% of Total	Jul 21 Actuals	Aug 21 Actuals	Sep 21 Actuals	Oct 21 Actuals	Nov 21 Actuals	Dec 21 Actuals	Jan 22 Actuals	Feb 22 Actuals	Mar 22 Forecasts	April 22 Forecasts	May 22 Forecasts	Jun 22 Forecasts	Total
Charlotte	40.59%	863,985	40.4%	\$ 4,585,539	\$ 4,326,315	\$ 4,494,138	\$ 4,603,496	\$ 4,891,177	\$ 5,450,855	\$ 4,126,742	\$ 3,665,227	\$ 4,314,458	\$ 3,959,948	\$ -	\$ -	\$ 44,417,895
Cornelius	1.46%	32,144	1.5%	164,887	155,566	161,601	165,533	181,973	202,796	153,533	136,362	\$ 160,517	147,327	-	-	1,630,095
Davidson	0.61%	13,261	0.6%	69,208	65,295	67,828	69,479	75,073	83,663	63,340	56,256	\$ 66,221	60,780	-	-	677,143
Huntersville	2.76%	62,528	2.9%	311,511	293,901	305,301	312,730	353,982	394,487	298,659	265,258	\$ 312,244	286,588	-	-	3,134,662
Matthews	1.51%	31,071	1.5%	170,086	160,471	166,696	170,753	175,899	196,026	148,408	131,810	\$ 155,158	142,409	-	-	1,617,717
Mint Hill	1.29%	27,692	1.3%	146,293	138,023	143,377	146,866	156,769	174,708	132,268	117,476	\$ 138,285	126,922	-	-	1,420,986
Pineville	0.43%	9,533	0.4%	48,882	46,119	47,908	49,073	53,968	60,143	45,533	40,441	\$ 47,605	43,693	-	-	483,365
Meck. County	51.35%	1,099,845	51.4%	5,801,983	5,473,992	5,686,335	5,824,704	6,226,423	6,938,889	5,253,305	4,665,800	\$ 5,492,265	5,040,978	-	-	56,404,675
Total	100.00%	2,140,059	100.0%	\$ 11,298,388	\$ 10,659,682	\$ 11,073,183	\$ 11,342,634	\$ 12,115,265	\$ 13,501,568	\$ 10,221,788	\$ 9,078,632	\$ 10,686,753	\$ 9,808,646			\$ 109,786,539

FY2022 Budget Sales Tax Comparison Year over Year

Year-over-Year Comparison (FY22-FY21)	16.7%	8.9%	27.7%	14.7%	22.9%	37.8%	23.5%	5.5%	22.3%	28.5%			2.1%
FY22 Budget Target	\$ 8,479,780	\$ 9,053,661	\$ 9,001,133	\$ 8,076,718	\$ 9,319,809	\$ 10,570,984	\$ 7,547,377	\$ 8,322,267	\$ 9,596,200	\$ 8,752,853	\$ 9,128,597	\$ 10,385,820	\$ 108,235,200
% of FY22 Budget Achieved	10.7%	20.7%	31.2%	41.9%	53.3%	66.0%	75.7%	84.3%	94.3%	103.6%			103.6%

Prior Year Sales Tax Receipts: FY2018 – FY2021

Fiscal Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total
FY2021	\$ 8,921,474	\$ 9,466,946	\$ 9,245,058	\$ 9,317,741	\$ 9,964,913	\$ 11,402,907	\$ 9,134,772	\$ 6,785,996	\$ 11,253,531	\$ 10,287,447	\$ 8,942,957	\$ 11,945,450	\$ 116,669,192
FY2020	\$ 9,683,570	\$ 9,787,973	\$ 8,671,558	\$ 9,890,136	\$ 9,858,570	\$ 9,800,116	\$ 8,278,036	\$ 8,606,547	\$ 8,735,473	\$ 7,635,380	\$ 6,997,727	\$ 9,833,896	\$ 107,778,982
FY2019	\$ 7,708,503	\$ 9,621,386	\$ 9,103,726	\$ 8,067,019	\$ 9,425,129	\$ 8,906,774	\$ 8,195,787	\$ 7,918,012	\$ 10,155,891	\$ 9,880,419	\$ 9,435,500	\$ 9,117,052	\$ 107,535,197
FY2018	\$ 8,147,197	\$ 8,436,960	\$ 8,784,051	\$ 7,883,713	\$ 8,884,437	\$ 9,324,267	\$ 6,897,695	\$ 7,842,800	\$ 9,303,951	\$ 8,539,748	\$ 9,277,676	\$ 9,699,263	\$ 103,021,757

