



Concord Kannapolis Area Transit Commission

October 24th, 2024 – 8:30AM

Rider Transit Center
45 Transit Court NW, Concord, NC

Agenda

1) Call to Order & Quorum

Chair Hinnant

- Quorum & Introduction of Guests - Changes or Additions to Agenda
- Public Comments from the Floor – 3 minutes per speaker

2) Approval of the 8/22/24 Meeting Minutes

Chair Hinnant

3) CAD/AVL Software Upgrade Recommendation

Rider Staff, GMV Staff

Information: Presentation of the RFP process, firm recommended for award, and a demonstration of the product recommended for award by staff by the project manager with GMV.

Recommendation/Action: Review and consider approval of staff recommendation for award.

4) Cabarrus Microtransit Feasibility Study

Taylor Cox, Benesch

Information: Presentation of the results of the Cabarrus County Microtransit Feasibility Study conducted by NCDOT and Benesch, including viable Microtransit service options and associated implementation steps and costs.

Recommendation/Action: Informational update

5) Reports / Other Business

Rider Staff

- Transdev Staffing Update
- Triennial Review Results
- Upcoming Long Range Transit Plan Task Order
- Replacement Bus and Van Update
- Other Business
- Next Meetings – 12/19 – 8:30am at the Rider Transit Center

CONCORD KANNAPOLIS TRANSIT COMMISSION MEETING

October 24th, 2024

CONNECTING COMMUNITY



Concord Kannapolis Area Transit

CONCORD KANNAPOLIS TRANSIT COMMISSION

10/24/2024

- **Call to Order & Quorum**
 - Quorum & Introduction of Guests
 - Public comments (3 minutes)
- **Approval of the August 22nd, 2024 Meeting Minutes**

CONNECTING COMMUNITY



Concord Kannapolis Area Transit

CAD/AVL Software Upgrade Recommendation

- Contract with current CAD/AVL provider (Passio) expires in early 2025
- RFP for new CAD/AVL, APC and On-Board Wi-Fi system issued August 16th
- 5 Proposals received September 17th and evaluated by staff
- Following product demos from finalists, staff negotiated with and is recommending contract with GMV
- Cristina Rosales, GMV Business Development Manager

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Concord Kannapolis Area Transit

Concord Kannapolis Area Transit

RFP#20240816

CAD/AVL/APC and On-Board Wi-Fi System

AGENDA

- Who is GMV
- The Rider Experience
- Onboard Amenities
- Prioritizing Safety
- A Transit Technology Partner
- Q&A

A Proven ITS Provider

100+



Transit Customers

18



Years in the US Transit Industry

2,000+



Digital Signs Deployed and Under Contract

55



Full-Time Employees

3,000+



Fixed Buses Tracking



Headquarters in Los Angeles, CA



Production in Houston, TX



Implementation in New York, NY



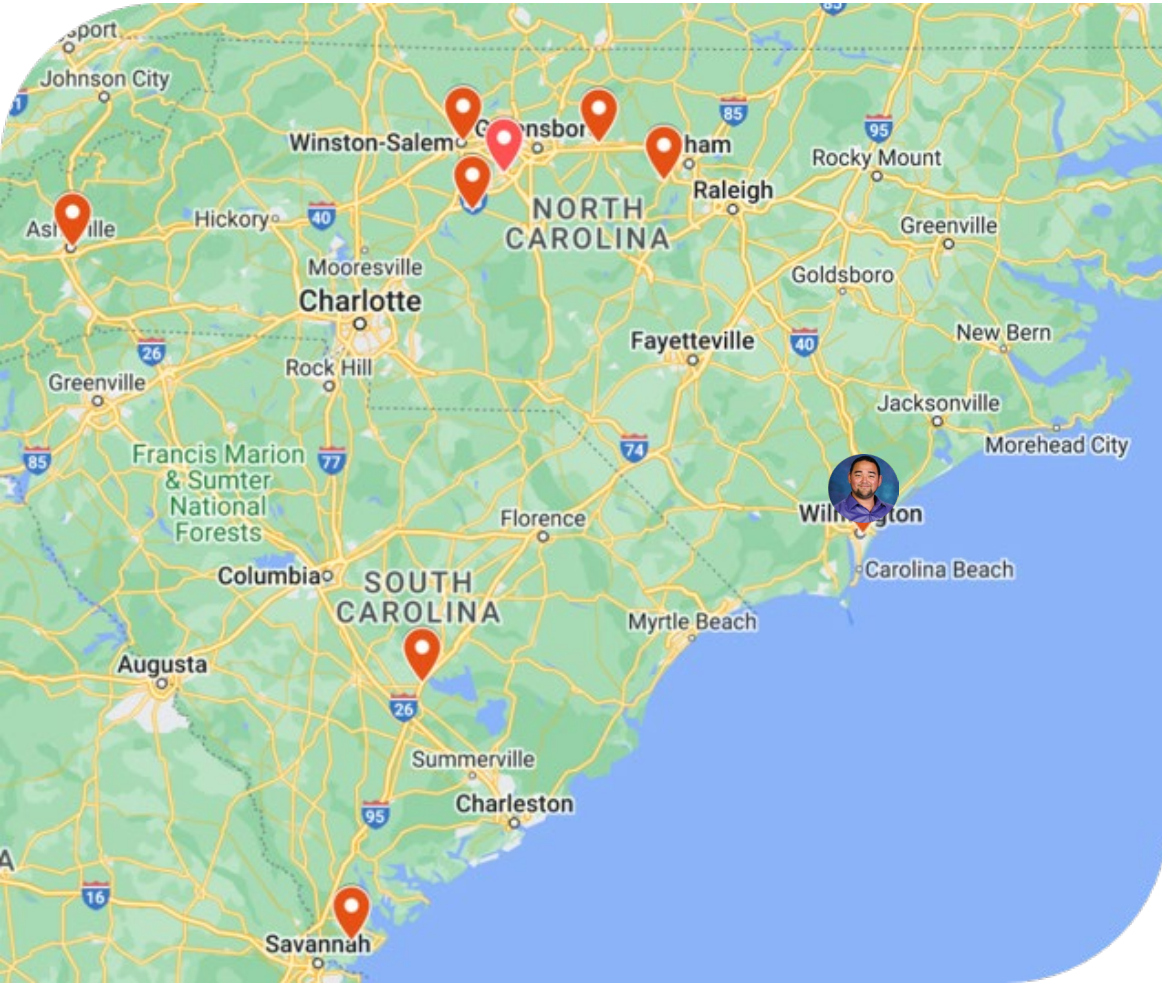
Remote staff across the country

With Clients Across the Globe



We serve 750 clients in 35 countries from 4 continents, ranging from Kuala Lumpur, Los Angeles and Sydney, Madrid and Barcelona, to Chapel Hill and Greensboro.

Who Has a History of Partnering with Tar Heels



CAD/AVL Provider

- Chapel Hill Transit – Chapel Hill, NC
- University of North Carolina, Chapel Hill
- DCTS – Davidson County, NC
- GTA – Greensboro, NC
- High Point Transit – High Point, NC
- Link Transit – Burlington, NC
- PART – Piedmont Triad Area, NC
- WSTA – Winston-Salem, NC

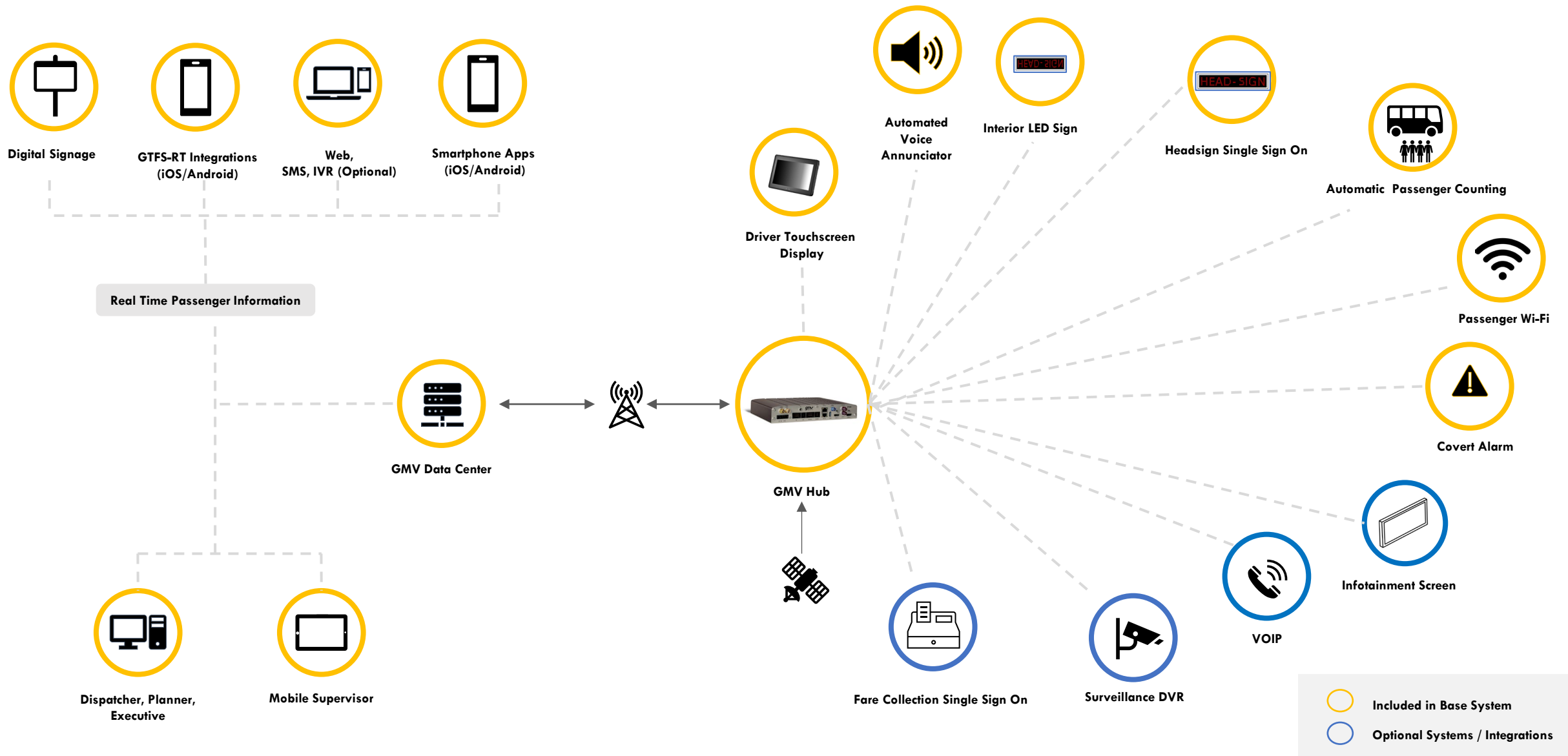


Our Approach

- Modernize Rider Transit's operations while integrating with existing hardware wherever possible
- Provide Rider Transit with accurate data, a suite of reports and a custom report builder
- Serve as a true transit technology partner to Rider Transit



Computer Aided Dispatch & Automated Vehicle Location System



Real-Time Bus Tracking - Web

Chapel Hill transit
My Chapel Hill Transit
Powered by *gmV*

Menu

Vehicle: 1201

420 Northbound

Updated: 4:15:03P
Stopped
Percent Full: 16%

Next Stops:

| | |
|---|-------------------|
| Durham Tech OCC Park and Ride | arriving in 2 min |
| Waterstone Drive at UNC Health Care - Hillsborough Campus | arriving in 2 min |
| NC 86 at Hampton Point Blvd (NB) | arriving in 6 min |

Keyboard shortcuts Map data ©2024 Google Terms Report a map error

Chapel Hill transit
My Chapel Hill Transit
Powered by *gmV*

Home Live Map Arrival Times Announcements Mobile Alerts Text Only

Menu

- Routes
- Legend
- Find Your Stop
- Show Traffic
- Hide Labels
- Switch to Hybrid Mode

Stop: Churton St at King St (Police Station)

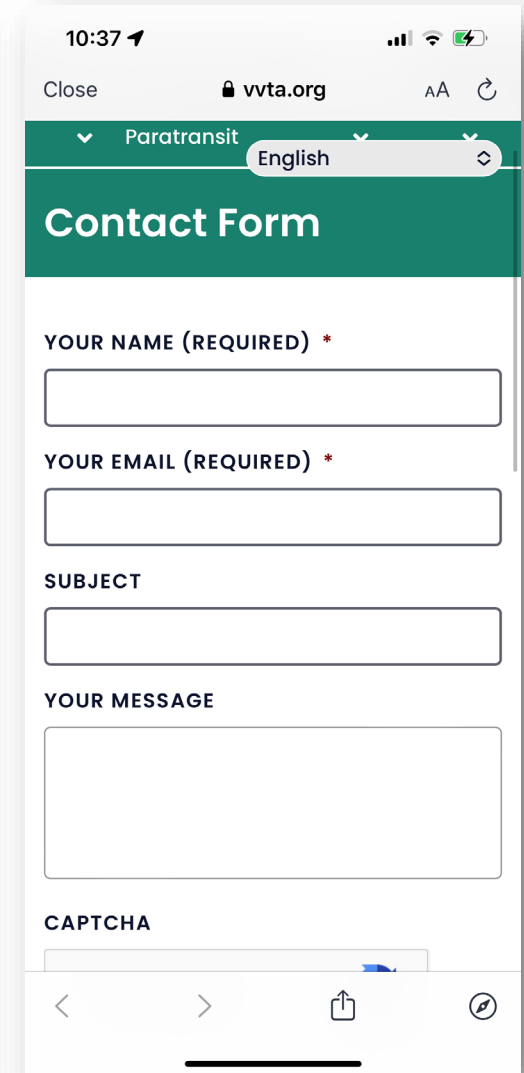
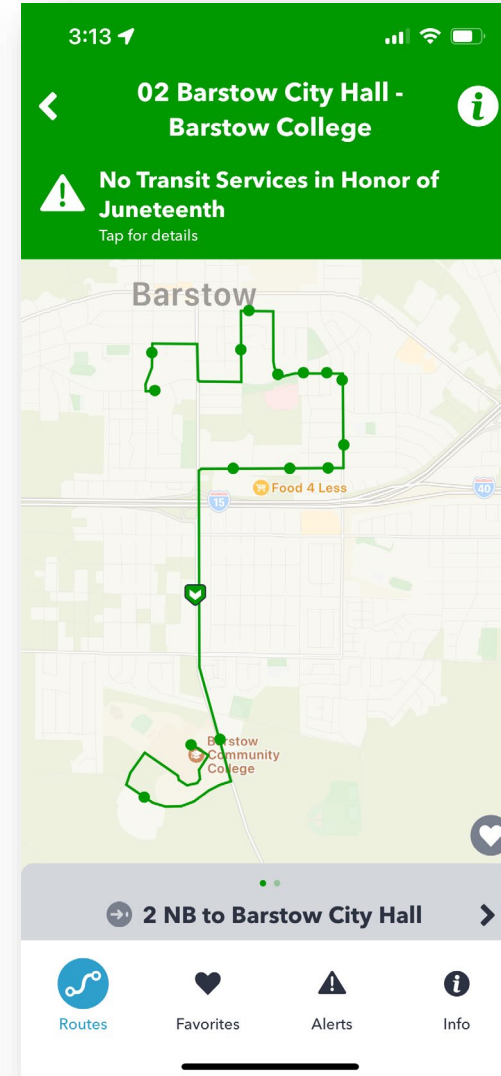
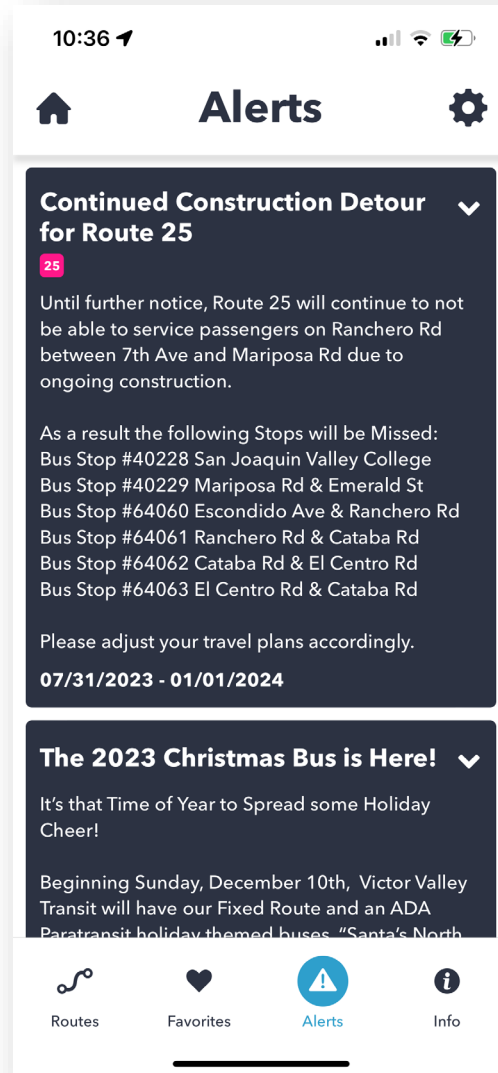
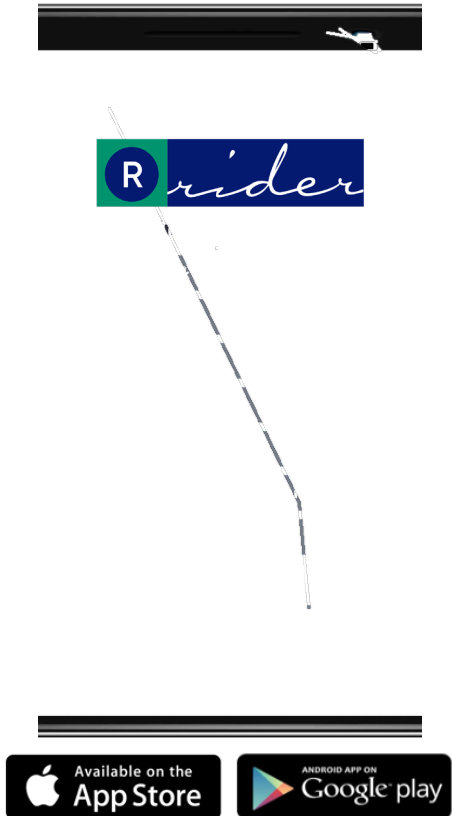
Stop #1758 [Street View](#)

Served By:

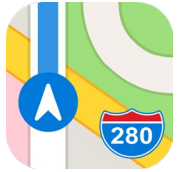
- 420 Southbound
- Bus scheduled to arrive in 89 min
- Bus scheduled to arrive in 154 min

Keyboard shortcuts Map data ©2024 Google Terms Report a map error

Real-Time Bus Tracking – Rider Transit App



Real-Time Bus Tracking – Third Party Apps



8:31

Transit Court Northwest

Memorial Gar

9 min 20 min

Leave 8:31 AM

ROYAL OAKS

Reynaldo Sandwich Burger

Rider Center

Google

LADOT

LAI Ech To W

Upcomin

2 min Delays

Mult

Stops

18 pi

Unio

Unio

3 Advisories

- Subject to delays**
Last updated: Jun 13, 2024 at 6:24 AM
The DASH Pico Union/Echo Park is subject to delays. <https://www.ladottransit.com/whatsnew/>
- Subject to delay and cancellation**
Last updated: Jun 12, 2024 at 3:13 PM
Due to staff unavailability, LADOT services are subject to delays and cancellations until further notice. <https://www.ladottransit.com/whatsnew/>
- Bus detour**
Last updated: Jun 12, 2024 at 3:13 PM
Due to construction, the DASH Pico Union/Echo Park is on detour in the Union Avenue area from May 22 until June 19, starting at 6:00 AM. <https://www.ladottransit.com/whatsnew/>

8:33

Chalfant Airport

Rider Transit Center

Country Club Dr & Cooperative Christian Ministries (Inbound)

Lake Concord & Le Phill

Church St & Palisade Dr (Inbound)

Church St & Carolina Ave (Inbound)

Google

Directions

Memorial Gar

Rider Transit C

Now

Prefer

25 min

Bus scheduled at 10:03

Alerts

- No service**
DASH Pico Union/Echo Park Missed Stops May 22, 2024 - June 19, 2024 - DASH Pico Union/Echo Park - (both directions) will be on detour and will not be serving the following stops on May 22, 2024 through June 19, 2024 starting at 6:00 AM until further notice, due to construction:

Union Ave. & Beverly Blvd. (#4032, #4070)
Union Ave. & Court St. (#4033, #4069)
Effective May 22, 2024 - Jun 20, 2024
- Significant delays (Pico Union/Echo Park)**
DASH Pico Union/Echo Park Service Delay - DASH Pico Union/Echo Park - (both directions) is experiencing a 28 minute service delay, until further notice.
Effective Jun 13, 2024 - Jun 14, 2024

5:58

N Washington St

1700 W Stat

Leave at 9:00 AM

Go at 9:03 AM

Go at 9:03 AM

TRANSIT+

OTHER OPTIONS

Walk

Bike

Uber 9 min

DASH

Pico Union/Echo Park

Southbound

Not receiving notifications

Tap to change notification settings

Union Ave / Beverly Blvd

- DASH Pico Union/Echo Park Missed Stops May 22, 2024 - June 19, 2024**
DASH Pico Union/Echo Park - (both directions) will be on detour and will not be serving the following stops on May 22, 2024 through June 19, 2024 starting at 6:00 AM until further notice, due to construction:

Union Ave. & Beverly Blvd. (#4032, #4070)
Union Ave. & Court St. (#4033, #4069)
Stop: Union Ave / Beverly Blvd (4070)
Posted on May 22, 2024 at 12:00 AM
Source: LADOT126
- DASH Pico Union/Echo Park Missed Stop: June 12, 2024 - July 1, 2024**
DASH Pico Union/Echo Park - (both directions) will be on detour and will not be serving the following stop starting on June 12, 2024 through July 1, 2024 until further notice, due to construction:

Beverly Blvd. & Bonnie Brae St. (#4071)
Stop: Beverly Blvd, Bonnie Brae St (4071)

Real-Time Bus Tracking – IVR and SMS



Estimated Arrival Times

Grey Routes indicate there are no vehicles on the route.

1. Choose Route
2. Choose Stop

Next Vehicles In

As of 2:55 PM

8 minutes - B Loop
Bus scheduled to arrive @ 15:04

38 minutes - B Loop
Bus scheduled to arrive @ 15:34

Mobile:



Mobile Maps: <http://mychtransit.org>
Visit from any mobile phone




Call: (919) 374-2287
Press 0, enter **stop 3237**



Text: "MYCHTRANSIT 3237"
to 41411

Real-Time Bus Tracking – At the Transit Center



METRO  Tuesday, April 16
2:27 pm

| | |
|---|--|
| I 041 17 m EASTBOUND to EASTWOOD TC | M 056 4 m NORTHBOUND to GREENSPOINT TC |
| J 004 7 m WESTBOUND to MISSION BEND TC | N 027 2 m HEPHERD PR |
| K 014 2 m SOUTHBOUND to HIRAM CLARKE TC | O 068 2 m O LEE CLINIC |
| L 084 21 m V BELLFORT AVE | P 084 25 m WEST TC DRVWY |



Communicating with Riders Across Channels

New Message [X]

GTFS-rt Smartphone App **SMS Text Message**

Message Text:

We are preparing for Debby and will make every effort to run normal service. In periods of heavy rain, traffic and flooding may delay buses. Thank you for your patience as we ensure your safety. Stay connected with alerts here and on our social media channels.

Send Message: **NOW** MESSAGE START DATE

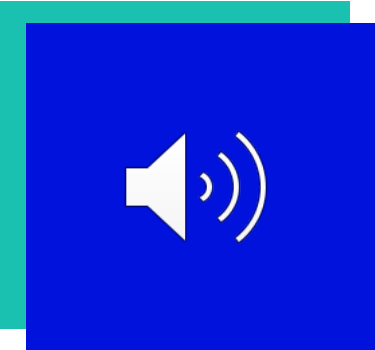
Back

Back

Back

Publish to All Channels

Amenities on the Bus – ADA Compliant Audible and Visual Announcements



Prioritizing Safety Onboard

The screenshot displays the gmV SYNC dispatch interface. At the top, navigation tabs include DISPATCH, OPS, PLAN, RIDE, MAINTENANCE, ADMIN, and Return to Track. The user is identified as SCOTT. Below the navigation, there are filter buttons for Map, List, and Assignments. A summary row shows 1 Emergency, 2 Not Signed In, 38 Off Route, 1 Early, 3 Late, and 44 Errors. A table header lists columns: Vehicle, Run, Trip, Driver, Route, Load, and Status. The 'Emergency' filter is selected. The main content area shows a card for driver JCalv... on run Ktown Al... with vehicle ID 124938, driver Scott Frazier (SF), route Ktown Loop, and a -34 load. A map shows the vehicle's location on a grid of streets, moving east at 20 mph. An emergency alert notification states 'triggered an emergency alert at 1:39 pm'. A red circle highlights a 'Manage this emergency' button, with a red arrow pointing from the notification text to it.

gmV SYNC

DISPATCH OPS PLAN RIDE MAINTENANCE ADMIN Return to Track

SCOTT

Map List Assignments

1 Emergency 2 Not Signed In 38 Off Route 1 Early 3 Late 44 Errors

Vehicle Run Trip Driver Route Load Status

Emergency

JCalv... Ktown Al... 124938 4:00 pm SF Scott Frazier Ktown Loop 0% -34

20 mph East

Emergency

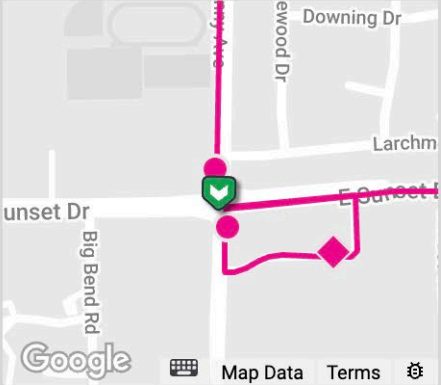
SF Scott Frazier

triggered an emergency alert at 1:39 pm

Manage this emergency

Managing Service – Cancellations and Detours

167 15A 5721554 9:15 am CS Charles S 15 In 13% 0

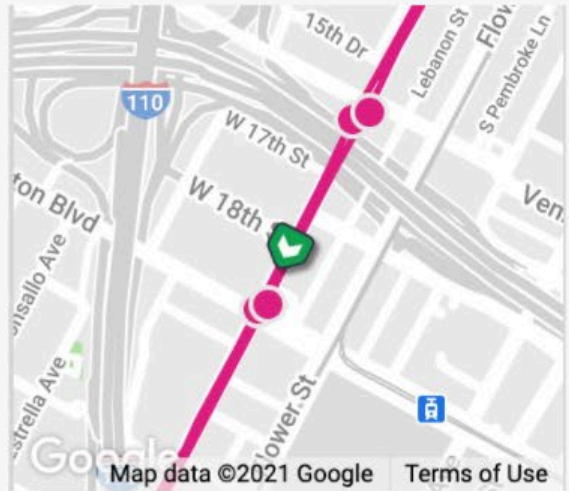


0 mph South

Cancel Service

| 6am | 7am | 8am | 9am | 10am | 11am | 12pm | 1pm | 2pm | 3pm | 4pm |
|------|------|------|------|------|------|------|-----|-----|-----|-----|
| 1... | 1... | 1... | 1... | | | | | | | |

Unselect All



Adjust Service

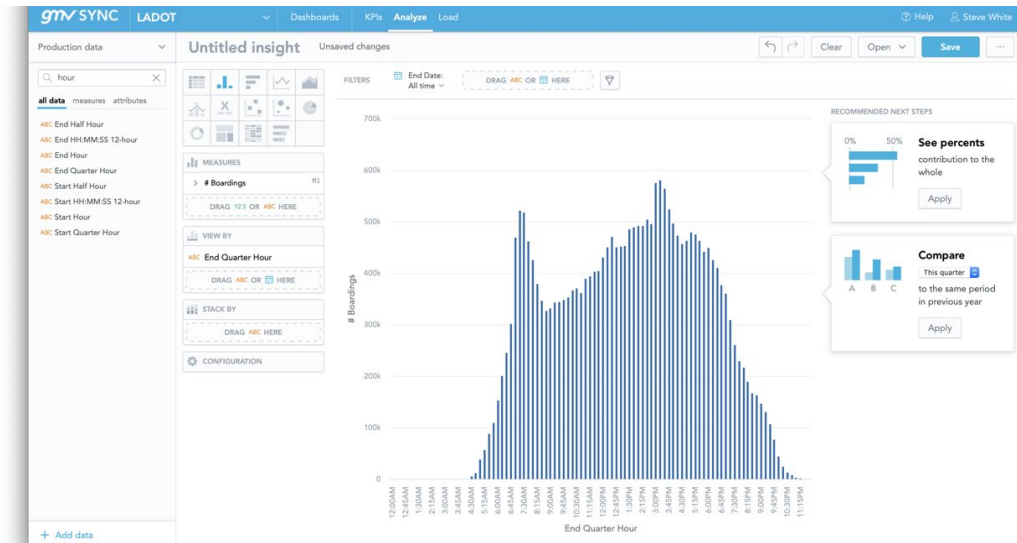
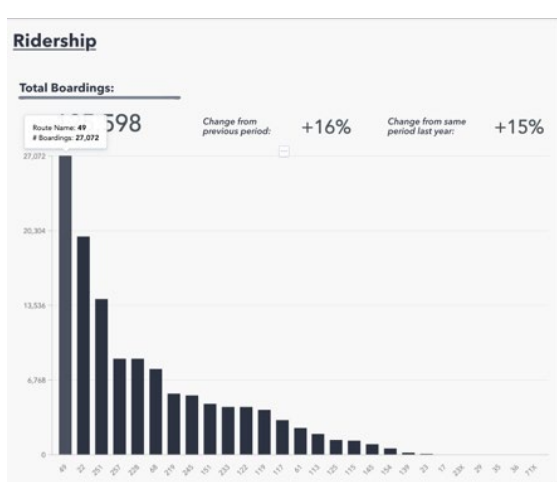
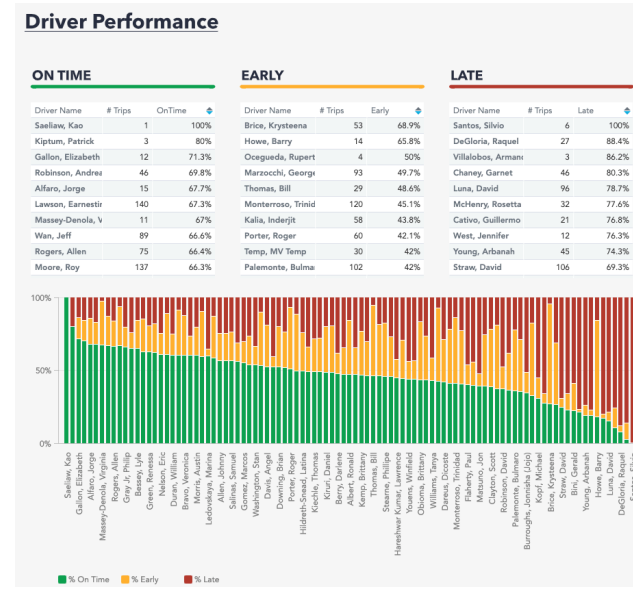
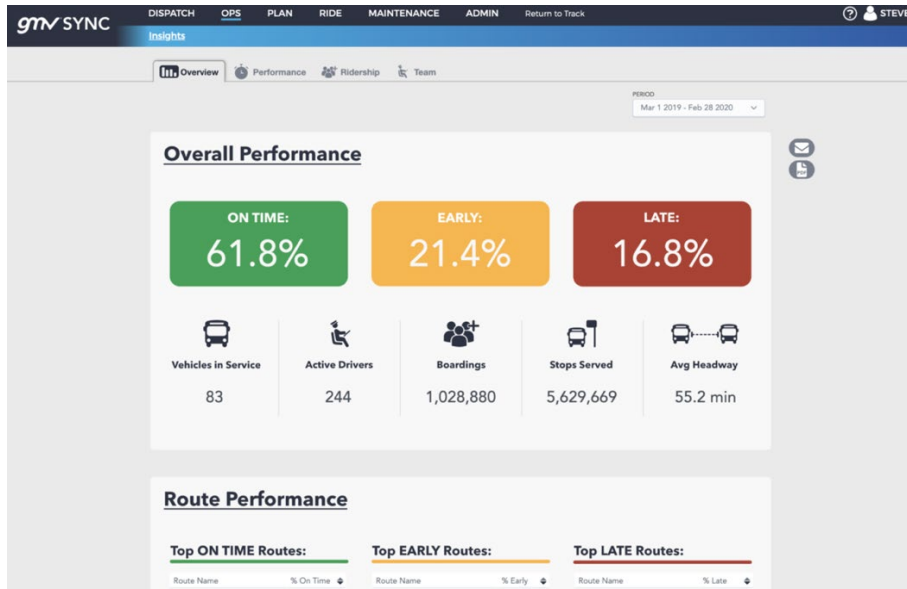
+ Add Trip × Skip Stop / Detour

Detour Pattern: Route X Construction Variation

> In effect 12:00pm - 5:00pm until 04/30/21

Send to Driver Create Alert

A Full Suite of Reports



Here to Support Rider Transit

Support for the Life of the Contract

- Unlimited, free training (implementation, refresher sessions, new staff onboarding)
- Full-time Customer Success team
- Dedicated Account Manager
- Online Knowledge Base

A Partner for Future ITS Projects

- Modify Routes and Schedules
- Technology on New Fixed Route Buses
- Bus Shelter Amenities
- Expand Intelligent Transportation Systems

Q&A

Thank you!

CAD/AVL Software Upgrade Recommendation

GMV Pricing:

- Selection based on best value to Rider Transit.
- 1st Year Total = \$249,877 (\$250,000 available in current year budget)
Years 2-3 Total = \$220,098
3-Year Contract Total = \$469,975
- **3-Year Funding Total:**
FTA grant: \$352,494
Concord: \$58,741
Kannapolis: \$58,741

CAD/AVL Software Upgrade Recommendation

Staff ask of Transit Commission:

- Recommendation of approval to Concord City Council to negotiate a three-year contract with GMV for a new CAD/AVL, APC, and Wi-Fi system for Rider Transit with a not-to-exceed price of \$469,975.

CONNECTING COMMUNITY



Concord Kannapolis Area Transit

Cabarrus Microtransit Feasibility Study

- This study was in partnership between CCTS, Rider Transit, NCDOT and Benesch
- The goal was to examine all of Cabarrus County, including population, growth and development, existing public transit service options, and determine where and how Microtransit might be a viable mode of service to improve mobility across the county
- The project was 100% funded by NCDOT
- Taylor Cox from Benesch will taking us through the study process, findings and recommendations

CONNECTING COMMUNITY



Concord Kannapolis Area Transit

Reports / Other Business

- Transdev Staffing Update
- Triennial Review Results
- Upcoming Long Range Transit Plan Task Order
- Replacement Bus and Van Update
- Other Business
- Next Meetings – 12/19 – 8:30am at the Rider Transit Center

CONNECTING COMMUNITY



Concord Kannapolis Area Transit

QUESTIONS?

CONNECTING COMMUNITY



Concord Kannapolis Area Transit



Cabarrus County Microtransit Feasibility Study

Concord Kannapolis Transit Commission

October 24, 2024



Microtransit | Overview



“A shared, technology-enabled, public transportation system with flexible routing developed based on real-time trip demand and origin-destination patterns.” (NCDOT)



Microtransit Service Opportunities



Add connections to fixed route service



Replace inefficient fixed route segments



New service in low-density areas



Provides service when other modes are unavailable

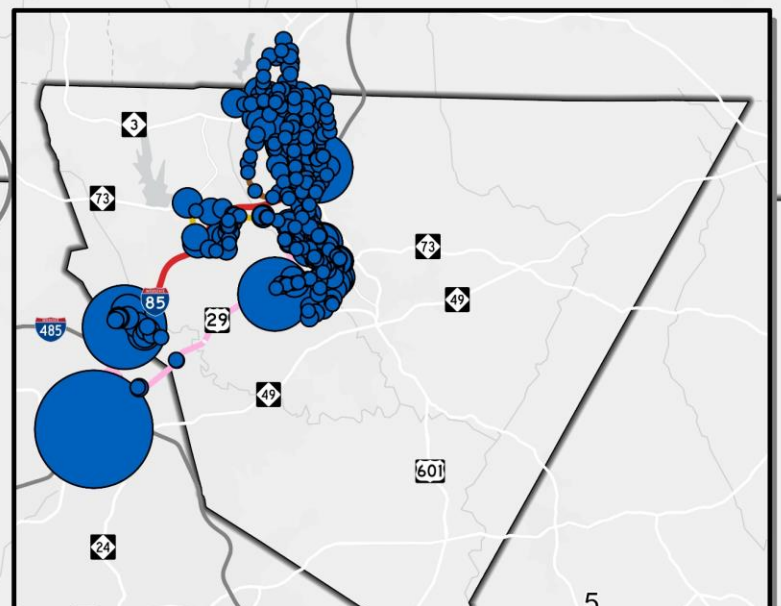
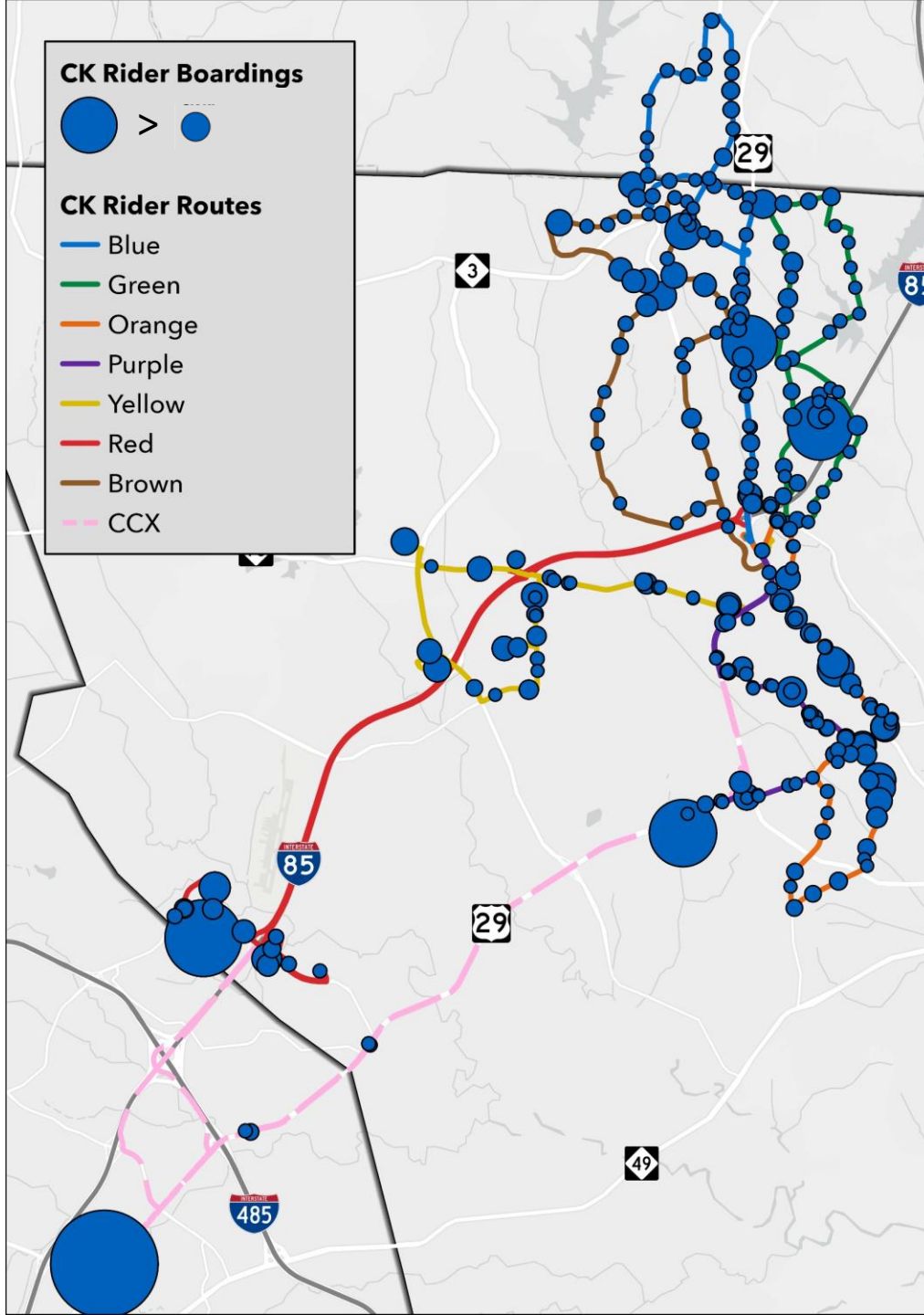
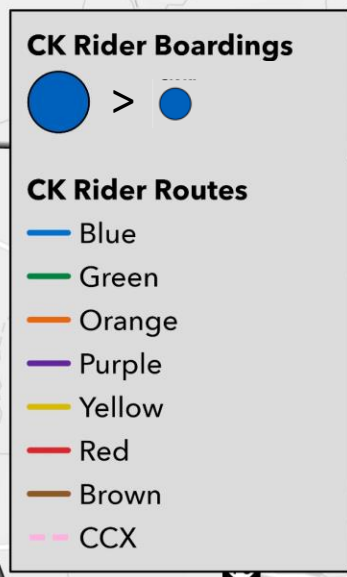


Convenience beyond demand response

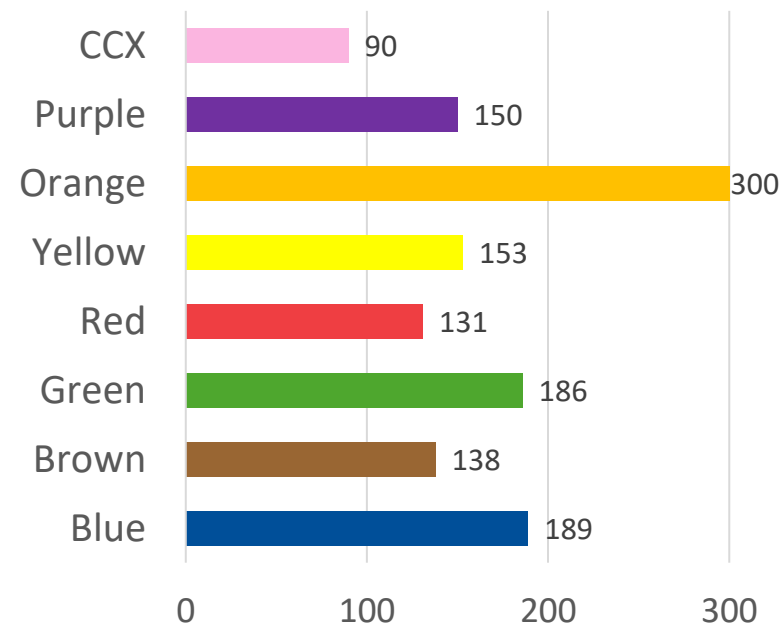


Data Analysis

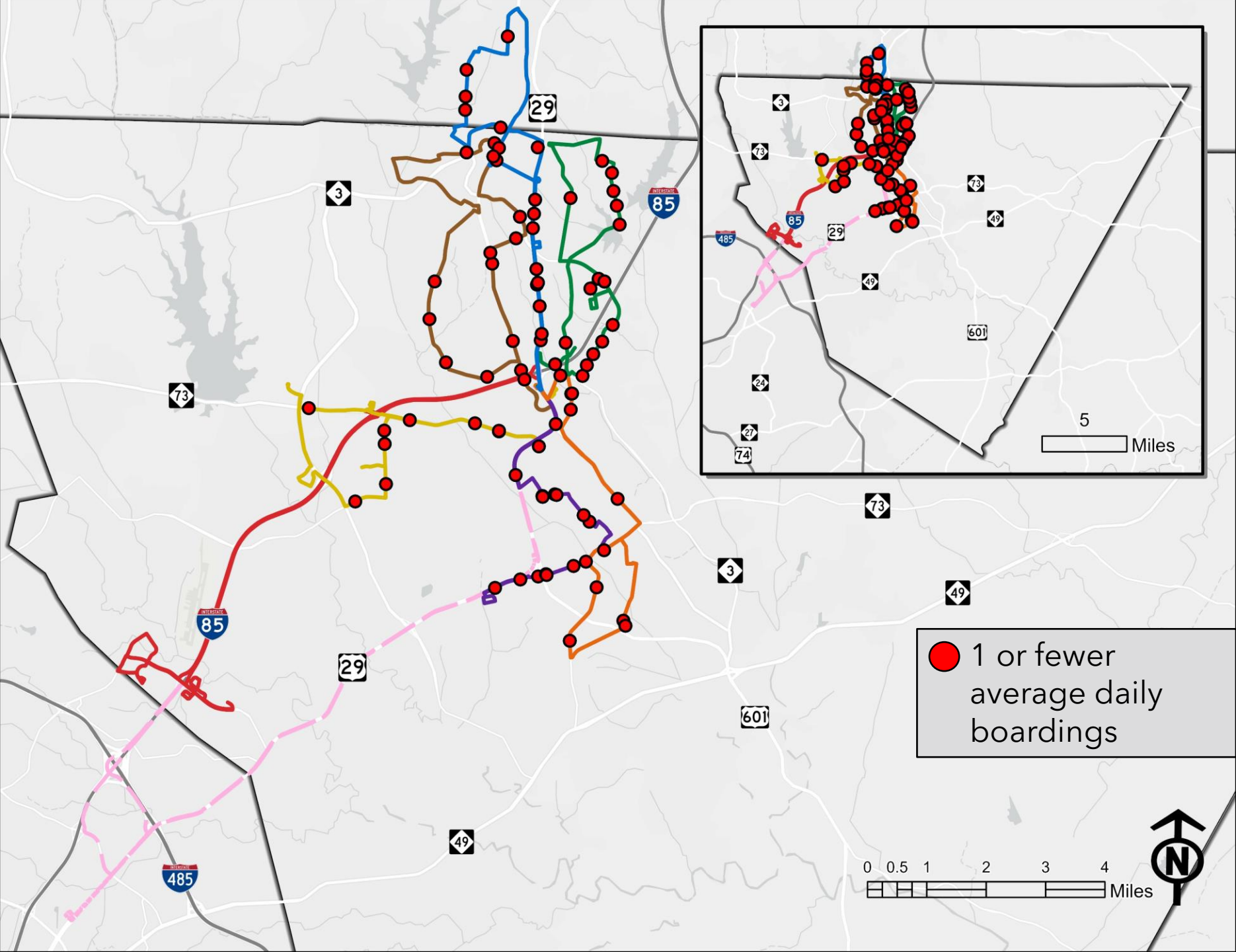
Trip Analysis | Fixed Route Boardings



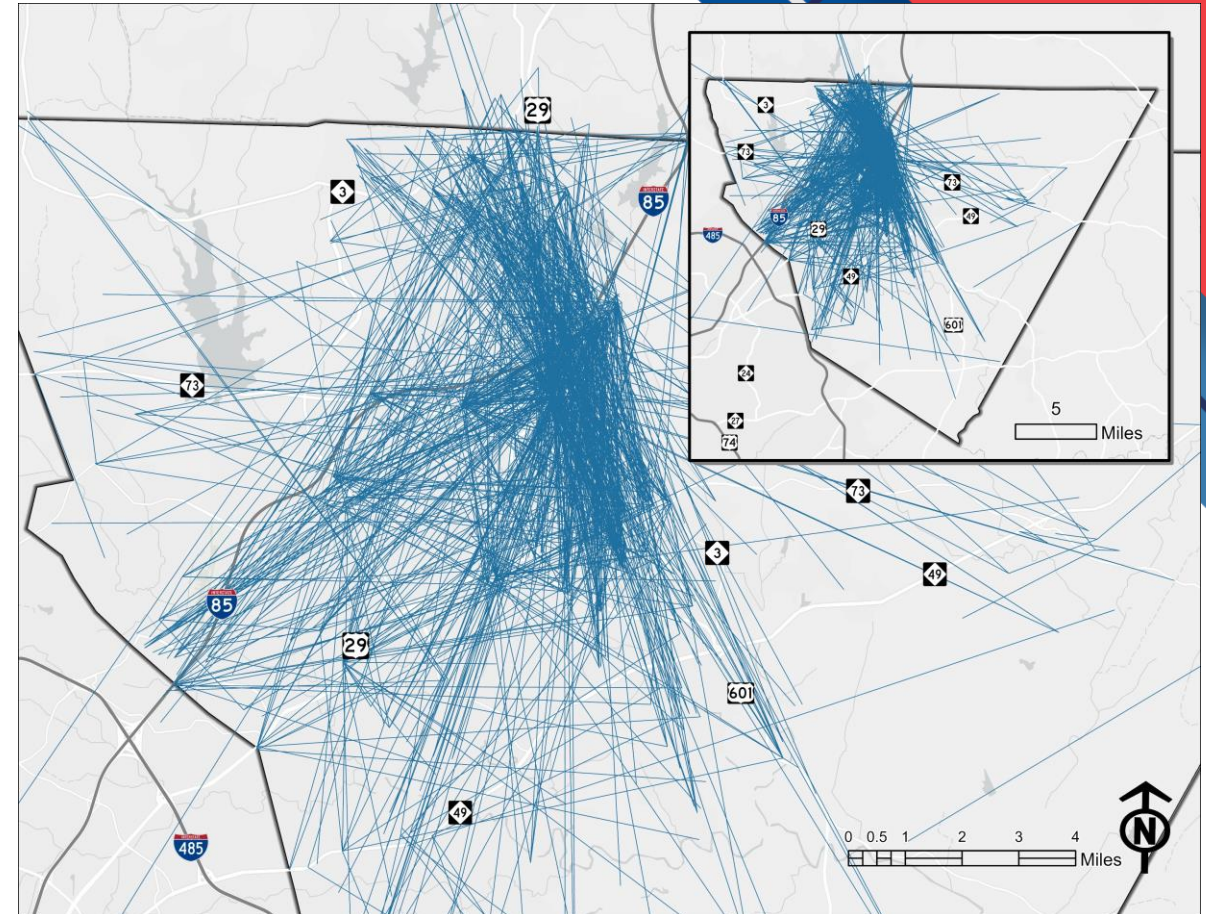
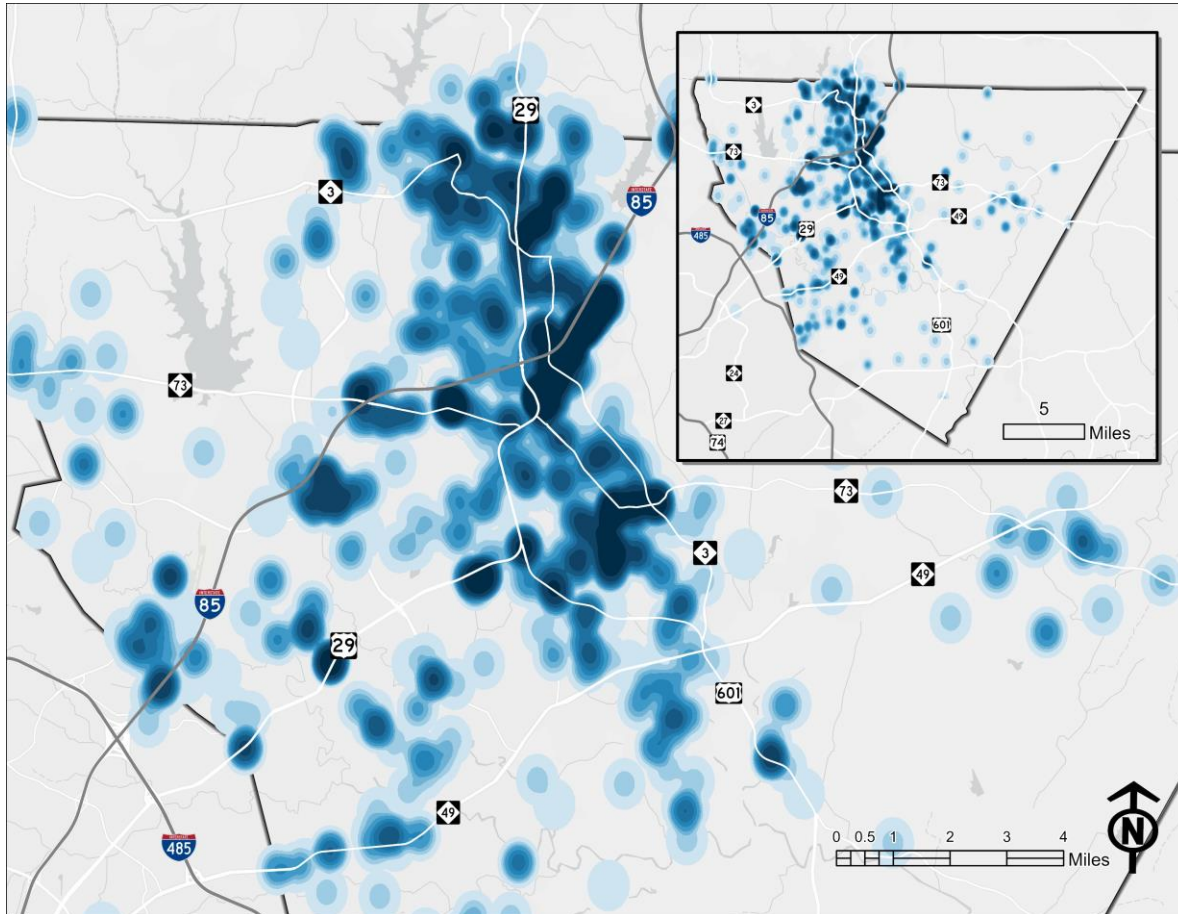
Average Daily Boardings (October 2023)



Fixed-Route | Stops with One or Fewer Daily Boardings



Trip Analysis | Demand Response & Paratransit





Recommendations

Identification of Service Concepts



Three microtransit zones feeding fixed route service



Eliminate large loops in Kannapolis routes, eliminate underutilized stops, improve efficiency of alignments



New service in Harrisburg, Liles/Kannapolis Pkwy, Poplar Tent Rd, Hwy 49, Coleman Blvd, Branchview

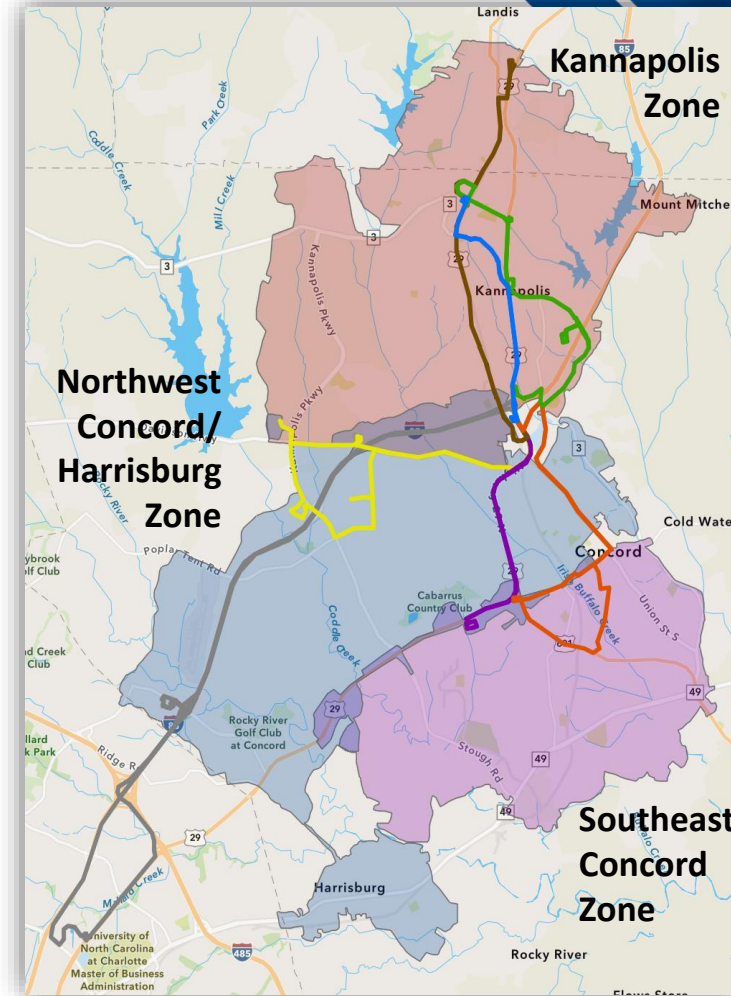
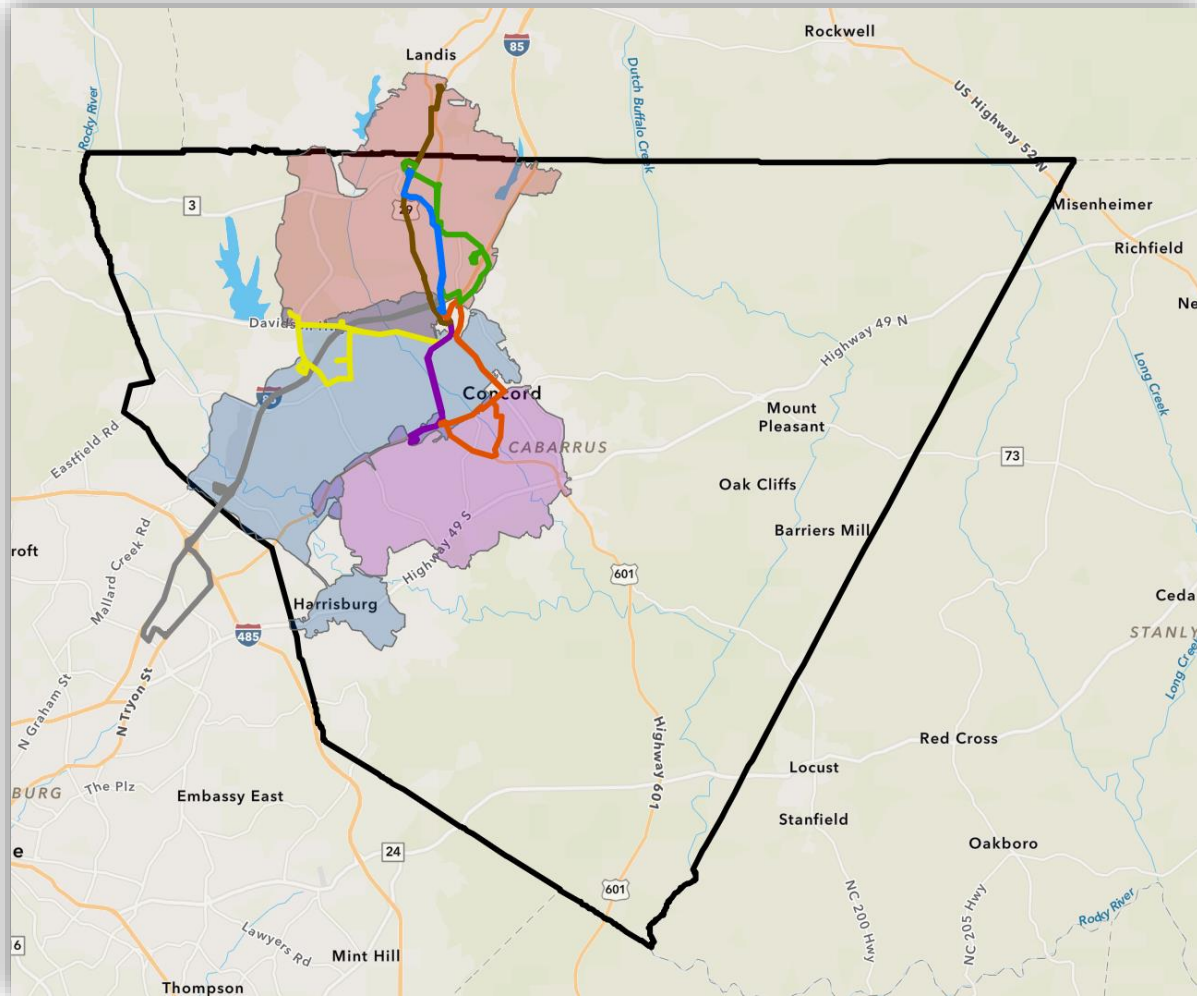


Microtransit service at night after fixed routes stop service

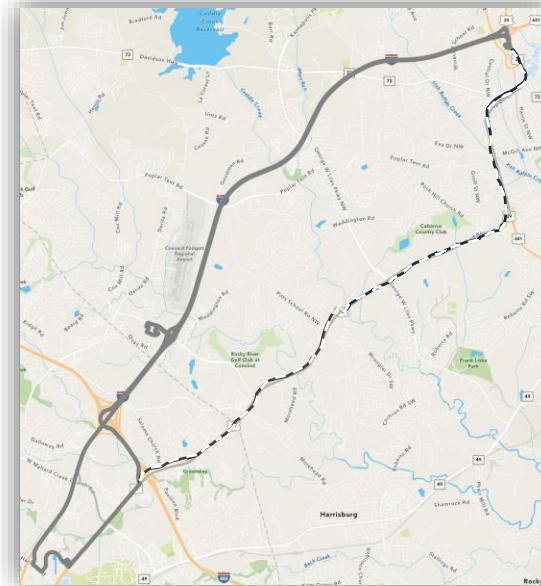
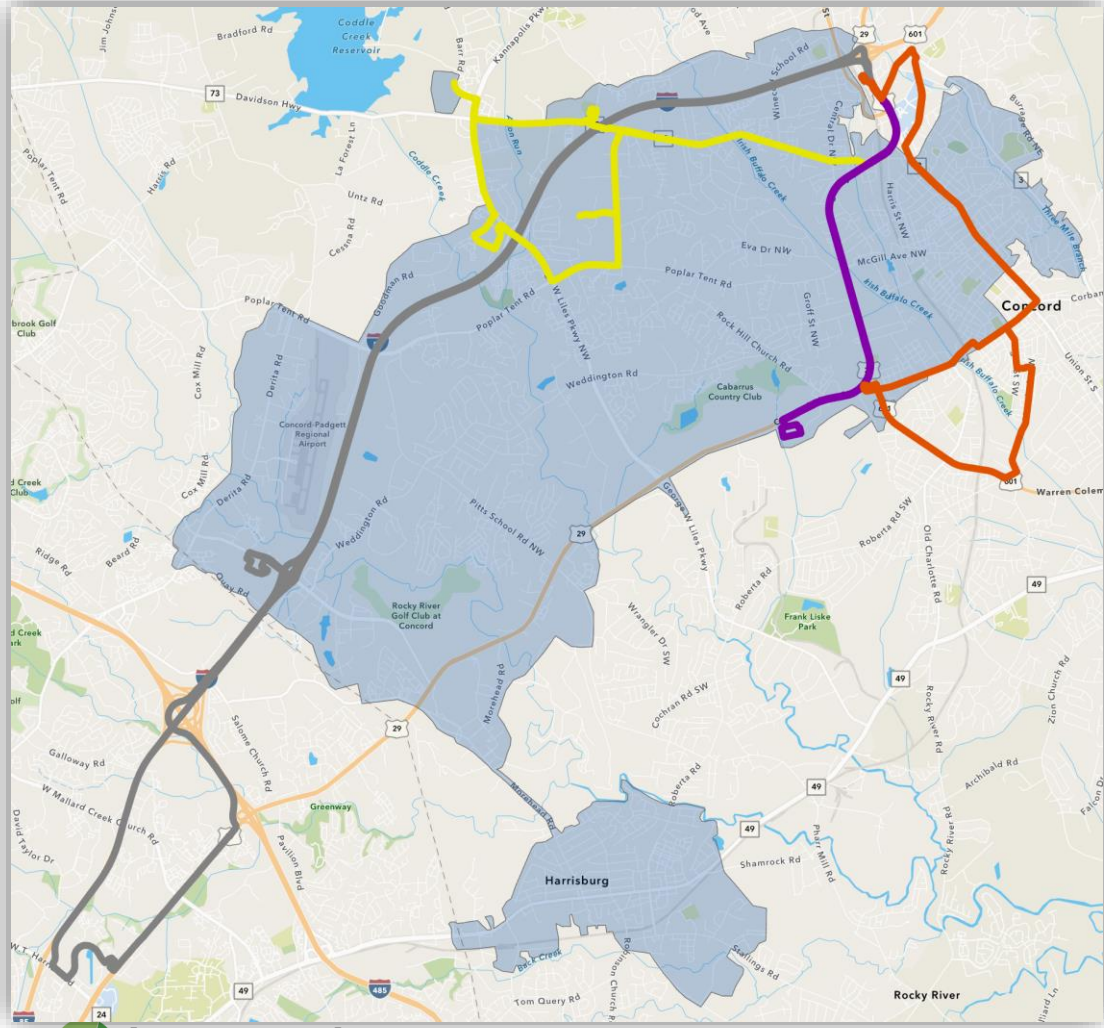


Convenience beyond demand response

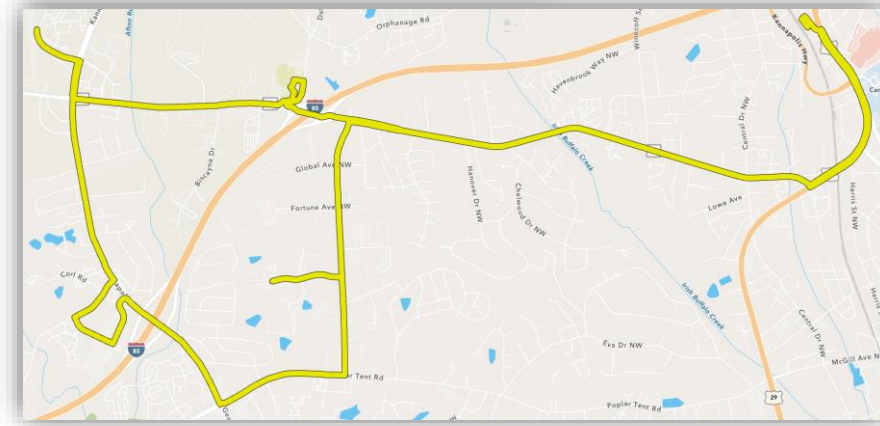
Microtransit System Concept



Northwest Concord & Harrisburg



CCX



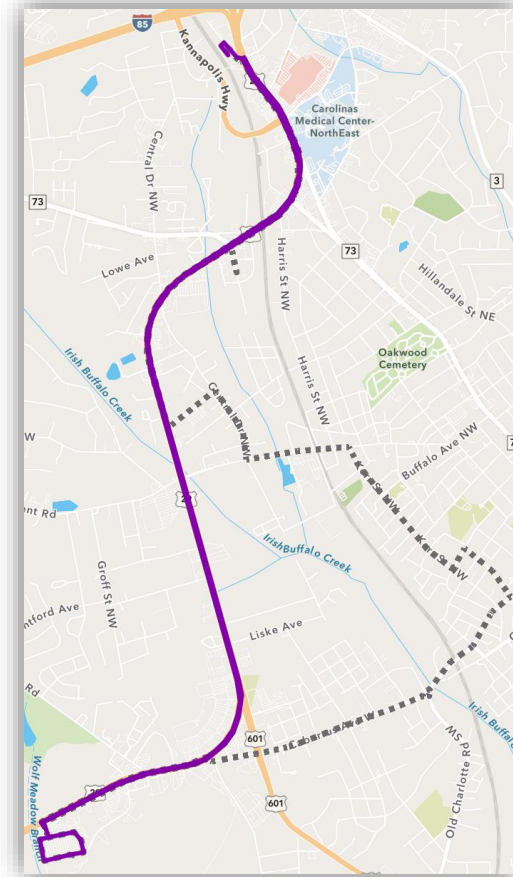
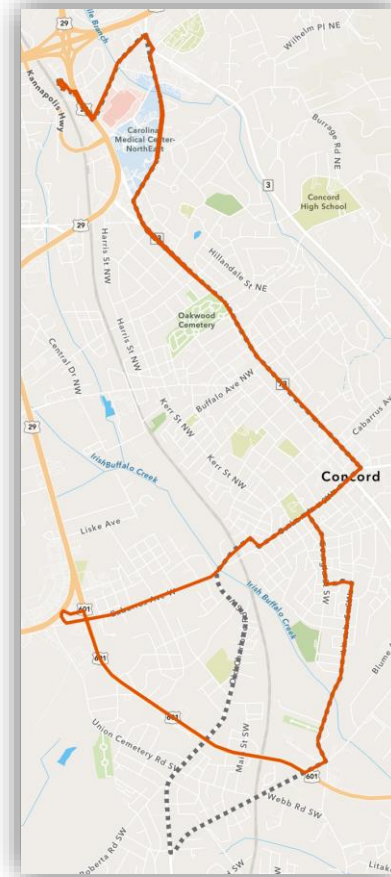
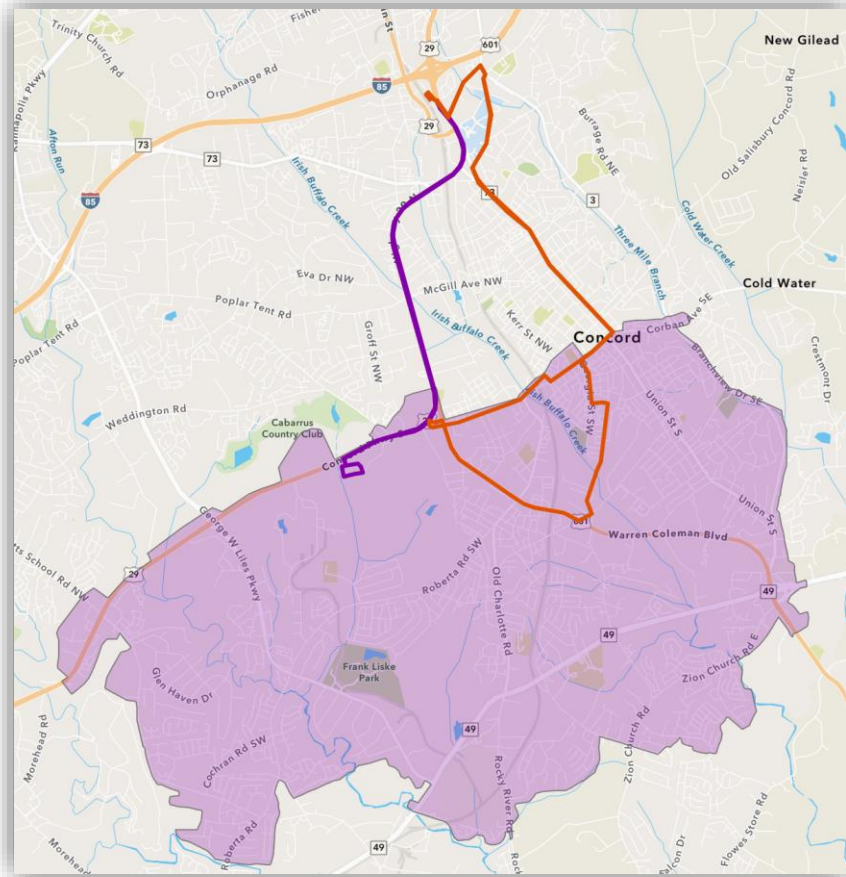
Yellow

Southeast Concord



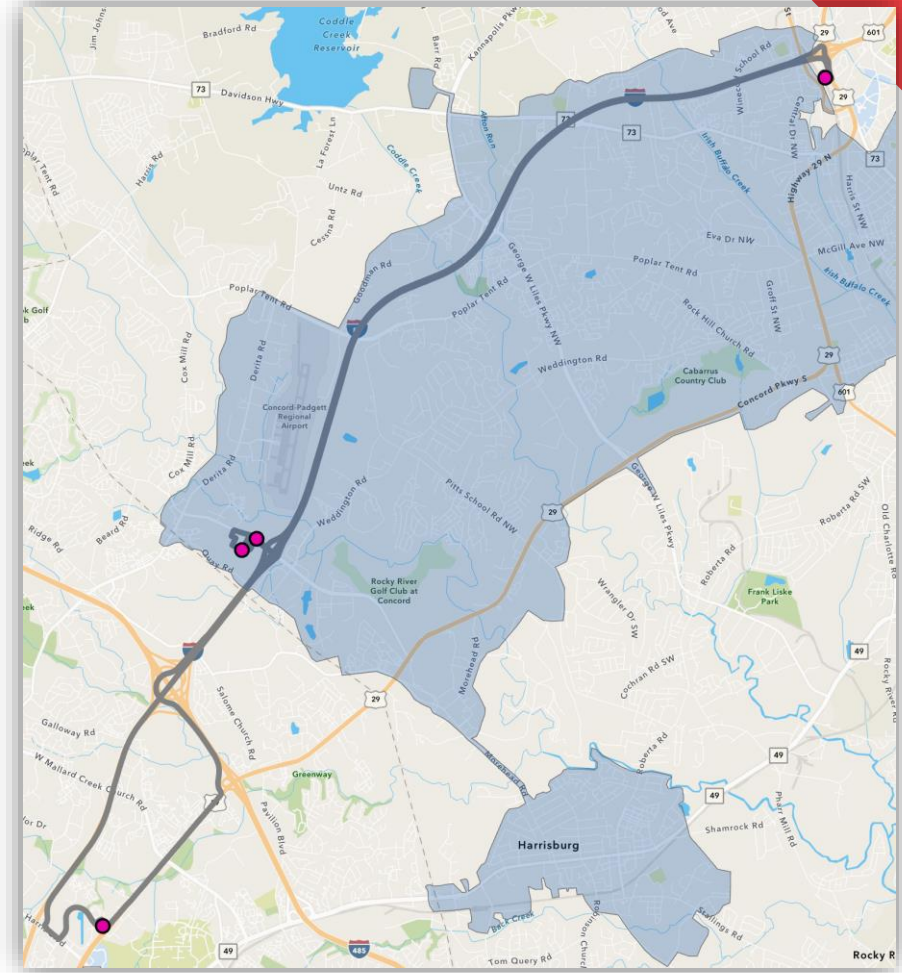
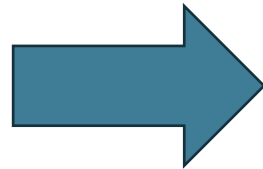
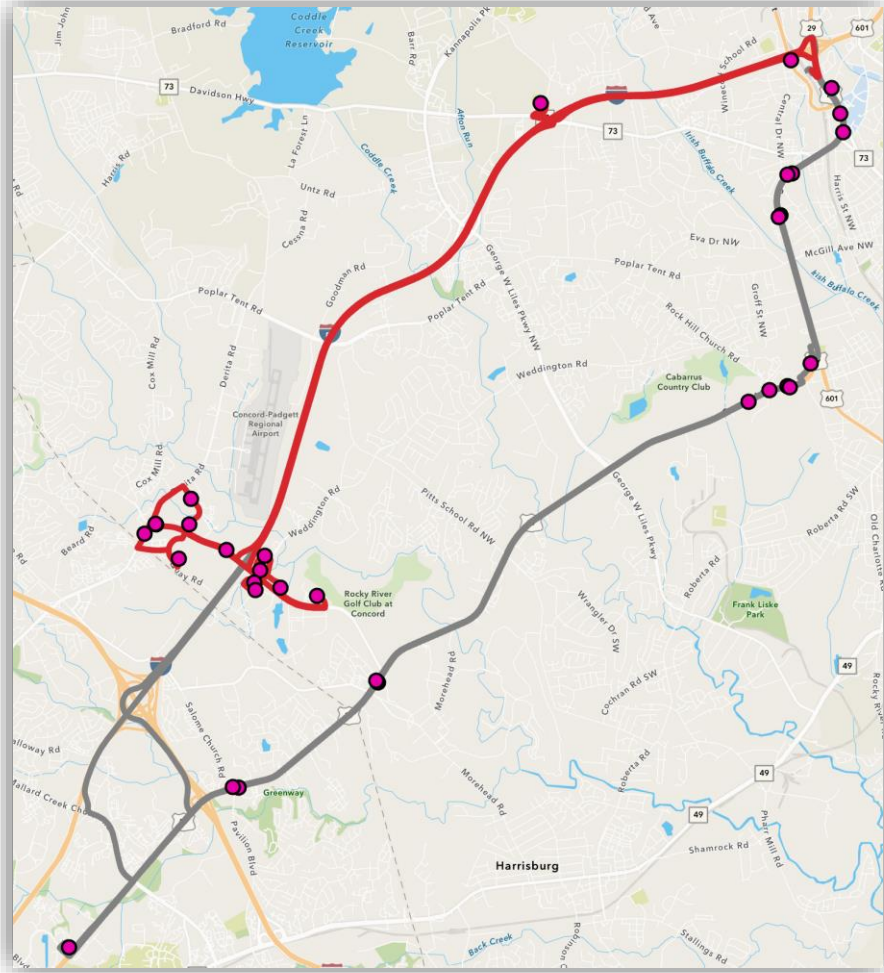
Orange

Purple

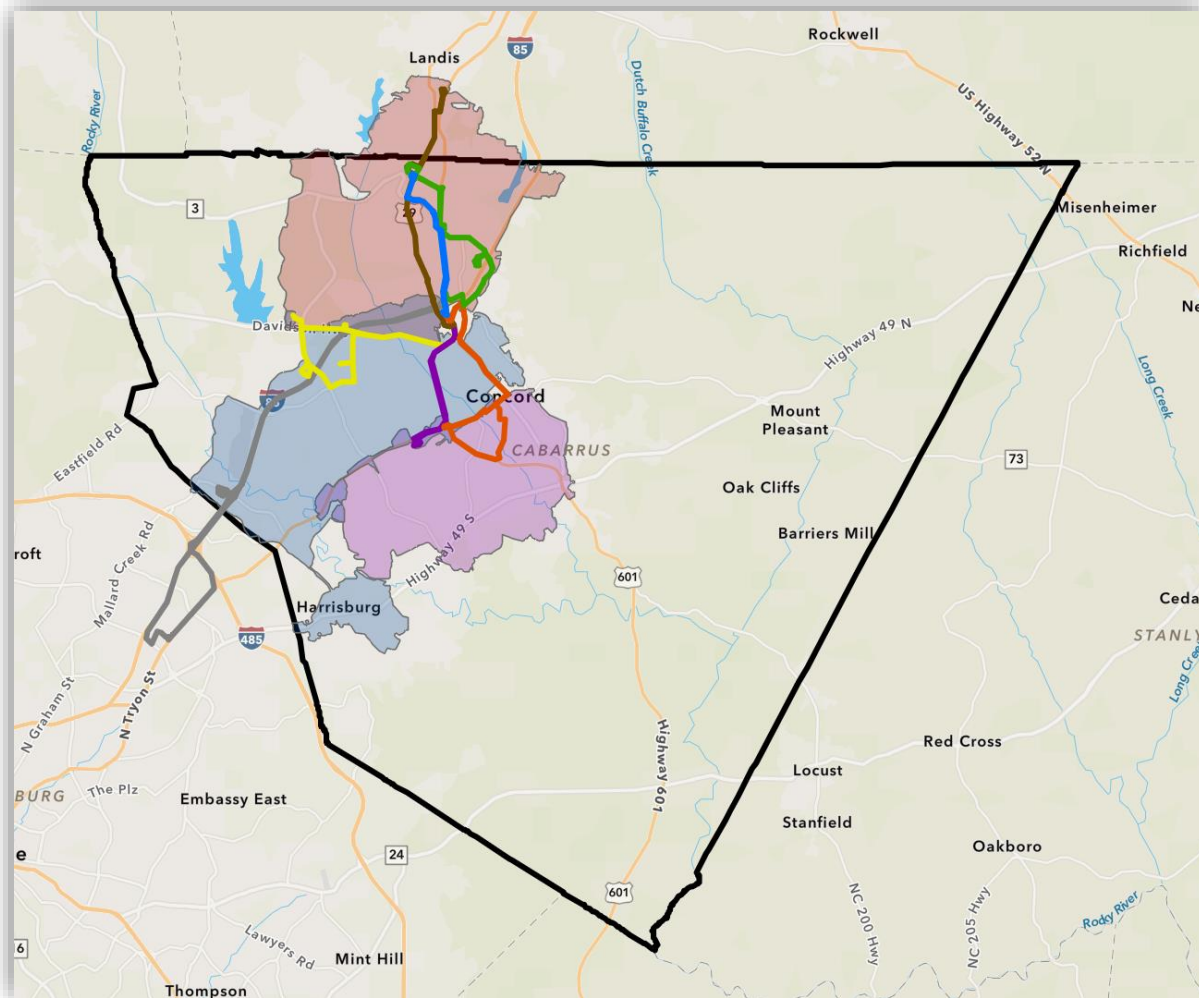


***30-min
headways**

Streamlined Red & CCX Routes



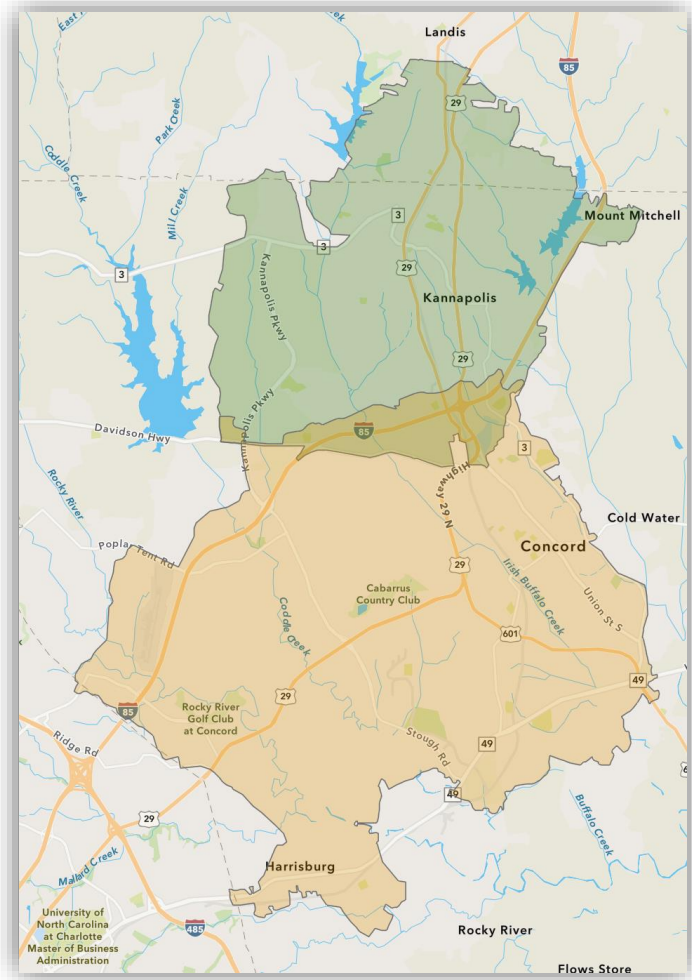
Overall Microtransit + Fixed Route Service



Proposed Routes Served

| Kannapolis Zone | Southeast Concord Zone | Northwest Concord/Harrisburg Zone |
|-----------------|------------------------|-----------------------------------|
| Blue | | |
| Green | | |
| Orange | Orange | Orange |
| | Purple | Purple |
| Yellow | | Yellow |
| Brown | | Brown |
| | | Grey |

Night Coverage



1. Daytime microtransit zones transition to nighttime microtransit zones at 7:30 PM
2. Fixed route service continues until 8:30 PM
3. Microtransit service continues until 11:30 PM



Implementation Plan

Microtransit Implementation Plan



Phase 1A:

Add Daytime Microtransit Zones

- Operationalize three microtransit zones during fixed route service hours
- Educate riders
- Address operational issues

Phase 1B:

Realign Fixed Routes

- Realign Blue, Brown, Green, Orange, Purple, and Yellow routes
- Address operational issues
- Determine if there is a need for virtual microtransit stops

Phase 2:

Add Nighttime Microtransit Zones

- Operationalize two nighttime microtransit zones, extending microtransit service until 11:30pm

Phase 3:

Address Boulevards of Concord

- Triggered by the addition of a circulator serving the Concord Mills/Bruton Smith Boulevard corridor
- Realign/streamline the Red and CCX routes



Benefits

Bottom Line



**83,000 More
People Have
Access to
Transit**



**98,000 More
Trips on
Transit***

*Does not include
fixed route ridership



**\$4.3M
Budget
Increase***

*Includes Concord
Mills Circulator



**+33%
Increase in
Revenue
Hours**



**+20%
Increase in
Revenue
Miles**



**+36%
Increase in
Trips per
Hour**



**\$12.53
Decrease in
Cost per On-
demand Trip**



Financial Impact

Financial Analysis



Existing Services in Cabarrus County

| System | Annual Ridership | Peak Vehicles | Annual Operating Expense | Revenue Miles | Revenue Hours | Expense per Trip | Population Served |
|-----------------------------|------------------|---------------|--------------------------|------------------|---------------|------------------|-------------------|
| Existing Fixed Route | 355,856 | 8 | \$2,882,428 | 705,945 | 35,511 | \$8.10 | 50,900 |
| Existing Rider Paratransit* | 19,167 | 4 | \$1,077,987 | 157,404 | 11,595 | \$56.24 | N/A* |
| Existing CCTS* | 55,676 | 22 | \$2,365,392 | 481,022 | 28,854 | \$42.48 | N/A* |
| Existing Total | 430,699 | 34 | \$6,325,807 | 1,344,371 | 75,960 | \$14.69 | 50,900 |

Proposed Service Concept

| System | Annual Ridership | Peak Vehicles | Annual Operating Expense | Revenue Miles | Revenue Hours | Expense per Trip | Population Served |
|-----------------------------------|------------------|---------------|--------------------------|------------------|----------------|------------------|-------------------|
| Proposed Fixed Route [^] | 343,239 | 7 | \$2,522,124 | 632,663 | 31,072 | \$7.35 | 30,300 |
| Daytime Microtransit** | 134,840 | 12 | \$3,920,000 | 704,868 | 48,978 | \$29.07 | 130,200 |
| Nighttime Microtransit** | 14,476 | 6 | \$632,300 | 85,100 | 7,910 | \$43.68 | 132,100 |
| Potential Rider Paratransit* | 9,008 | 2 | \$506,687 | 73,980 | 5,450 | \$56.25 | N/A* |
| Potential CCTS* | 16,703 | 6 | \$709,543 | 116,587 | 6,994 | \$42.48 | N/A* |
| Circulator ^{^^} | 50,000 | 5 | \$2,363,740 | 201,548 | 24,975 | \$47.27 | N/A |
| Proposed Daytime Total | 553,790 | 32 | \$10,022,094 | 1,729,646 | 117,469 | \$18.10 | 130,200 |
| Proposed Total | 568,266 | 32 | \$10,654,394 | 1,814,746 | 125,379 | \$18.75 | 134,100 |

*These services have restrictions on rider eligibility

**Microtransit operating expense per hour is assumed \$80

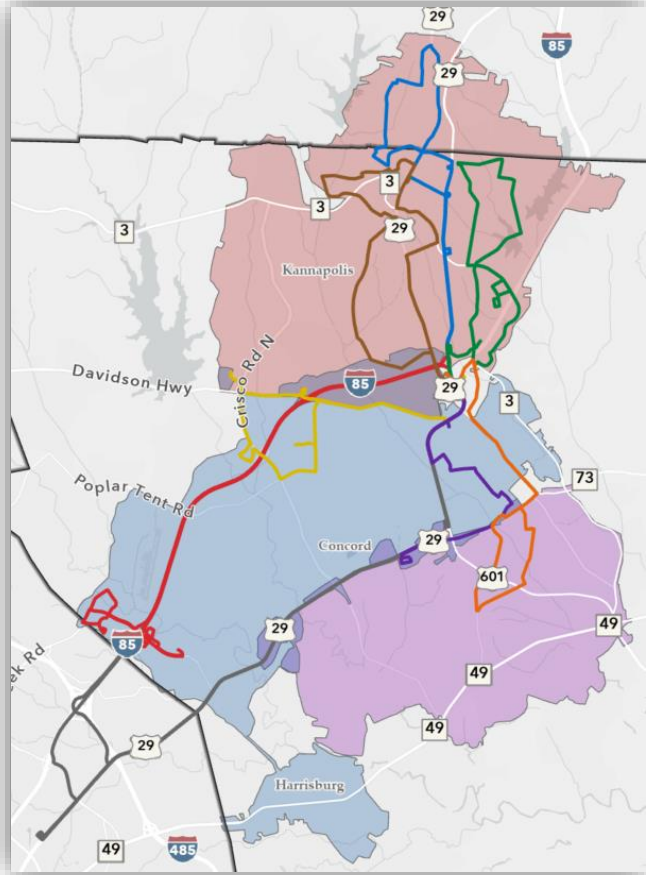
[^]Assumes 20% growth on Purple and Blue routes, no growth on all other routes

^{^^}Assumes a \$472,748 expense per peak vehicle, a low-end ridership of 50,000 trips, and a high number of peak vehicles (5)

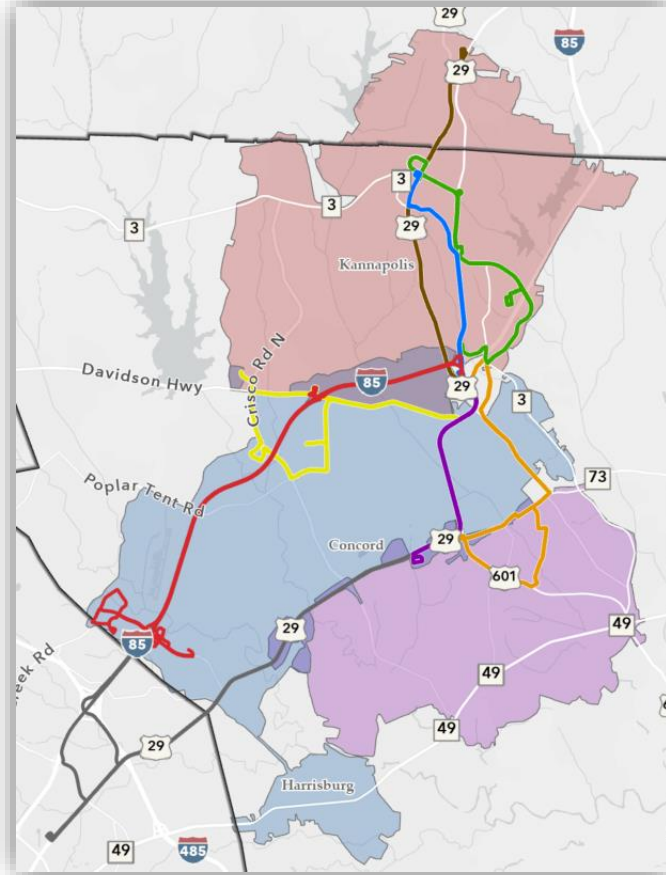
Thank You & Questions



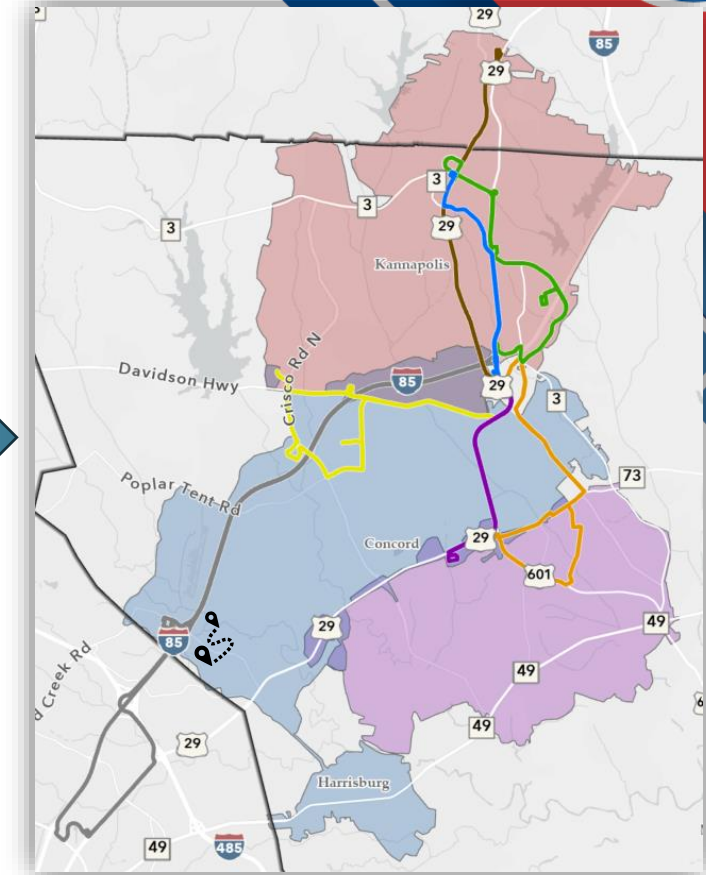
Phases of Implementation



1A: Add Daytime Zones



**1B: Realign six routes
2: Add Night Zones**



**3A: Add Concord Mills Circulator
3B: Streamline Red and CCX**



CONNECTING COMMUNITY



Concord Kannapolis Area Transit

RideCo & Concord Kannapolis Area Transit

City Wide Microtransit Simulation Results

August 22, 2024



Simulation Purpose

-
1. To determine the resources required to operate a city-wide on-demand microtransit system that replaces fixed route services.
 2. To estimate budget implications and financial viability.



The Levers of Microtransit

In the full system microtransit deployment that replaces fixed route, we are prioritizing system **COVERAGE** and system **CONVENIENCE** levels.

As a result there's a cost associated with this.



Coverage

Geographic Span

Stop Spacing

Span (Hours of Service)



Convenience

Wait-Times & On-Board Times

Reliability

Walking Distance



Cost

Vehicle Count

Cost Per Ride

Vehicle Hours and Miles

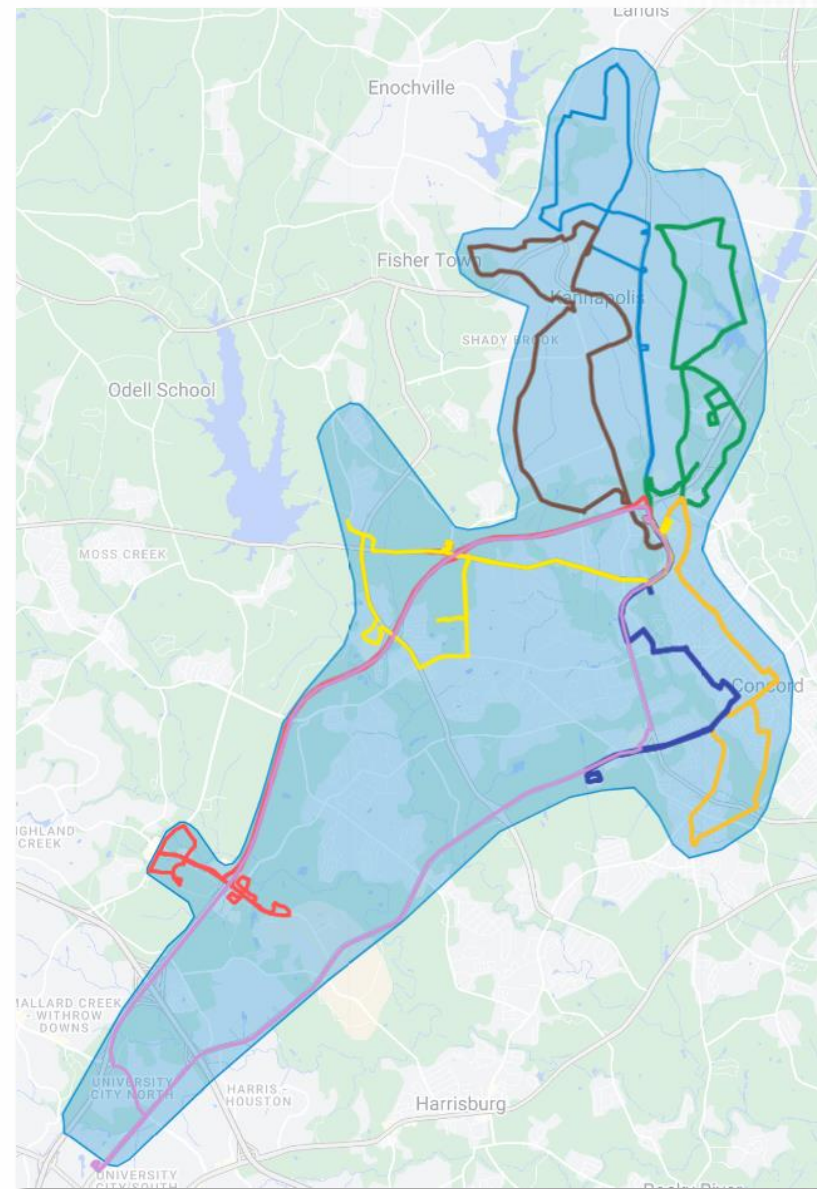
Simulation Methodology



City Wide Microtransit – Full Zone

| | Average Daily Ridership |
|--------------|-------------------------|
| Blue | 150 |
| Brown | 108 |
| CCX | 106 |
| Green | 154 |
| Orange | 192 |
| Purple | 189 |
| Red | 94 |
| Yellow | 159 |
| Total | 1152 |

- Average daily ridership was calculated from 3 days of fixed route ridership on the fixed routes in the table above.
- 100% of the fixed route ridership was assumed to transition from the fixed route service to the microtransit service.
- The Red route and CCX route were included in the Full Zone simulation

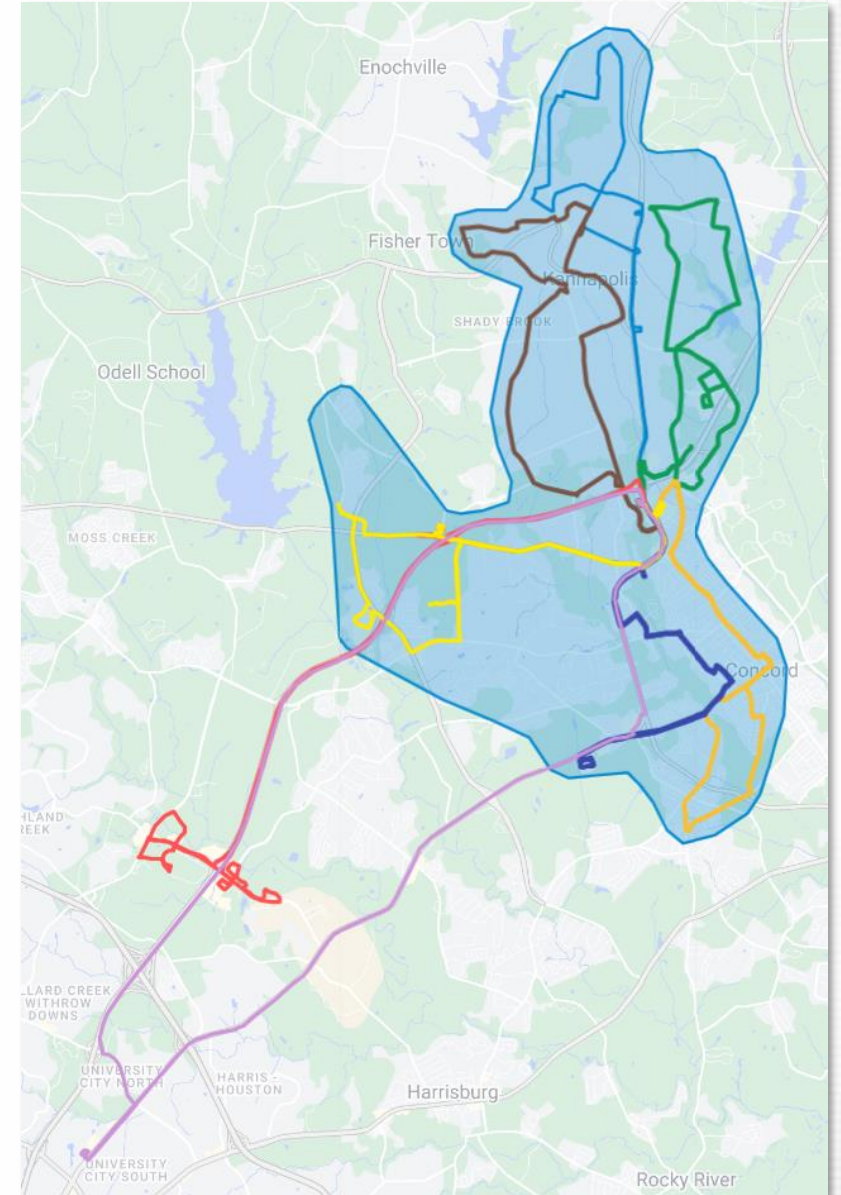




City Wide Microtransit – Reduced Zone

| | Average Daily Ridership |
|--------------|-------------------------|
| Blue | 150 |
| Brown | 108 |
| CCX | 106 |
| Green | 154 |
| Orange | 192 |
| Purple | 189 |
| Red | 94 |
| Yellow | 159 |
| Total | 952 |

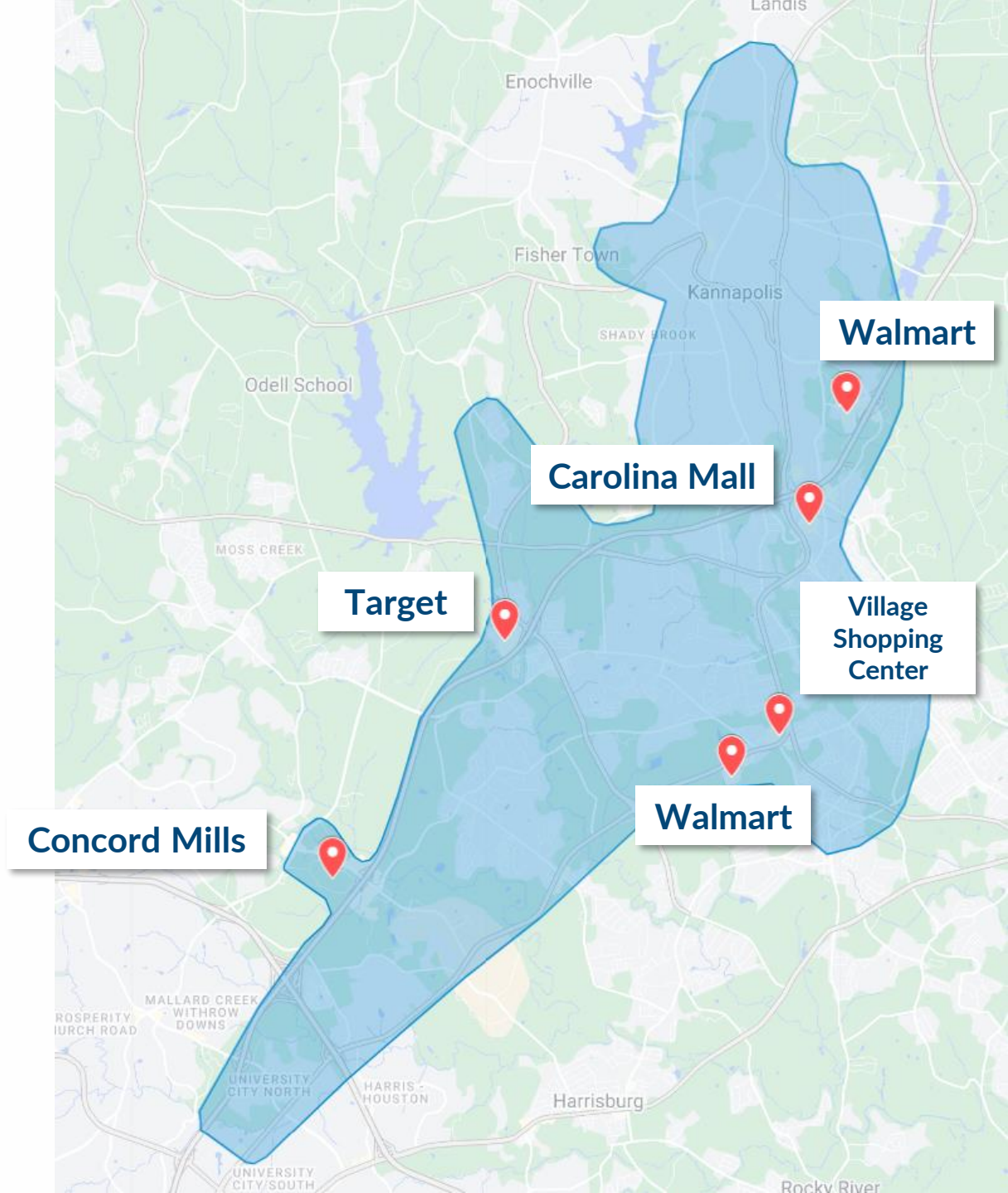
- Average daily ridership was calculated from 3 days of fixed route ridership on the fixed routes in the table above.
- 100% of the fixed route ridership was assumed to transition from the fixed route service to the microtransit service.
- The Red route and CCX route were not included in the Full Zone simulation





Estimating Travel Patterns

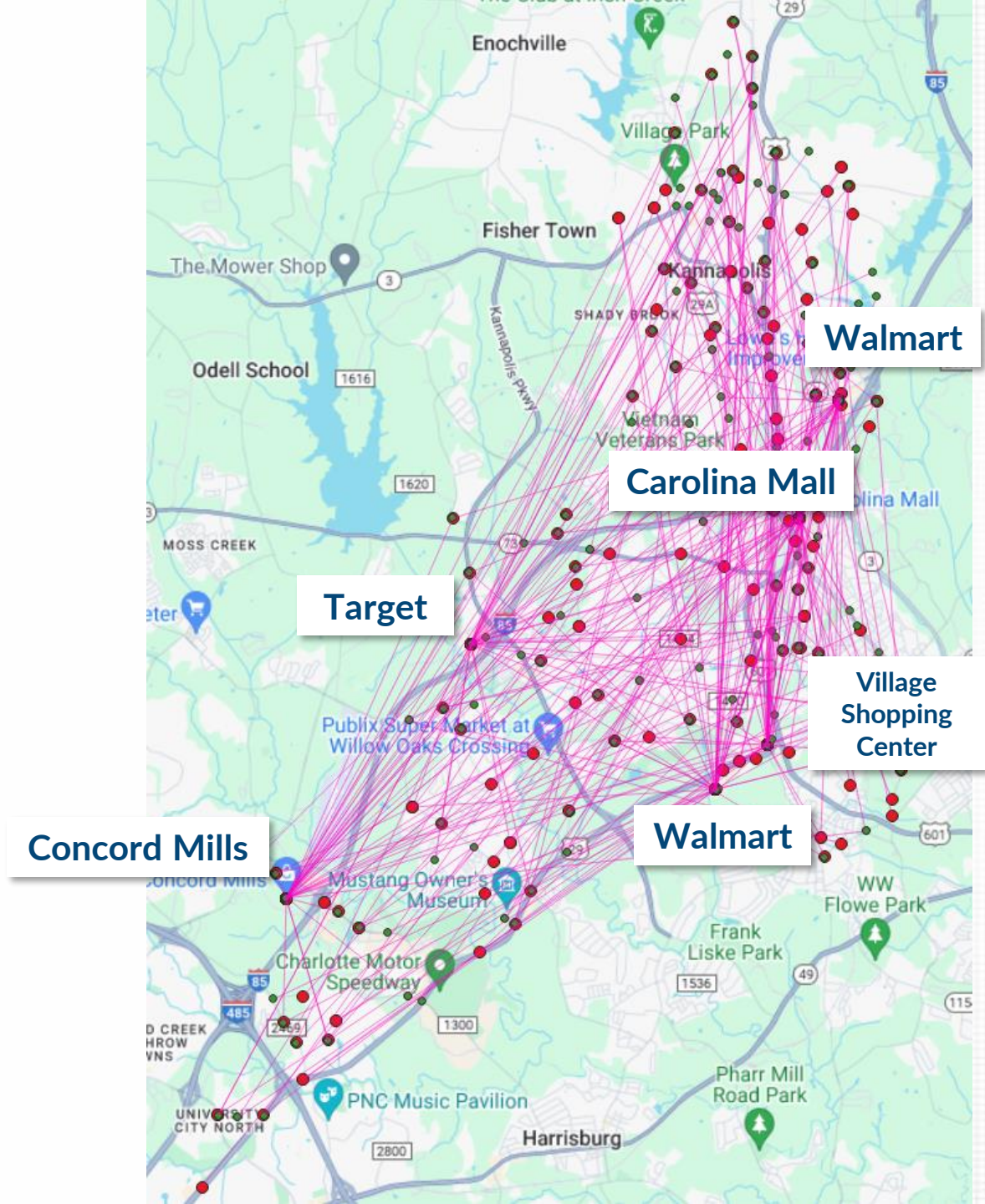
| POI – Full Zone | Percent of Ridership |
|-------------------------|----------------------|
| Concord Mills | 20% |
| Target | 15% |
| Carolina Mall | 10% |
| Village Shopping Center | 15% |
| Walmart North | 20% |
| Walmart South | 10% |
| Rest of Stops | 10% |
| Total | 100% |





OD Pairs – Full Zone

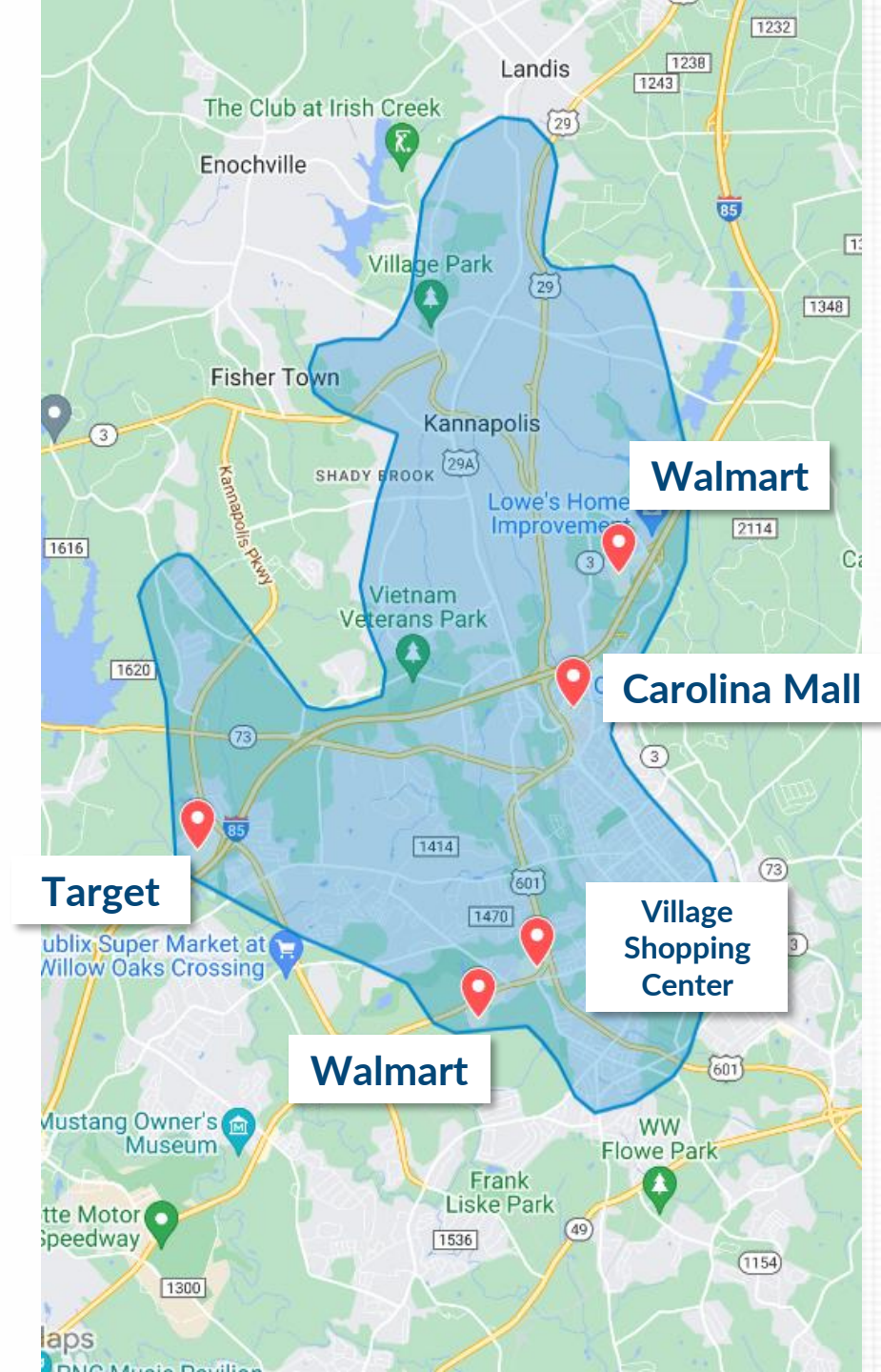
| POI – Full Zone | Percent of Ridership |
|-------------------------|----------------------|
| Concord Mills | 20% |
| Target | 15% |
| Carolina Mall | 10% |
| Village Shopping Center | 15% |
| Walmart North | 20% |
| Walmart South | 10% |
| Rest of Stops | 10% |
| Total | 100% |





Points of Interest – Reduced Zone

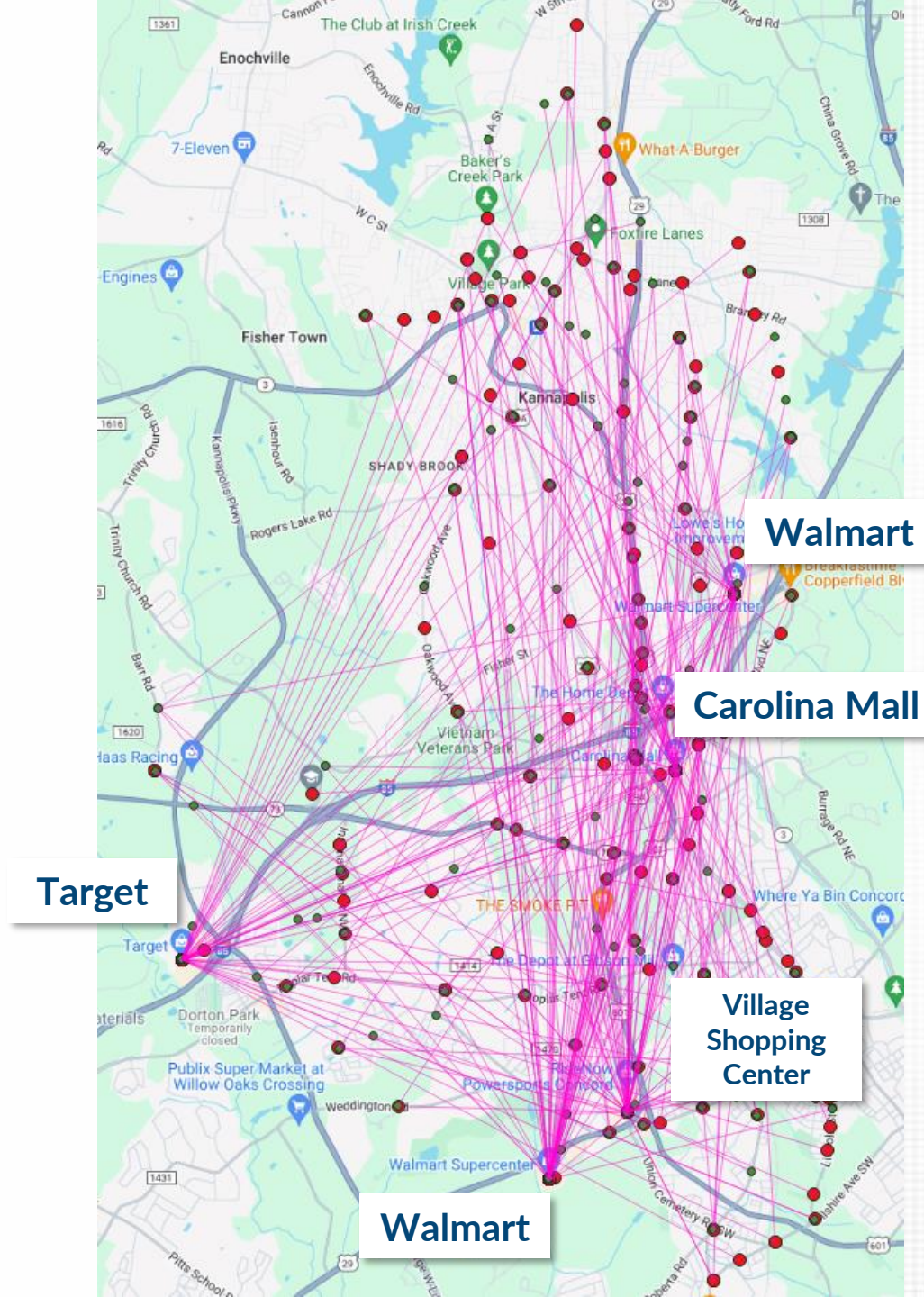
| | Percent of Ridership |
|-------------------------|----------------------|
| Target | 19% |
| Carolina Mall | 14% |
| Village Shopping Center | 19% |
| Walmart North | 24% |
| Walmart South | 14% |
| Rest of Stops | 10% |
| Total | 100% |





OD Pairs – Reduced Zone

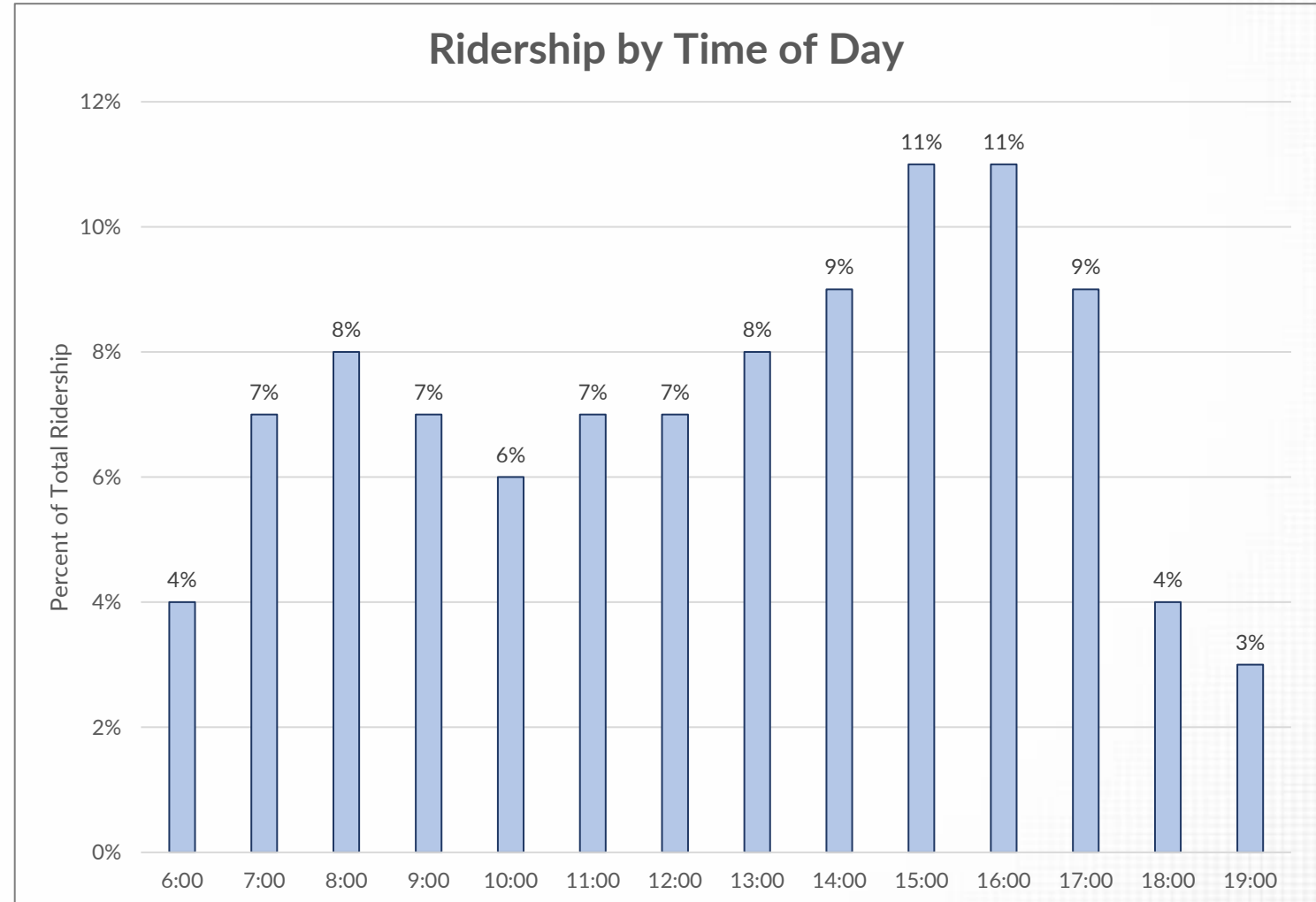
| | Percent of Ridership |
|-------------------------|----------------------|
| Target | 19% |
| Carolina Mall | 14% |
| Village Shopping Center | 19% |
| Walmart North | 24% |
| Walmart South | 14% |
| Rest of Stops | 10% |
| Total | 100% |





Fixed Route Demand Profile

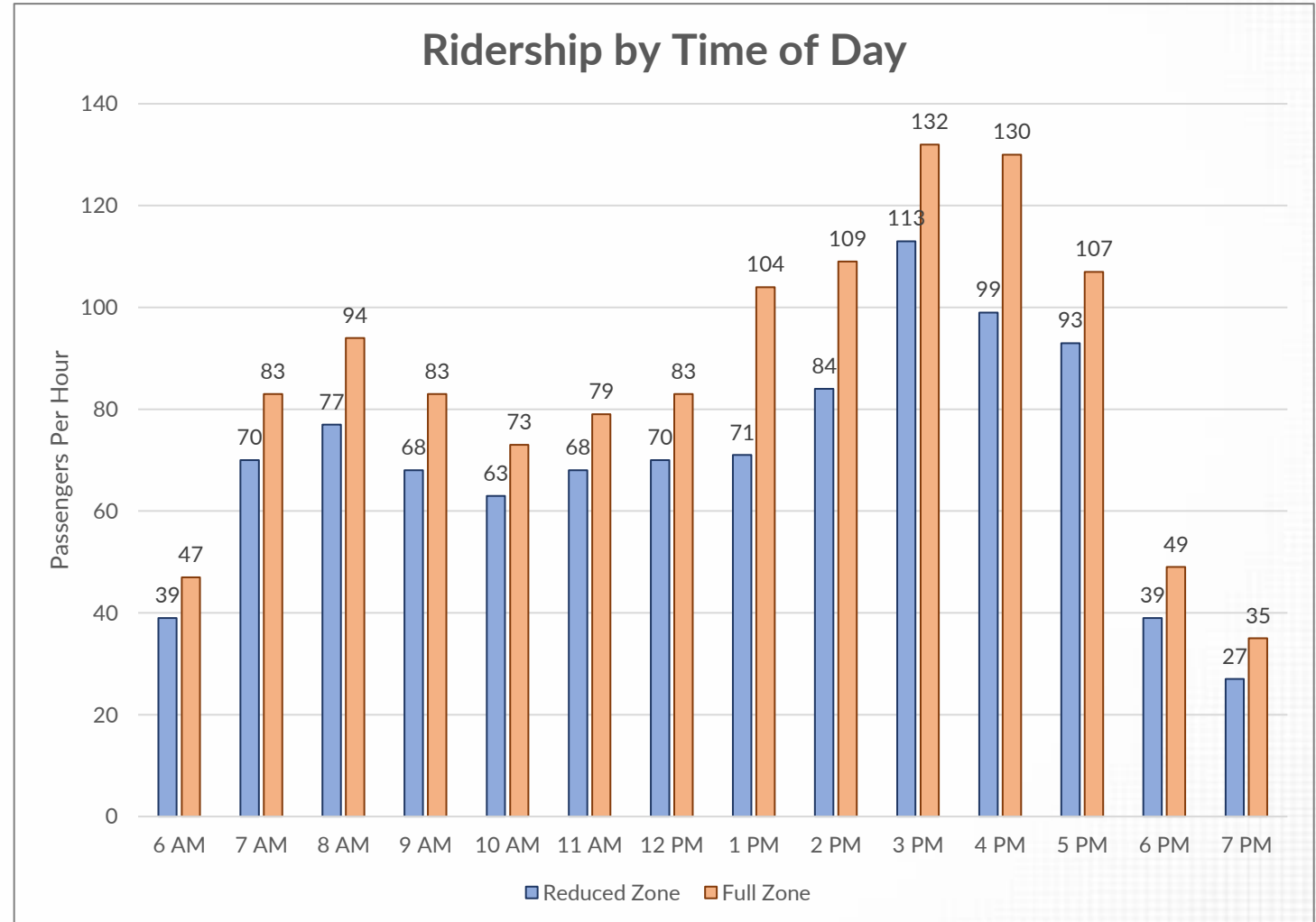
- Understanding the current dynamics of existing fixed route travel patterns provides insight into potential microtransit vehicle requirements during peak and off-peak periods
- The intensity of peak periods also plays a role in assessing the potential productivity of the service





Ridership by Time of Day

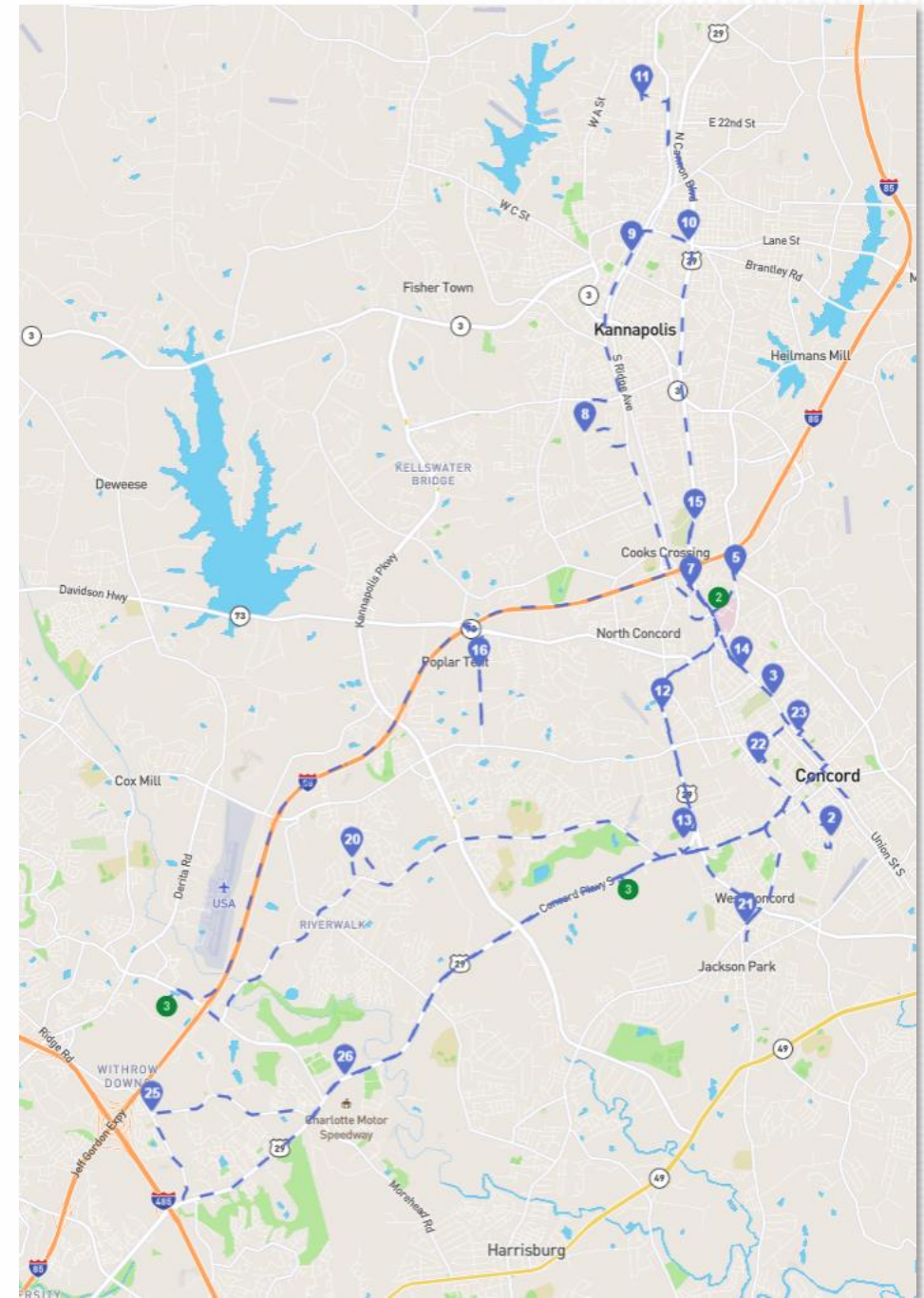
- Understanding the current dynamics of existing fixed route travel patterns provides insight into potential microtransit vehicle requirements during peak and off-peak periods
- The intensity of peak periods also plays a role in assessing the potential productivity of the service





Simulation Inputs

| | |
|--------------------------------------|--|
| Passengers | Reduced Zone: 952 Full Zone: 1152 |
| Shift Duration | 5 - 10 hours |
| Vehicle Types/Capacity Configuration | Minivan 4 AMB or 2 AMB & 1 WC |
| Pick-Up Window | 10 minutes |
| Boarding & Alighting Delays | Ambulatory: 1.5 & 1 minutes Wheelchair: 5 & 3 minutes |
| Traffic/Road Speed Scale-Down | 10% Slower (slower than average to account for driver behavior) |





Simulation Results

| | Reduced Zone | Full Zone |
|--|--------------|------------|
| Daily Weekday Revenue Hours | 352 | 475 |
| Pickup On-Time Performance | 96% | 97% |
| Dropoff On-Time Performance | 99% | 98% |
| Sharing Percentage | 75% | 73% |
| Average Wait time from request to start of pickup window | 8 minutes | 10 minutes |
| Average On-Board Time | 19 minutes | 22 minutes |
| Demand Response Productivity (PVH) | 2.7 | 2.4 |
| Vehicles Operating in Max Service (VOMS) | 34 | 46 |
| Fixed Routes | 2 | 0 |





Budget Implications

| | Current Operation | Reduced Zone | Full Zone | Full Zone Low Cost Scenario |
|---|-------------------|--------------------------|-----------|-----------------------------|
| Daily Weekday Ridership | 1152 | 952 DR +200 FR = 1152 | 1152 | 1152 |
| Daily Weekday Revenue Hours | 119 | 352 DR + 30 FR = 382 | 475 | 475 |
| System-Wide Productivity (PVH) | 9.7 | 3.0 | 2.4 | 2.4 |
| On Demand Vehicles Operating in Max Service | 0 | 34 | 46 | 46 |
| Fixed Route VOMS | 8 | 2 | 0 | 0 |
| Daily Weekday Operating Cost | \$9,700* | \$35,200* | \$44,200* | \$23,750** |
| Cost/Passenger | \$8.42 | \$30.56 | \$38.37 | \$20.62 |
| Annual Operating Cost | \$3.3 M | \$12.0 M | \$15.0 M | \$8.1 M |
| Increase of Existing Budget | - | 3.6X | 4.5X | 2.5X |

*Based on current system cost/hour of \$92.97 for DR and \$81.17 for FR

**Based on cost/hour of \$50.00 (full turnkey operation with independent contractor driver model)

Turnkey price of \$20/rev hour required to get Full Zone within existing budget





Additional Ridership Scenarios (Full Zone)

Additional scenarios requested at the committee meeting on August 22, 2024

| | Current Operation | Full Zone + 10% Ridership Increase | Full Zone + 20% Ridership Increase | Full Zone, Supportable Ridership with Existing Budget |
|---|-------------------|------------------------------------|------------------------------------|---|
| Daily Weekday Ridership | 1152 | 1,268 | 1,382 | 262 (Supports 23% of current ridership) |
| Daily Weekday Revenue Hours | 120 | 507 | 532 | 105 |
| System-Wide Productivity (PVH) | 9.6 | 2.5 | 2.6 | 2.5 |
| On Demand Vehicles Operating in Max Service | 0 | 49 | 52 | 10 |
| Fixed Route VOMS | 8 | 0 | 0 | 0 |
| Daily Weekday Operating Cost | \$9,740* | \$47,136* | \$49,460* | \$9,740* |
| Cost/Passenger | \$8.46 | \$37.17 | \$35.79 | \$35.68 |
| Annual Operating Cost | \$3.3 M | \$16.0 M | \$16.8 M | \$3.3 M |
| Increase of Existing Budget | - | 4.8 X | 5.1 X | - |

*Based on current system cost/hour of \$92.97 for DR and \$81.17 for FR

**Based on cost/hour of \$50.00 (full turnkey operation with independent contractor driver model)





Additional Ridership Scenarios (Reduced Zone)

Additional scenarios requested at the committee meeting on August 22, 2024

| | Current Operation | Reduced Zone + 10% Ridership Increase | Reduced Zone + 20% Ridership Increase | Reduced Zone, Supportable Ridership with Existing Budget |
|---|-------------------|---------------------------------------|---------------------------------------|--|
| Daily Weekday Ridership | 1152 | 1047 DR +220 FR = 1267 | 1142 DR +240 FR = 1382 | 197 DR + 200 FR (755 unserved on DR) |
| Daily Weekday Revenue Hours | 120 | 388 DR +30 FR = 418 | 408 DR + 30 FR = 438 | 79 DR+ 30 FR |
| System-Wide Productivity (PVH) | 9.6 | 3.0 | 3.2 | 3.4 |
| On Demand Vehicles Operating in Max Service | 0 | 37 | 40 | 14 |
| Fixed Route VOMS | 8 | 2 | 2 | 2 |
| Daily Weekday Operating Cost | \$9,740* | \$38,507* | \$40,367* | \$9,740* |
| Cost/Passenger | \$8.46 | \$30.39 | \$29.21 | \$16.40 |
| Annual Operating Cost | \$3.3 M | \$13.0 M | \$13.7 M | \$3.3 M |
| Increase of Existing Budget | - | 3.9 X | 4.15 X | - |

*Based on current system cost/hour of \$92.97 for DR and \$81.17 for FR

**Based on cost/hour of \$50.00 (full turnkey operation with independent contractor driver model)





Additional Ridership Scenarios (Full Zone)

Additional scenarios requested at the committee meeting on August 22, 2024

| | Current Operation | Full Zone – Low Cost + 10% Ridership Increase | Full Zone – Low Cost + 20% Ridership Increase | Full Zone- Low Cost, Supportable Ridership with Existing Budget |
|---|-------------------|---|---|---|
| Daily Weekday Ridership | 1152 | 1,268 | 1,382 | 527 (Supports 46% of current ridership) |
| Daily Weekday Revenue Hours | 120 | 507 | 532 | 195 |
| System-Wide Productivity (PVH) | 9.6 | 2.5 | 2.6 | 2.5 |
| On Demand Vehicles Operating in Max Service | 0 | 49 | 52 | 10 |
| Fixed Route VOMS | 8 | 0 | 0 | 0 |
| Daily Weekday Operating Cost | \$9,740* | \$25,350** | \$26,600** | \$9,740** |
| Cost/Passenger | \$8.46 | \$20.00 | \$19.25 | \$35.68 |
| Annual Operating Cost | \$3.3 M | \$8.6 M | \$9.0 M | \$3.3 M |
| Increase of Existing Budget | - | 2.6 X | 2.7 X | - |

*Based on current system cost/hour of \$92.97 for DR and \$81.17 for FR

**Based on cost/hour of \$50.00 (full turnkey operation with independent contractor driver model)





Additional Ridership Scenarios (Reduced Zone)

Additional scenarios requested at the committee meeting on August 22, 2024

| | Current Operation | Reduced Zone - Low Cost + 10% Ridership Increase | Reduced Zone - Low Cost + 20% Ridership Increase | Reduced Zone- Low Cost, Supportable Ridership with Existing Budget |
|---|-------------------|--|--|--|
| Daily Weekday Ridership | 1152 | 1047 DR +220 FR = 1267 | 1142 DR +240 FR = 1382 | 394 DR + 200 FR (558 unserved on DR) |
| Daily Weekday Revenue Hours | 120 | 388 DR +30 FR = 418 | 408 DR + 30 FR = 438 | 146 DR+ 30 FR |
| System-Wide Productivity (PVH) | 9.6 | 3.0 | 3.2 | 3.4 |
| On Demand Vehicles Operating in Max Service | 0 | 37 | 40 | 14 |
| Fixed Route VOMS | 8 | 2 | 2 | 2 |
| Daily Weekday Operating Cost | \$9,740* | \$21,835** | \$22,835** | \$9,740** |
| Cost/Passenger | \$8.46 | \$17.23 | \$16.52 | \$16.40 |
| Annual Operating Cost | \$3.3 M | \$7.4 M | \$7.7 M | \$3.3 M |
| Increase of Existing Budget | - | 2.24 X | 2.33 X | - |

*Based on current system cost/hour of \$92.97 for DR and \$81.17 for FR

**Based on cost/hour of \$50.00 (full turnkey operation with independent contractor driver model)





Questions?

MINUTES

Concord Kannapolis Area Transit Commission

October 24, 2024, 8:30 am

Rider Transit Center

MEMBERS:

Mayor Darrel Hinnant-City of Kannapolis
Darrell Jackson- City of Kannapolis
Betty Stocks-City of Concord

OTHERS:

Andy Christy-Rider Transit
Phil Conrad- CRMPO
Taylor Cox-Benesch
Randall Farwell-Benesch
Craig Meeks-Rider Transit
Wilmer Melton-City of Kannapolis
Obdulio Oden-Transdev
Charles Ratliff-Cabarrus County
Christina Rosales-GMV
Joshua Smith-City of Concord
Kelly Strong-Cabarrus County
Paige Tamaro-City of Concord
Jaime Tippett Poe- Rider Transit
L.J. Weslowski- Rider Transit

Call to Order, Quorum, and Approval of Minutes

Mayor Hinnant called the meeting to order at 8:32 am, declared a quorum.

No individuals were present for public comment.

Mayor Hinnant requested a motion to approve the minutes of the Concord Kannapolis Area Transit Commission meeting from 8/22/2024.

Mr. Jackson made a motion to approve; Ms. Stock second. Minutes approved unanimously as presented.

Mr. Weslowski introduced Cristina Rosales, project manager with GMV.

CAD/AVL Software Upgrade Recommendation

Using a PowerPoint, Mr. Christy presented.

- Contract with current CAD/AVL provider (Passio) expires in early 2025
- RFP for new CAD/AVL, APC and On-Board Wi-Fi system issued August 16th

- 5 Proposals received September 17th and evaluated by staff
- Following product demos from finalists, staff negotiated with and is recommending contract with GMV

Mr. Christy introduced Ms. Rosales who presented and provided an overview of the GMV product.

- 100+ Transit Customers
- 2,000+ Digital Signs Deployed and Under Contract
- 18 Years in the US Transit Industry
- 55 Full-Time Employees
- 3,000+ Fixed Buses Tracking
- CAD/AVL Provider for:
 - Chapel Hill Transit – Chapel Hill, NC
 - University of North Carolina, Chapel Hill
 - DCTS – Davidson County, NC
 - GTA – Greensboro, NC
 - High Point Transit – High Point, NC
 - Link Transit – Burlington, NC
 - PART – Piedmont Triad Area, NC
 - WSTA - Winston-Salem, NC
- Modernize Rider Transit's operations while integrating with existing hardware wherever possible
- Provide Rider Transit with accurate data, a suite of reports and a custom report builder
- Serve as a true transit technology partner to Rider Transit

Mr. Meeks presented.

- GMV Pricing:
Selection based on best value to Rider Transit.
 - 1st Year Total \$249,877 (\$250,000 available in current year budget)
Years 2-3 Total \$220,098
3-Year Contract Total \$469,975
 - 3-Year Funding Total:

| | |
|-------------|-----------|
| FTA grant: | \$352,494 |
| Concord: | \$58,741 |
| Kannapolis: | \$58,741 |

Recommendation/Action: Review and consider approval of negotiation of a three-year contract with GMV for a new CAD/AVL, APC, and Wi-Fi system for Rider Transit with a not-to-exceed price of \$469,975.

Mr. Jackson made a motion to approve negotiation of a three-year contract with GMV for a new CAD/AVL, APC, and Wi-Fi system for Rider Transit, not to exceed \$469,975. Ms. Stocks second. Unanimous

Cabarrus Microtransit Feasibility Study

Using a PowerPoint, Mr. Weslowski presented.

- This study was in partnership between CCTS, Rider Transit, NCDOT and Benesch.

- The goal was to examine all of Cabarrus County, including population, growth and development, existing public transit service options, and determine where and how Microtransit might be a viable mode of service to improve mobility across the county.
- The project was 100% funded by NCDOT.

Mr. Weslowski introduced Taylor Cox from Benesch for taking us through the study process, findings and recommendations.

Mr. Cox provided a recap of preliminary concepts and service characteristics.

Highlights of Microtransit Service

- Add connections to fixed route service
- Replace inefficient fixed route segments
- New service in low density areas
- Provides services when other modes are unavailable
- Provides localized mobility

Benefits of Microtransit Service

- 8300 more people have access to transit
- 98000 more trips on transit
- \$12.53 decrease in cost per trip
- 20% increase in revenue miles
- 33% increase in revenue hours
- 36% increase in trips per hour

Daytime versus night time zone concepts for Kannapolis Zone, West Concord/Harrisburg Zone, and South Concord Zone

Will need to have Red and CCX Routes and a Circulator.

The percentage of on-demand trips that are able to be navigated curb to curb needs to be addressed.

Financial Analysis without CCX and Red Routes or Circulator

Existing Services in Cabarrus County

| System | Annual Ridership | Peak Vehicles | Annual Operating Expense | Revenue Miles | Revenue Hours | Expense per Trip | Population Served |
|----------------------------|------------------|---------------|--------------------------|------------------|---------------|------------------|-------------------|
| Existing Fixed Route | 293,613 | 8 | \$3,931,553 | 730,473 | 34,161 | \$13.39 | 50,900 |
| Existing Rider Paratransit | 16,819 | 4 | \$916,060 | 138,122 | 10,175 | \$54.47 | N/A* |
| Existing CCTS | 55,676 | 22 | \$2,365,392 | 481,022 | 28,854 | \$42.48 | N/A* |
| Existing Total | 366,108 | 34 | \$7,213,005 | 1,349,617 | 73,190 | \$19.70 | 50,900 |

Proposed Service Concept

| System | Annual Ridership | Peak Vehicles | Annual Operating Expense | Revenue Miles | Revenue Hours | Expense per Trip | Population Served |
|-------------------------------|------------------|---------------|--------------------------|------------------|---------------|------------------|-------------------|
| Proposed Fixed Route | 284,238^ | 7 | \$3,507,649 | 654,125 | 28,780 | \$12.34 | 30,300 |
| Daytime Microtransit | 134,840 | 12 | \$3,920,000 | 704,868 | 48,978 | \$29.07 | 130,200 |
| Nighttime Microtransit | 14,476 | 6 | \$632,300 | 85,100 | 7,910 | \$43.68 | 132,100 |
| Potential Rider Paratransit* | 7,905 | 2 | \$430,548 | 64,917 | 4,782 | \$54.47 | N/A* |
| Potential CCTS* | 16,703 | 6 | \$709,543 | 116,587 | 6,994 | \$42.48 | N/A* |
| Proposed Daytime Total | 443,686 | 27 | \$8,567,740 | 1,540,497 | 89,534 | \$19.31 | 130,200 |
| Proposed Total | 458,162 | 27 | \$9,200,040 | 1,625,597 | 97,444 | \$20.08 | 134,100 |

Implementation Recommendations

- Phase 1A-Add Daytime Microtransit Zones
- Phase 1B-Realign Fixed Routes
- Phase 2-Add Nighttime Microtransit Zones
- Phase 3-Address Boulevards of Concord

Mayor Hinnant thanked presenters and asked that they send the PowerPoint utilized here with updated financials based on each zone and addition of the Red, CCX, and Concord Mills Circulator. He also requested that they receive the final document when it is completed.

Reports/Other Business

- Transdev Staffing Update- Mr. Oden stated that they are receiving significantly more applications and have filled all positions except maintenance and utility at this time.
- Triennial Review Results- Mr. Weslowski stated that the FTA Triennial Review has been completed and other than the three findings that the City of Concord received, Transit received no findings, which is a rare occurrence.
- Upcoming Long Range Transit Plan Task Order-Mr. Weslowski stated that staff is actively working on the task order for the Long Range Plan and we plan to have a recommendation for a firm to complete this task at the December Transit Commission Meeting.
- Replacement Bus and Van Update-Mr. Weslowski stated that the two fixed route vehicles have arrived and are at fleet for processing. We have ordered the four replacement vans, but are awaiting form completion due to the contract by NCDOT prior to deliver.
- Next Meetings – 12/19 – 8:30am at the Rider Transit Center

Mayor Hinnant requested a motion to adjourn. Mr. Jackson made a motion; Ms. Stocks second. Unanimous. With no additional discussion or items on the agenda; meeting adjourned at 10:13 am.