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# Short Range Transit Plan

# Presentation

## Short Range Transit Plan

- Opportunities and Challenges
- Meeting plan goals with system redesign using existing resources
- Additional service priorities

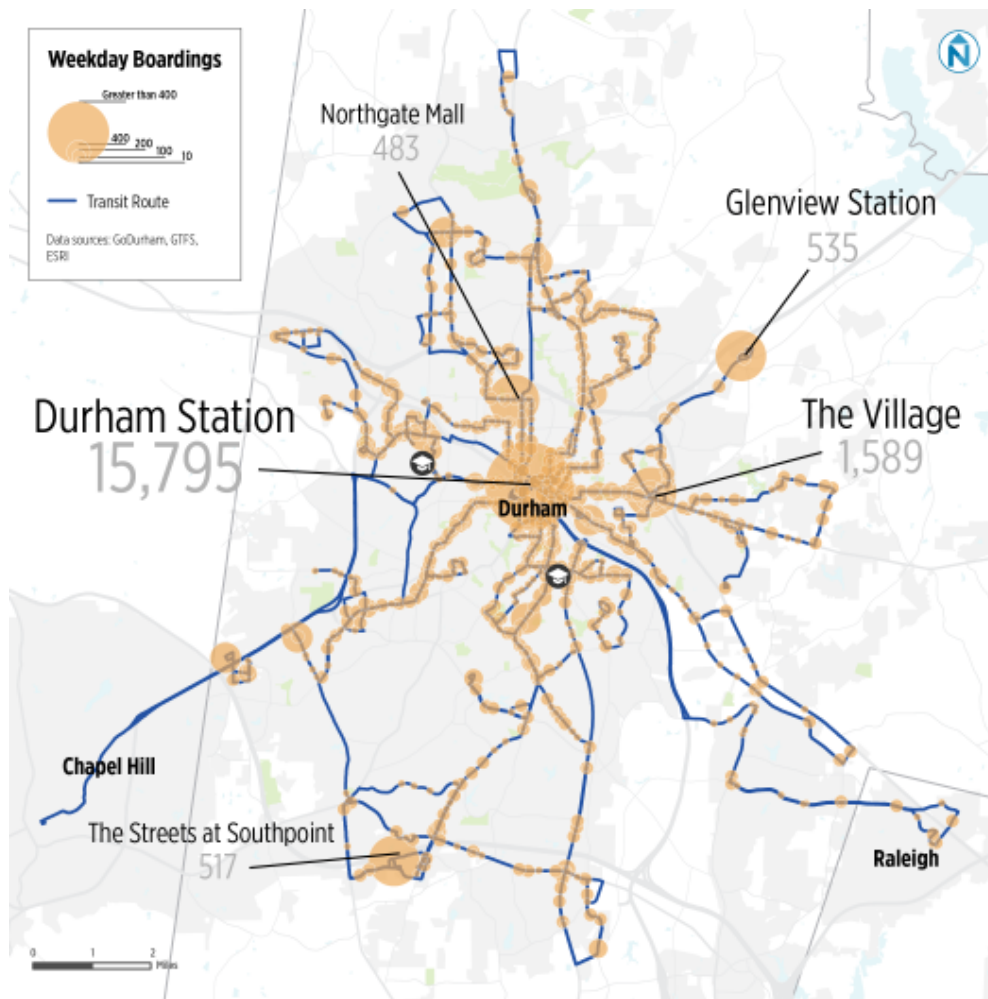
## Fare Strategies

- Fare free zones
- Fare free system
- Pass donation program
- Fare capping

## Addressing Funding Shortfall

- Service adjustments
- Guidance from Council

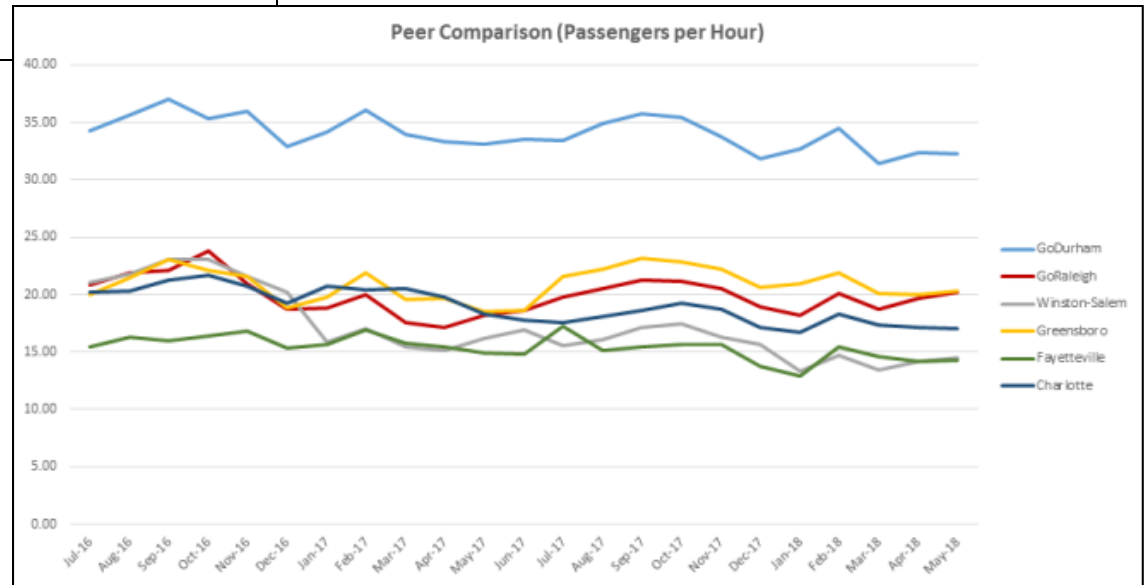
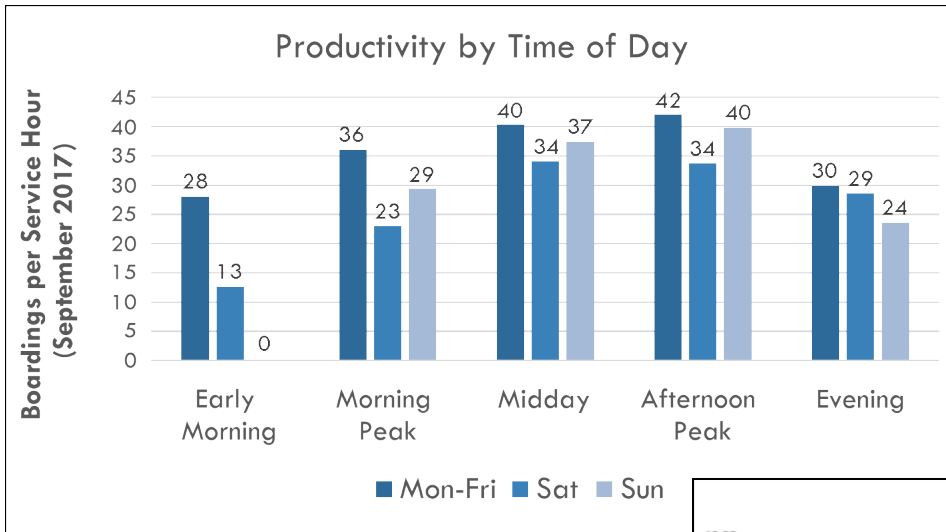
# Opportunities & Challenges



- High usage compared to peers
- Increasing population density
- Traffic congestion
- Housing affordability concerns

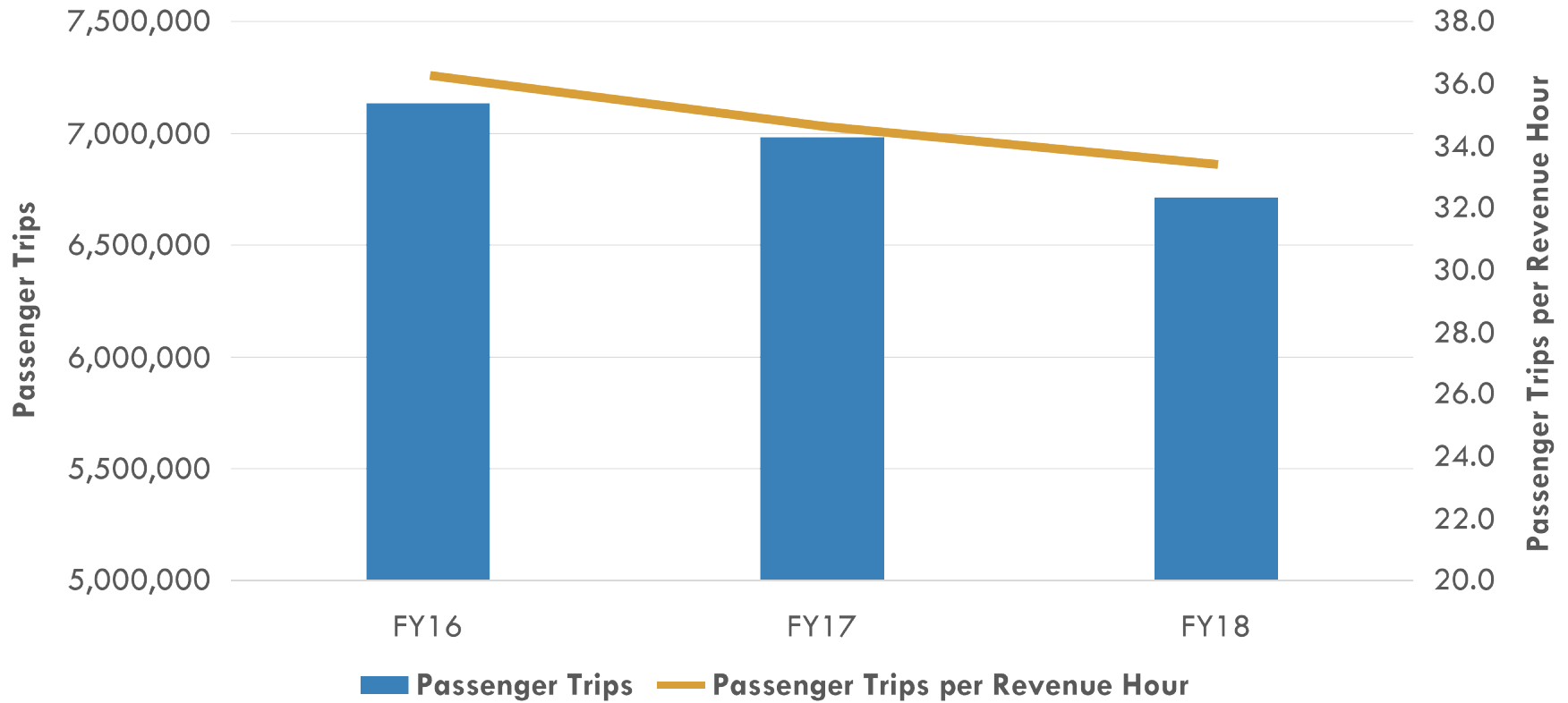
The Transit Plan provides an opportunity to address City of Durham's Strategic Initiatives to increase transportation choices and promote access to a diversity of housing options

# GoDurham is a Productive System

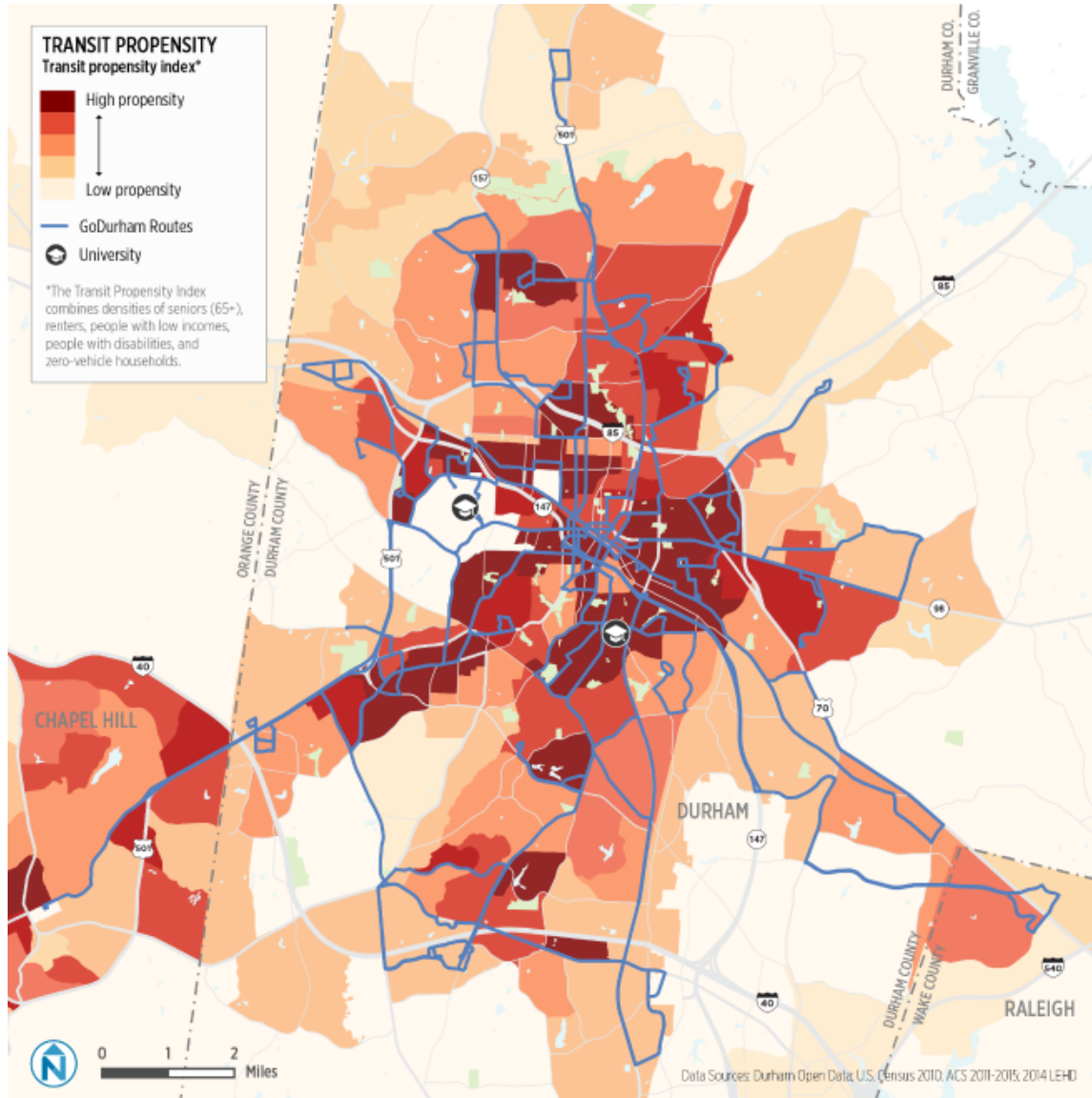


# At the Same Time, Ridership is Falling

GoDurham System Ridership and Productivity



# Important to Address High Transit Need and Ensure Affordability for Passengers



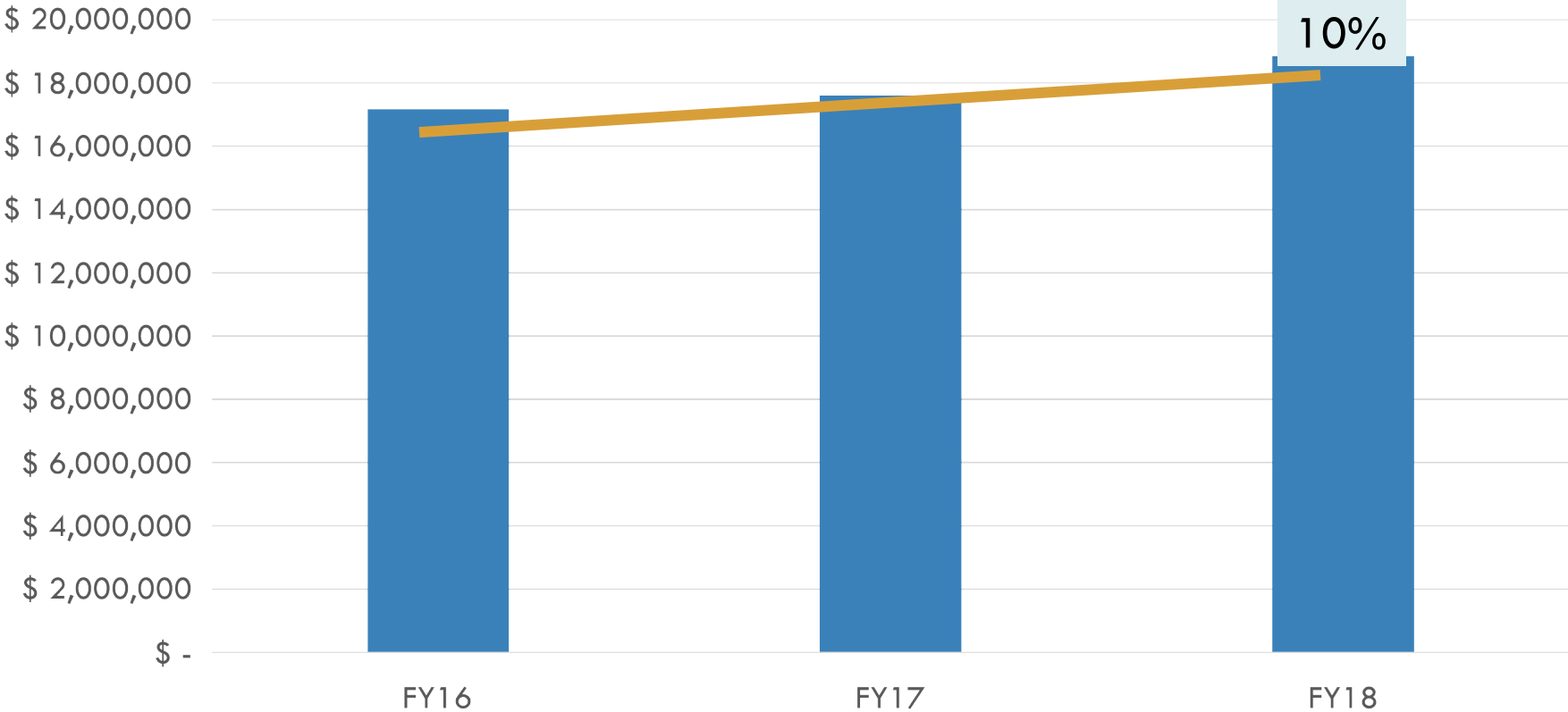
- Provide reliable service in areas with high transit need
- GoDurham's fares have remained at \$1 since 2004

# GoDurham's Fares are Lower than Peers

Sample Peer Agency	Local Fare
GoDurham	\$1.00
GoRaleigh	\$1.25
GoCary	\$1.50
Charlotte (CATS)	\$2.20
Richmond (GRTC)	\$1.50
Atlanta (MARTA)	\$2.50
Nashville (MTA)	\$1.70
Minneapolis (Metro)	\$2.00-\$2.50

# System Costs are Increasing

GoDurham Total Operating Cost

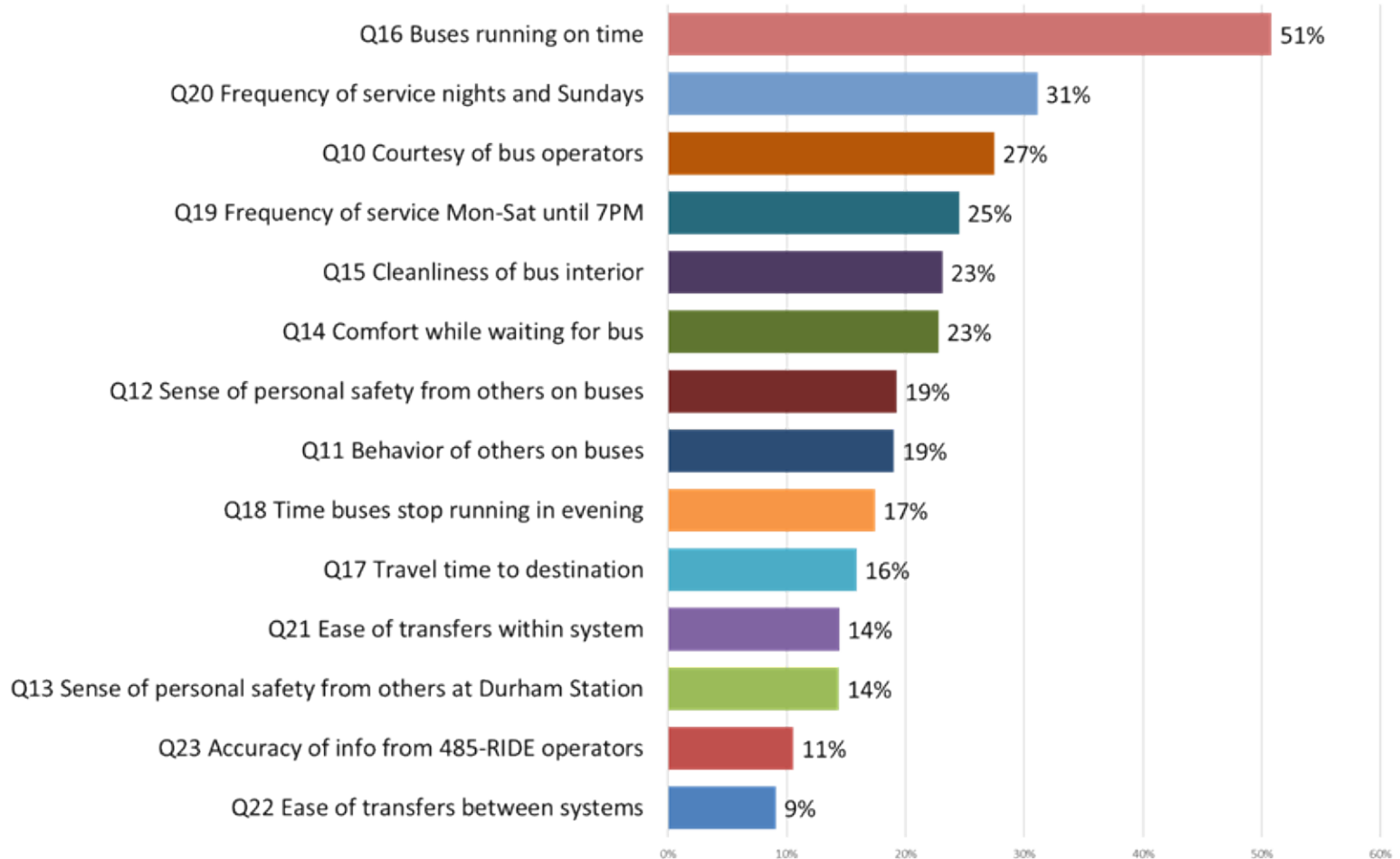




# Improving Reliability is Important for Riders

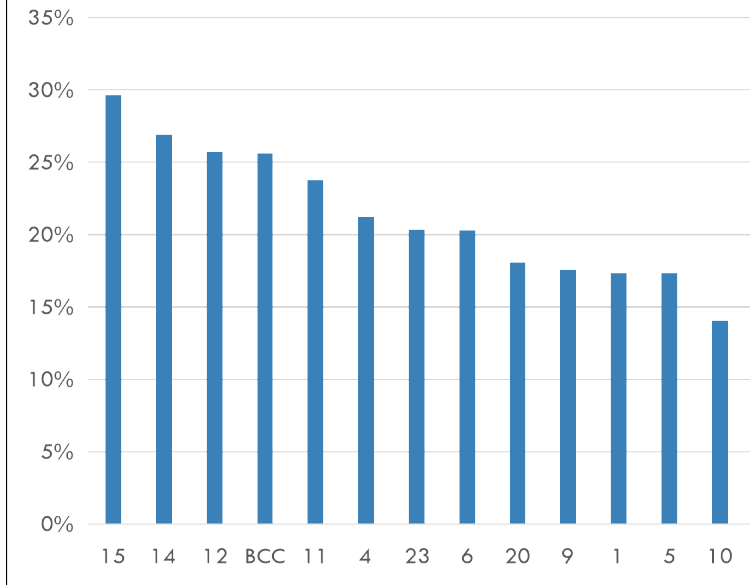
One of top 3 "Most important to improve"

(Source: GoDurham Onboard Survey, 2017)

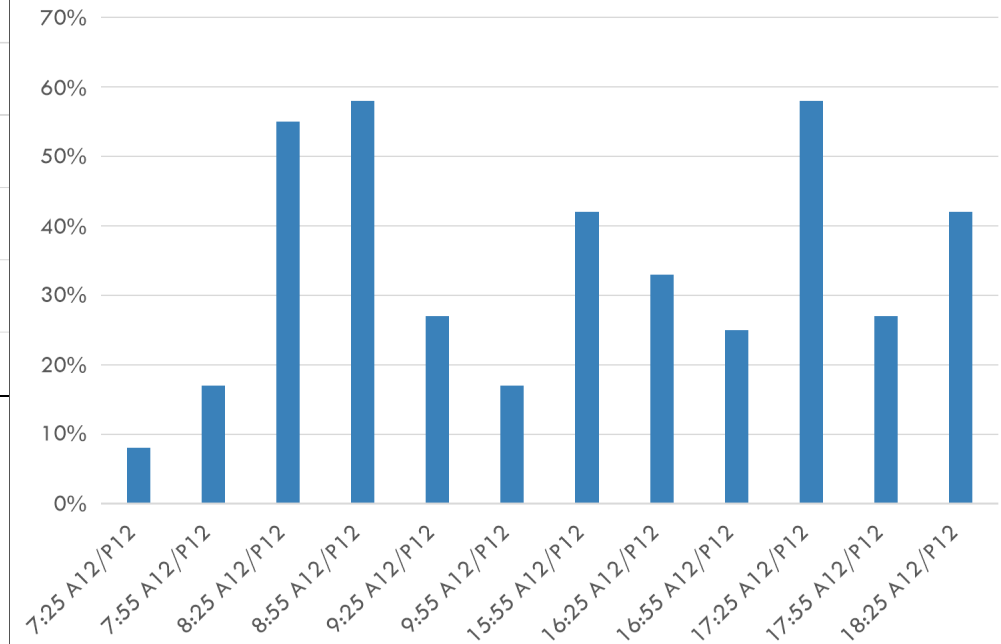


# Improving Reliability is Important for Riders

**On-Time Performance: Percent of Early and Late Trips (2018)**



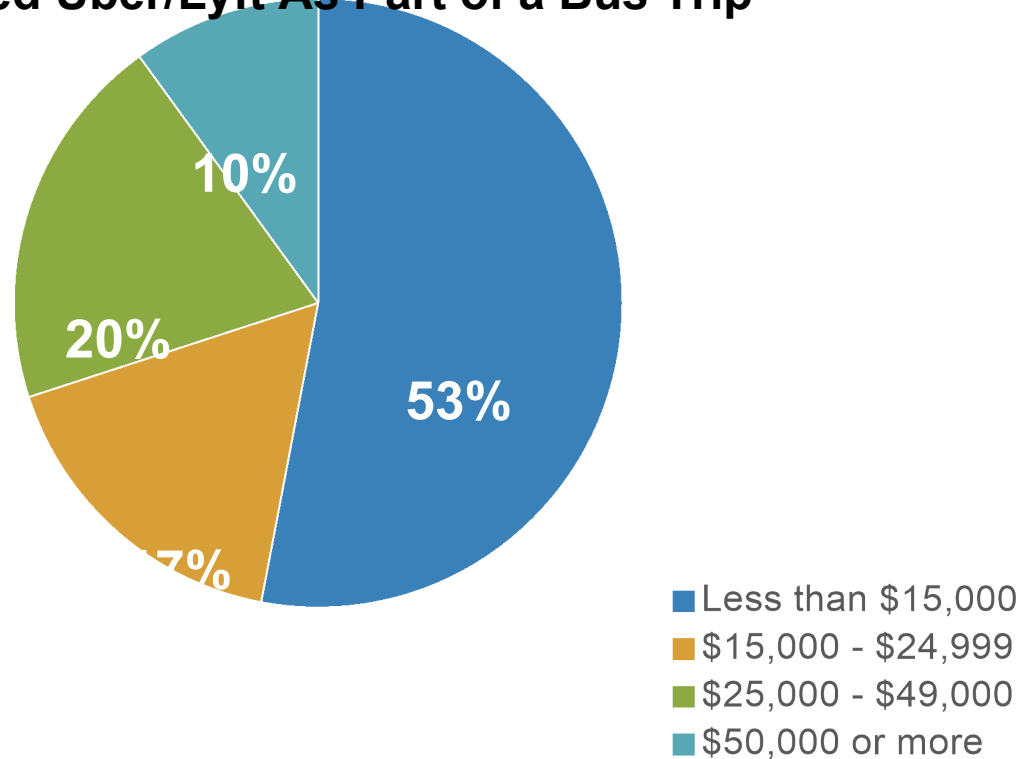
**Route 11: Percent of Early/Late Trips (Peak Period 2018)**



# GoDurham is Affordable if it is Reliable

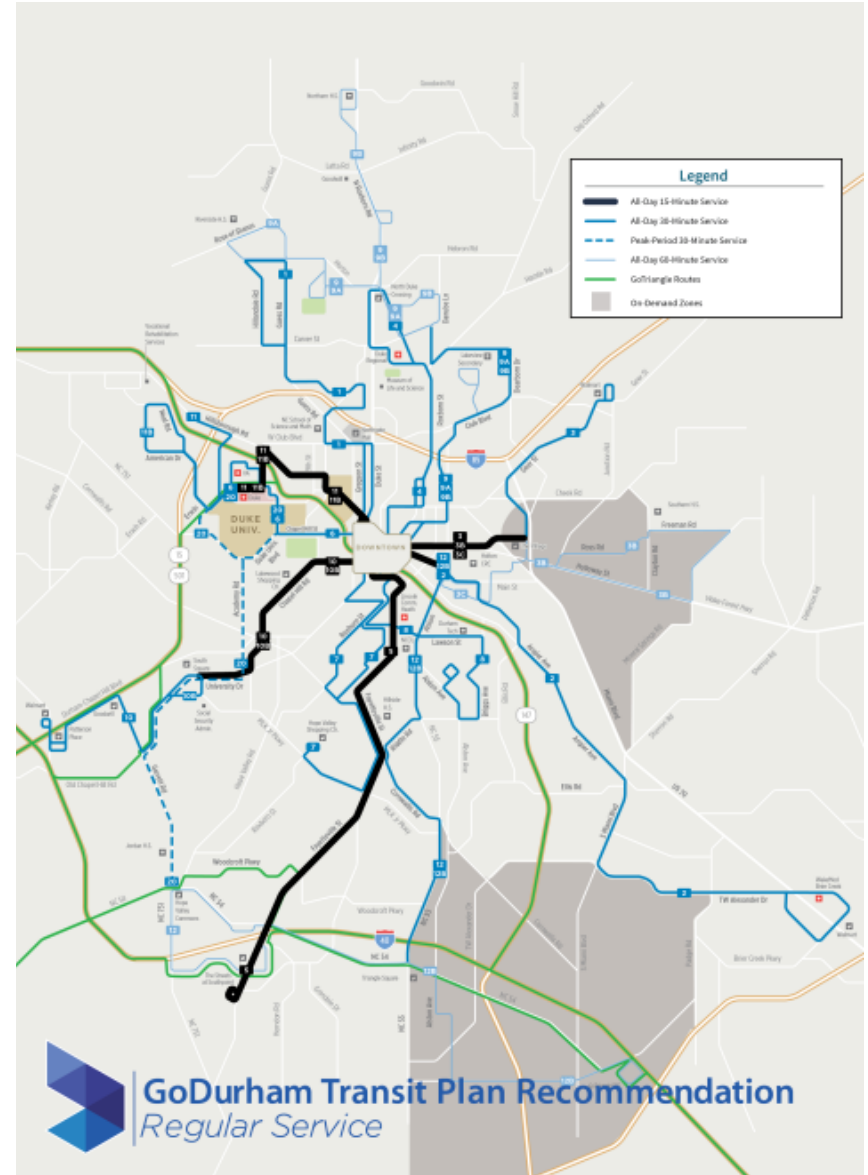
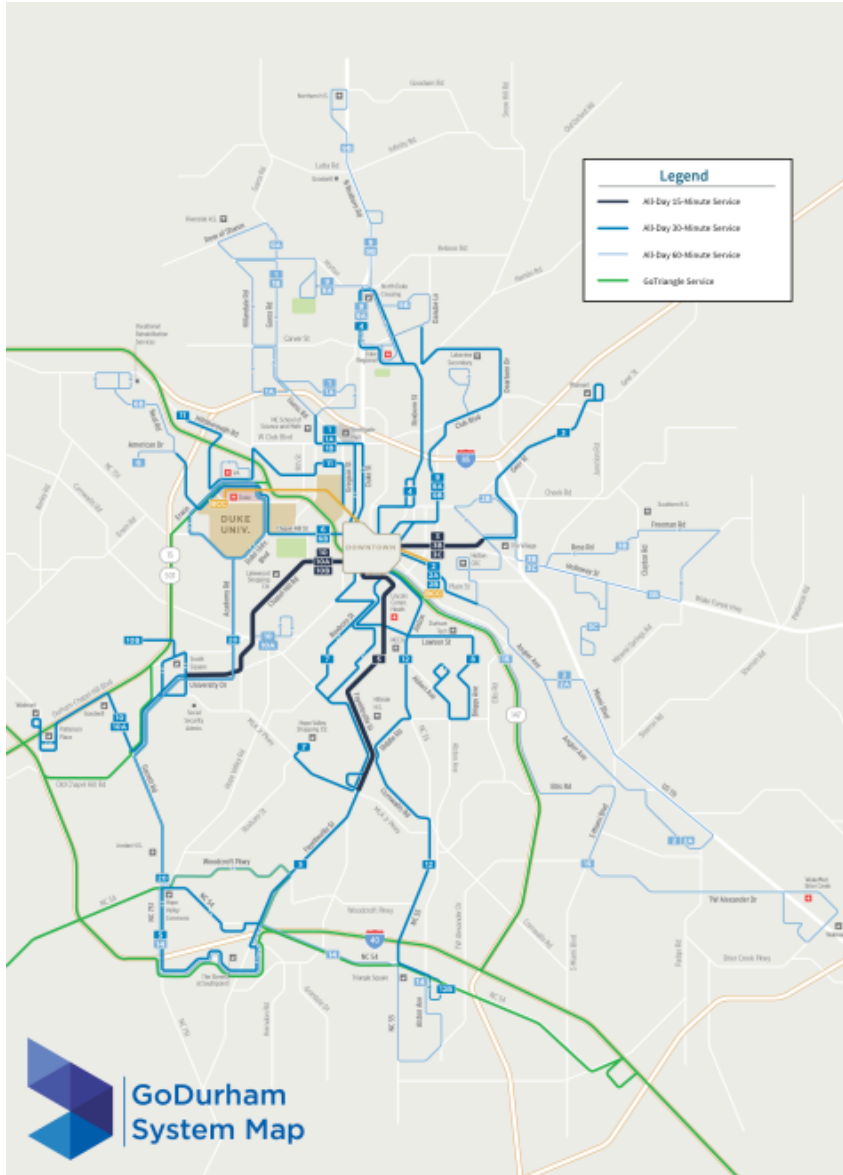
- Of those that answered “yes,” to using Uber/Lyft as part of a bus trip, the majority were below the poverty line

Used Uber/Lyft As Part of a Bus Trip



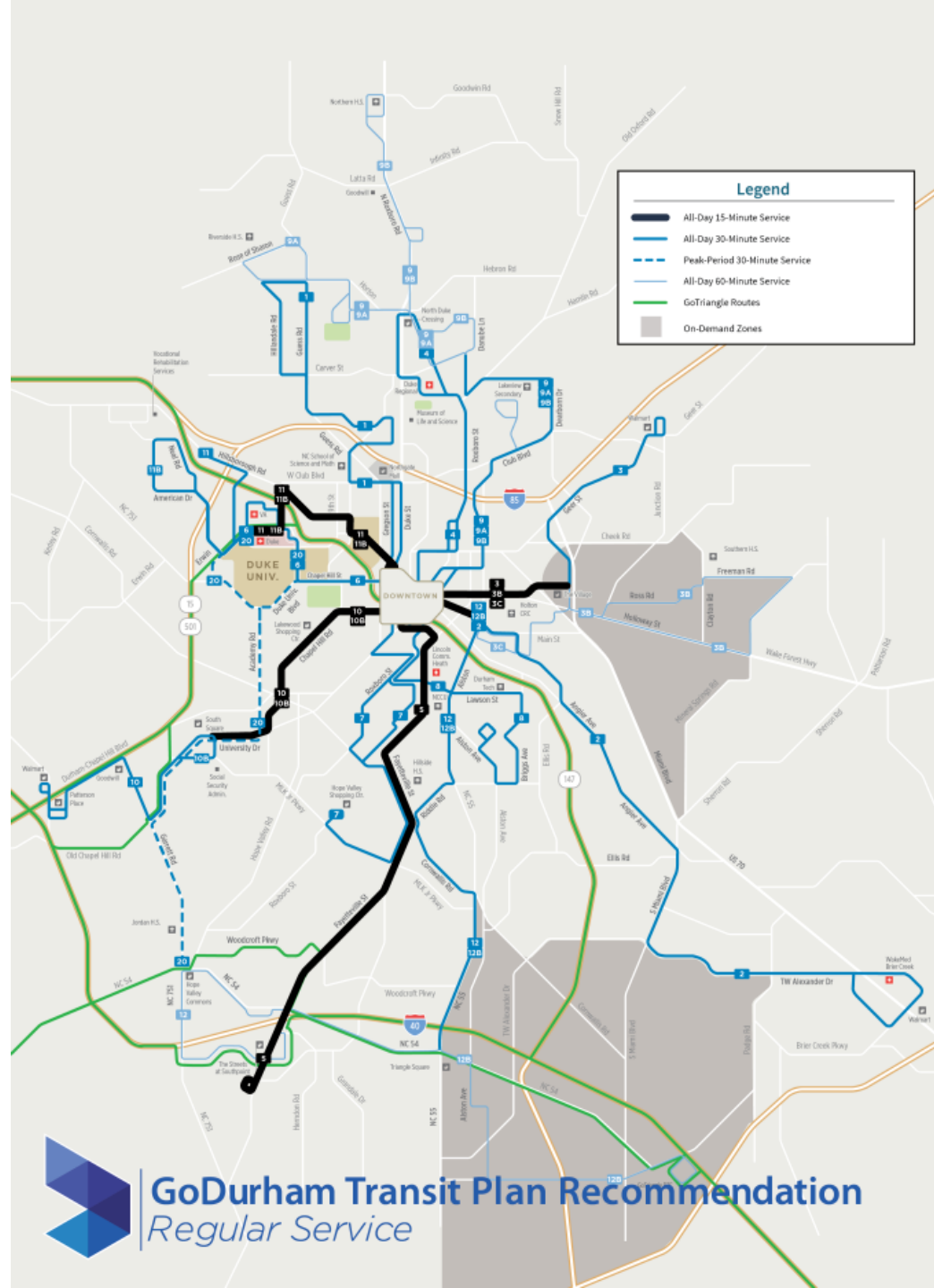
Source: GoDurham Customer Satisfaction Survey, 2017

# Existing Service and Preferred Option



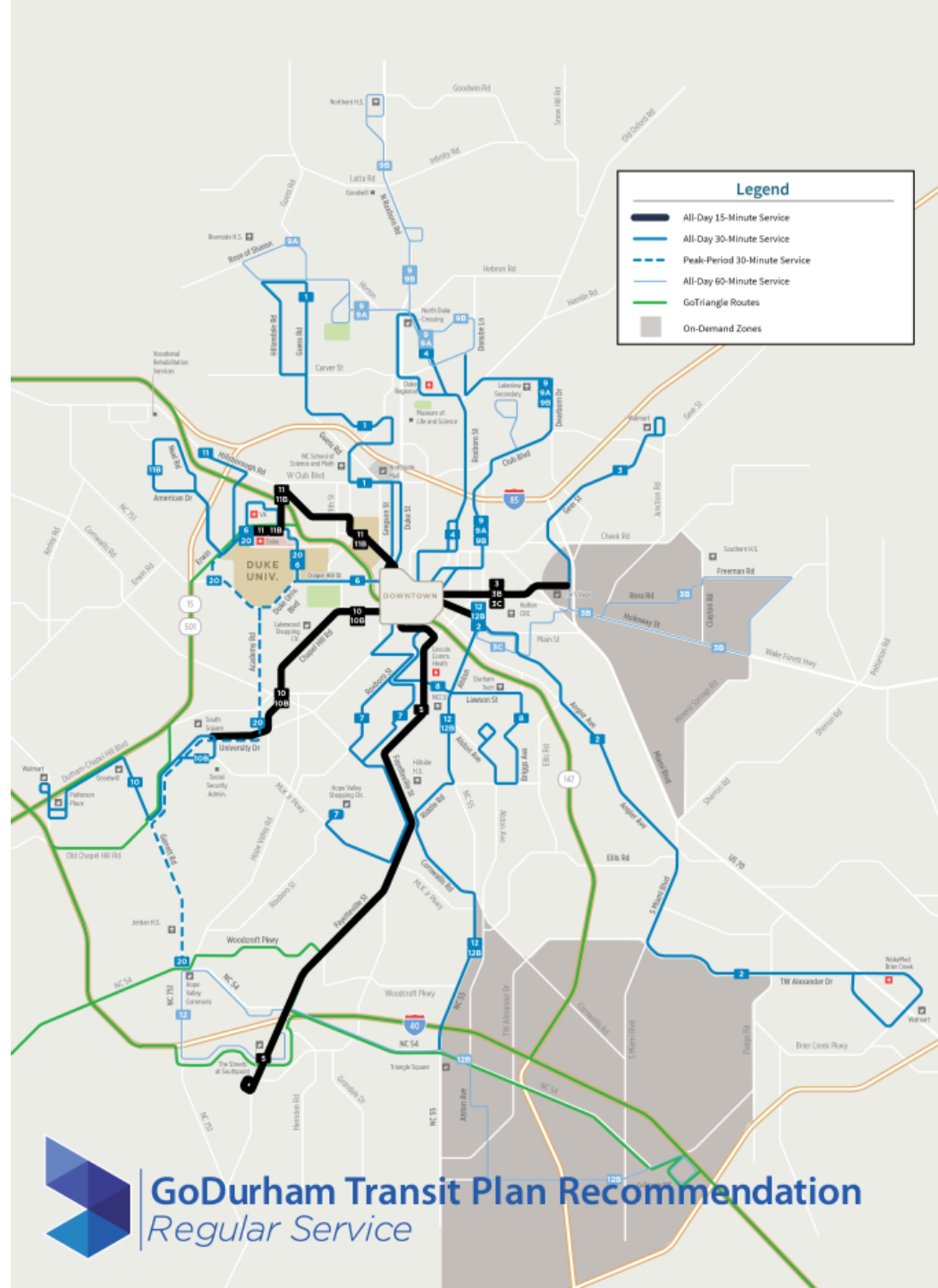
# Preferred Option

- **Improved Reliability** – Including routes with chronic on-time performance issues
- **Extended High Frequency Service Network** – New destinations with service every 15 minutes: Streets at Southpoint, Duke/VA Hospital, and E. Main Street (to Alston Ave)
- **Simplified Service** – Fewer route variations and deviations
- **Expanded Sunday and Weekday Evening Service** – Destinations with service every 30 minutes: The Village, Duke/VA Hospital, and E. Main Street (to Alston Ave)
- **More Direct Service to Major Destinations** – Connecting East Durham to RTP, Southpoint, and Brier Creek



# Preferred Option

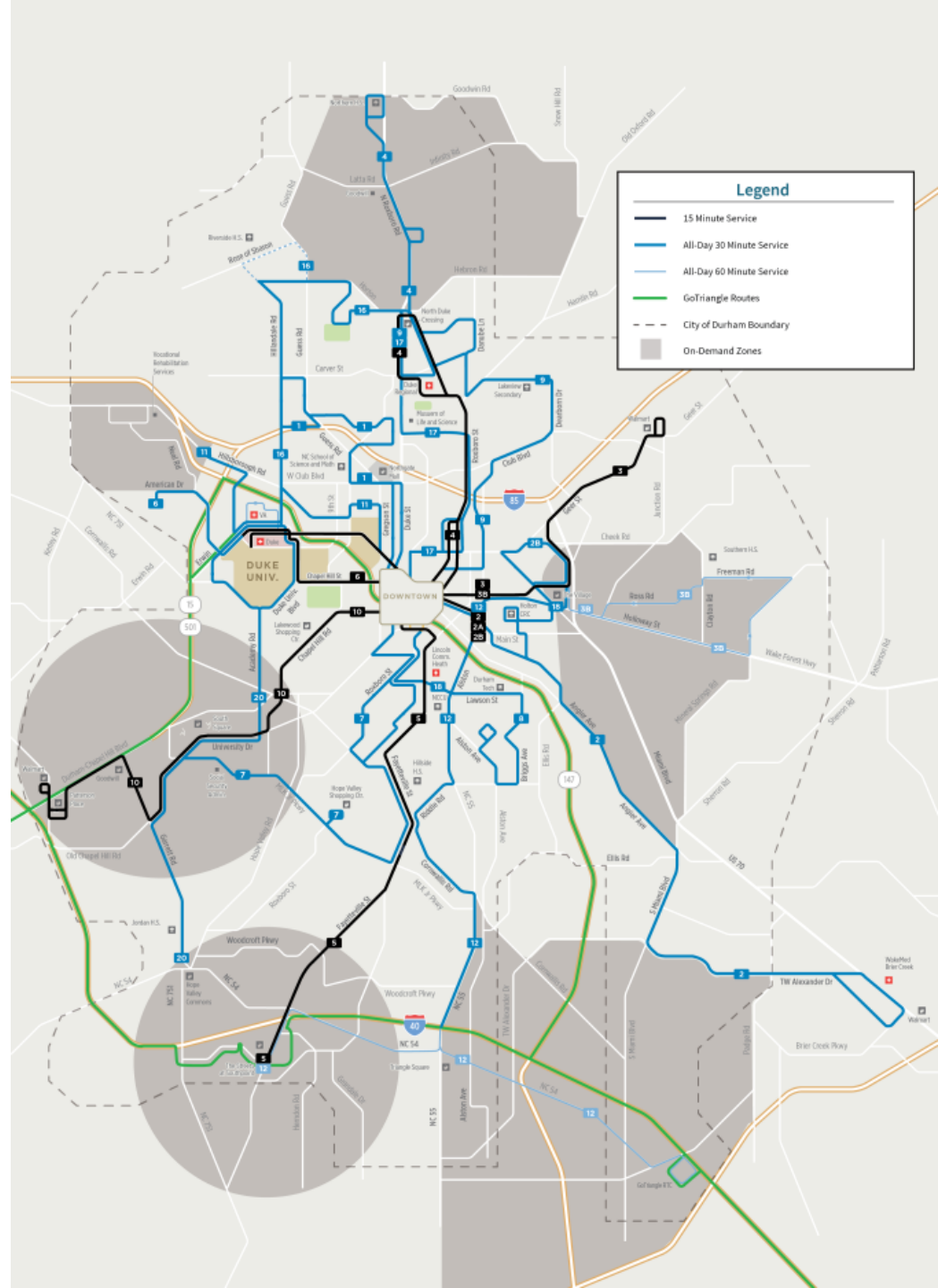
- 9.3 more miles of very frequent service (every 15 minutes or more all day)
- 12,700 more residents and jobs within a quarter mile of very frequent service
- 16,000 more residents and jobs within a quarter mile of service that operates every 30 minutes or better



# Mid-Term Priorities: Further Addresses Transit Need and Affordability

- More corridors with all day 15-minute service
- More frequent weekday/ Saturday service
- Later service
- More frequent/later Sunday service
- More direct service
- On-demand zones
- Supporting capital facilities

**Supports City's Strategic Initiatives  
of increasing transportation choices  
and promoting access to a diversity  
of housing options**



# Recommendation Uses BCC Resources for Addressing Reliability and Ridership

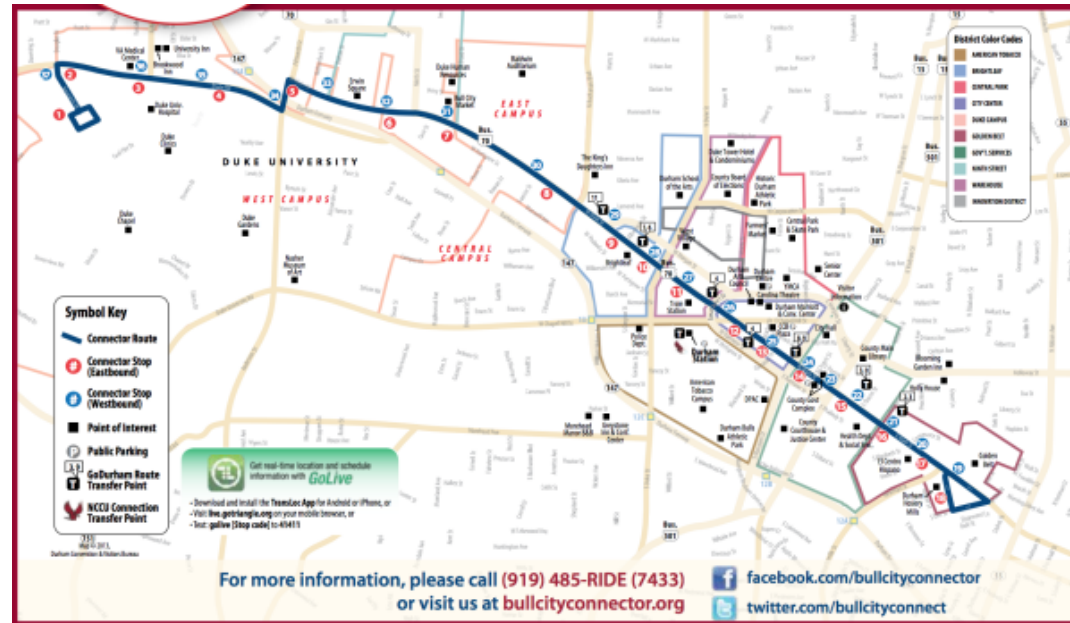
- Current GoDurham system achieves a lot
- BCC resources necessary for addressing reliability, ridership, and affordability
- Service along Main Street corridor improved
- No longer fare free





# BCC Designed to Connect Duke, VA Hospital, and Downtown Durham

- Began operation in 2010
- Fare free with support from Duke
- Originally served Durham Station with no timed connections
- Service removed from Durham Station in 2015
- Operates every 17 minutes with no published schedule



# Service in BCC Corridor Will Improve in Preferred Alternative

- 2015 change resulted in loss in ridership
- BCC reliability is an issue
  - 35% of trips take longer than budgeted trip time
- In the Preferred Alternative, the majority of service is maintained in BCC corridor
  - Frequency improved
- Timed Durham Station connections and Sunday service



# Revised Fare Policies Can Help Address Concerns about Eliminating Fare Free Route

## Previous Council Discussion:

- Concerned about reduction in accessibility to Downtown
- As cost of living increases in Durham, taking away something that makes living in the city easier would especially hurt low-income populations
- What could be next category of riders that should be supported for free service?
- Could means testing be conducted?



# Opportunity to Increase City of Durham's Bulk Pass Donation Limit

- City of Durham already donates \$8k in Day passes to nonprofit organizations each year
- Match program provides an \$8k match for up to \$16k in day passes.
- Flexibility to increase donation limit and provide more passes
- Some current recipients:
  - Urban Ministries
  - Oxford House
  - Durham Head Start
  - The Aya Center



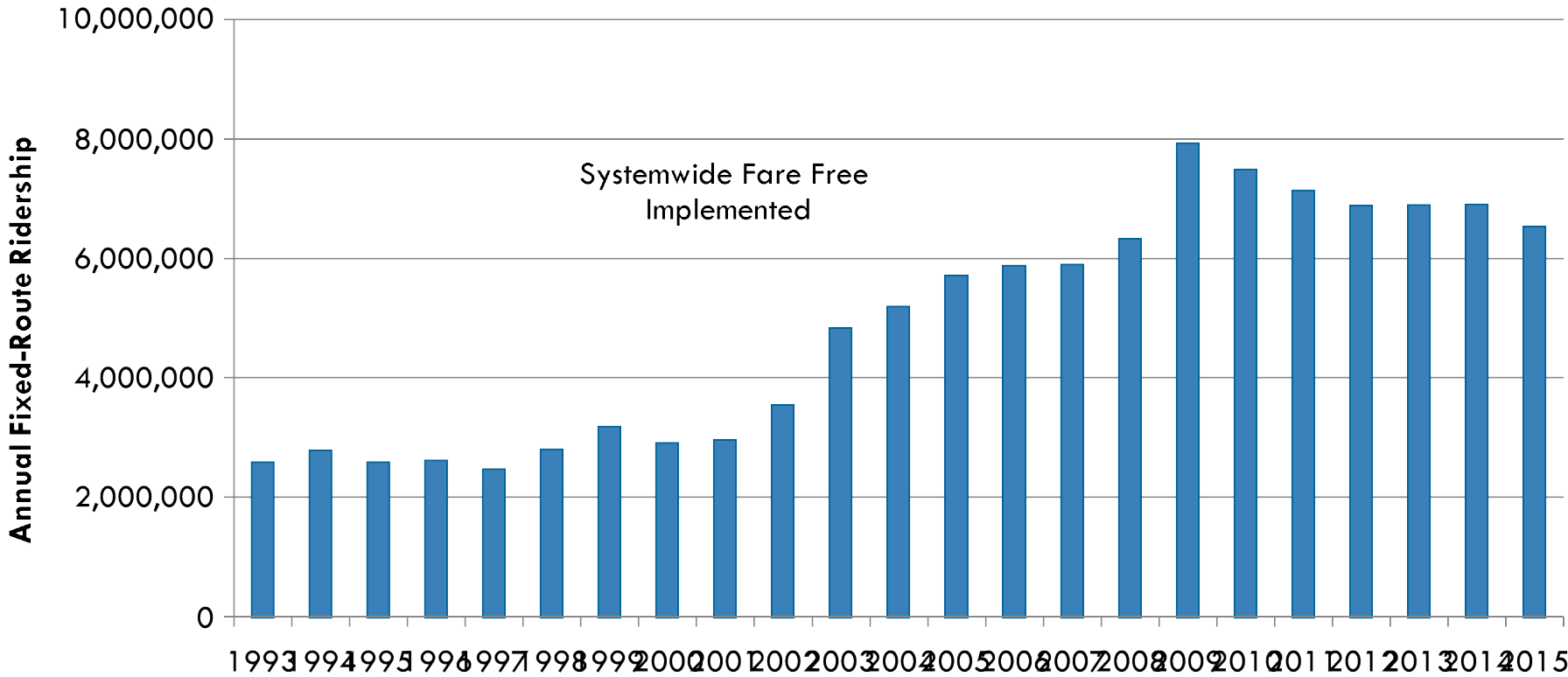
# Fare Free Service

- Fare free, or “pre-paid”, transit is funded by other means than collected fare
- Can address affordability and increase transit use
- Improves speed and eliminates cost to maintain/upgrade fareboxes

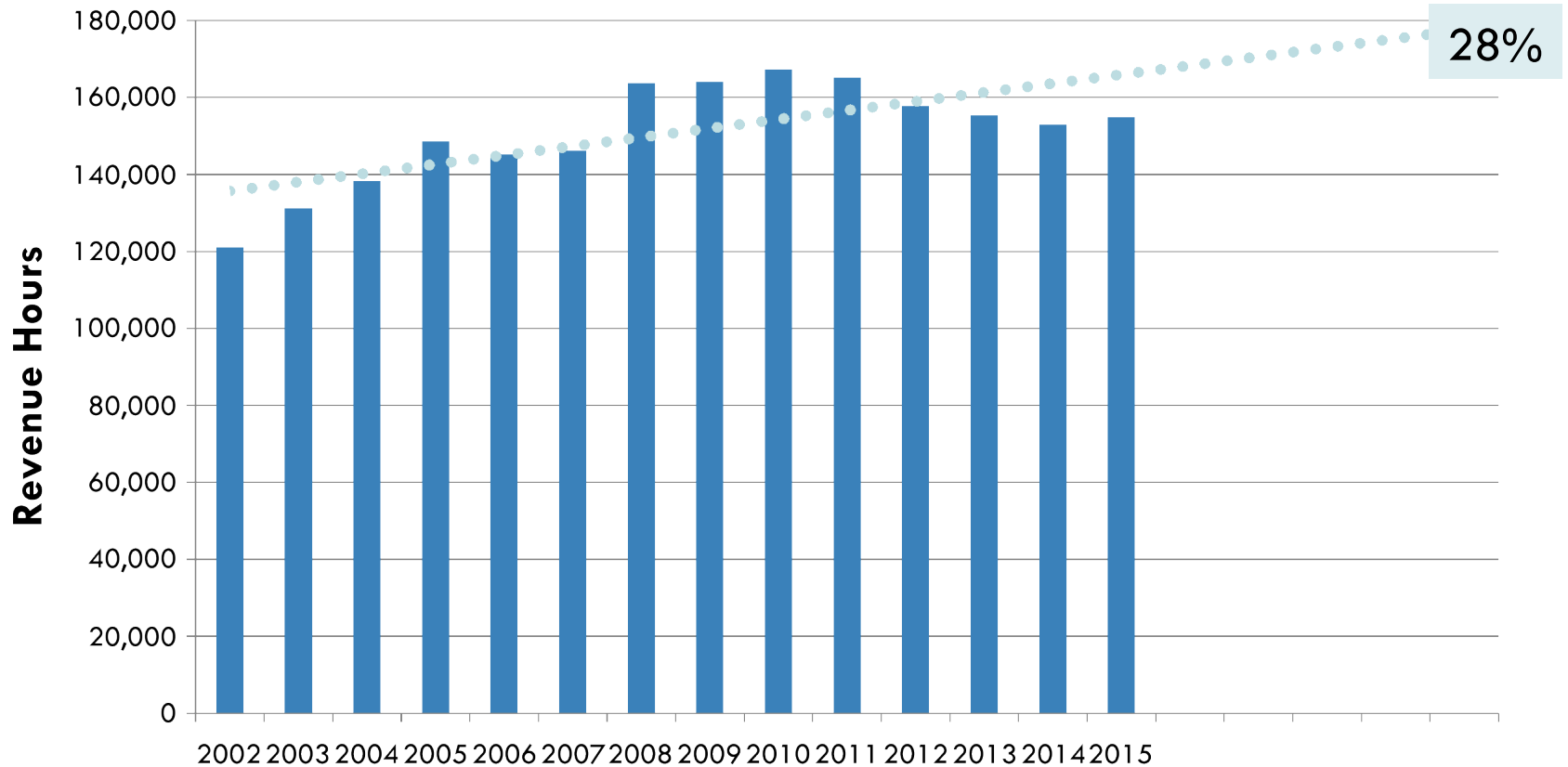


# Case Study: Chapel Hill Transit

**Chapel Hill Transit Fixed-Route Ridership 1993-2015**  
**Before/After Fare-Free Implementation**



# CHT Increased Service to Accommodate Ridership Demand



# Implications in Durham: Fare Free Service

Routes that could require additional service

Additional bus needs

Additional annual operating costs

Route 1A/1B, 2A/2B, 3/3B/3C, 4, 5/5K, 6/6B, 8, 9A/9B, 10A/10B, 12

23 to 34 vehicles  
(including spares)

Cost of **\$11.5 million**  
to **\$17 million**

7.5% to 21%  
increase in service

Cost of **\$1.4 million**  
to **\$4 million**





# Implications in Durham: Fare Free Service

## Additional costs:

- \$2.6 million in lost revenue
- Additional resources for increased paratransit demand
- Vehicle storage/maintenance capacity for new vehicles

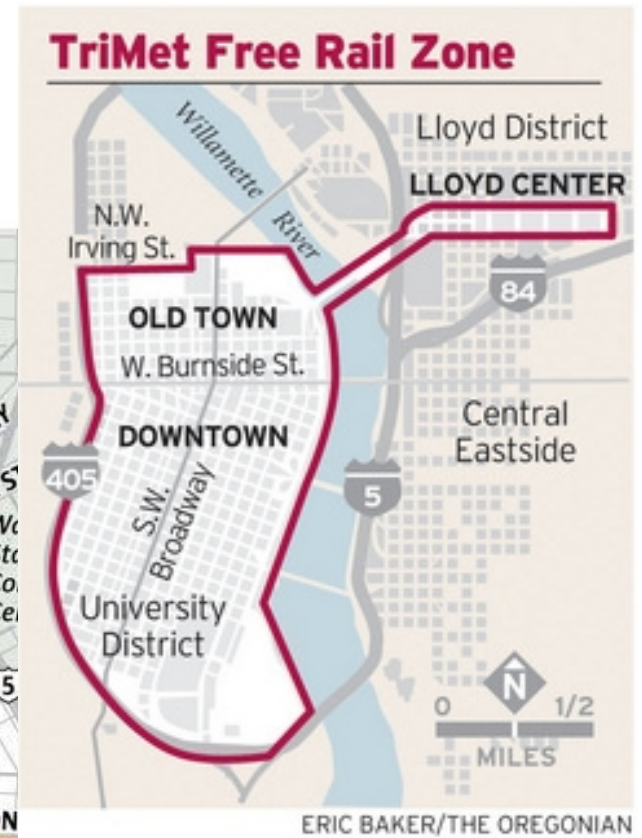
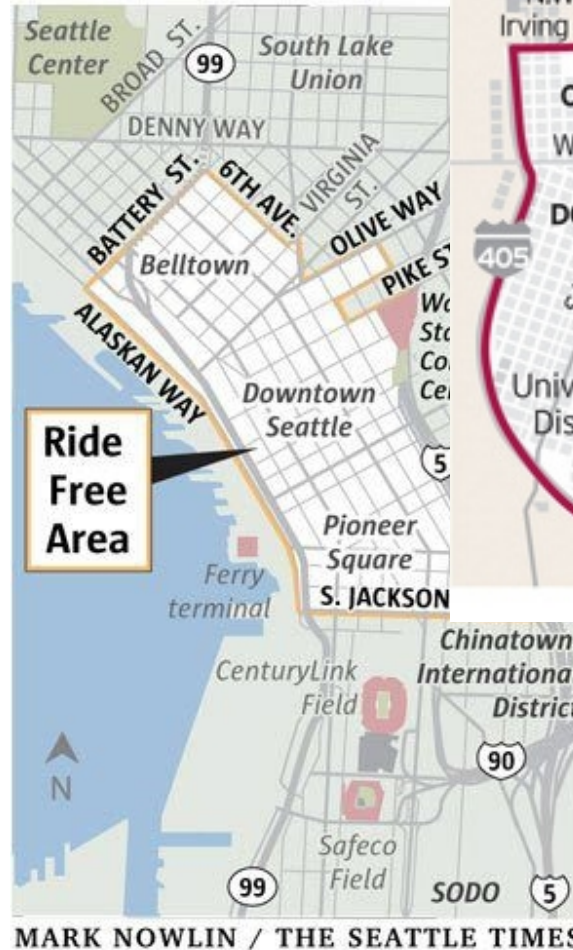
## Additional savings:

- No maintaining/replacing farebox equipment (estimated \$1 million savings)
- Administrative savings (no cash handling)



# Fare Free Zones

- Fare free operations within a zone or based on time-of-day are not common
- **Pros:** Improved boarding times, faster operations, increased ridership
- **Cons:** Confusing for passengers, increased conflicts, ridership increases less substantial than system-wide fare free



# Implications in Durham: Fare Free Zone

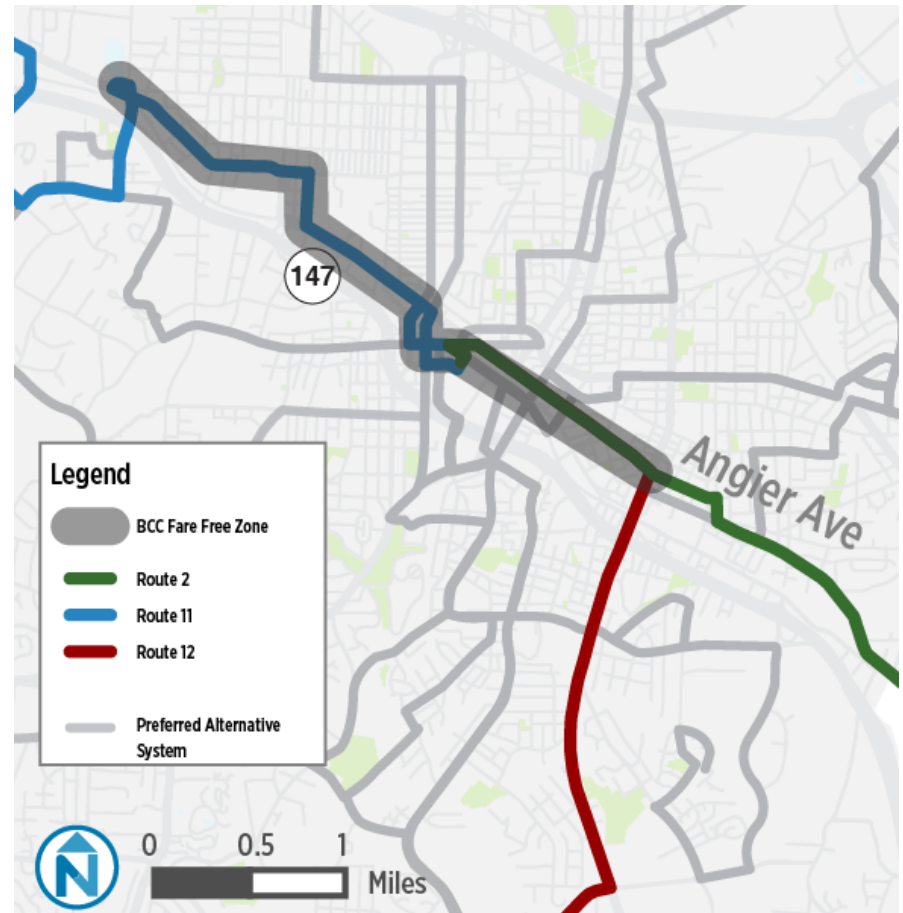
If the BCC is removed, could a fare free zone be established between East Durham and Duke Hospital?

## Assumptions:

- Free service along Main Street corridor on Routes 2, 11, and 12
- Includes Durham Station

## Considerations:

- Annual costs due to lost fare revenue are estimated at **\$285,000** annually
- Confusion for passengers
- Increased potential for conflicts
- Requires additional resources to implement



# Fare Capping



Improve **Pass Distribution** & Sales



Balance **Revenue** and **Ridership** Goals



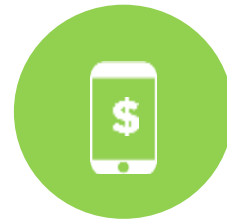
Improve **Passenger Experience**



Improve **Regional Coordination**

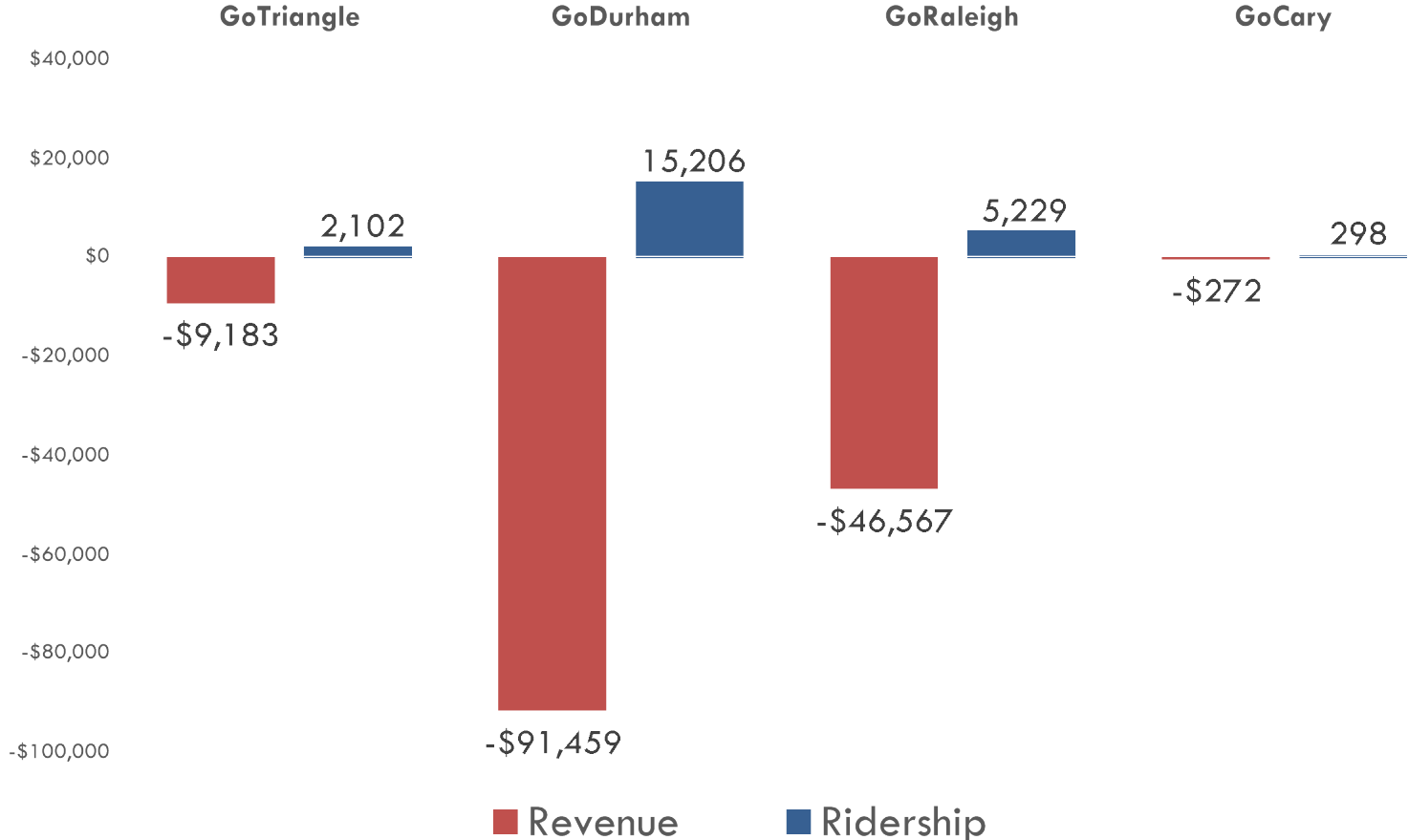


Make Transit An **Affordable Option**

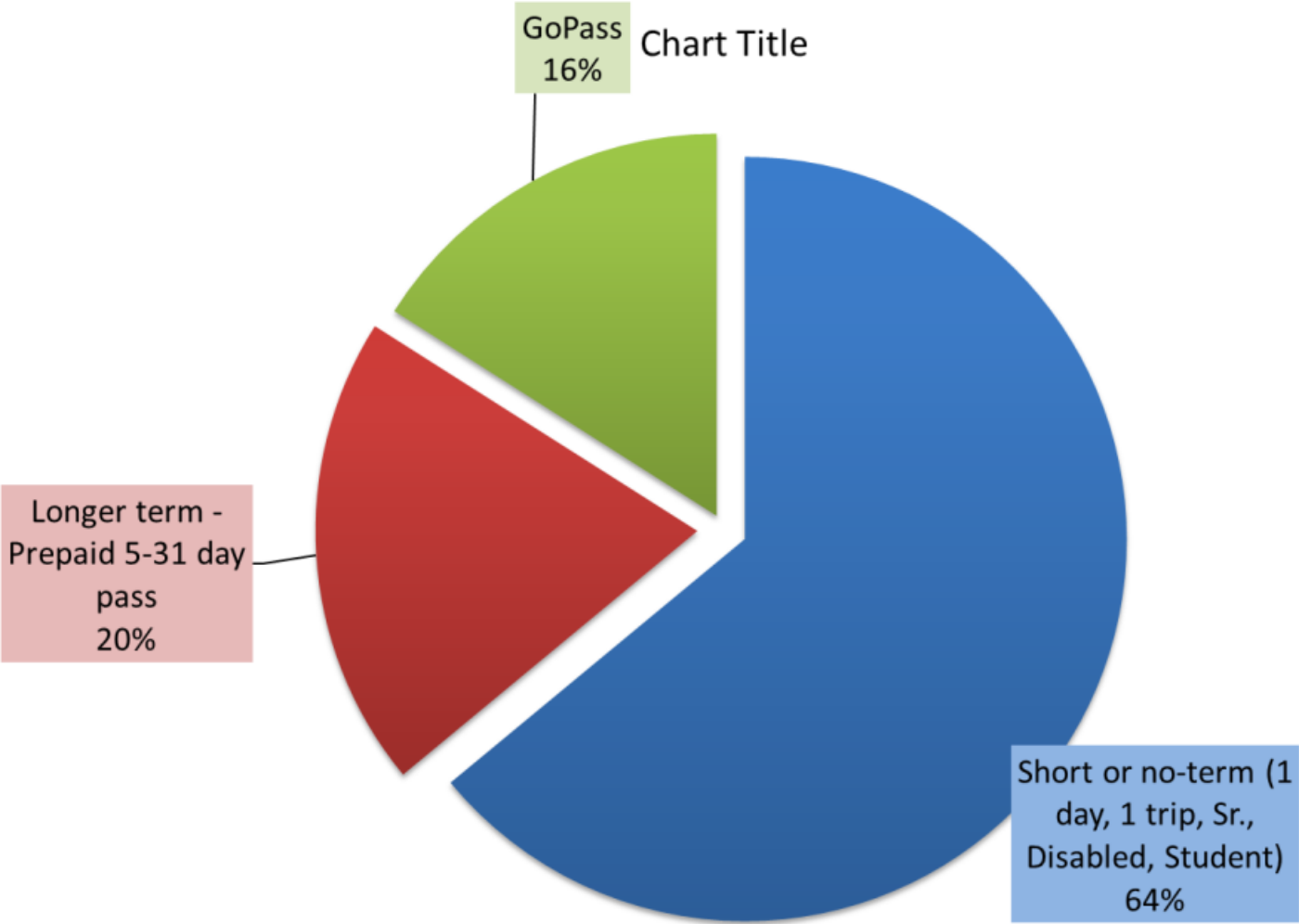


Explore New **Fare Technologies**

# Fare Capping Ridership/Revenue Impacts

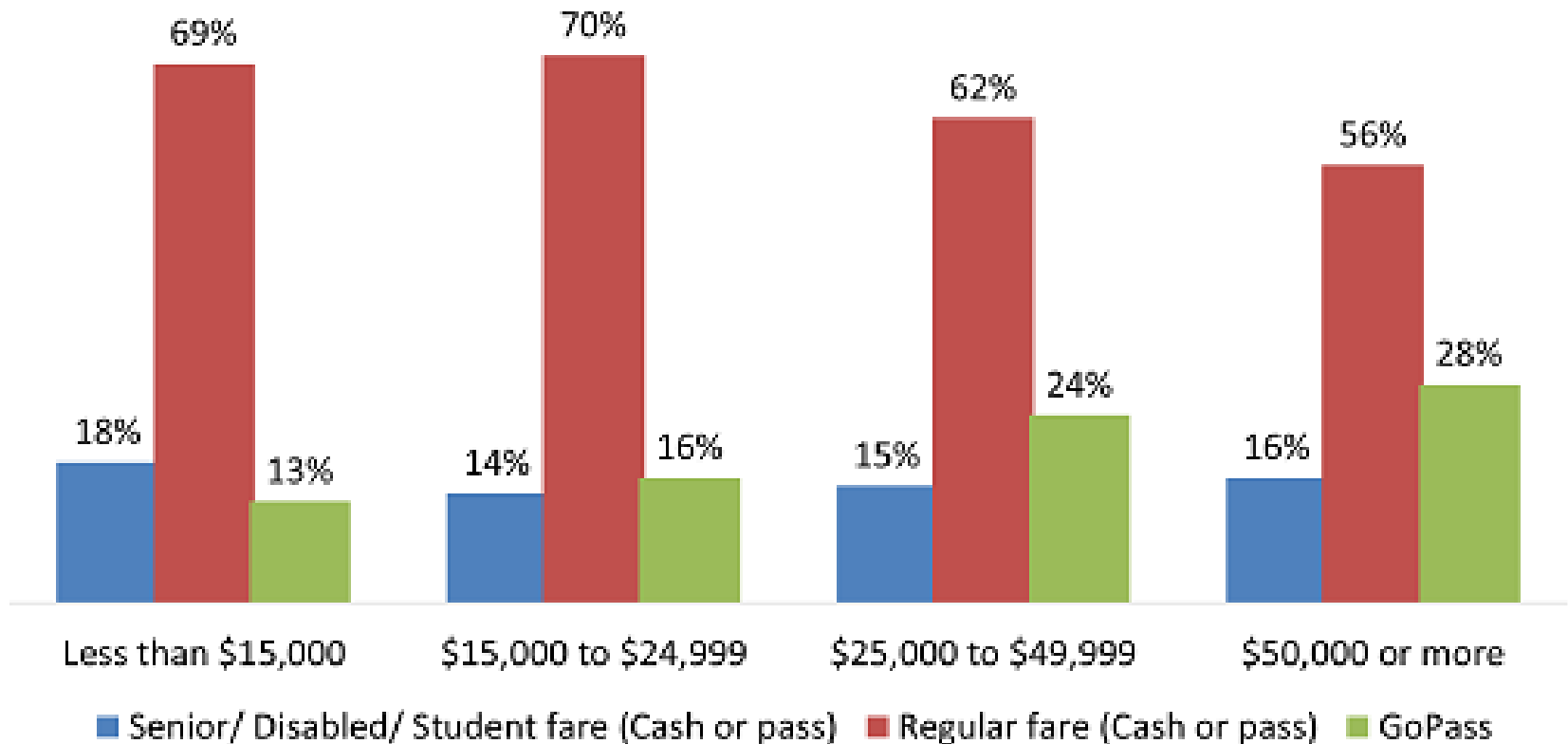


# Who Benefits from Fare Capping



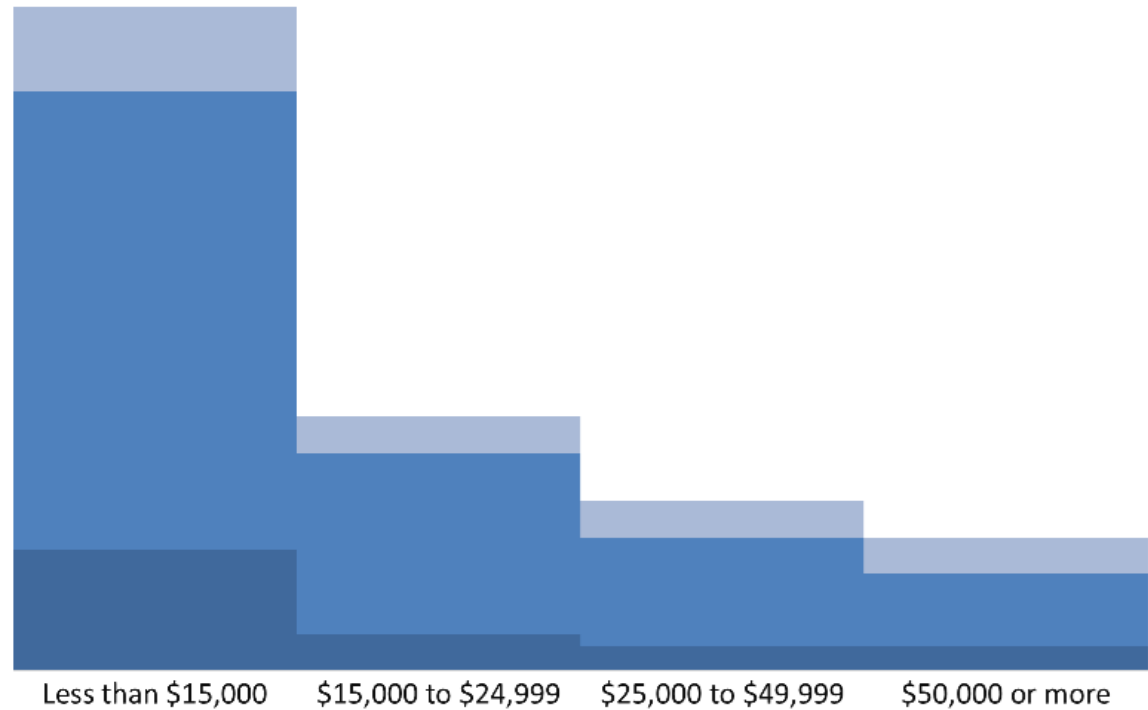
# Who Benefits from Fare Capping

Income and type of fare  
(Source: GoDurham Onboard Survey, 2017)



# Who Benefits from Fare Capping

Q7 Q41 Percent of riders in all income groups paying full or discounted fares  
(Source: GoDurham onboard survey 2017)



■ GoPass	7%	3%	3%	3%
■ Regular full fare (Cash or pass)	38%	15%	9%	6%
■ Senior/Disabled/Student (Cash or pass)	10%	3%	2%	2%

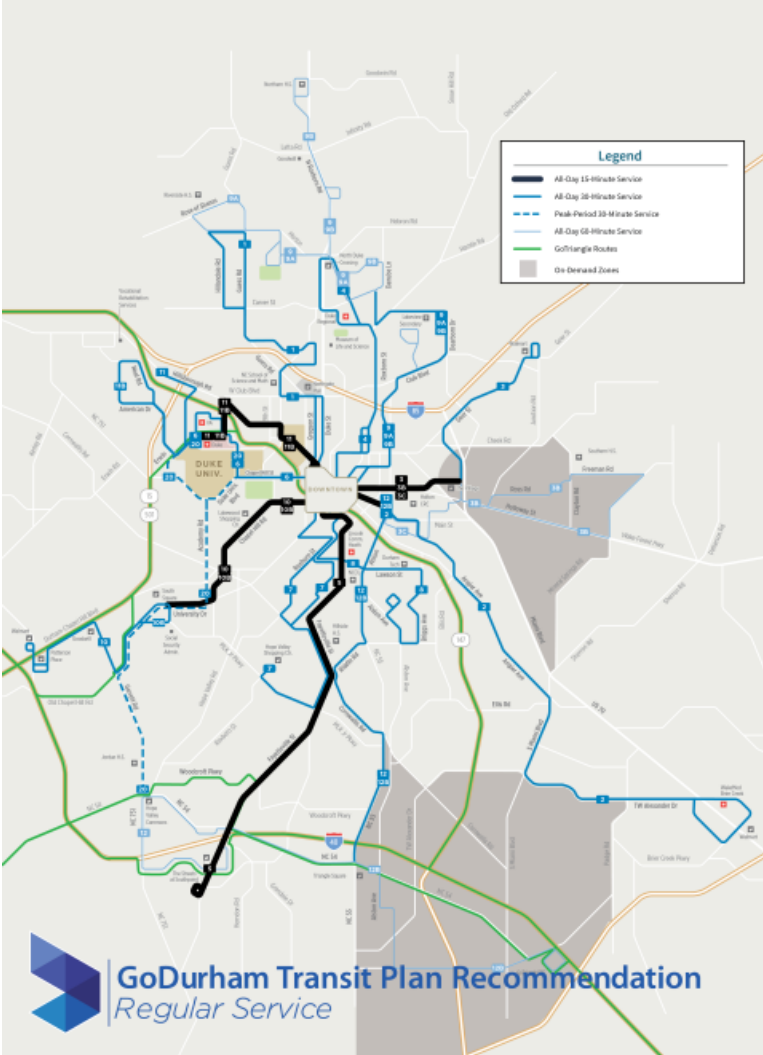


# Fare Capping Technology

Fare Media	Benefits
<p><b>Smart Card</b></p>	<ul style="list-style-type: none"> <li>• Account-based system, allows for user features like auto-load and balance protection</li> <li>• Can load value online or over the phone</li> <li>• Faster boarding times</li> <li>• Durability</li> <li>• Enhanced data collection</li> </ul>

Fare Media	Benefits	Drawbacks
<p><b>Mobile Ticketing</b></p>	<ul style="list-style-type: none"> <li>• Customer convenience</li> <li>• Operational savings</li> <li>• Reduce delay in fare payment</li> <li>• Lower farebox maintenance costs</li> <li>• Various options for validation</li> <li>• Reloadable</li> <li>• Fare products available on phone (no need for additional sales outlets)</li> </ul>	<ul style="list-style-type: none"> <li>• Some customers do not own a smartphone</li> <li>• Requires WiFi or data plan to activate</li> </ul>

# Guidelines to Address Funding Shortfall



- Maintain system integrity
- Impact least number of customers
- Focus on productivity and cost
- Maintain Coverage
- Social Equity

# Two Scenarios Developed

Scenario 1:  
Adjust Span of  
Service Across  
Entire Network

Scenario 2:  
Targeted  
Adjustments to  
Evening and  
Weekend  
Schedules

**Both scenarios save ~\$875,000 annually**

# Scenario 1 – Adjust Span of Service

Delete Route 20 – one of the least productive routes operated by GoDurham

End all service one hour earlier weekdays and Saturdays

The last “pulse” at Durham Station would leave at 11 p.m. instead of midnight

Begin Sunday service one hour later

First trips would begin at 8 a.m. instead of 7 a.m.

Begin Saturday service one hour later

# Scenario 1

Potential Option	Potential Ridership Impacts	Potential Savings	Potential Savings
Delete Route 20	100	3,500 Rev. Hours	\$350,000
Reduce Weekday/Sat span by one hour	239 (weekday) 120 (Saturday)	3,900 Rev. Hours	\$390,000
Start Sunday service one hour later	103	670 Rev. Hours	\$67,000
Start Saturday service one hour later	206	760 Rev. Hours	\$76,000
Total	339 (weekday) 326 (Saturday) 103 (Sunday) <b>*108,873 (annual)</b>	8,830 Rev. Hours	\$883,000

# Scenario 1 – Anticipated Results

## Positive

Improve on-time performance

High-frequency service is maintained in key corridors

Connection to RTP is maintained

Coverage loss is minimal (same as preferred Alternative)

Consistent, across the board reductions = everyone is affected

## Impacts

Route 20 goes away

Evening job access is reduced

Evening and early morning paratransit is reduced

Church access on Sundays may be impacted

# Scenario 2 – Scheduling Adjustments

## Targeted Span Adjustment:

Identify evening trips carrying less than 13 passengers  
Route 7 and 8 evening trips have low ridership  
Much of Route 7 and 8 service area is duplicated by Route 5

## Evening/Sunday Scheduling Adjustments

When service is hourly, long layovers

Operate second pulse when service is hourly to make schedules more efficient

Modifications to Route 12 are made to make it a 90-minute cycle

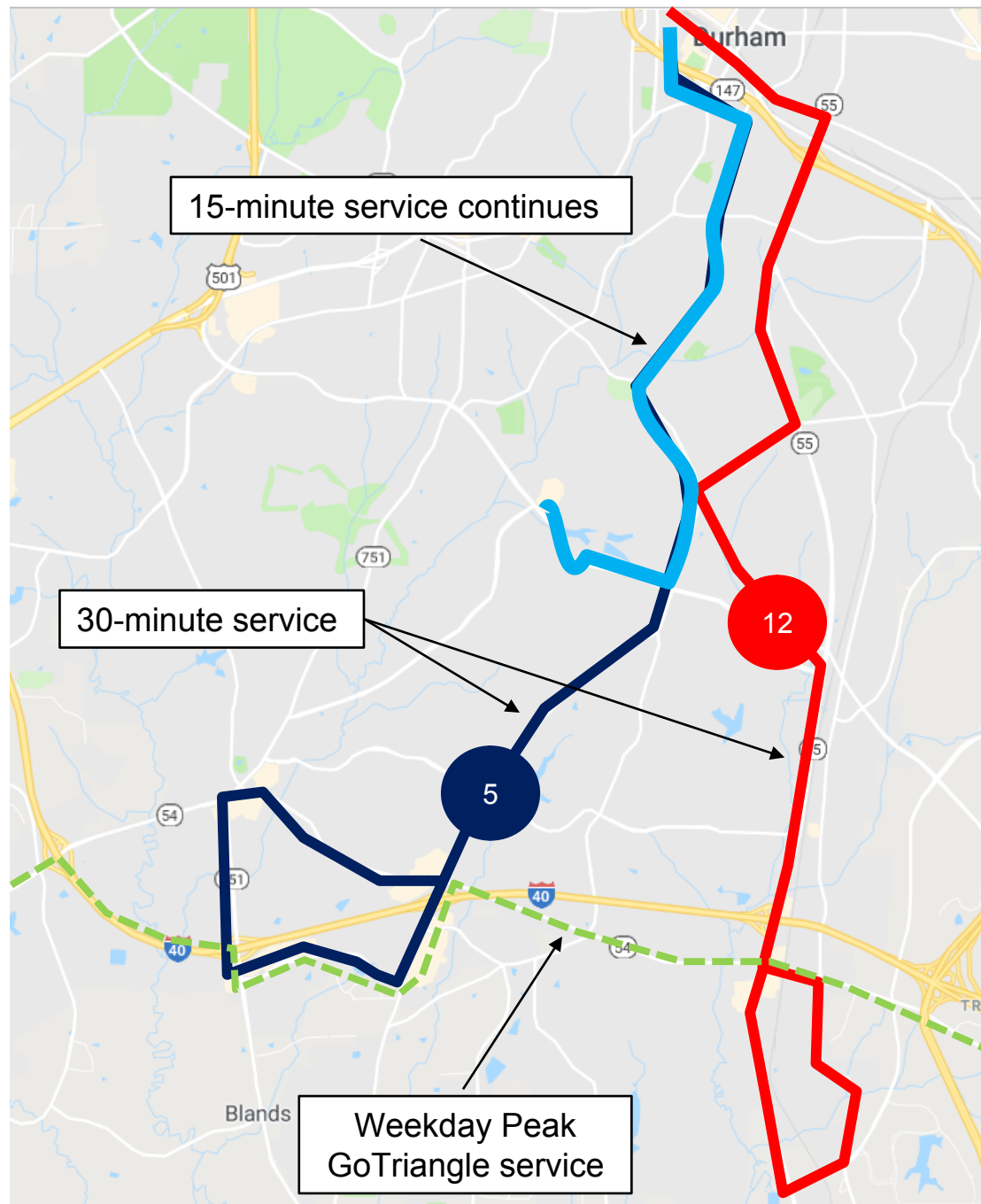
# Scenario 2 – Scheduling Adjustments

Potential Option	Potential Ridership Impacts	Potential Savings	Potential Savings
Delete Route 20	100	3,500 Rev. Hours	\$350,000
Targeted span reduction: Routes 8&7 end one hour earlier	33 (weekday) 17 (Saturday)	610 Rev. Hours	\$61,000
Routes 12 and 2 operate at 90 min cycle (30/60) and interline	240 (weekday) 120 (Saturday) 60 (Sunday)	4,928 Rev. Hours	\$492,800
Interline night/Sun Routes 5 and 10		*savings included above	
No midday/evening service along NC-54	12 (weekday) 6 (Saturday) 3 (Sunday)	*savings included above	
<b>Total</b>	385 (weekday) 143 (Saturday) 63 (Sunday) <b>*108,713 (annual)</b>	9,038	\$903,800



# Scenario 2 Scheduling Adjustments

- Remove Route 14
- Customers rely on other providers for service on NC 54
- Evenings & Sundays:  
Half of riders for Routes 2, 5, 10, and 12 may have 30-minute wait at Durham Station



# Scenario 2 – Anticipated Results

## Positive

On-time performance improved

High-frequency service maintained in key corridors

Consistent route patterns

Less off-peak layover

## Impacts

Route 20 goes away

Route 5 service frequency to Southpoint does not increase  
(remains 30 minutes)

Southpoint connection to NC 54/NC 55 not available

When service is hourly, passengers have long transfer wait  
times for major routes

# Next Steps

- Receive Council's feedback and direction regarding Preferred Option and budget shortfall
- Finalize Transit Plan and Fare Strategy





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