Preliminary Findings Update

RTA Webinar, July 16, 2020

Presented By: VHB Team
What’s Covered

- Overview/Purpose of FAST Study
- Transit Options
  - Corridors
  - Stops
- FAST Corridors and Improvements
  - 2022
  - 2025
- Example Future FAST Corridors
  - 2030
  - 2035
- Outreach Efforts
Preliminary Findings
Regional business community framework for enhanced transit

- Recognize size, dispersion, and upward trajectory of our region
- Expectation that cost-effective, useful travel options will be in place as the market expands
- Focus on rapid implementation of an effective, scalable, regional multimodal transportation system
Preliminary Findings

**Study Purpose**

- **Advance ideas for improving and accelerating regional connectivity**
- Accelerate effective, all-day mobility along our freeway and street-system that can expand and improve over time
- Complement existing and emerging travel options
- Serve as a valuable template for other regions of the state
Preliminary Findings

Existing Conditions

Regional Freeway System
Preliminary Findings

Transit System

Planned BRT
**Preliminary Findings**

**BRT corridors:** High-frequency, high quality, subregional connections

**Commuter rail:** Express, regional, low/moderate frequency connection

**FAST:**
- Assumes completion of BRT, multiple linkages to commuter rail
- Provides complementary, effective, regional connections
- Accelerates creation of true regional transit network
Creating a regional FAST network

- **Bigger** network – more routes
- **Better** network – more frequency, new service patterns
- **Faster** network – more “transit advantages”

*FAST mindset:* Add improvements quickly, then scale them over time
Preliminary Findings

Mobility criteria
- Travel Demand
- Transit Performance
- Traffic Performance
- Context

Accessibility criteria
- Access Equity
- Planned Projects
- Missing Links
Preliminary Findings

FAST Network
Activity Zones
Preliminary Findings

2030 Trip Origins to Durham and Duke
Preliminary Findings

2030 Trip Origins to South Durham
Preliminary Findings

2030 Trip Origins to North Cary
Preliminary Findings

2030 Trip Origins to Blue Ridge/ Crabtree
Preliminary Findings

2030 Trip Origins to NCSU
Preliminary Findings

2030 Trip Origins to WakeMed/St. Albans
Preliminary Findings

2030 Trip Origins to All Zones
Preliminary Findings

2030 Trip Origins to All Zones

Freeways
US Routes (non-Freeway)
NC Routes (non-Freeway)
County Boundaries
Activity Zones

Trip Origins (1 dot = 5 trips)
- to Chapel Hill
- to Duke & Downtown Durham
- to South Durham
- to RTP
- to RDU
- to North Cary
- to Blue Ridge & Crabtree
- to NCSU
- to Downtown Raleigh
- to Wake Med & St. Alban's
- to Crossroads & South Cary
Preliminary Findings

2030 Trip Origins to All Zones

Trip Origins (1 dot = 5 trips)
- to Chapel Hill
- to Duke & Downtown Durham
- to South Durham
- to RTP
- to RDU
- to North Cary
- to Blue Ridge & Crabtree
- to NCSU
- to Downtown Raleigh
- to Wake Med & St. Alban's
- to Crossroads & South Cary
Preliminary Findings

2030 Trip Origins to All Zones
Preliminary Findings

2030 Trip Origins to All Zones
Preliminary Findings

FAST Network

2030 Trip Origins to All Zones

Trip Origins (1 dot = 5 trips)
- to Chapel Hill
- to Duke & Downtown Durham
- to South Durham
- to RTP
- to RDU
- to North Cary
- to Blue Ridge & Crabtree
- to NCSU
- to Downtown Raleigh
- to Wake Med & St. Alban's
- to Crossroads & South Cary
Potential transit advantages
Low-cost transit advantages -- Freeways

- On-ramp signal bypass
- Bus On Shoulder System (BOSS)
- Yield-to-Bus
- Transit slip ramps and slip stops

Prioritize corridor features where they are anticipated to have the greatest impact.
Low-cost transit advantages - Streets

- Transit Signal Priority
- Queue Jump Lanes
- Tactical bus lane
- RED Lanes

Prioritize corridor features where they are anticipated to have the greatest impact.
Level Boarding
Enhanced Bus Stop
Off Board Fare Payment
Side Boarding Island Stop or Floating Bus Stop

Source: Metropolitan Council
Source: KCATA
Source: NYC DOT
Source: Oran Viriyincy
FAST Network Characteristics

Passenger Satisfaction

- Real-time information
- WiFi
- Upgraded fleet
Preliminary Findings

Hamilton’s BLAST Network

Brampton ZUM (Zoom)

FAST Network Characteristics

Branding
Proposed 2025 FAST network
Preliminary Findings

US 15/501

Bus On Shoulder System
Preliminary Findings

Immediate Freeway Corridors

RDU Direct Access Ramps
Preliminary Findings

FAST Network

Immediate Freeway Corridors

I-40 & NC 147

Bus On Shoulder Expansion

Increased Service Frequency & Span

2022 FAST Freeway
2025 FAST Freeway
Direct Access 2025
Future BRT
BRT
Preliminary Findings

FAST Network

Immediate Freeway & Street Corridors

US 15/501
- Traffic Signal Priority
- Queue Jump Lanes
- Enhanced Access/Stops/Boarding

Systemwide - Increased Frequency - Off-Board Fare Collection

Durham County

Wake County

Chapel Hill
Carrboro

RTP

Durham Airport

Increased Frequency

Off-Board Fare Collection
Preliminary Findings

FAST Network

Immediate Freeway & Street Corridors

- Holloway/Main/Erwin
- Traffic Signal Priority
- Queue Jump Lanes
- Enhanced Access/Stops/Boarding
- Floating Bus Stops

Systemwide
- Increased Frequency
- Off-Board Fare Collection

Durham County

Orange County

Durham

Chapel Hill
Carrboro

Wake County

RTP
RDU Airport

Morrisville
Cary

Raleigh

Garner
Holly Springs

Future BRT

2022 FAST Street
2022 FAST Freeway
2025 FAST Street
2025 FAST Freeway
Direct Access 2025
BRT
Preliminary Findings

- FAST Network
- Immediate Freeway & Street Corridors

- NC 54/Raleigh Rd
  - Traffic Signal Priority
  - Queue Jump Lanes
  - Enhanced Access/Stops/Boarding
  - RED Bus Lanes (portions)

- Systemwide
  - Increased Frequency
  - Off-Board Fare Collection
Preliminary Findings

**FAST Network**

**Immediate Freeway & Street Corridors**

- Glenwood Ave (west of I-440)
  - Traffic Signal Priority
  - Queue Jump Lanes
  - Enhanced Access/Stops/Boarding

- Systemwide
- Increased Frequency
- Off-Board Fare Collection

- 2022 FAST Street
- 2022 FAST Freeway
- 2025 FAST Street
- 2025 FAST Freeway
- Direct Access 2025
- Future BRT
- BRT
Preliminary Findings

Systemwide
Increased Frequency
Off-Board Fare Collection

FAST Network
Immediate Freeway & Street Corridors

Richmond
Durham County
Orange County
Chapel Hill
Carrboro
Durham
RTP
RDU Airport
Wake County
RTP

Glenwood Ave (east of I-440)

Traffic Signal Priority
Enhanced Access/Stops/Boarding
RED Bus Lanes (portions)
Preliminary Findings

FAST Network

Immediate Freeway & Street Corridors

Systemwide Increased Frequency Off-Board Fare Collection

- Increased Frequency
- Off-Board Fare Collection

Six Forks Rd

- Traffic Signal Priority
- Queue Jump Lanes
- Enhanced Access/Stops/Boarding
- RED Bus Lanes (portion)
- Floating Bus Stops (some)
Preliminary Findings

FAST Network

Immediate Freeway & Street Corridors

Systemwide Increased Frequency Off-Board Fare Collection

Capital Blvd
- Traffic Signal Priority
- Queue Jump Lanes
- Future Through Lanes
- Enhanced Access/Stops/Boarding

2022 FAST Street
2022 FAST Freeway
2025 FAST Street
2025 FAST Freeway
Direct Access 2025
Future BRT
BRT
Preliminary Findings

FAST Network

Immediate Freeway & Street Corridors

Systemwide
Increased Frequency
Off-Board Fare Collection

Poole Road
Traffic Signal Priority
Queue Jump Lanes
Enhanced Access/Stops/Boarding
Floating Bus Stops

Diamond Area

Orange County
Durham County
Wake County

Orange County
Chapel Hill
Carrboro
Duke
Durham
RDU Airport
RTP
Durham
Wake County
RDU Airport
Durham
RTP

2022 FAST Street
2022 FAST Freeway
2025 FAST Street
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Direct Access 2025
BRT
Future BRT

Preliminary Findings

FAST Network

Immediate Freeway & Street Corridors

Systemwide
Increased Frequency
Off-Board Fare Collection

Poole Road
Traffic Signal Priority
Queue Jump Lanes
Enhanced Access/Stops/Boarding
Floating Bus Stops

Diamond Area

Orange County
Chapel Hill
Carrboro
Duke
Durham
RDU Airport
RTP
Durham
Wake County
RDU Airport
Durham
RTP

2022 FAST Street
2022 FAST Freeway
2025 FAST Street
2025 FAST Freeway
Direct Access 2025
BRT
Future BRT
Preliminary Findings

"Interlining" with 2+ routes along part of a BRT lane or other high-capacity route

- Increased speed and reliability
- Higher frequency
- Multiple travel options
Enhanced FAST Infrastructure Examples
Enhanced transit advantages - freeways and streets

- Peak period express shoulder lanes on freeways
- Dedicated or priority express lanes on freeways
- Direct connect transit priority ramps
- Freeway transit hub stations
Minneapolis: I-35W Lake Street Station

Source: https://www.metrotransit.org/i-35w-lake-street-station
Seattle: Mountlake Terrace Transit Center

Source: Bing Maps and SounderBruce
Example future FAST corridors
Preliminary Findings

FAST Network

Mid-Term Freeway & Street Corridors
Preliminary Findings
Public Comment Period

• Download a version of this presentation at letsgetmoving.org/FAST

• Email comments to FAST@letsgetmoving.org

• 45-Day Comment Period
  July 16-August 31
2020 SCHEDULE

1. Visualize: FAST Network Service Standards and Corridors
2. Believe: FAST Network Playbook and Implementation

Receive Advisory Team Comments

PROJECT MILESTONES

In-Reach
- ADVISORY TEAM (MAY 5)
- ADVISORY TEAM
- ADVISORY TEAM

Out-Reach
- INNOVATION FORUM (APRIL 15)
- FAST – PRELIMINARY FINDINGS WEBINAR (JULY 16)
- 2020 TRANSPORTATION BREAKFAST: FAST VISION FOR THE TRIANGLE (AUG 4)

Finishing: FINAL REPORT
Next Steps

• Review ongoing/upcoming highway projects for potential transit advantage incorporation opportunities

• Develop implementation playbook for several illustrative examples
  • 2022
  • 2025
Preliminary Findings

FAST Network

Purpose
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  July 16-August 31