Capital Boulevard North
Big Ideas

Green Road Community Center
April 1, 2019
Participation Today

• Sign in to the meeting
• Visit the stations
• Take the survey
• Provide comments
Contents

• Background
• Initial strategies
• The Boulevard strategy
• Intersection Design
• Street Section Concepts
The Capital Boulevard North Corridor Study is a public process led by the City of Raleigh with the goal of creating a long range plan for North Capital Boulevard from I-440 to I-540.
Project Purpose

• Identify a multi-modal transportation vision that considers pedestrians, bicycles, transit, and automobiles
• Identify new opportunities for mixed-use development
• Improve urban design along the corridor
• Create a community development vision that includes:
  • Neighborhood stability
  • Social engagement
  • A blend of incomes and household types
Study Timeline

Summer 2018: Visioning

Fall 2018: Kickoff workshop

Spring 2019: Big Ideas Workshop

Fall 2019: Specific Ideas Workshop

Winter 2019/2020: Recommended Improvements

Spring 2020: Final Recommendations and Draft Plan
Previous Activities

- Visioning Meeting and Survey
- Kickoff Survey
- Market Analysis
- Community Profile
- Travel Data
Visioning Meeting & Survey
Visioning Meeting & Survey

General Experience of Corridor

- Useful regional connection
- Variety of retail
- Neighborhoods and parks
- Congested
- Not attractive
- Impacts of some commercial uses
Kickoff Meeting & Survey
Kickoff Meeting & Survey

Specific Priorities

- Reduce vehicle/pedestrian conflicts
- Separate local/regional traffic
- Uniform street appearance
- Rapid transit
- Easier to cross
- Balanced land uses/mixed use development
Market Analysis

- Housing costs are low
- Office space has low vacancy
- 20% of Raleigh’s retail space
- Most new development around Triangle Town Center
- Demand for housing, office, and grocery projected to grow
Travel Data

- Existing traffic volume
- Traffic volume projections
- Crash data: vehicle, bicycle, pedestrian
- Bicycle and pedestrian stress
- Transit ridership
- Other plans and projects
Vehicle Traffic Counts

Historical AADT Along Capital Boulevard

- Capital Blvd North of I-440 Interchange
- Capital Blvd South of Butterworth Road
- Capital Blvd North of Frankford Road
- Capital Blvd South of Old Buffaloe Road
- Capital Blvd North of Buffaloe Road
- Capital Blvd South of Louisburg Road
- Capital Blvd North of Millbrook Road
- Capital Blvd South of Spring Forest Road
- Capital Blvd North of Old Wake Forest Road

Vehicular Traffic Locations

All Day - 2017

- 33% Internal Internal
- 32% Internal External
- 11% External Internal
- 24% External External

Raleigh
Bicycle Connectivity

Pedestrian-Transit Access
- Low Connectivity
- Moderate Connectivity
- High Connectivity

Study Area
Area of Influence
Capital Boulevard North Corridor
Data Input Summary

**Community Values**
- Reduce congestion
- Improve safety
- Maintain local access

**Technical Analysis**
- 25-50% growth in traffic volume projected by 2045
- Little room for additional right-of-way
- Proven demand for transit
Strategy Framework

Community Values and Technical Analysis

Define initial roadway strategies and remove less desirable options

Design improvement alternatives

Select improvements based on community-defined performance measures
Initial Strategies

• **Main Street**: Helps pedestrian safety and local access, may make congestion worse

• **Boulevard**: Helps congestion, maintains much of local access, improvements can be designed to improve safety

• **Freeway**: Helps congestion the most, removes much of local access, improvements can be designed to improve safety
Initial Strategies

• **Main Street**: Helps pedestrian safety and local access, may make congestion worse

• **Boulevard**: Helps congestion, maintains much of local access, improvements can be designed to improve safety

• **Freeway**: Helps congestion the most, removes much of local access, improvements can be designed to improve safety
The Boulevard Strategy

- Reduce left turns from smaller cross streets
- Grade Separations (Interchange or Intersection)
- Improve street cross-section for pedestrian safety, appearance, and transit
- Signal timing improvements
Intersection Design Options
Intersection Safety

• Interchanges can help to reduce crashes by eliminating conflicts between vehicles and between vehicles and pedestrians

• Interchanges can allow bicycles and pedestrians to cross Capital Boulevard with fewer conflicts with vehicles and smaller individual crossing distances

• Interchanges can facilitate pedestrian access to transit stops
Grade Separated Interchanges

Diverging Diamond

Partial Cloverleaf

Tight Diamond
Other Types of Grade Separation

- Quadrant Interchange ("Urban Loops")
- Grade Separated Intersection
Alternative Intersections

Displaced Left Turn

Median U-Turn
Interchange Factors

Access

No access to driveways on acceleration ramp
Interchange Factors

Access

Continuous local lanes allow access from “ramp”

Grade Separated Intersection
Interchange Factors

Access

Continuous local lanes allow access from “ramp”
Street Section Concepts
The Wake Transit Plan identifies Capital Boulevard as a Frequent Network Corridor but there are no current plans for enhanced transit service. As such, the Capital Boulevard North study does not assume any specific enhanced transit service characteristics such as potential routing, dedicated lanes, or station locations. Instead, the study presents options that could accommodate enhanced transit service if it is planned in the future.
Concept Section 1

- Uses more right-of-way than existing
- Would not allow for most reliable transit service

Information presented is conceptual in nature and not a proposed design. The transit lanes shown on the cross-section would only be constructed if enhanced transit service is planned in the future.
Concept Section 2

- Uses same right-of-way width as Concept Section 1
- Allows for dedicated bus lanes in the future that can significantly improve transit reliability

Information presented is conceptual in nature and not a proposed design. The transit lanes shown on the cross-section would only be constructed if enhanced transit service is planned in the future.
Section Concept 3

- Uses more right-of-way than other two concepts
- Allows reliable transit service
- Provides buffer from through traffic
- Can encourage more urban development pattern

*Information presented is conceptual in nature and not a proposed design. The transit lanes shown on the cross-section would only be constructed if enhanced transit service is planned in the future.*
Street Section Factors

- Concept Section 1 uses more right-of-way than existing, **would not allow for most reliable transit service**
- Concept Section 2 uses same right-of-way as Concept Section 1, allows for dedicated bus lanes in the future that can **significantly improve transit reliability**
- Concept Section 3 uses more right-of-way than other two concepts, allows **reliable transit service**, provides buffer from through traffic, can encourage **more urban development pattern**
Land Use Elements

Land use recommendations in this study

• Land Use Vision Areas – detailed land use and urban form concepts to envision possible future development pattern
  • Triangle Town Center
  • Mini City
  • Highwoods/Westinghouse

• General Land Use Policies – How can land use policies and transportation improvements support each other to maximize community benefits
Land Use Vision Areas

- Triangle Town Center
- Highwoods/Westinghouse
- Mini City
Example Land Use Recommendation: New Hope/Millbrook

Note: The land use policy shown is an example for display purposes only and not a final recommendation.
Land Use Factors

Access, Land use, and Urban Form

• Areas with greater access from Capital Boulevard are better suited to retail
• Areas accessed by secondary streets may be more suited to office or residential uses
• Different section designs support different urban form patterns
• Transit stops should be coordinated with nodes of employment, denser housing, or mixed-use development
Participation Today

- Have a snack!
- Visit the stations
- Take the survey
Thank you!

Survey

• Open April 1 – May 18
• [www.planningforraleigh.com/capitalnorth](http://www.planningforraleigh.com/capitalnorth)

Design alternatives this fall

• Intersections
• Street sections
• Land use vision areas