

# US 1 Corridor Study

No. CAMPO 2005-02

## Oversight Team Meeting

December 13, 2005

# CAMPO

# *RS&H*

In association with



# Presentation Format

- Desired Outcome From Study Sponsors
- Why Oversight Team
- Project Team
- Community Involvement
- Project Schedule
- Study Area
- Study Approach
- Existing Conditions
- Feedback from Oversight Team
- Next Step

# Desired Outcome From Study Sponsors

- Develop a Comprehensive, Long-range Transportation Plan that:
  - Improves Multimodal Access and Mobility
  - Encourages Economic Development
  - Increases Safety
  - Coordinates with Land Development
- Supports Economic Growth
  - Relieves Recurring Congestion
  - Improves Safety

# Study Sponsors

- City of Raleigh
- Town of Wake Forest
- Triangle Transit Authority
- North Carolina Department of Transportation
- Capital Area Metropolitan Planning Organization

# Why An Oversight Team?

- Knowledge and History of the Corridor
- Understanding of Study Purpose and Need
- In Touch with Community Needs and Desires
- Mix of Perspectives
- Ability to Identify “Fatal” Flaws
- Valuable Input to Develop and Evaluate Alternatives
- Ambassadors for US 1 Corridor Improvements

*Project Oversight Team*

*Capital Area Metropolitan Planning Organization*

**Kenneth Withrow – Project Manager**

**RS&H** Team

**Janice K. Anderson, PE – Project Director**

**Rick H. Grochoske, PE – Project Manager**

**Transportation  
Planning**

**Rick H. Grochoske, PE  
Janice K. Anderson, PE**

**Functional Design/  
Natural Resources**

**Tim Hayes, PE  
Bill Hood, PE**

**Land Use Planning/  
Economic Development**

**Stanford Harvey, AICP**

**Transit Planning**

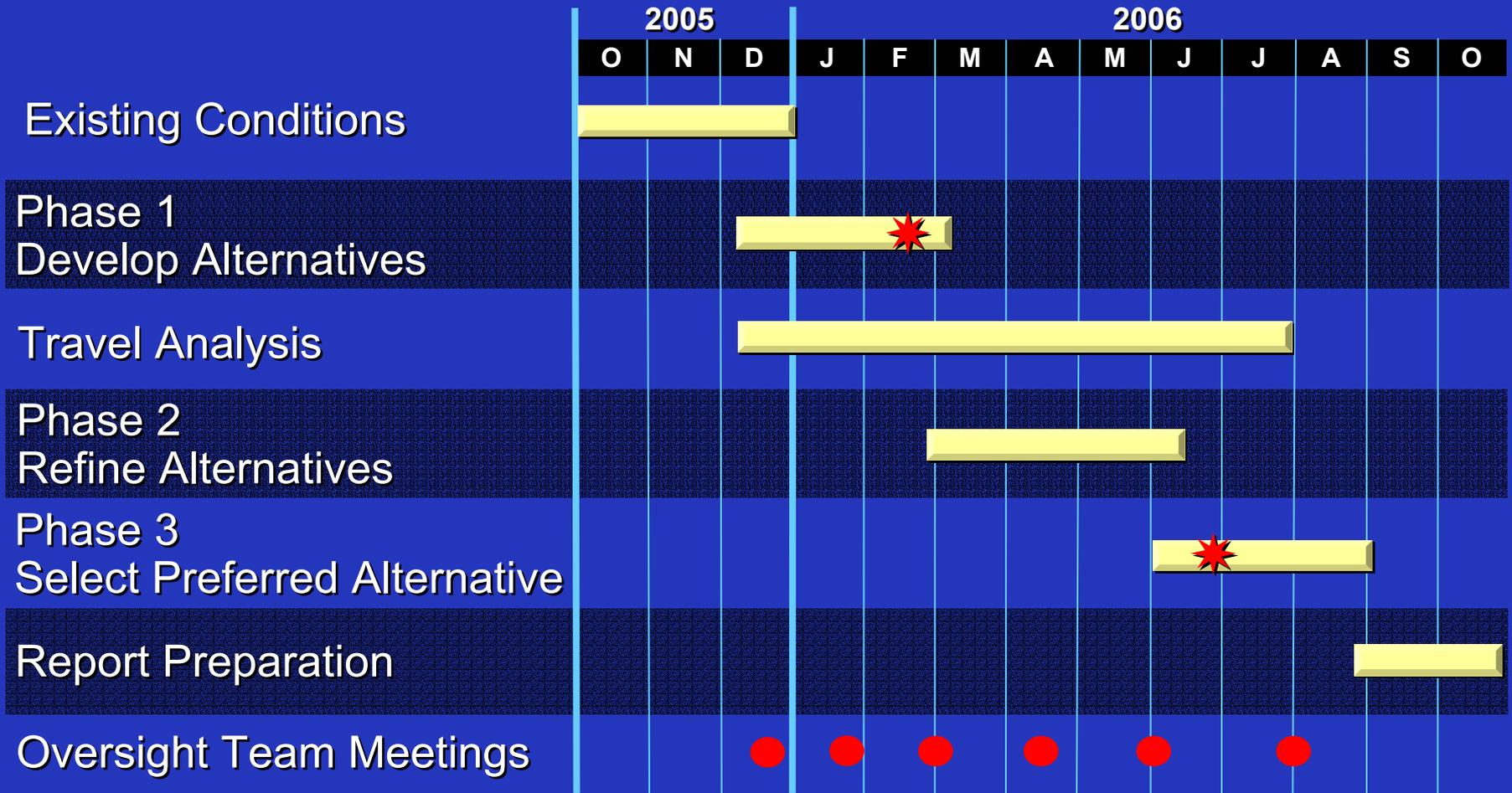
**Alan Danaher, PE,  
PTOE, AICP**

# Community Involvement

- 6 Oversight Meetings
- 2 Public Meetings



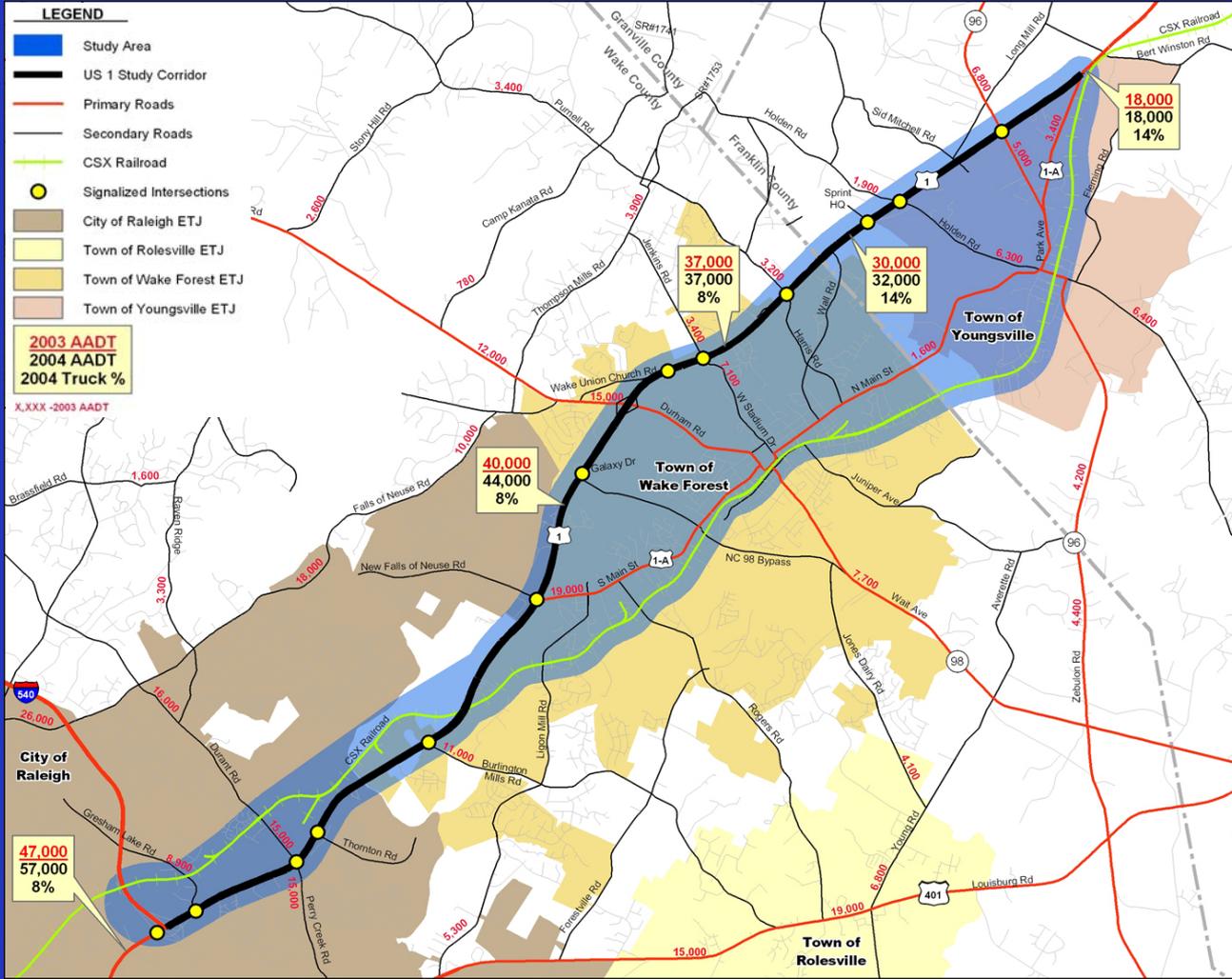
# Project Schedule



 Public Meetings

# US 1 Study Limits

## From I-540 To US 1A, Franklin County



# Study Approach

- Three-Phase Process
  - Phase 1 - Develop Corridor Alternatives
  - Phase 2 - Refine Corridor Alternatives
  - Phase 3 - Select a Locally Preferred Alternative



# Study Approach

## *Phase 1 - Develop Corridor Alternatives*

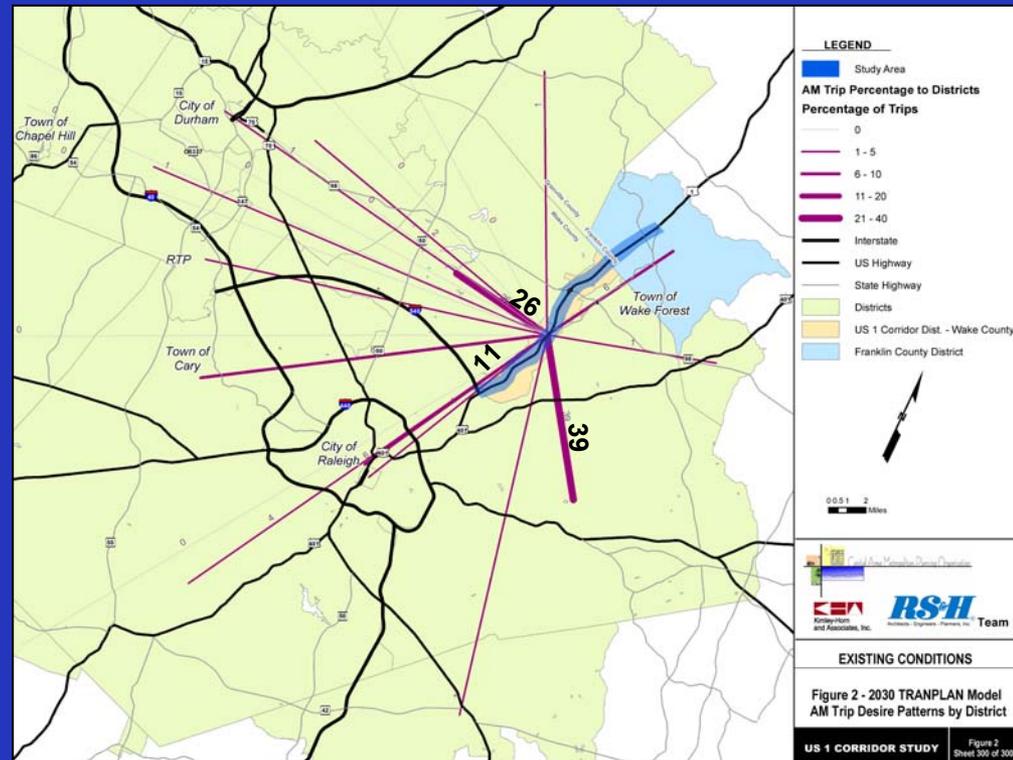
- Inventory and Assessment of Existing Conditions
- Traffic and Safety Deficiencies
- Roadway Deficiencies
- Future Development Opportunities
- Multimodal Opportunities



# Study Approach

## Phase 2 - Refine Corridor Alternatives

- Roadway Focus
- Technology (ITS) Improvements
- Transit Focus
  - Bus Rapid Transit
  - Regional Rail
- Evaluation and Screen Alternatives



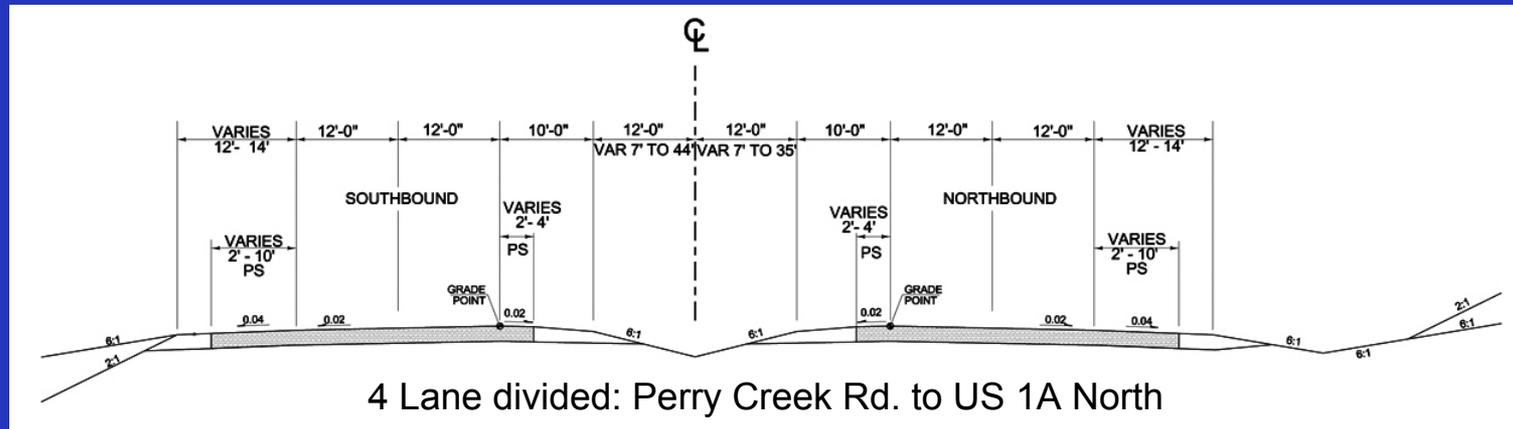
# Study Approach

## *Phase 3 - Select a Locally Preferred Alternative*

- Multimodal Transportation Plan
- Corridor Character
- Activity Center Concepts

# Existing Highway Conditions

- Typical Roadway Sections
  - 6 Lane divided: I-540 to Jacqueline Ln.
  - 5 Lane divided: Jacqueline Ln. to Perry Creek Rd. (3 NB)
  - 4 Lane divided: Perry Creek Rd. to US 1A North
- Speed Limit
  - Posted Speed is 55 mph
  - Existing Design Speed Varies from 60 to 70 mph



# Existing Highway Conditions

- Horizontal Alignment
  - Substandard Spirals (minor)
  - Substandard Paved Shoulders
- Vertical Alignment
  - Substandard Grades (minor)
  - Substandard Stopping Sight Distance (meet posted speed limit, all are sag vertical curves)
- Right of Way
  - Varies from 200' to 475'
  - Generally 200' to 250' Where No Service Roads
- Structures
  - 7 structures in 4 locations
  - Sufficiency ratings from 62-100
  - NC 98 Bypass Scheduled to Open in May 2006

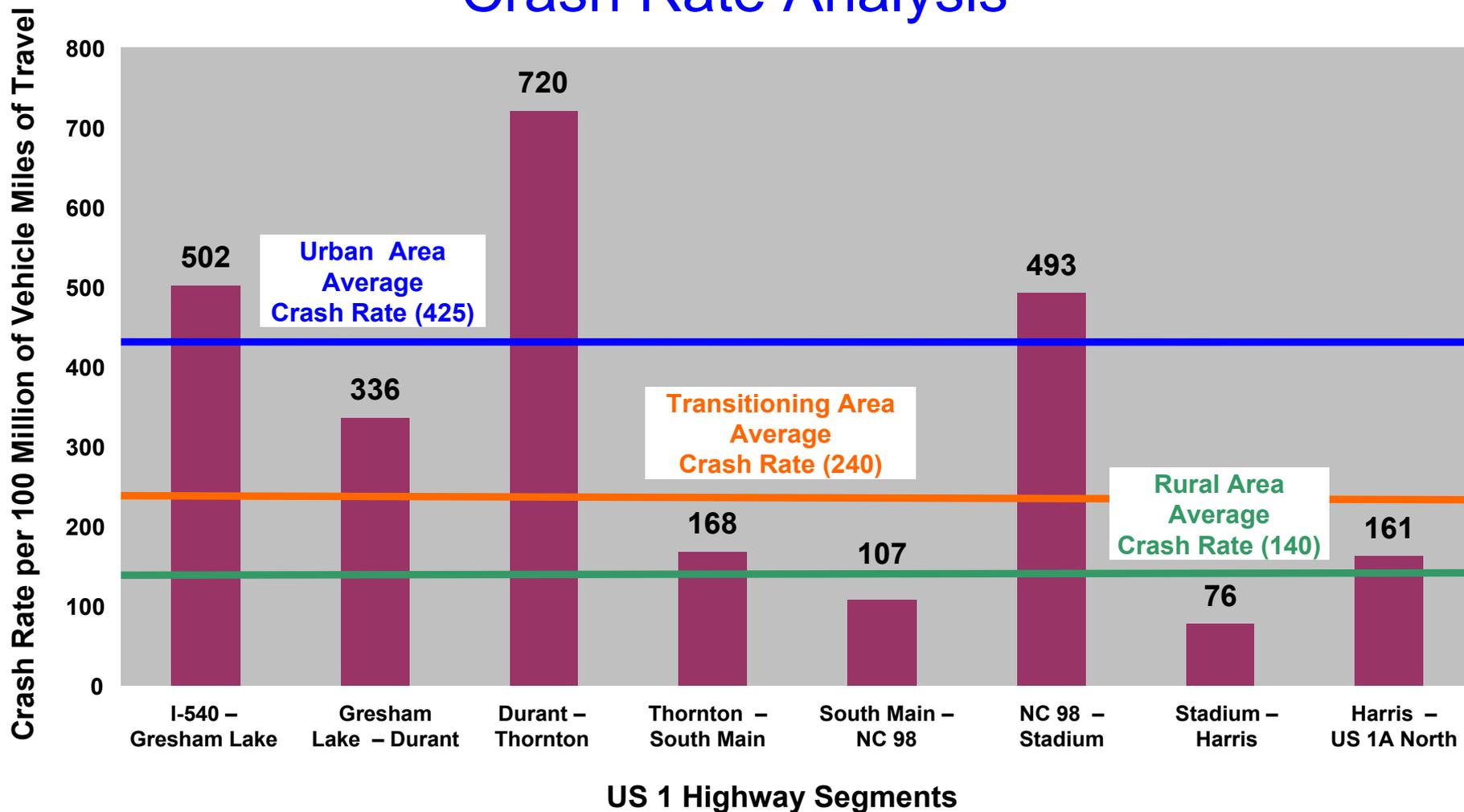
# Existing Travel Conditions

- Congestion
  - Over 47,000 AADT (2003)
  - Growth of 10% Per Year
  - 8 to 14% Truck Volumes
- High Accident Locations
  - Speeding
  - Number of Access Points
- Access Points
  - 110 Driveways, Median Openings and Cross-Streets
  - 13 Signalized Intersections



# Existing Travel Conditions

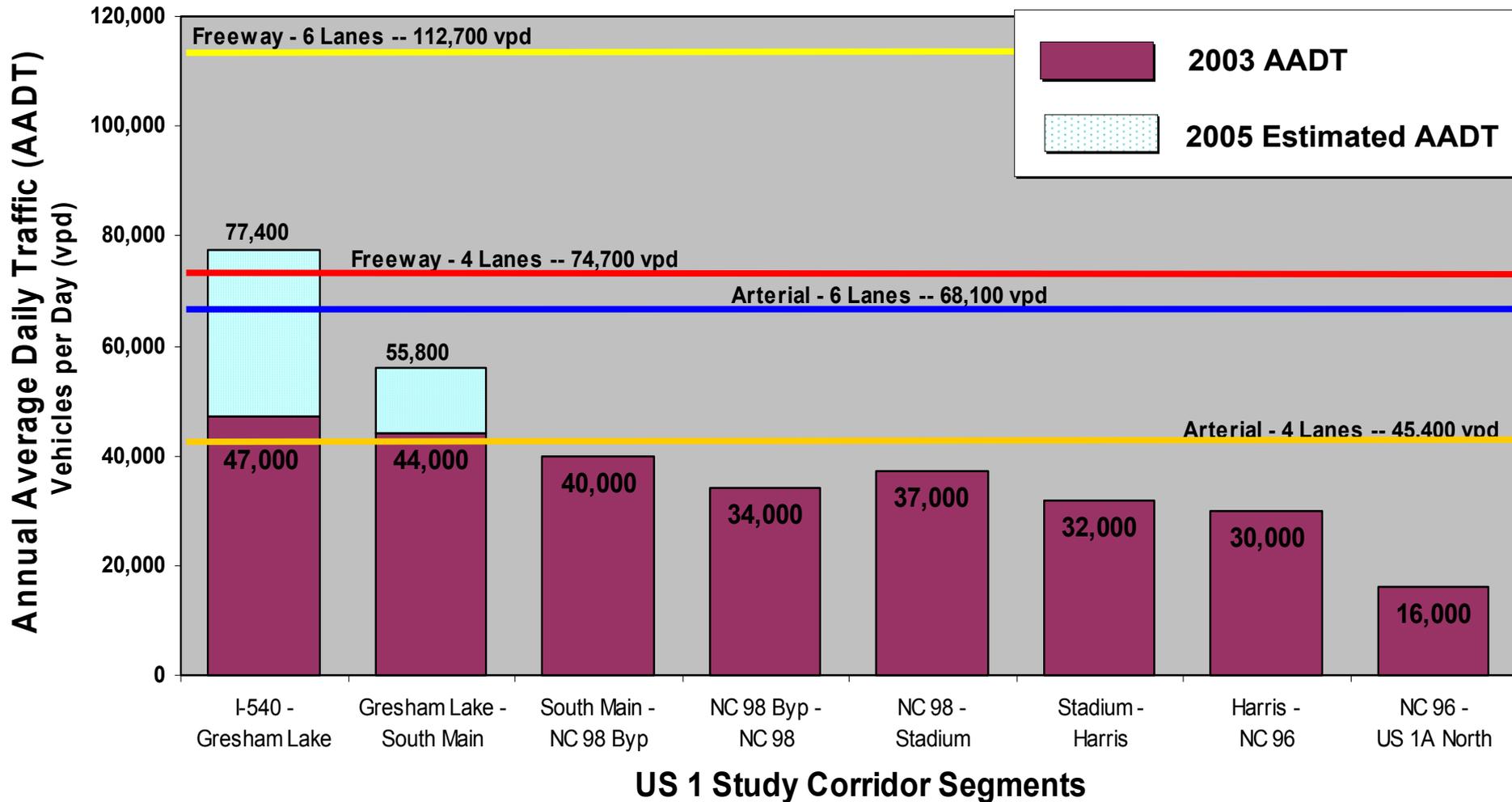
## Crash Rate Analysis



Source: North Carolina Department of Transportation, November 2001 - October 2004

# Existing Travel Conditions

## Roadway Capacity Analysis



Source: **AADT** - North Carolina Department of Transportation, 2003 - 20005; **Capacities** - NCLOS Software, 2005

# Existing Travel Conditions

- Access Points
    - Driveways
    - Cross-Streets
    - Median Openings
- } = Total of 110 or 8.5 per mile



# Existing Transit Conditions

- No Bus Service Along US 1 North of I-540
- Closest North-South Bus Service – CAT #1 Route at Sumner Blvd. (South of I-540)
- CAT #25C Circulator Along Durant Road Crosses US 1

# Potential Transit Improvements

- Extension of US 1 Local Bus Service North to I-540
- Express Bus Service to Wake Forest via US 1 and SR 98 with Park-n-Ride Lots
- Regional Rail North to Durant Road (TTA Studies)
- Southeast High Speed Rail – Richmond to Charlotte (FRA Study)

# Existing Land Use Conditions



Historic Wake Forest



Durant Nature Park

- Older Commercial and Industrial Development in the Southern Section of the Corridor
- Recent Townhouse and Duplex Developments in Raleigh and Wake Forest
- Major Mixed-use Development at Wakefield Planned Community
- Significant Historic Resources in the Towns Of Wake Forest and Youngsville
- Major Open Spaces Include Durant Nature Park, Flaherty Park and Joyner Park
- Falls Lake State Park Lies in Close Proximity

# Existing Zoning Districts

- Parcels Along US-1 Corridor Mostly Zoned for Commercial and Industrial Uses
- Parcels Along the Railroad Corridor Include Residential and Mixed-use Development North of Burlington Mill Road
- Wake Forest Regulations Include Historic Preservation Districts and Design Guidelines
- Watershed Overlay Districts Implemented in Franklin County, Raleigh and Wake Forest
- Youngsville Allows Mixed-use Development Along the Railroad Corridor at the Northern End of the Study Area

# Development Opportunities

- Over 3,500 Acres of Vacant and 2,900 Acres of Forested/Agricultural Land within the Study Area (Half-mile Each Side of US-1 and Rail Corridor)
- The 2030 Regional Transportation Plan Anticipates Primarily Commercial Development Along the Corridor
- Potential for Higher Density Development at I-540 and US-1 Interchange

# Development Opportunities

- Opportunities for Infill Development in Youngsville and Wake Forest
- Potential Opportunities for Development on the South Side of the NC-98 Bypass Interchange Opening Soon
- Proposed Developments Include Multiple Single-family Projects in Youngsville, Industrial Uses Along US-1 in Franklin County and Additional Development At Wakefield Planned Community

# Existing Natural Resources Conditions

- Natural Heritage Program
  - Ecologically significant or rare species, and the occurrences of exemplary or unique natural ecosystems and wildlife habitat
- Superfund Site Locations
  - Only one in the Study Area
  - Greshams Lake Industrial Park
- FEMA Flood Zones
  - Flood hazard Areas
  - 100 year flood zone
- National Register Historic Properties
  - Seven Total Sites in the Study Area
  - Only Three Adjacent to US 1
- Wetlands
- Neuse and Tar-Pamlico River Basins

# Next Steps....

- Develop Screening/Evaluation Methodology
- Identify Conceptional Multimodal Alternatives
- Begin Traffic Modeling and Analysis
- Prepare for 1st Public Meeting (February '06)





***Feedback***

***Questions***

***Thank You***