Mid-Currituck Bridge Project

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NORTH CAROLINA Turnpike Authority

Presentation Focus

- Project Description and Purpose
- Planning Studies
  - History and Current Status
  - Project Elements
    - Mid-Currituck Bridge
    - NC 12 Widening
    - US 158 Hurricane Evacuation Considerations
    - Impacts
- Project Considerations
- Project Costs

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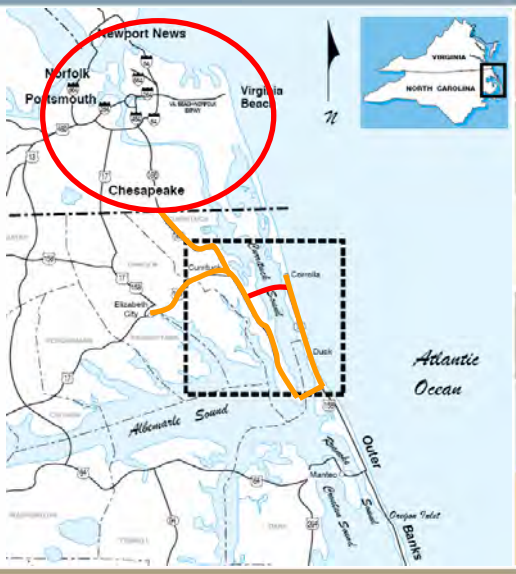
Project Description

- Project Area
  - NE North Carolina
  - Existing Roads – NC 168, US 158, NC 12
  - Wright Memorial Bridge
- Project Details
  - Design year – 2035



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Purpose

- Improve traffic flow on NC 12 and US 158
- Reduce travel time between the mainland and the Outer Banks
- Reduce hurricane evacuation time
- Improve system efficiency with an additional linkage between the mainland and Outer Banks

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Planning Studies

- NCDOT Studies (1995-2006)
  - July 1995 – NOI issued for Mid-Currituck Bridge project
  - January 1998 – Mid-Currituck Bridge DEIS released
  - May 1998 – Public hearings; project process paused
  - October 2000 – Project reactivated
  - 2001 – Study area and scope of study expanded
  - November 2003 – Agreement on Statement of Purpose and Need
  - 2005 – Statewide Hurricane Evacuation Study

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Planning Studies

- Transition to NCTA (2005-2006)
  - 2005 – Legislation authorizing NCTA to study Mid-Currituck Bridge project and pursue PPP agreement
  - 2006 – NCTA adopts Mid-Currituck Bridge project
  - January 2007 – Preliminary Traffic & Revenue Study complete
  - January 2007 – NCTA begins planning studies

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Project Issues - 1998

- Key Issues in Comments on 1998 DEIS:
  - Impacts on Maple Swamp (on mainland)
  - Impacts on communities (incl. Aydlett)
  - Questions about ability to meet purpose & need
    - Will it reduce evacuation times?
  - Belief that additional alts. need to be studied
    - Widen existing roads; add ferry service

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Project Issues – 1998 & 2008

Issue	1998	2008
Maple Swamp	Filled	Bridged
Aydlett community	Bisected by bridge corridor C3/C4	C3/C4 corridor eliminated
Hurricane evacuation	No quantitative data to support need	Statewide hurricane model and project-specific analysis
Additional Alternatives	Minimally evaluated	Evaluated in detail and eliminated during alternatives screening

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Current Status

- Project Coordination Plan
  - Process for completing planning studies
  - Agency and public coordination
- Environmental Documentation
  - Statement of Purpose and Need
  - Alternatives Screening Report

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Alternatives Considered

- Improve Efficiency of Existing Roads
  - Shifting Rental Times
  - Transportation Systems Management
  - Bus Transit
- Ferry
- Widen Existing Roads
- Mid-Currituck Bridge with various combinations of existing road widening

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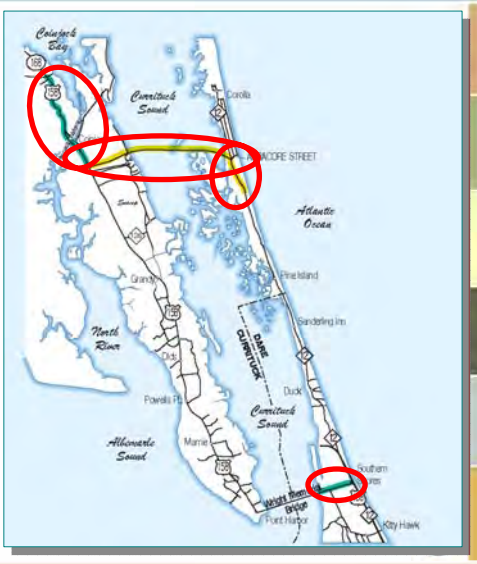
Project Elements

- Mid-Currituck Bridge
- NC 12 Widening
- US 158 Hurricane Evacuation Component(s)



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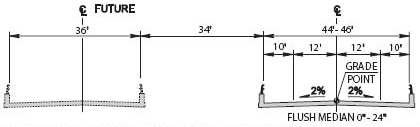
Mid-Currituck Bridge

- Two-lane bridge
- Interchange with US 158
  - Includes toll collection facilities
- Intersection with NC 12



MID-CURRITUCK BRIDGE AND APPROACH BRIDGE TYPICAL SECTION

2035 Average Daily Traffic Projections	
Summer Weekend	Summer Weekday
NEPA No Toll – 35,400	NEPA No Toll – 24,500
NEPA with Toll – 22,500	NEPA with Toll – 14,500
T&R with Toll – 20,800	T&R with Toll – 5,400

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Two-Lane Bridge Decision

- Traffic (level of service, speed, travel time)
  - Provides acceptable summer weekend service
    - 2-Lane—38 mph and 12.6 minutes
    - 4-lane—54 mph and 8.9 minutes
- Cost
  - Substantially less expensive than a 4-lane bridge ($130 million to $200 million less)
- Safety
  - Geometrics, emergency access, and ITS considered in design
- Risk
  - 2-Lane – risk is that traffic forecasts are too low and higher than acceptable summer weekend congestion will occur

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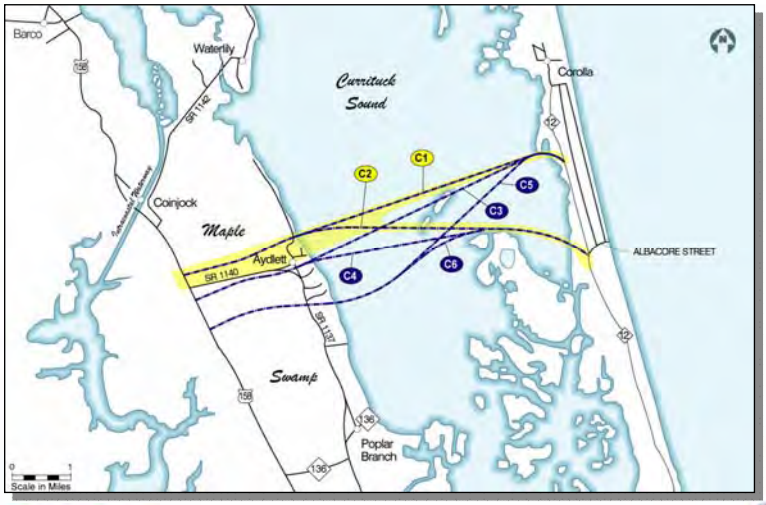
Detailed Study Bridge Corridors



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US 158 Interchange

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Outer Banks C1 Termini

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Outer Banks C2 Termini

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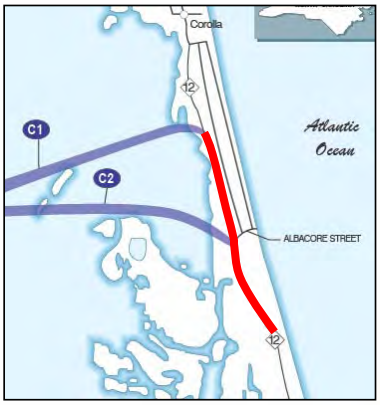
Project Element - NC 12

- Widen to 4 lanes
- Mid-Currituck Bridge to Clubhouse Road to prevent back-ups onto the bridge
- 2 to 4 miles



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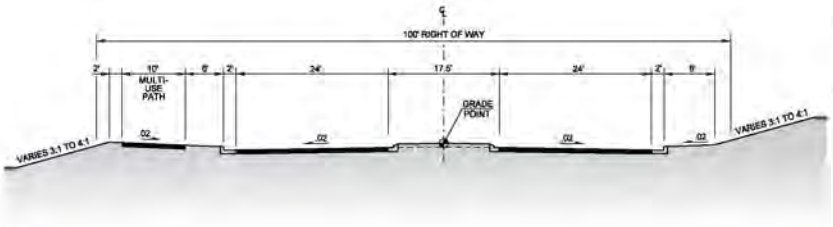
NC 12 Widening

- Four 12-foot lanes
- 17.5-foot median
- 10-foot multi-use path
- Except for some minor grading, will fit within the existing 100-foot right-of-way



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Project Element – US 158

- US 158 controls evacuation time in the project area
- Category 3 storm with 75% Tourist Occupancy

NC Hurricane Evacuation Standard	18 hours
2004 Hurricane Evacuation Clearance Time	25.8 hours
2035 Hurricane Evacuation Clearance Time	36.3 hours

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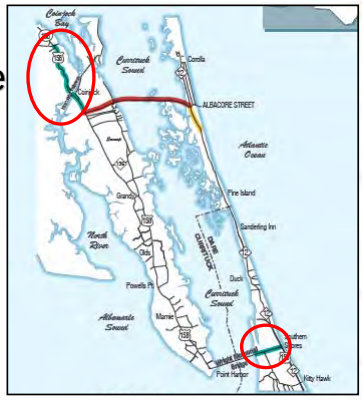
US 158 & Hurricane Evacuation

- Added capacity required to reduce evacuation time
  - Mid-Currituck Bridge to NC 168
  - NC 12 to Wright Memorial Bridge
- Design Options
  - Construct third northbound lane
  - Use existing center turn lane as contraflow lane



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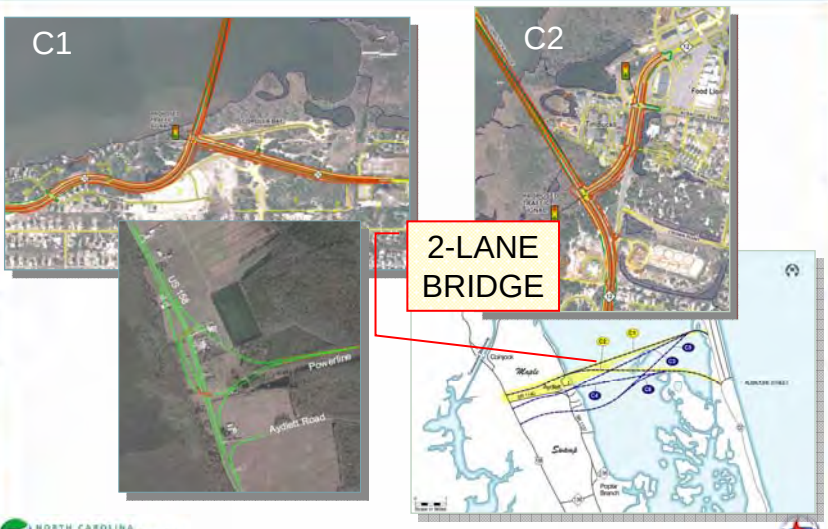
Bridge Alternatives



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Environmental Considerations

- Currituck Sound
  - SAV and SAV habitat
  - Water quality and bridge run-off
- Maple Swamp
  - State-designated Significant Natural Heritage Area
- Coastal & Non-Coastal Wetlands
- Indirect and Cumulative Impacts

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Permitting

- US Army Corps of Engineers – Clean Water Act Section 404 Individual Permit
- US Coast Guard – Bridge Permit
- NC Division of Water Quality – Clean Water Act Section 401 Certification
- NC Division of Coastal Management – Coastal Area Management Act (CAMA) Permit

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Design Considerations

- Bridge Clearance
  - Navigation span with 35-foot vertical clearance
- Bicycle Accommodations
  - Current design includes 10-foot shoulders
- Construction Methods
  - Shallow water depths and sensitive resources
- Geotechnical Investigations
- Maintenance of Traffic
  - Summer peak periods

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Project Costs

- C1 = $510M
  - 6.3 miles bridge
  - 4 miles widening on NC 12
- C2 = $538M
  - 6.8 miles bridge
  - 2 miles widening on NC 12
- US 158 Hurricane Improvements
  - $11-14M (assumes additional lanes constructed)
    - $3M – NC 12 to Wright Memorial Bridge (1.5 miles)
    - $11M – Mid-Currituck Bridge to NC 168 (5 miles)

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Next Steps

- Complete the Draft Environmental Impact Statement and Recommend Preferred Alternative
- Hold Public Hearings
- Select a Least Environmentally Damaging Practicable Alternative
- Avoidance and Minimization

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Schedule

- Draft Environmental Impact Statement—**August 2008**
- Final Environmental Impact Statement—**May 2009**
- Record of Decision—**August 2009**

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