



**THOMAS & HUTTON**

Engineering | Surveying | Planning | GIS | Consulting

# Northern Beaufort Bypass Feasibility Study

# Agenda

- ❑ Project Description
- ❑ Feasibility Summary Report
- ❑ Traffic Data
- ❑ Public Concerns
- ❑ Need & Purpose
- ❑ Alternative Alignments
- ❑ Benefit Cost Analysis
- ❑ Where do we go from here
- ❑ Q&A

# Project Description

- ❑ Two-part review of the feasibility of a bypass around the City of Beaufort and a connection between downtown Beaufort and Lady's Island
- ❑ Part One – Feasibility Study
- ❑ Part Two – NEPA Documentation

# Feasibility Summary Report

- ❑ Includes summary of information and a recommendation based on:
  - Traffic
  - Public Concerns
  - Needs
  - Environmental Impacts
  - Benefit/Cost Analysis

# Traffic Data

- ❑ Used county-wide transportation model to predict traffic numbers for 2025
- ❑ Without bypass or bridge at Bellamy's Curve, traffic on segments of US 21 and SC 802 will be unacceptable
- ❑ With bypass, traffic changes little
- ❑ With bridge at Bellamy's Curve and SC 802, traffic on Carteret St become acceptable but traffic on Boundary St increases

# Public Concerns

- ❑ Majority of public comments agreed additional bridge was needed
- ❑ Not in my backyard was preferred location
- ❑ Bellamy's Curve bridge would be most used route according to public comments
- ❑ Marine Corps Air Station does not support route that runs along their entire north boundary

# Need & Purpose

- ❑ Less traffic on US 21 from Clarendon Rd to SC 802
- ❑ Less traffic delays on bridges crossing Beaufort River



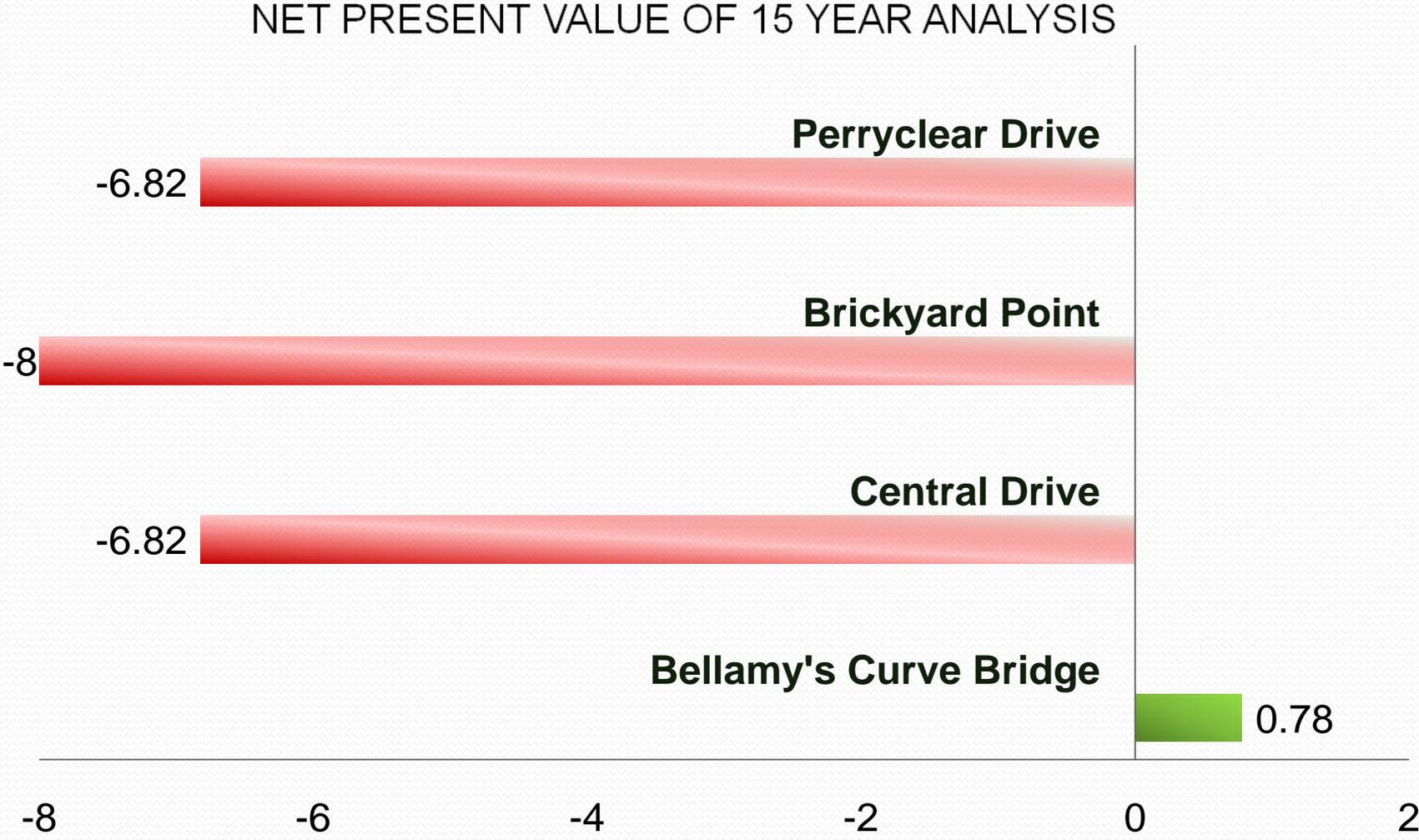
# Alternative Alignments

- ❑ Alignments were evaluated for possible conflicts and ability to meet the purposes of the project
- ❑ Bellamy's Curve bridge has the lowest potential for conflicts, lowest cost and most positive traffic impacts

# Benefit Cost Analysis

- ❑ Guidance: 2003 AASHTO User Benefit Analysis for Highways
- ❑ Inputs
  - Design Years: 2010 & 2025
  - Travel Time Costs
  - Vehicle Operating Costs
  - Accident Costs
  - Agency Costs (Capital Expenses)

# Benefit Cost Analysis



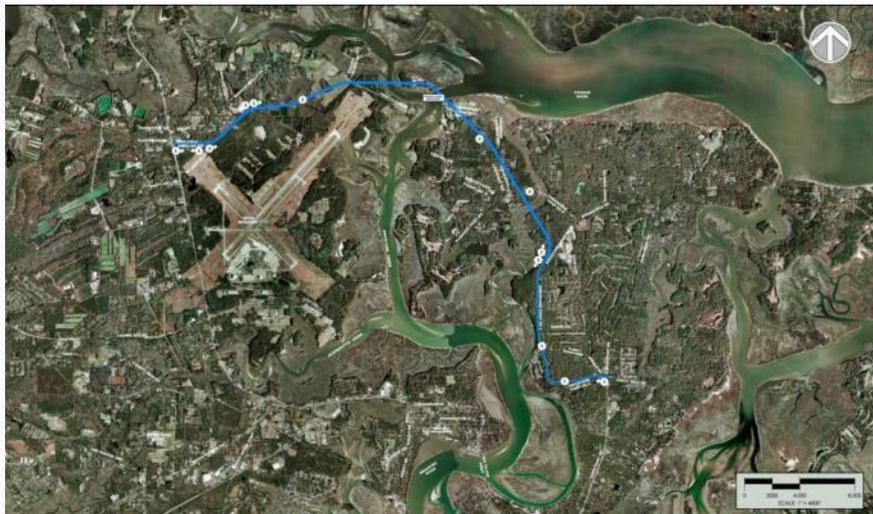
# Benefit Cost Analysis

## □ Conclusions

- All three design alternatives for the Northern Beaufort Bypass have predicted **net costs** as opposed to net benefits over 15 years.
- The design alternative for the Bellamy's Curve Bridge is predicted to have a **net benefit** over 15 years. However, this benefit will only cover approximately 78% of the cost to build the Bridge.

# Where do we go from here

- Create composite route that includes best sections from the alternate alignments



Item #	Description	Factor	Brickyard Point		Central Drive		Perryclear Drive		Bellamy's Curve Bridge Alt.		Composite Alternative	
			Number of Conflicts	Acres of impact	Number of Conflicts	Acres of impact	Number of Conflicts	Acres of impact	Number of Conflicts	Acres of impact	Number of Conflicts	Acres of impact
1	# of Commercial parcels impacted	1	6		6		6		1		18	
2	# of Residential parcels impacted	2	185		245		287		23		165	
3	# of Displacements (residential)	5	32		23		39		4		23	
4	Farm land impacts	1		4.9		8.6		15		0		17.6
5	US Marine Corp Lands	1		43.4		7.8		5.6		0		7.3
6	Federal Lands	1		3.7		5.8		5.7		0		3.7
7	Eligible or Potentially Eligible Architectural Resources	1	0		0		0		0		0	
8	Not Eligible Architectural Resources	1	0		3		2		0		1	
9	Potentially Eligible Archaeological Sites	1	1		0		0		0		0	
10	Non Eligible Archaeological Sites	1	1		0		0		0		0	
11	4(F) and 6(F) lands	4		0		4.24		1.78		0.06		6.1
12	Schools	2	1		0		1		0		0	
13	Churches	1	1		1		1		0		1	
14	Cemeteries	5	0		0		0		0		0	
15	Fire stations	2	1		1		1		0		1	
16	Police Stations	2	0		0		0		0		0	
17	Freshwater wetlands	3		9.4		5.6		3.9		0		10.3
18	ROW within Floodplain	18		104		118		106		11.8		119
19	Open Water Ponds	1		0.1		0		0		0		0
20	ROW Area within critical area Wetlands	2		30.4		20.6		12.4		10.9		30.0
21	Potential Noise & Air Impacts	1	9.345		12.855		9.568		0		11.171	
22	Threatened/Endangered Plants (Pond Berry)	3	2		2		0		0		2	
23	Threatened/Endangered Animals (Colonial Wading Bird Habitat)	3	0		0		1		0		0	
24	Essential Fish Habitat	3		41.85		17.81		13.98		13.05		38.69
25	USTs and Hazardous waste sites	3	1		1		1		0		1	
26	Estimated Project Cost (in Millions)	1		98.02		116.91		81.55		55.20		116.95
Total Score				1,030.02		1,011.63		1,097.98		195.19		983.09

# Where do we go from here

- ❑ Present Composite route to SCDOT & FHWA for input on environmental document
- ❑ Start special studies for environmental document
- ❑ Submit draft environmental document to SCDOT & FHWA
- ❑ Use draft environmental document for planning purposes to preserve the route alignment until forecasted use will make bypass feasible