



**US 113 NORTH/SOUTH STUDY**

# **US 113 North/South Study Lincoln and Milford Public Workshops**

**February 26 & 27, 2007**





**US 113 NORTH/SOUTH STUDY**

# **US 113 North/South Study**

## **Lincoln and Milford Public Workshops**

**February 26 & 27, 2007**



*Wilson's*  
**AUCTION GALLERY**  
*Our Showroom For Specialty Auctions™*

# Welcome & Workshop Purpose

**Public Workshops Highlight Refined Alternatives for US 113**

Please join us for our sixth round of public workshops for the US 113 North-South Study. Since the last workshops, refinements have been made to the Alternatives Retained for Detailed Study, including the Brown Alternative. These refinements are a result of input from the Milford Area Working Group, June 2006 public workshops, and continued consultation with the State and Federal environmental resource and regulatory agencies.

**Review alternatives. Ask questions. Provide comments.** By attending one of the workshops, you will be able to review alternatives and their effects at your own pace, discuss questions and concerns with members of DeDOT's Project Team, and provide your ideas and comments.

**Thanks for staying involved!** Information about the study and the Refined Alternatives Retained for Detailed Study can be obtained from the project website at <http://www.delDOT.gov/static/projects/us113>. Information received during the workshops and the comment period extending through March 16, 2007 will be used to assist in the selection of a recommended preferred alternative and the preparation of the Draft Environmental Impact Statement for the Milford Area.

**February Public Workshops:**

- Lincoln Area**  
Monday, February 26, 2007  
Dorsey L. Harris Early Childhood Center  
3600 Third Street, Lincoln  
400 to 7:00 PM.
- Milford Area**  
Tuesday, February 27, 2007  
Benjamin Franklin Elementary School  
449 North Street, Milford  
4:00 to 7:00 PM.

The above locations are accessible to persons having disabilities. Any person having special needs or requiring special aid, such as an interpreter, is requested to contact DeDOT by phone or mail a week in advance.  
Si necesita un intérprete en español en las sesiones de 113, llame por favor a DeDOT por adelantado.

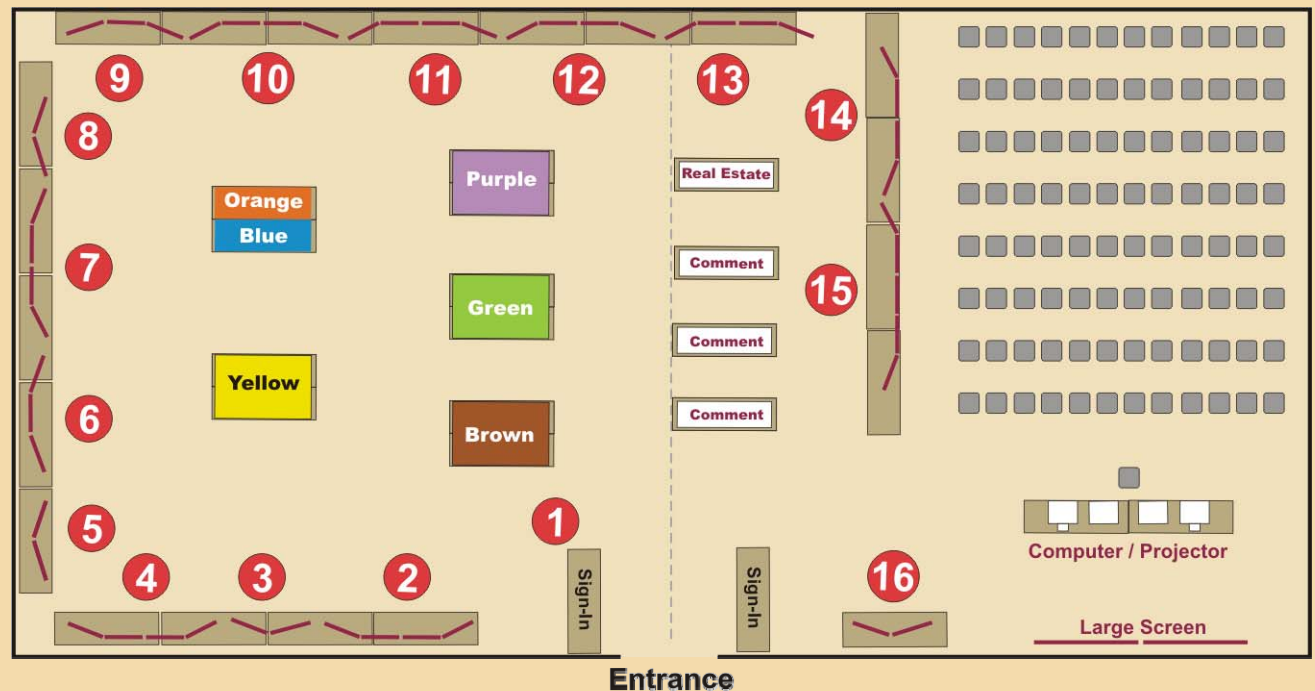
**Time for Both Public Workshops**  
4:00 - 7:00 PM  
Identical information will be presented at each workshop. A brief presentation will be made at 4:15 and repeated at 5:15 and 6:15 at each workshop.

**For More Information:**  
Contact DeDOT Public Relations at 1-800-452-6888 (in DE) or 302-260-2800 or visit [www.delDOT.gov](http://www.delDOT.gov).

- Welcome to the sixth round of public workshops for the US 113 North-South Study
- This may be your last opportunity to review and comment at a public workshop on the Alternatives Retained for Detailed Evaluation before DeDOT presents a Draft Environmental Impact Statement (DEIS), including a recommended Preferred Alternative late this spring
- The Retained Alternatives have been refined in response to comments and input from the June 2006 public workshops, the Working Group, and continuing consultation with the environmental resource and regulatory agencies
- In response to Working Group comments and the June 2006 workshop, the Brown Alternative has been evaluated by the Project Team and reviewed by the Environmental Resource and Regulatory agencies in a manner similar to the other Retained Alternatives
- The Project Team continues to be available to discuss issues you consider important to the project

# Tonight's Workshop Layout

- 1 Welcome / Purpose
- 2 Public Involvement / Resource Agency Coordination
- 3 Study areas - Purpose and Need
- 4 Traffic Analysis
- 5 Right-of-Way/Property Acquisition Process
- 6 Cultural Resources
- 7 Natural Resources
- 8 Air Quality Analysis
- 9 Noise Analysis
- 10 Yellow Alternative
- 11 Orange Alternative
- 12 Blue Alternative
- 13 Green Alternative
- 14 Purple Alternative
- 15 Brown Alternative
- 16 Next Steps / Stay Informed / Thank You



# Handouts Available

1. Public Workshop FYI
2. Recap of June 2006 Workshop Comments
3. Workshop Display Boards (16)
4. Impact Matrix
5. Comment Form
6. Right-of-Way Brochures

US 113 North-South Study - Comment Form - February 26 & 27, 2007  
 DELAWARE DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION

**QUESTIONS AND/OR COMMENTS**

US 113 North-South Study  
 MILFORD and LINCOLN AREAS - PUBLIC WORKSHOPS  
 Monday - February 26, 2007 - Evelyn I. Morris Early Childhood Center - Lincoln  
 Tuesday - February 27, 2007 - Benjamin Banneker Elementary School - Milford

I/We wish to comment on issues about the following aspects of this project:

I/We wish to comment and/or provide input regarding a Recommended Preferred Alternative (the meeting in the project development process):

Please **USE** only for **input** to the Meeting Day. Please **DO NOT** use for **input** to the Meeting Day.

Your comments and suggestions regarding alternatives presented at the meeting will be carefully considered by FHWA. Statewide law requires public review of all alternatives and the results will be made available to the public. Thank you for your participation and assistance in the proposed transportation project.

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_  
 State: \_\_\_\_\_  
 Zip: \_\_\_\_\_  
 Telephone: \_\_\_\_\_  
 E-mail: \_\_\_\_\_

Mr. Warren Wills, DE 113 Project Manager  
 Delaware Department of Transportation, P.O. Box 178, Dover, Delaware 19903  
 Phone 800-453-6888, Fax 302-739-2225, Email: [dehwa-publiccomment@delaware.gov](mailto:dehwa-publiccomment@delaware.gov)  
 Web: <http://www.deldot.gov> or <http://www.deldot.com>

Additional comments may be provided on the back of this page.

1. Public Notice  
 A copy of the Public Notice for this workshop published in the Delaware State News, The Milford Beacon, and The Milford Chronicle (see notice to the left).
2. Impact Matrices (Separate, Also available at sign-in table)  
 The Impact Matrices provide a detailed, numerical comparison of the natural environmental, cultural resource, agricultural, property, and access impacts associated with each of the refined alternatives retained for detailed study, along with a comparison of their costs and engineering features.
3. June 2006 Workshop Comments  
 The public, including a large representation from the Concerned Citizens of Greater Lincoln, attended the June 2006 Workshop, providing extensive comments and voicing considerable support for the Brown Alternative and opposition to the Green and Purple Alternatives. The Project Team has prepared a response to a number of these comments, based on the more detailed evaluation undertaken over the past several months for all of the Alternatives Retained for Detailed Study, including the Brown Alternative.
4. Display Boards  
 This packet includes an 11" x 17" copy of each of the seventeen Display Boards presented at the workshop. These boards describe various aspects of the US 113 Project, such as Workshop Purpose, Public Involvement/Resource Agency Coordination, Study Purpose & Need, Traffic, Air Quality, Noise, Right-of-Way/Property Acquisition Process, Cultural Resources, Natural Resources, a summary of the results of the evaluation of the refined Retained Alternatives, and Next Steps.
5. Right-of-Way Brochures (Separate Available at Display #5)  
 Two brochures are provided that summarize DeDOT's land acquisition process "Your Property and the Right-of-Way" and "Transportation and the Right-of-Way, A Guide for Property Owners".

113 US 113 North / South Study  
 CONTRACT NO. 22-127-01

**Public Workshops Highlight Refined Alternatives for US 113**

Please join us for our next round of public workshops for the US 113 North-South Study. Since the last workshop, alternatives have been refined and the alternatives retained for detailed study, including the Brown Alternative. These alternatives are a result of input from the Milford Area Working Group and other public agencies, and will be used to make environmental analyses and engineering designs.

**February Public Workshops:**

- Lincoln Area**  
 Monday, February 26, 2007  
 6:00 AM - 7:00 PM  
 Evelyn I. Morris Early Childhood Center
- Milford Area**  
 Tuesday, February 27, 2007  
 6:00 AM - 7:00 PM  
 Benjamin Banneker Elementary School

Time for Public Workshops  
 6-8:30 - 7:00 PM

US 113 North / South Study  
 CONTRACT NO. 22-127-01

**Comparison of Retained Alternatives**

Alternative	No-Build	Yellow	Orange	Blue	Green	Purple	Brown
Alternative 1: No-Build	100	0	0	0	0	0	0
Alternative 2: Yellow	0	100	0	0	0	0	0
Alternative 3: Orange	0	0	100	0	0	0	0
Alternative 4: Blue	0	0	0	100	0	0	0
Alternative 5: Green	0	0	0	0	100	0	0
Alternative 6: Purple	0	0	0	0	0	100	0
Alternative 7: Brown	0	0	0	0	0	0	100

US 113 North / South Study  
 CONTRACT NO. 22-127-01

**ALTERNATIVES RETAINED FOR DETAILED STUDY**

NO BUILD

ON-ALIGNMENT

WEST BYPASS ALTERNATIVES

EAST BYPASS ALTERNATIVES

YELLOW ORANGE BLUE

GREEN PURPLE BROWN

February 2007

# Alternatives Retained for Detailed Study

## ❖ No-Build Alternative

## ❖ Build Alternatives

### ■ On-Alignment

- Yellow

### ■ West Bypass

- Orange
- Blue

### ■ East Bypass

- Green
- Purple
- Brown

# Milford Area Alternatives Retained for Detailed Study

## NO BUILD



## ON-ALIGNMENT



## WEST BYPASS ALTERNATIVES



## EAST BYPASS ALTERNATIVES



# **Summary of Comments**

## **June 2006 Milford & Lincoln Workshops**

- Taking homes and properties
- Noise, health effects
- Property values
- Emergency vehicle access
- Don't divide Milford or Lincoln
- Concern stated about negative impact on businesses and jobs
- Concern expressed regarding length and cost of west alternatives
- A few ideas were put forth: elevate existing US 113, use the median, widen existing roads
- Project perceived as helping out-of-state travelers
- Polar opposite views – no need vs. DelDOT must meet the challenge
- Appreciation for the public outreach generally and for the displays and maps
- Concern about the changing schedule and perception that the Department lacks funds to move ahead



# Summary of Comments

## June 20, 2006 Milford Workshop

**219 Attendees**

**78 Comment Forms Received**

- Prefer Brown, little support for Orange, Blue and Purple Alternatives
  
- Limited opposition to East and West Bypasses and specific opposition to On-Alignment Alternative  
*Note: The Concerned Citizens of Greater Lincoln had a display area immediately outside of the Public Workshop. The group distributed a voting form.*
  
- Environmental concerns for opposing an alternative:
  - Well and septic impact, storm water runoff
  - Wetland, RTE, pond impacts
  - Use of farmland was mentioned as both a negative impact and a plus (better than taking homes)

# Summary of Comments

## June 19, 2006 Lincoln Workshop

**255 Attendees**

**93 Comment Forms Received**

- Strong Preference for Brown

- Opposition to Green and Purple Alternatives

*Note: The Concerned Citizens of Greater Lincoln had a display area immediately outside of the Public Workshop. The group distributed a voting form. See results of the Concerned Citizens completed forms on adjacent slide.*

- Reasons for favoring Brown:

- Less environmental impacts
- Shorter, less expensive
- Fewer homes impacted
- Doesn't divide Lincoln
- Ponds will not be polluted

- Reasons for opposing Green and Purple:

- Divide Lincoln
- Impact Greentop community
- Toxic pollution to waterways, air pollution, noise
- Elevated segments
- Impacts to schools and churches
- Concern expressed about development
- Concern cited about helping up-state and out-of-state tourists

# Summary of Comments

## Concerned Citizens of Greater Lincoln

- The Concerned Citizens of Greater Lincoln organization handed out materials and requested attendees to complete a Preference Form voting for the alternative they prefer. The results were provided to Secretary Wicks:

Alternative	Favorable Votes
No-build	48
On-alignment	18
Orange	7
Blue	3
Green	0
Purple	0
Brown	117
<b>TOTAL</b>	<b>193</b>

- The Concerned Citizens of Greater Lincoln is an advocacy organization which strongly opposes the Green and Purple Alternatives and favors the Brown Alternative.

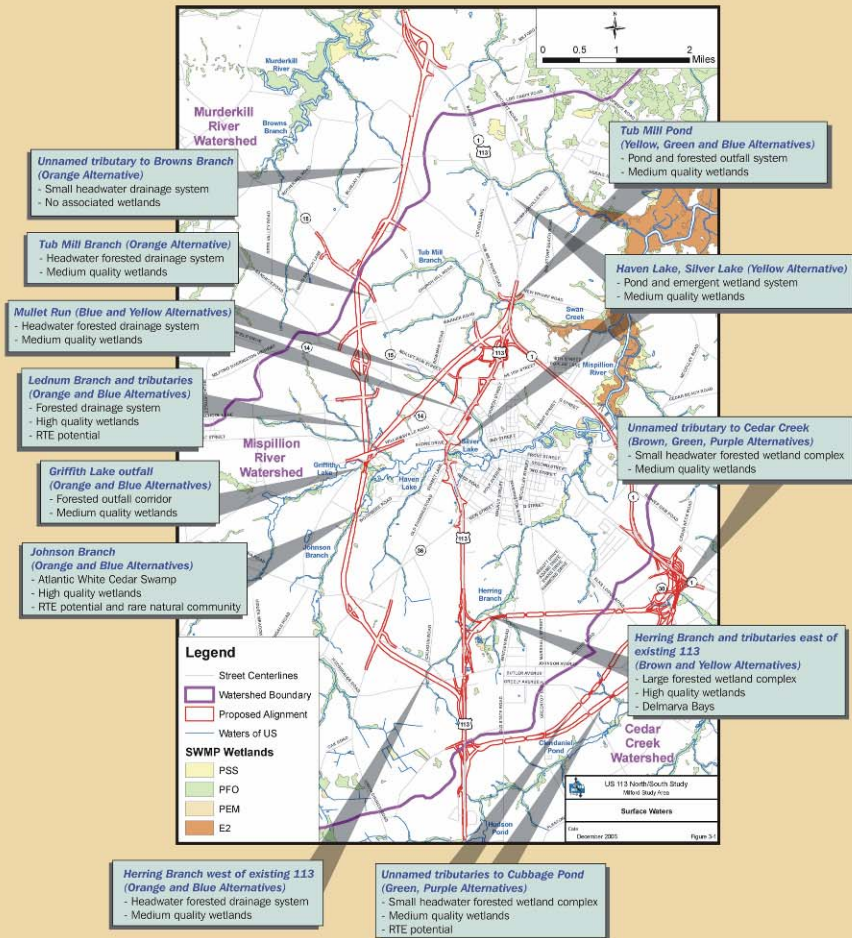
# **Project Team Activities Since June 2006 Workshops**

## **Wetlands**

- Extensive consultation with natural resource agencies who have analyzed the retained alternatives.
  - U.S. Army Corps of Engineers
  - Environmental Protection Agency
  - U.S. Fish and Wildlife Service
  - Department of Natural Resources and Environmental Control
- Several field visits have been conducted with the agencies to review critical issues.
- These agencies now have a full understanding of the wetland and woodland issues, including habitat quality, associated with each alternative.

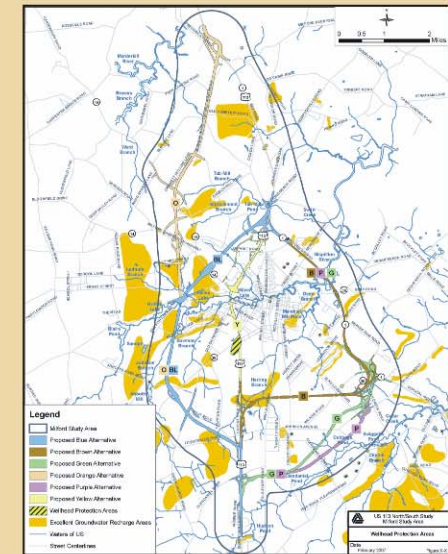
# Wetlands and Streams

Federally jurisdictional Waters of the US, including wetlands, streams and open water, exist throughout the project area. In this portion of the Delaware River Basin, wetlands are primarily found associated with streams and waterways. The map below identifies alignment impact locations along wetlands and streams in the project area.



# Groundwater

Groundwater is an important natural resource and commodity which is used to supply drinking water and for crop irrigation. In Milford, 100 percent of the public drinking water is supplied by groundwater. Delaware averages around 42 inches of local rainfall a year, of which only around 12 inches is available to "recharge" the groundwater supply through infiltration (the rest is lost to evaporation, surface runoff, and transpiration by plants). The recharge potential of surface soils has been modeled by Delaware Geologic Survey as shown below. Areas with excellent recharge potential allow three to four times more water through the soil than areas with fair to poor recharge and allow introduced contaminants to enter the groundwater supply quickly. New impervious surfaces limit rainfall infiltration and new roadways have the potential to introduce contaminants into the water supply. Milford's public drinking water wells are protected by a 150 foot buffer shown as The Wellhead Protection area below.



# **Project Team Activities Since June 2006 Workshops**

## **Cultural Resources**

- The Delaware State Historic Preservation Office (SHPO), working closely with the project team, has agreed on the eligibility or non-eligibility of all architectural properties for the National Register of Historic Places.
- See Display # 6



# Project Team Activities Since June 2006 Workshops

## Rare, Threatened and Endangered Species (RTEs)

- Coordinated with the U.S. Fish and Wildlife Service and DNREC regarding Federal species of concern.
- Extensive studies were conducted to determine potential impacts to the Swamp Pink, a Federally-listed plant species.
  - No direct impacts were found.
  - Exceptional habitat was found in the Johnson Branch area.
- A new bald eagle nest was discovered by DNREC in the fall of 2006 within about 500 feet of the Orange Alternative.
- See Display # 7



# Rare, Threatened and Endangered Species

## What Are RTEs?

- Rare, threatened, and endangered (RTE) species are wildlife species that are in danger of extinction. Federal and State RTE species likely exist in the US 113 project area.
- RTE species are a critical part of the project natural resources analysis. Potential effects to species and their habitat must be considered in project decision making.

## Important Regulations

### Endangered Species Act

- ▶ The Endangered Species Act regulates actions that may result in an incidental "take" of a listed species or adverse affects to its habitat, but does not prohibit such actions unless they result in jeopardy to the continued existence of a listed species, or result in the destruction or adverse modification of designated critical habitat.
- ▶ Currently, 632 endangered species and 190 threatened species are protected and include birds, insects, fish, reptiles, mammals, crustaceans, flowers, grasses, and trees.
- ▶ The law provides regulations for the conservation of threatened and endangered plants and animals and the habitats in which they are found.

### Delaware Regulations

- ▶ Title 7 of the Annotated Code of Delaware prohibits the importation, transportation, possession, or sale of any part of an endangered species of fish or wildlife.
- ▶ In addition to federal species, DNREC maintains a list of state rare, threatened and endangered species and adverse impacts to these species are discouraged.

### National Environmental Policy Act (NEPA)

- ▶ NEPA requires a fair and thorough evaluation of all project alternatives and their associated impacts during the planning process. Impacts to rare, threatened and endangered species and their habitats are part of this process.

## Identification and Evaluations

- DelDOT has performed extensive field studies to identify whether RTE species or their potential habitat exist in the project area.
- DelDOT is working closely with DNREC and the US Fish and Wildlife Service and has identified RTE species that likely exist within the project area.

# Rare, Threatened and Endangered Species

### ▶ Bald Eagle (*Haliaeetus leucocephalus*, threatened bird)

The federal protection strategy for the bald eagle protects active bald eagle nests from disturbance. DNREC conducts annual bald eagle nesting surveys and monitors the location of most nests. DNREC information indicates there is one nest in the Milford study area located near both western alternatives (Orange and Blue).



### ▶ Swamp Pink (*Helonias bullata*, threatened flowering plant)

Swamp pink is a showy flowering plant that blooms in early spring. Swamp pink is threatened by wetland habitat loss and degradation. The plant exhibits low seedling establishment which limits its recovery potential. DNREC has identified swamp pink populations along stream valleys in the Milford study area. The western alternatives (Orange and Blue) have the highest potential to impact swamp pink.

### ▶ State Species

DNREC has identified the potential presence of several Delaware state listed species in the Milford Study area, as listed in the table below.

Common Name	Scientific Name	Taxon	State Rank
Alewife Floater	<i>Anodonta implicata</i>	Invertebrate Animal	Extremely Rare
Big Floating-heart	<i>Nymphoides aquatica</i>	Vascular Plant	Extremely Rare
Blackbanded Sunfish	<i>Enneacanthus chaetodon</i>	Vertebrate Animal	Very Rare
Bronze Copper	<i>Lycaena hylus</i>	Invertebrate Animal	Very Rare
Brown-fruited Rush	<i>Juncus pelocarpus</i>	Vascular Plant	Very Rare
Horse-tail Spike-rush	<i>Eleocharis equisetoides</i>	Vascular Plant	Very Rare
Mitchell's Sedge	<i>Carex mitchelliana</i>	Vascular Plant	Very Rare
Red-shouldered Hawk	<i>Buteo lineatus</i>	Vertebrate Animal	Very Rare Breeding, Rare to Uncommon Nonbreeding
Tidewater Mucket	<i>Leptodea ochracea</i>	Invertebrate Animal	Extremely Rare
Yellow-throated Warbler	<i>Dendroica dominica</i>	Vertebrate Animal	Very Rare Breeding
White Beak-rush	<i>Rhynchospora alba</i>	Vascular Plant	Very Rare

# Project Team Activities Since June 2006 Workshops

## Traffic

- During 2006, DelDOT completely updated its travel demand model
  - Population and employment
  - External volumes
  - 2005 calibration
  - Mode choice model (DTC)
  - New toll model (I-95, SR 1, US 301)
  - Traffic analysis is continuing

# Project Team Activities Since June 2006 Workshops

## Traffic

Alternative	2030 Traffic Volumes		
	Existing US 113	Bypass	
		New roadway	SR 1 segment
Base Year (2003)	19,000	N/A	N/A
No-build	45,000	N/A	N/A
Yellow (on-alignment)	67,000	N/A	N/A
Orange (west)	15,000	51,500	N/A
Blue (west)	15,500	37,500	N/A
Green (east)	17,000	38,000	65,500
Purple (east)	17,000	38,000	65,500
Brown (east)	22,000	39,000	64,500

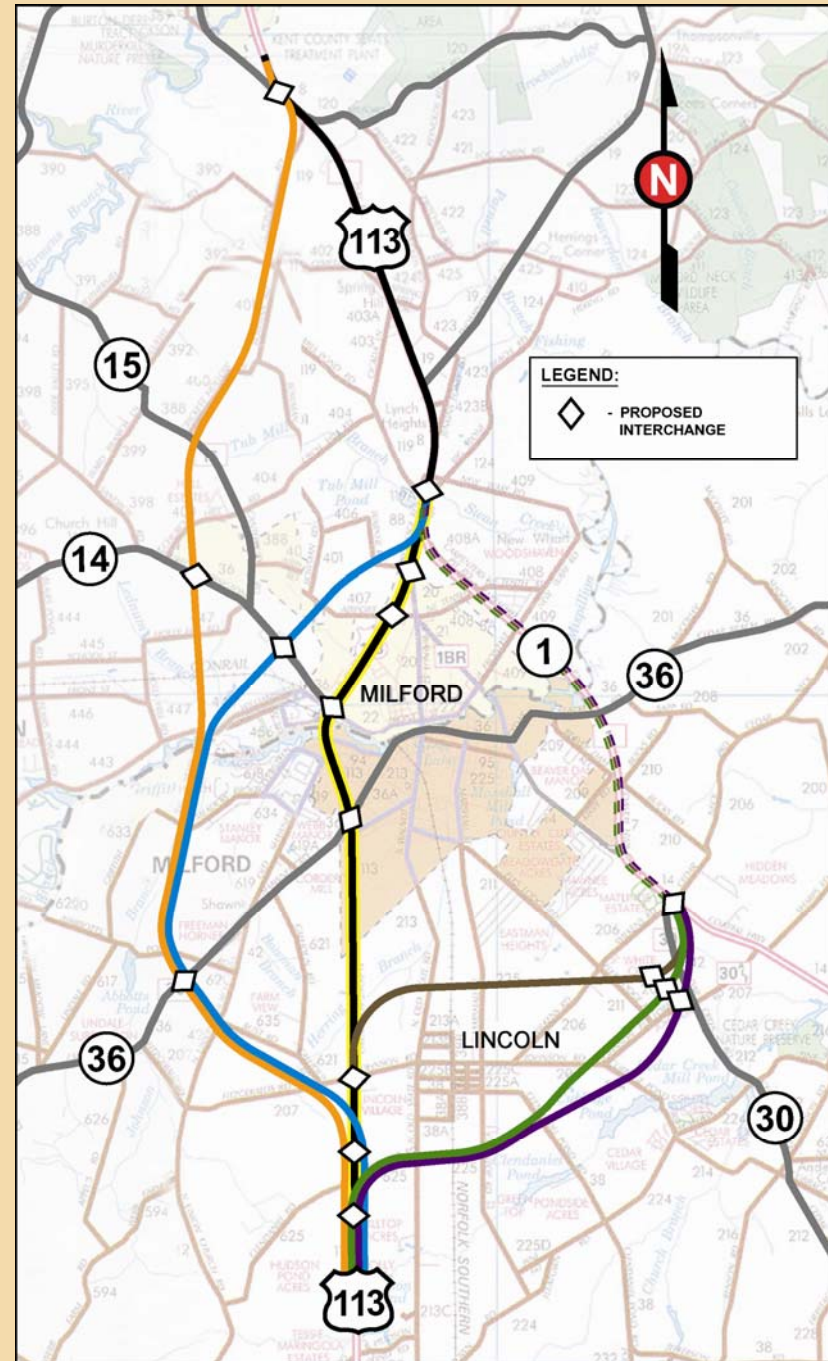
- All alternatives meet purpose and need
- See Traffic Analysis – Display # 4

# **Project Team Activities Since June 2006 Workshops**

## **Socio-Economic Impacts**

- This category includes impacts to both businesses, including agriculture, and properties.
- Property impacts have been updated in the matrix.
- The analysis of economic impacts, including agriculture, is underway, based on this updated traffic data, and will be presented at the next round of public workshops.

# Milford Area Alternatives Retained for Detailed Study

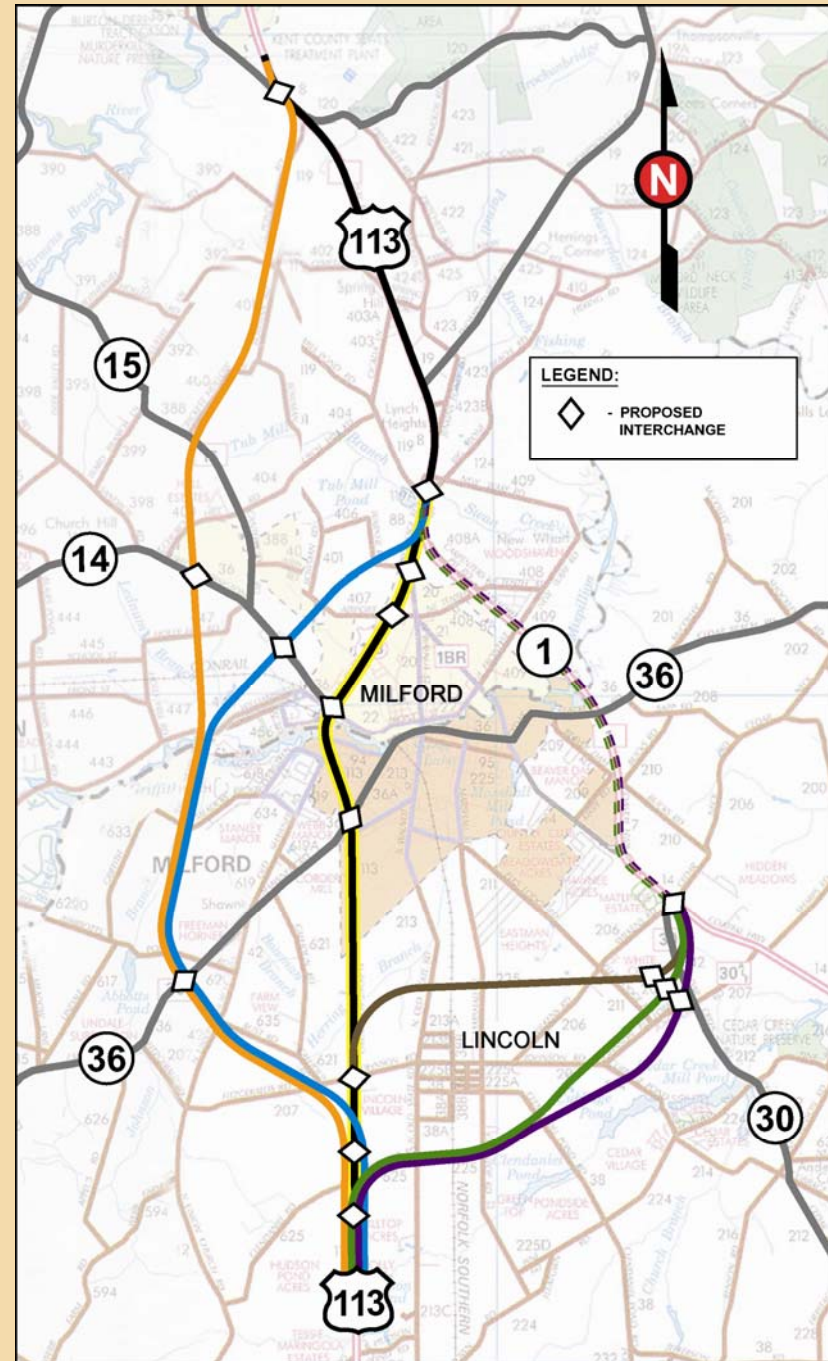


# Project Team Activities Since June 2006 Workshops

## Natural Areas

- DNREC approved new State Resource Area and Natural Area maps in fall 2006.
- These data were provided to the project team by DNREC immediately upon approval and have been incorporated into the mapping.
- Impacts are included in the current impact matrix.
  - The significant impacts are on the Orange and Blue Alternatives at Haven / Griffith Lakes and Johnson Branch.

# Milford Area Alternatives Retained for Detailed Study



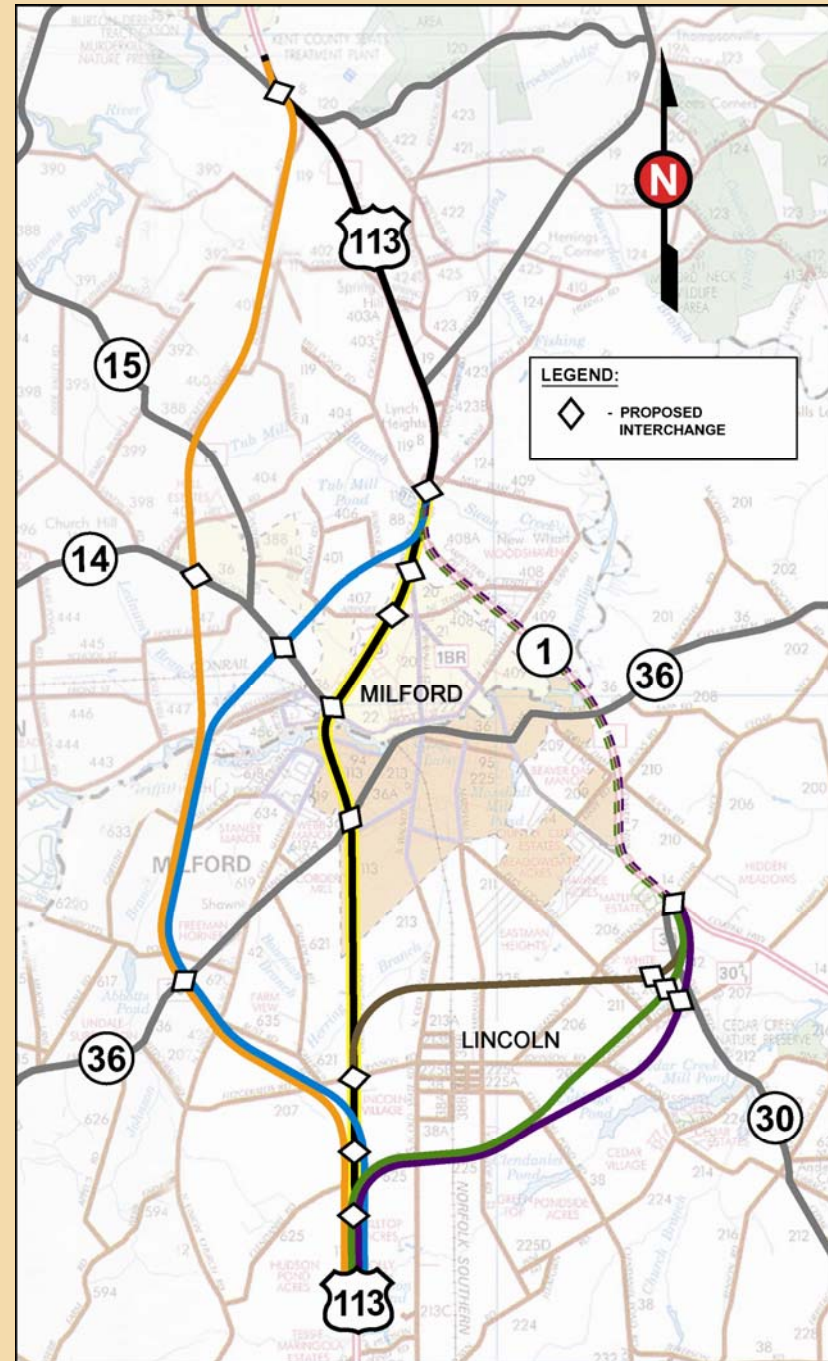
# Project Team Activities Since June 2006 Workshops

## Cost Estimates

- The following preliminary cost estimates include construction, right of way, and other incidental costs in today's dollars:
  - **Yellow** (on-alignment): \$418 – 512 million
  - **Orange** (west): \$420 – 513 million
  - **Blue** (west): \$324 – 395 million
  - **Green** (east): \$299 – 365 million
  - **Purple** (east): \$337 – 411 million
  - **Brown** (east): \$339 – 415 million



# Milford Area Alternatives Retained for Detailed Study

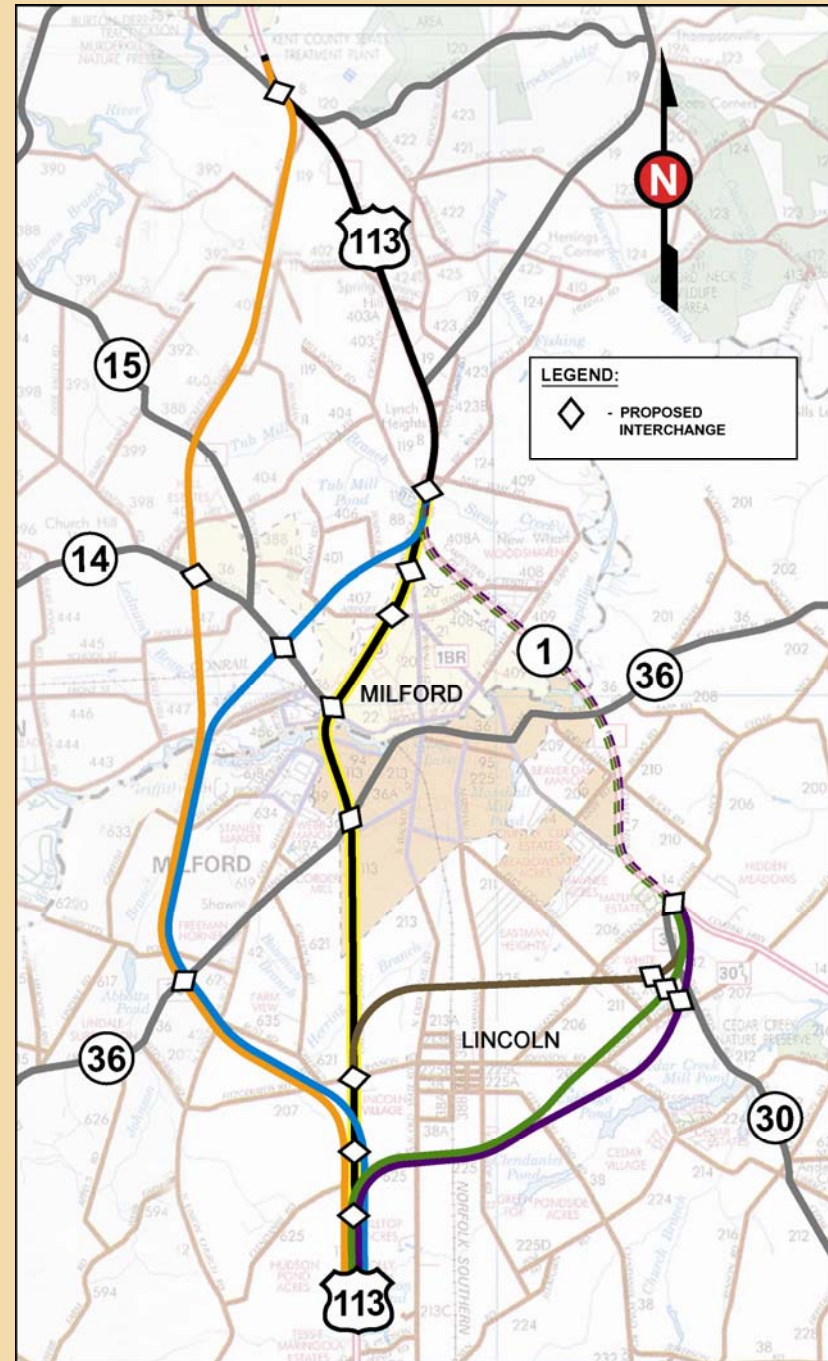


## **Project Team Activities Since June 2006 Workshops**

### **Refinements to Retained Alternatives**

- Orange (west): adjusted in the Church Hill Road vicinity to avoid a historic farm
- Blue (west): adjusted to avoid historic property at northwest corner of US 113 and Warner Road
- Purple (east): shifted alignment south to reduce residential and resource impacts near Logans Run
- Brown (east): evaluated several alignment options

# Milford Area Alternatives Retained for Detailed Study



# **Alternatives Retained for Detailed Study**

### ON-ALIGNMENT



### WEST BYPASS ALTERNATIVES



### NO BUILD



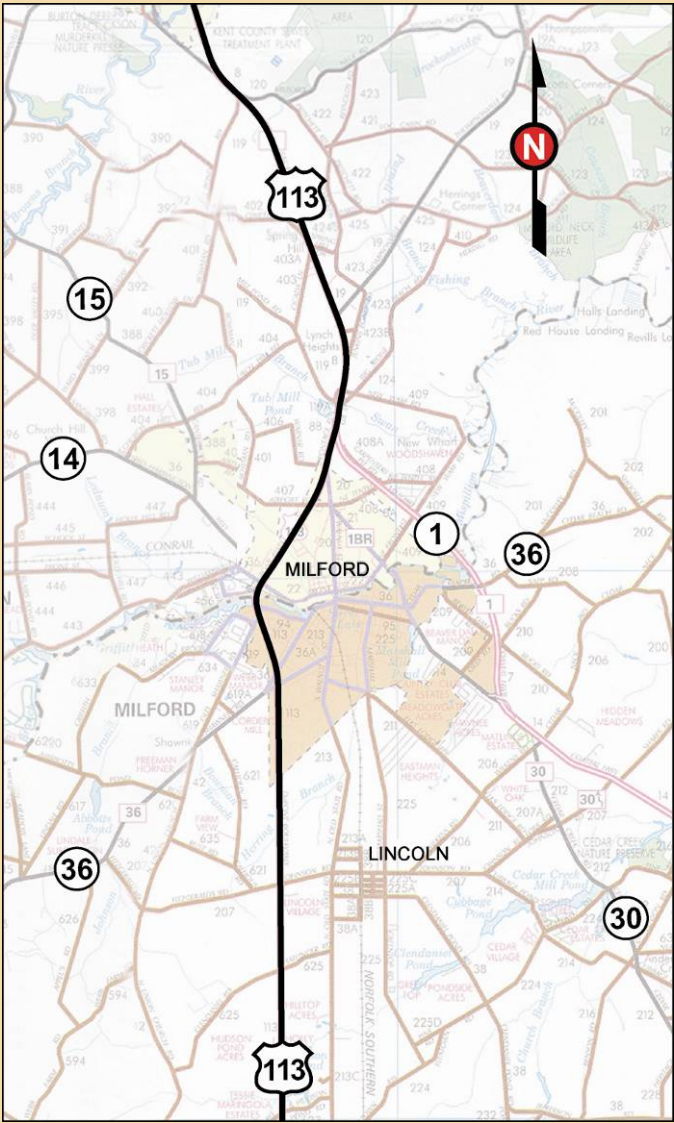
### EAST BYPASS ALTERNATIVES



# **NO-BUILD Alternative**

- Includes existing network of roads, plus currently programmed, committed and funded roadway and transit projects, except for US 113 North-South Study, as listed in DelDOT's 2030 CLRP
- Does not meet Purpose and Need for this project
- Provides a baseline condition with which to compare the other alternatives and their consequences
- Is retained for evaluation purposes
- The No-Build Alternative does have environmental effects (projects contained in CLRP) that are not evaluated as part of the North-South Study. Will be evaluated as part of the studies for each specific action.

# NO-BUILD Alternative



# YELLOW (On-Alignment)

## Natural Environment

### • Advantages

- Low wetland impacts
- Wetland impacts to previously disturbed systems along existing US 113
- Low State Natural Area and Resource Area impacts
- Low forest impacts
- Moderate Waters of the US impacts
- Few agricultural districts and easements impacted
- Moderate potential effect on excellent groundwater recharge areas

### • Disadvantages

- Potential 4(f) impact - BMX Park
- Potential Federally listed RTE impact- swamp pink
- Potential effect on Milford wellhead protection area

## Cultural Resources

### • Advantages

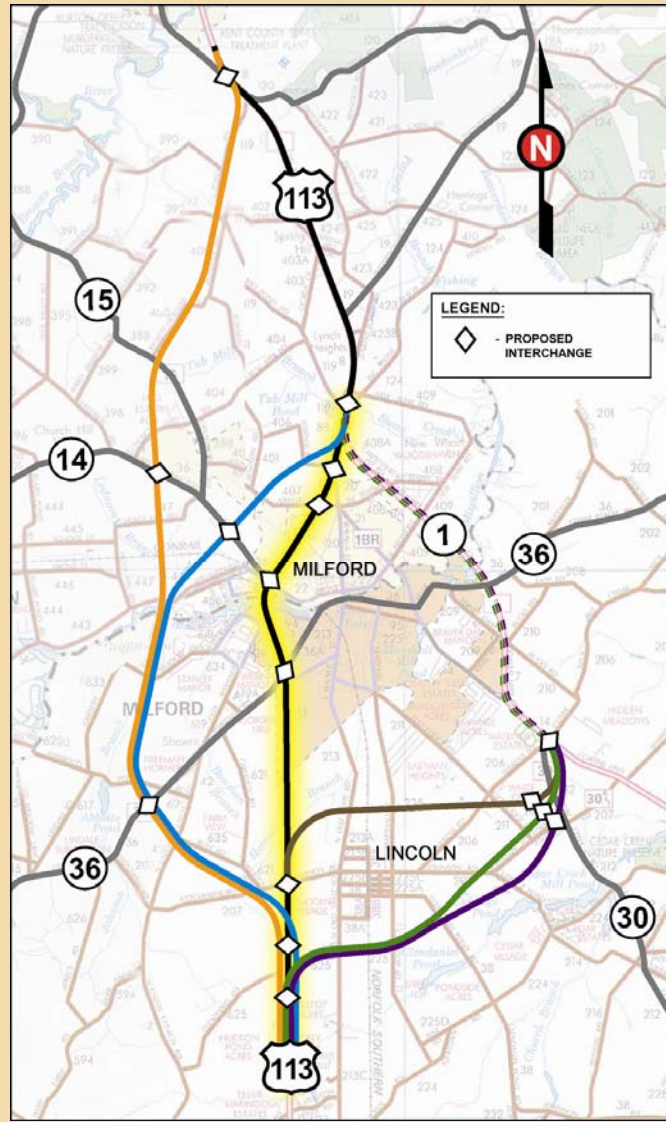
- Lowest impact to areas with potential high sensitivity for early historic-period archeological resources
- Moderate impact to areas with potential high sensitivity for prehistoric archeological resources

### • Disadvantages

- Unavoidable direct impacts to multiple National Register of Historic Places architectural properties - Section 4(f) - fatal flaw for Federal funding
- Highest potential indirect impacts to National Register of Historic Places architectural properties
- Highest impact to areas with potential high sensitivity for later historic-period archeological resources
- Impacts a known archeological site



# YELLOW (On-Alignment)



# **YELLOW (On-Alignment)**

## **Community / Engineering / Traffic**

### **• Advantages**

- Shortest overall length
- Takes advantage of existing US 113 right of way
- The alignment is at grade as it passes adjacent to residential communities
- No school properties would be directly impacted
- Lowest number of farm properties (33) within 900 feet of Yellow Alternative
- Low number of existing residential properties (29) and farm properties (12) to be acquired

### **• Disadvantages**

- High number of existing communities (10) lie within 900 feet of the Yellow Alternative

#### **Kent County**

- Salevan's 2nd Addition
- W.&N. Rogers Dev
- North Shores - Sec. 1

#### **Sussex County**

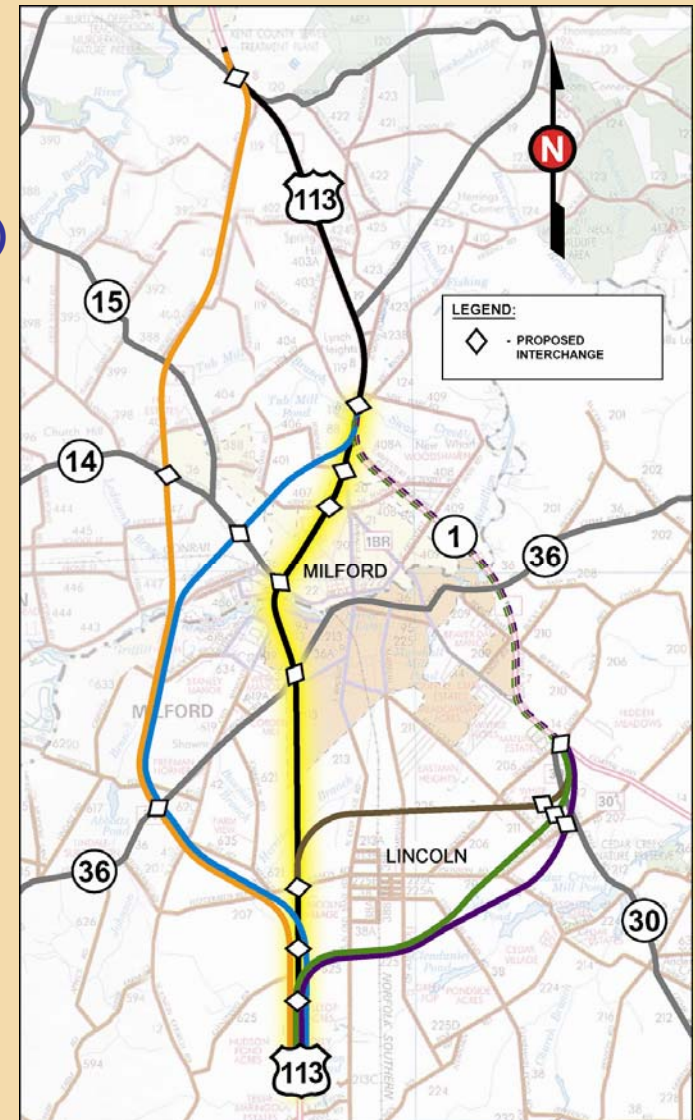
- Hudson Mill
- Hudson Pond Acres
- Evergreen Acres
- Haven Lake Estates
- Lake Lawn Estates
- Lincoln Village
- Central Parke  
(under construction)

# YELLOW (On-Alignment)

## Community / Engineering / Traffic

### • Disadvantages

- High number of property acquisitions required (76)
- Highest number of commercial property acquisitions (35)
- Greatest disruption of access to existing businesses (53)
- Very poor consistency with Livable Delaware
- Greatest impact on traffic during construction
- High cost alternative
- The Milford Church of Christ, Faith Independent Baptist Church, the Reformation Evangelical Church and property of the New Hope Baptist Church are located within 900 feet of the Yellow Alternative
- High number of residential properties (603) within 900 feet of the Yellow Alternative
- Requires modifying access to highest number of residential properties (30) and commercial properties (53)
- Six Milford School District properties lie within 900 feet of the centerline including portions of Milford High School, Milford Middle School and the headquarters of the Milford School District



# **YELLOW (On-Alignment)**

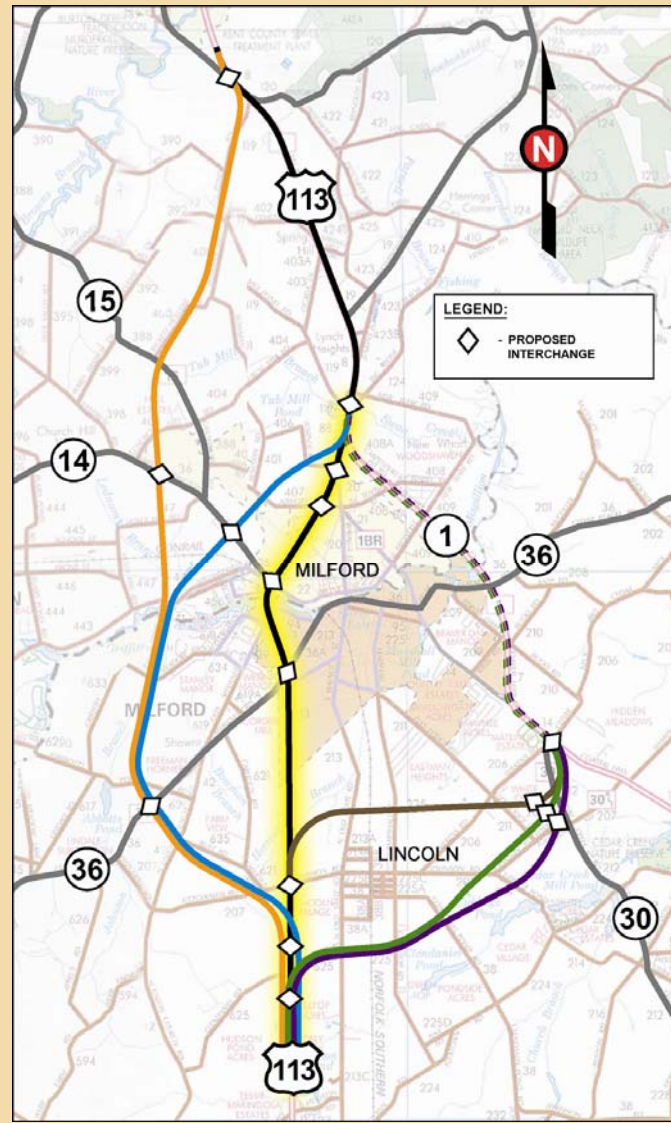
## **Resource & Regulatory Agency Comments**

- **The Yellow Alternative has greater potential effects on historic buildings than the West or East Bypass Alternatives. The Federal Highway Administration has commented that the direct impacts on historic properties make the Yellow Alternative not feasible and prudent under Section 4 (f) of the USDOT Act of 1966.**
- **The East and West Bypass Alternatives are feasible and prudent avoidance alternatives to the Yellow On-Alignment Alternative under the Section 4 (f) federal regulation.**
- **The Yellow On-Alignment Alternative and the East Bypass Alternatives have less overall potential to affect archeological sites than do the West Bypass Alternatives.**

## **Public Comments to Date**

- **Opposition to Yellow Alternative voiced by City of Milford, emergency service providers, and some Working Group members.**
- **Some support and opposition from members of the public.**

# YELLOW (On-Alignment)



# ORANGE (West Bypass)

## Natural Environment

### • Advantages

- No potential effect on wellhead protection areas

### • Disadvantages

- Among highest State Natural Area and Resource Area impacts
- Impacts to highest quality wetlands along Johnson Branch
- High wetland impacts
- High Waters of the US impacts
- Potential direct impact to Federally-listed RTE - area around new bald eagle nest
- High potential Federally-listed RTE impacts - swamp pink
- High agricultural impacts
- High forest land impacts
- High potential effect on excellent and good groundwater recharge areas

## Cultural Resources

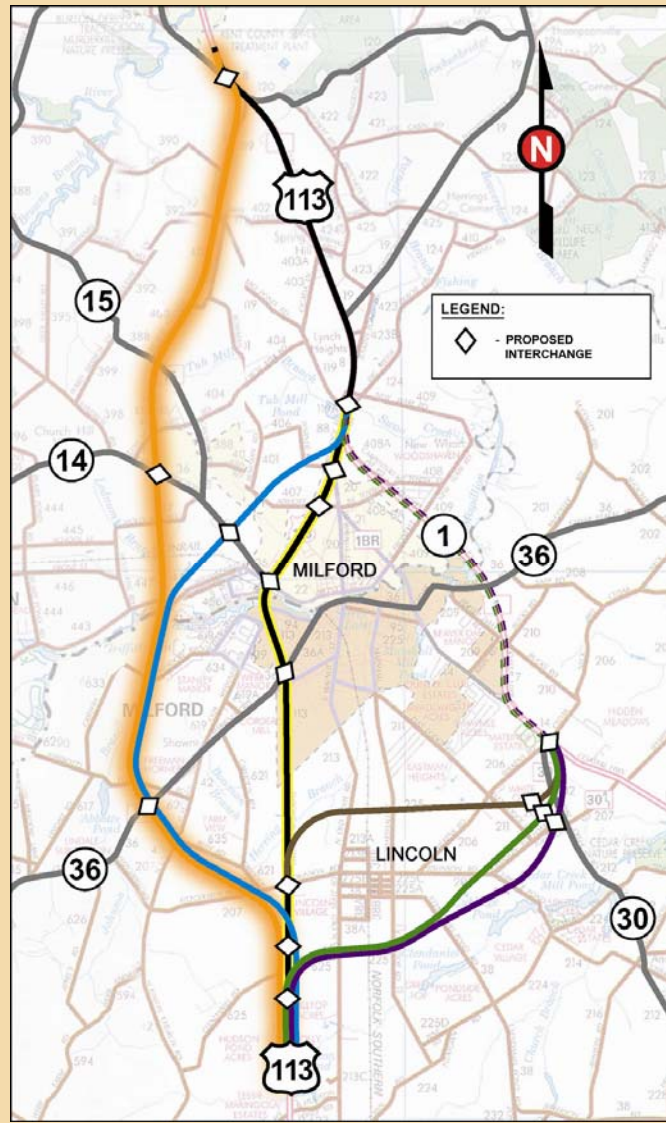
### • Advantages

- No direct impact to National Register of Historic Places architectural properties
- Low impact to areas with potential high sensitivity for early historic-period archeological resources
- Moderate impact to areas with potential high sensitivity for later historic-period archeological resources

### • Disadvantages

- High potential indirect effects on National Register of Historic Places architectural properties (approximately 6 properties)
- Highest impact to areas with potential high and moderate sensitivity for prehistoric archeological resources
- Impacts a known archeological site

# ORANGE (West Bypass)



# ORANGE (West Bypass)

## Community / Engineering / Traffic

### • Advantages

- Short overall length
- Highest traffic benefits (51,500 vehicles per day (vpd) vs. about 38,000 vpd for the other bypass alternatives)
- Little disruption to existing businesses
- Moderate number of existing residential properties (318) within 900 feet of the Orange Alternative
- A moderate number of existing residential properties (51) would be acquired
- A low number of residential properties access (3) and farm properties access (2) would be modified
- The lowest number of commercial properties (1) would be acquired
- No school properties would be located within 900 feet of the Orange Alternative

### • Disadvantages

- High number of existing communities (9) are within 900 feet of the Orange Alternative

#### Kent County

- Hall Estates
- Country Lake
- Haven Lake Estates

#### Sussex County

- The Heath
- Stanley Manor
- Lincoln Village
- Hudson Mill
- Hudson Pond Acres
- The Retreat at Hazzards Hill  
(under construction)

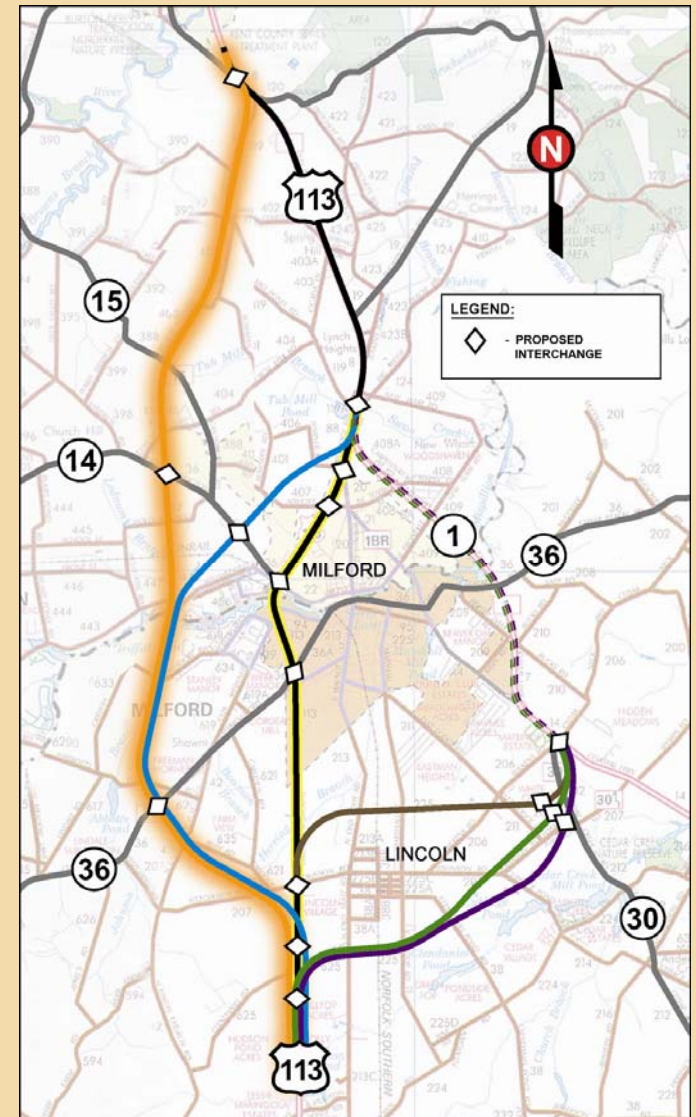


# ORANGE (West Bypass)

## Community / Engineering / Traffic

### • Disadvantages

- High number of property impacts
- Highest acres of property impacts
- Fair consistency with Livable Delaware
- Longest length of construction on new alignment
- High cost alternative
- The Frederica First Baptist Church and property of the New Hope Baptist Church are located within 900 feet of the Orange Alternative
- A manufactured housing community on Fitzgeralds Road would be acquired
- High number of farm properties (69) within 900 feet of the Orange Alternative



# ORANGE (West Bypass)

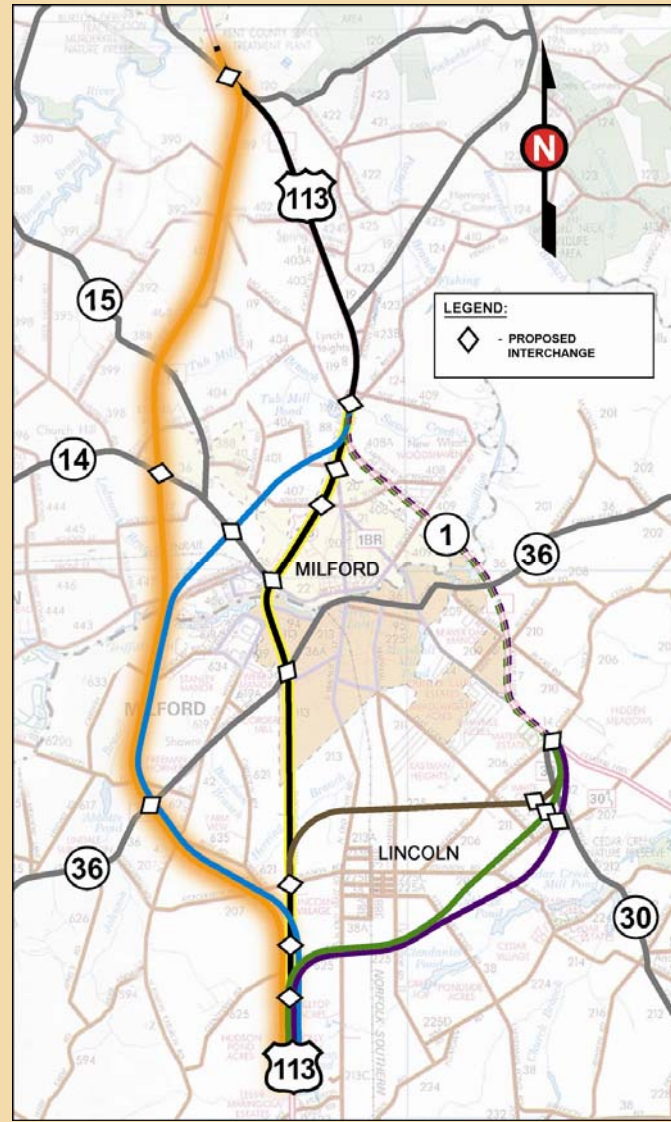
## Resource & Regulatory Agency Comments

- Because the West Bypass Alternatives directly impact more and higher quality natural resources, they are considered more environmentally damaging alternatives than the East Bypass Alternatives.
- The environmental resource and regulatory agencies consider the East Bypass Alternatives preferable to the West Bypass Alternatives.
- The West Bypass Alternatives have more potential to affect historic buildings than do the East Bypass Alternatives.
- The West Bypass Alternatives have greater overall potential to affect archeological sites than do the Yellow and East Bypass Alternatives.

## Public Comments to Date

- Little support to date by Working Group and the public for the Orange Alternative.

# ORANGE (West Bypass)



# BLUE (West Bypass)

## Natural Environment

### • Advantages

- No potential effect on wellhead protection areas
- Moderate impacts on agriculture

### • Disadvantages

- Highest wetland impacts
- Impacts to highest quality wetlands along Johnson Branch
- Among greatest State Natural Area and Resource Area impacts
- Highest Waters of the US impacts
- Highest potential Federally-listed RTE impacts
  - Swamp pink
  - New bald eagle nest in the vicinity
- High forest land impacts
- High potential effect on excellent and good groundwater recharge areas

## Cultural Resources

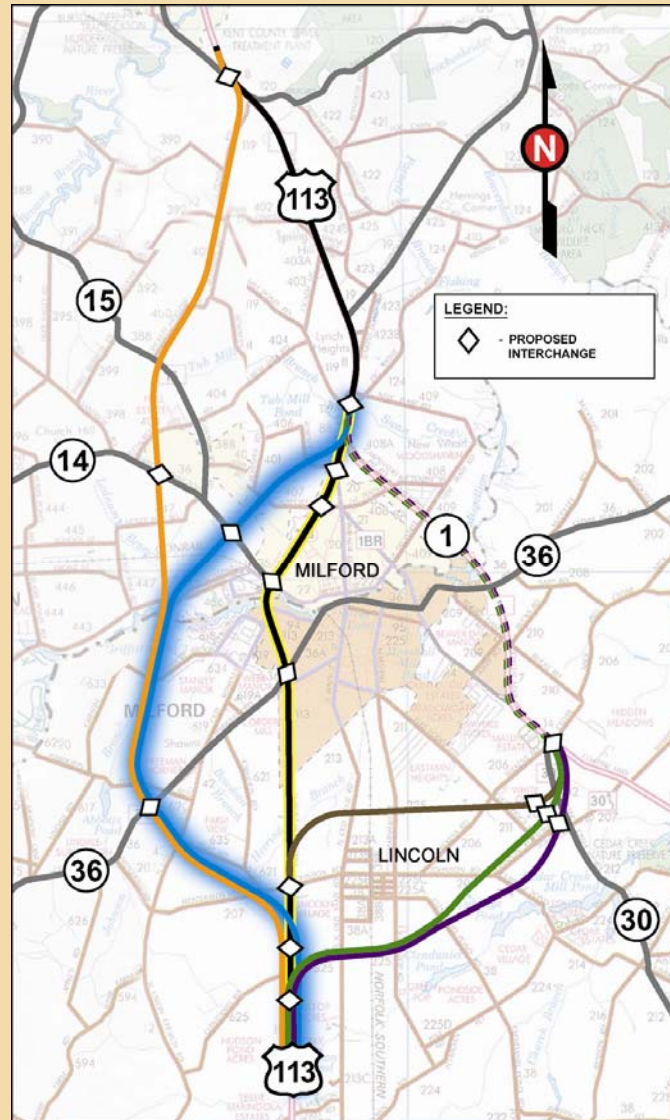
### • Advantages

- No direct impact to National Register of Historic Places architectural properties
- Moderate impact to areas with potential high sensitivity for later historic-period archeological resources

### • Disadvantages

- High potential indirect effect on National Register of Historic Places architectural properties (approximately 7 properties)
- High impact to areas with potential high and moderate sensitivity for prehistoric resources
- Highest impact to areas with high and moderate sensitivity for early historic-period archeological resources
- Impacts a known archeological site

# BLUE (West Bypass)



# BLUE (West Bypass)

## Community / Engineering / Traffic

### • Advantages

- Moderate length alternative
- Moderate cost alternative
- Moderate impact to existing businesses
- A low number of farm properties (5) would be acquired
- A moderate number of commercial properties (11) would be acquired
- No schools properties would be directly impacted
- Moderate number of existing residential properties (299) and farm properties (48) are within 900 feet of the Blue Alternative
- A low number of commercial properties access (4) and farm properties access (2) would be modified

### • Disadvantages

- High number of existing communities (10) are within 900 feet of the Blue Alternative

#### **Kent County**

- Knotts Landing
- Country Lake
- Haven Lake Estates
- Milford Crossing

#### **Sussex County**

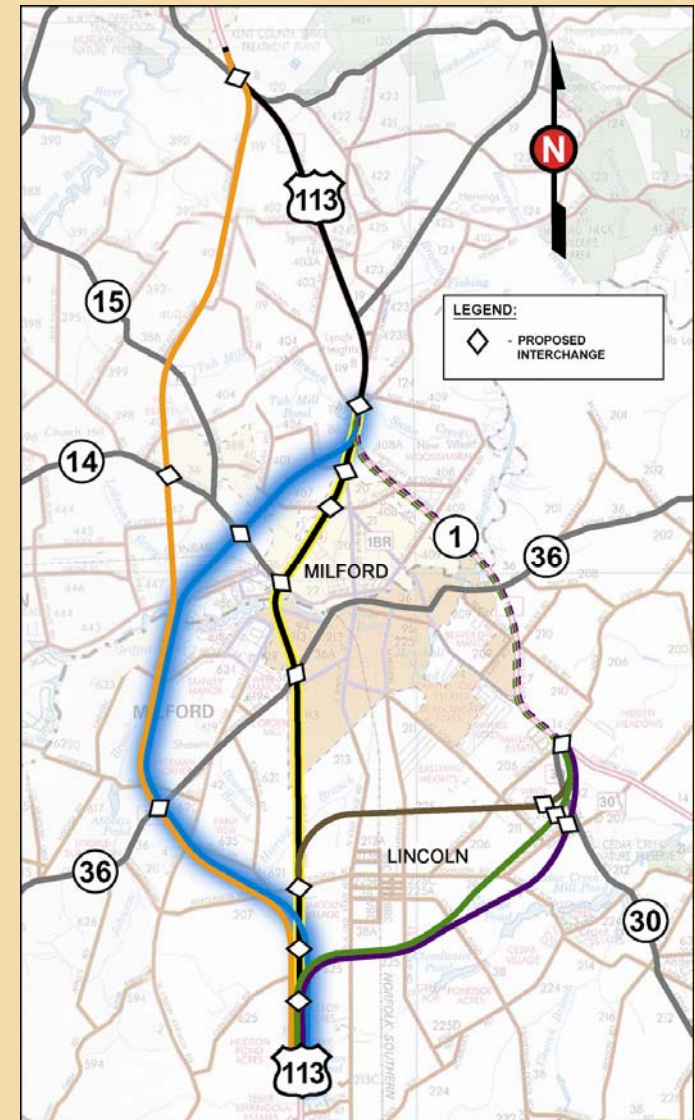
- The Heath
- Stanley Manor
- Lincoln Village
- Hudson Mill
- Hudson Pond Acres
- The Retreat at Hazzards Hill  
(under construction)

# BLUE (West Bypass)

## Community / Engineering / Traffic

### • Disadvantages

- High number of property impacts
- High acres of property impacts
- Poor consistency with Livable Delaware
- First United Pentecostal Church and New Hope Baptist Church property are located within 900 feet of the Blue Alternative
- A high number of existing residential properties (59) would be acquired
- A manufactured housing community on Fitzgeralds Road would be acquired



# **BLUE (West Bypass)**

## **Resource & Regulatory Agency Comments**

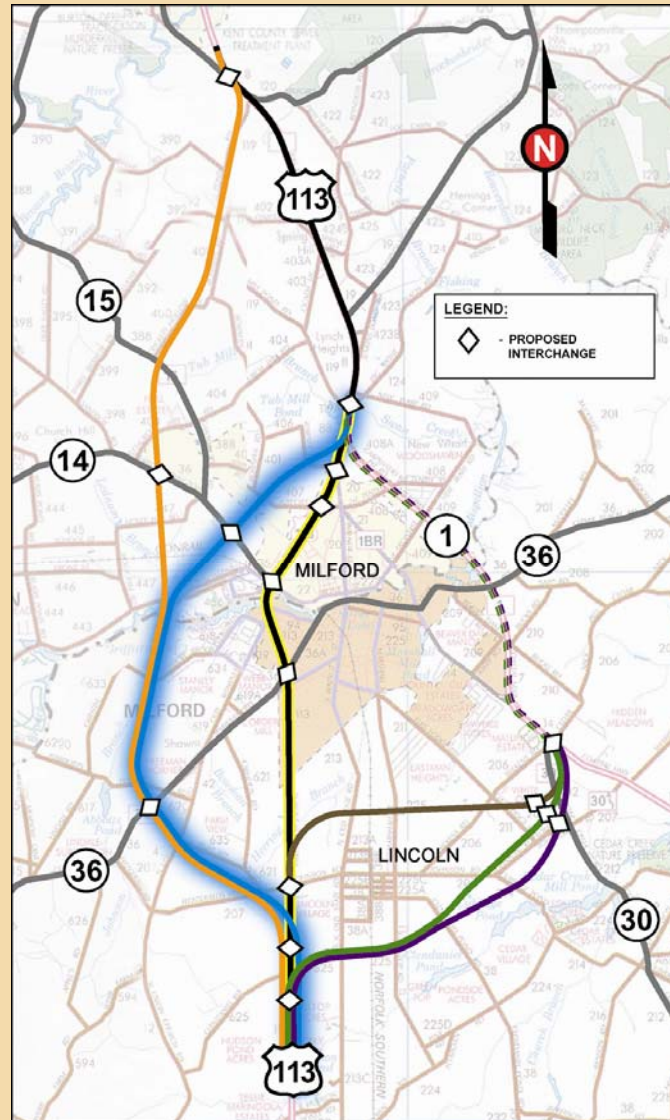
- **Because the West Bypass Alternatives directly impact more and higher quality natural resources, they are considered more environmentally damaging Alternatives than the East Bypass Alternatives.**
- **The environmental resource and regulatory agencies consider the East Bypass Alternatives preferable to the West Bypass Alternatives.**
- **The West Bypass Alternatives have more potential to affect historic buildings than do the East Bypass Alternatives.**
- **The West Bypass Alternatives have greater overall potential to affect archeological sites than do the Yellow (On-Alignment) and East Bypass Alternatives.**

## **Public Comments to Date**

- **Little support to date by Working Group and the public for the Blue Alternative.**



# BLUE (West Bypass)



# GREEN (East Bypass)

## Natural Environment

### • Advantages

- Lowest wetland impacts
- Wetland impacts to only small medium quality systems on unnamed tributary to Cedar Creek and unnamed tributary to Cabbage Pond
- Low State Natural Area and Resource Area impacts
- Low Waters of the US impacts
- Low potential Federally listed RTE impacts
- Low forest impacts
- Moderate agricultural impacts
- No potential effect on wellhead protection areas
- No potential effect on excellent groundwater recharge areas
- Low potential effect on good groundwater recharge zones

### • Disadvantages

- Extends parallel, for some distance, to Cabbage and Clendaniel Ponds

## Cultural Resources

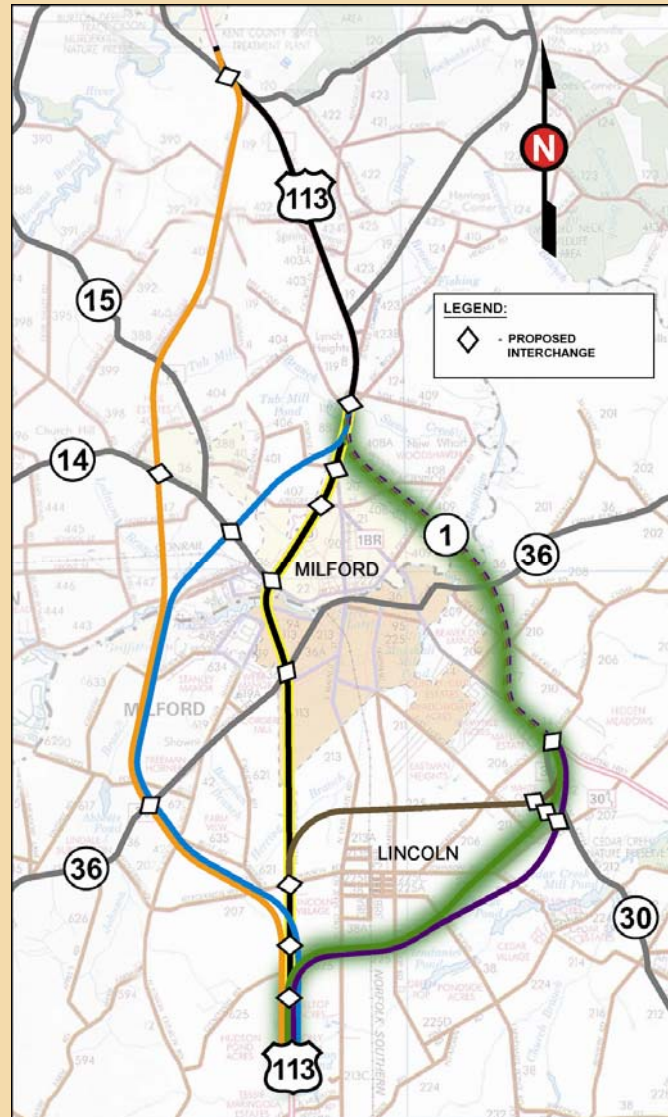
### • Advantages

- No direct impacts to National Register of Historic Places architectural properties
- Low potential indirect effects on National Register of Historic Places architectural properties (approximately 3 properties)
- Low impact to areas with potential high and moderate sensitivity for early historic-period archeological resources
- Lowest impact to areas with potential high and moderate sensitivity for prehistoric archeological resources

### • Disadvantages

- Impacts a known archeological site

# GREEN (East Bypass)



# **GREEN (East Bypass)**

## **Community / Engineering / Traffic**

### **• Advantages**

- **Low number of affected properties**
- **Moderate acres of affected properties**
- **Takes advantage of existing SR 1 – shorter length of construction on new alignment**
- **Good consistency with Livable Delaware**
- **Lowest cost alternative**
- **Low impact to existing businesses**
- **No school properties would be directly impacted**
- **All existing roads remain open, passing over or under the alternative**
- **A moderate number of existing residential properties (28) and farm properties (9) would be acquired**
- **Access would be modified for a low number of commercial properties (2) and a moderate number of farm properties (5)**
- **A low number of businesses (3) would be acquired**

### **• Advantages**

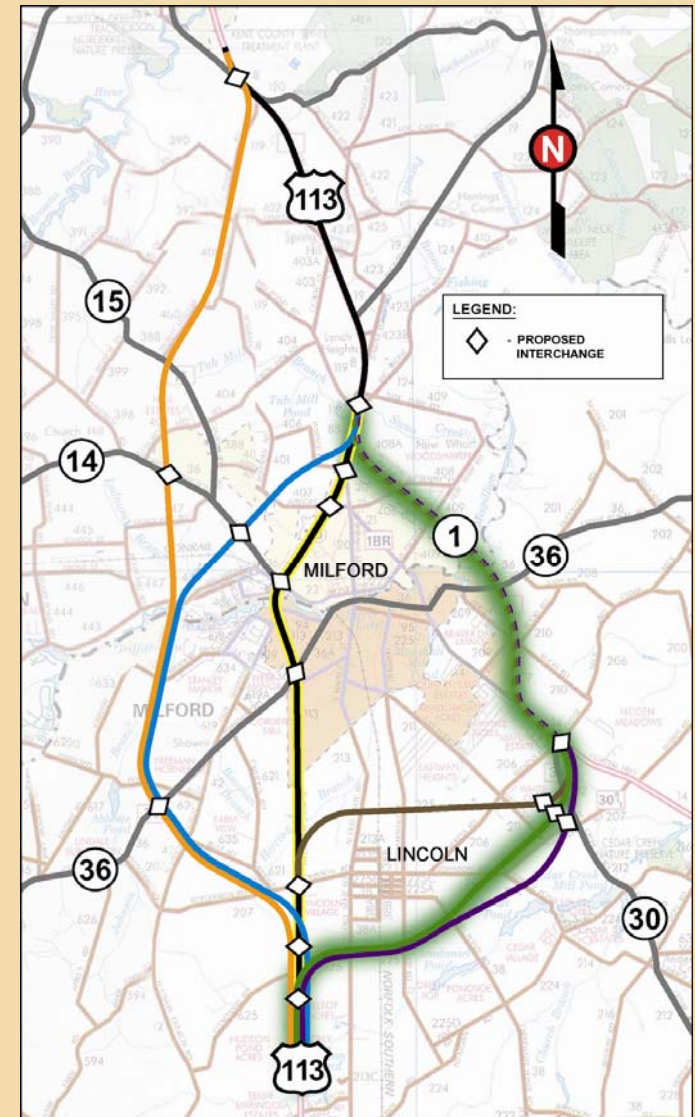
- **Moderate number of existing communities (8) are within 900 feet of the Green Alternative (4 are along existing SR 1)**
  - **Blueberry Hill**
  - **Lincoln Village**
  - **Hudson Mill**
  - **Woods Haven**
  - **Meadows at Shawnee**
  - **Knollac Acres II**
  - **Matlinds Estates**
  - **Hudson Pond Acres**
- **3 commercial properties would be acquired**

# GREEN (East Bypass)

## Community / Engineering / Traffic

### • Disadvantages

- Opposed by Greater Lincoln Community
- Proximity to Lincoln community
- Impacts to Greentop community
- Greater overall length than On-Alignment and West Bypass Alternatives
- A high number of existing residential properties (601) and farm properties (82) lie within 900 feet of the centerline. Note: 418 residential properties and 34 farm properties are located along SR 1
- The Christian Tabernacle and the Pentecostal Church of God are located within 900 feet of the Green Alternative
- The greatest number of vacant lots (31) in approved subdivisions would be acquired
- Access to a large number of residential properties (27), would be modified



# **GREEN (East Bypass)**

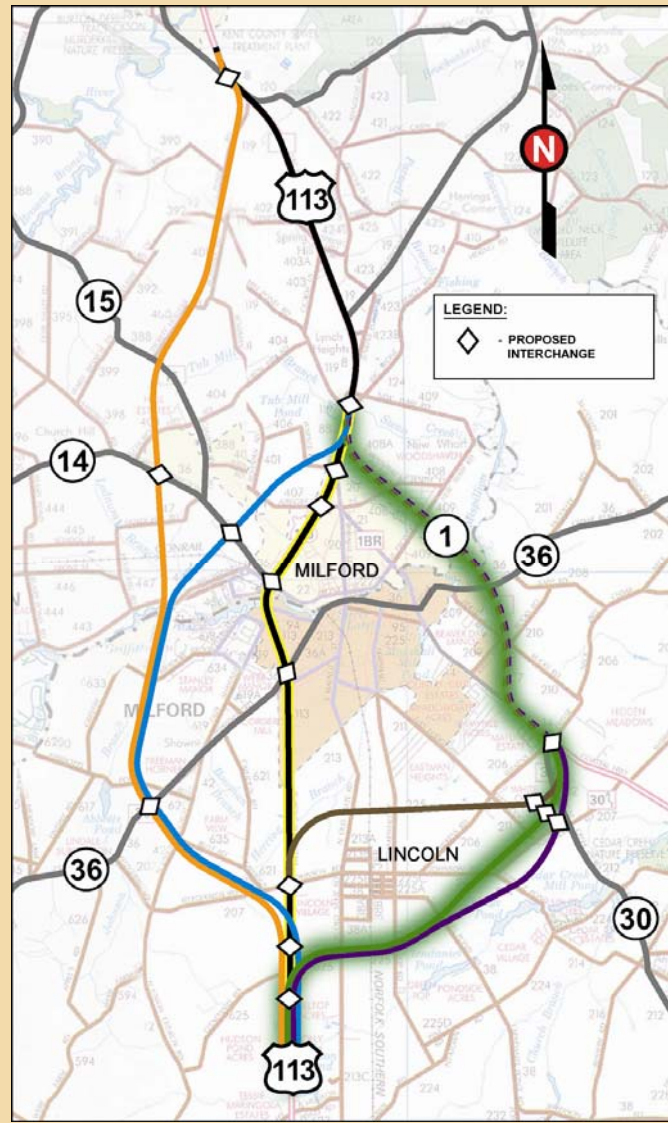
## **Resource & Regulatory Agency Comments**

- **Because the East Bypass Alternatives directly impact less and lower quality natural resources, they are considered less environmentally damaging alternatives than the West Bypass Alternatives.**
- **The environmental resource and regulatory agencies consider the East Bypass Alternatives preferable to the West Bypass Alternatives.**
- **Because the Green and Purple Alternatives directly impact less and lower quality natural resources, they are considered less environmentally damaging alternatives than the Brown Alternative, which impacts and divides the higher quality wooded wetland and habitat complex around Herring Branch.**
- **The environmental resource and regulatory agencies consider the Green and Purple Alternatives preferable to the Brown Alternative.**
- **The Green and Purple Alternatives have less potential to affect historic buildings than the On-Alignment and West Bypass Alternatives.**
- **The Green and Purple Alternatives are generally less likely to affect areas with a higher probability to contain prehistoric archeological sites than the On-Alignment, West Bypass, and Brown Alternatives.**

## **Public Comments to Date**

- **Working Group favors the East Bypass Alternatives and requested the Brown Alternative be evaluated.**
- **Greater Lincoln Community favors the Brown Alternative and opposes the Green and Purple Alternatives**

# GREEN (East Bypass)



# PURPLE (East Bypass)

## Natural Environment

### • Advantages

- Low wetland impacts
- Wetland impacts to only small medium quality systems on unnamed tributary to Cedar Creek and unnamed tributary to Cabbage Pond
- Low State Natural Area and Resource Area impacts
- Lowest Waters of the US impacts
- Low potential Federally-listed RTE impacts
- Low forest impacts
- Moderate agricultural impacts
- No potential effect on wellhead protection areas
- No potential effect on excellent groundwater recharge areas
- Low potential effect on good groundwater recharge areas

### • Disadvantages

- Extends parallel, for some distance, to Cabbage and Clendaniel Ponds

## Cultural Resources

### • Advantages

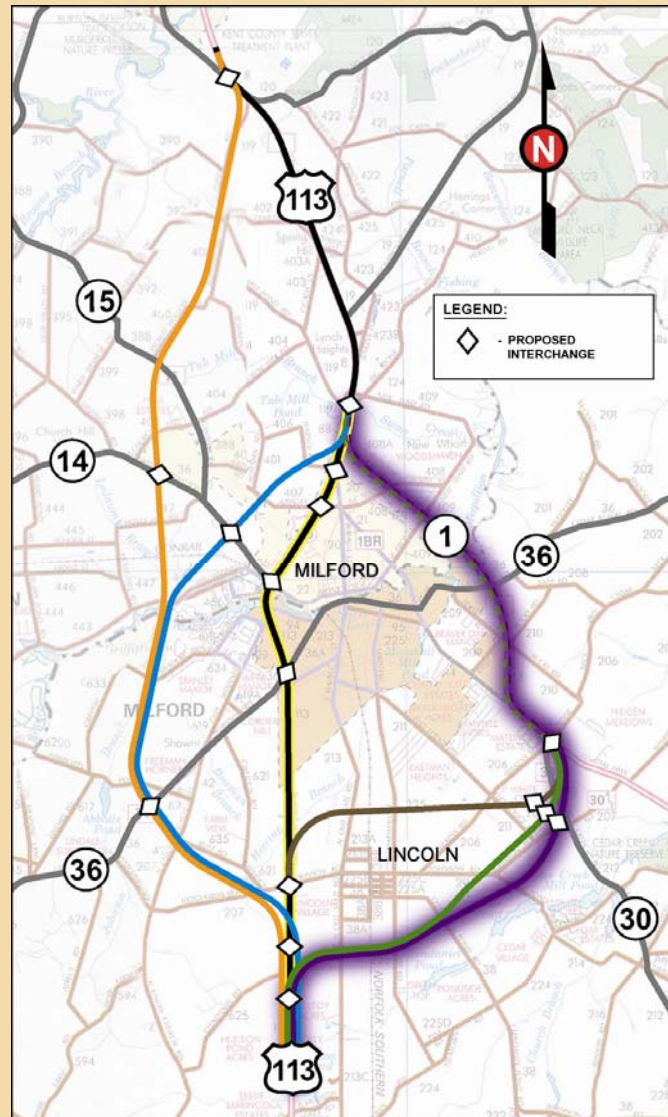
- No direct impacts to National Register of Historic Places architectural properties
- Moderate potential indirect effects on National Register of Historic Places architectural properties (approximately 4 properties)
- Low impact to areas with potential high and moderate sensitivity for early historic-period archeological resources
- Low impact to areas with potential high and moderate sensitivity for prehistoric archeological resources
- Low impact to areas with potential high sensitivity for later historic-period archeological resources

### • Disadvantages

- Impacts a known archeological site



# PURPLE (East Bypass)



# PURPLE (East Bypass)

## Community / Engineering / Traffic

### • Advantages

- Low number of affected properties
- Moderate acres of affected properties
- Takes advantage of existing SR 1 - shorter length of construction on new alignment
- Good consistency with Livable Delaware
- Moderate cost alternative
- The alignment is at grade as it passes Hudson Mill and Hudson Pond Acres communities
- No school properties would be directly impacted
- All existing roads remain open, passing over or under the alternative
- Access to moderate number of residential properties (20), commercial properties (2) and farm properties (4) would be modified
- Moderate number of vacant (16) lots in approved subdivisions would be acquired
- Moderate number of existing residential properties (32) and farm properties (10) would be acquired

### • Advantages

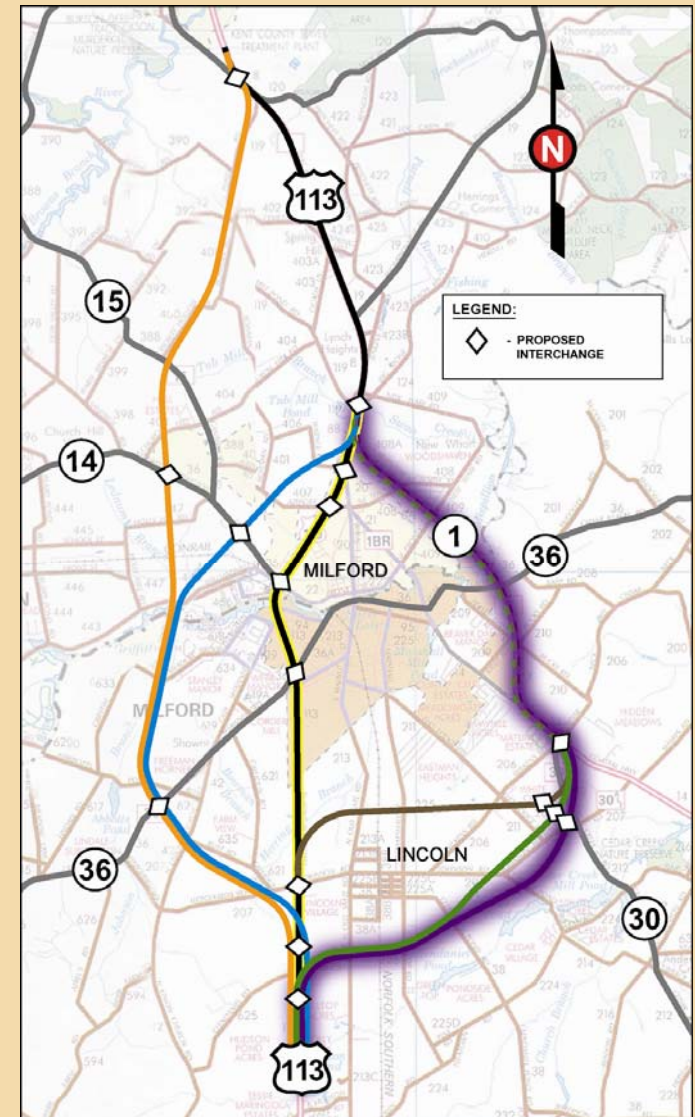
- Moderate number of existing communities (7) are within 900 feet of the Purple Alternative
  - Hudson Mill
  - Logans Run
  - Hudson Pond Acres
  - Woods Haven
  - Meadows at Shawnee
  - Knollac Acres II
  - Lincoln Village
  - Matlinds Estates
- Low number of commercial properties (3) would be acquired

# PURPLE (East Bypass)

## Community / Engineering / Traffic

### • Disadvantages

- Opposed by Greater Lincoln Community
- Proximity to Lincoln community
- Impacts to Greentop community
- High number of existing residential properties (576) and high number of farm properties (77) are within 900 feet of the Purple Alternative. Note: 418 residential properties and 34 farm properties are located along SR 1
- Greater overall length than On-alignment and West Bypass Alternatives
- The Pentecostal Church of God is located within 900 feet of the Purple Alternative



# PURPLE (East Bypass)

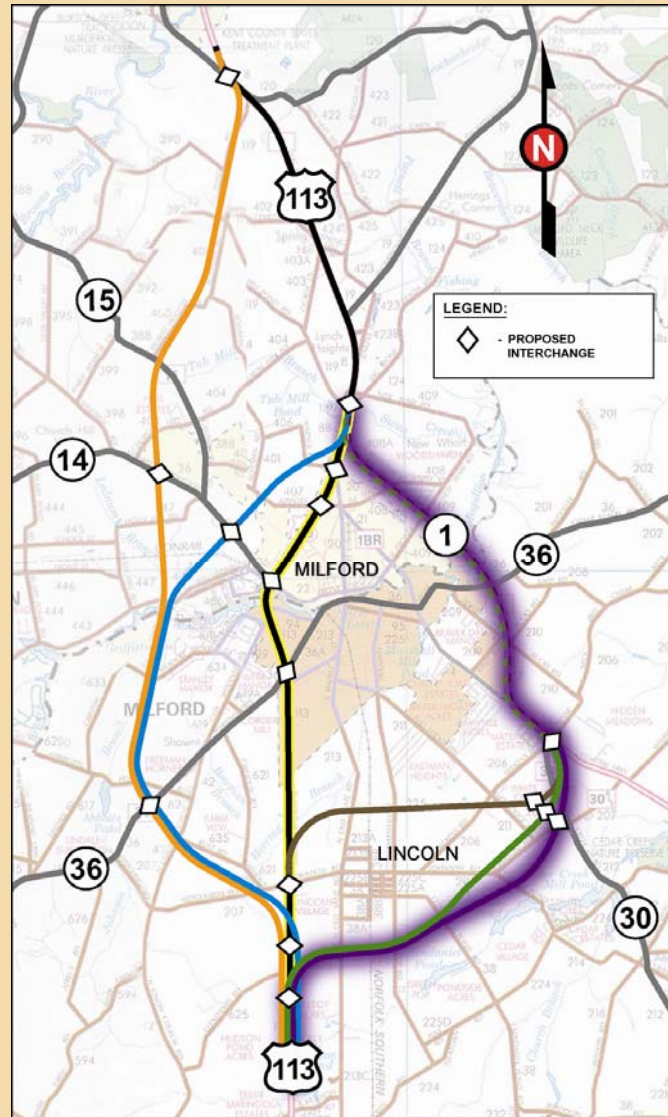
## Resource & Regulatory Agency Comments

- Because the East Bypass Alternatives directly impact less and lower quality natural resources, they are considered less environmentally damaging alternatives than the West Bypass Alternatives.
- The environmental resource and regulatory agencies consider the East Bypass Alternatives preferable to the West Bypass Alternatives.
- Because the Green and Purple Alternatives directly impact less and lower quality natural resources, they are considered less environmentally damaging alternatives than the Brown Alternative, which impacts and divides the higher quality wooded wetland and habitat complex around Herring Branch.
- The environmental resource and regulatory agencies consider the Green and Purple Alternatives preferable to the Brown Alternative.
- The Purple and Green Alternatives have less potential to affect historic buildings than the On-Alignment and West Bypass Alternatives
- The Purple and Green Alternatives are generally less likely to affect areas with a higher probability to contain prehistoric archeological sites than the On-Alignment, West Bypass, and Brown Alternatives

## Public Comments to Date

- Working Group favors the East Bypass Alternatives and requested the Brown Alternative be evaluated
- Greater Lincoln Community favors the Brown Alternative and opposes the Green and Purple Alternatives

# PURPLE (East Bypass)



# BROWN (East Bypass)

## Natural Environment

### • Advantages

- Moderate wetlands impacts
- Relatively low potential Federally listed RTE impacts
- Low State Natural Area and Resource Area impacts
- Removed from area next to Cubbage and Clendaniel Ponds
- No potential affect on wellhead protection areas
- Moderate forest impacts

### • Disadvantages

- Impacts high quality wetlands – Herring Branch
- Fragments high quality wetland/forest habitat - Herring Branch
- High Waters of the US impacts
- Potential effect on excellent groundwater recharge area (Herring Branch) and adjacent
- good/fair recharge area

## Cultural Resources

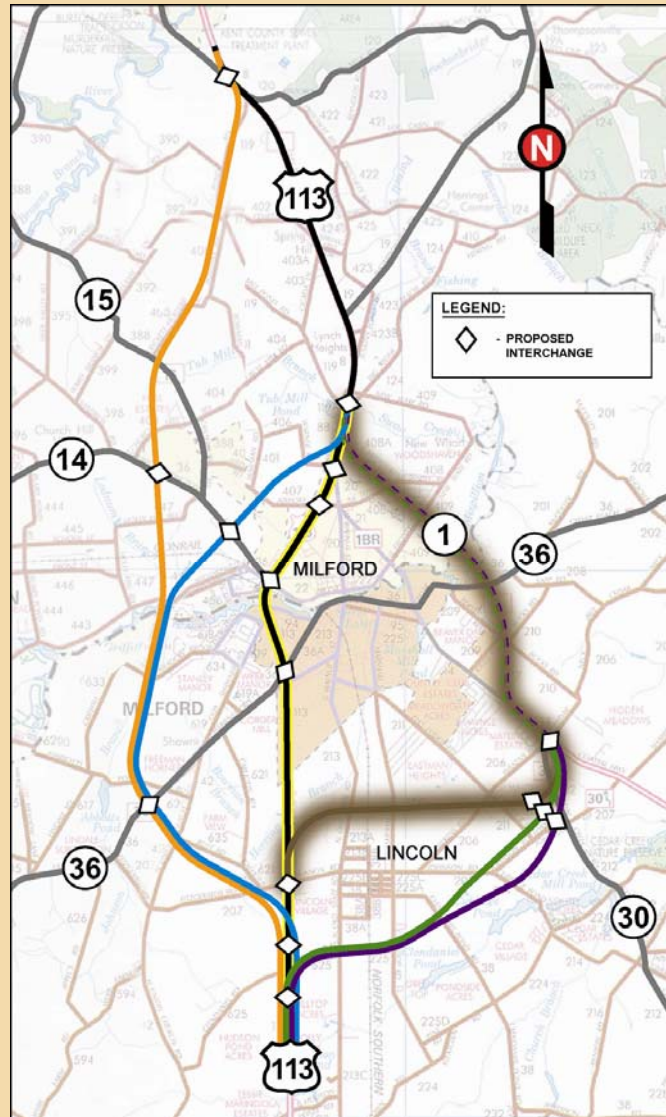
### • Advantages

- No direct impacts to National Register of Historic Places architectural properties
- Moderate potential indirect effects on National Register of Historic Places architectural properties (approximately 4 properties)
- Low impact to areas with potential high sensitivity for later historic-period archeological resources
- Low impact to areas with potential high and moderate sensitivity for early historic-period archeological resources

### • Disadvantages

- Moderate to high impact to areas with potential high and moderate sensitivity for prehistoric archeological resources
- Impacts a known archeological site

# BROWN (East Bypass)



# **BROWN (East Bypass)**

## **Community / Engineering / Traffic**

### **• Advantages**

- Favored by Greater Lincoln Community
- Eliminates impact on Greentop community (compared to Green & Purple)
- Reduced effect on Lincoln community (compared to Green & Purple)
- Low number of affected properties
- Moderate acres of affected properties
- Takes advantage of existing SR 1 - shorter length of construction on new alignment
- Good consistency with Livable Delaware
- Moderate cost alternative
- All existing roads remain open, passing over or under the alternative

### **• Advantages**

- Moderate number of existing communities (8) are within 900 feet of the Brown Alternative (4 are along existing SR 1)
  - Central Parke (under construction)
  - Lincoln Village
  - Hudson Mill
  - Hudson Pond Acres
  - Woods Haven
  - Meadows at Shawnee
  - Knollac Acres II
  - Matlinds Estates
- Lowest number of existing residential properties (20) would be acquired
- Access modified to a moderate number of residential properties (14), commercial properties (6) and farm properties (8)
- Moderate number of commercial properties (6) would be acquired
- No lots in approved subdivisions would be acquired

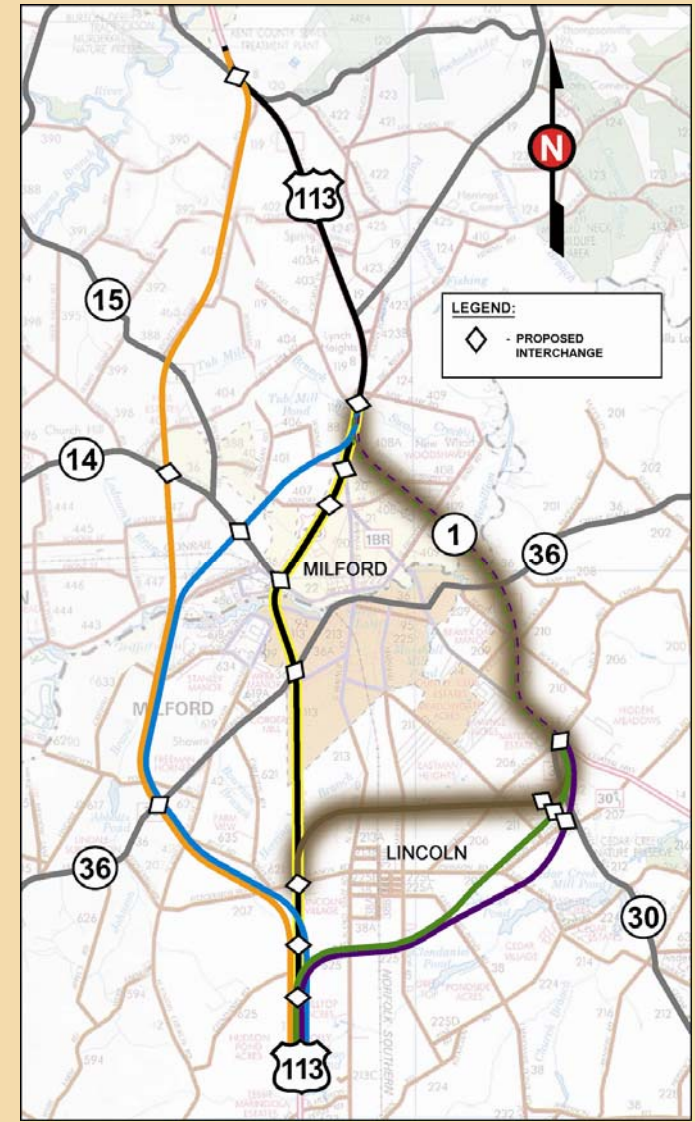


# BROWN (East Bypass)

## Community / Engineering / Traffic

### • Disadvantages

- Greater overall length than other alternatives
- Property belonging to the New Hope Baptist Church is within 900' of the centerline
- Two school properties lie within 900 feet of the Brown Alternative
- High number of residential properties (502) and farm properties (76) are within 900 feet of the Brown Alternative. Note: 418 residential and 34 farm properties are along existing SR 1



# **BROWN (East Bypass)**

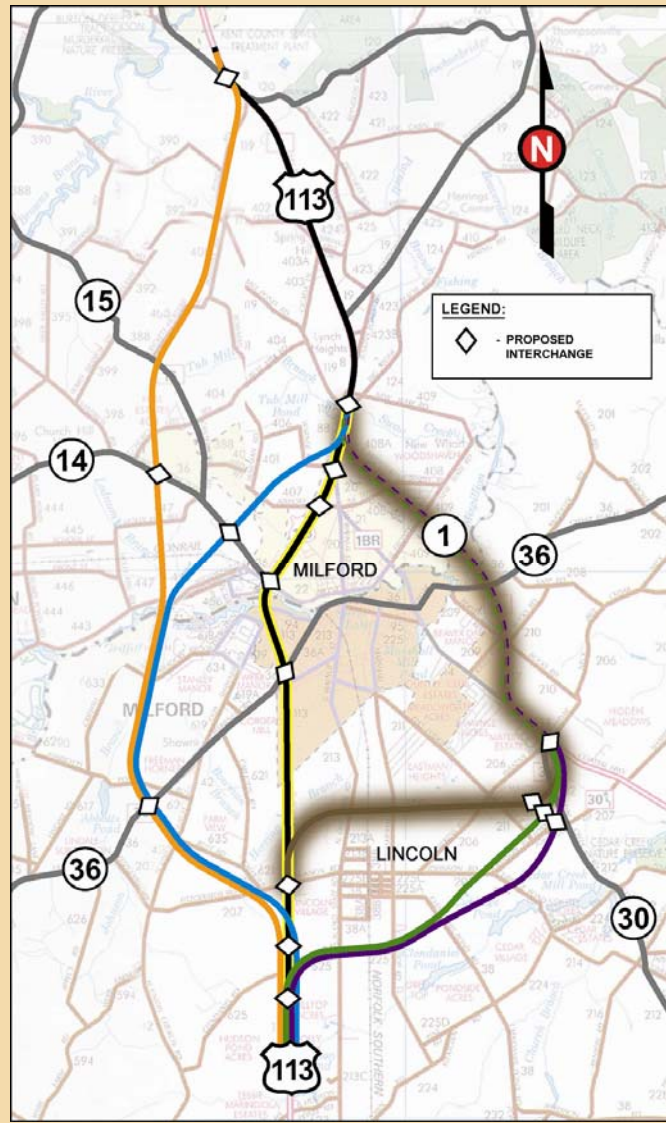
## **Resource & Regulatory Agency Comments**

- **Because the Brown Alternative impacts and divides the higher quality wooded wetland and habitat complex around Herring Branch and the Green and Purple Alternatives directly impact less and lower quality natural resources, the Brown Alternative is considered a more environmentally damaging alternative.**
- **The environmental resource and regulatory agencies consider the Green and Purple Alternatives preferable to the Brown Alternative.**
- **The Brown Alternative is generally more likely to affect areas with a higher probability to contain prehistoric archeological sites than the Green and Purple Alternatives.**

## **Public Comments to Date**

- **Working Group favors the East Bypass Alternatives and requested the Brown Alternative be evaluated**
- **Greater Lincoln Community favors the Brown Alternative and opposes the Green and Purple Alternatives**

# BROWN (East Bypass)



# BROWN (East Bypass)

## ■ Natural/Cultural Resources

### • Advantages

- No anticipated impacts on historic architectural resources
- Relatively low potential RTE impacts
- Low State Natural Area and Resource Area impacts

### • Disadvantages

- Fragments wetland/forest habitat on Herring Branch
- High Waters of the US impacts

## ■ Engineering/Traffic/Safety/Community

### • Advantages

- Moderate cost alternative
- Takes advantage of existing SR 1 – not much new alignment
- Good consistency with Livable Delaware

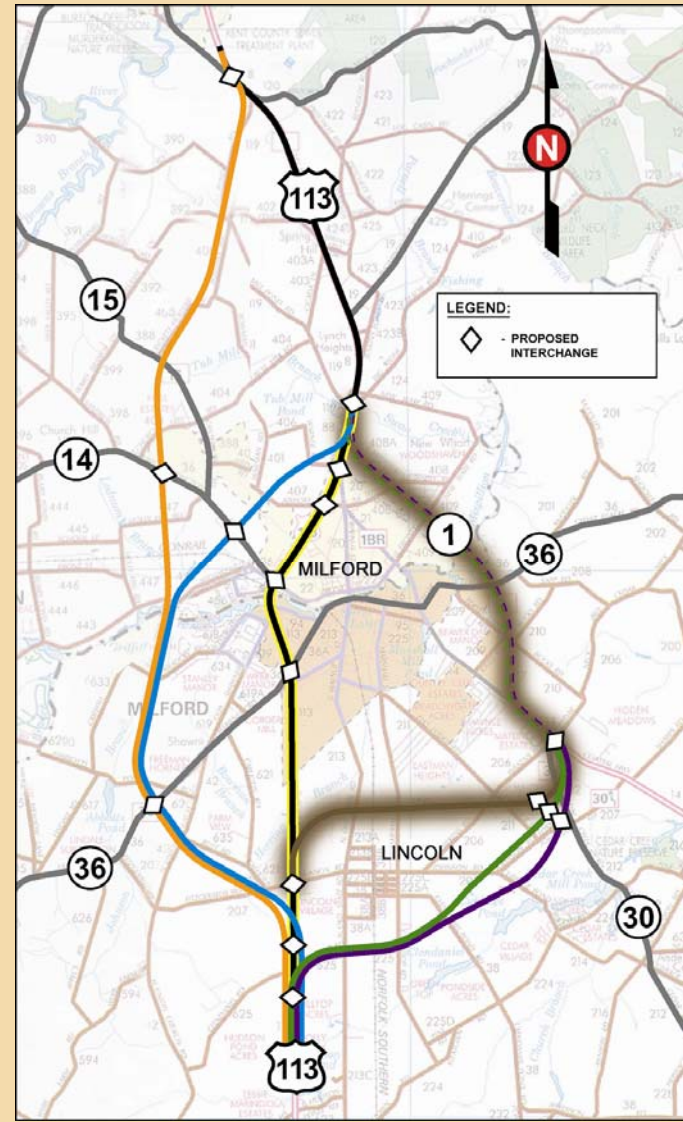
### • Disadvantages

- Greatest overall length

# BROWN (East Bypass)

## Public Comments to Date

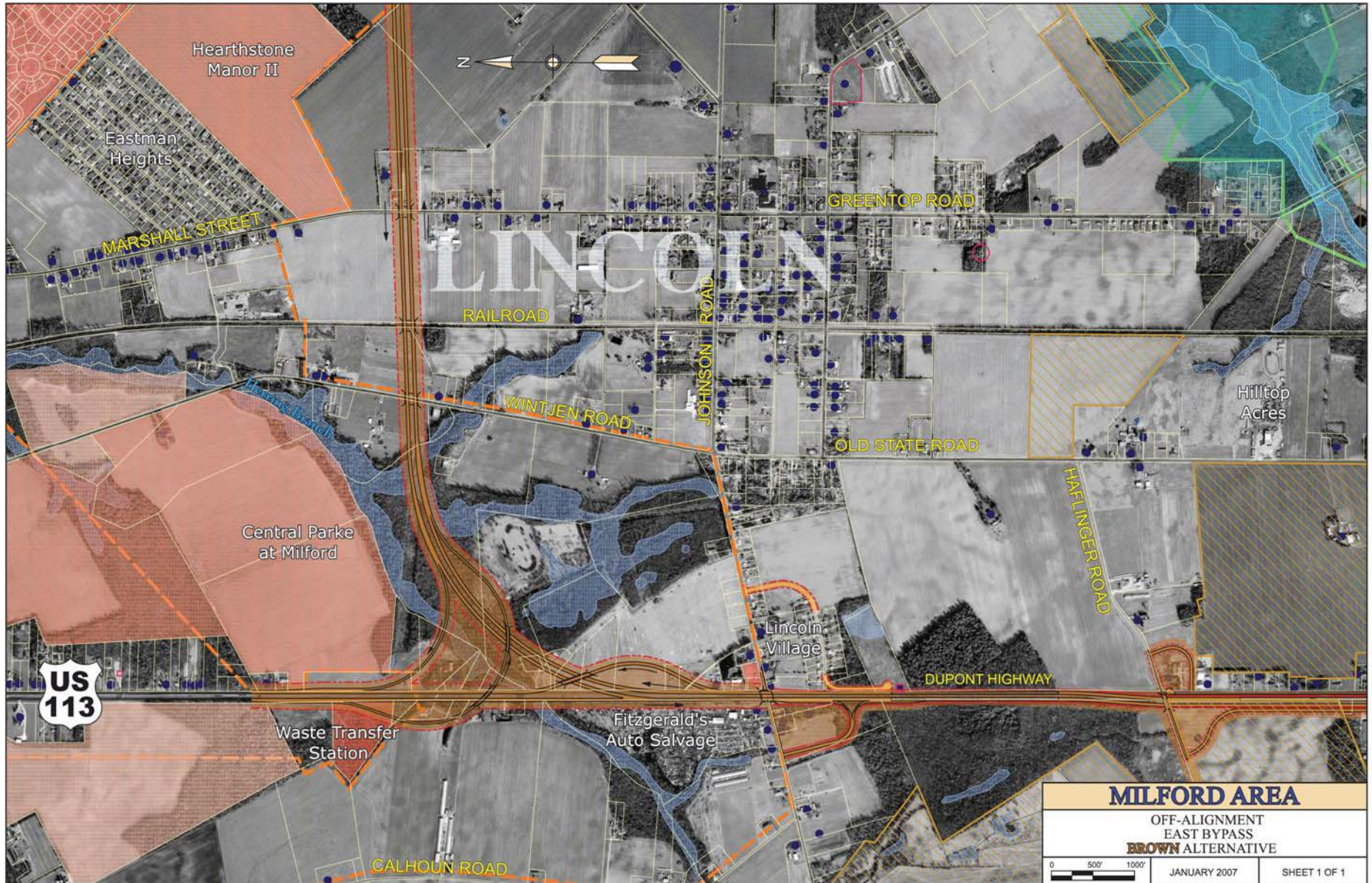
- Working Group favors East; requested Brown be evaluated
- Greater Lincoln community opposes Green and Purple; favors Brown



# Brown Alignment Options (East Bypass)

## ■ Discussions with the Agencies

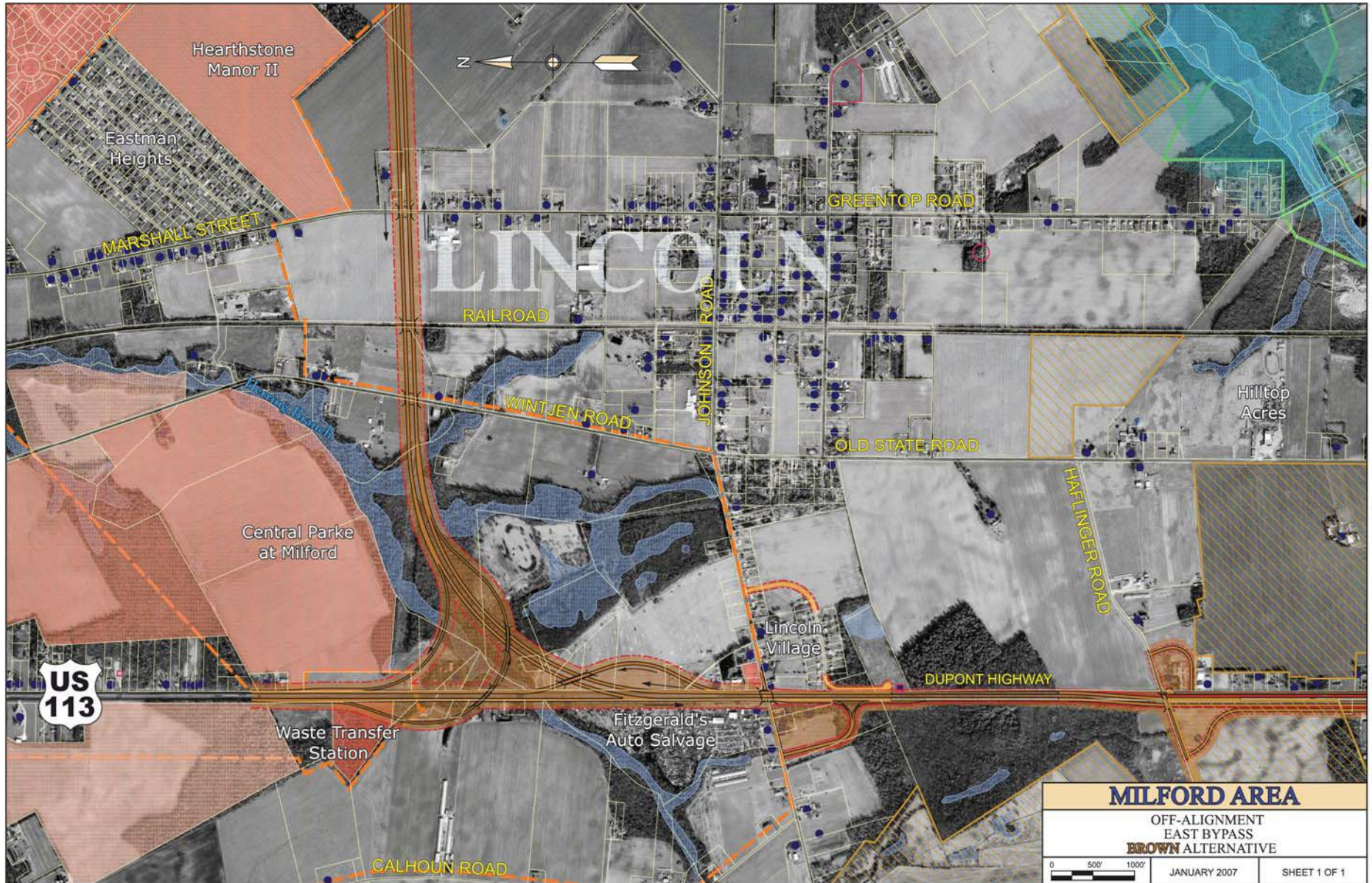
- September field view: agencies expressed concern regarding impacts to Herring Branch area
  - Wetland acreage impacted is somewhat greater than Green and Purple
  - Herring Branch wetlands and adjacent forest, which is of higher quality than the wetland area impacted by Green and Purple (*un-named tributary to Cedar Creek (all 3) and un-named tributary to Cabbage Pond (G&P)*)



# Brown Alignment Options (East Bypass)

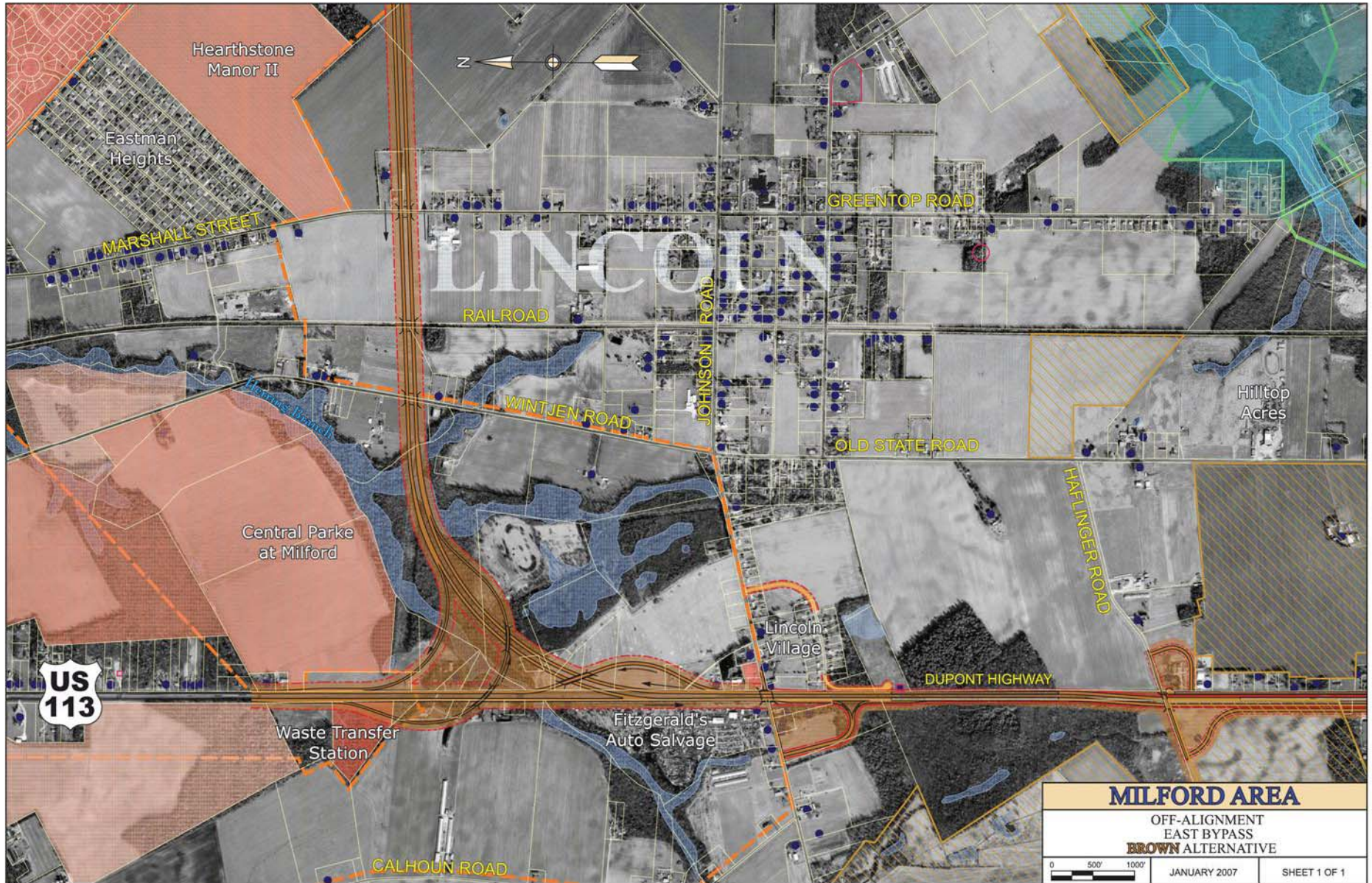
- September/October: DeIDOT evaluated options to move Brown out of the Herring Branch area
  - Moving Brown south would place it much closer to Lincoln than either Green or Purple
  - This was not considered viable
  - Moving Brown north would impact Central Parke, a 700+ unit development that is currently under construction





# Brown Alignment Options (East Bypass)

- Implications of impacting Central Parke:
  - Purchase the entire parcel in 2007: about \$30-35 million (including land, improvements, engineering, etc.) ... OR ...
  - Purchase about 100 homes after they are complete and relocate residents: about \$50-60 million, plus compensation for financial impacts related to community facilities
- DeIDOT does not consider either of these approaches or solutions viable



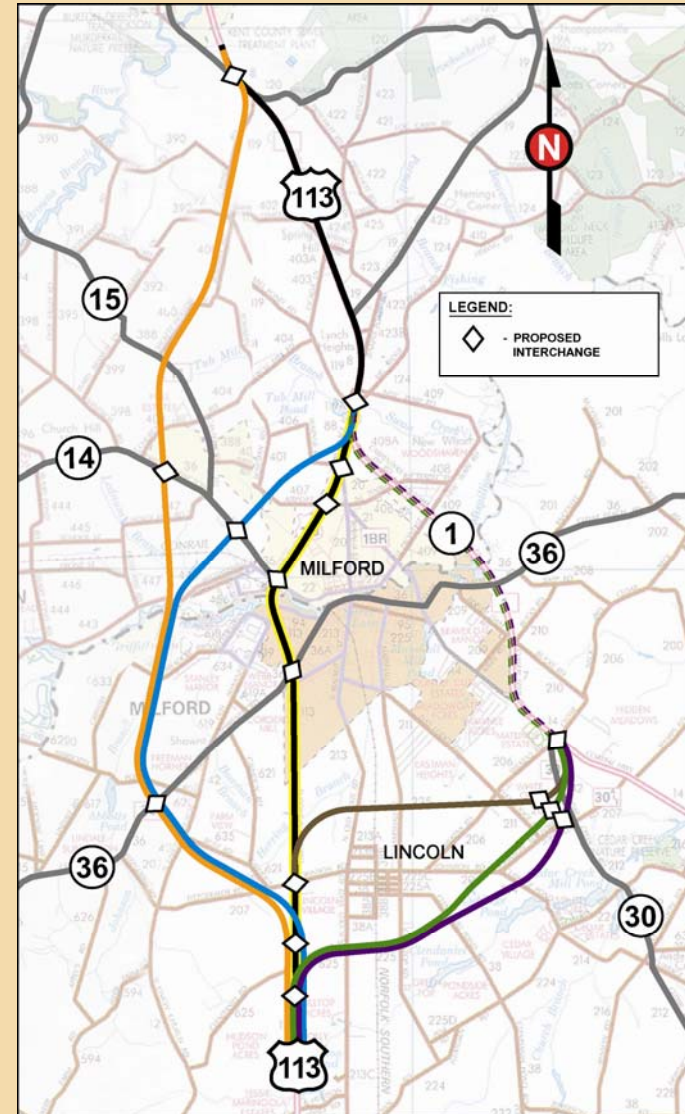
# Brown Alignment Options (East Bypass)

- November/December: DeIDOT looked at options to keep Brown in the Herring Branch area, but reduce its impact
  - Narrower cross section
  - Removed or relocated ramps
- December: The agencies indicated that even though the options reduced impacts in the Herring Branch area, the impacts of the Brown Alternative remained greater than those of the Green and Purple Alternatives.



# Summary of Federal and State Environmental Resource and Regulatory Agency Comments

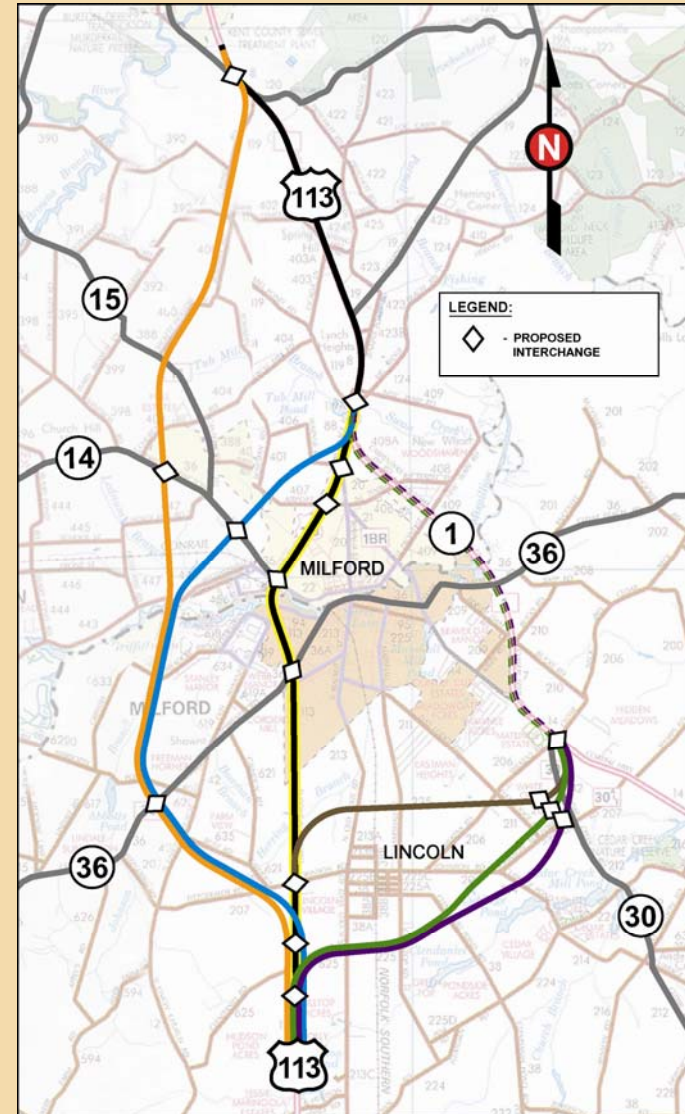
- Because the East Bypass alternatives directly impact fewer and lower quality natural resources, they are considered less environmentally damaging alternatives than the West Bypass alternatives.
- The environmental resource and regulatory agencies consider the East Bypass alternatives preferable to the West Bypass alternatives.





# Summary of Federal and State Environmental Resource and Regulatory Agency Comments

- Because the Green and Purple Alternatives directly impact fewer and lower quality natural resources, they are considered less environmentally damaging alternatives than the Brown Alternative, which impacts and divides the higher quality wooded wetland and habitat complex around Herring Branch.
- The environmental resource and regulatory agencies consider the Green or Purple Alternatives preferable to the Brown Alternative.

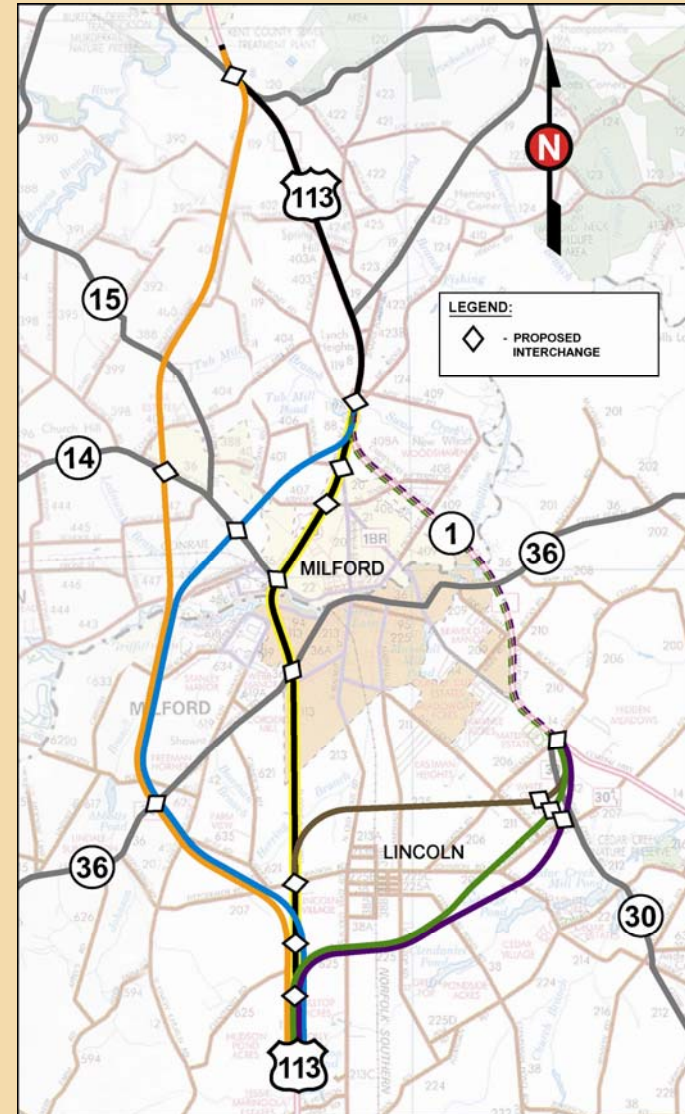






# Project Team Comments

- The Project Team believes that the agency position regarding the natural resource impacts is supported by the results of the environmental evaluation to date.





# Lincoln Community - Resource Agencies - DeIDOT

## Summary

### Lincoln Community Comments

- Strongly oppose Green and Purple Alternatives
- Strongly support Brown Alternative

### Agency Comments

- Prefer Green and Purple over Brown – based on natural environmental resources evaluation
    - The Brown Alternative options directly impact a greater area of high quality natural resources than Green and Purple. The Brown Alternative also divides or fragments that higher quality habitat complex (Herring Branch)
- NOTE:** DeIDOT agrees that the position of the agencies is supported by the results of the environmental evaluation to date

### DeIDOT Comments

- DeIDOT considers alignment options to north of Herring Branch NOT viable (costly impact to Central Parke - \$30-\$60 million) and alignment options to the south of Herring Branch (closer to Lincoln) NOT viable
- DeIDOT cannot recommend a build alternative that cannot be permitted and constructed
- The agencies can only permit the least environmentally damaging practicable alternative (LEDPA)

### Lincoln Community Path Forward

- To secure DeIDOT and agencies' support for Brown, it would have to be demonstrated that both Purple and Green are NOT PRACTICABLE alternatives



# Study Schedule

- DelDOT's goal is to identify a recommended preferred alternative, and circulate a Draft Environmental Impact Statement containing that alternative, in May 2007 and conduct a public hearing in June.

# Tentative Schedule

Milford Area	
Agencies	Working Groups/Workshops
March 14	March 7 WG
	March 21 WG
April 5	
	April 11 WG
	June 11 and 12 public hearings

**INITIATE** recommended preferred alternative discussion  
**CONTINUE** recommended preferred alternative discussion  
**END** recommended preferred alternative discussion

# Funding Status

- Funds are available for the work necessary to gain federal approval of a Preferred Alternative
- DeIDOT has requested the legislature to authorize FY 2008 (begins July 1, 2007) funding for additional project development and detailed engineering to determine the right-of-way required for the eventually selected preferred alternative
- DeIDOT has programmed right-of-way funds to protect the selected alternative corridor, beginning in FY 2009 (July 1, 2008) – requires legislative approval (2008 session)





# Ask Questions – Provide Input

- Please feel free to ask questions of the Project Team Members

- Please complete the Comment Form tonight, if possible. You may also visit the project website

[http:// www.deldot.net/static/projects/us113](http://www.deldot.net/static/projects/us113)

and complete the Comment Form on-line

- Please provide comments to us by March 16, 2007

**Thank You  
for Your Interest  
and Participation**