

# US 301 Project Development



State Contract 25-113-01



Federal Highway  
Administration



Delaware Department  
of Transportation



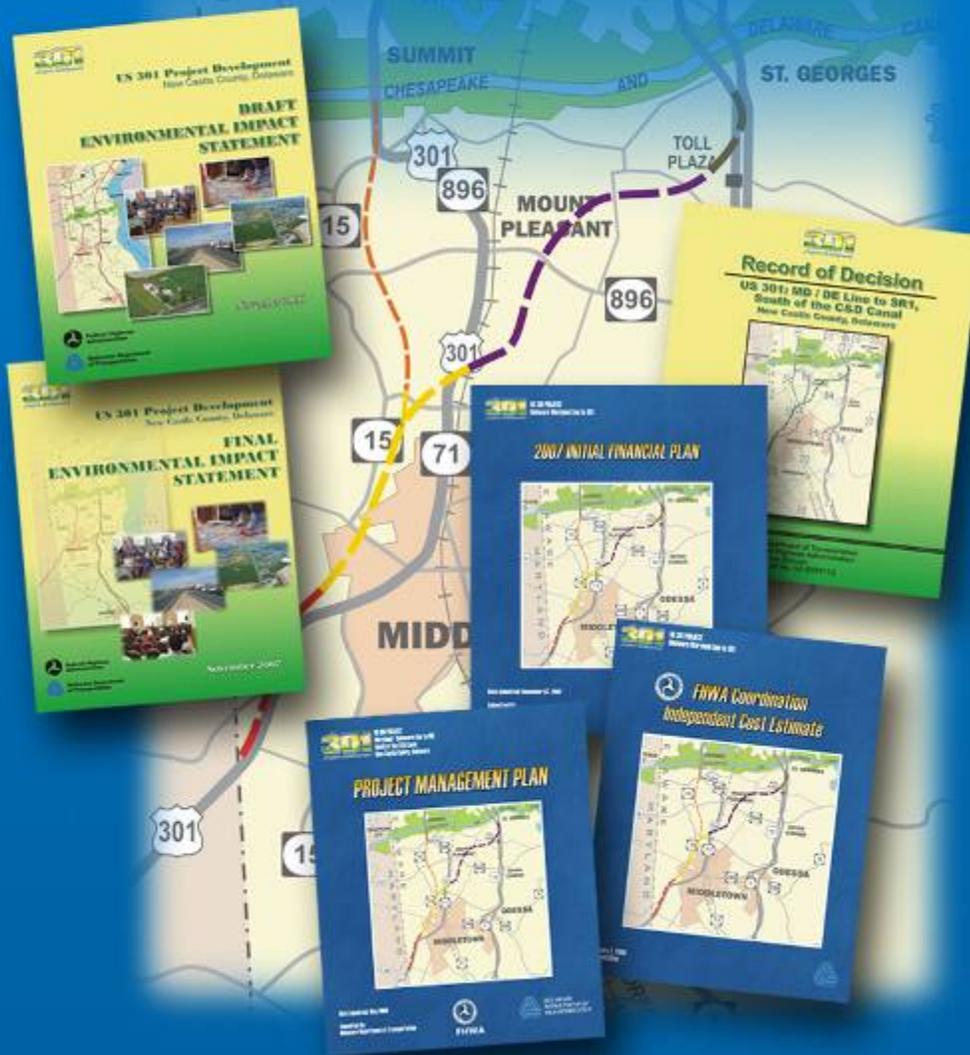
US Army Corps  
of Engineers

## Public Workshop

March 23, 2009

Middletown Fire Hall

FINAL





# Welcome & Purpose

- Welcome to the Public Workshop for the US 301 Project Development effort!
- Purpose

## 2008 Budget Language

At the conclusion of the 2008 legislative session, the General Assembly directed DeIDOT to conduct additional studies on the Spur Road and present the results at public workshops. The specific Bond Bill language stated:

*“The General Assembly directs the Department to implement the US 301 Corridor project in Phases, beginning with the US 301 mainline section. Before expending funds for the final design and construction of the Spur Road segment of the project, the Department will convene public workshops on the Spur Road segment. At the workshops, the Department will present information and alternatives for the Spur Road, including the upgrading of the existing US 301. The most current traffic data available at that time shall be presented to the public at the workshops. The Department shall report to the General Assembly on the comments received at the public workshops and make recommendations on how to proceed with this segment of the project no later than May 1, 2009.”*

**Note:** To minimize costs, DeIDOT has decided to conduct a single, five-hour public workshop, rather than two three-hour workshops on successive days, as done previously. However, as in the past, DeIDOT has met, and will continue to meet, with many of the communities and property owners in the project area, at their request, in advance of the actual workshop, to present and discuss workshop materials.



# Welcome & Purpose

- The purpose and primary focus of this public workshop is to present the following information to the public regarding the Spur Road:
  - Potential alternatives for the Spur Road, including the upgrading of Existing US 301
  - The most current traffic data
  - The results of additional studies that were commitments in FHWA's approved Record of Decision (ROD) for the project, or other DeIDOT commitments including:
    - Identification of an early contract to improve the sharp curve on SR 896, just south of Summit Bridge
    - Spur Road alignment refinements to minimize impacts
    - Spur Road median width
    - Spur Road design speed



# Public Workshop

- **Additional Opportunity:**
  - **Present Potential Refinements to the New US 301 Mainline**
  - **Provide information on the DelDOT process for acquiring right-of-way (US 301 only)**



**US 301 Project Development  
Public Workshop Comment Form**  
 FEDERAL HIGHWAY ADMINISTRATION  
 FEDERAL INFRASTRUCTURE INVESTMENT ACT  
 SALEM COUNTY PROJECT

**QUESTIONS AND/OR COMMENTS**

Public Workshop  
 Thursday, March 23, 2009  
 3:00 PM to 8:00 PM  
 Middleburian Fair Hall

Please write your comments on the following project or projects:

This information will be made available to the public and will be used to inform the project development process.

I would like to see more information.  
 I would like to see more information.  
 I would like to see more information.

NAME: \_\_\_\_\_  
 ADDRESS: \_\_\_\_\_  
 CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
 PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_  
 E-MAIL: \_\_\_\_\_

**ENVIRONMENTAL RESOURCES  
ALTERNATIVES IMPACT MATRIX**  
 NOVEMBER 2008

Resource	Alternative 1		Alternative 2		Alternative 3		Alternative 4		Mitigation
	Impact	Significance	Impact	Significance	Impact	Significance	Impact	Significance	
Archaeological Resources	...	...	...	...	...	...	...	...	...
Cultural Resources	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...



**HANDOUTS AVAILABLE**

**Workshop Public Notice**

**Comment Form**

**Impact Matrices**

**Display Boards**

**Right-of-Way Brochures**

**Archaeological / Cultural Resources Brochure**

Information will also be available on the US 301 Project Website, shortly before the Workshop



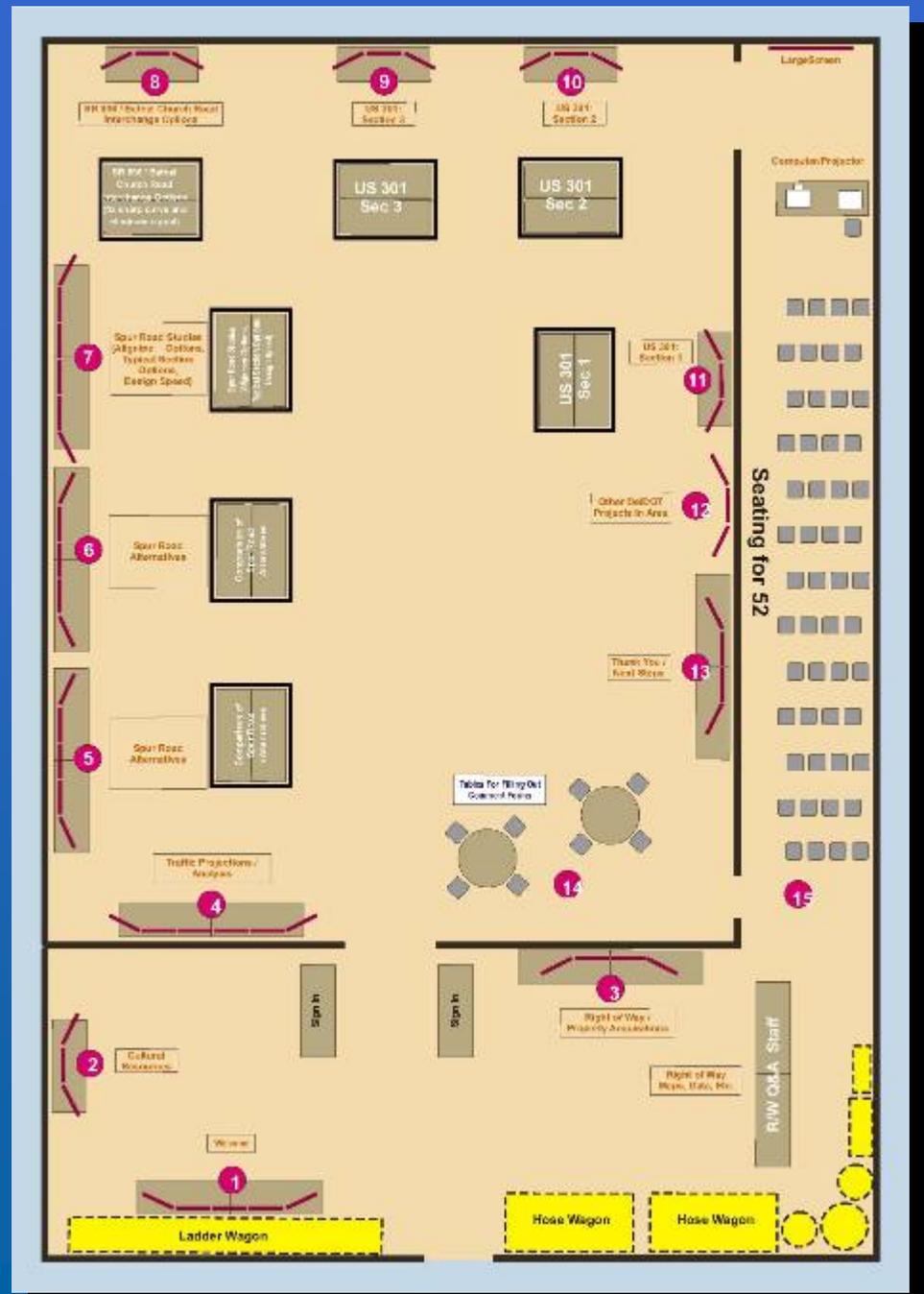
# Public Workshop

- Members of the Project Team are here to explain the information regarding the Spur Road, alternatives to the Spur Road, the potential US 301 Mainline refinements, to listen to the public's ideas, and answer questions.
- You are invited to express your views and submit comments on the US 301 Project.
- Comments will be received during the Workshop (comment forms), by emailing to [dotpr@state.de.us](mailto:dotpr@state.de.us), or by mailing to DelDOT Public Relations, PO Box 778, Dover, Delaware 19903.
- **Comments are due by April 3, 2009.**
- Comments received from the public, along with those from the Environmental Resource and Regulatory Agencies, will be considered by DelDOT and reported, no later than May 1, 2009, to the General Assembly, along with recommendations on how to proceed with the Spur Road segment of the project.

**See Workshop Public Notice - Handout**

# Tonight's Workshop Layout

- 1 Welcome
- 2 Cultural Resources
- 3 Right of Way
- 4 Traffic
- 5 Spur Road Alternatives
- 6 Spur Road Alternatives
- 7 Spur Road Studies
- 8 SR 896 / Bethel Church Road Interchange Options (fix sharp curve and eliminate signal)
- 9 US 301: Section 3, S. of MD/DE Line to Levels Road
- 10 US 301: Section 2, Levels Road to E. of Norfolk Southern RR
- 11 US 301: Section 1, E. of Norfolk Southern RR to SR 1
- 12 Other DeIDOT Projects in Area
- 13 Thank You / Next Steps
- 14 Comment Tables
- 15 Workshop PowerPoint Presentation





## Section 1

*US 301: SR1 to E. of Norfolk  
Southern RR*

## Section 2

*US 301: E. of Norfolk  
Southern RR to Levels Road*

## Section 3

*US 301: Levels Road to S. of  
DE/MD Line*

## Section 4

*Spur Road: New US 301 to  
Summit Bridge*





# Purpose and Need

- Three Key Components:
  - Manage truck traffic
  - Improve safety
  - Reduce roadway congestion



US 301 Northbound at SR 299



South of Summit Bridge Curve



Westbound Boyds Corner Road at US 301



# Purpose and Need

## Manage Truck Traffic

- US 301 is used as a Mid-Atlantic truck route, and serves as an alternative to avoid tolls and congestion on I-95.
- High volume of truck traffic on US 301
  - 27% Trucks at DE/MD State Line (Feb 2008)
  - 15% Trucks on Boyds Corner Road (Sep 2008)
- Mixing a high percentage of truck traffic with local traffic affects roadway operations and safety.
- 95% of interstate truck traffic on Northbound US 301 is heading Northeast.

## Improve Safety

- From January 2000 to December 2006, 1200+ reported accidents in project area (US 301, SR 896, SR 299, and SR 15)
  - 36% resulted in injury or death
  - 13 fatalities on the US 301/SR 896 Corridor

Note: Five (5) additional fatalities have occurred on US 301 south of the C&D Canal, between January 2007 and December 2008

- High Accident Locations
  - Several roadway segments of US 301 / SR 896 are on DelDOT's Highway Safety Improvement Program (HSIP) list
  - Need to address sharp curve at south end of Summit Bridge

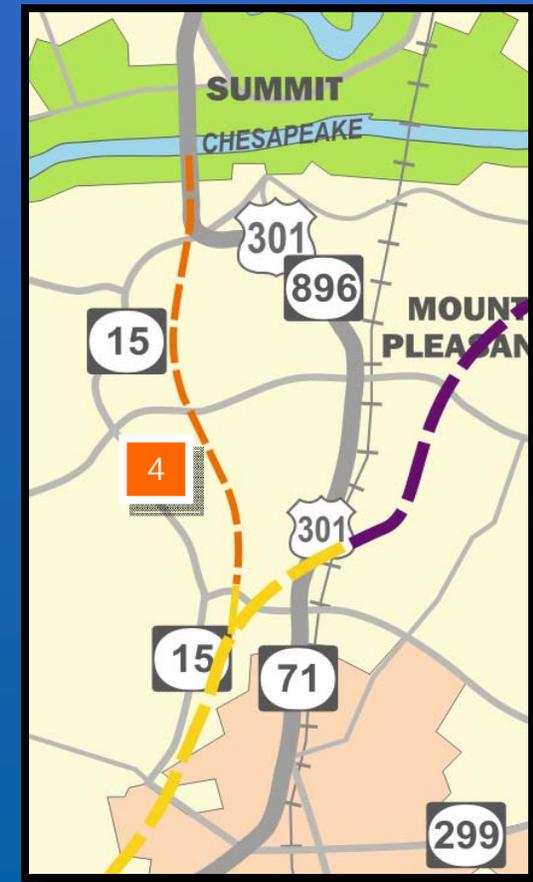
## Reduce Congestion

- Separate local traffic from US 301 through traffic, especially trucks.
- Multi-modal related recommendations from the US 301 Major Investment Study have been or are being implemented.
- Despite these non-capacity improvements, traffic growth during the last 5 to 10 years in the Project Area has exceeded projections.
- Need to develop roadway capacity improvements



## Section 4: Spur Road

- The Spur Road was added to the Green and Purple alternatives in the fall of 2005 as a means of better addressing the project Purpose and Need:
  - Removes even more trucks from Existing US 301 and other local roads than the Green and Purple Alternatives, without the Spur Road
  - Moves a significant volume of cars and trucks off local roads with at-grade intersections and driveways and places them on a safer, median divided, controlled-access facility
  - Reduces delay for vehicles on Existing US 301 and for vehicles using the Spur to bypass Existing US 301





## Section 4: *Spur Road Alternatives*

- Spur Road Alternatives (Bond Bill Language)

### **FEIS/ROD/Selected Alternative - Spur Road & No Upgrade of Existing US 301**

**Alternative 1:** No Spur Road & No Upgrade of Existing US 301

**Alternative 2:** No Spur Road & Upgrade of Existing US 301, Ash Boulevard to Mt. Pleasant (Specifically mentioned in Bond Bill)

**Alternative 3:** No Spur Road & Limited Access Roadway Along Existing US 301 (Existing/New US 301 Interchange, north of Armstrong Corner Road, to Summit Bridge)

*Note: All Spur Road alternatives assume construction of the new mainline US 301*



# Section 4: *Spur Road Alternatives*

## FEIS/ROD/Selected Alternative - Spur Road & No Upgrade of Existing US 301

### Description:

The Spur Road provides a 2-lane, median divided, controlled access facility (one lane in each direction), from New US 301 in the vicinity of Armstrong Corner Road to Summit Bridge, including:

- North serving trumpet-type interchange between Spur Road and Bethel Church Road Extended
- Y-type interchange with SR 896, south of Summit Bridge
- Overpasses of Spur Road by Armstrong Corner Road, Old School House Road, and Churchtown Road
- Visual earth berm west of Chesapeake Meadow Community

### Advantages:

#### Manage Truck Traffic :

- Provides a controlled-access highway (Spur Road) for thru-truck traffic from MD/DE Line to Summit Bridge
- Places 900 to 2,000 trucks per day, in 2030, on a safer controlled-access highway (Spur Road) , removing them from local roads

#### Safety:

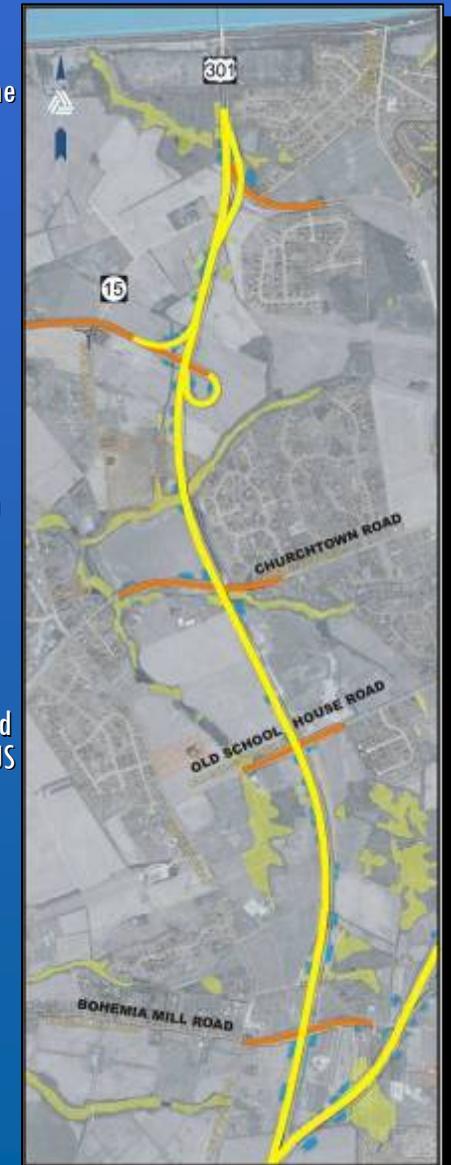
- Improves safety by separating regional traffic (especially trucks) on Spur Road from local traffic
- Reduces the projected traffic on Choptank Road and Existing US 301/SR 896, thus improving safety
- Places from 12,000 to 22,000 vehicles per day in 2030, depending on the level of Westown development completed at that time, on a safer controlled-access roadway (Spur Road), removing those vehicles from local roads (Existing US 301 and Choptank Road)

#### Congestion:

- Provides an alternative route (Spur Road) should there be an incident on SR 1 north of the Biddles Toll Plaza, or on New US 301 between Middletown and SR 1
- Accommodates full potential for growth in Westown area

### Disadvantages:

- Cost - \$105 million in Year of Expenditure Dollars (Preliminary Estimate)
- Located within 600' of existing communities of Chesapeake Meadow & Summit Bridge Farms
- Impacts agricultural properties and properties with agricultural easements





## Section 4: *Spur Road Alternatives*

### Alternative 1: No Spur Road & No Upgrade of Existing US 301

#### Advantages:

- Eliminates Spur Road impacts
- Reduces overall project costs (Preliminary Cost Estimate for Spur Road is \$105 million)

#### Disadvantages:

##### Manage Truck Traffic:

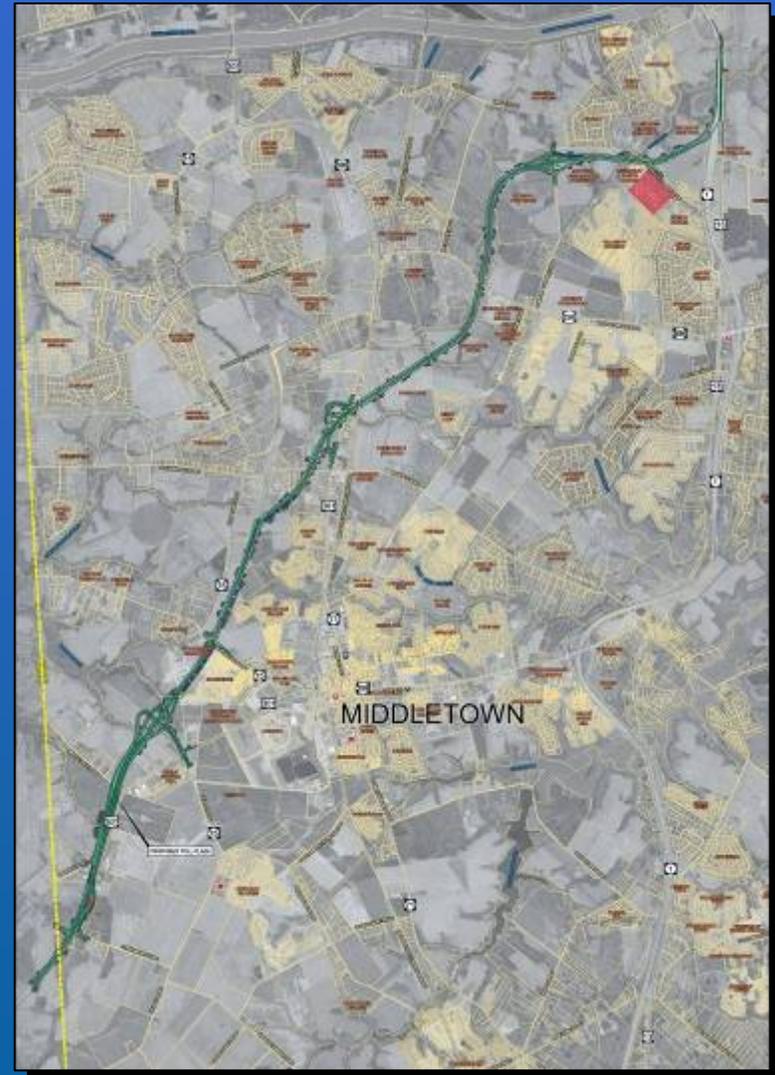
- Does not manage truck traffic since thru-truck traffic (to and from Summit Bridge) would use Existing US 301 from the new interchange between Existing and New US 301 (north of Armstrong Corner Road) and Summit Bridge, thus not separating regional traffic (especially trucks) from local traffic.

##### Safety:

- Would not provide any safety benefits for traffic heading to and from Summit Bridge

##### Congestion:

- Does not reduce traffic on Existing US 301
- Does not reduce traffic on Choptank Road
- Does not provide a controlled-access highway to Summit Bridge
- Does not accommodate full potential for growth in Westtown area



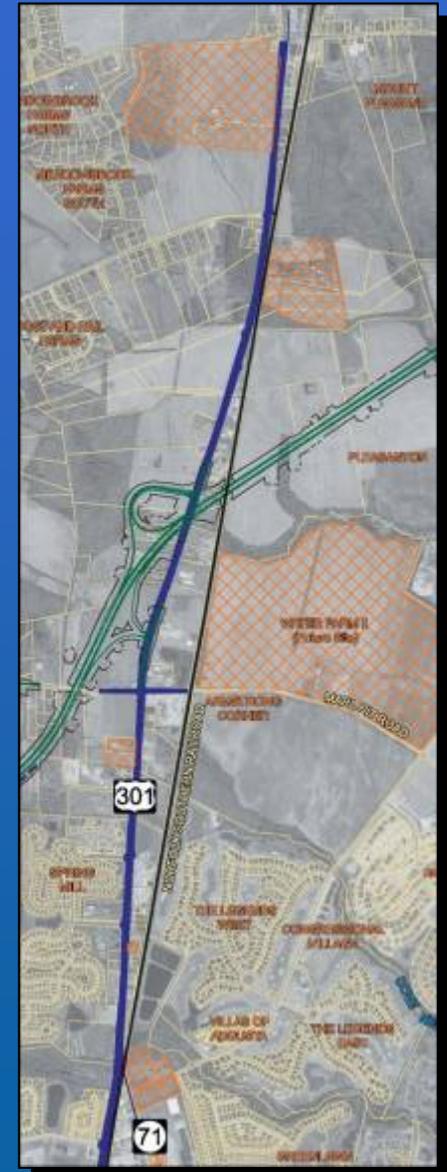
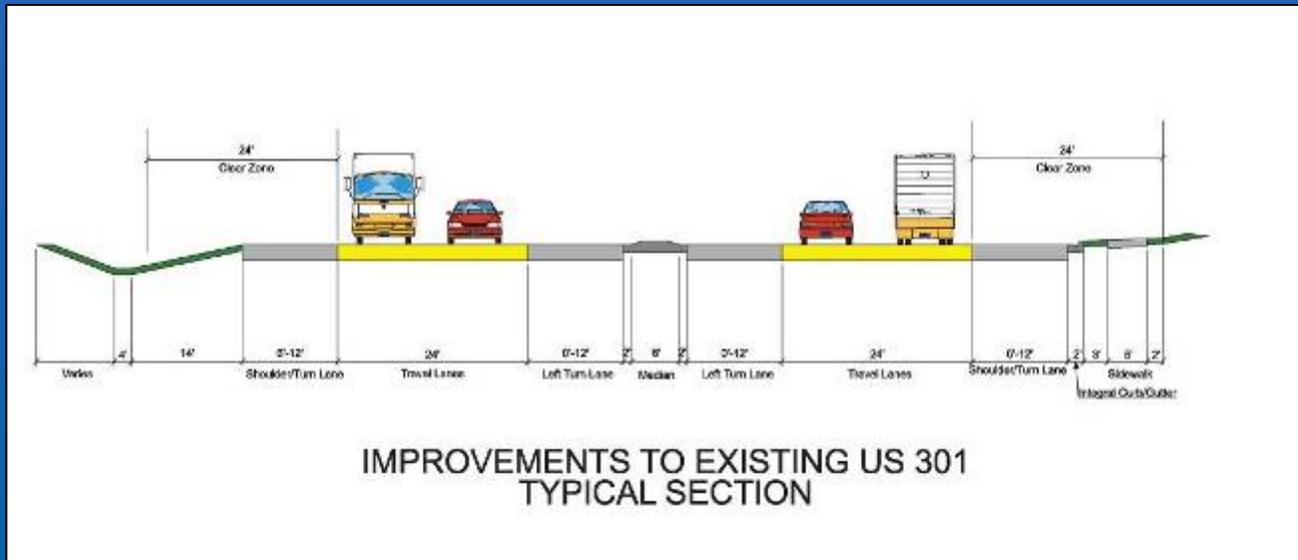


# Section 4: *Spur Road Alternatives*

**Alternative 2:** No Spur Road & Upgrade of Existing US 301, Ash Blvd to Mt. Pleasant (specifically mentioned in Bond Bill)

## Description:

- Widens Existing US 301 from Ash Boulevard to the Mt. Pleasant intersection to 2-lanes in each direction, with median turning lanes
- Alignment developed to avoid National Register Properties and Norfolk Southern Railroad





## Section 4: *Spur Road Alternatives*

### Alternative 2: No Spur Road & Upgrade of Existing US 301, Ash Blvd to Mt. Pleasant (specifically mentioned in Bond Bill)

#### Advantages

##### Safety:

- Improves Existing US 301 from Ash Boulevard to Mt. Pleasant (2 lanes in each direction with center turning lanes and a raised concrete median) thus improving safety of this section — although not as safe as the median divided, controlled-access Spur Road

##### Other:

- Cost of upgrading Existing US 301 would be less than the Spur Road Alternative (\$65M versus \$105M for the Spur Road — Preliminary Cost Estimates)
- Reduces impacts to active agricultural lands and agricultural easement lands
- Fewer impacts to forests as compared to the Spur Road

#### Disadvantages

##### Manage Truck Traffic:

- Does not separate regional traffic (especially trucks) from local traffic. — all traffic on existing local roads
- Thru-truck traffic would use Existing US 301 from the interchange between Existing and New US 301 (north of Armstrong Corner Road) and Summit Bridge

##### Safety:

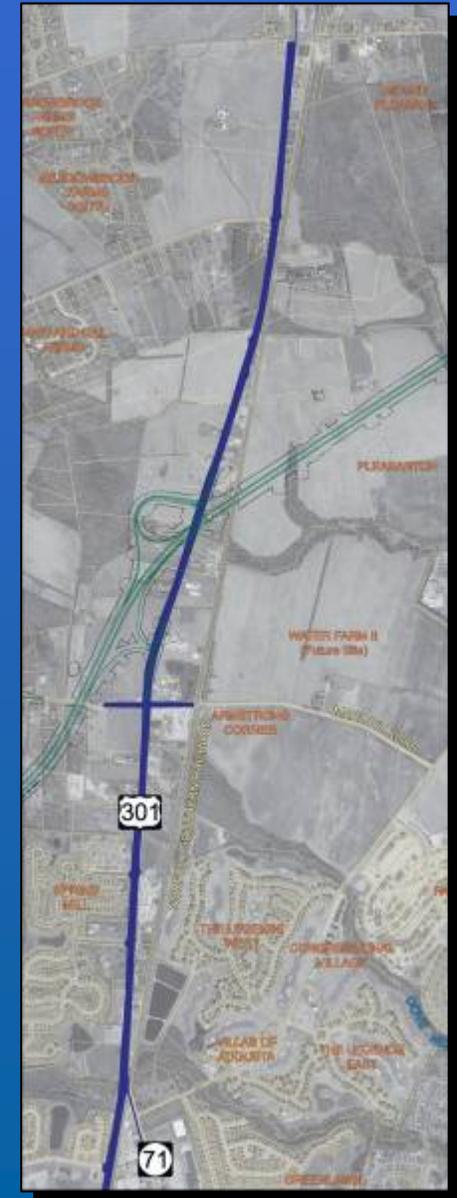
- While safer than Existing US 301 (two lane undivided roadway), Alternative 2 would not be as safe as the median divided, controlled-access Spur Road, i.e. Under Alternative 2 12,000 to 22,000 more vehicles per day (including 900 to 2,000 trucks) in 2030, depending on the level of Westtown development completed at that time, would travel on local roads through at-grade intersections and past driveways on Existing US 301

##### Congestion:

- While upgrading Existing US 301 provides additional capacity over Existing US 301, without the Spur Road, future traffic growth over the Summit Bridge would be focused on both Existing US 301 and Choptank Road
- Does not provide an alternative route to Summit Bridge during incidents or emergencies

##### Other:

- Considerably more properties impacted than Spur Road alternative (64 vs. 35)
  - Requires the total acquisition of 5 homes and 1 business vs. none for the Spur Road
  - Requires the partial acquisition of 15 businesses, 12 residentially occupied properties and a church, along with the communities of Springmill and Middletown Village
- Left turns in and left turns out to properties/businesses located along Existing US 301 will be limited by provision of a raised concrete median
- Greater impacts to wetlands as compared to the Spur Road (1.92 vs. 1.23)





## Section 4: *Spur Road Alternatives*

### Alternative 3: No Spur Road & Limited Access Along Existing US 301

#### Description:

Provides a Y-type interchange between New US 301 and an upgraded Existing US 301 — which would be converted into a controlled access facility to Summit Bridge. The freeway-type road would extend north along the west side of Existing US 301 to the vicinity of Summit Airport. The Spur Road would then cross Existing US 301 extending north along the east side of Existing US 301 and then curve west and north to Summit Bridge.

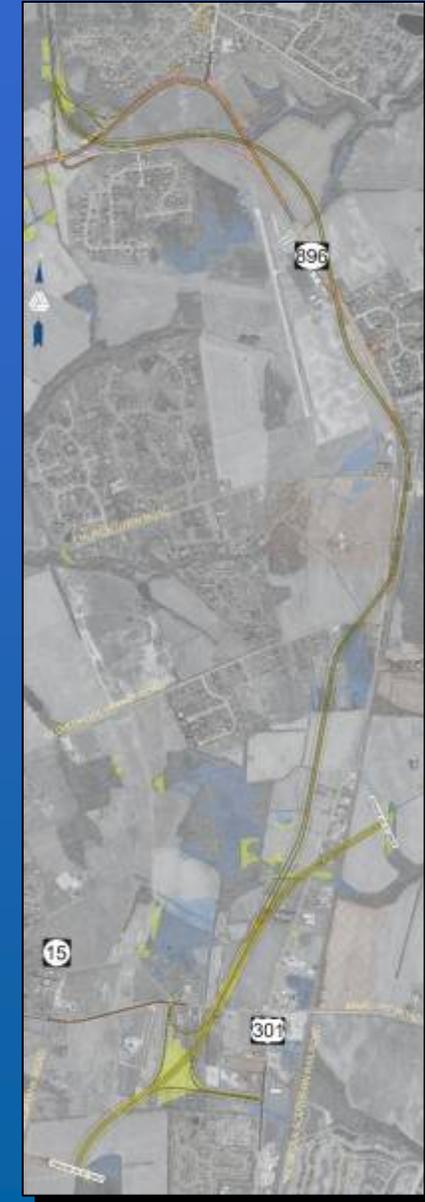
#### Advantages:

Manages Truck Traffic, Improves Safety and Congestion by providing Spur Road-type facility along Existing US 301:

- Since Alternative 3 is a limited access facility, it would be expected to provide benefits similar to the recommended Spur Road, including the management of truck traffic and improved safety and congestion:
  - Provides a direct controlled-access highway for thru-truck traffic to and from Summit Bridge
  - Places more vehicles on a safer controlled-access roadway, removing them from local roads with at-grade intersections, traffic signals and driveway access

#### Disadvantages:

- Costs associated with Alternative 3 would exceed those of the recommended Spur Road, i.e. approximately \$165 million versus \$105 million (Preliminary Cost Estimates)
- The impacts to properties along Existing US 301 would be extraordinary, including Summit Airport, and their expansion plans, 12 homes and the Shoppes at Mt. Pleasant
- Potential Section 4(f) impacts (historic resources) at Mt. Pleasant Farm, due to proximity to Norfolk Southern Railroad
- Significantly greater impacts to natural resources than the Spur Road
  - » 13 acres of wetlands impacted as compared to 1.2 acres for the Spur Road
  - » 11.2 acres of forest impacted as compared to 6.7 acres for the Spur Road





# Traffic

## Traffic Forecasts

### — Original DeIDOT forecasts for the project's Draft Environmental Impact Statement (Draft EIS) developed in 2005 used:

- WILMAPCO's 2003 approved land use projections (10,000 trips in 2030 from the Westown area )
- Westown's 2004 development proposal as described in their 2005 Traffic Impact Study (TIS) (130,000 trips from the Westown area)

### — Recently developed current DeIDOT forecasts used:

- WILMAPCO's November 2008 approved land use projections (32,000 trips in 2030 — from the Westown area)



# Traffic

## Traffic Forecasts

### WILMAPCO's FORCECASTING PROCESS

- WILMAPCO generates land use forecasts on an annual basis to help set the direction for regional transportation planning. Prior to 2008 it had been updated on a tri-annual (every three year) basis.
- Land use forecasts are developed by the WILMAPCO Data and Demographics Subcommittee and approved by the WILMAPCO Council for the purpose of producing an annual, trend-based allocation of population, households and employment to the Traffic Analysis Zones (TAZs).
- Once completed, the forecasts comprise the land use component of the DeIDOT Travel Demand Model for regional planning activities, and for evaluating air quality conformity to satisfy federal requirements.
- The TAZ forecasts stay within the countywide totals set each year by the Delaware Population Consortium.
  - The subcommittee performs a zone-by-zone review and allocates population, households and employment consider all active/pending/preliminary development plans that are available from municipalities and the county land use department.
  - The University of Delaware Center for Applied Demography and Survey Research assists in the the TAZ allocation effort



# Traffic

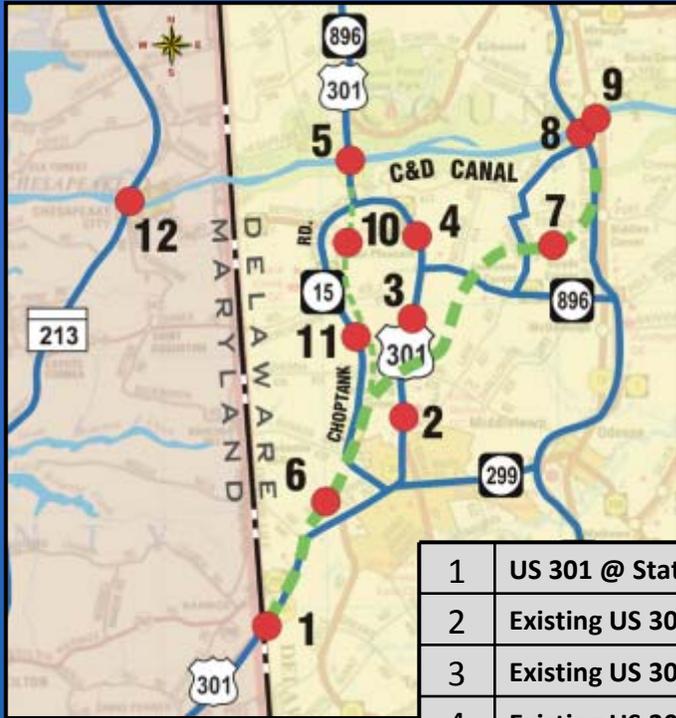
## Traffic Forecasts

### US 301 FORCECASTING PROCESS

- While considering the regional context, the US 301 Project Team developed traffic forecasts that focused specifically on the rapidly developing MOT area, as well as the long-distance (Interstate) travel characteristics of motorists on the US 301 corridor.
- To develop travel forecasts for the US 301 project, the Project Team utilized the DeIDOT Travel Demand Model and the most current (at the time 2003) WILMAPCO land use forecasts, then closely examined the land use projections for the MOT area, and used a multi-state model to examine the balance of traffic flow between I-95 and US 301.
- On a project level, one of the primary concerns of the traffic forecasts is to ensure that the proposed alternatives will adequately accommodate potential future traffic demand in the 2030 design year and beyond.
  - The MOT area has experienced the highest rate of growth in the state in recent years, and several major developments (Westtown, Eastown, Whitehall, etc) are continuing to progress through the planning and design and in some cases construction stages despite the current economic downturn
  - For a major investment project such as US 301, it would be short-sighted not to consider potential growth beyond the 2030 design year
- Because of these factors, the US 301 Project Team has presented a range of potential traffic volumes in 2030, showing both WILMAPCO's current estimate of development in 2030, as well as potential volumes if the Westtown area fully develops, as currently planned.



# Traffic



The following table compares DeIDOT's prior (Draft EIS) traffic forecasts with DeIDOT's current forecasts.

		2005 Existing	2030 Draft EIS Forecasts (2003 WILMAPCO Land Use Data + Westown TIS data)		Current 2030 Forecasts (2008 WILMAPCO Land Use Data)	
			w/ Spur	w/o Spur	w/ Spur	w/o Spur
1	US 301 @ State Line	11,400	16,800	14,500	26,800	25,600
2	Existing US 301	21,900	22,100	28,200	24,800	26,200
3	Existing US 301	19,900	21,300	27,900	15,200	22,500
4	Existing US 301	23,200	27,900	37,200	31,000	39,300
5	US 301 @ Summit Bridge	28,600	59,500	53,900	50,800	47,600
6	New US 301	-	56,700	42,000	34,200	27,100
7	New US 301	-	43,500	45,300	27,700	28,100
8	SR 1 @ C&D Canal	65,700	104,300	106,300	110,000	112,400
9	US 13 @ C&D Canal	11,500	19,600	19,700	26,600	26,700
10	Spur Road	-	22,500	-	12,300	-
11	Choptank Road	3,400	5,100	12,900	7,500	9,000
12	MD 213 @ C&D Canal	15,000	21,000	23,500	24,400	25,100



# Traffic

## Traffic Forecasts

### — Current DeIDOT 2030 forecasts indicate :

- Increased volumes compared to existing volumes at nearly all key locations throughout study area
- Increased volumes on US 301 at the state line when compared to the Draft EIS forecasts (refinements to latest DeIDOT traffic model)
- lower volumes, when compared to the Draft EIS forecasts on several roads, including:
  - The Levels Road interchange ramps with New US 301
  - New US 301, north of Levels Road
  - Existing US 301 from the interchange between Existing and New US 301, north of Armstrong Corner Road and Mt Pleasant
  - The Spur Road

— However, based on recent information from the Town of Middletown, land use assumptions in current 2030 forecasts do not appear to reflect full build-out of Westown.



# Traffic

## Traffic Forecasts

- Based on recent discussions with the Town of Middletown, rapid development continues in Westtown - even during the economic downturn - with several properties under construction and numerous others in the design stage
- The Town of Middletown has indicated that the scale of the ultimate build-out has actually increased from the 2005 assumptions due to additional retail development replacing other proposed uses and the addition of four (4) new parcels which are likely to be developed

	2030 Trips Assumed in the 2003 WILMAPCO Land Use Forecasts	2030 Trips Assumed in Westtown TIS, June 2005	2030 Draft EIS Forecasts ('03 WILMAPCO Land Use + Westtown TIS)	2030 Trips Assumed in Current 2008 WILMAPCO Land Use Forecasts	Estimated 2030 Trips based on latest Westtown Development Plans
Total Daily Trips from Westtown	10,000	127,000	131,000	32,100	136,000

- According to data provided by the Town of Middletown, the following approximate trips have and will be generated by Westtown development:

Time Period	New Trips
2003-2005	7,000
2005-2008	42,000
Under Construction	2,000
Approved	12,000
<b>Subtotal</b>	<b>63,000</b>
Remaining Potential Trips	73,000
<b>Total</b>	<b>136,000</b>

**Note:** Growth in Westtown is occurring faster than projected (63,000 trips from parcels that have been constructed, are under construction, or have been approved, in Westtown, versus 32,000 trips by 2030, assumed in the latest 2008 land use forecasts.



# Traffic

## Traffic Forecasts

### — Based on the latest Westown development plans

- The 2030 Draft EIS traffic forecasts appear to represent a reasonable “upper bound” for the traffic projections in the study area
- The current 2030 traffic forecasts do not reflect full build-out of the Westown development. Therefore, they appear to represent a “lower bound” for the traffic projections.

### — The Spur Road can be expected to carry between 12,000 and 22,000 trips per day in 2030, depending on the amount of development completed in Westown by that time

### — The increase on other roadways in 2030, due to not constructing the Spur Road, might also be described by a range, again depending on the amount of development completed in Westown by that time :

- Existing US 301, north of Middletown — increase between 1,400 and 6,100 vehicles per day
- Choptank Road — increase between 1,500 and 7,800 vehicles per day



# Traffic

## Traffic Forecasts: Summary / Factors to Consider

- **The most recent land use forecasts show increased growth (both population and employment) in the MOT area for year 2030 compared to the 2003 forecasts, but did not account for the potential full build-out of Westown as currently planned by the Town of Middletown**
- While the most recent land use forecasts show increased development in the MOT area, the forecasts also reflect decreases in total population and employment countywide, which could somewhat alter travel patterns throughout the county
- **Despite these trends, the latest 2030 traffic projections, even without the full build-out of Westown, results in over 12,000 motorists per day using the Spur Road**
- Further expansion (e.g. build-out) of Westown beyond what is assumed in the current 2030 forecasts will result in additional traffic — both in Middletown and north-south across the C&D canal (for example, new US 301, spur road, existing US 301 and Choptank Road)
- **The 2030 EIS forecasts — based on land use assumptions made in 2003 and including full build out of Westown — indicated over 22,000 trips on the Spur Road**
- If the spur road is removed from the US 301 project and the right-of-way is allowed to develop, nearly all future traffic growth from Westown — before and after 2030 — would occur on existing roads: existing US 301, Choptank Road, etc. and on new US 301



# Toll Diversion

- Toll Diversion Working Group
  - Eight (8) Recommendations (see below) were unanimously agreed upon by the Working Group and subsequently approved by the DeIDOT Secretary of Transportation and Maryland State Highway Administrator.
- Recommendations:
  1. Commence a Traffic Monitoring Program to collect traffic data at 13 specific locations on roads in DE and MD before/after the opening of the proposed Weigh and Inspection Stations on US 301 and before/after the opening of the proposed Mainline US 301 toll plaza
  2. Evaluation and implementation of additional truck restrictions on ten (10) specific local roads in Maryland and Delaware
  3. Enhance the existing truck restriction signing on three specific routes
  4. Consider various measures along MD 282 from Cecilton to Warwick to address excessive traffic speeds
  5. Construct and operate a reasonable number of Virtual Weigh Stations (VWS) at appropriate locations as determined by the traffic monitoring program (At a minimum VWS's should be installed in both directions on MD 213 south of Cecilton.)
  6. Provide enhanced truck enforcement:
    - Delaware should provide additional staffing at their future northbound weigh and inspection station to better match the proposed staffing of Maryland's southbound station
    - Both states should provide sufficient dedicated enforcement to adequately monitor all VWS's and all truck restrictions on local roads
    - Maryland should explore increased funding for staff & equipment to support the Maryland State Police in their enhanced truck enforcement efforts
    - Similarly, DeIDOT should seek additional funding for truck diversion enforcement
  7. Consider closing the median opening on US 301 at MD 299, providing U-turn locations on US 301 north and south of the intersection
  8. Consider posting truck length restrictions on MD 213



# Identification of Early Contract to Fix Sharp Curve South of Summit Bridge

- Interchange Option A: Shifts trumpet interchange to accommodate Choptank Road roundabout
- Interchange Option B: Directional ramps at SR 896/Bethel Church Road





# Identification of Early Contract to Fix Sharp Curve South of Summit Bridge

## Interchange Option A: SR 896/Bethel Church Road

*Shifts trumpet interchange to accommodate Choptank Road Roundabout*

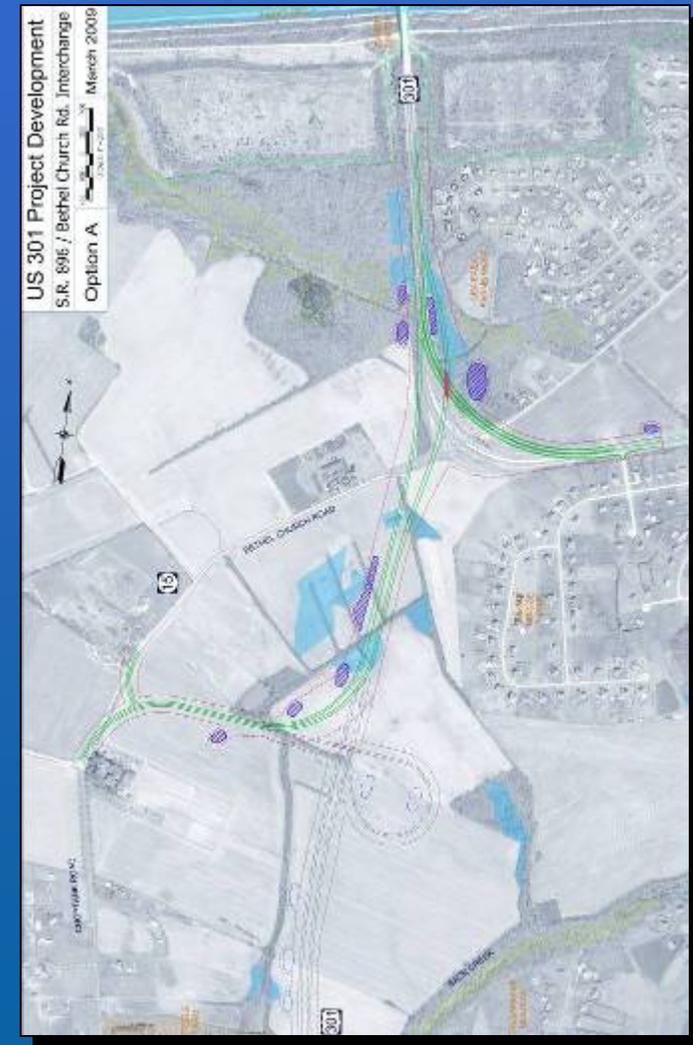
*(Preliminary Cost Estimate: \$20 million)*

### Advantages:

- Provides an improved connection with the Choptank Road roundabout with minimal reconstruction at the roundabout
- Moves the interchange closer to Summit Bridge Road, reducing the cost of the early contract

### Disadvantages:

- Requires a longer length of relocated Bethel Church Road and Spur Road to be constructed compared to Interchange Option B
- Greater impacts to natural resources as compared to Option B
- Interchange is located closer to Summit Bridge Farms community





# Identification of Early Contract to Fix Sharp Curve South of Summit Bridge

## Interchange Option B: SR 896/Bethel Church Road

*Directional Ramps at SR 896/Bethel Church Road*

*(Preliminary Cost Estimate: \$20 million)*

### Advantages:

- Provides a more direct connection to Bethel Church Road with minimal reconstruction of the roundabout
- Reduces right of way impacts associated with the relocated Bethel Church Road
- Reduces the construction cost by reducing the length of roadway
- Fewer impacts to natural resources than Option A

### Disadvantages:

- Additional retaining wall costs
- Interchange is located closer to Summit Bridge Farms community





## Section 4: *Spur Alignment Options*

- **Option 1:** Shift alignment west, away from Chesapeake Meadow
- **Option 2:** Shift alignment east, away from Steele Farm buildings
- **Option 3:** Minimize impacts to Rhoadesdale Farm and Steele Farm

### FEIS / ROD Alternative





# Section 4: *Spur Alignment Options*

**Alignment Option 1** - Shift FEIS/ROD alignment to the west to increase distance between the Spur Road and the Chesapeake Meadow community

## Advantages:

- Increases the distance between the Spur Road and Chesapeake Meadow by approximately 110'
- Maintains same distance to Summit Bridge Farms as the FEIS/ROD alignment at the north end and increases distance by approximately 50' at the south end of the community

## Disadvantages:

- Increases property impacts to Steele Farm (agricultural easement) by about 2.5 acres. Four buildings would also be impacted
- Increases property impacts to Rhoadesdale Farm by almost 3 acres
- Increases property impacts to Yaiser property by approximately 4 acres
- Increases property impacts to the Zapata property by approximately 0.25 acres





# Section 4: *Spur Alignment Options*

## Alignment Option 2 - Shift FEIS/ROD alignment to the east to reduce impacts to Steele Farm Structures

### Advantages:

- Reduces the property impacts to Steele Farm (agricultural easement) by approximately 4 acres and avoids impacting their buildings
- Reduces the impacts to the Yaiser property by approximately 1 acre
- Reduces impacts to low quality wetlands and other Waters of the US

### Disadvantages:

- Decreases the distance between the Spur Road and Chesapeake Meadow by approximately 100' at the closest point, but maintains visual earth berm
- Brings alignment closer to Summit Bridge Farms by approximately 30' at the north end and 135' at the south end of the community
- Increases structure length over Back Creek
- Increases total wetland impacts at Back Creek
- Increases impacts on subaqueous lands and forest lands





# Section 4: *Spur Alignment Options*

## Alignment Option 3 - Shift FEIS/ROD alignment to the east to minimize impacts to Steele Farm Structures and to reduce impacts to the Rhoadesdale Farm

### Advantages:

- Decreases impacts to Steele Farm by approximately 4 acres and avoids impacts to the Steele Farm buildings
- Decreases impacts to Rhoadesdale Farm by approximately 4 acres
- Preserves a major portion of the natural hedgerow boundary and berm along the Rhoadesdale property
- Slightly reduces impacts to the Zapata property
- Reduces stream, agricultural preservation and farmland impacts

### Disadvantages:

- Reduces distance between the Spur Road and Chesapeake Meadow community by 40' at the closest point, but visual earth berm still provided
- Alignment is closer to the Summit Bridge Farms community by approximately 65' at the north end and approximately 210' at the south end of the community
- Increases structure length and high quality wetland impacts across Back Creek
- Increases impacts to the Yaiser property by approximately 0.7 acres
- Shifts the Spur Road crossing of Old School House Road by approximately 65' to the east, which raises the elevation of Old School House Road at the future driveway entrances
- Increases the length of structure carrying Churchtown Road over the Spur Road
- Increases the Spur Road embankment requirements and construction cost as a result of the shift on the borrow site
- Increases Spur Road costs
- Increases wetland and forest land impacts





## Section 4: *Spur Road Design Issues*

- **Median Width**

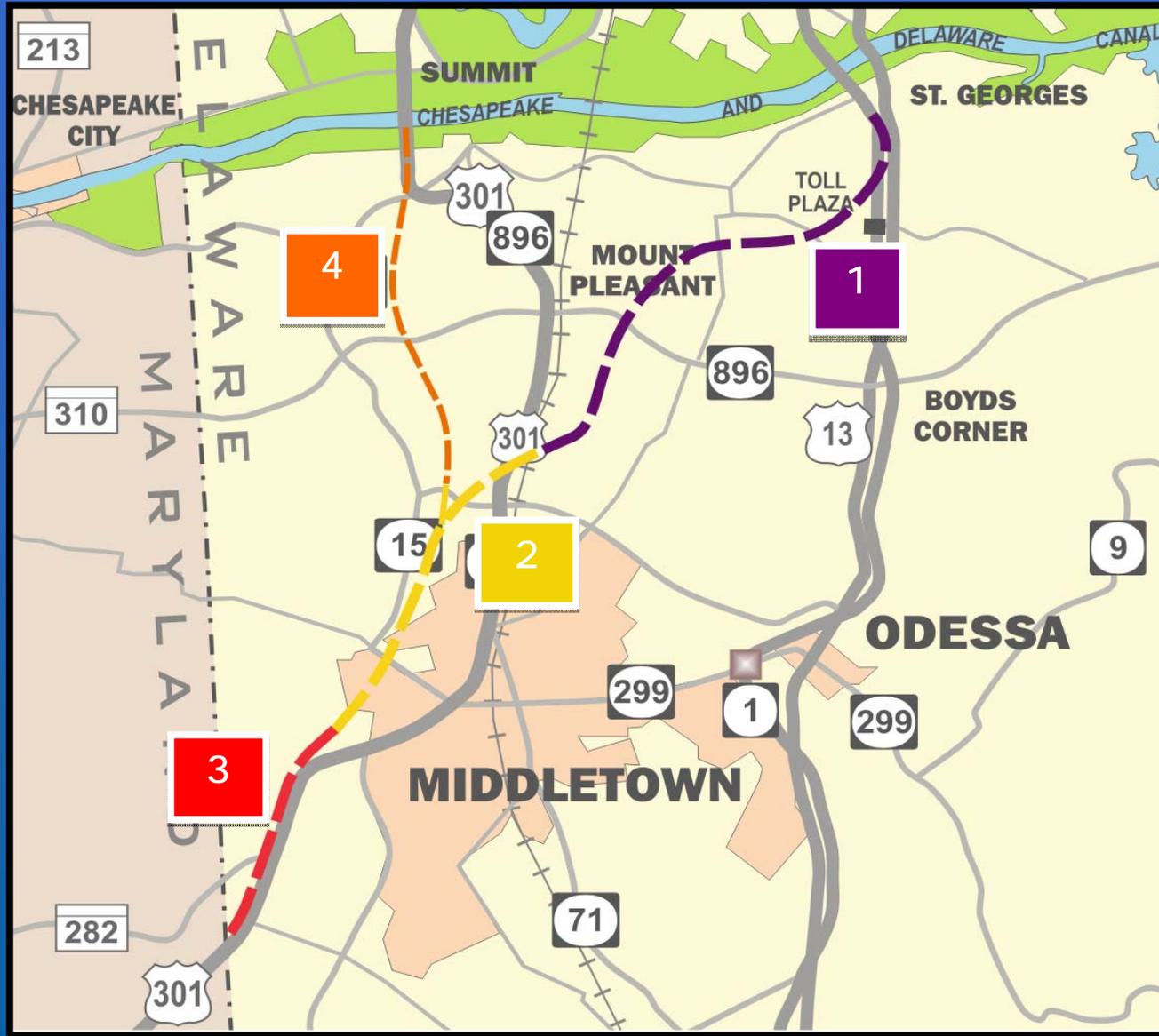
- DeIDOT is recommending the 62' wide median indicated in the FEIS/ROD be reduced to 54'.

- **Design Speed:**

- DeIDOT is recommending the 70 mph design speed be retained, in order to provide the safest possible facility for the traveling public.
- The posted speed is typically set just below the design speed and would likely be 65 mph.



# US 301 Potential Refinements





# US 301 Potential Refinements

- SECTION 3

- Slight shift of New US 301 Mainline to east at MD/DE line to reduce environmental impacts and avoid electric transmission towers
- Improve Traffic Operations for weigh station and Levels Road Interchange
- Levels Road Interchange - shift about 125 feet south to reduce environmental impacts to Sandy Branch

- SECTION 2

- Provide right exit ramp from Northbound US 301 to Northbound Spur Road
- Replace Proposed Partial Cloverleaf Interchange configuration at New US 301/Existing US 301 Interchange, north of Armstrong Corner Road with Diamond configuration with Roundabouts

- SECTION 1

- Provide Diamond Interchange with roundabouts rather than stop-controlled intersections at Jamison Corner Road interchange
- Relocate toll-free ramp intersection with US 13 - 1,150 feet south of the ROD Alternative and relocate Port Penn Road to a consolidated intersection with toll-free ramp and US 13





## Design Section 3: *South of MD/DE Line to Levels Road*

### Potential Refinement

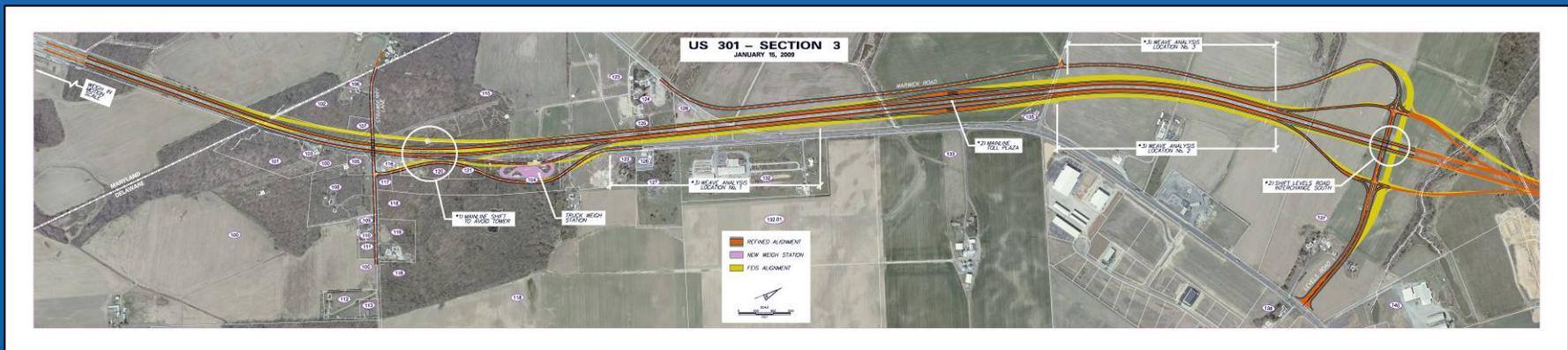
- Improve Traffic Operations for weigh station and Levels Road Interchange

- Advantages:

- Weigh station trucks can use highway speed EZ-Pass Lanes or Cash Lanes (not restricted to use cash lanes, per ROD Alternative)
- Northbound highway speed EZ-Pass traffic can exit at Levels Road (not restricted to use cash lanes, per ROD Alternative)
- Levels Road on ramp to southbound US 301 can use the highway speed EZ-Pass Lanes (not restricted to use cash lanes, per ROD Alternative)
- Reduces project footprint, pavement and cost
  - Pavement reduction = 46,700 SY = \$2,968,000
  - Concrete barrier reduction = 9,400 LF = \$1,269,000
  - Wetland impact reduction = 0.14 acres
  - ROW impact reduction = 3 acres
  - Overhead sign structure span reduction
  - SWM facilities reduction

- Disadvantages:

- None identified





## Design Section 3: *South of MD/DE Line to Levels Road*

### *Potential Refinement*

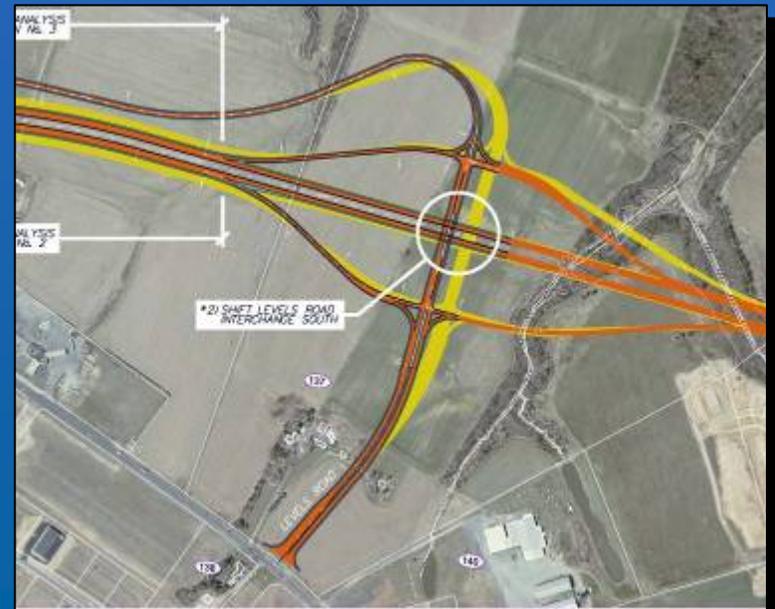
- Levels Road Interchange - shift about 125 feet south to reduce environmental impacts on Sandy Branch

#### — Advantages:

- Bridge cost savings of \$726,000 (4,400 sq ft less)
- Reduction of environmental impacts (in Section 2)
- Reduction of earthwork quantities due to Ramp F configuration
- Less required right-of-way for Ramp F

#### — Disadvantages:

- Slightly closer to the historic property (Rumsey Farm)





## Design Section 2: *Levels Road to East of Norfolk Southern Railroad*

### *Potential Refinement*

- Provide right exit ramp from Northbound US 301 to Northbound Spur Road
  - **Advantages:**
    - Improved operation and safety based on slower right lane speeds and driver expectations
    - Simplifies advance signing by allowing safe placement behind right shoulder
    - Improved skew for ramp bridge over US 301, which simplifies design
    - Shorter 2-span structure over US 301, approximately 300' total bridge length for the right exit versus 700' for the left exit
    - Reduces construction costs for bridge structure and retaining walls by \$5.25M versus the left exit configuration
    - Retaining walls are not needed
  - **Disadvantages:**
    - Additional right-of-way is needed
    - Somewhat closer to the Springmill community, i.e. 1,600 ± for the right exit versus 1,700 ± for the left exit
    - Increased wetland (7.61 vs. 7.31 acres) and forest impacts (6.04 vs. 5.41 acres)





## Design Section 2: *Levels Road to East of Norfolk Southern Railroad*

### Potential Refinement

- Replace Proposed Partial Cloverleaf Interchange configuration at New US 301/Existing US 301 Interchange, north of Armstrong Corner Road with Diamond configuration with Roundabouts
  - **Advantages:**
    - Provides single point access with Existing 301
    - Minimizes wetland impacts (1.53 vs. 1.85 acres) along tax ditch to the west of proposed US 301
    - Reduces Waters of the US impacts
    - Improves geometry of US 301 Bridge over Existing 301 — the ramp gore is no longer on the bridge
    - Provides tangent sections along on-and off-ramps to facilitate tolling operations
    - Separates ramp movements from Existing 301 Intersection
  - **Disadvantages:**
    - Impacts Mid Farms community
    - Increases construction cost by \$1M
    - Reduces distance between New US 301 and Middletown Baptist Church
- Roundabouts
  - **Advantages:**
    - Provides full movements, including u-turns (i.e. does not require turn bays)
    - Can easily accommodate traffic if parcel west of interchange is developed (Potential DelDOT Maintenance Facility / Park and Ride Facility)
    - Typically reduces speeds and eliminates left turn and right angle conflicts, improving safety (less accidents, especially fatalities)
    - Generally less expensive/more flexible for traffic growth
    - More convenient for drivers during off-peak travel periods
    - Will not require traffic signal maintenance (i.e. detection, timing plans)
  - **Disadvantages:**
    - None identified

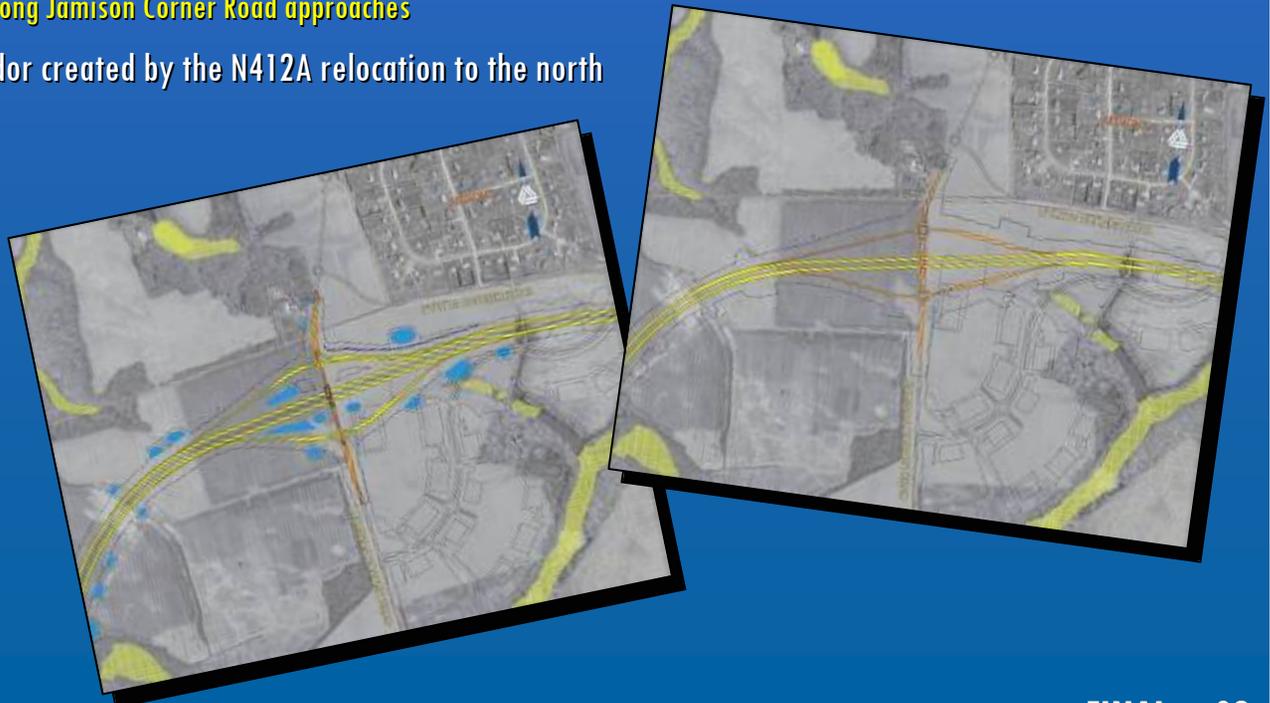




## Design Section 1: *East of NSRR to SR 1, south of the C&D Canal*

### *Potential Refinement*

- Provide Diamond Interchange with roundabouts rather than stop-controlled intersections at Jamison Corner Road Interchange
  - **Advantages:**
    - Provides continuous flow at ramp intersections, reducing delays to traveling public
    - Reduces the width of the Jamison Corner Road bridge over US 301, reducing costs
      - Roundabouts allow for a two-lane typical section, while stop-controlled intersections require a three-lane typical section to accommodate left turn lanes
    - Roundabouts typically reduce speeds and eliminate left-turn and right-angle conflicts, improving safety
      - Reduce speeds along Jamison Corner Road approaches
    - Continues roundabout corridor created by the N412A relocation to the north
  - **Disadvantages:**
    - None identified





## Design Section 1: *East of NSRR to SR 1, south of the C&D Canal*

- **ROD/Selected Alternative**

- The FEIS/ROD alignment moved the existing toll-free ramp/SR 1 merger location 2650 feet south along SR1 to accommodate the proposed bridge abutment for the US 301 Northbound flyover to Northbound SR1. The toll-free ramp intersects US 13 adjacent to this location, with a configuration similar to the existing configuration. The existing Port Penn Road alignment was not altered in the Record of Decision.





## Design Section 1: *East of NSRR to SR 1, south of the C&D Canal*

### *Potential Refinement*

- Relocate the toll-free ramp intersection with US 13 1150 feet south of the Record of Decision (ROD) alternative, and relocate Port Penn Road to a single signalized intersection with the toll-free ramp and US 13

#### — Advantages:

- Toll-free ramp traffic travel speeds will be closer to SR-1 travel speeds at the end of the toll-free ramp
- The Northbound US 13 to toll-free ramp movement will remain a single left to meter traffic entering SR-1, which will facilitate merging traffic
- Northbound US 13 to toll-free ramp traffic will have significant room to back up before backing through another intersection (Hyetts Corner Road - 6600' to the south)
- A portion of the left-turn lane may be separated from the thru-US 13 traffic by barrier, in order to move stopped traffic away from high-speed traffic and eliminate traffic cutting into line, thus increasing safety
- A single signal on US 13 for Port Penn Road and the toll-free ramp is expected to decrease overall delay
- Port Penn Road traffic seeking to enter the toll-free ramp would not have to enter the Northbound US 13 left-turn queue, which would otherwise extend past Port Penn Road at times
- Port Penn Road will intersect US 13 at a 90-degree angle, which increases visibility of oncoming traffic for vehicles at the intersection
- Reduces traffic on Old Port Penn Road, in front of residences

#### — Disadvantages:

- Makes access to/from Ches-Del Restaurant more difficult
- Impacts Frightland property parking area
- Removes existing trees (0.67 acres) between US 13 and SR-1
- \$2.5M to \$3.5M more expensive than ROD alternative
- Discussions with Agencies are on-going, in order to determine their input



Cultural Resource Studies On-going



# Cost Estimates and Funding Options

- The current cost estimate, developed in 2007 for the Selected Alternative, Green North + Spur Road, is \$704 million (inflated \$'s)
- The project goal has been, and continues to be, to fund the US 301 project primarily with bonds supported by US 301 toll revenues, thus attempting to minimize the project's impact on the State Transportation Trust Fund (TTF) and the Statewide Transportation Program.
- In November 2007, DeIDOT prepared a Financial Analysis that supported this approach and concluded that toll revenue bonds were a feasible funding option.
  - **The Federal Highway Administration (FHWA) conducted an independent review of DeIDOT's Cost Estimates and Financial Analysis, and determined that the estimates, analysis and results were reasonable.**
- Economic conditions have changed dramatically in the last year, thus DeIDOT is in the process of updating all project cost estimates and will subsequently be updating the Financial Analysis of funding options for the new US 301 Project. Based on the potential refinements to the project that have been developed over the past year, it is anticipated that the estimated project cost will increase.
- The updated Cost Estimates and Financial Analysis will include:
  - **DeIDOT's recommendations for the project , after considering comments from the Public Workshop on the Spur Road Alternatives, Spur Road Study Options, and Potential Refinements to New US 301**
  - **Anticipated Bond Market conditions, etc.**



# Path Forward

2008 : The General Assembly has authorized FY 2009 funding for detailed engineering and initiating property acquisition for the New US 301 Mainline

*Note: Final design and right-of-way acquisition activities are NOT underway on the Spur Road*

2008-2011: Design and right-of-way acquisition for the New US 301 Mainline will likely require 4 years, contingent upon funding availability

2011: Construction for the New US 301 Mainline begins, if full funding is available and concurrence is received from Legislature, under ideal conditions

*Notes: The estimated construction period is 4 to 5 years.*

*Toll Revenues are proposed to fund a significant portion of the cost of the Project.*

*recommendation to  
segment of the project (required*

*A schedule for the Spur Road cannot be determined until DeLDOT makes a  
the General Assembly on how to proceed with the Spur Road  
by May 1, 2009).*



# Ask Questions – Provide Input

- Please feel free to ask questions of the Project Team members.
- Please complete the Comment Form tonight. You may also visit the project website ([www.us301.deldot.gov](http://www.us301.deldot.gov)) and complete the Comment Form on-line.

**Please provide your comments to us by April 3, 2009.**



# Comment Form

## US 301 Project Development Public Workshop Comment Form

DELAWARE DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
US ARMY CORPS OF ENGINEERS

### QUESTIONS AND/OR COMMENTS

Public Workshop  
Monday, March 23, 2009  
3:00 PM to 8:00 PM  
Middletown Fire Hall

I / We wish to comment or inquire about the following aspects of this project: \_\_\_\_\_

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Your comments and opinions are very important. All information provided on this form will be carefully considered by DeDOT. Under state law, this form is public domain, and if requested, a copy of it must be provided to the media or public. Thank you for your participation and contributions to this important transportation project.

Please ADD my / our name(s) to the Mailing List       Please DELETE my / our name(s) from the Mailing List

**OPTIONAL:** Please provide your information:

Name: \_\_\_\_\_

Community / Organization: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: 866-485-9988 (toll free)      Fax: 302-739-2092      Email: dot-public-relations@state.de.us  
www.deidot.gov



# Stay Informed and Up-to-Date

- We encourage all residents, property owners, business owners and those who travel the US 301 Corridor to stay informed and make their views known. There are several ways to do this:
  - Comment Forms provided at Workshop
  - Have your name added to the Project Mailing List (on bottom of Comment Form)
  - Emailing to [dotpr@state.de.us](mailto:dotpr@state.de.us)
  - Mailing to DeIDOT Public Relations, PO Box 778, Dover, Delaware 19903
- Visit the Project website for all the latest information ([www.us301.deldot.gov](http://www.us301.deldot.gov))

**Thank you**

**for your interest and  
participation!**