



TRIGGERS FOR CONSTRUCTION OF THE US 301 SPUR ROAD

March 17, 2010

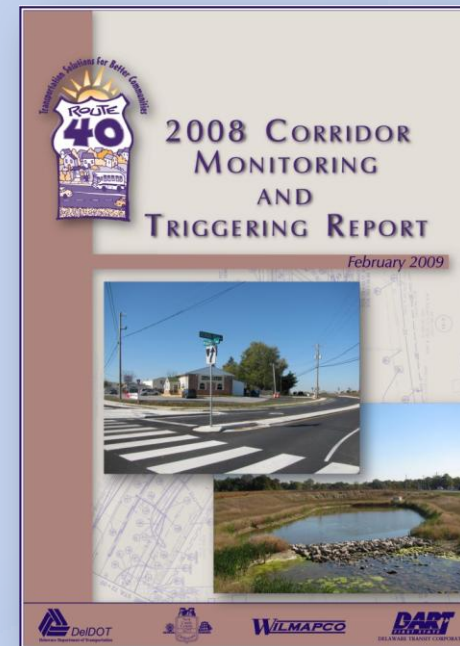


Wilmington Area
Planning Council



Delaware Department
of Transportation

- **Purpose:** To determine the appropriate time to construct the US 301 Spur Road based on existing and anticipated traffic conditions in the surrounding area.
- **Previous examples of triggering programs in Delaware:**
 - US 40 Corridor Improvements
 - Tyler McConnell Bridge



- Triggers for the US 301 Spur construction should be based on a collective understanding of traffic and safety characteristics and conditions of the surrounding regional roadway network.
- Triggers should be selected that focus on the US 301 Project's Purpose and Need:
 - Reduce Traffic Congestion
 - Improve Safety
 - Manage Truck Traffic

- **US 301 Spur Road Triggering Program based on three elements:**
 - **An annual Monitoring Program**
 - **Report developed annually by DeIDOT in cooperation with WILMAPCO, New Castle County and local municipalities**
 - **Results of Monitoring Program summarized in report and posted on the internet**
 - **Results of Monitoring Program presented annually at February WILMAPCO meeting**
 - **Begin annual monitoring of traffic characteristics and conditions in Fall 2010**
 - **Additional public involvement at key decision points, such as when the Secretary of Transportation decides to recommend that construction of the Spur should begin.**
 - **An annual report to the General Assembly in April**
- **When existing and anticipated traffic conditions indicate the need, the Report will provide a recommendation for the appropriate time to construct the US 301 Spur Road**

● US 301 Spur – Key Decision Considerations

- Decision of when to build the US 301 Spur would not be rigidly tied to specific quantitative thresholds
- Rather, it would be based on a collective understanding of traffic flow characteristics and conditions, including congestion levels, safety data and land use / development activity
 - For Example, if 3 intersections along existing US 301 were approaching the UDC LOS thresholds, ADT volumes on key local roads were growing faster than the projections, and a segment of roadway had a crash rate higher than the statewide average, the Secretary of Transportation may decide to recommend that construction of the Spur Road should begin, as part of the report to the General Assembly.

- **The proposed annual monitoring and reporting program described on the remaining slides was developed to cost-effectively measure traffic flow conditions pertaining to the Purpose and Need for the US 301 Spur**

- **As a new north-south roadway connecting southern Middletown and points south with the Summit Bridge and points north, the US 301 Spur is projected to:**
 - **Reduce traffic and congestion on parallel north-south roads including existing US 301 and Choptank Road**

 - **Reduce the likelihood of crashes on Existing US 301 and other local roads in the region, and provide an alternative travel route when major incidents occur on other north-south roads**

 - **Manage truck traffic by eliminating conflicts with local traffic by providing a new roadway without intersections**

- Therefore, the proposed annual monitoring and reporting program is based on the following :
 - Collecting traffic volumes on key roadways
 - To track total traffic volumes over time
 - To track truck volumes over time
 - To compare measured traffic with projected traffic
 - Collecting intersection volumes and delay
 - To calculate signalized and unsignalized intersection Levels of Service (congestion)
 - Collecting crash data
 - To track crash records of key roads over time
 - To identify locations with crash rates exceeding the statewide average for similar roads
 - Collecting data on land use / development activity
 - To track the pace of development in the Middletown area
 - To monitor the magnitude of potential near-term (within 5 years) development in the Middletown region
 - Reporting on regional activity that may affect the timing of the US 301 Spur, such as BRAC

DATA TO BE COLLECTED

● Key Roadway Volumes (Average Daily Traffic)

- Choptank Road, North of Churchtown Road
- Roth Bridge (SR 1)

Consideration should also be given to other routes to north (ex: SR 72 and SR 273) that could potentially serve north-south traffic as an alternative to the US 301 Spur

- St. George's Bridge (US 13)
- Summit Bridge (US 301)
- Existing US 301, North of Mt. Pleasant
- Existing US 301, between Armstrong Corner Road and Mt. Pleasant
- New US 301 Bypass north of Jamison Corner Road



NOTE: All Traffic Data to be Collected Annually During the 1st Two Weeks of October

PROPOSED REPORTING METHODS

- **Average Daily Traffic (ADT) Volumes**
 - Track traffic volumes over time
 - Compare existing and projected traffic volumes
 - Monitor pace of traffic growth
 - Compare existing traffic volumes to estimated daily capacities of key roadways



PROPOSED REPORTING METHODS

● Truck Volumes

- Track volume of trucks over time at specific locations
- Compare to existing truck traffic volumes



DATA TO BE COLLECTED

- **Peak Hour Signalized Intersection Volumes**
- ★ US 301 / Old Summit Bridge Road
- ★ US 301 / SR 896 (Boyds Corner Road)
- ★ US 301 / Armstrong Corner Road
- ★ US 301 / SR 71 (Broad Street)
- ★ US 301 / SR 299



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PROPOSED REPORTING METHODS

● Peak Hour Signalized Intersection Levels of Service (LOS)

- Tied to UDC Requirements
 - LOS D/E Border in Sewer Service Areas (same as US 40)
- Analysis Based on Highway Capacity Manual Methodology

Example:

	2010	2011	2012	2013	2014	2015	2016
US 301 at Old Summit Bridge	B	B	C	C	D	D	E
US 301 at SR 896							
US 301 at Armstrong Corner Rd							
US 301 at SR 71							
US 301 at SR 299							



DATA TO BE COLLECTED

- **Peak Hour Unsignalized Intersection Delay**
 - ❖ Existing US 301 @ Old Schoolhouse Road
 - ❖ Existing US 301 @ Keenan Auto Body
 - ❖ Choptank Road @ Back Creek Subdivision



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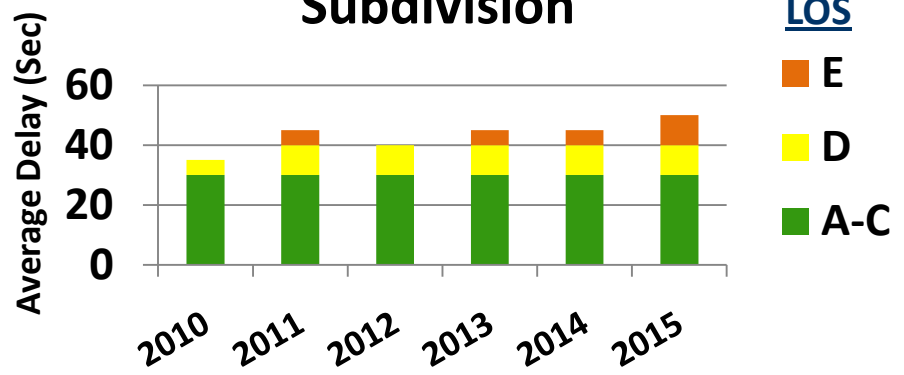
PROPOSED REPORTING METHODS

Unsignalized Intersection Delay

- Report average delay for sample of left-turning vehicles from unsignalized streets and driveways
- Tied to UDC Requirements
 - LOS C/D Border outside Sewer Service Areas
 - LOS D/E Border in Sewer Service Areas

Example:

Choptank Road @ Backcreek Subdivision





● Crash Data – Data to be Collected

- Crash totals and rates for two key roadways
 - Choptank Road
 - Existing US 301
- Statewide Average Crash Rates for Similar Roadways
- Locations on DelDOT's Highway Safety Improvement Program (HSIP) list

● Crash Data – Proposed Reporting Methods

- Summarize and Compare crash data annually for key roadway segments
- Compare crash rates to statewide averages

● Land Use / Development Activity

- DeIDOT, WILMAPCO, New Castle County and local municipalities will provide comments regarding existing and anticipated near-term (5 years or less) land use and development activity in Southern New Castle County to the Secretary of Transportation to be included in the annual report to the General Assembly.