See previous page for left side of display

SPUR ROAD STUDIES

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

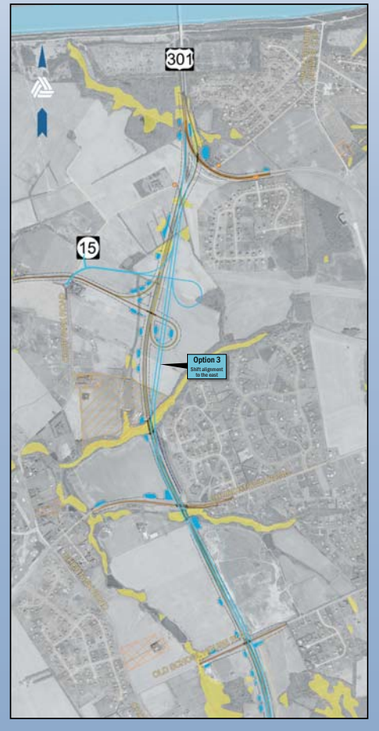
Advantages:

- 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

See Impact Matrix Handout for comparison of environmental impacts of Alignment Option 3 (Interchange Options A & B), Alignment Options 1 and 2, and the FEIS/ROD Alignment.



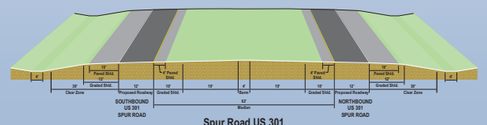
Spur Road Median Width

ROD Commitments:

"Undertake an evaluation of the Spur Road median width." (Commitment C-48, ROD Attachment B, Page 5)

FEIS Typical Section

- The FEIS typical section consists of a 62' wide median, which would allow for future widening to the inside. The resulting median would be 38' wide.



Spur Road US 301
FEIS Typical Section - 62' Median

Typical Section Option

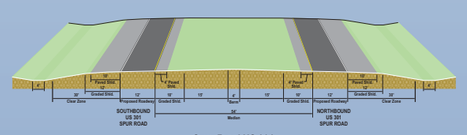
- An alternative typical section has been developed, consisting of a 54' wide median, which would allow for future widening to the inside. The resulting median would be 30' wide, which is the minimum desirable width.

DelDOT Recommendation:

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

Advantages:

- Less impacts to the community and natural resources as compared to the FEIS/ROD typical section
- Reduced ROW and less embankment lowers project costs



Spur Road US 301
Typical Section Option - 54' Median
(DelDOT's Recommendation)

Spur Road Design Speed

ROD Commitments:

Undertake a study of the Spur Road design speed

What is Design Speed?

Design speed is selected to set the geometric design features of a roadway. The determination of design speed takes into account factors such as topography, anticipated operating speed, adjacent land use and the functional classification of the roadway. Selected design speed must closely relate to anticipated operating speed, so that safety, mobility and efficiency within the constraints of environmental quality, economics, aesthetics and social impacts can be achieved.

Why is Design Speed important?

Drivers adjust their speeds to their perception of the physical limitations of the roadway and its traffic. Design speed is selected to be consistent with the speeds that drivers are likely to perform on a given roadway. A safe roadway's Posted Speed is related to design speed.

How is Design Speed selected?

A number of factors were taken into consideration to select the design speed for the Spur Road.

Design speed must take into account a project's Purpose and Need. The 301 project's Purpose and Need is to:

- Manage traffic by separating US 301 through traffic, particularly truck traffic, from local traffic.
- Improve safety in the project area.
- Reduce existing and projected roadway congestion in the project area

The Spur Road alignment was developed with the intent to minimize impacts to the environment and surrounding community.

The existing topography dictates a road alignment that is relatively straight and flat, which promotes higher operating speeds.

During the project development stage, communities along the proposed Spur Road specifically requested that multiple points of access and intersections be minimized, since they felt that this type of roadway would likely promote development. A limited access facility was proposed to address project Purpose and Need and meet the needs of the community. Limited access facilities promote higher operating speeds and are assigned higher design speeds.

Recommended Design Speed

- DelDOT 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.