

ALTERNATIVE RETAINED FOR DETAILED EVALUATION - PURPLE + SPUR ALTERNATIVE

301 US 301 Project Development

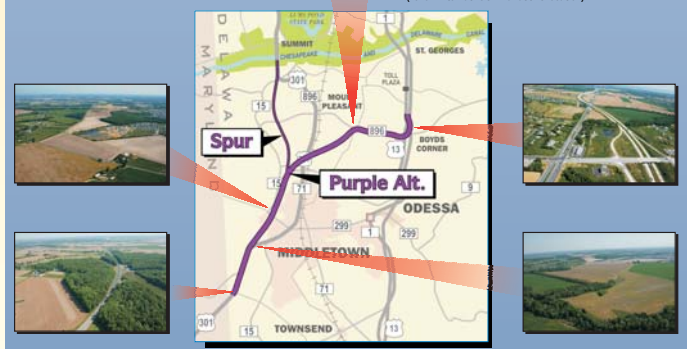
DESCRIPTION OF THE PURPLE + SPUR ALTERNATIVE 4 LANES - LIMITED ACCESS - ALONG EXISTING BOYDS CORNER ROAD & ON NEW LOCATION

The Purple+Spur Alternative would be a four-lane, limited access tolled highway constructed on new location, generally north/south, from the Delaware/Maryland state line to south of Armstrong Corner Road, north of Middletown. The new alignment would continue northeast to SR 896 west of Jamison Corner Road and Cedar Lane Road, where the alignment would parallel existing Boyds Corner Road (SR 896) and tie into SR 1 just north of the SR 1/Boys Corner Road interchange and south of the existing Biddies Corner Toll Plaza. A two-lane, limited access spur roadway would extend from north of Armstrong Corner Road to just south of the Summit Bridge, with a diamond interchange (Option 1) at the Spur/SR 15/SR 896.

US 301 at Cedar Lane Middle & Elementary Schools
(Looking east along Boyds Corner Road)



Existing Condition Rendering of PURPLE + SPUR Alternative (Option 1)
(Yellow Alternative similar at this location)



INTERCHANGE OPTIONS IN ARMSTRONG CORNER ROAD AREA

Option 1 Description

- Provides diamond interchange between new US 301 and Armstrong Corner Road
- Lower wetland impacts than Option 2 and 3
- Utilizes existing Armstrong Corner Road alignment (reduces costs)
- Located farther away from Springmill community than Options 2 and 3
- Does not directly impact any historic properties - farthest away from historic properties
- Uses proposed signal at Armstrong Corner Road for local access from existing US 301 to new US 301 (minimizes the number of traffic signals on existing US 301)
- Provides greatest spacing between signalized intersections on existing US 301
- Reduces total ROW impacts compared to Option 2
- Mainline goes under Armstrong Corner Road, so requires fewer bridge structures than Option 2



PURPLE + SPUR and GREEN + SPUR

Advantages

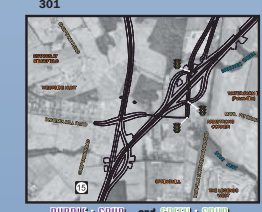
- Lower wetland impacts than Option 2 and 3
- Utilizes existing Armstrong Corner Road alignment (reduces costs)
- Located farther away from Springmill community than Options 2 and 3
- Does not directly impact any historic properties - farthest away from historic properties
- Uses proposed signal at Armstrong Corner Road for local access from existing US 301 to new US 301 (minimizes the number of traffic signals on existing US 301)
- Provides greatest spacing between signalized intersections on existing US 301
- Reduces total ROW impacts compared to Option 2
- Mainline goes under Armstrong Corner Road, so requires fewer bridge structures than Option 2

Disadvantages

- Requires acquisition of Middletown Baptist Church - impacts both church buildings and parking lot
- Provides ramp spacing between Spur and new US 301/Armstrong Corner Road that barely meets minimum design standards
- Does not provide direct tie between Armstrong Corner Road and Bohemia Mills Road
- Locates new US 301 interchange on local road (Armstrong Corner) rather than arterial (existing US 301)
- Highest Forestland impacts
- Highest Habitat area impacts
- Impacts on Midland Farms Community

Option 2 Description

- Provides diamond interchange between new US 301 and relocated existing US 301
- Less wetland impacts than Option 3
- Improves spacing between Spur interchange and new US 301/relocated existing US 301 interchange
- Avoids impacts to Middletown Baptist Church buildings, but impacts a portion of the church parking area
- Provides direct connection between Armstrong Corner Road and Bohemia Mills Road
- Locates new US 301 interchange on arterial (existing US 301) rather than local road (Armstrong Corner Road)
- Does not directly impact any historic properties



PURPLE + SPUR and GREEN + SPUR

Advantages

- Less wetland impacts than Option 3
- Improves spacing between Spur interchange and new US 301/relocated existing US 301 interchange
- Avoids impacts to Middletown Baptist Church buildings, but impacts a portion of the church parking area
- Provides direct connection between Armstrong Corner Road and Bohemia Mills Road
- Locates new US 301 interchange on arterial (existing US 301) rather than local road (Armstrong Corner Road)
- Does not directly impact any historic properties

Disadvantages

- Results in greater ROW and relocation impacts along existing US 301 than Option 1 (increased costs)
- Increased construction cost due to additional structures and relocation of existing US 301
- Two additional signals on existing US 301 (in addition to proposed signal at Armstrong Corner) - affects traffic operations on US 301
- Leads to less than desirable spacing of signalized intersections on US 301
- Reduces distance between new US 301 and Springmill (from 1300 to 840 feet)
- Highest Waters of the US impacts
- Impacts on Midland Farms Community

INTERCHANGE OPTIONS IN ARMSTRONG CORNER ROAD AREA

Option 2A (New) Description

- Provides a non-typical interchange with the movements split over several thousand feet. The northbound entrance and exit ramps are located just north of Armstrong Corner Road. The southbound entrance and exit ramps are located just south of existing US 301. The southbound exit ramp is a loop-type ramp.



PURPLE + SPUR and GREEN + SPUR

Advantages

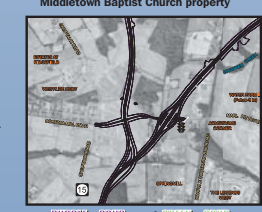
- Avoids direct impacts to Middletown Baptist Church property
- Does not directly affect any historic properties
- Locates new US 301 interchange on an arterial (existing US 301) rather than a local road (Armstrong Corner Road)
- 2 additional signals to be placed on existing US 301, but at a greater spacing than Option 2
- Do not have to relocate existing US 301, so decreased construction and right-of-way cost as compared to Option 2
- Easier access to existing southbound US 301 from the north (right-hand turn) as compared to Option 2 (left-hand turn)

Disadvantages

- Not a traditional type interchange
- Wider bridge needed over existing US 301 because of deceleration lane for loop
- May have to add turn lanes on existing US 301 for ramps and loops
- Slightly more difficult to access proposed northbound US 310 from south (left-hand turn) as compared to Option 2 (right-hand turn)
- Decreases distance between the interchange ramps and Post and Rail Farms Community
- Impacts on Midland Farms Community

Option 3 Description

- Provides diamond interchange between the new US 301 and Armstrong Corner Road (similar to Option 1), but alignment shifted slightly to southeast to avoid Middletown Baptist Church property
- Lower Waters of the US and Species Habitat impacts than Options 1&2
- Lower DNREC Sub-Aqueous Lands impacts than Option 2
- Lower Forest impacts than Options 1&2
- Increases distance from new US 301 to Post and Rail Farms community
- Avoids direct impacts to Middletown Baptist Church property
- Uses proposed signal at Armstrong Corner Road for local access from existing US 301 to new US 301 (minimizes number of signals on existing US 301)
- Does not require additional traffic signals on existing US 301
- Provides direct connection between Armstrong Corner Road and Bohemia Mills Road
- Reduces acres of property required to 203 acres (214 and 281 acres for Options 1 and 2 respectively)
- Does not directly affect any historic properties



PURPLE + SPUR and GREEN + SPUR

Advantages

- Lower Waters of the US and Species Habitat impacts than Options 1&2
- Lower DNREC Sub-Aqueous Lands impacts than Option 2
- Lower Forest impacts than Options 1&2
- Increases distance from new US 301 to Post and Rail Farms community
- Avoids direct impacts to Middletown Baptist Church property
- Uses proposed signal at Armstrong Corner Road for local access from existing US 301 to new US 301 (minimizes number of signals on existing US 301)
- Does not require additional traffic signals on existing US 301
- Provides direct connection between Armstrong Corner Road and Bohemia Mills Road
- Reduces acres of property required to 203 acres (214 and 281 acres for Options 1 and 2 respectively)
- Does not directly affect any historic properties

Disadvantages

- Greater wetland impacts than Options 1&2 (9.6 acres verses 6.0 and 7.8 acres for Options 1&2, respectively)
- Impacts previously undisturbed, low quality wetland NW of Springmill
- Reduces distance between new US 301 and Springmill Community to 600 feet (1300 and 840 feet for Options 1&2, respectively)
- Locates new US 301 interchange on local road (Armstrong Corner Road) rather than arterial (existing US 301)
- Reduces distance between new US 301 and the Armstrong Walker House historic site to 500 feet (700 and 1000 feet for Options 1 and 2, respectively)
- Middletown Baptist Church buildings are located 300 feet from new ramp and 550 feet from new US 301 mainline
- Impacts on Midland Farms Community