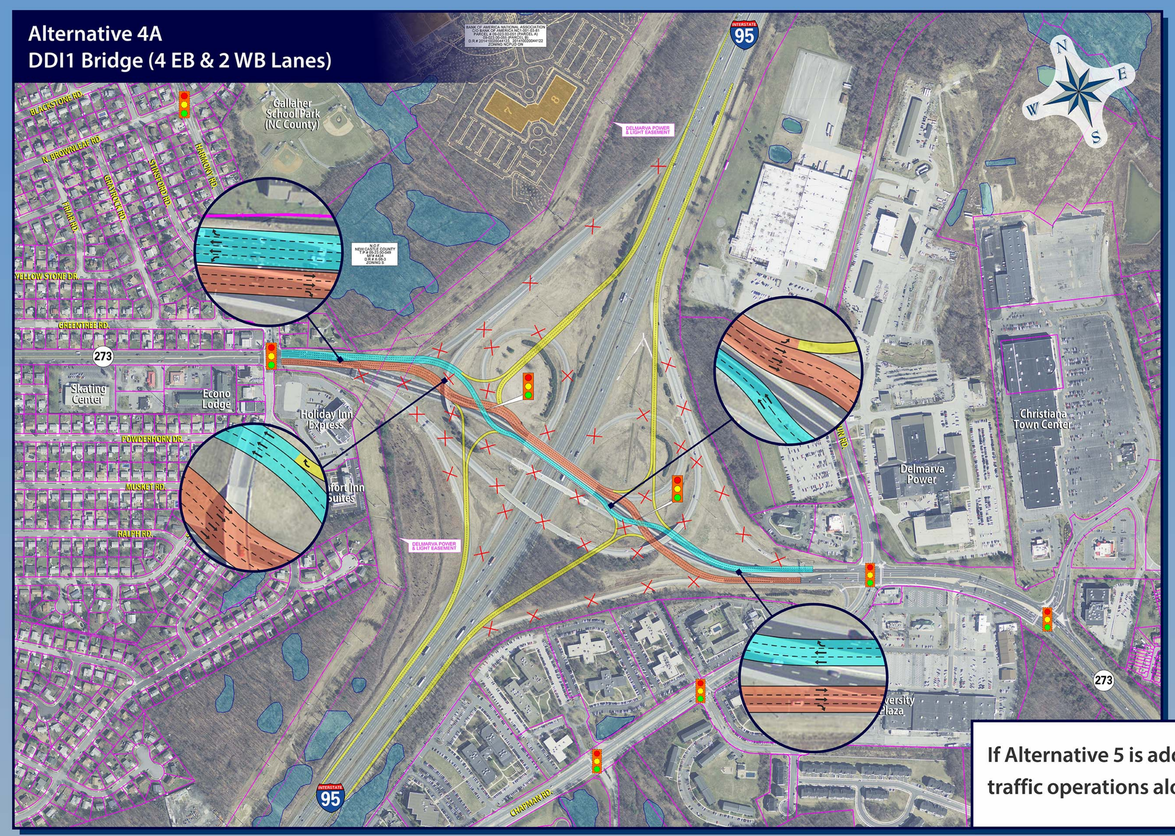
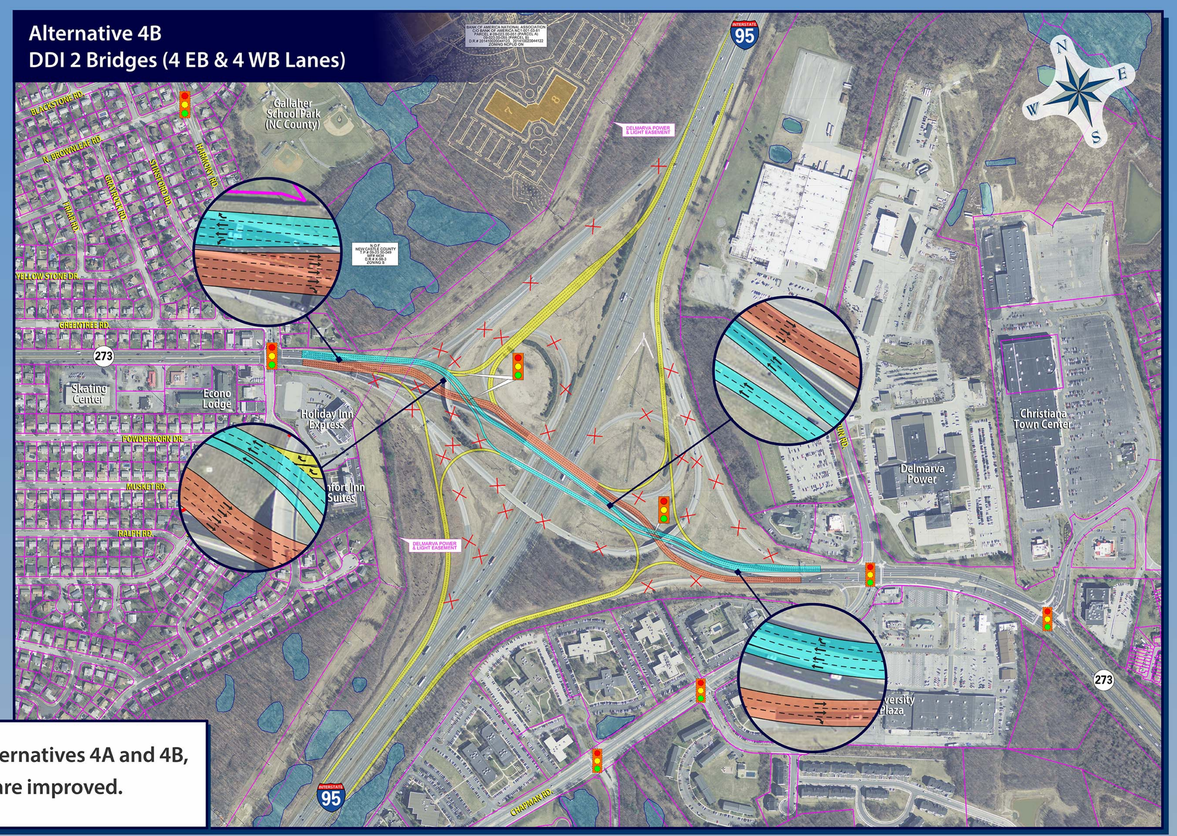
Alternatives 4A and 4B Diverging Diamond Interchange





If Alternative 5 is added with Alternatives 4A and 4B, traffic operations along SR 273 are improved.

4A Advantages

- Diverging diamond interchange operation is highly compatible with primary traffic movements
- Moves SB I-95 ramp entrance to WB 273 further east of the Harmony Road intersection
- Provides a new WB 273 traffic signal to alternate mainline and ramp traffic and eliminate weave at Harmony Road
- Improves SB I-95 ramp access to left turn at N. Gerald Drive
- Allows lengthening of WB 273 right turn lane at Harmony Road
- Removes NB I-95 to WB 273 loop ramp, thus eliminating weave on bridge between ramps
- Provides three continuous EB 273 lanes between Harmony Road and Chapman Road
- Provides a new EB 273 traffic signal to alternate mainline and NB I-95 ramp traffic and eliminate weave at Chapman Road
- Significantly lengthens the 'right turn only' lane approaching Chapman Road
- Improves NB I-95 ramp access to left turn at Eagle Run Road
- Introduces potential for a sidewalk crossing of I-95 to provide missing pedestrian connection
- Provides required number of SR 273 lanes on one existing bridge (4 EB lanes, 2 WB lanes)
- Reduces overall interchange footprint and number of DelDOT maintained bridges

4A Disadvantages

- Adds two additional SR 273 signalized intersections
- Significant impact to traffic during construction
- Introduces driver learning-curve with maneuvering through the diverging diamond interchange
- Impacts to a forest stand located between I-95 and the exit ramp to WB 273
- Possible wetland impacts from modification of exit lane from SB I-95

4B Advantages

- Diverging diamond interchange operations is highly compatible with primary traffic movements
- Moves SB I-95 ramp entrance to WB 273 further east of the Harmony Road intersection
- Provides a new WB 273 traffic signal to alternate mainline and ramp traffic and eliminate weave at Harmony Road
- Improves SB I-95 ramp access to left turn at Gerald Drive
- Allows lengthening of WB 273 right turn lane at Harmony Road
- Removes NB I-95 to WB 273 loop ramp, thus eliminating weave on bridge between ramps
- Provides three continuous EB 273 lanes between Harmony Road and Chapman Road
- Provides a new EB 273 traffic signal to alternate mainline and NB I-95 ramp traffic and eliminate weave at Chapman Road
- Significantly lengthens the 'right turn only' lane approaching Chapman Road
- Improves NB I-95 ramp access to left turn at Eagle Run Road
- Introduces potential to provide a missing pedestrian connection over I-95
- Provides required number of SR 273 lanes on two existing bridges (4 EB lanes, 4 WB lanes)
- Provides improved interchange level of service when compared to Alternative 4A
- Reduces overall interchange footprint and number of DelDOT maintained bridges

4B Disadvantages

- Adds two additional SR 273 signalized intersections
- Requires signalization of double-right from SB I-95 to WB 273
- Significant impact to traffic during construction
- Introduces driver learning-curve with maneuvering through the diverging diamond interchange
- Introduces greater signing challenges with split WB movements when compared to Alternative 4A
- Possible wetland impacts from modification of exit lane from SB I-95