APPENDIX J:
Diverging Diamond Interchange Presentation

LOOP 202
South Mountain
Freeway

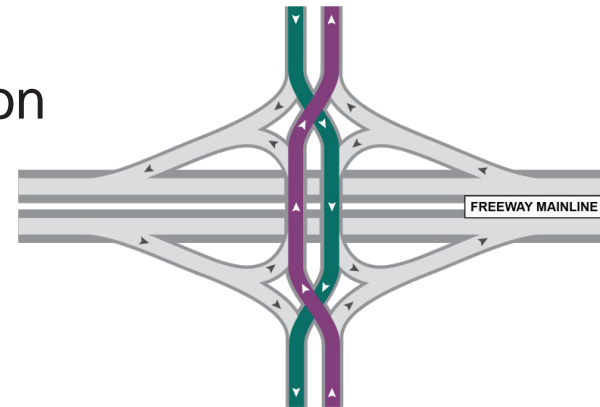CONNECT 202 PARTNERS

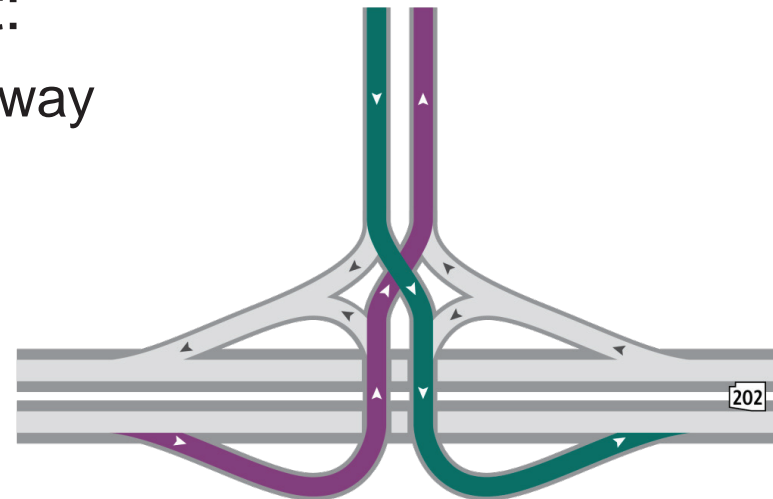# Diverging Diamond Interchange

September 2016

ADOT

Diverging Diamond Interchange (DDI)

- **Drivers going in both directions on the approach road cross to the opposite side on both sides of the bridge at the freeway**

  - Requires traffic on the crossroad overpass (or underpass) to briefly drive on the opposite side of the road

  - Allows for two-phase operation at all signalized intersections within the interchange

FREEWAY MAINLINE

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Diverging Diamond Interchange (DDI)

- **Three half-DDIs are planned for the South Mountain Freeway at:**
  - ☐ Desert Foothills Parkway
  - ☐ 17th Avenue

- **Full configuration not needed**
  - ☐ No connections to the south

Graphic representation similar to configuration planned for Desert Foothills Parkway. The freeway mainline will go over the crossroad at 17th Avenue.

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Benefits of the DDI

- Improves safety
  - Eliminates long left turns where drivers on the right side of the road must clear opposing traffic
  - Reduces the number of conflict points
  - Recent studies of DDIs nationwide by University of Missouri indicate:
    - Overall crashes decreased by more than 50 percent at DDI locations
    - Fatal and injury crashes decreased by more than 70 percent

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Benefits of the DDI (continued)

- ▪ **Improves efficiency**
  - ☐ Provides more green-light time
    - ☐ Motorists wait through only two traffic signal intervals rather than the six or more found in other interchange designs
  - ☐ Increases capacity of an overpass or underpass by removing the need for turn lanes required for other interchange types

- ▪ **Minimizes right of way footprint**
  - ☐ Reduces the number of lanes needed on the cross road

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New Concept for Metro Phoenix

- Local drivers may be unfamiliar with the DDI configuration and merging maneuvers

- Signage and pavement markings will be used to alert drivers to the change in traffic flow

Questions and Comments

- Direct questions to a Project team member

- Submit your input on the comment form and return it to the sign-in table

Your input is appreciated!

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Freeway