INTERSTATE 10 AND HOUGHTON ROAD

TRAFFIC INTERCHANGE RECONSTRUCTION

CONSTRUCTION PROJECT OVERVIEW

The Arizona Department of Transportation (ADOT) and the Federal Highway Administration (FHWA) are constructing a new traffic interchange that will replace the existing interchange at Interstate 10 and Houghton Road in Tucson. The new interchange will be the first Diverging Diamond Interchange (DDI) in southern Arizona. It will allow for more efficient flow of traffic and reduce the chances of wrong-way movements onto the interstate. Houghton Road will be widened to three lanes in each direction within the interchange.

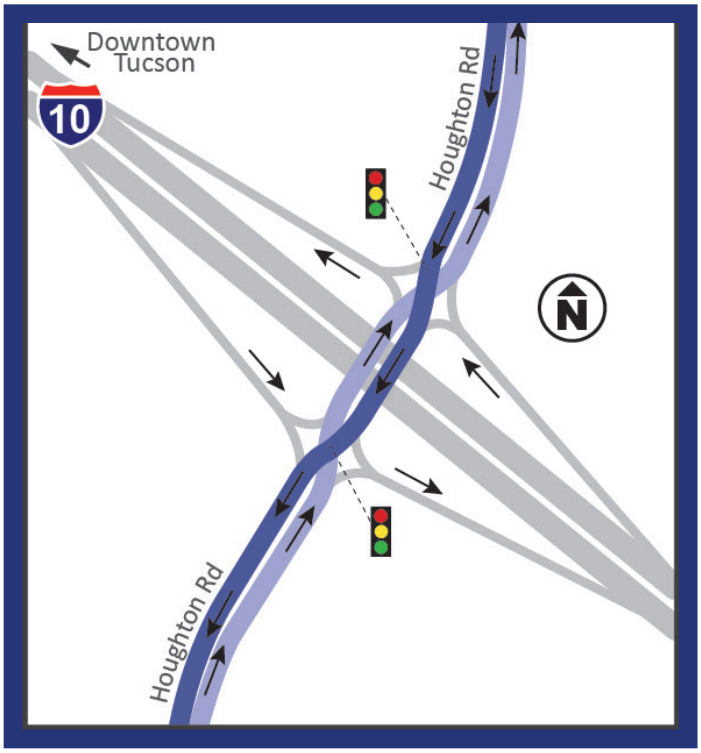
The new bridge will be constructed just west of the existing bridge, allowing Houghton Road and ramps to/from the west (toward downtown Tucson) to remain open throughout the project's duration.

BENEFITS OF THE NEW TRAFFIC INTERCHANGE

- Improving a major traffic connector from southeast Tucson to central and downtown Tucson
- Improving traffic movement on I-10 ramps and Houghton Road, reducing congestion and travel times
- Improving existing ramps and crossroad geometrics and accommodating future potential widening of I-10

TRAFFIC IMPACTS

- Overnight lane reductions and traffic shifts on I-10
- Intermittent overnight closures of Houghton Road
- Westbound I-10 traffic will not be able to exit at Houghton Road and Houghton Road traffic will not be able to enter eastbound I-10 from late August to late November 2020.
- Lane shifts throughout the work zone



ANTICIPATED TIMELINE

- The project is expected to extend from late summer 2020 to late 2021.

STAY INFORMED

Call the ADOT Bilingual Project Information Line at: 1.855.712.8530

Email: JMoerke@azdot.gov

Website: azdot.gov/I10Houghton

- Learn more about Diverging Diamond Interchanges
- Sign up to receive project information and updates by email

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FREQUENTLY ASKED QUESTIONS

Why did ADOT decide to construct a Diverging Diamond Interchange at Houghton Road?

During the pre-design phase, ADOT studied whether a Diverging Diamond Interchange (DDI), a conventional Diamond Interchange, a Single-Point Urban Interchange or Twin Roundabouts would perform best at I-10 and Houghton Road. The DDI was chosen because it: rated the best at handling peak volume turning movements, provides lower intersection delay than the Diamond and Single Point Interchange alternatives, features one of the lowest construction costs of the alternatives considered, and is supported by the agency stakeholders.

Are DDIs safe?

Safety is among the many benefits of a DDI, as they have been shown to reduce the number and severity of collisions while also reducing wrong-way movements. DDIs reduce the number of traffic "conflict points" compared to other interchange designs and, because of reduced speed limits and the angles at which vehicles cross the intersection, the severity of collisions decreases. In a study by the Federal Highway Administration (FHWA), researchers compared the DDI to other interchange designs. The study found that at locations where a DDI is constructed, the interchange experienced a 50-percent reduction in overall collisions and a 60-percent reduction in fatal collisions. DDIs also have safety benefits to the cyclists and pedestrians who travel through them. Pedestrians travel through the center of the DDI in a wide median that is separated from the travel lanes. The crossings are shorter and protected with signals.

How does traffic flow on a DDI?

The Diverging Diamond Interchange operates differently from the interchanges familiar to many motorists in the Tucson area. The major difference is that, as motorists approach the overpass from each direction, they are directed to the opposite side of the road at signalized intersections. While it may appear confusing when viewing maps and illustrations, road markings make it feel quite intuitive. The completed interchange will have pavement striping, curbed islands and medians, traffic signals, and signing to provide a simple and efficient driving experience. When traveling through a DDI, the striping and signage are very similar to driving on a one-way road that happens to cross another one-way road and permits free flow left-turn movements onto the ramps without crossing opposing traffic or waiting for a traffic signal.

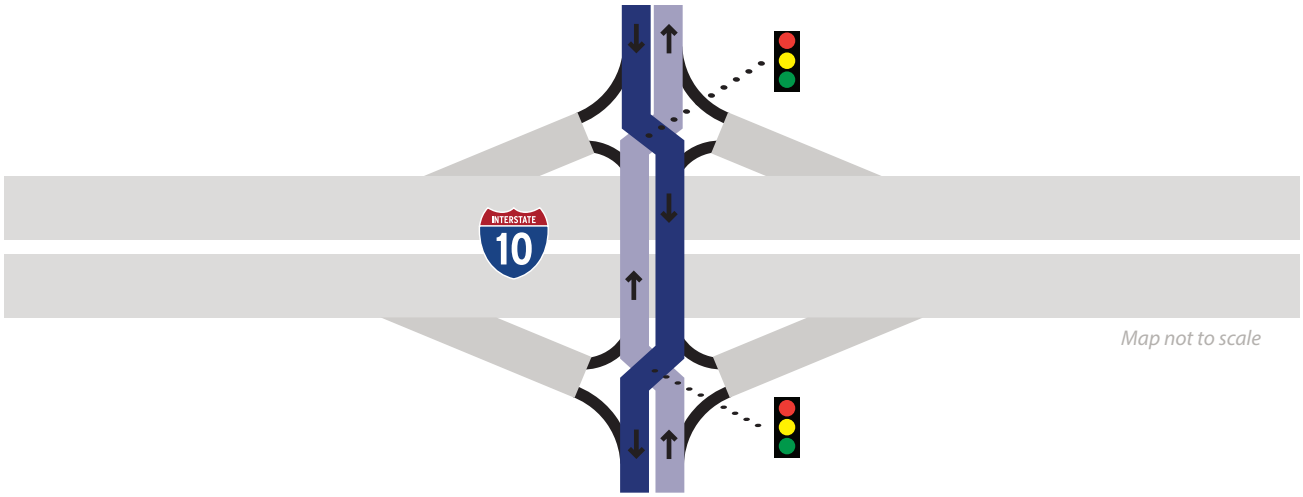
What are the primary benefits of the DDI at I-10 and Houghton Road?

The DDI has been shown nationally to reduce the number and severity of crashes and, because of its geometry, can reduce the possibility of wrong-way movements by motorists. The new interchange also will reduce traffic congestion and shorten delays experienced at the interchange, where consistent growth and development are expected to continue.

Where else in the United States are DDIs being used?

As of May 2020, more than 115 DDIs are in use across the United States, and many more are planned.

In Arizona, two half DDIs have been constructed on the South Mountain Freeway, and a full DDI is under construction at I-17 and Happy Valley Road in Phoenix.



Map not to scale