Frequently Asked Questions

Q.) What is a Diverging Diamond Interchange (DDI)?

A.) The DDI is based on a standard diamond interchange with a shift in the traffic within the interchange to safely and efficiently accommodate high volume left turn movements. Within the interchange, traffic briefly drives on the left side of the road to allow left turn movements to occur without crossing oncoming traffic or stopping. A DDI has fewer conflict points, reducing the opportunities for crashes, and there is greater capacity for vehicles at the interchange.

Q.) How does a DDI work?

A.) DDIs allow free-flow left turns for motorists, meaning vehicles taking a left turn don't cross opposing traffic. With DDI design, opposing lanes of traffic cross over at traffic signals at the ends of the interchange. When crossing the bridge, oncoming traffic is on the right side of the road, accommodating left turn movements without conflict from oncoming traffic. This type of interchange works well in areas with significant traffic levels combined with a high volume of left hand turn movements. Traffic signals, signs, pavement markings and concrete barriers guide motorists through the interchange.

Q.) Why is a Diverging Diamond Interchange being considered for the SR 72/SR 1 Interchange?

A.) SR 72 (Wrangle Hill Road) has a significant amount of traffic making left hand turns onto SR 1. During the morning peak hour, an average of 585 vehicles make a left turn onto northbound SR 1. Due to the high volume of left turns onto SR 1, the current diamond interchange design is not efficient at reducing traffic congestion and bottlenecks. The DDI design improves traffic flow by creating a free flow left turn, which also improves other congestion related issues including the amount of vehicles waiting behind a vehicle making a turn, traffic synchronization and bottlenecks.

Q.) What are the advantages of a DDI?

- Safety – Reduces the number of ways vehicles can collide by almost half (14 compared to 26 for a conventional diamond interchange).
- Greater capacity and efficiency – Accommodates more traffic than conventional designs. Drivers make free-flow, left turns on to the Interstate.
- Reduces backup congestion – At intersections where there is a high volume of left turns onto the Interstate, DDIs reduce traffic backups because the free-flow left turns mean vehicles do not have to stop to access the ramp.
- Easy navigation – Guides drivers with overhead signs, pavement marking and traffic signals.
- Low cost—The DDI utilizes the existing structure, therefore it is a relatively low-cost solution. Other options might have required us to widen the existing bridge or construct new ramps, which would have been much more costly.

Q.) Does the DDI accommodate pedestrians and bicyclists?

A.) Yes. The DDI has a designated shared use path and crosswalks that can be used for both pedestrians and bicyclists.

Q.) Can any type of vehicle safely travel through a DDI?

A.) Yes. The design allows for all vehicles to maneuver through the interchange just like any other type of interchange.