

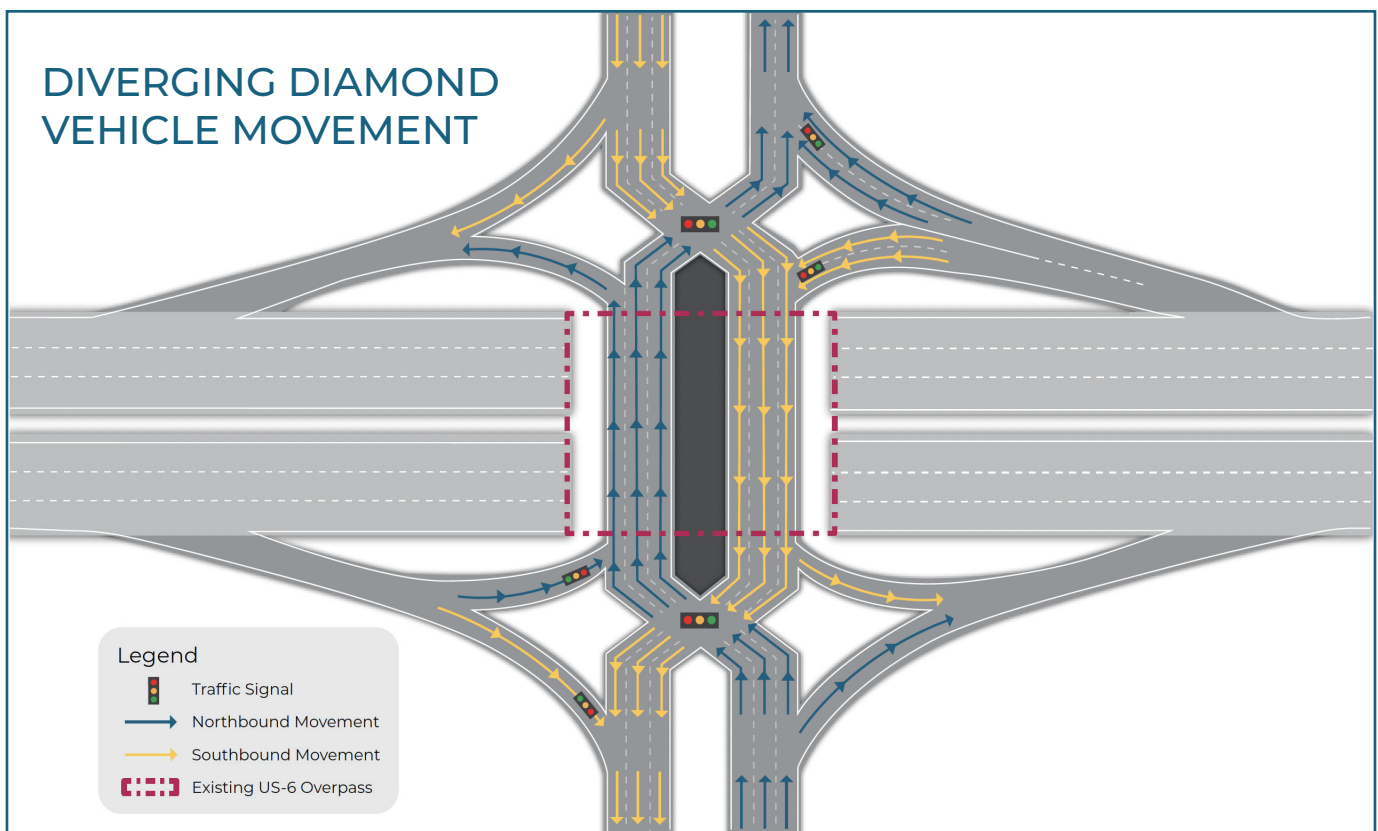
Diverging Diamond Interchange (DDI)

A Diverging Diamond Interchange (DDI) is a modern interchange design where traffic temporarily crosses to the left side of the road to allow direct left turns onto freeway ramps without crossing opposing traffic. It reduces conflict points, improves left-turn capacity, and keeps vehicles moving efficiently through high-volume interchanges.

DDIs are becoming more common across Nebraska and the United States because they have been proven to significantly improve safety and reduce congestion at busy interchanges. Since the first DDI opened in 2009 (in Springfield, Mo.), more than 150 have been built nationwide, demonstrating strong public acceptance and consistent performance.

How does it work?

At a DDI, traffic is guided across the freeway overpass or underpass to the left side of the road at signalized intersections. This allows vehicles to make left turns onto freeway ramps without crossing opposing traffic. Lane markings, signage, and traffic signals direct drivers through the crossover, keeping traffic flowing safely and efficiently.



Why does it work?

A conventional diamond interchange typically has 26 potential vehicle-vehicle conflict points, where left-turning and crossing movements can increase the risk of severe crashes. A DDI reduces these conflict points to 14, which lowers the risk of severe crashes and improves overall safety. Independent studies show that DDIs reduce severe (fatal and injury) crashes by 40-68% and decrease total crashes by 33-48% after conversion. These safety gains come from eliminating the most dangerous movements—left turns across opposing traffic.

Because those high-risk movements are removed, DDIs also improve efficiency. Vehicles move with fewer stops, congestion decreases, and drivers benefit from better sight distances. The design accommodates heavy left-turn volumes without adding lanes.

DDI's also operate with fewer traffic signal phases, which increase the volume of traffic able to move through the interchange and therefore decreases delay.

Proven Safety in Nebraska

The Diverging Diamond Interchange at I-80 & NW 48th Street in Lincoln has demonstrated significant safety improvements since opening in 2016.

75%
reduction in fatal
and serious
injury crashes

14%
reduction in
injury crashes

These results reflect national trends showing that DDIs reduce conflict points, simplify traffic movements, and lower the risk of severe crashes.

Existing DDIs in Nebraska

- **Lincoln:** I-80 & NW 48th Street
(Constructed 2016)
- **Omaha:** US-6 (West Dodge Rd) & 192nd Street (Constructed 2025)

Proposed DDIs

(Based on Metro Area Travel Improvement Study recommendations)

Omaha Area:

- I-80 & N-370
- I-80 & N-50
- I-80 & L Street
- I-680 & Pacific Street
- US-75 & Cornhusker Road

NEBRASKA

Good Life. Great Journey.

DEPARTMENT OF TRANSPORTATION