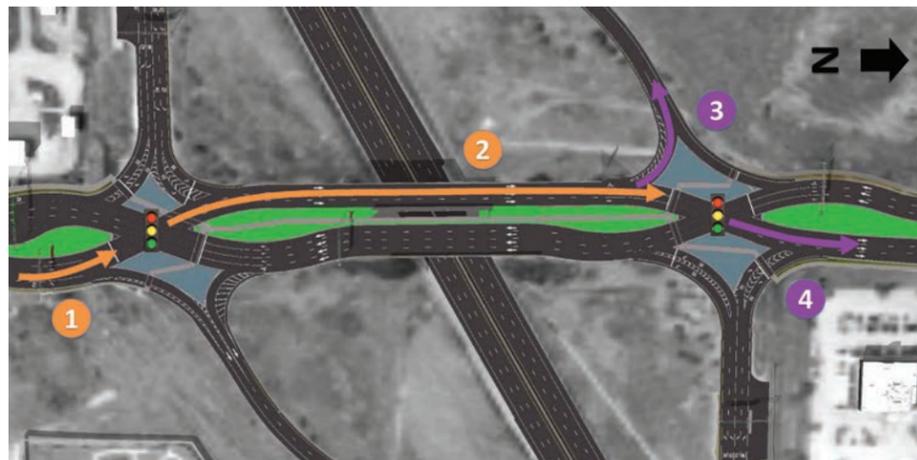
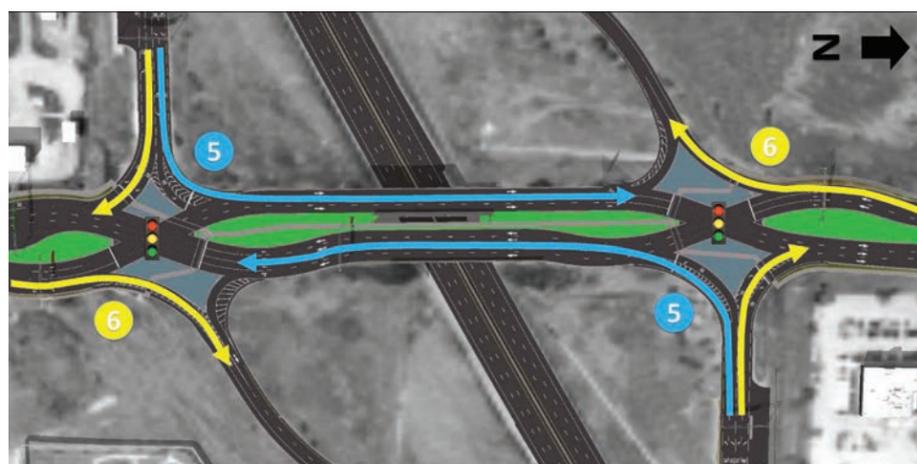


## Diverging Diamond Interchange



*Navigating the Crossover*



*Exiting/Entering I-55*

### How To Drive a DDI

1. Approaching the traffic signal, Weber Road will curve to the left.
2. You will be guided through the intersection and crossed to the left side of the road with opposing traffic now on the right side.
3. Entering onto I-55 will be a "free flow" left turn, meaning no need to stop.
4. Through traffic will pass the next signal and shift back to the right side. Opposing traffic will now be on the left side.
5. Traffic exiting I-55 will be controlled with a traffic signal. Left-turns onto Weber Road will be similar to turning left onto a one-way street.
6. Right turns to/from Weber Road and the I-55 ramp in either direction will be similar to the existing interchange.

### Benefits

#### SAFETY

- Results in Potentially Fewer Turning, Rear End, and Right Angle Crashes
- Slower Intersection Speeds (25-30mph)
- Eliminates left-turn conflicts

#### OPERATIONS

- Up To 20% Increase in Overall Intersection Capacity\*
- Up To 60% Decrease in Overall Intersection Delay\*
- 2 Phase Signal with Shorter Cycle Lengths

#### DESIGN

- Accommodates High Left Turn Movements
- Allows for Multi-Lane Approaches
- Reduced Pedestrian Crossing Distance
- Shorter Construction Duration
- Reduces Potential for Wrong-Way Entrance to Ramps
- Simple Truck Accessibility and Maneuvering
- Better Sight Distance For Turning Movements

\*Compares the Proposed DDI vs. Proposed Standard Diamond Interchange Under 2040 Traffic Conditions



Illinois Department of Transportation



# I-55 at Weber Road Study

November 2013 Newsletter



### Project Overview

The Illinois Department of Transportation (IDOT) in cooperation with Will County is studying potential improvements to the Interstate 55 (I-55) interchange at Weber Road. The project is located in DuPage Township in northwest Will County and is situated within the Villages of Romeoville and Bolingbrook. The study area encompasses two miles of Weber Road starting at Rodeo Drive/119th Street continuing south past the I-55 interchange to Romeo Road/135th Street.

The I-55 at Weber Road interchange was built in 1990. At that time, much of the area around Weber Road was used for farming with a few residential subdivisions. Since 1990, the population in Will County has nearly doubled, making it one of the fastest growing counties in the nation.

Currently, Weber Road and the interchange are congested, with traffic volumes expected to increase as regional growth continues.

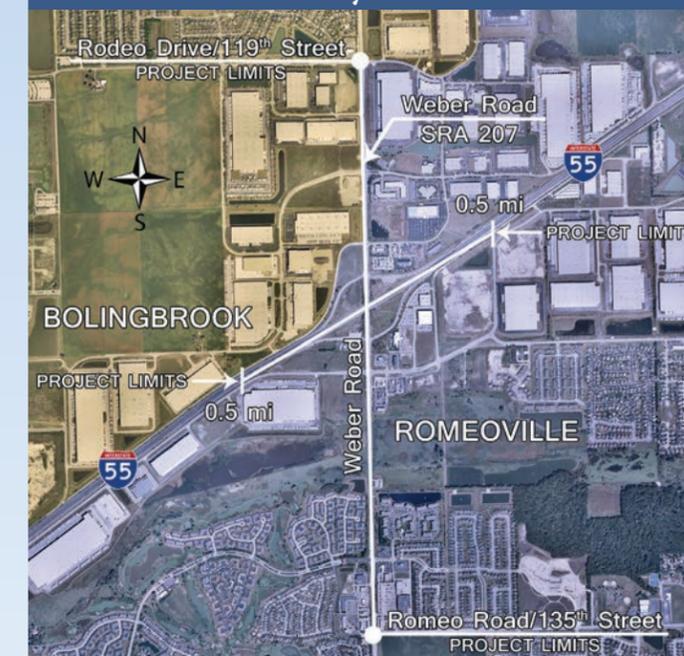
### Preferred Alternative

The I-55 at Weber Road Study began with identification of a wide range of alternatives, which were narrowed down to determine a preferred alternative for the project. After extensive public involvement, evaluation, and analysis, IDOT has identified the **Diverging Diamond Interchange (DDI)** as the Preferred Alternative. DDI features include:

#### Interchange

- All on-ramps and off-ramps are designed to be free flow
- Pedestrian and bicycle accommodations along Weber Road to allow crossing of I-55
- Pedestrian controlled signals at ramps
- Added capacity at northbound and southbound I-55 ramps
- Dedicated right turn lane on Weber Road extending from Normantown Road to the northbound I-55 ramps

### Study Area



- The existing bridge will be reused and carry 4 southbound lanes
- A new parallel bridge is proposed west of the existing bridge to carry 3 northbound lanes
- 14 foot wide lanes allow for passage of all vehicles through the diverging locations

#### Weber Road Improvements

- Widen to six lanes
- Potential pedestrian accommodations on both sides
- Additional turn lanes at intersections

### Diverging Diamond Interchange

A diverging diamond interchange is a traffic design that facilitates slower intersection speeds (25-30mph) and creates fewer conflict points while eliminating wrong-way entrance to highway ramps. Despite the lower speeds allowable, the design also allows for the safer and more efficient conduction of heavy turn movements by permitting more “green time” for traffic signals to allow more traffic to move through the interchange without stopping. The ramp configuration is similar to a

traditional interchange, but moves traffic on the cross-street to the left side of the roadway at the segment between signalized intersections at either end of the bridge. This allows a free-flow left turn onto the interstate without relying on a traffic signal, while allowing exiting freeway traffic to perform a free-flow left turn movement onto the cross-street. The design also creates a safer pedestrian and bicycle environment, and is both less land-intensive and comes with a lower cost than similar interchanges.



### Public Involvement

Public participation is essential to the transportation decision-making process. IDOT has identified this project as a Context Sensitive Solutions (CSS) project to enhance public outreach through early participation with stakeholders in the transportation planning process. The public, agencies, local officials, interest groups and other stakeholders participated in public meetings and Community Advisory Group meetings. Public meetings were held in April 2010 and May 2012 and the Community Advisory Group has met several times during the project.



### Provide Your Input!

The Illinois Department of Transportation is studying improvements to the I-55 interchange at Weber Road. For more information about the project, answers to commonly asked questions and information from project public meetings, visit the official project website at:

[www.i55atweber.com](http://www.i55atweber.com)

For questions and additional information about the study, please contact:

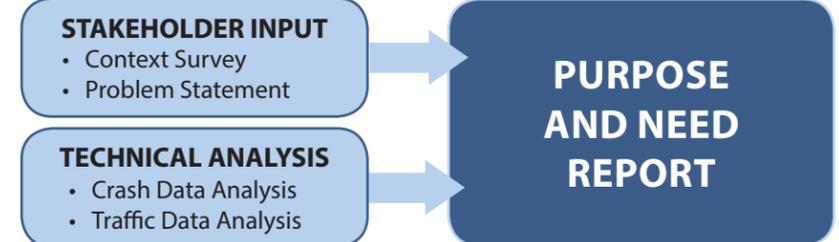
Illinois Department of Transportation  
Bureau of Programming  
201 West Center Court, Schaumburg, IL 60196-1096  
Attention: Jessica Feliciano, P.E., Project Engineer  
Email: [i55atWeberRd@clark-dietz.com](mailto:i55atWeberRd@clark-dietz.com)

### I-55 At Weber Road Purpose and Need

The Purpose and Need explains why the project is being worked on and guides the alternatives analysis process by providing goals and measures for evaluating potential solutions.

Since the I-55 interchange and Weber Road serve as critical commuting links for the region as well as a number of local businesses and industries, the project study team and community stakeholders identified Operations, Capacity, and Safety as the three elements with the greatest need.

To read the full Purpose and Need Report, visit the Study Documents Section of the project website.  
[www.i55atweber.com](http://www.i55atweber.com)



#### 1 Operations

There is currently inadequate intersection spacing on Weber Road, narrow width to make the turn at the exit ramps, and thru-lane blockage that cause safety issues and traffic delays.

#### 2 Capacity

Increased regional growth and industrial development has resulted in more traffic delays, creating longer travel times for the efficient transport of both people and goods.

#### 3 Safety

Crash data analysis has indicated the need for improved transportation safety in the study area. High crash rates have resulted in one fatality. Additionally, ADA, pedestrian, and bicycle access is limited.

### Traffic Noise Study

A traffic noise study was conducted for the Weber Road project in accordance to the IDOT Noise Policy. The noise study includes both noise monitoring of existing field conditions and noise computer modeling of existing and future conditions. The Federal Highway Administration’s (FHWA) “Traffic Noise Model” (TNM) was used for the computer modeling of the existing condition and the projected 2040 build and no-build conditions. Noise levels were studied at noise sensitive locations within the project area, including residences, daycares, schools, and commercial sites with outdoor activities.

At locations where traffic noise impacts were determined, an evaluation was conducted to determine if noise walls were warranted. Four noise walls were found to be warranted within the corridor and will be considered for implementation as part of the project, pending the views of those benefited by the proposed barriers. The results of the traffic noise study will be available at the project’s Public Hearing.

### Funding

This project is included in our IDOT’s FY 2014-2019 Proposed Multi-Modal Transportation Improvement Program contingent upon the sale of approximately 200 acres of unused

property currently owned by the Illinois Department of Corrections as stipulated in Public Act 95-0019, and contingent upon local financial participation for improvements to adjacent highway facilities under local jurisdiction.

