



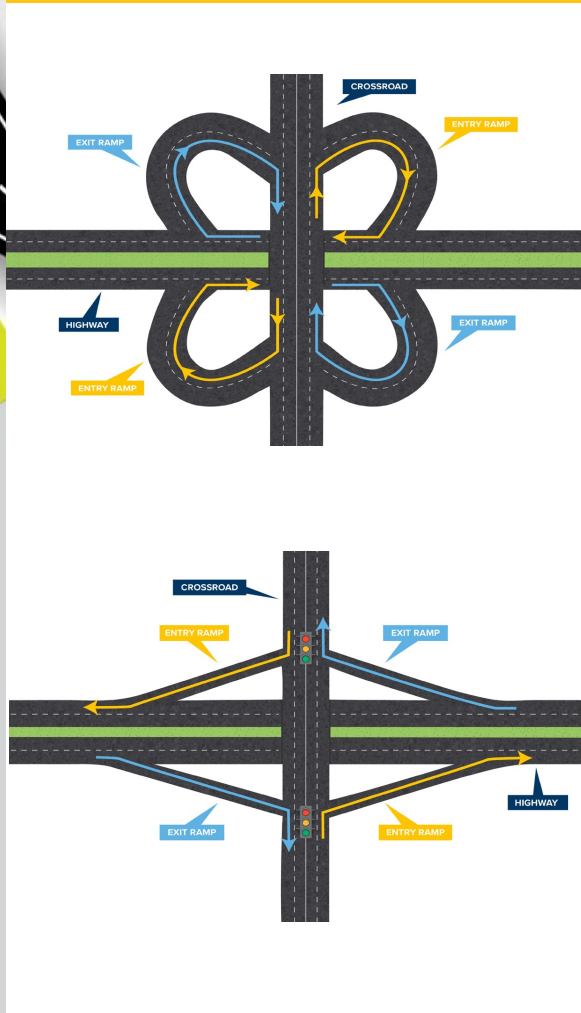
SAFERoad Solutions

A guide to roadway designs

Presentation by:

On Month Day 2023

INTERCHANGES – Cloverleaf & Diamond



When to use

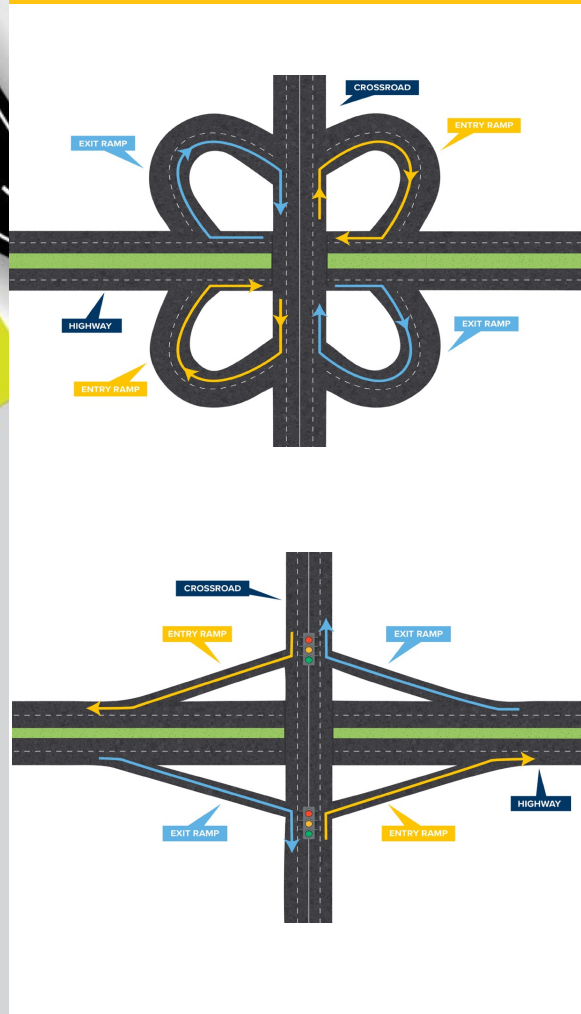
- Connecting two roadways that do not have a high left-turn volume.
- Cloverleaf are typically used in **rural** environments with **low traffic** volumes & minimal weaving.

When NOT to use

- Should not be used on roadways with high traffic volumes.
- Cloverleaf interchanges should not be used in areas with frequent large vehicle traffic. Some larger vehicles have trouble navigating smaller cloverleaf turns.



INTERCHANGES

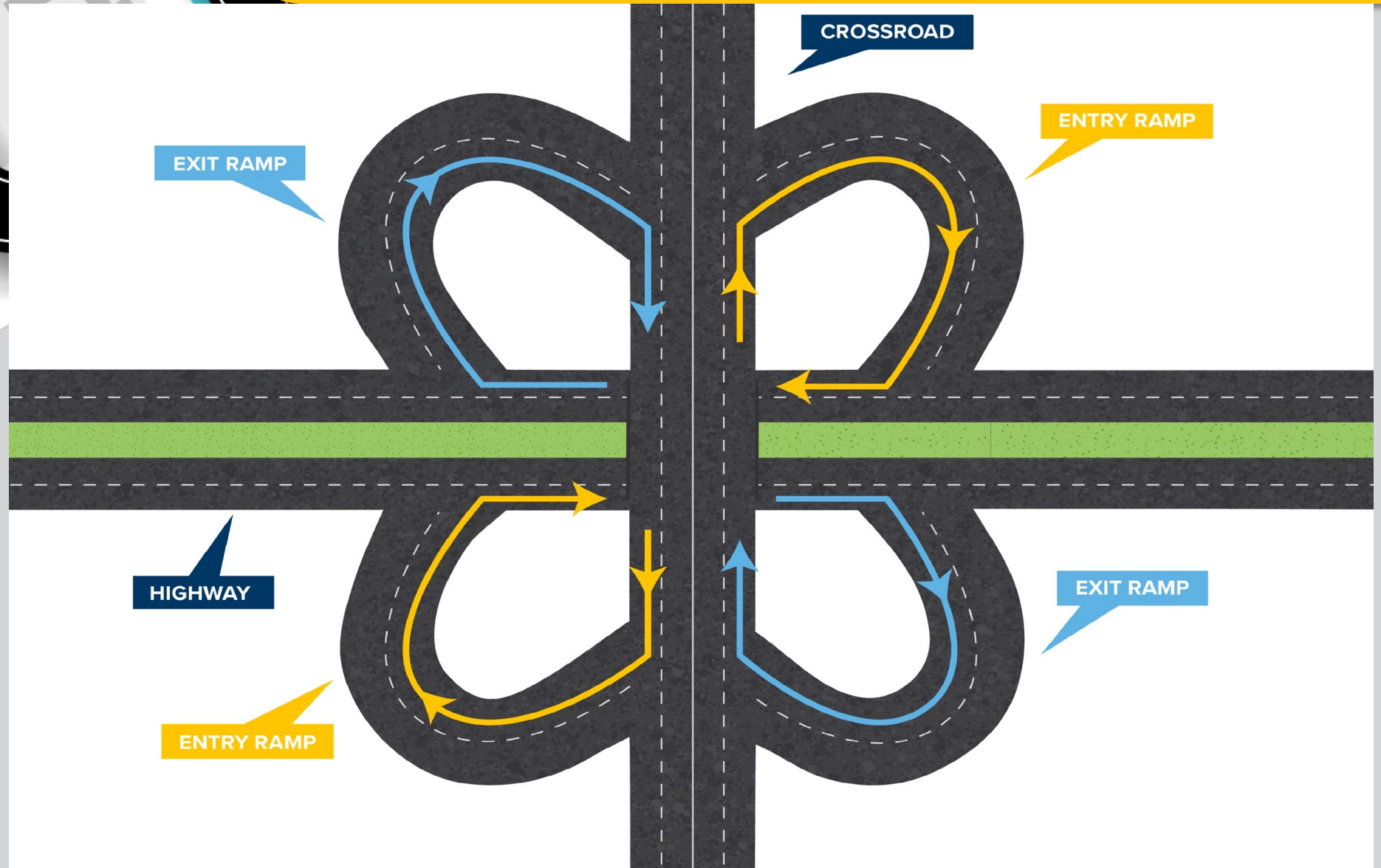


Benefits

- **Efficiency** – interchanges keep traffic moving and allow for traffic to flow between major roadways and crossroads.
- **Familiarity** - cloverleaf and diamond interchanges are the most common type of interchanges, which makes them highly recognizable and increases motorists' level of comfort while driving.



INTERCHANGES - Cloverleaf



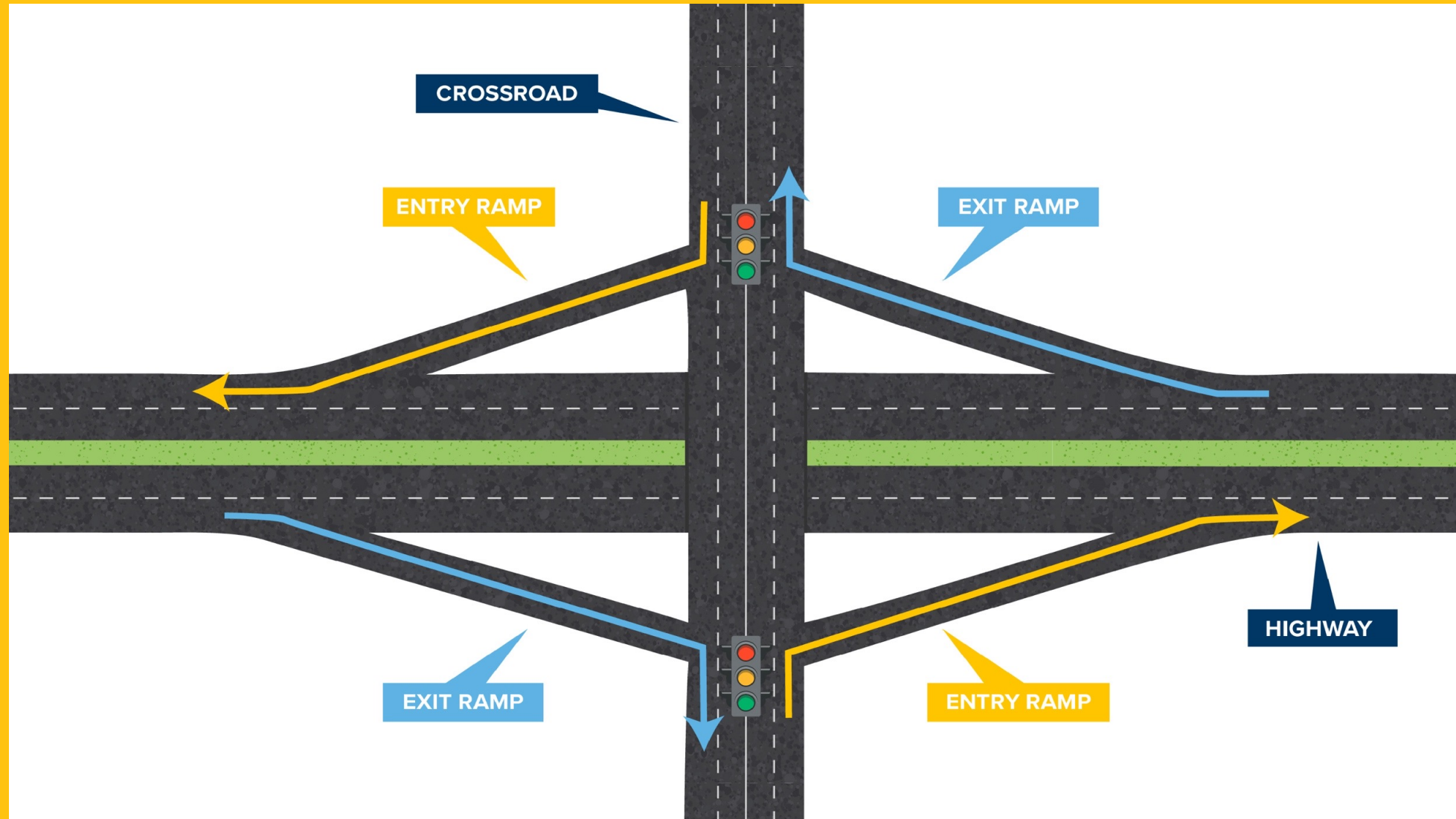
 **YOUTUBE VIDEO**

INTERCHANGES - Cloverleaf



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INTERCHANGES - Diamond



 **YOUTUBE VIDEO** >>>

INTERCHANGES - Diamond

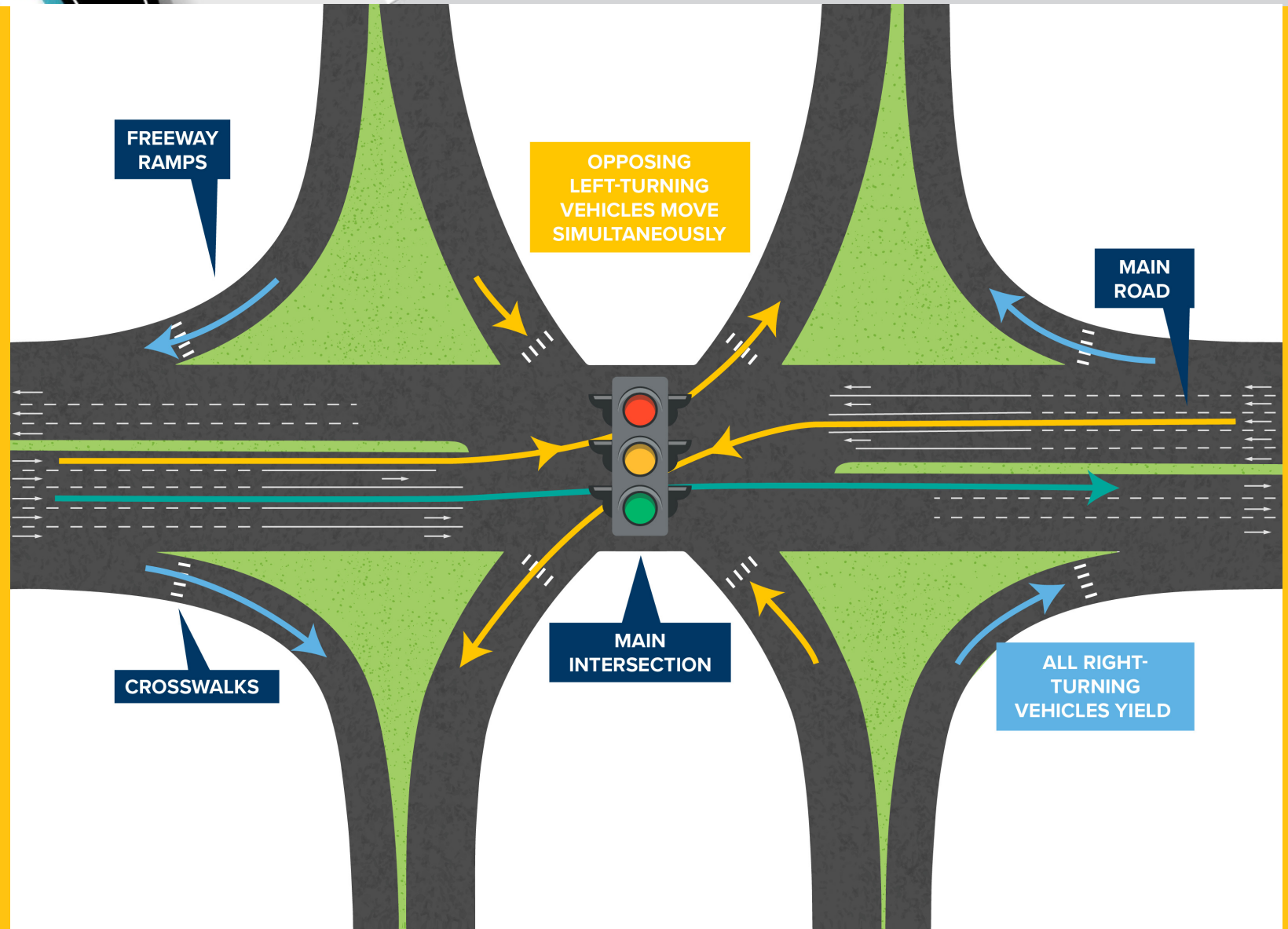


 **YOUTUBE VIDEO**

Cloverleaf & Diamond VIDEO



SINGLE-POINT URBAN INTERCHANGE



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SINGLE-POINT URBAN INTERCHANGE

Benefits

- **Enhanced safety** – vehicles cross paths at only one location.
- **Increased efficiency**— traffic signals operate in three phases increasing “green light” time.
- **Increased capacity** – Allows for left turns to occur simultaneously and at higher speeds.
- **Fewer traffic signals** – Channels traffic into one intersection.
- **Reduced right-of-way impacts** – Smaller footprint than conventional interchanges,



SINGLE-POINT URBAN INTERCHANGE



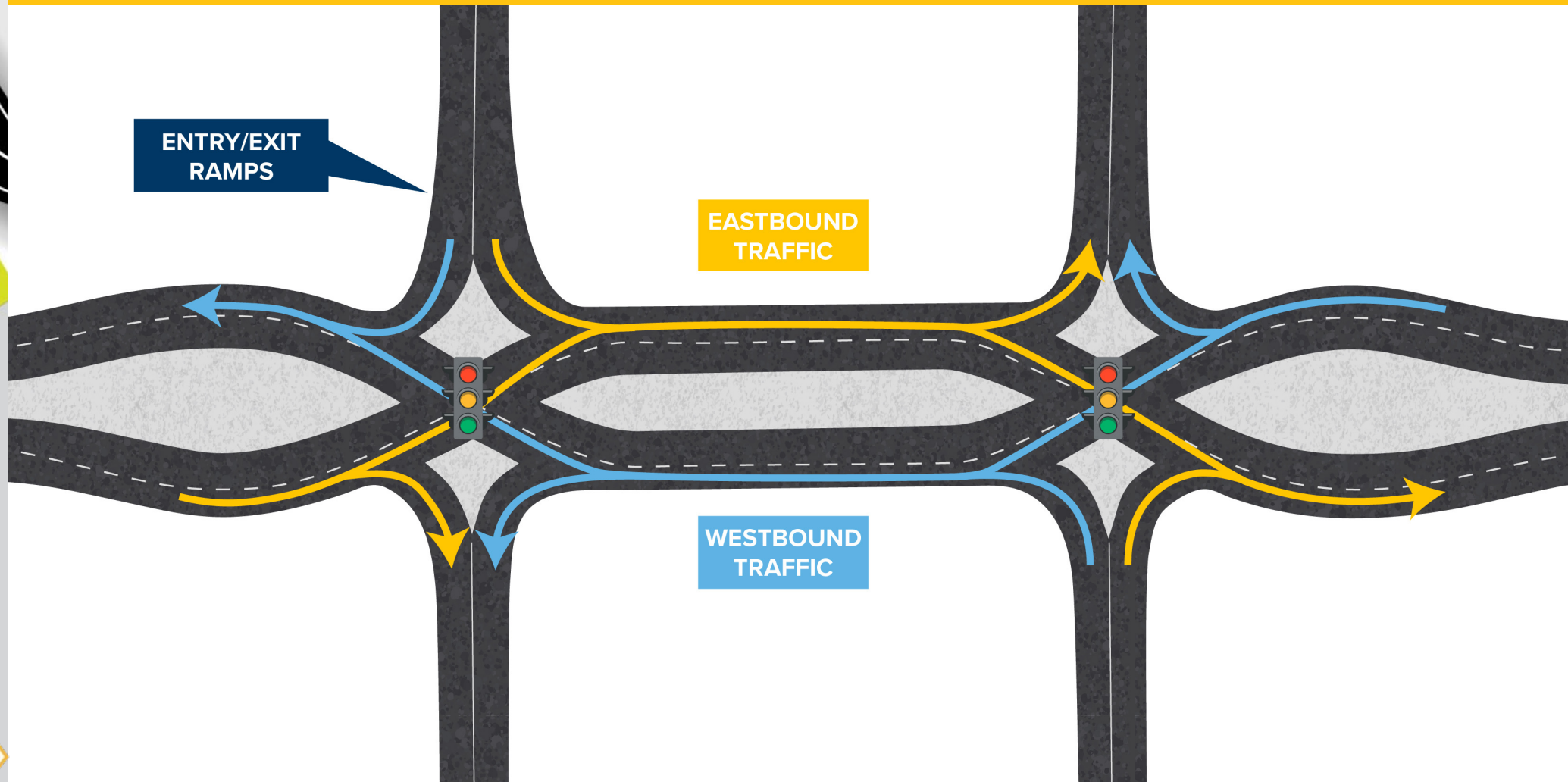
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SINGLE-POINT URBAN INTERCHANGE



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DOUBLE CROSSOVER DIAMOND INTERCHANGE



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DOUBLE CROSSOVER DIAMOND INTERCHANGE

Benefits

•Safety

- Reduces wrong-way entries to ramps,
- Number of times opposing traffic crosses paths
- Potential number of crash points for vehicles
- Slows down drivers

•Efficiency

- Fewer traffic signal phases
- Easier access to the highway
- Does not cross opposing traffic

•**Cost effective** – Can improve traditional interchanges by reconfiguring existing lanes and intersections at a lesser cost.



DOUBLE CROSSOVER DIAMOND INTERCHANGE



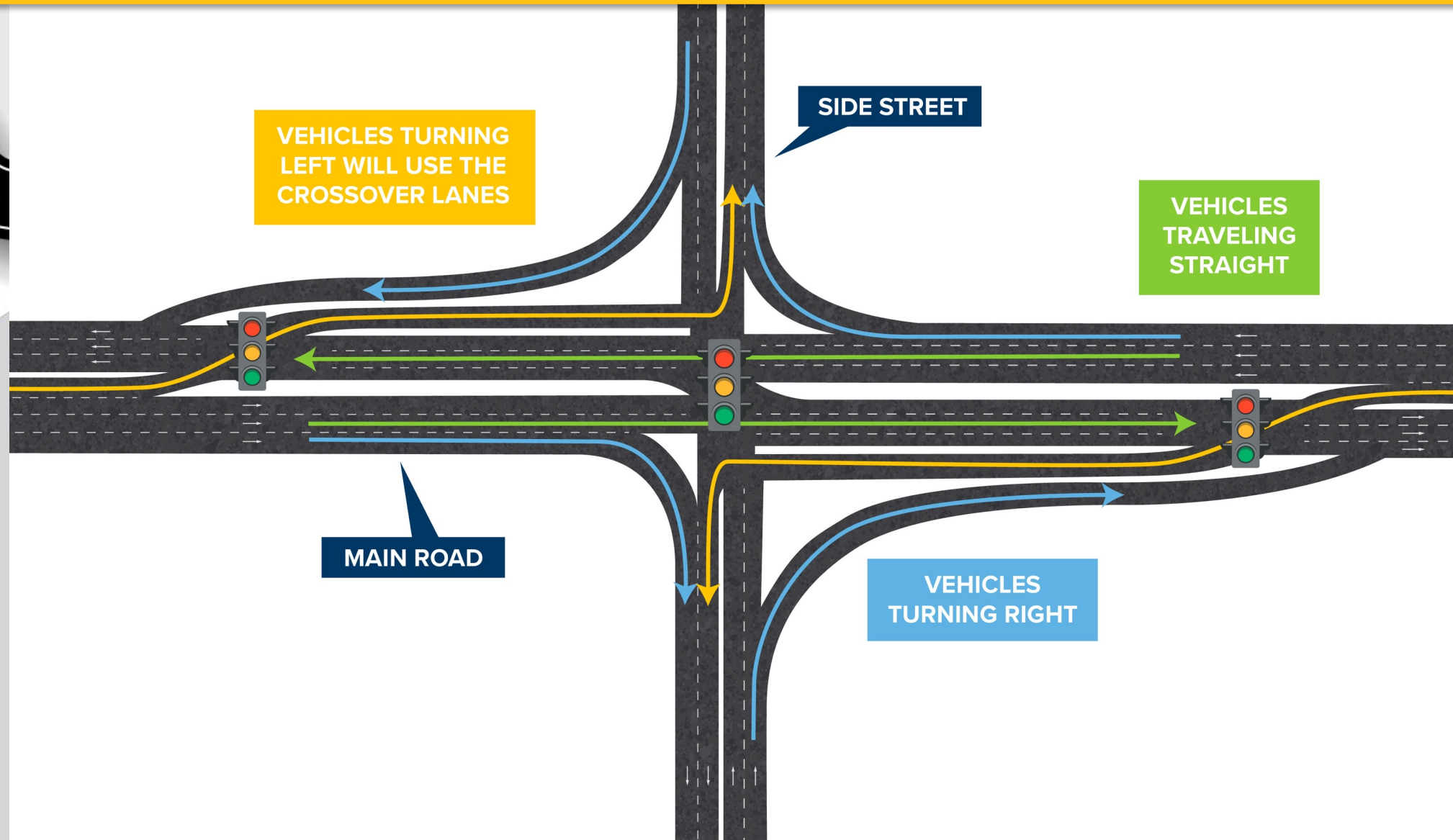
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DOUBLE CROSSOVER DIAMOND INTERCHANGE - Video



CONTINUOUS FLOW INTERSECTION (CFI)



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CONTINUOUS FLOW INTERSECTION (CFI)



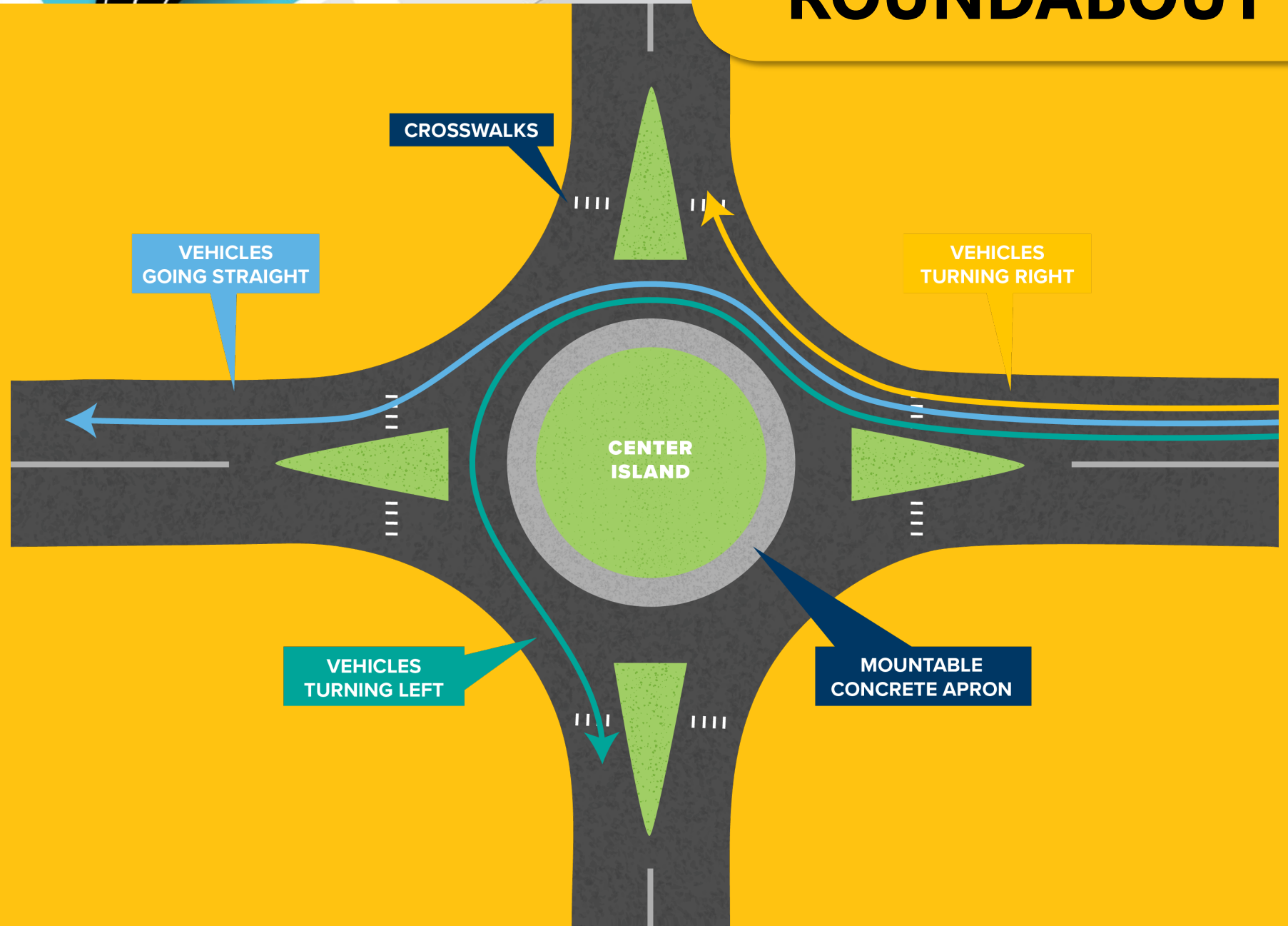
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CFI Video



ROUNDABOUT



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ROUNDABOUT

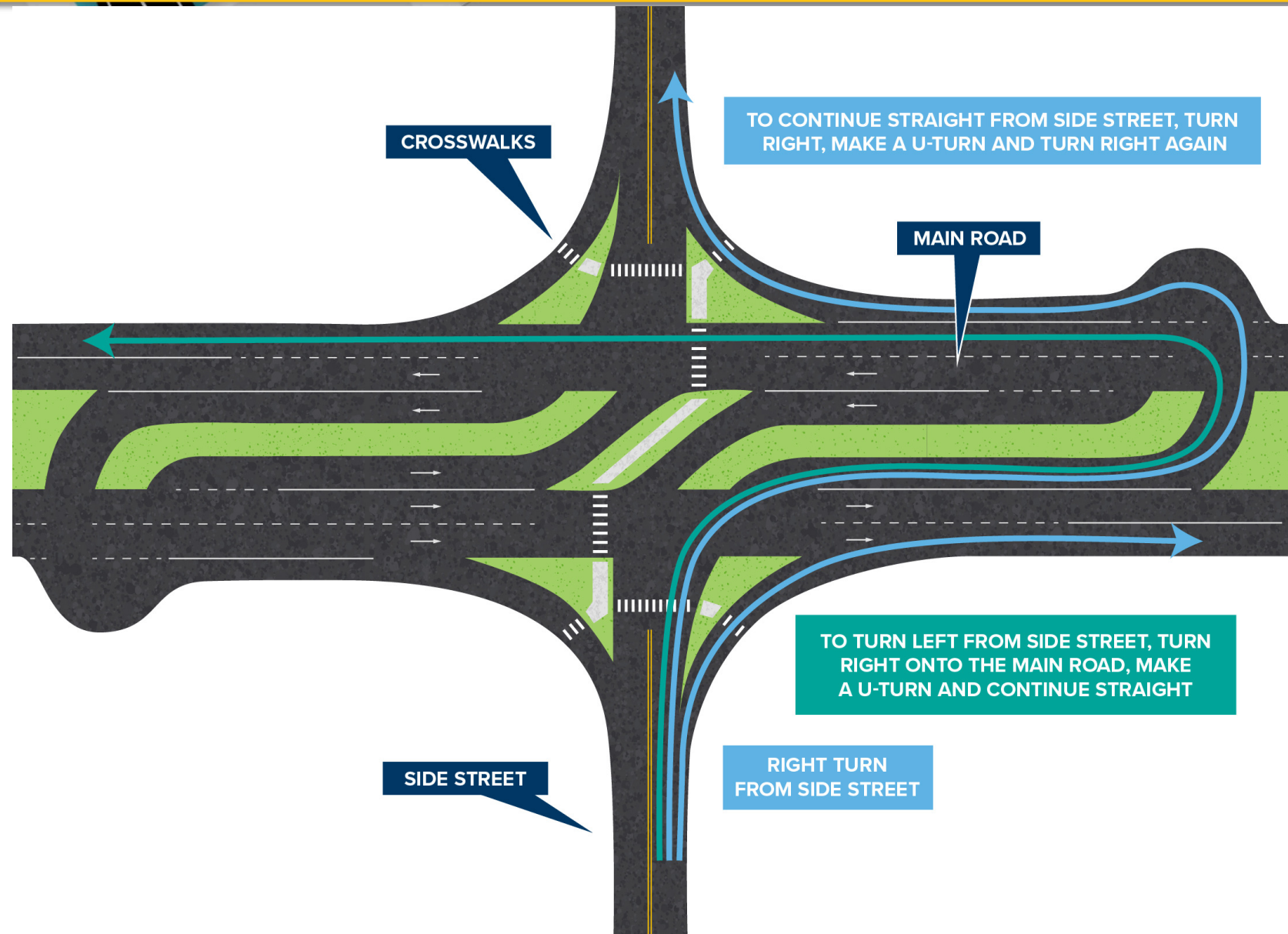


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ROUNDABOUT - Video



RESTRICTED CROSSING U-TURN (RCUT)



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RESTRICTED CROSSING U-TURN (RCUT)



 **YOUTUBE VIDEO**



RESTRICTED CROSSING U-TURN (RCUT)

Benefits

- **Enhanced safety** – Motorists only focus on one direction of oncoming traffic at a time, making the intersection safer and easier to navigate.
- **Increased efficiency** – Fewer traffic lights and stops when compared to a standard intersection.
- **More capacity** – Each direction operates independently by creating two one-way streets to decongest the flow of traffic.



RESTRICTED CROSSING U-TURN (RCUT)



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RESTRICTED CROSSING U-TURN (RCUT) - Video





Download Fact Sheets for
each road configuration at
transportation.ky.gov/saferoadsolutions



A stylized, abstract map in the top-left corner features a winding black road with white dashed lines. The map includes green, blue, and grey areas representing different terrain or urban zones. The rest of the background is a solid light grey.

Questions?



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KYTC.KEEN@ky.gov
[transportation.ky.gov/Education
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