



Replace Left-Turn and Through Movements with a Right-Turn/U-Turn Combination

Conversion of minor road left turns and through movements to right turns and U-turns. There are several variations of this design, with some permitting direct left turns from the major road and others prohibiting left turns entirely.



Source: North Carolina DOT

Drivers must turn right and then complete a U-turn maneuver to turn left.



Source: VHB

This intersection incorporates delineators instead of concrete islands to force all drivers to turn right.



Source: Tennessee DOT Aerial

This aerial photograph shows the channelization at the intersection and the downstream U-turn bulb-out.



Targeted Crash Types

- Right-angle
- Opposing left turn
- Rear-end (major road)
- Pedestrian

Problems Addressed

- Excessive intersection conflicts
- Poor operational performance
- Misjudgment of gaps
- Vehicle conflicts with non-motorists

Conditions Addressed

- Crash history or observed conflicts involving left-turning vehicles or vehicles attempting to continue on the minor road by crossing the major road.
- Insufficient gaps in major road traffic for left-turn or through movements from minor road.
- Crash history or observed conflicts involving vehicles in median.
- Can eliminate a turning movement across a crosswalk and provide pedestrian refuge.

Considerations

- This treatment is typically applied along major roads whose geometric conditions are conducive to U-turn maneuvers (i.e., those characterized by a median and multiple lanes in each direction).
- A bulb-out (also known as a loon) may be needed to accommodate U-turn maneuvers for buses and other longer vehicles.
- Stakeholders should be involved during planning stages, especially adjacent businesses or residents that may be affected by the access restriction.
- Consult with elected representatives and emergency responders before initiating design work.
- Sufficient distance should be provided from the intersection to the U-turn.
- Appropriate signing should be incorporated to prevent motorist confusion.

Industry Standard

MUTCD

[Section 2B.18: Movement Prohibition Signs](#)

AASHTO Green Book

Section 9.9: Indirect Left Turns and U-turns

Other Resources

[Restricted Crossing U-Turn Intersections Video, FHWA](#)

[Median U-Turn Intersections Video, FHWA](#)

[Alternative Intersections/Interchanges: Informational Report \(AIIR\), FHWA](#)

[Low-Cost Safety Enhancements for Stop-Controlled and Signalized Intersections, FHWA](#)

[Innovative Operational Safety Improvements at Unsignalized Intersections, FDOT](#)

Select Examples

[US 15 & S. Seton Ave., Emmitsburg, MD](#)

[Tanbridge Rd. & Eastwood Rd., Wilmington, NC](#)

[US 1 & Cranes Creek Rd., Vass, NC](#)

[Linden Dr. NW & Lake Michigan Dr., Allendale, MI](#)