



Install a Left-Turn Lane on the Major Road

An auxiliary lane exclusively for the deceleration and storage of left-turning vehicles.



Source: VHB

A left-turn lane removes left-turning vehicles from the through lane.

Targeted Crash Types

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

Problems Addressed

- Poor operational performance
- Excessive intersection conflicts

Conditions Addressed

- Crash history or observed conflicts between turning vehicles and following vehicles or opposing through vehicles.
- Long queues due to vehicle stopped in through lane waiting to make left turn.
- Vehicle tracks and rutting on right side of road due to through vehicles bypassing left-turning vehicles.
- Heavy left-turn volumes.

Considerations

- Check left-turn warrants (see NCHRP 193 report referenced below).
- For locations with opposing left-turn lanes, consider offsetting the left-turn lanes to improve visibility between turning vehicles and oncoming traffic.
- Adding a turn lane may require additional right-of-way.
- The length of the left-turn lane should be sufficient to accommodate the predominant left-turn storage demand.
- Because the addition of a lane will increase the distance for crossing pedestrians, consider providing a refuge island where appropriate.

Industry Standard

MUTCD

[Section 3B.20 Pavement Word, Symbol, and Arrow Markings](#)

AASHTO Green Book

Section 9.7.3: Design Treatments for Left-Turn Maneuvers

Other Resources

[NCHRP 193: Development of Left-Turn Lane Warrants for Unsignalized Intersections](#)

[NCHRP 500 Volume 5: A Guide for Addressing Unsignalized Intersections](#)

[Intersection Safety: A Manual for Local Rural Road Owners, FHWA](#)

[Safety Effectiveness of Intersection Left- and Right-Turn Lanes, FHWA](#)

Select Examples

[Pheasant Branch Rd. & Co. Rd. K, Middleton, WI](#)

[E. Delilah Rd. & N. Franklin Blvd., Pleasantville, NJ](#)

