

Truck Lane Restrictions in Work Zones

Description

Construction and maintenance work zones on roadways can be a challenge for drivers, especially because of the many distractions caused by signs, equipment, workers and other factors. Adding to the challenge is the presence of commercial motor vehicles traveling through work zones. The number of accidents involving vehicles in work zones could be reduced by restricting larger commercial motor vehicles to using one designated lane when traveling in a work zone with at least two lanes available.

How This Will Help

Removing the potential speed differential between passenger vehicles and large commercial vehicles traveling in the work zones could reduce the number of lane changes and passing maneuvers attempted by passenger vehicles trailing a larger, slower moving commercial motor vehicle in a work zone, thereby increasing safety and reducing the number of crashes. This in turn:

- Improves traffic flow by providing a lane free of truck-passenger car interaction.
- Improves safety and mobility.

Application Techniques

DOTs typically use standalone static signs (TRUCKS USE LEFT/RIGHT LANE, R4-5, *Manual on Uniform Traffic Control Devices*) or in combination with Portable Changeable Message Signs (PCMSs).



R4-5

The number of signs installed and their placement is important to reinforce and ensure trucks follow the restrictions. Static signs should be installed on both sides of the roadway. A minimum of two static signs or a single static sign combined with a PCMS is recommended in advance of the work zone. The

frequency of signs within the work zones will depend on the length of the work zone, but installing them in typical 1 mile increments should be considered. Agencies can adjust sign placement and frequency downstream of any high truck-volume merging-ramp traffic.

Implementation Considerations

Conditions most conducive to implementing truck lane restrictions are freeways with two or more lanes in each direction, interchanges spaced more than 2 miles apart with low ramp volumes, and truck percentages between 10 and 25 percent of the total traffic stream. The roadway section to be restricted should be at least 6 miles long. DOTs should also consider truck lane restrictions when traffic is shifted onto patched shoulders.

Compliance requires routine enforcement by regular traffic patrols and/or specialized dedicated truck enforcement units. To ensure the success of the restrictions, DOTs should also conduct a good information campaign about the restriction to inform the public and the trucking community along the corridor.

Implementation Examples

In 2015, the 84th Texas Legislature passed House Bill 3225 giving TxDOT the authority to restrict commercial motor vehicle traffic to a specific lane in a work zone on the state highway system. The lane restrictions only apply when traffic control device signs are installed. This legislation went into effect September 1, 2015, and I-35 in Waco District became the first location in the state to improve work zone safety by restricting trucks to the left lane.

Michigan DOT has used truck-lane restrictions on two projects:

- **Reconstruct 5.6 miles of Interstate-75 from Dixie Highway to I-275, MI**, primarily to prevent trucks traveling on patched shoulders and existing drain grates (trucks make up 30 percent of the traffic composition). Trucks were restricted to using the left lane. Truck lane restrictions were in place during the reconstruction of both the northbound roadbed

(March–October, 2015) and southbound roadbed (April–September, 2016).

- **Reconstruct 10-mile section of US-23 within Livingston and Washtenaw Counties, MI**, from the west US-23/M-14 (tri-level) interchange (Exit 45) north to the Silver Lake Road interchange (Exit 55). The project was not set up originally for trucks to use only the left lane. However, in spring 2017, when traffic was shifted to the outside (right) shoulders, the shoulders began to fail. Michigan DOT repaired the areas that failed initially and started using the TRUCKS USE LEFT LANE messaging to keep trucks off the nonrepaired shoulders. Trucks were restricted to using the left lane in both northbound and southbound directions.

Highlights

1. **Truck traffic using the assigned lane increased by 235 percent (with no enforcement).**
2. **Truck restriction works best when truck traffic percentage is 10 to 25 percent and interchange spacing is more than 2 miles.**
3. **Implementing truck lane restriction is economical—\$1,000 for static signing and \$15,000 to \$25,000 per PCMS.**
4. **Road-maintenance cost is reduced (especially on temporary roadways).**
5. **Productivity and safety is improved.**
6. **Marginal decrease in truck speeds (~3 mph).**

In both Michigan DOT projects, truck lane restrictions were enforced by using multiple static signs and PCMSs.

