

DYNAMIC TRUCK RESTRICTIONS

Description

Dynamic truck restrictions constrain trucks to certain lanes or routes that give at least one lane exclusively to passenger traffic and may be adjusted based on traffic flow or time of day considerations. Other forms of the concept may limit trucks from entering specified entry ramps during certain times of the day or during certain traffic conditions. This enables passenger cars and light trucks to flow more freely without having to frequently brake or maneuver around slower, less agile truck traffic.

Unlike static lane restrictions, dynamic lane restrictions do not apply all the time. The goal of using dynamic rather than static restrictions is to achieve greater speed uniformity and better use of capacity during periods of congestion or near-congestion.

Restrictions can be triggered using real-time speeds and traffic volume data or by using historical traffic operations data. Real-time operational data allow the corridor operators to be more flexible with implementing the strategy.

Target Market

- Highways with high truck volumes.
- Major streets serving industrial and passenger traffic.

Dynamic truck restrictions should only be used on highways and streets that have significant volumes of truck traffic that interfere with passenger traffic. This strategy works well with speed harmonization.

How Will This Help?

- Improve safety by separating less agile trucks from general passenger car and light truck traffic.
- Better traffic flow and travel time reliability over facilities with only static truck restrictions.
- More uniform speed and driver behavior.

Success Story

The Netherlands began testing dynamic truck restrictions after successful implementations of restrictions based on time-of-day. Positive results have been seen with an increase in left-lane speeds, more stable and homogeneous traffic flow, and slightly higher capacity (about 3 percent) realized.



AARoads

Cost:	●●●●○
Time:	Short
Impact:	Corridor
Who:	State & Local
Hurdles:	Legislative & Regulatory

Implementation Issues

Agencies must seek enabling legislation to allow and enforce dynamic truck restrictions. Accurate and reliable expert systems are needed to deploy the strategy based on prevailing roadway conditions. The installation of sign gantries needs to be sufficient to ensure that at least one sign displaying the restrictions is visible at all times.