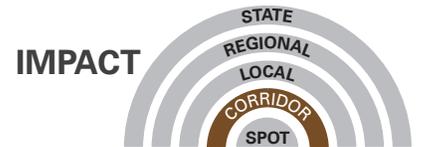




DYNAMIC TRUCK RESTRICTIONS



Source: AARoads



WHO

CITY/STATE

HURDLES

LEGISLATIVE, REGULATORY

More Information: tti.tamu.edu/policy/how-to-fix-congestion

Description

Dynamic truck restrictions limit trucks to certain mobility conditions such as speed, lanes, or routes. Restrictions may be dynamically adjusted based on traffic flow or time-of-day considerations. The goal is to lower interference with passenger traffic at peak times.

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 goals of using dynamic rather than static restrictions are:

- Greater speed uniformity.
- Better capacity use during periods of congestion or near-congestion.
- Better separation of vehicles during lane management use.

Restrictions can be activated using real-time traffic and infrastructure information or predicted traffic conditions.

Real-time operational data allow 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 major volumes of truck traffic that interfere with passenger traffic. This strategy works well with speed harmonization.

How Will This Help?

- **Improves safety** by separating less-agile trucks from passenger car and light truck traffic.
- **Creates better traffic flow and travel time reliability** compared to facilities with only static truck restrictions.
- **Increases trip reliability** by allowing a more uniform speed and driver behavior.

SUCCESS STORIES



Europe

The Netherlands began testing dynamic truck restrictions after successful time-of-day restrictions. Positive results include:

- **An increase in left-lane speeds.**
- **More stable and uniform traffic flow.**
- **Higher capacity (about 3%).**
- **Lowers energy consumption and emissions** by increasing engine efficiency due to more uniform operation.

Implementation Issues

Agencies may require legislative action to deploy this strategy. Truck restrictions by definition limit the operation of trucks. This directly affects goods transportation and could increase costs. Accurate and reliable expert systems are needed to deploy the strategy based on normal road conditions. The installation of sign gantries must ensure that at least one sign displaying the restrictions is visible at all times.

