

SHOULDER PAVEMENT UPGRADE

Description

Shoulders on many Texas freeways are full width, meaning they are wide enough to carry a full lane of traffic. Though used primarily to handle crashes and vehicle breakdowns, shoulders can be upgraded to carry traffic either permanently or during a construction project (usually up to three years). Upgrading shoulder pavements increases flexibility for use, enabling agencies to ease congestion during peak hour traffic, construction, or evacuations.

Before shoulders can be used, the structural capacity must be assessed and upgraded if found lacking. Simple non-destructive tests can be easily used to identify shoulders needing upgrades. Upgrades are usually simple and accomplished with little effect on adjacent traffic.

Target Market

- Freeways with existing full-width shoulders.
- Freeways with a deficient shoulder or lacking a full-width shoulder must be identified and upgraded in continuous sections to allow future flexible use.

How Will This Help?

- Increase or maintain capacity by adding lanes during construction or evacuation
- Lower construction time and costs by simplifying designs and limiting disruptions to traffic
- Reduce impacts and disruptions normally caused by construction
- Relatively low cost (when compared to traditional methods of adding lanes)



Cost:	●●○○○
Time:	Short
Impact:	Corridor
Who:	State
Hurdles:	Safety

Success Stories

- *IH 610 Houston, Texas*—During construction projects on the 610 Loop, several recently reinforced shoulder sections carried traffic to minimize the impact and delay from the project.
- *Shoulders as Evacuation Routes* Hurricane evacuation routes from many cities use upgraded shoulders to increase capacity during a hurricane.

Implementation Issues

Most recent studies show that the shoulders on major highways in Texas are strong enough to carry main-lane traffic. Non-continuous or inadequate shoulders must be catalogued and upgraded. Safety concerns must be addressed with decisions to upgrade and use shoulders. Design modifications will be required at entrance and exit ramps, and vehicle breakdown plans and refuge locations must be developed.