

PAVEMENT RECYCLING

Description

Major reconstruction projects can cause a significant amount of congestion and can be a costly and time consuming irritant for drivers. Agencies often receive criticism that their major multi-year capacity improvement projects create a large amount of extra travel time. These frequently involve a total rebuild of both main lanes and frontage roads—the existing roadway must be removed completely and the new, expanded pavement built from the ground up.



Pavement recycling can significantly reduce construction time and cost by using the existing road structure as part of the new roadway. Breaking up the old pavement and using it as the base material for the final surface lanes (also known as “rubblization” or “full depth reclamation”) saves material costs and is much quicker to build.

This technique must include an up-front investigation of the existing pavement structure to judge its suitability for recycling. This involves a combination of both nondestructive testing and limited drilling to investigate the pavement structure. In some instances, the existing pavement does not need to be recycled but can, with minimal repairs, be incorporated into the proposed new cross section. The combination of using existing structurally sound pavement and recycling the worn out pavement can make more efficient use of material, cut project costs, and minimize disruptions.

How Will This Help?

- Accelerate construction, lessening the period that causes congestion
- Reduce construction costs by eliminating the need for aggregate materials and transportation

Success Stories

- **US 96 near Beaumont**
Old concrete was successfully rubblized to form the base for the new pavement structure.
- **SH 6 in Bryan**
Full depth reclamation with cement is widely used to turn the existing pavement into an excellent foundation for the new structure.

Implementation Issues

Many DOTs actively use pavement evaluation and recycling techniques to turn the existing pavement into a foundation layer for new structures. The State of Louisiana estimates that rubblization of IH 10 reduced construction costs by 40% and construction time by over 60%.

Cost:	●○○○○
Time:	Short
Impact:	Corridor
Who:	City/State
Hurdles:	None