

Cold In-Place Recycling

A Cost Effective Pavement Preservation Treatment

Southeast Pavement Preservation Partnership

May 30, 2013

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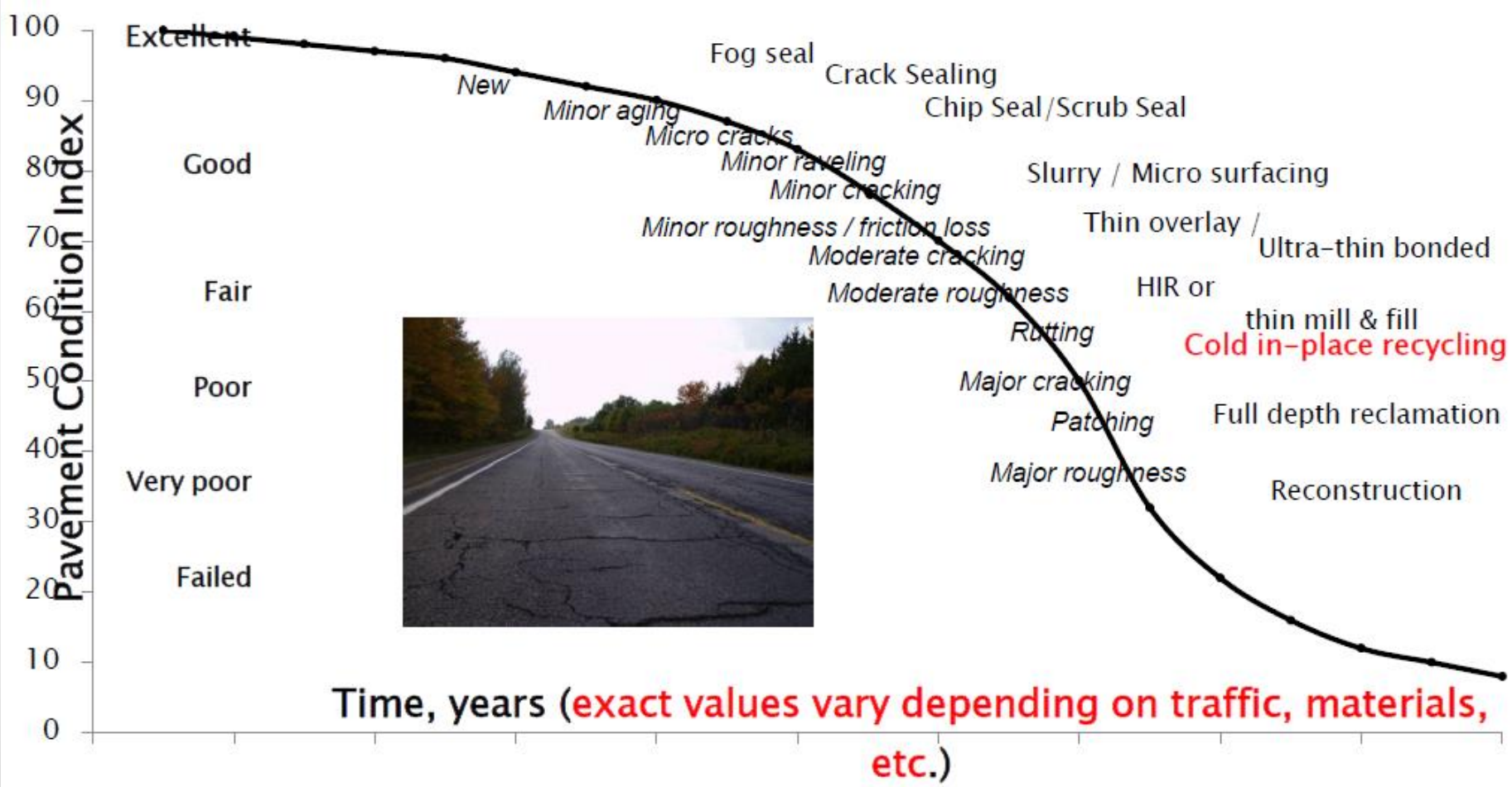
Outline

- Definition
- Project Selection Criteria
- Project Evaluation
- TxDOT Amarillo District CIR Projects
- Potential Cost Savings

CIR Definition

- COLD IN-PLACE RECYCLING – Recycling of asphalt pavement without the application of heat to produce a rehabilitated pavement. Rap is mixed with an additive(s) to produce a reprocessed material used as an asphalt pavement layer.

Project Selection Criteria



Project Selection Criteria

- Adequate asphalt surface thickness – 3" to 6"
- Base & Subgrade layers in good condition
 - No or only isolated full-depth failures – repair prior to CIR
- Material properties of existing asphalt surface layer

Project Evaluation

- Visual assessment of the pavement condition
- Pavement testing
 - Falling Weight Deflectometer (FWD)
 - Cores of existing pavement
 - Dynamic Cone Penetrometer (DCP)
 - Trenching
- Lab evaluation of asphalt material
- Mix design
 - Optimize additive(s) type and amount
 - Emulsion
 - Aggregate
 - Lime
 - Fly Ash

TxDOT Amarillo District CIR Experience



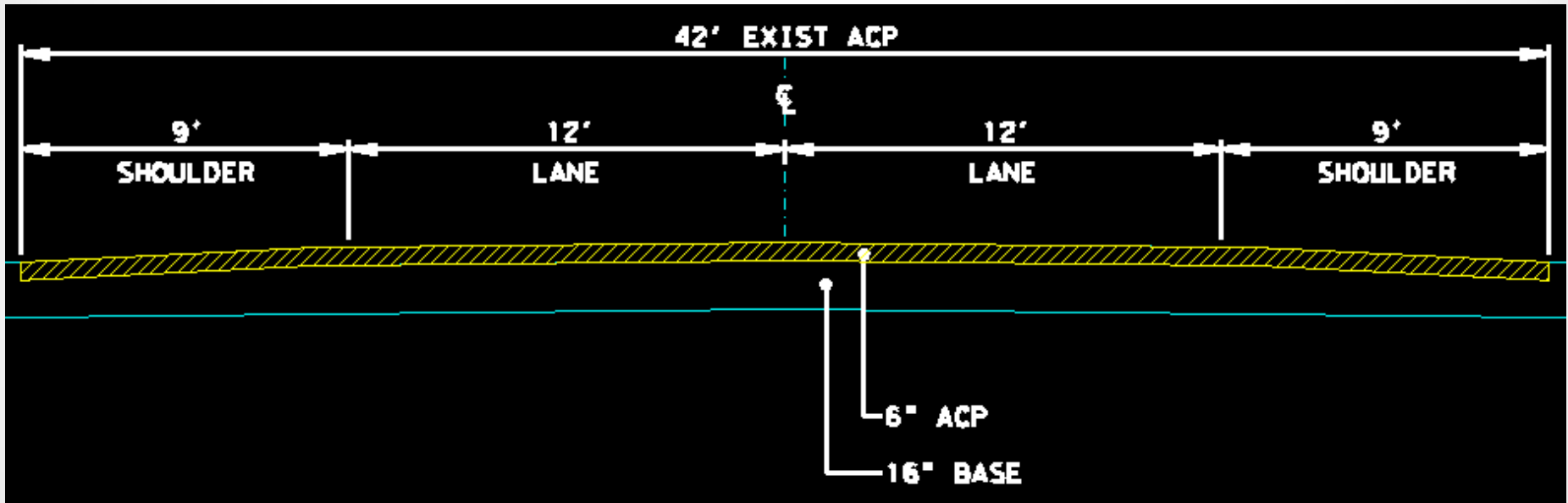
US 83 Ochiltree County – 2010

US 83 Hemphill County – 2013

US 83 Ochiltree Co.

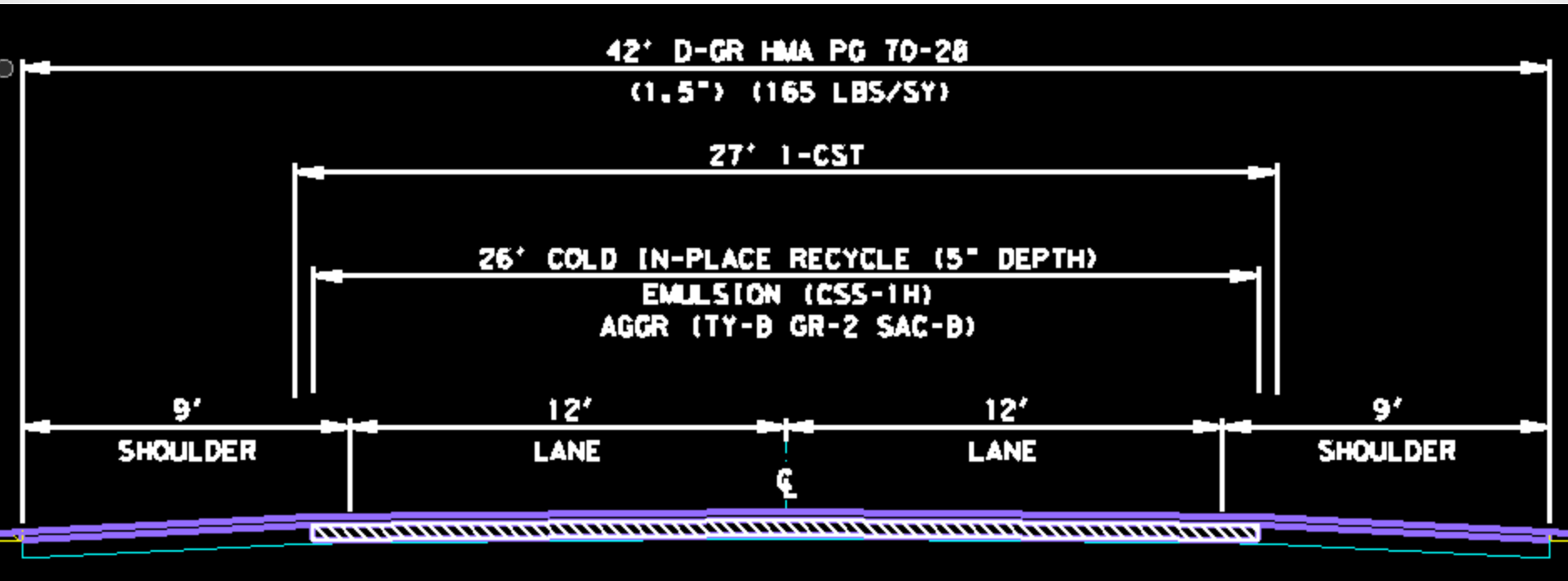
- US 83 – From Oklahoma to 6.1 miles South
- Constructed - Fall 2010
- ADT – 2,700 vpd (in the rural section)
- 36% Trucks
- ESALs – 4,300,000 (20 yr period)

Existing Typical Section



US 83 Ochiltree County

Proposed Typical Section



US 83 Ochiltree County



US 83 Ochiltree County



US 83 Ochiltree County



US 83 Ochiltree County



US 83 Ochiltree County



US 83 Ochiltree County



US 83 Ochiltree County



US 83 Ochiltree County



US 83 Ochiltree County

US 83 Hemphill Co.

- US 83 – From Lipscomb Co line to 6.1 miles South
- To be Constructed – Summer 2013
- ADT – 2,000 vpd
- 33% Trucks
- ESALs – 2,500,000 (20 yr period)

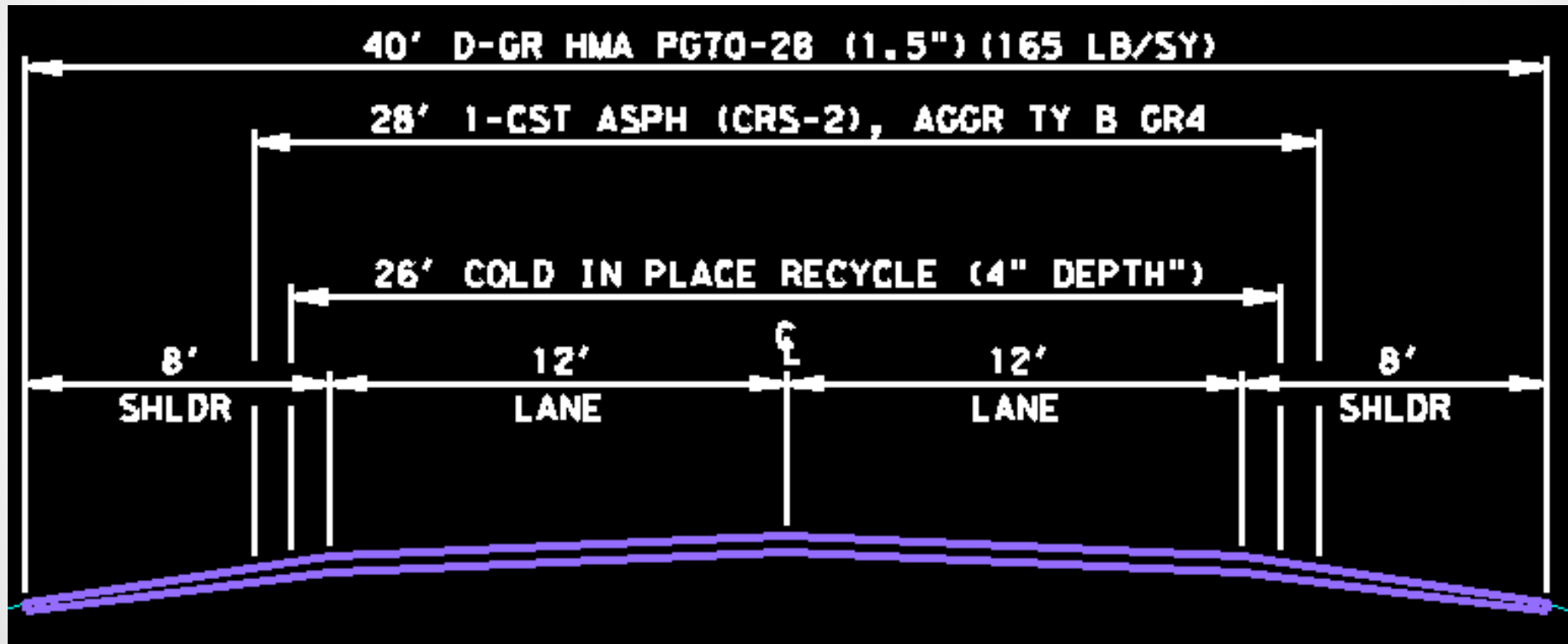


Existing Pavement Section

US 83 Hemphill County

06/09/2011

Proposed Typical Section



US 83 Hemphill County



US 83 Hemphill County



US 83 Hemphill County

Potential Cost Savings

- Prices and materials vary by region
- Difficult to compare Apples to Apples
- Typically compare CIR to Mill & Fill or HMA Overlay
- Past experience shows 30%-50% cost savings

Questions

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