
ARRA

ASPHALT RECYCLING & RECLAIMING ASSOCIATION

ARRA 1976

Asphalt Recycling 1975

Recycling Fact

Asphalt is the most commonly recycled material on the face of the earth

MEMBERSHIP of ARRA

- CONTRACTORS
- SUPPLIERS
- AFFILIATE MEMBERS

DISCIPLINES of ARRA

- CP Cold Planning
- HR Hot Recycling
- HIR Hot In-Place Recycling
- CIR Cold In-Place Recycling
- FDR Full Depth Reclamation

Hot In-Place Recycling

A Rehabilitation Alternative

ARRA
ASPHALT
RECYCLING &
RECLAIMING
ASSOCIATION

ASPHALT
100% RECYCLABLE
"IN-PLACE"

3 Types of HIR

- Surface Recycling
- Surface Repaving
- Remixing

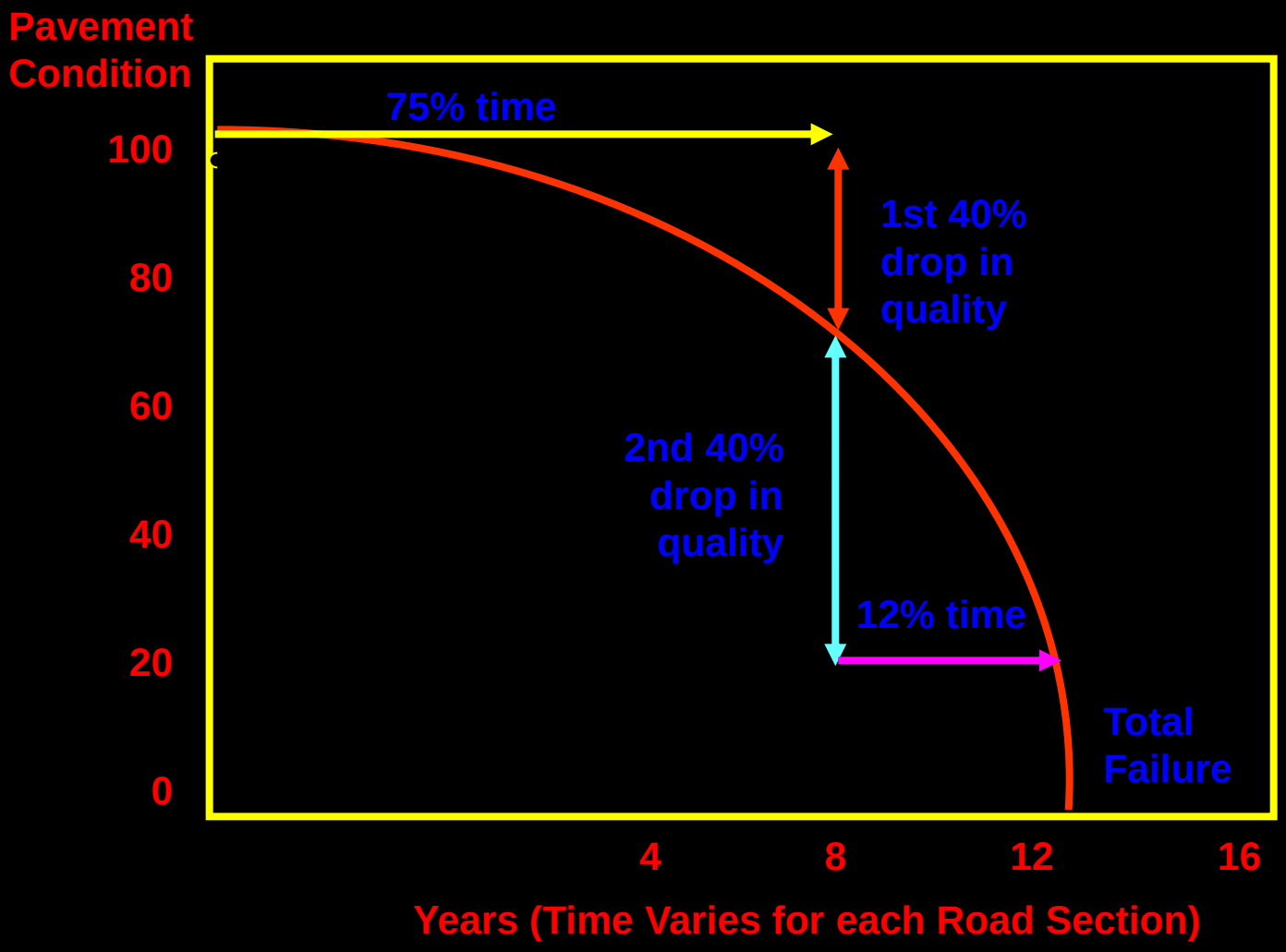
The Bottom Line Question

- How can I maximize the return on my investment in asphalt pavement rehabilitation funding?

Answer

- By repairing your asphalt pavement during the first 40% drop in quality

The Cost of Timely Maintenance



Each $1 spent during the first 40% drop in quality will cost $4-5 if delayed until pavement loses 80% of its original quality.

The Surface is the Critical Area

Aging of asphalt pavement occurs most rapidly at the surface

Surface Defects

- Ruts, Shoves & Bumps
- Patches & Utility Costs
- Reflective & Shrinkage Cracks
- Weathering, Bleeding & Raveling
- Pavement Geometry

Surface Recycling

Heating, reworking and rejuvenating the top one inch of an existing asphalt pavement in preparation of either a seal coat, micro-surfacing or overlay


GALLAGHER ASPHALT
From planning to paving... WE POWER IT ALL
GALLAGHER ASPHALT
E63

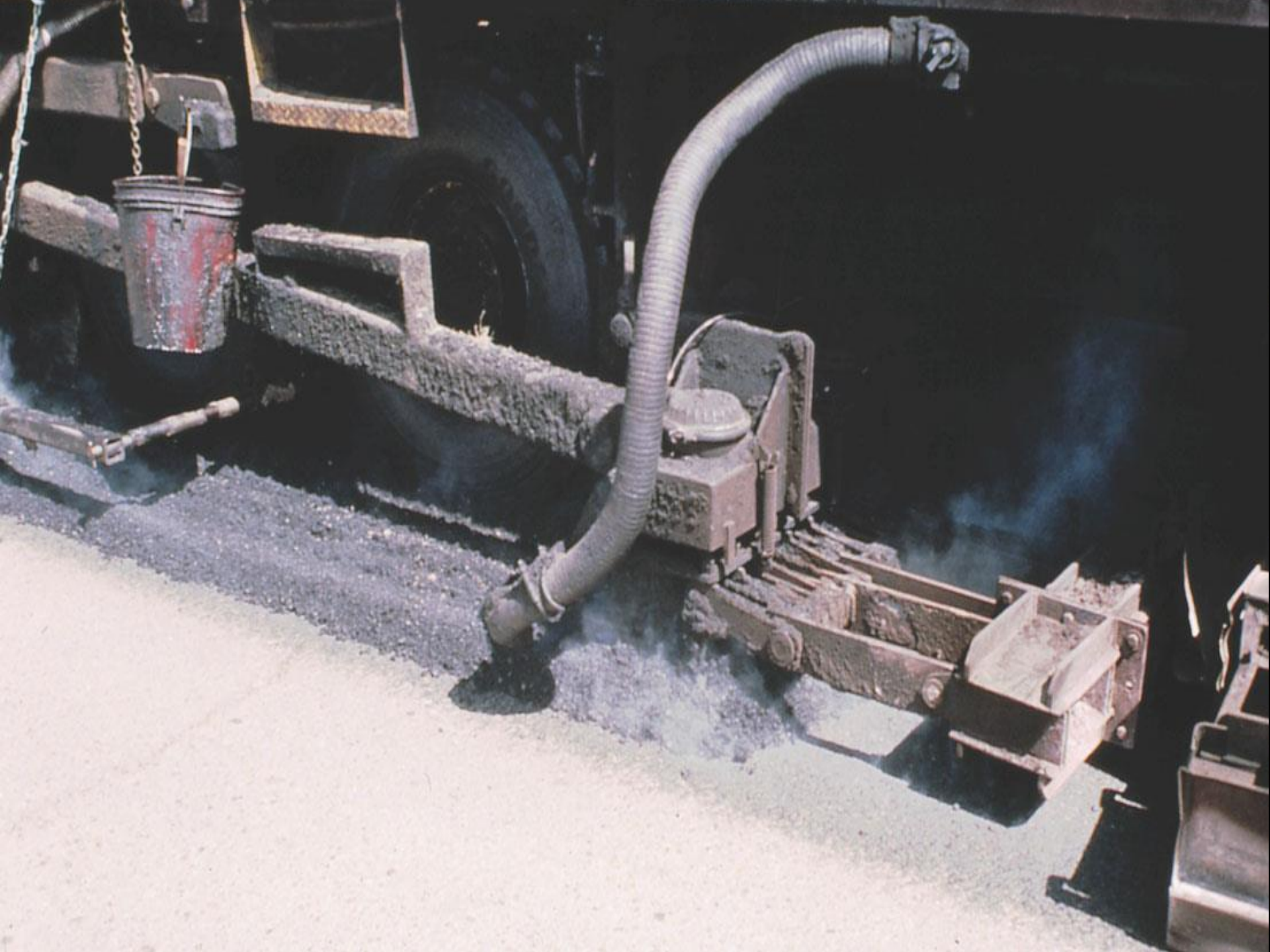

E40
GALLAGHER ASPHALT
GALLAGHER ASPHALT
HOT-IN-PLACE RECYCLING
ASPHALT
100% RECYCLABLE


GALLAGHER ASPHALT
From planning to paving...
GALLAGHER ASPHALT
1075
2858
5245 PM


WARNING
DANGER
WARNING

Surface Repaving

Heating, reworking and rejuvenating the top one inch of an existing asphalt pavement and simultaneously applying an overlay while the temperature of the recycled layer is 200°F



Urban Applications

- Curb line milling may be necessary
- Traffic easily controlled in work zone
- Environmental considerations


NO
PARKING

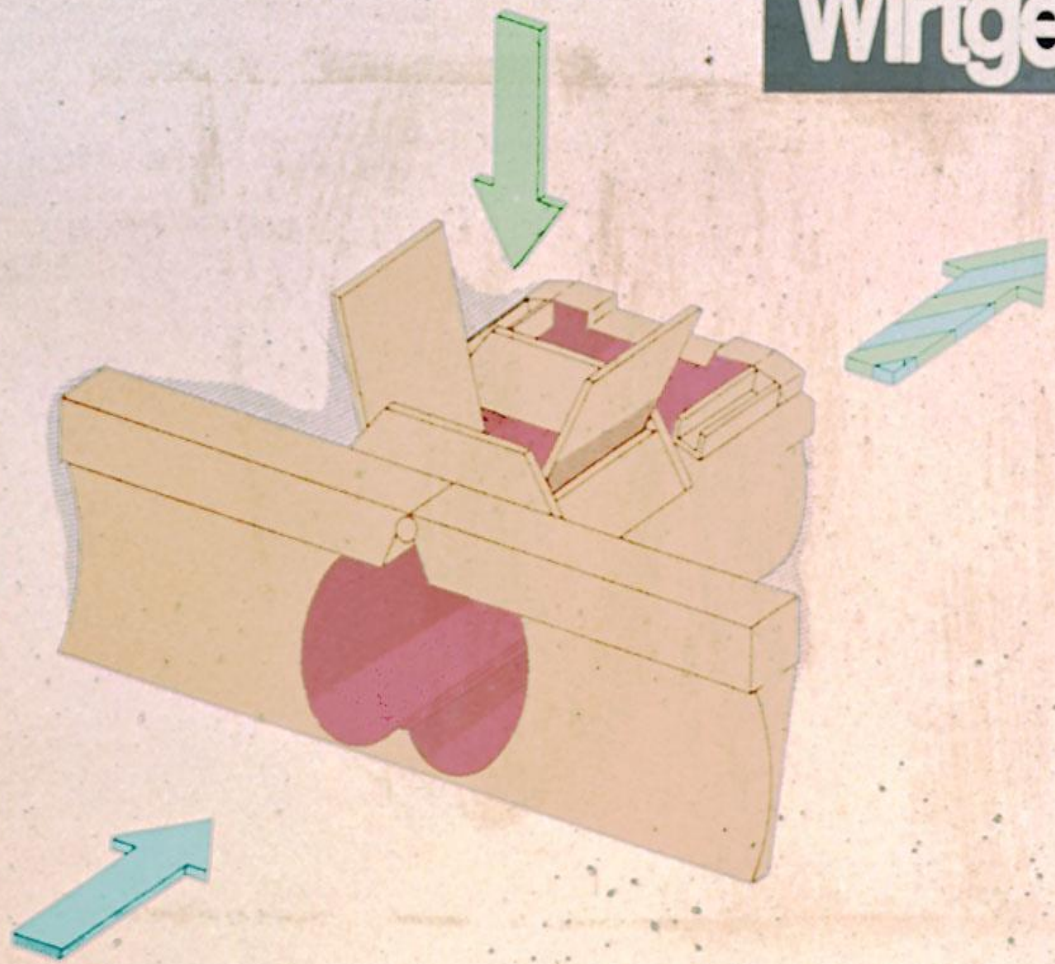
Remixing

Heating, reworking and rejuvenating the top 1 to 1-1/2 inches of an existing asphalt pavement adding virgin admix and mixing the combined recycled and new material in a pugmill prior to laying, either as a binder or surface course.


SLOAN


WIRTGEN
REMIXER
SLOAN

Wirtgen



Mischwerk für Remixer


AR2000

Laydown

Hot In-Place Recycling

- Treats surface to a depth of 1 inch
- A hot process
- Adds additional binder/modifier
- Adds additional hot mix asphalt
- Increase structural coefficient

Recycling Depth Considerations

- Depth of existing HMA
- Depth of distress
- Recompaction considerations
- Smoothness considerations
- Asphalt content
- Age of asphalt cement

Project Considerations

- Uniformity
- Depth of existing HMA
- Presence of Chip Seals
- Asphalt content (bleeding)
- Asphalt properties
- Traffic
- Types of pavement distress
- Environment

Decision Making Process of Public Agency

- Field Samples
- Field tests
- Analysis
- Evaluation (pavement history)
- Options

Potential HIPR Benefits

- Repairs Distress
- Extends Life
- Improves Ride Quality
- Improves Friction Coefficient
- Improves Appearance
- Improved Bonding
- Work completed in a single pass