Manitoba's In-Place Recycling Experience

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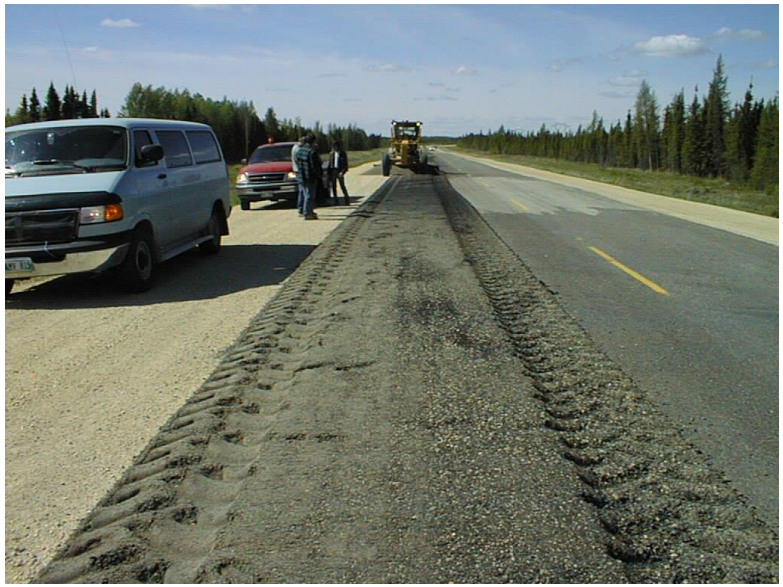
Manitoba

In-Place Recycling Processes

- Pulverize Existing Surface
- CIR
- FDR

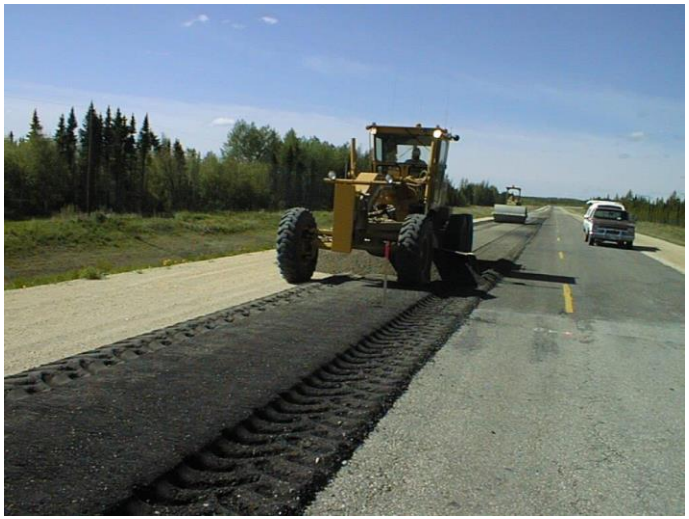
Pulverize Existing Surface

- Has been used since 1999
- Equipment: rotomill or reclaiming machine
- Up to 200mm (8”) depth of existing surface



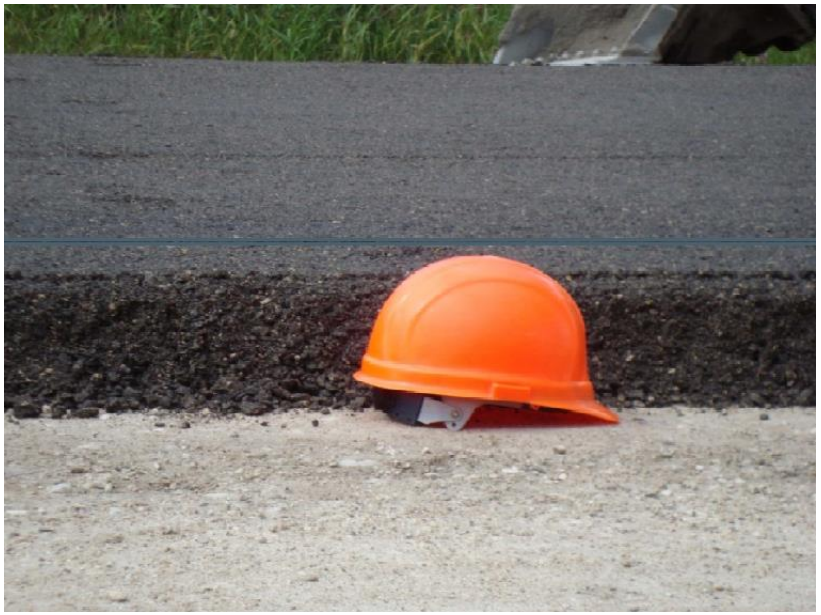
Pulverize Existing Surface

- Typically only in the asphalt pavement layer
- No emulsion or asphalt cement added
- Blade, shape, re-work, pack with steel vibrator and rubber pneumatic roller



CIR

- Construction completed
  - 2010 (1 project)
  - 2012 (2 projects)



- Foamed Asphalt Cement

FDR

- Tendered and awarded
- Construction to commence 2014
- Completed foamed asphalt cement mix design

- Challenges with existing pavement thickness

Implementation

- Executive support
  - Economic benefits
    - 10-20% cost savings compared to conventional HMA design
  - Environmental benefits
    - Reduced raw aggregate and asphalt cement

Implementation

- Educate ourselves
  - From experienced Contractors and Suppliers
  - Workshop 2009
    - Executive, technical and field staff participation
  - Internal In-Place Recycling Working Group

Implementation

- Specifications
  - CIR and FDR specifications based upon Ontario's specifications
- Consulted with local Industry

How has it been working?

Manitoba

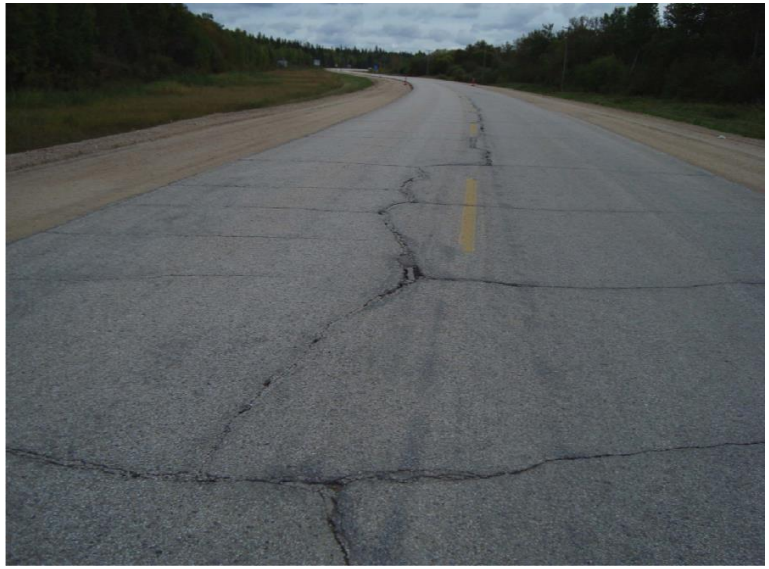
Good, eh?

How has it been working?

- Adjusted our specification
  - Moisture requirements
  - Compaction effort
- Positive support from Elected Officials
- Performance as expected, compared to conventional methods

Lessons Learned

- Project selection
- Pre-engineering require
  - Core, core, core
    - Asphalt cement graded
    - Gradation
  - Blind mix design completed



Moving Forward

- Communicate with Industry about Department's future plans
- Stay current with changing specifications and technology
- Continue to educate internally

Questions