CRCP Rehabilitation

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The Keys to Developing a Rehab Strategy
- Understanding the mechanisms causing the distress
- Understanding the impact of the rehab strategy on pavement performance

FHWA & CRSI
CRCP Suite of Guides

Developing a Rehab Strategy
- Records Review
- Evaluation
- Analysis

ANALYSIS

ANALYSIS
CRCP Rehab Options
- Isolated repairs

Isolated Repairs
- Full depth

Isolated Repairs
- Full depth
- Partial depth

CRCP Rehab Options
- Isolated repairs
- Grinding

Grinding
- Restore skid (may expose soft CA)
- Added smoothness
Grinding
- Restore skid (may expose soft CA)
- Added smoothness
- Reduce noise

Grinding
- Restore skid (may expose soft CA)
- Added smoothness
- Reduce noise
- Looks good

CRCP Rehab Options
- Isolated repairs
- Grinding
- Stitching

Stitching Longitudinal Joints
- Safety

Stitching Longitudinal Joints
- Safety
- Establish Load Transfer
- Reduces Loss of Support
CRCP Rehab Options
- Isolated repairs
- Grinding
- Stitching
- Tied Concrete Shoulders

Tied Concrete Shoulders
- Increased Structural Capacity
- Protects the Layers Under the Load

Tied Concrete Shoulders
- Increased Structural Capacity
- Protects the Layers Under the Load
- Detour or Traffic Lane

CRCP Rehab Options
- Isolated repairs
- Grinding
- Stitching
- Tied Concrete Shoulders
- Bonded CRCP Overlay

Bonded CRCP Overlay
- Increased Structural Capacity
Bonded CRCP Overlay

- Increased Structural Capacity
- Added Steel to Hold Cracks Tight
- Minimum Increase in Thickness
- Requirements
  - Effective bond to existing CRCP

Increased Structural Capacity
- Added Steel to Hold Cracks Tight
- Minimum Increase in Thickness
- Requirements
  - Effective bond to existing CRCP
  - Load transfer efficiency of at least ___?

Effective bond to existing CRCP
- Load transfer efficiency of at least ___?
- Stabilize areas with loss of support

Isolated repairs
- Grinding
- Stitching
- Tied Concrete Shoulders
- Bonded CRCP Overlay
- Unbonded CRCP Overlay
Unbonded CRCP Overlay

- Requires Less Repair

- HMA Layer Required
  - Bond Breaker
  - Level Up

- > Distress Requires > Thickness

Existing CRCP Treated as a Layer in a Composite Structure

CRCP Rehab Options

- Isolated repairs
- Grinding
- Stitching
- Tied Concrete Shoulders
- Bonded CRCP Overlay
- Unbonded CRCP Overlay
- Thin HMA Overlay
Interstate 664

Interstate 664 NB

Interstate 664

Interstate 664 SB After Powhatan O

Interstate 664 SB After Powhatan

Interstate 664 SB Looking back at Powhatan21

Interstate 64

- Overall Condition
  - Poor

- Mainline
  - Color: Black
  - Texture: Rough
  - Condition: Poor

- Shoulder
  - Color: Black
  - Texture: Rough
  - Condition: Poor

- Median
  - Color: Black
  - Texture: Rough
  - Condition: Poor

- Roadway
  - Color: Black
  - Texture: Rough
  - Condition: Poor

- Infrastructure
  - Guardrail: Present
  - Median Barrier: Present
  - Signage: Present

- Pavement
  - Condition: Poor

- Weather
  - Rain: Present

- Traffic
  - Volume: Low

- Maintenance
  - Needs: Repairs

- Recommendations
  - Rehab: Required
  - Repairs: Immediate

- Funding
  - Source: Local

- Conclusion
  - Immediate repairs are necessary to ensure safety and functionality.
Interstate 295 East

(a)

Interstate 295 East

(b)

Interstate 295 East

(c)

Interstate 295 East

(d)

Interstate 295 West