

CONCRETE PAVEMENT REHABILITATION



Kent County
Road Commission

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PURPOSE

- Repair a Specific Distress
- Improve Ride Quality
- KCRC has approx. 28 Miles of Concrete Roads



Figure A 5-694.901



Figure B 5-694.901



Figure C 5-694.901



Full Depth

Unbonded Concrete Overlay

Joint Repair/Seal

Diamond Grinding

Slab Lifting/Stabilization

HMA Overlay





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Unbonded Concrete Overlay





White Topping

- 4" = 4'x4' Joint Grid
- 6" = 6'x6' Joint Grid
- Transverse Expansion joints every 500 ft.





Concrete Cracking

- Shrinkage
- Hairline
- Settlement
- Structural

Joint Spacing

- 2-3 times the thickness of Concrete
 - 6" Conc. = 12-18' Joints



Crack Sealing

- Hot Poured Rubber
- Silicone

Load Transfer Restoration

- Dowel Bar Retrofit
- Crack Stitching



Diamond Grinding

- Improve Ride Quality
- Reduce Dynamic Loads
- Reduce Tire Noise
- Overlay Alternate





Slab Lifting/Stabilization



- High Density Polyurethane Foam
- Cementitious Grout or Flowable Fill





- Direct with Membrane
- Rubblization
- Crack and Seal
- Bond Breaker





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Concrete Rubblizing





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Crack and Seat





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Concrete Intersections





- Typically High Volume Roads – U.S. Routes
- Phase Construction
- Maintaining Traffic
- Compromise Quality To Keep Traffic Moving



Proper Repair Methods?



HMA Repair Products and
Techniques Don't Work –
Look Bad and Ride Bad

