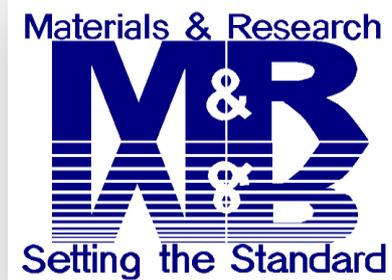




# Pavement Design Section

11/19/2008





# Pavement Design

## Mission

The pavement design section provides comprehensive design of asphalt, concrete, and composite pavements as well as accurate calculation of contract construction quantities. The section performs field inspection and identification of pavement repair needs and writes appropriate specifications and special provisions to the Standard Specifications for Highway Construction. Pavement coring and Falling Weight Deflectometer testing is also accomplished within the section. All work is done in a timely manner that supports the NDOR letting schedule.

# Pavement Design

- **Design of the Entire Pavement Structure**
  - **Soil, Foundation Course, Pavement**
  - **Materials & Thicknesses**
- **New build – 10%**
  - **Analyze traffic, design life, materials, cost**
- **Resurfacing – 90%**
  - **Analyze existing structure, distresses, design life, traffic, cost**
- **Office work – 90%, Field work – 10%**



# Current Resurfacing Strategies

## Asphalt Roadways

- **Asphalt Overlay**
- **Asphalt Mill and Overlay**
- **Recycle**
  - **Hot In Place Recycle**
  - **Hydrated Lime Slurry Stabilization**
  - **Full Depth Reclamation w/fly ash, cement, or emulsion**
- **New** - Fly Ash Slurry Injection of Thermal Cracks w/Mill and Fill

## Concrete Roadways

- **Repair and Diamond Grind**
- **Asphalt Overlay**
- **Recycle & Overlay**
  - **Crack and Seal**
  - **Rubbilization**

## Hydrated Lime Slurry Stabilization



## Hot In Place Recycle



## New Concrete



## Full Depth Reclamation w/Fly Ash



## Rubbilization and Overlay



## Crack and Seat and Overlay

SEP 20 2004



I-480



I-480 Night work Crew

Dodge Street  
Omaha



US-6 Night Work Crew



Inspection Team  
West Dodge - Omaha



Night Work Inspection

# FWD Falling Weight Deflectometer





# Field Inspection Concrete Repair Measurements



**Asphalt Coring Verifying the Design**



# Structural Evaluation of Flooded Roadway Niobrara, NE