Pavement Management System

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Current Management System

• Pavement Condition Index (PCI)
  • Developed by the US Army Corp of Engineers
  • Most widely used rating system – survey and calculations are standardized by ASTM
  • Numerical index between 0 and 100 that indicates the general condition of the pavement (0 = Worst; 100 = Best)
Current Management System

- Pavement Condition Index (PCI)
  - Statistical measure and utilizes a manual survey of type, severity, and extent of pavement distresses
Current Management System

• Benefits of PCI
  • Provides a more accurate overview of road network condition
  • More detailed analysis and robust ratings index
  • Quantifies distress – not as subjective
  • Gives an indication of rate of deterioration
  • Allows for better monitoring of pavement condition over time
Current Management System

- Pavement Condition Index (PCI)
  - Focus on lower cost maintenance
Current Management System

• TotalPave PCI
  • Implemented in 2015
  • Smartphone app
  • Developed by UNB Grab Students with a goal of simplifying data collection and calculations
  • Road sections broken into intervals and distresses are entered on phone
  • Real-time calculation and upload of data to web
Current Management System

- TotalPave PCI – Web Portal
Rehabilitation/Maintenance Options

• Considerations
  • PCI rating
  • Traffic Volumes
  • Surface defects
  • Sub-base condition
  • Drainage
  • Other infrastructure
    • Water
    • Sewer
    • Storm
    • Curb and sidewalks
Rehabilitation/Maintenance Options

• Options
  • Pothole patching
  • Crack sealing
  • Cutting and patching
  • Milling and patching
  • Milling and overlay
  • Micro-surfacing
  • Full-Reconstruction
Budget Considerations

• Pavement Management is Costly
  • Crack sealing ~ $1.25/linear m
  • Milling and Paving ~ $220/m
  • Full-Reconstruction ~ $500-$550/m
Budget Considerations

- 2008/2009 Budget
  - Street Capital - $1,550,000
  - Sidewalk Capital - $885,000

- 2017/2018 Budget
  - Street and Sidewalk Capital - $900,000

- Increased focus on maintenance activities
- Shift away from ‘worst first’