

# Infrastructure Needs: County, Township and Tribal Roads and Bridges: 2022-2041

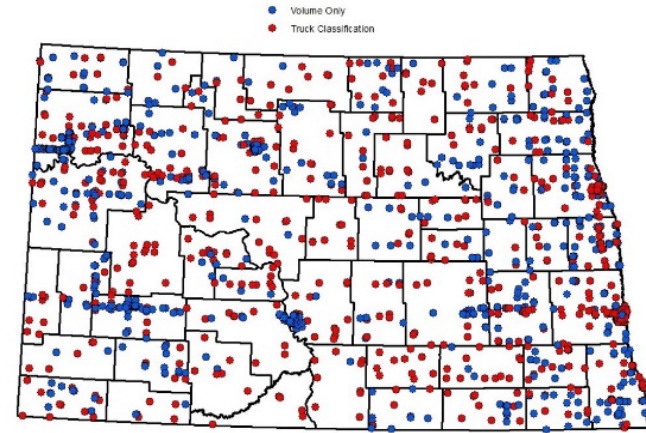
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# Study Objective

- Estimate the funding needs to maintain the existing road system over the next 20 years

# Study Components

- Traffic Model
  - Key component for modeling pavement and gravel needs
    - Gravel – higher traffic results in more frequent maintenance
    - Paved – design is based on ESALs, higher traffic results in thicker pavements and accelerates deterioration
  - Based upon traffic generators, destinations
    - Agricultural Traffic
    - Oil Related Traffic
  - Calibrated using traffic counts



# Study Components

- Unpaved Roads Costing
  - Statewide county and township survey
    - Component Costs
    - Practices at different traffic levels
    - Blading
    - Regraveling thickness and frequency
    - Dust suppressant and base stabilization
  - Establish annual per-mile costs by traffic category, county and jurisdiction

# Study Components

- Pavement Model and Cost Projection
  - Data Collection
    - Pavement condition
    - GRIT – county entered data
    - Existing roadbed strength
  - Analysis (AASHTO 93)
    - Forecast pavement deterioration and improvement timing
      - Overlay
      - Reconstruction
      - Widening

# Study Components

- Bridge Model and Cost Projection
  - Utilizes National Bridge Inventory System (NBIS) data
  - Development of Bridge Needs Target (BNT) to evaluate bridge condition to estimate improvement and maintenance costs
  - Developed with the assistance of a panel of county engineers

# Study Results

Period	Unpaved (\$M)	Paved (\$M)	Bridges (\$M)	Total (\$M)
2022-2023	\$ 660.35	\$ 557.10	\$139.42	\$1,356.87
2024-2025	\$ 650.79	\$ 515.00	\$139.42	\$1,305.21
2026-2027	\$ 665.91	\$ 371.50	\$139.42	\$1,176.83
2028-2029	\$ 665.55	\$ 344.90	\$139.42	\$1,149.87
2030-2031	\$ 651.44	\$ 274.30	\$139.42	\$1,065.16
2032-2041	\$ 3,251.62	\$ 1,186.00	\$18.45	\$4,456.07
2022-2041	\$ 6,545.66	\$ 3,248.80	\$715.57	\$10,510.01

Category	2020-2039 (\$M)	2022-2041 (\$M)	% Change
Unpaved	\$6,056.34	\$6,545.66	8.07%
Paved	\$2,668.49	\$3,248.80	21.75%
Bridges	\$498.81	\$715.57	43.46%
Total	\$9,223.64	\$10,510.01	13.95%

# Upcoming Study

- Enhanced Data Collection
  - Traffic Counts
  - Gravel Survey
  - Pavement Condition
    - 1/2 of the state each year
  - GRIT Data



# Upcoming Study

- Meetings with county road supervisors
  - Jurisdiction
    - Verify ownership and maintenance responsibility
      - Federal Aid (CMC)
      - County non-CMC
      - Township (organized)
      - Township (unorganized)
      - Tribal
      - BIA
      - Federal (Forest Service, Air Force, etc.)
  - Traffic Generators
    - Recent changes and potential facility locations

# Questions?

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[https://www.ugpti.org/downloads/road\\_needs/](https://www.ugpti.org/downloads/road_needs/)