State of Structures

SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION

Director Mike Behm PE, Division of Planning & Engineering
HIGHWAYS
State – 7,793 centerline miles
Local Government – 73,904 miles
  • County – 35,068 miles
  • City – 4,420 miles
  • Town/Township – 30,892 miles
  • Other Admin – 3,524 miles

STRUCTURES
State – 1,819
Local Government – 3,941
  • County – 3,673
  • City - 179
  • Town – 69
  • GF&P - 20
STATE-OWNED BRIDGES
Number and Condition

2022 Condition of State owned Structures
(as a percentage of deck area)

2022 Condition of State owned Structures
(as a percentage of total structures)
Average age of State-owned Structures in South Dakota is 46 years old.
54% of state-owned bridges are at least 50 years old.
National average age is 44.4 years old.
Number of New Structures Constructed on State System - Actual and Forecast

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Major Bridge Project *In the Works*:

**Platte-Winner Bridge**
on SD44

- 2024 Letting
- $158 Million
- Final Design in Progress
Major Bridge Project *In the Works:*

**Deadwood “Box”**

2028 Letting
$69 Million
Route Location Study Underway
Major Bridge Project *In the Works:*

**US 212 over Missouri**
**Forest City**

- 2030 Letting
- $179 Million
- Route Location Study Underway
FUNDING FOR STATE STRUCTURES

STATE FUNDS
Fuel Tax & Excise Tax
- Match for federal funds
- Structure maintenance

FEDERAL FUNDS
Federal legislation
- Bridge Formula Funds ($38.25 M)
- 2022 HIP funds (Local portion by poor deck area)
- Discretionary funds???
### LOCAL GOVERNMENT BRIDGES

**Number and Condition**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Number of Bridges</th>
<th>% of Total Number of Bridges</th>
<th>Deck Area (sq ft)</th>
<th>% of Total Deck Area</th>
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<tr>
<td>Good</td>
<td>1,254</td>
<td>31.8%</td>
<td>2,427,567</td>
<td>31.1%</td>
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<td>Fair</td>
<td>1,744</td>
<td>44.3%</td>
<td>4,001,897</td>
<td>51.3%</td>
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<td>Poor</td>
<td>943</td>
<td>23.9%</td>
<td>1,368,652</td>
<td>17.6%</td>
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<td>Total</td>
<td>3,941</td>
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<td>7,798,117</td>
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</table>
Average age of local government structures in South Dakota is 50.4 years old
National average age is 44.4 years old
South Dakota Bridges Built by Decade

- Local Bridges
- State Bridges

- 1900's: 37
- 1910's: 75
- 1920's: 0
- 1930's: 0
- 1940's: 11
- 1950's: 37
- 1960's: 68
- 1970's: 439
- 1980's: 476
- 1990's: 412
- 2000's: 173
- 2010's: 178

- 1900's: 39
- 1910's: 0
- 1920's: 0
- 1930's: 13
- 1940's: 68
- 1950's: 287
- 1960's: 328
- 1970's: 398
- 1980's: 412
- 1990's: 173
- 2000's: 178
- 2010's: 39
FUNDING FOR LOCAL GOVERNMENT STRUCTURES

LOCAL FUNDS
- Vehicle Registration, Wheel Tax, County General Funds, etc.
- Match to Federal Funds
- Match to BIG Funds
- Structure Replacement
- Structure Rehabilitation
- Structure maintenance

BIG
- State Law, Transportation Commission
- Preliminary Engineering
- Preservation
- Structure Replacement
- Structure Rehabilitation

FEDERAL FUNDS
- Federal legislation
  - Bridge Formula Funds
  - 2022 HIP funds
  - Discretionary funds???
LOCAL FUNDS

Owner budgets improvements
Design completed
Necessary permits gained
Project is let
Plans provided to DOT

Since 2015, 143 structures have been replaced by local governments.
Bridge Improvement Grant (BIG) History

BIG funds
- Planning requirements met
- Application submitted to DOT
- Project is awarded

Preliminary Engineering
- Preliminary Design begins
- Ends with a Type Size & Location

Replacement/Rehabilitation
Project is “Bid Ready”
- Plans reviewed and letting authorization
- Project is let
- Construction Engineering is completed
- Plans provided to DOT

Project needs final design
- Design based on TS&L is complete
- Necessary Permits are gained
- Project is let
- Construction Engineering is completed
- Plans provided to DOT

Since 2015, 203 structures have had PE completed, been replaced, rehabilitated, or had preservation work completed.

215 structures are planned to have PE completed, be replaced or rehabilitated, or preservation work done in the next 3 years.
FEDERAL FUNDS

Application submitted to DOT
Design Complete
 Necessary Permits gained
Plans reviewed
FHWA Concurrence
Project is let by DOT
Construction Engineering is completed by DOT

The 2020 Local Federal Aid Bridge program included 49 structure replacements and 7 removals.
The 2021 Local Federal Aid Bridge program included 35 replacements and 11 removals.
Requirements

- Right-of-Way
- Utilities
- FEMA
- US Army Corps Permits
- NEPA
- Stormwater
- Etc.
Questions?