# Bridge Inspection & Load Rating



2022 COUNTY ROADS CONFERENCE BRYON FUCHS, PE NDDOT

Dakota | Transportation

# History

#### ► NDDOT

- Completing inspections on state and local bridges (>20.0' in length) since the Bridge Inspection Program began
  - NDDOT internal staff
- In 2020, moved to Consultants for all locally owned bridges and some stateowned bridges with NDDOT staff managing the contracts
- NDDOT is still inspecting the majority of the state-owned bridges, but consulting the remaining



## Why we invest so much time, effort, and funds for Inspections/Load Rating?

#### ► Safety is #1!

- Mobility
- Movement of freight (agriculture, oil, etc.)
  - Vital link in the transportation network
- Emergency Services
- Asset Management



### So Where are we at?

- 2020/2021 Bridge inspection cycle has been completed
- Most of the 2020 load rating have been completed and approved
- 2021 load ratings are coming all are due by June 30, 2022



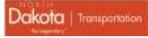
# What did we learn and some numbers?

- Improved inspections and Documentation!!!!
- Some bridges weren't as good as we thought!
- Inspections/load ratings are showing the need for some repairs and/or rehab to remain open or improve load carrying capacity
- Critical findings
  - ▶ 182 were issued
    - ▶ Load posting signs and substructure issues were the majority, some closures
- New or Reduced Load Postings (about 45% Load Rating are in)
  - 183 load postings
- Closures based on Load Ratings
  - About 10 so far



### Reminders!!

- Critical findings closures and load postings
  - 30-days to post
  - Closures are supposed to done immediately
- ▶ Repairs, new construction, replaced
  - Structural Inspection Notification form
    - Submit prior to opening bridge, not at the end of the year!!!!
    - Proposed changes will require an inspection prior to opening
    - Document everything!!!



### Reminders!!

- New or Replaced bridges will get a new Bridge #!?!
  - Once you know the size and location, please notify us and provide the information – new bridge ID will be provided if necessary
- Load postings as a result load ratings go out on a monthly basis
  - Operating rating may no longer be the max posting allowed



### Reminder and look ahead

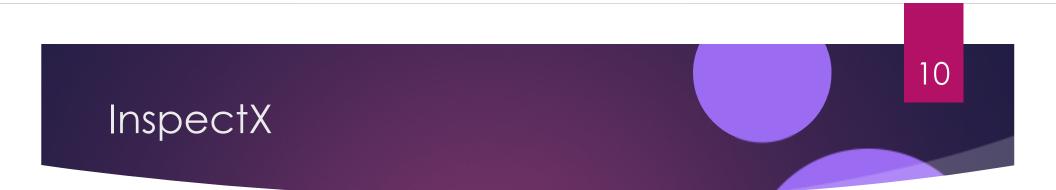
- All Load ratings for new bridges need to be done by the designer
  - Needs to be done prior to opening to traffic
  - Started with the Oct 2020 bid opening or locally funded bridges in 2020
- Starting to look at 2022 Bridge inspection cycle
  - ▶ Let us know about removals, replacements, planned repairs, etc.
  - ▶ The inspection month (schedule) is in InspectX plan accordingly



# Bridge Inspections (2022/2023)

- Consultants will be completing inspections again and possibly some load ratings as needed
- Interviews were held (9), entering negotiation fee
- 4 Regions again
- Will start in April and go through November
- Costs should be about 50% of what they previously were since no load ratings will be completed on every bridge this time
- Extended contracts possibly 2024/2025

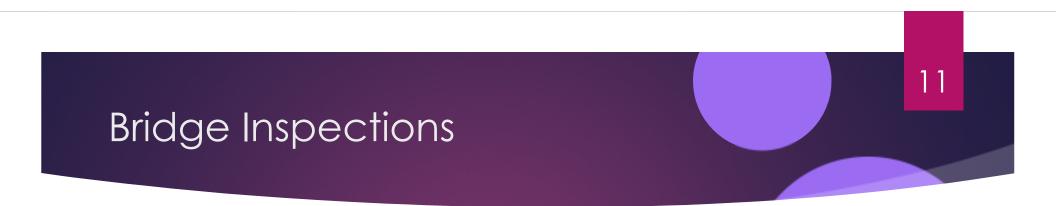




#### ► InspectX

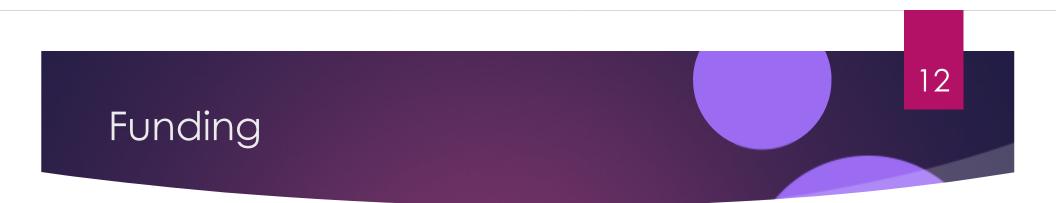
- Full name, email, and phone #
- 21 Counties HAVE NOT requested access to obtain their bridge inspection reports, etc.





Discussion





- ► HB 1505 Bridge Projects (ARPA)
- New Highway Bill (IIJA)



## Funding – HB 1505 Bridge Projects

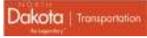
- 39 Counties submitted at least 1 application
- ▶ 111 applications received
- 129 total bridges were submitted
- Total Cost \$109M
- ▶ Funds Requested \$89.9M
- Available Funds \$24,652,429
- Executive office is reviewing list for approval



# Funding – IIJA Preliminary #'s

#### Approximately about \$103M more

- ▶ NHPP \$26M
- STBGP \$6M (55% sub-allocation)
- ► HSIP \$4M
- ▶ EV \$5M (new)
- Bridge \$45M (new), 15% minimum
- Carbon Reduction \$8M (new) (65% sub-allocation)
- PROTECT \$9M (new)
- Population shifts
  - Old 57.6% Urban vs 42.4% Rural
  - New 61.7% Urban vs 38.3% Rural (Preliminary)



# Funding – IIJA Preliminary #'s

- Transportation Alternatives (TA) (59% sub-allocation)
  - Should more than double current available funding

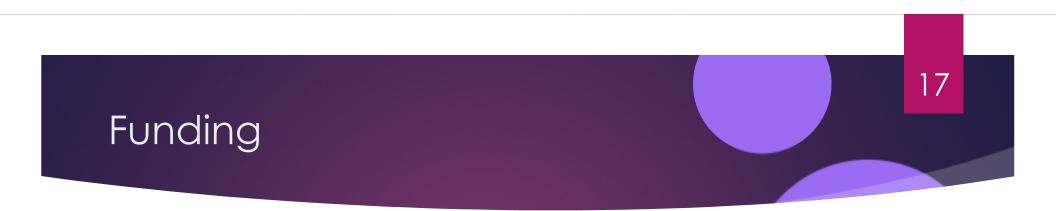


# Funding – IIJA Preliminary #'s

#### Bridge Funding

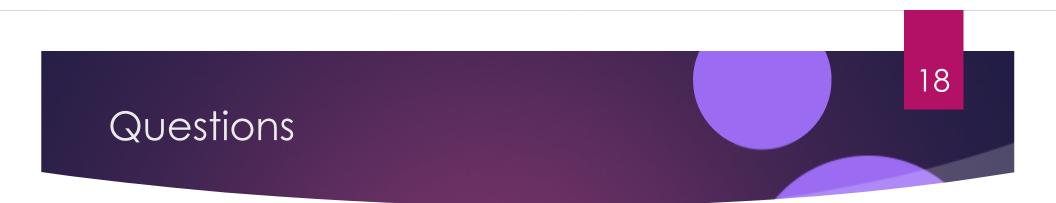
- Significantly more
- Looking at a Separate program go away if not used
  - Bridge View
- Backlog of Projects/Applications
  - Previously approved for Funding \$24M (federal)
  - Tentatively approved \$14M (federal)
  - Unfunded HB 1505 Applications \$65M (federal)





Discussion







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