



2021 GRIT Updates & New Features

Webinar | August 11, 2021

Presented by Brad Wentz, P.E.

Highlights and Overview by

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Transportation Liaison Assistant
Engineer | August 23, 2021

The GRIT update for 2021 has a wide variety of enhancements and new features. This update is based on input from N.D. counties and presented by Brad Wentz via webinar on August 11, 2021. Following are brief highlights of the update. For a complete understanding of the new updates and features, please view the video of the webinar available at [UGPTI Resource web page](#).

Load Restriction Layer

- Date Manager
 - Select start and end dates for when load restrictions are to be activated/deactivated
 - Separate selection for all paved roads and unpaved roads
 - Zone Declaration
 - Restrictions can be set up by zone (i.e., some counties may want restrictions in the south half of the county to start and end before the north half)
 - Each road segment can be assigned a segment
 - Make sure data is up to date as this data is being shared with the NDDOT Roadway Information Map

Construction Planning Layer

- Under “Project Info” button
 - Construction Type dropdown
 - Emergency is new
 - To be used for emergency projects such as spring flooding
 - Under Background Layers – Construction Planning - Current Year Projects with Outdated Status
 - When turned on it will show the following:
 - For current year projects, segments will appear in red if:
 - Project status and date are not updated within last 3 weeks
 - Email will be sent to county engineer reminding them to update only if any projects have not been updated in last 3 weeks
 - Reminder to update as much information as possible
 - Estimated Total Cost
 - Final Total Cost
 - Public Impacts
 - Actual Construction Start and End dates
 - NOTE: This data is starting to be shown on the NDDOT Roadway Information Map
 - Make sure information is up to date

Minor Structures

- Under Location tab – Structure Position (New)
 - Can now identify if Centerline, Approach Rt or Approach Lt
- Photo Gallery
 - Can now take photos of structure and upload them to GRIT
 - Directly from smart phone or uploaded from PC
 - Can add comments to each photo
 - Limited to 5 photos/session
- Update data (reminder)
 - Year installed
 - Replacement cost (very useful data for new Dashboard Feature)

Construction History

- Base tab
 - Top and Bottom Base Layer
 - Select “Granular Sand” (New)
 - Does add value to structural number
- Subgrade
 - Can now add Resilient Modulus (psi)
 - Can now add Soil Factor (mainly for MN)
- Performance Button
 - Condition information now available (brought in from the needs study)
 - Tied to Construction Planning
 - Brings in project type and year from current “Construction Planning” layer – resets to new in year of project
- Strength Tab
 - Data brought in from Construction History and calculated based on depths entered
- Traffic Data Tab
 - Not available for ND Counties yet; will be shortly after this year’s collection is complete
- Future Tab
 - Data automatically brought in from other sources
 - Will project future pavement condition; can select by year
- Background Layers
 - New items added for:
 - Construction Planning
 - Ownership Load Restrictions
 - Minor Structures
 - Performance

Virtual Image Capture (New Layer)

- Added to gather pavement photos and roadway weather information
 - In GRIT, points are added on roadway segments where photos are desired
 - As vehicle drives to these added points, a photo is automatically taken
 - It is automatically stored in the system and available for viewing on a web map
 - When point selected in GRIT, photo is displayed
 - Photos can be deleted or archived
 - If photos are not archived, they will be deleted after one year
 - Smartphone with data services and access to vric web app required in truck*
 - Phone is mounted on dash of vehicle; app is turned on and photos automatically taken and uploaded when vehicle gets to pre-determined point
 - Can be viewed on GRIT Viewer map

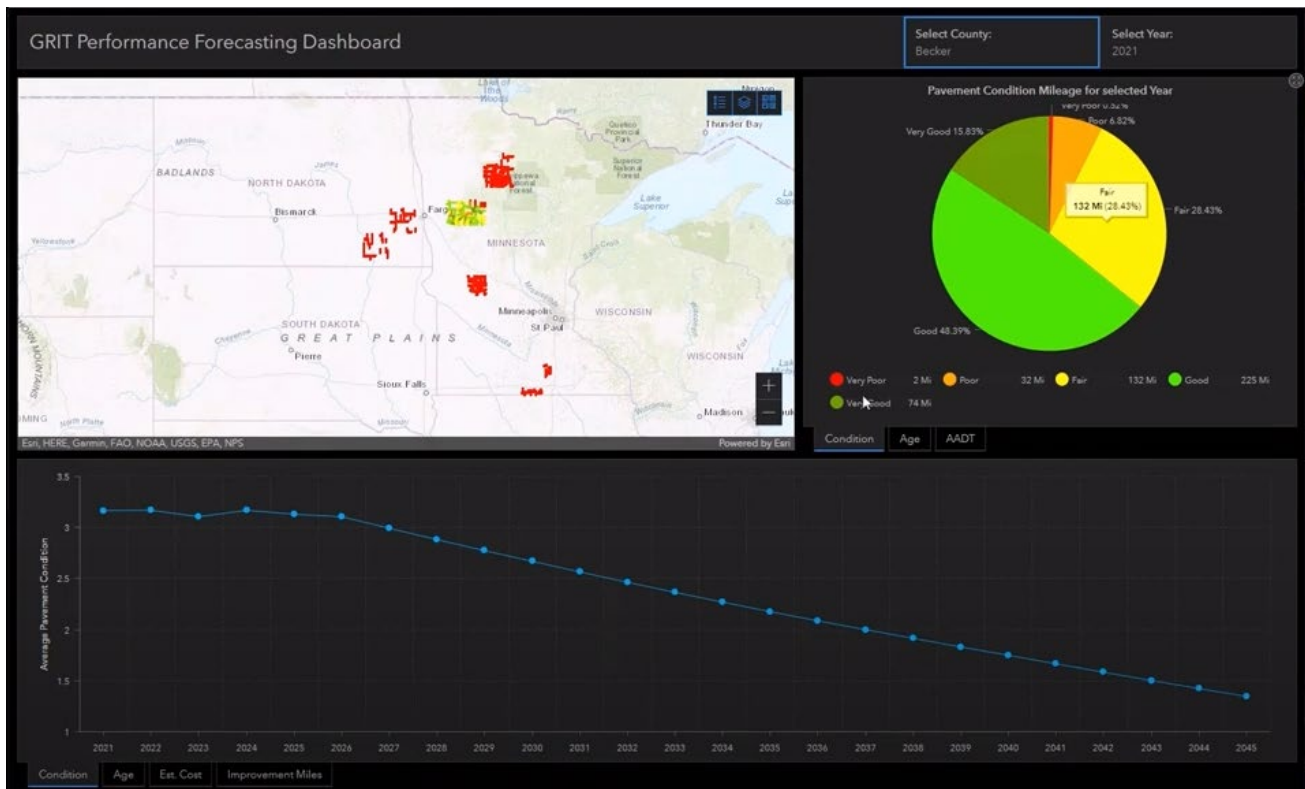
***NOTE:** Contact Brad Wentz if you want this app and layer added to your county GRIT system

WebMap Viewers (UGPTI Resource/GRIT web page)

- All Layers – ND
 - All layers from all counties are available for viewing on this public web site
- Information from needs study is available
 - Pavement condition info
 - Roadway image capture
- Load Restrictions
 - This information is made available on NDDOT Travel Information page
 - Shows proposed and active
 - With new feature, they can automatically be activated based on input in GRIT
- Pavement Condition Forecasting
 - Can show pavement condition by year using slider at bottom of map

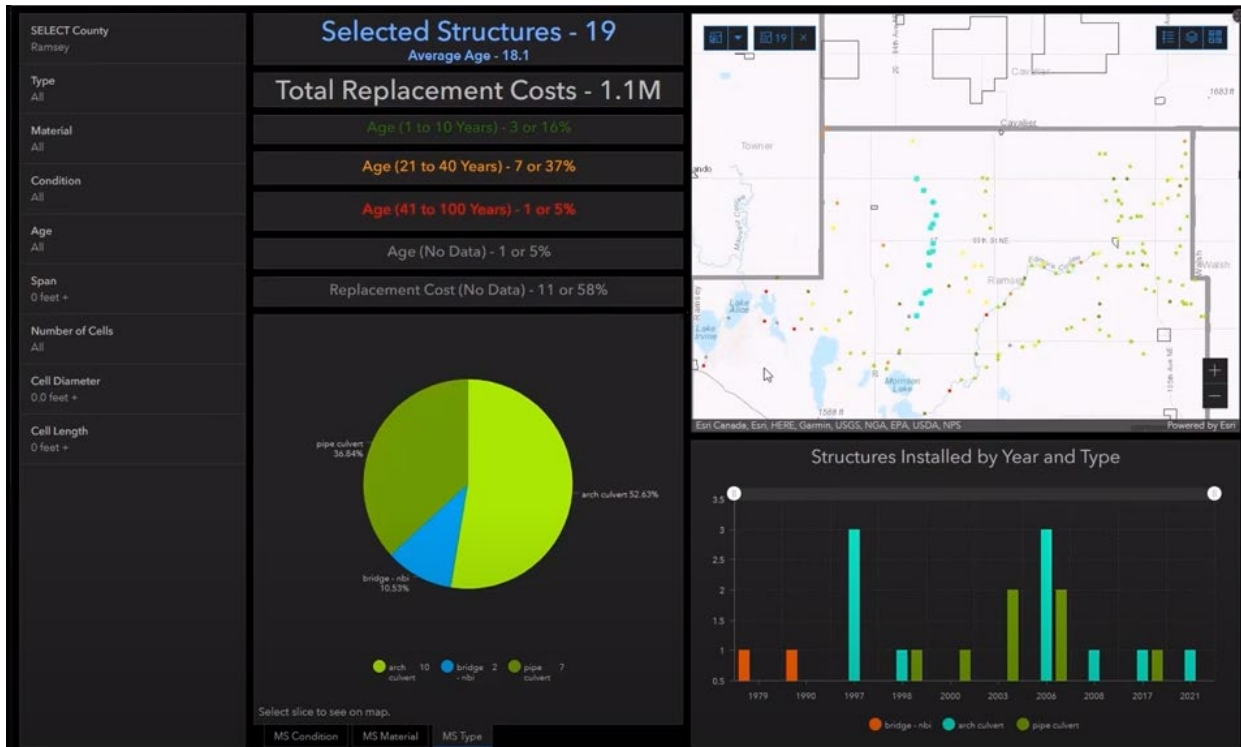
GRIT Dashboards (New) – Used for system-wide analysis

- Pavement Performance Forecasting
 - Pie Charts available:
 - Condition
 - Age
 - AADT
 - Graphs Available:
 - Condition
 - Age
 - Est. Cost (Need to input cost data in GRIT to show on graphs)
 - Improvement Miles
 - Selectable by County
 - Selectable by year



Pavement Performance Forecasting

- Minor Structures
 - Pie Chart available for:
 - Condition
 - Material
 - Type
 - Replacement Cost
 - Help with budgeting/planning
 - Replacement cost info must be input into GRIT to help with budgeting/planning
 - Structure Installed by Year and Type
 - Need to ensure data is up to date in GRIT (i.e., date installed, etc.)
 - Can view by material type, age, condition, span, number of cells, cell diameter and length
 - Can select minor structures by road segment or stream



Minor Structures Dashboard (Shows selected structures by stream name)

- ND County Crash Dashboard
 - Crash data available by:
 - County or entire state
 - Selectable by Year
 - To be used by counties for their own analysis for safety
 - Can view crash data by:
 - Severity
 - Event
 - Collision Manner
 - Contributing Factor (i.e., was it roadway, etc.)

All GRIT information, including previous webinars, training videos and Map Viewers, including the new Dashboards are available on the [Resource Page](#).

GRIT Team – Office and On-Site Assistance



Brad Wentz – Leanna Emmer – Kelly Bengston – Ed Ryen

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UGPTI and NDLTAP are ready to assist the counties with the new enhancements and features. Contact information for the GRIT Team is available on the [Help](#) section of the GRIT Resource Page.

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