Visualizing Asset Management in New Mexico

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Transportation Asset Management Plan

NMDOT TAMP Communications
The Structure of the NMDOT TAMP
The TAMP Document

• Communicate the messages in a visual way wherever possible

• Content communicated in easy to understand ways

• Met federal requirements
Web-Based TAMP

• Provide easier access for all stakeholders
• Available whenever wanted with use of any browser
• Will be basis for the “living TAMP” that supports a continuous improvements approach

New Mexico Department of Transportation
Online Transportation Asset Management Plan

Part I: Where Are We Now?  Part II: Where Are We Headed?  Part III: How Do We Get There?

Bridge Performance Measures

NMDOOT follows FHWA NBI standards for inspecting all bridges on public routes in New Mexico except for federally owned bridges. Inspectors record overall ratings for a bridge’s deck, superstructure, and substructure on a scale from 0 (failed) to 9 (excellent condition). Structures classified as culverts are included in the inventory if they are longer than 20 feet. For these structures, a single culvert rating is recorded using the same 0-9 scale. Bridge condition ratings are used to classify the bridge as being in good, fair or poor condition. The lowest of the three ratings for deck, superstructure and substructure determines the rating. If this value is 7 or greater the bridge is classified as being in good condition. If it is 5 or 6 the bridge is classified as being in fair condition, and if it is 4 or less the bridge is classified as being in poor condition. A bridge in poor condition is considered Structurally Deficient (SD). While a bridge may be classified as SD, this does not mean that the bridge is unsafe, rather that deficiencies have been identified that require maintenance, rehabilitation or replacement.

NMDOOT also performs element-level inspections that provide additional detail on individual components of a bridge. Element-level information is not factored into designation of SD or good-fair-poor condition ratings.

Bridge Condition

The table on the right summarizes the condition of the NMDOOT-owned NHS and non-NHS bridge inventory and the locally owned NHS bridge inventory. The conditions are summarized by the percent of bridges in good, fair and poor condition, weighted by deck area. 95.5% of NMDOOT’s bridges (weighted by deck area) are in good or fair condition and 4.3% are in poor condition.

As shown in the graph on the right, New Mexico bridge condition has been steadily improving since 2004. The percentage of NMDOOT bridges (weighted by deck area) classified as poor or SD has decreased from a high of over 16% in 2004 to less than 5% today. During this time, NMDOOT has made a considerable investment in bridge preservation by funding rehabilitation projects to address bridges in poor condition and preventive maintenance projects to extend the service life of bridges in fair or good condition.

Source: 2016 inventory and conditions report in the 2017 NBI submittal

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• Launch Asset Management Dashboard from web-based TAMP to access current data and create flexible views of asset information

• Created Asset Management Dashboard using Rolta OneView
• Allows flexible reporting and views of asset information
Entering the Dashboard

**Analytics**
Analytics provides role-based cross-functional insights using real-time and historical data from various internal and external networks.

**Bridge Condition Forecasting**
Bridge condition forecasting application forecast condition of the bridges for a period of 10 years based on the NHS budget, Non-NHS budgets, Priority and unspecified uses with the current condition of the bridges or considering the worst-case conditions.
Overview Screen
Pavement View

New Mexico Map

Map is for year 2017

Pavement Management-LFC

Lane Miles - Good

Lane Miles - Fair

Lane Miles - Poor

Non-Interstate
Interstate
StateWide
NHS
Non-NHS

22-Jun-2018
Condition Forecast

10 Year Condition Forecasting based on Funding

Scenario: KEEP CRNT CONDITION, NHS: All, Route Prefix: BL; FL; I; NM; NMX; US; USX;

- Recommended Treatment Cost
- Roughness Index (RI)
- Overall Condition Index (OCI)
- Pavement Condition Rating (PCR)
Benefits of Visualization Investments

- Greater buy-in from stakeholders on our TAMP
- Support from leadership for TAM
- Understanding of TAM strategies at district level
- Ability to connect statewide performance targets with district specific needs