





NDOT TAMP Update

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NDOT Goals and Objectives



Safety



Customer Service



Fiscal Responsibility



Asset Management



**Mobility/
Accessibility**



Freight Movement



Environmental Stewardship



The NDOT Transportation Asset Management Plan

- Included assets: pavement, bridge, intelligent transportation system (ITS) devices
- Preserving what we have saves money
- Managing to meet minimum performance targets
- Safety is not compromised
- 10-year investment strategies prioritize key corridors
- Risks are identified and addressed
- Next steps for continual improvement





Why Only Three Asset Types?

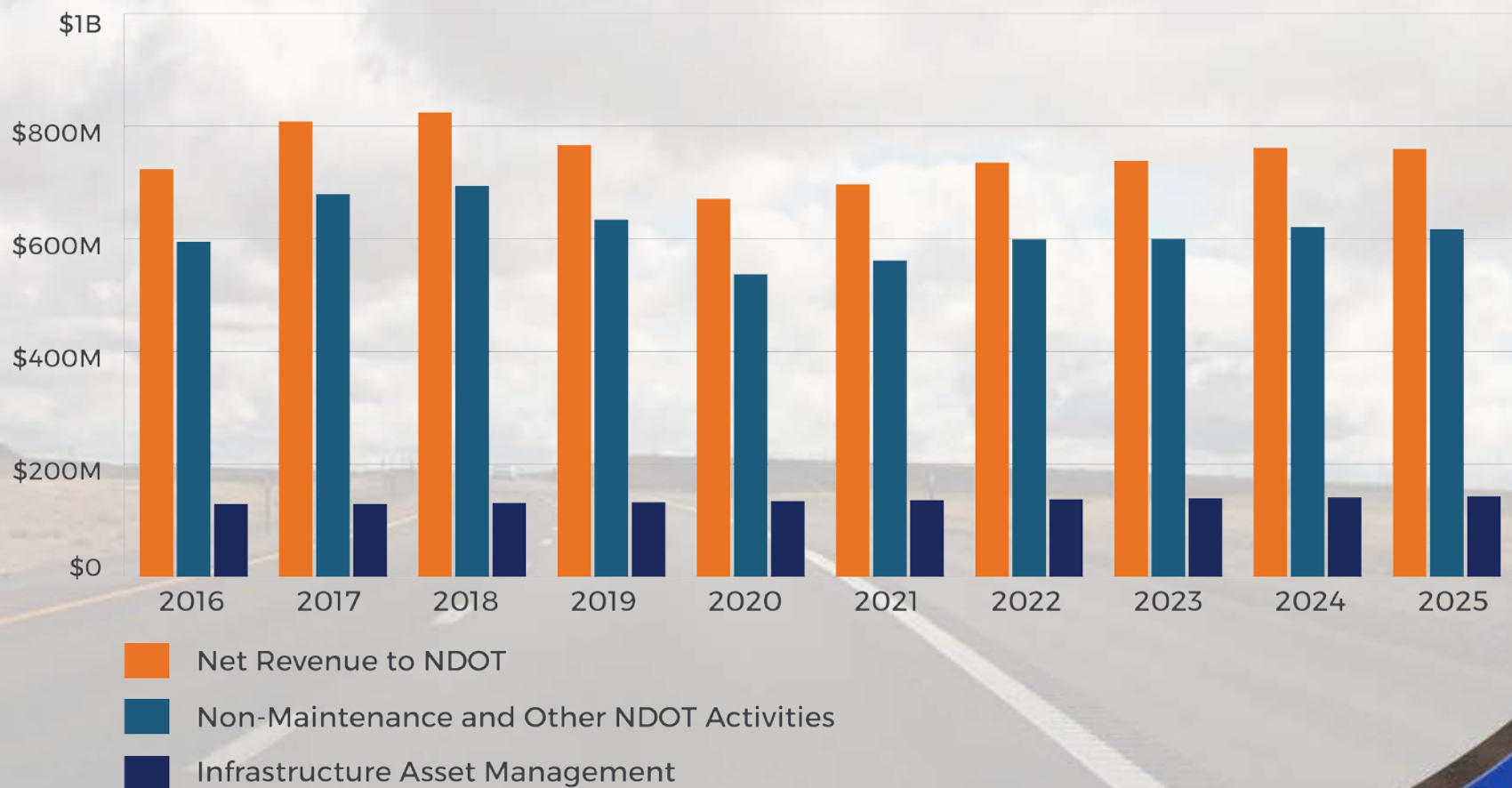
Implementation Tier	Assets Included
I – Have data, processes and analytic tools	<ul style="list-style-type: none">• Pavement• Bridges• ITS• Rest Areas & Buildings
II – Some, missing processes or analytics	<ul style="list-style-type: none">• Slopes• Guard Rails• Culverts & Pipes• Signs & Supports
III – Little to no information	<ul style="list-style-type: none">• Lighting Structures• Walls• Markings• Traffic Signals• Bike Paths & Sidewalks• Landscape Features• Others*

Tiers II and III will be added over time:

- Need inventory data and software tools
- Need to develop management strategies

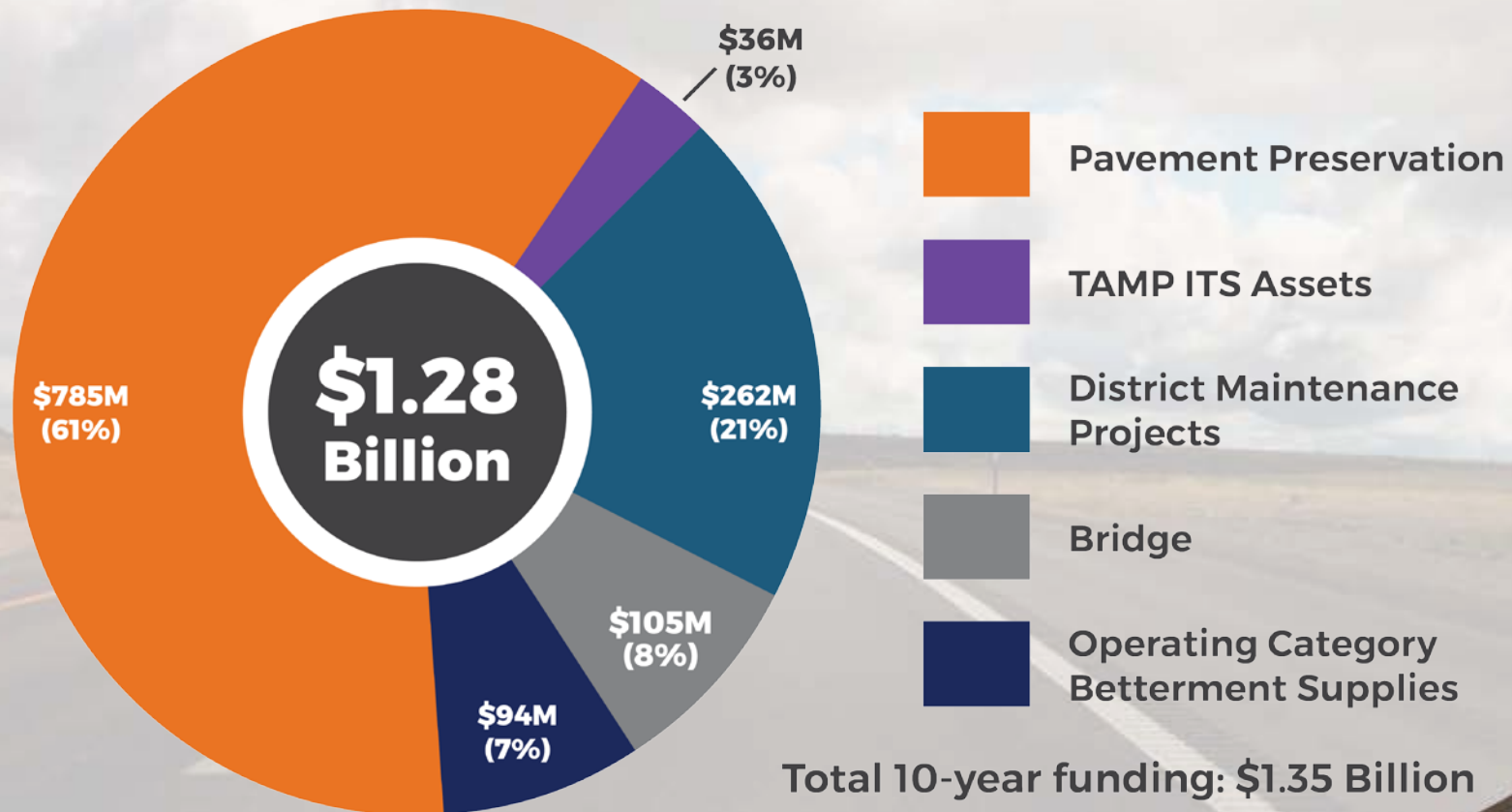


Projected Funding





Total 10-Year Funding for Preservation and Maintenance

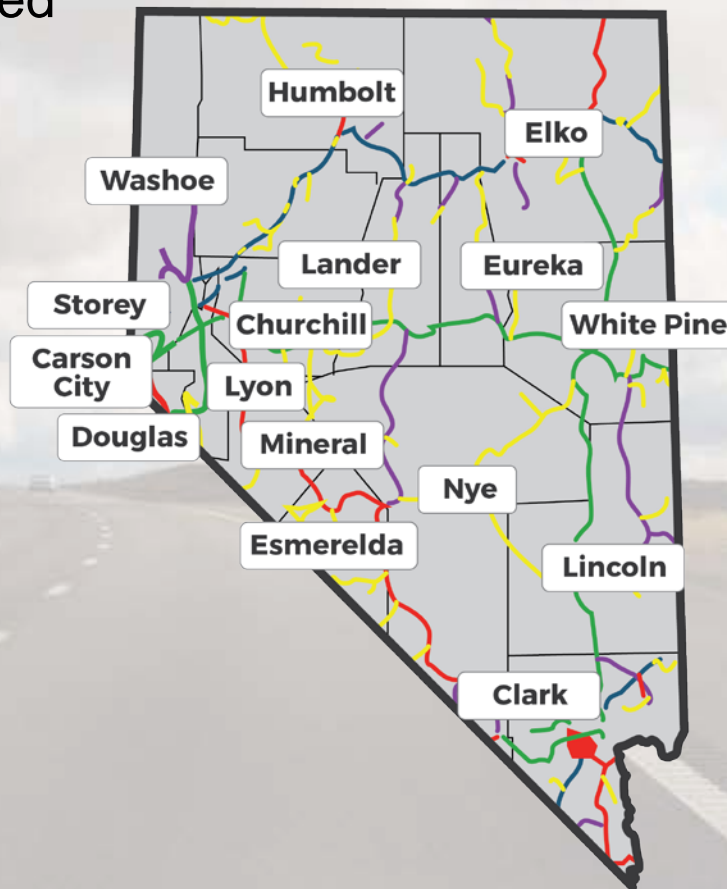




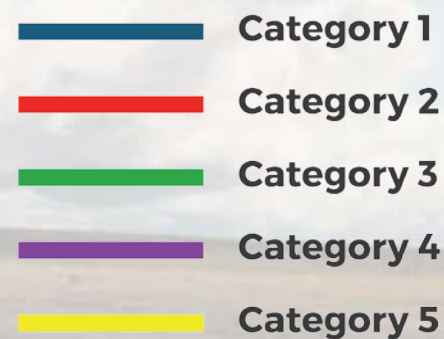
Pavement Inventory

13,835 lane miles

- Category 1: Controlled Access
25%
- Category 2: High Traffic
20%
- Category 3: Medium Traffic
20%
- Category 4: Low Traffic
23%
- Category 5: Very-low Traffic
12%



45% NHS





NDOT's Pavement Investment Strategy

Determine initial pavement conditions:

Very Good, Good, Fair, Mediocre, Poor, Very Poor, and Failed



Determine M&R needs with constrained funding levels

Highest priority given to Roadway Category 1

Lowest priority to Roadway Category 5



Determine work activities

Some will be contracted out, some will be performed by state maintenance forces



Determine expected pavement conditions

Ensure all recommended preservation and rehabilitation activities have been performed and develop performance targets

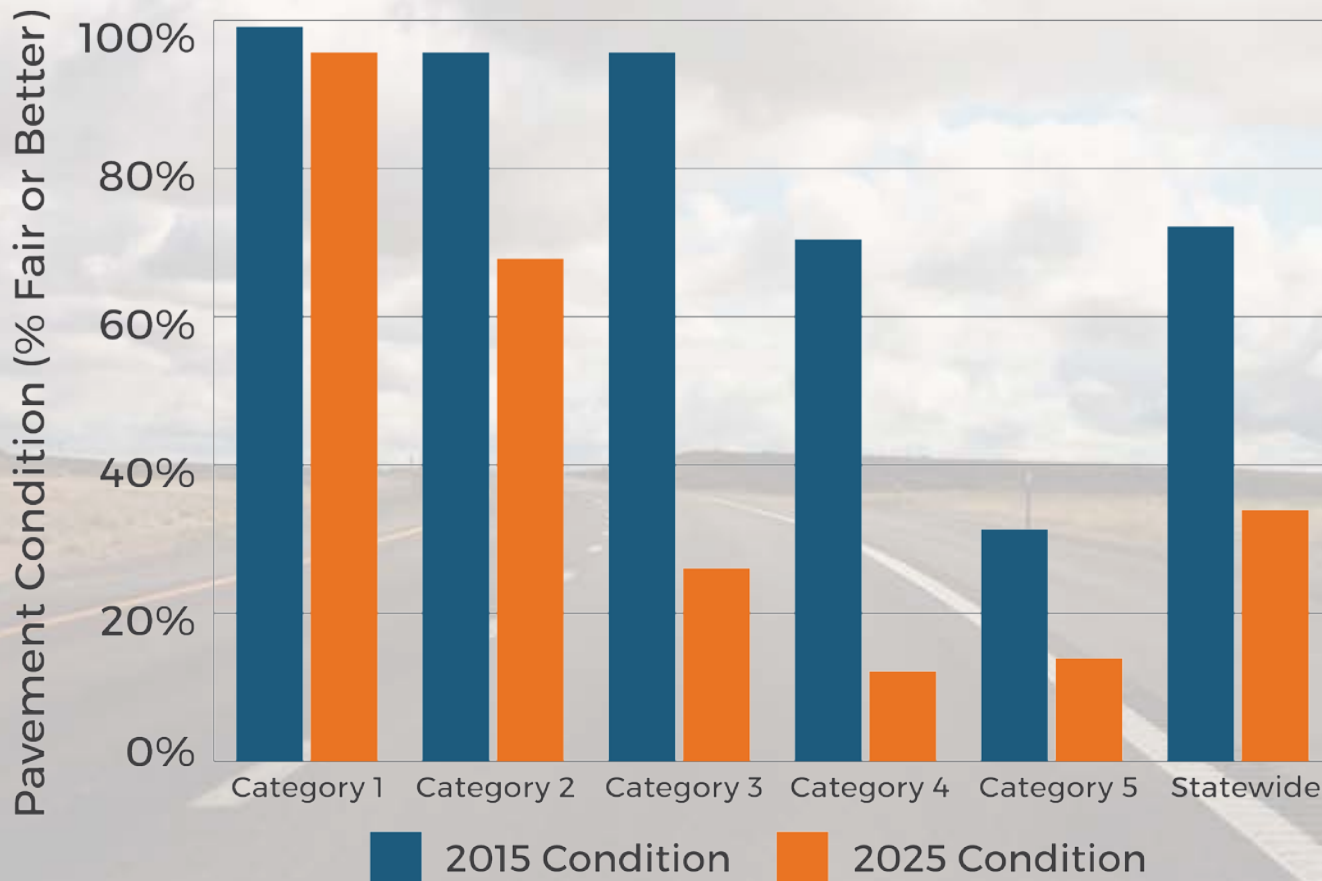


Determine if federal mandates for pavement condition criteria have been met





Current and Future Pavement Conditions



Proposed Federal Target for Interstate Pavement Condition:

<5% Poor

Interstate Pavement Conditions in Nevada by 2025:

0% Poor



Future Pavement Conditions at Different Investment Levels

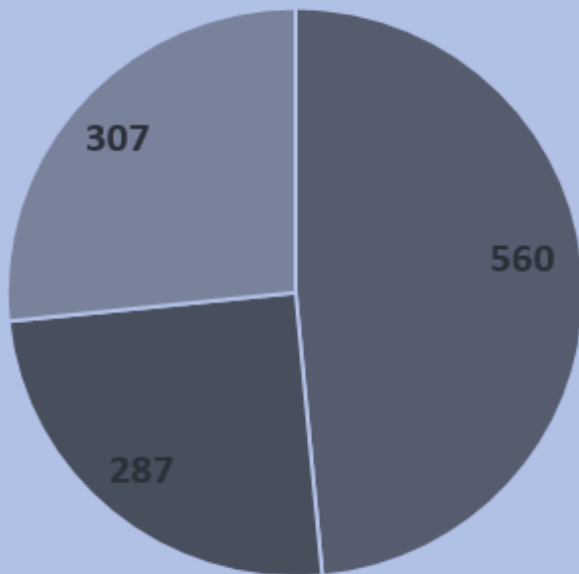




Bridge Inventory

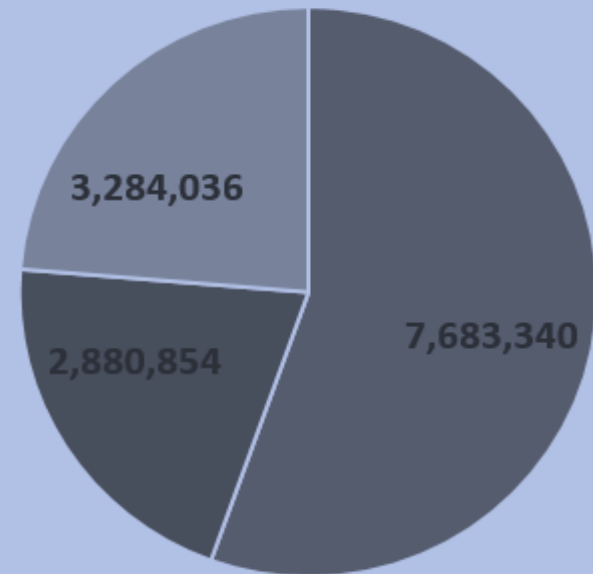
1952 Bridges

Bridge Inventory (Count)



■ Interstate ■ Other NHS ■ Non-NHS

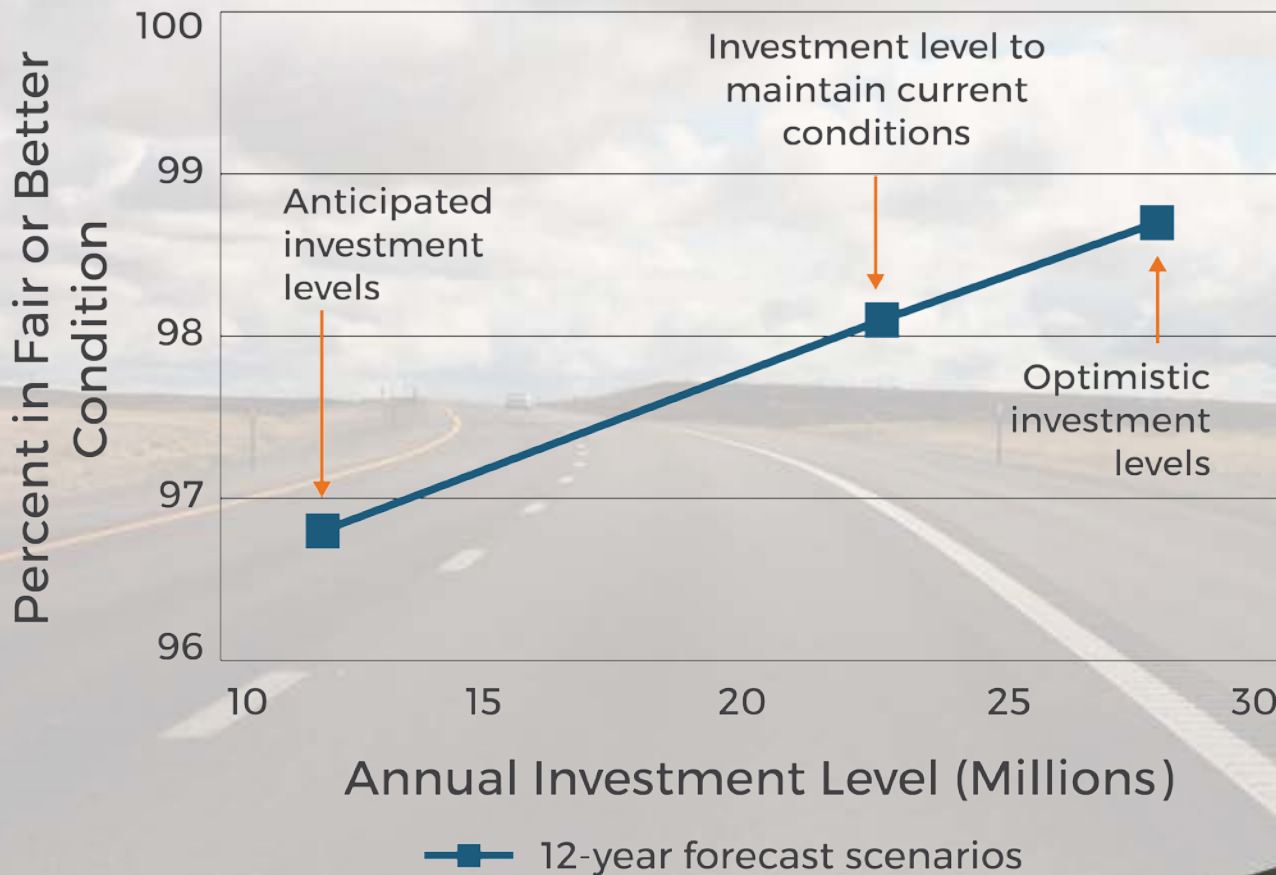
Bridge Inventory (Deck Area, sq. ft.)



■ Interstate ■ Other NHS ■ Non-NHS



Future Bridge Conditions at Different Investment Levels



Federal Target for Structurally Deficient NHS Bridges:

<10%

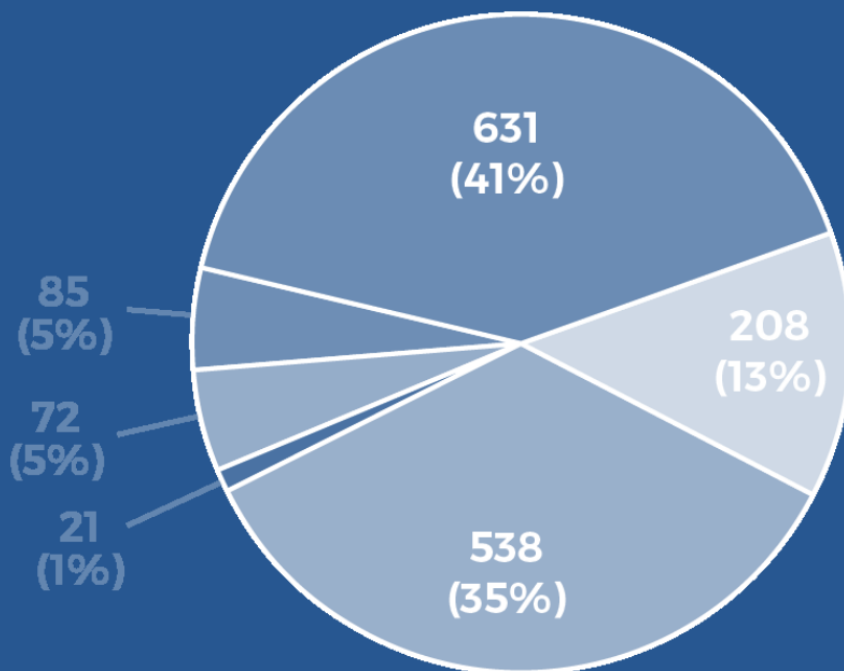
Structurally Deficient NHS Bridges in Nevada by 2027:

2.4%



ITS Inventory

ITS Asset Inventory Count by Asset Type



CCTV DMS Flow Detectors HAR Ramp Meters RWIS



Intelligent Transportation System Devices

- Support Nevada's Strategic Planning Framework 2016-2020 - 2.1.1 Reduce Congestion
- Saves money by getting the most out of what we have
- Asset inventories nearly complete
- Timely maintenance and replacement is essential to maintaining traffic flow
- \$3.6 million per year needed to maintain the 6 ITS assets included in the TAMP
- Small need but BIG impact



Risks

What is the Risk?	Risk Rating			What are Likely Causes?	What are the Consequences?	How Will NDOT Deal With It?
	Likelihood	Consequence	Overall Risk Rating			
Increase in regulations could result in increased investment needs	5	3	High	<p>Federal and State policy changes or mandates such as:</p> <p>Installation of assets on historical lands</p> <p>Air and water quality considerations</p>	<p>A significant increase in investment needs on individual projects</p> <p>Increase in staff time commitment to address issues</p>	<p>Monitor regulation changes and determine impacts on project selection and funding</p> <p>Participate in national organizations such as AASHTO to stay informed on regulatory issues</p>
Volatility in material and construction prices could reduce the accuracy of NDOT's needs estimates	3	3	Medium	<p>Economic inflation</p> <p>Political or economic changes</p> <p>Uncertainties in cement and asphalt production quantities and costs</p>	<p>Fewer projects being funded</p> <p>Increasing complaints from the traveling public</p>	<p>Prioritize projects within available funding based on agency goals</p> <p>Monitor prices regularly and revise condition projections and performance targets accordingly</p>
Lack of data and analytical tools	3	2	Medium	<p>Failure to implement an asset management system</p> <p>Uncertainty in asset performance and service life</p>	<p>Inability to prioritize and deliver projects</p> <p>Inability to main assets at lowest life-cycle cost</p>	<p>Develop a process to prioritize projects within available funding based on agency goals</p> <p>Implement asset management software to improve the decision process and better understand investment options</p>



The Way Forward

- Obtain approval of the initial TAMP
- Update TAMP to comply with final rules
- Study the use of leading indicators
- Improve and embrace decision making based on long-term life-cycle cost considerations
- Develop a communication plan
 - Funding to meet minimum performance goals and uncompromised safety
 - Economic and public benefits of sufficiently funding infrastructure



Future Steps/ Improvements

- Implement Enterprise Asset Management System (EAMS) software
 - Include additional assets (Storm Water Assets)
 - Improve analytics
 - Improve tracking of maintenance activities
 - Quantify trade-offs between different assets and programs
 - RFP being issued in Summer 2016
 - Award Expected Fall 2016



Questions?





NEVADA DOT



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