

PORTFOLIOS & STRATEGIES

PRESERVATION PORTFOLIO



Focus on critical asset management needs by balancing asset preservation strategies across the entire system.



GUIDING PRINCIPLES

- **Strategies to support WV's most critical system condition and performance issues for pavement and bridges**
- **Strategies to maintain the optimal balance between NHS, non-NHS and Turnpike pavement and bridge performance against deterioration, traffic demand and limited funding resources**
- **Strategies which employ more innovative construction materials and methods to increase the durability of assets**
- **Strategies which increase treatment cycles to proactively extend service life and save repair/recovery costs over time**

PORTFOLIO STRATEGIES



These 5 strategies will help preserve West Virginia's most critical assets by extending service life, reducing maintenance costs over time, and improving roadside assets to continue to provide a connected and reliable statewide transportation network.

PORTFOLIOS & STRATEGIES

PRESERVATION STRATEGIES



Implement the spectrum of asset management principles to preserve and comprehensively improve bridge conditions.



LRTP ALIGNMENT

Advances three of the five LRTP Goals:

- Livable and Healthy Communities
- Safety and Security for All Users
- System Condition, Efficiency, and Fiscal Sustainability

Low



PERFORMANCE

Strategy proactively maintains the state's bridges and emphasizes critical bridge needs. It will help to mitigate the impact on statewide performance of the projected wave of bridges nearing the end of their design life. It will also support the continued effective application of WVDOH's bridge management system (BMS) and enhance internal decision making.

Low

High



READINESS

Strategy requires more resources to flatten the wave of bridges nearing end of design life and to proactively manage bridges in fair condition. Standard operating procedure changes throughout all levels of DOH to optimize decision making requires awareness and training and will require extension of and updates to current BMS and ERP applications.



RESILIENCY

Strategy enables a proactive stance toward addressing existing and future conditions including planning for resources needed for long-term benefits, including technology changes. This will help WVDOH emphasize bridge needs as a priority during funding discussions and help WVDOH mitigate economic risks associated with asset closures.

CURRENT STATE OF STRATEGY IN WV

- There are 7,200 state-maintained bridges with 30% of bridges reaching the end of their design life
- BMS predicts a wave of needed increased investment through the next 10-15 years to address these end of design life bridges. This cycle will continue unless alternative funding sources are identified.

ACTIONS

Improve data collection and asset management tools, and apply asset management principles to all bridges

PORTFOLIOS & STRATEGIES

PRESERVATION STRATEGIES



Implement the spectrum of asset management principles to preserve and comprehensively improve pavement conditions.



LRTP ALIGNMENT

Advances three of the five LRTP Goals:

- Economic Vitality
- Safety and Security for All Users
- System Condition, Efficiency and Fiscal Sustainability

Low High



PERFORMANCE

Strategy proactively maintains the state's pavements and emphasizes critical pavement needs. It will also support the continued effective application of WVDOT's pavement management system (PMS) and enhance internal decision making.

Low High



READINESS

This Strategy occurs in conjunction with ongoing implementation of WVDOT's capital program and supports continued use of the PMS. It will require maintaining funding commitments on the NHS, improvements to data accuracy and analysis of PMS to optimize performance and increasing resources and internal coordination to implement.

Low High



RESILIENCY

Strategy provides a snapshot of existing pavement conditions as well as future conditions including resources needed for long-term benefit and the consideration of technology changes. This will help WVDOT achieve pavement condition performance targets and provide high benefit solutions effective over time.

Low High

CURRENT STATE OF STRATEGY IN WV

- There are over 35,000 lane miles in West Virginia
- Pavement maintenance was identified as the most important need by stakeholders and pavement condition is considered most visible to West Virginia citizens
- The Roads to Prosperity program continues to contribute to condition improvement

ACTIONS

Improve data collection and asset management tools, and apply asset management principles to pavements

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Plan for and deliver equitable and balanced asset management principles on non-NHS facilities, balancing urban and rural needs to foster local and regional commerce, tourism, and community access.



LRTP ALIGNMENT

Advances three of the five LRTP Goals:

- System Condition, Efficiency and Fiscal Sustainability
- Safety and Security for All Users
- Economic Vitality and Freight Movement

Low



PERFORMANCE

Strategy aspires to maintain all assets in a state of good repair, promotes asset management goals, and aims to improve highway conditions beyond the National Highway System routes. WVDOH will need to carefully consider how to set performance targets for non-NHS bridges and pavements and implement a program to support performance improvement.

Low

High



READINESS

Strategy builds upon ongoing pavement preservation, rehabilitation and reconstruction efforts underway. It will require more resources including improved data collection on non-NHS facilities, more extensive local coordination, and a review of routes and corridors statewide to prioritize investments that will enhance commerce and tourism.



RESILIENCY

Strategy emphasizes pavement and bridge needs as a priority during funding discussions. Preservation of these assets also will help ensure that rural communities maintain and enhance access to the transportation system. It is subject to technology changes which may require increasing technology and data investment to foster data-driven decisions.

Low

High

CURRENT STATE OF STRATEGY IN WV

- Expected increase in poor pavement conditions on non-NHS roadways, many which represent the primary access opportunity for rural communities
- Maintaining assets at minimal state of good repair will require funding and significant coordination
- Pavement condition continues to be the highest concern of citizens

ACTIONS

Improve data collection and asset management tools across the entire system, and apply equitable asset management principles

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Protect assets and maintain stormwater facilities, coordinate with emergency management partners and build capacity to respond quickly to emergency related events.



LRTP ALIGNMENT

Advances three of the five LRTP Goals:

- System Condition, Efficiency and Fiscal Sustainability
- Safety and Security for All Users
- Economic Vitality and Freight Movement

Low  High



PERFORMANCE

Strategy provides solutions that have high visibility to the traveling public (improved agency responsiveness particularly during emergency events), improves emergency response and risk management, and utilizes new technologies to reduce costs. Stormwater management helps WVDOH and resource agencies attain watershed protection goals.

Low  High



READINESS

Strategy occurs in conjunction with ongoing capital investments, maintains stormwater best management practices (BMPs), and mitigates environmental permitting violations. The strategy will also require coordination with emergency management partners and an adequately trained workforce to implement.

Low  High



RESILIENCY

Strategy will require a knowledge center of best maintenance practices and ongoing maintenance of critical facilities. This will support the use of new technologies to minimize and protect vulnerable assets against risk and will improve overall system condition through high quality repairs.

Low  High

CURRENT STATE OF STRATEGY IN WV

- Since 1993, flood events have resulted in an estimated \$1.8 billion in property damage
- Asset damage and closure can cut-off communities and access to critical services (especially in rural areas)

ACTIONS

Prevent slides and other natural hazards through proactive steps to maintain stormwater facilities and other roadside infrastructure

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PRESERVATION STRATEGIES



Ensure DOH District and county support facilities, vehicles, and other assets are in operating condition, maintain and improve roadside assets and enhance quality and capacity of travel plazas and welcome centers.



LRTP ALIGNMENT

Advances three of the five LRTP Goals:

- System Condition, Efficiency and Fiscal Sustainability
- Economic Vitality and Freight Movement
- Safety and Security for All Users

Low High



PERFORMANCE

Strategy provides low-cost solutions that have high visibility to the traveling public (improved customer satisfaction) and utilizes new technologies to reduce maintenance costs.

Low High



READINESS

Strategy focuses on upgrades to DOH and Turnpike operational facilities and equipment to address asset longevity and improvements to signs and lighting to enhance roadway safety and traveler awareness. Enhancements to travel plazas and welcome centers support commerce and tourism industries and requires multi-agency coordination.

Low High



RESILIENCY

Strategy requires expanded maintenance of facilities and other existing assets and supports environmental sustainability by using new environmentally friendly technologies.

Low High

CURRENT STATE OF STRATEGY IN WV

- There are currently 8 Welcome Centers, 4 Turnpike Travel Plazas and 10 Interstate rest areas in West Virginia. Approximately 3.5 million visitors utilize West Virginia's welcome centers each year
- There are currently 10 District offices, 55 maintenance facilities and over 50,000 signs and over 60,000 lights statewide

ACTIONS

Improve quality and expand capacity of travel facilities to facilitate growing tourism, and modernize DOH operational facilities