

Montana's Approach to Asset Management

MDT's Performance Programming Process (P3)



Revenue & Transportation Interim Committee

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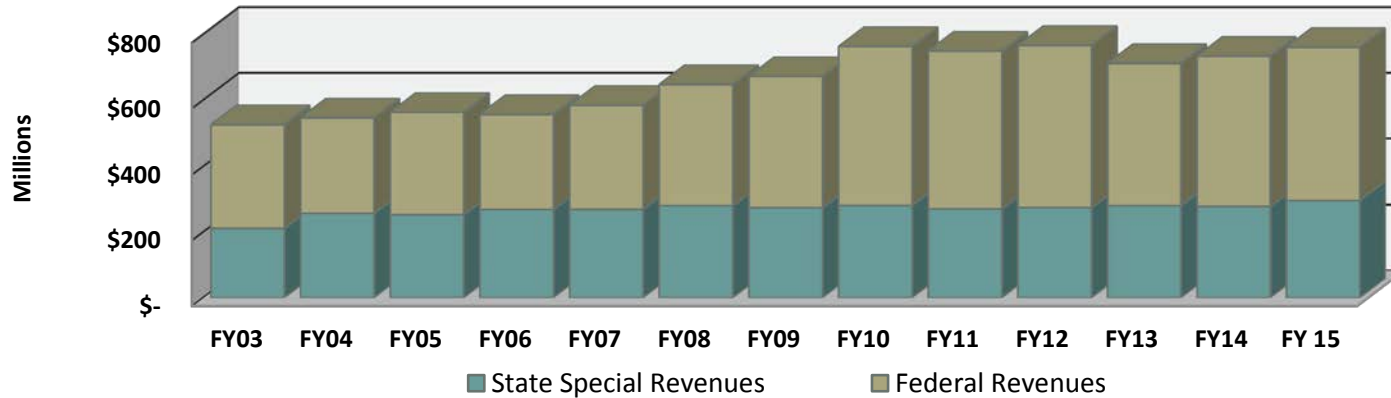
12/1/2015

Topics

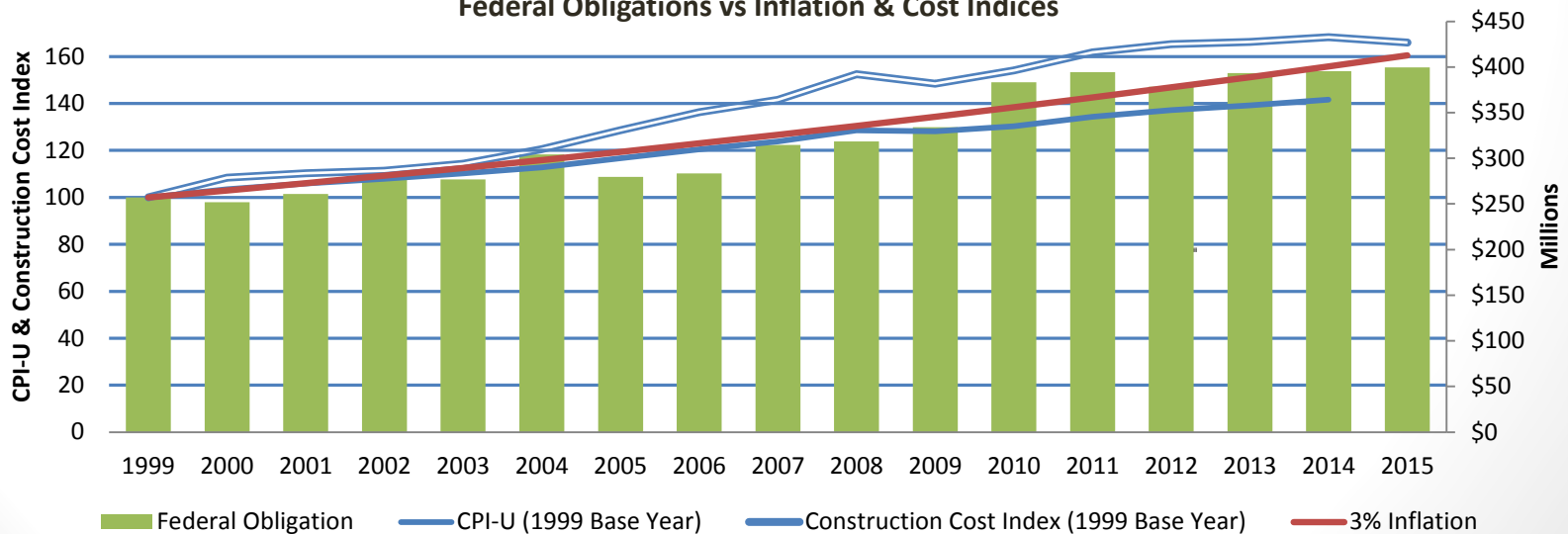
- Trends
- Asset Management Theory
- MDT Performance Programming Process (P3)
- MDT System Performance (Results)

History - Revenue Generation, Funding & Costs

Montana Department of Transportation
State & Federal Highway Fund Revenue Comparison FY03 thru FY15

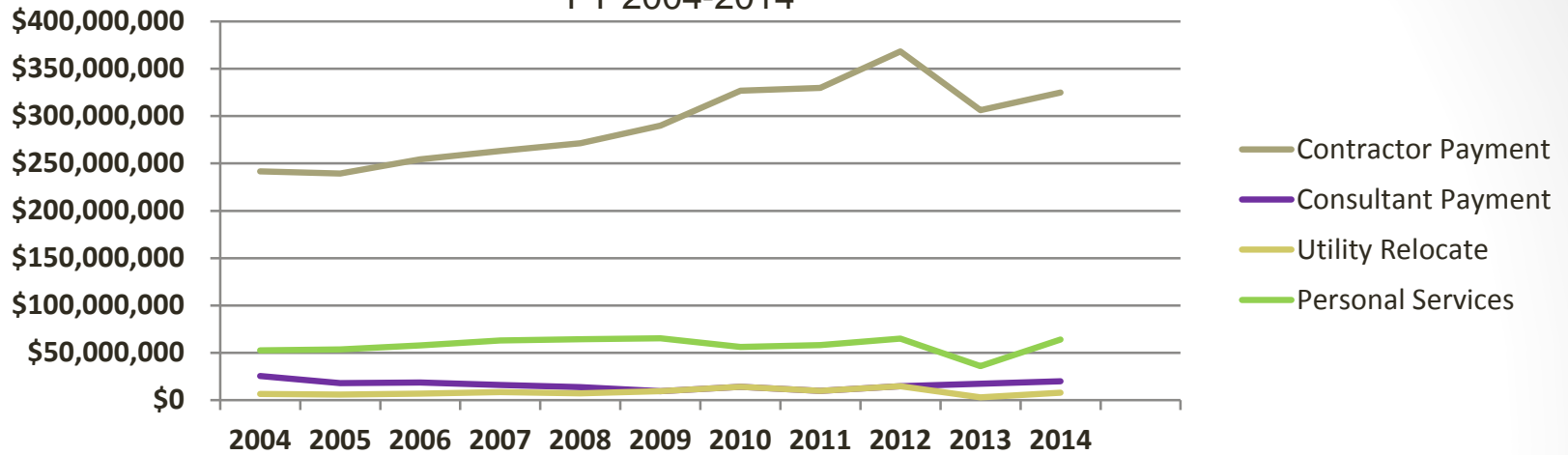


Federal Obligations vs Inflation & Cost Indices

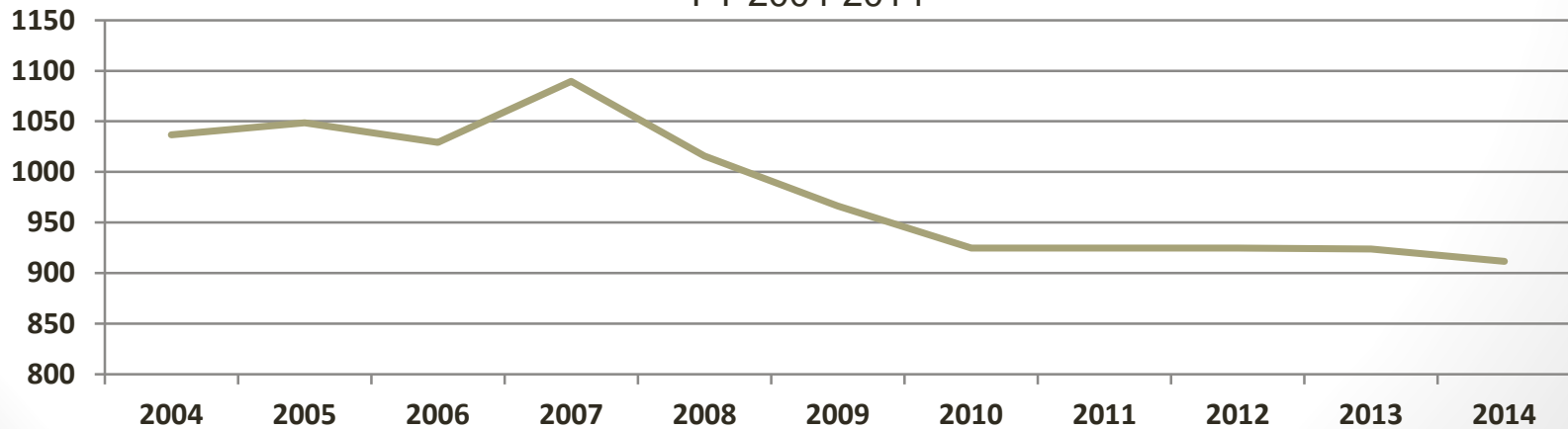


Construction Program –

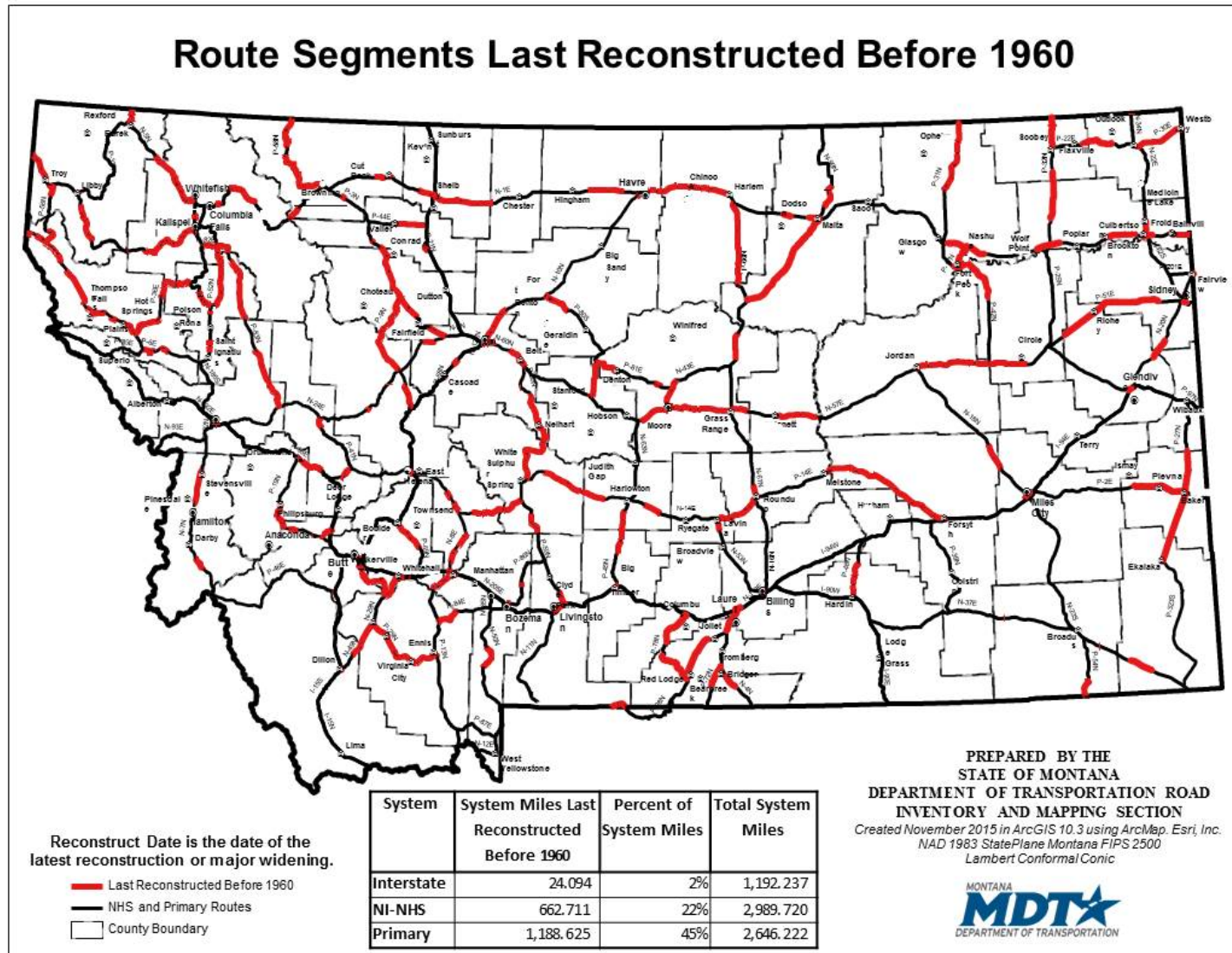
Contractor Payments
FY 2004-2014



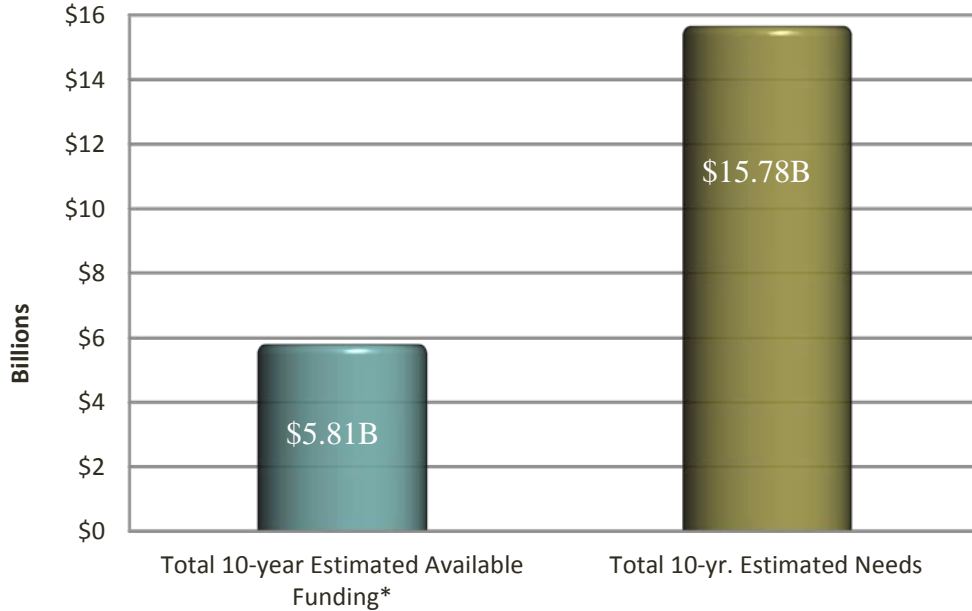
Construction Program FTEs
FY 2004-2014



And – The System is Aging

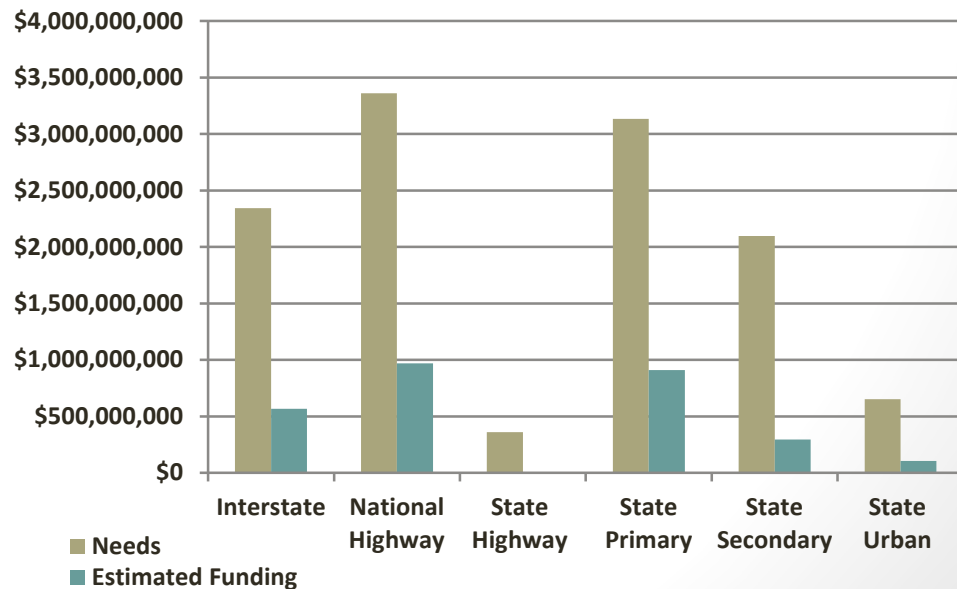


Results – Un-met Needs



10-year Estimated Available Funding vs. Estimated Needs

10 Year Estimated Need by State Highway System vs. Estimated Funding



Fund Allocation & Asset Management

Asset management is a systematic and ongoing process that seeks to maximize the life of the asset in the most cost effective way

Major features of asset management:

- Goals linked to policy objectives - TranPlan 21
- Performance measures are measurable – Quantifiable Results
- Analysis and evaluation are data driven – Management Systems
- Results inform investment decisions –Trade Off Analysis
- Monitoring and feedback –From Both Data and Customers to Links Back to Policy

MDT's

Performance Programming Process (P3) =
***optimal funding allocation and investment plan based on strategic
highway system performance goals***

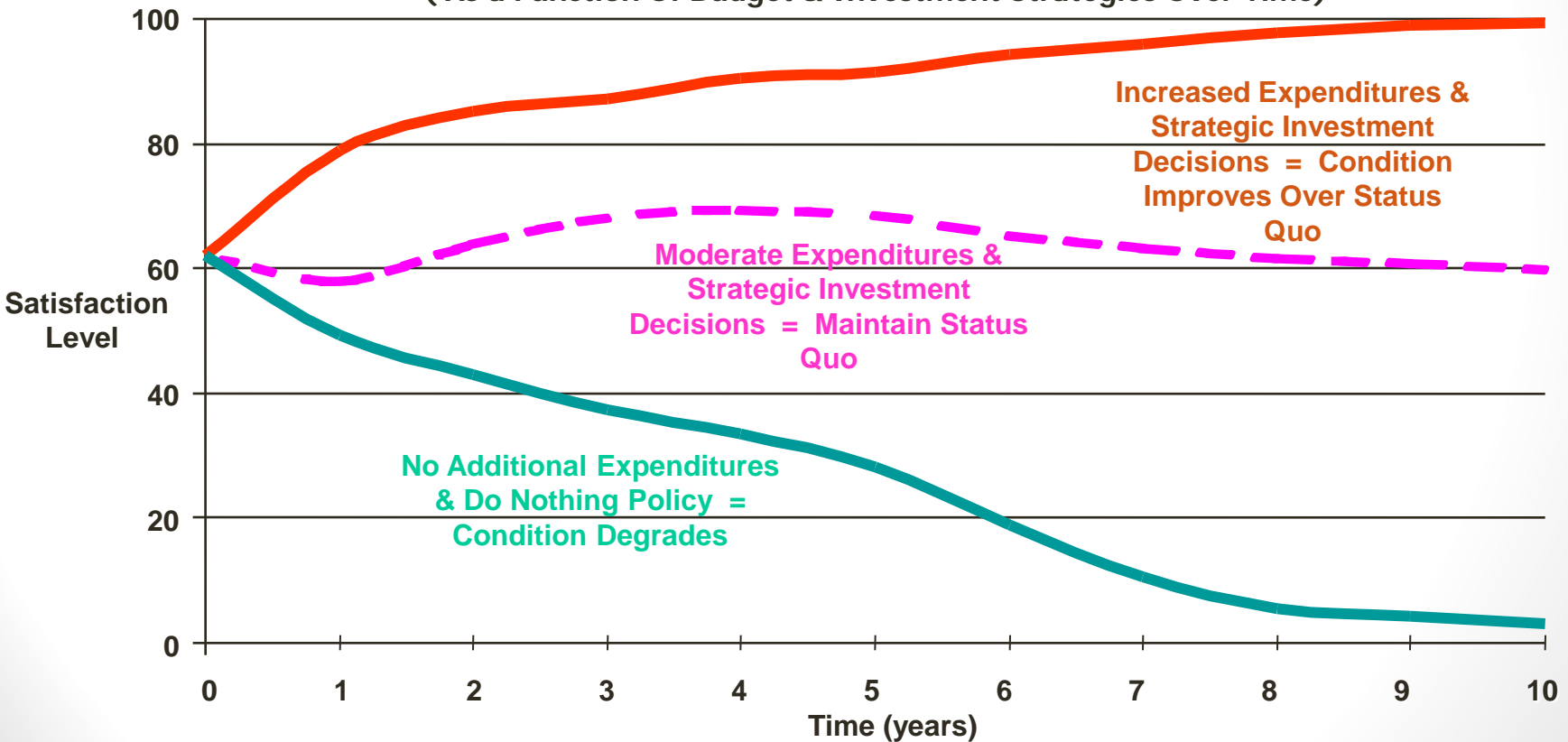
Asset Management is a Key Element of Montana's Approach to Addressing Challenges including management of an adequate fund balance in the HSSRA & supporting cost-effective, accountable decisions

Asset Management Theory

Definition:

A systematic and ongoing process that seeks to maximize an asset's useful life most cost effectively.

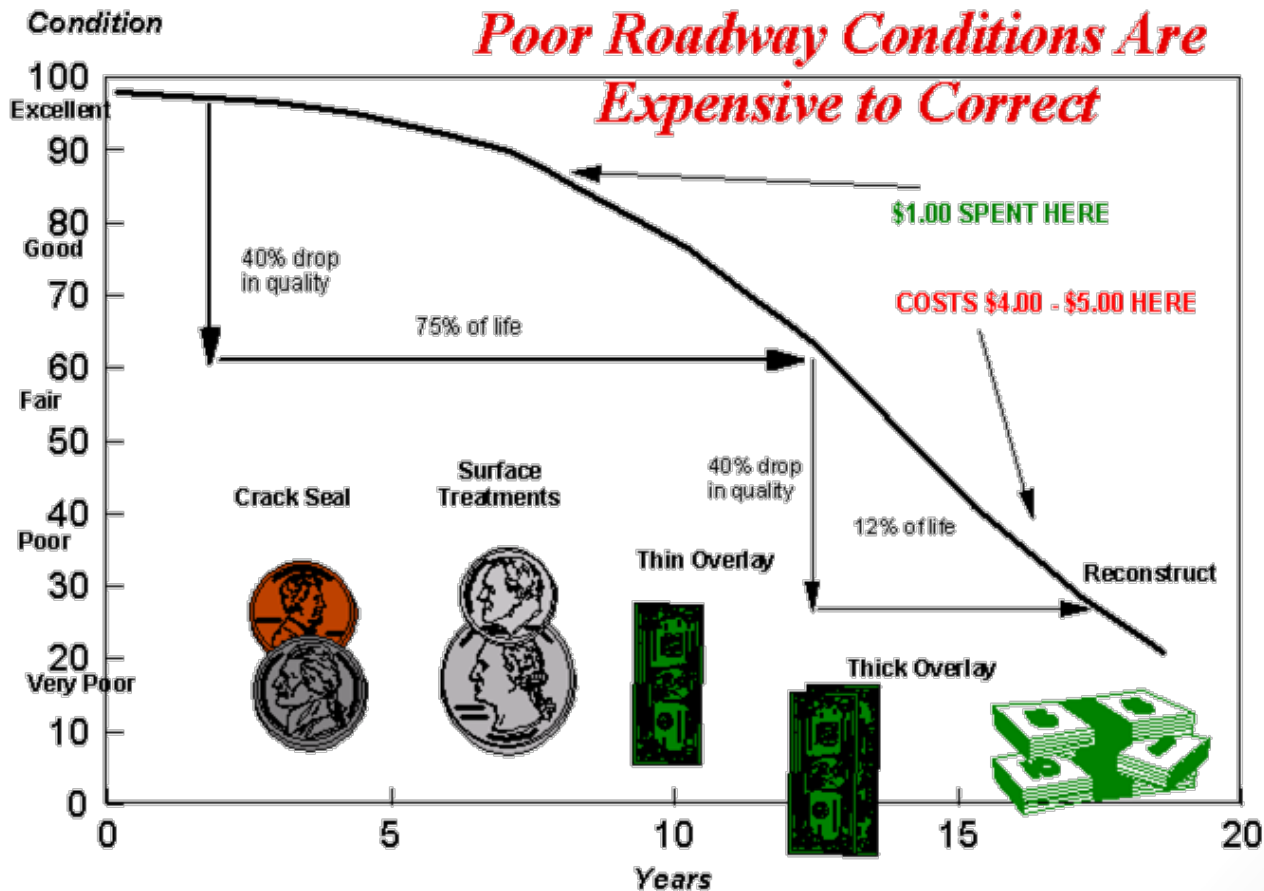
(As a Function Of Budget & Investment Strategies Over Time)



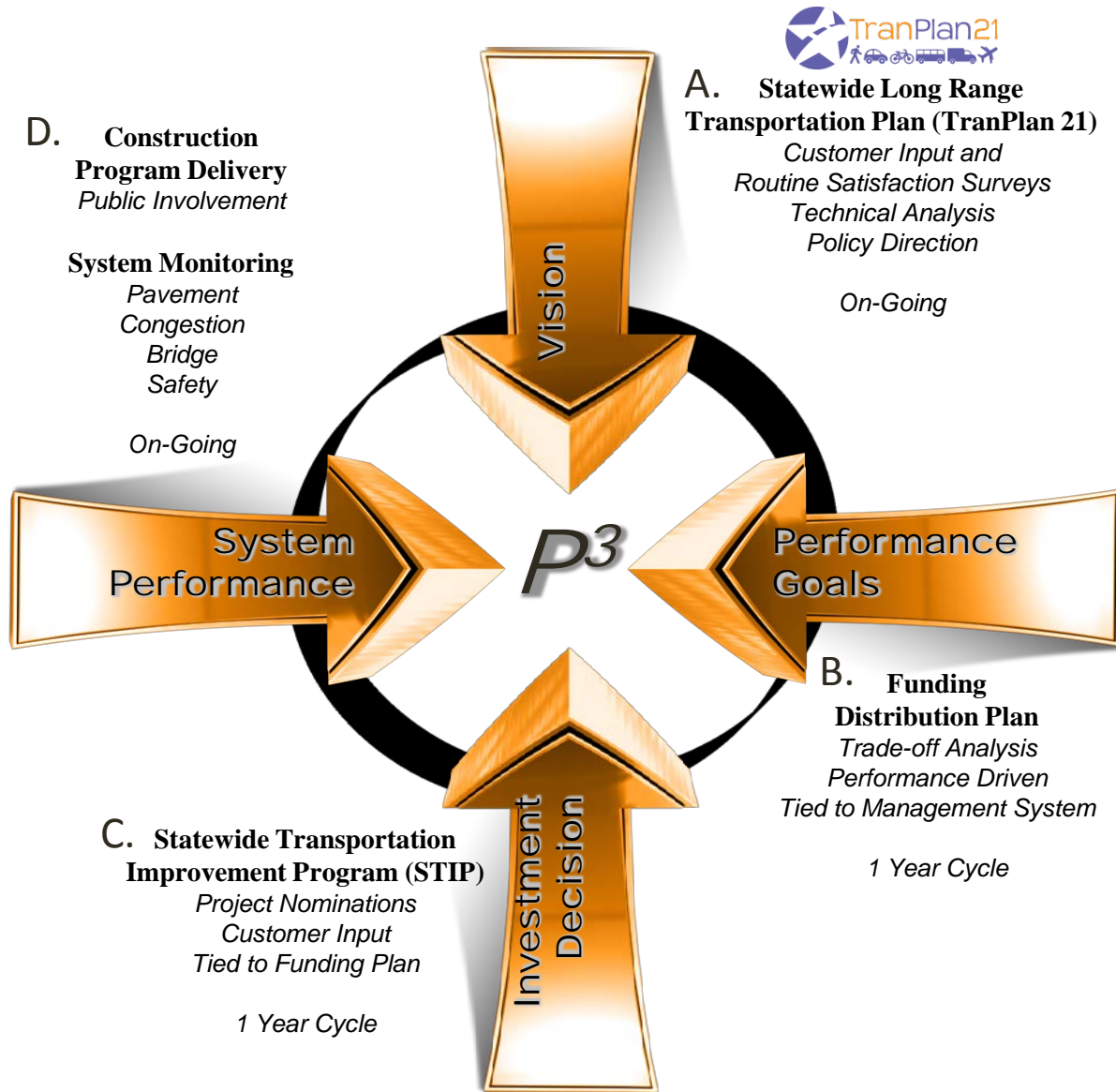
Evaluation of Alternatives to Optimize Investment

Produces The Right Treatment At The Right Time

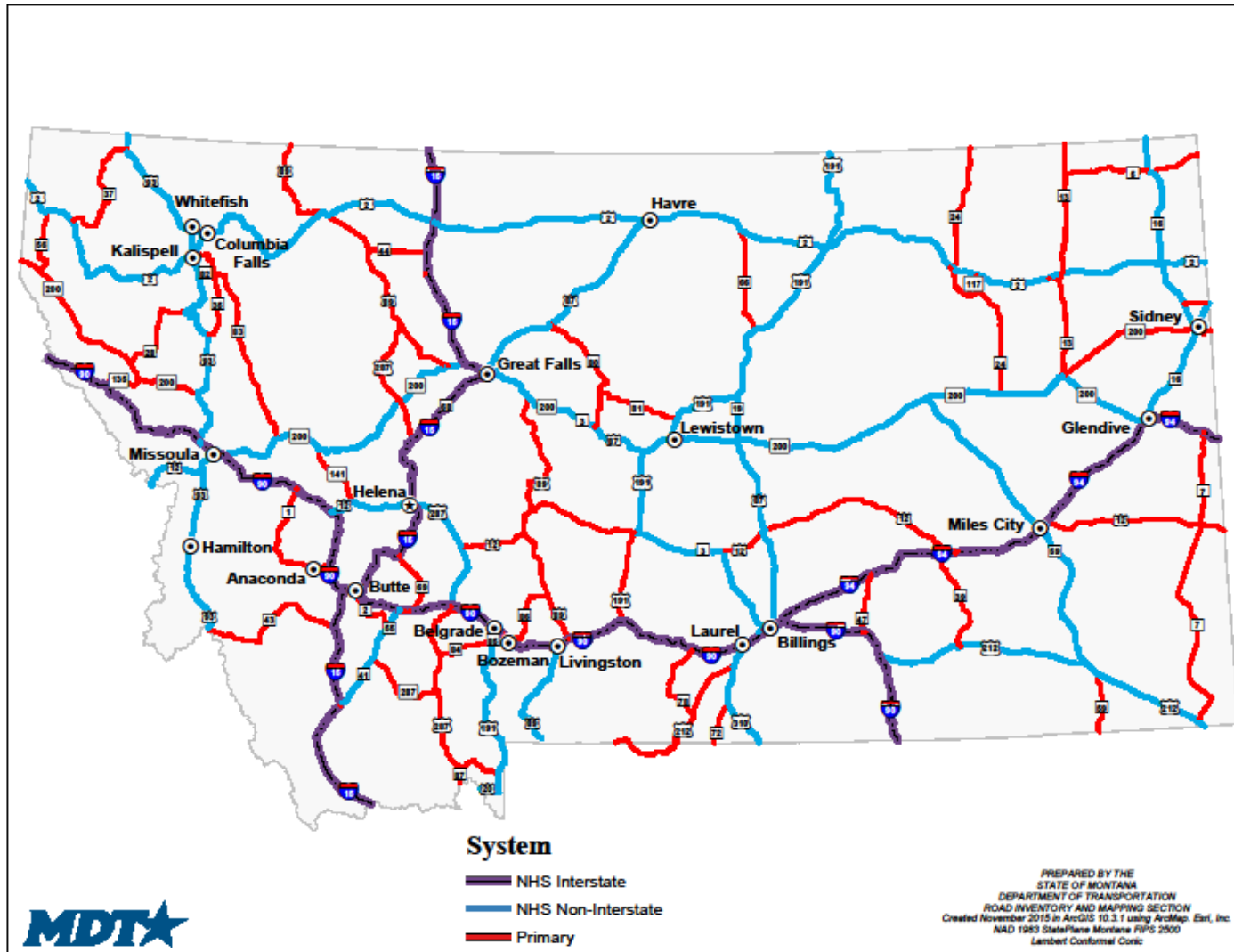
- Resurfacing and Rehabilitation Work Stretches Resources
- Reconstruction Work needed when Useful Life is Over
- Maintain the System, rather than Reconstructing it
- *Ideal Mix = Best Package to Meet Performance Goals*



Performance Programming Process



P3 Governs Interstate, NHS, and Primary Routes



P3 Goals and Results

- GOAL AREAS:

Pavement Condition: Maintain average ride (smoothness) in the desirable (or superior) range

Bridge Condition: Reduce the number of structurally deficient bridges

Congestion: Maintain Level of Service at “B” or Above (Interstate), “C” or above (NHS/Primary)

Safety: Reduce fatal & Serious Injuries

- RESULTS:

Goals achieved

Equality of Pavement Condition Achieved

Understanding of -

- Condition of our Assets
- Consequences of investing or not investing

Optimal Fund Plan

Accountability & Conformity with State Statues

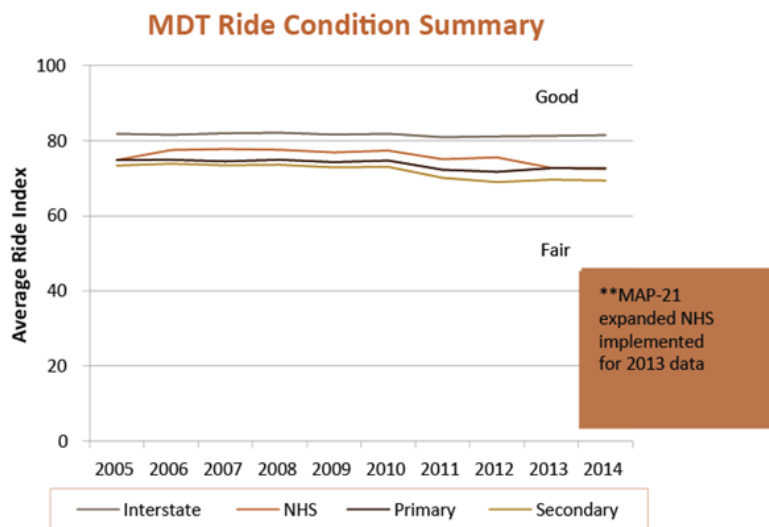
- *P³ received national recognition through:*

2008 National Transportation Planning Excellence Awards

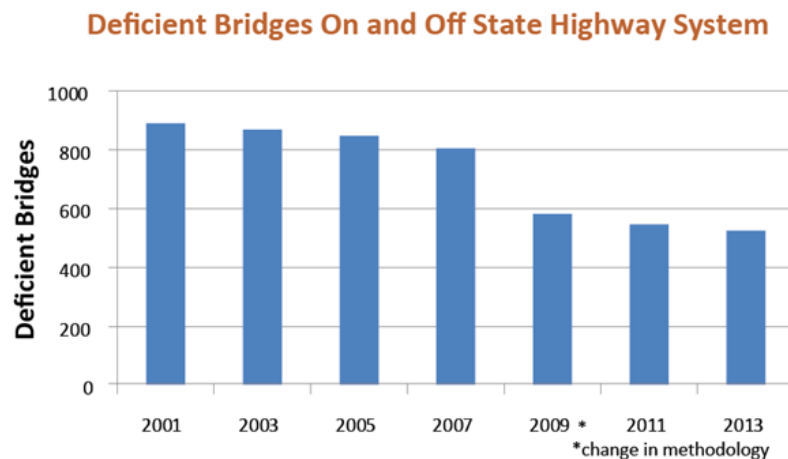
2011 Report on the Performance of State Highway Systems

How are we doing.....

- As a result of past investments Montana's Highway Infrastructure is in good shape
- However – at the current funding level we can't maintain this level of performance
 - Current funding falls short of our estimated need by about \$1 billion per year
 - Without additional funding we are looking at managed decline in system condition



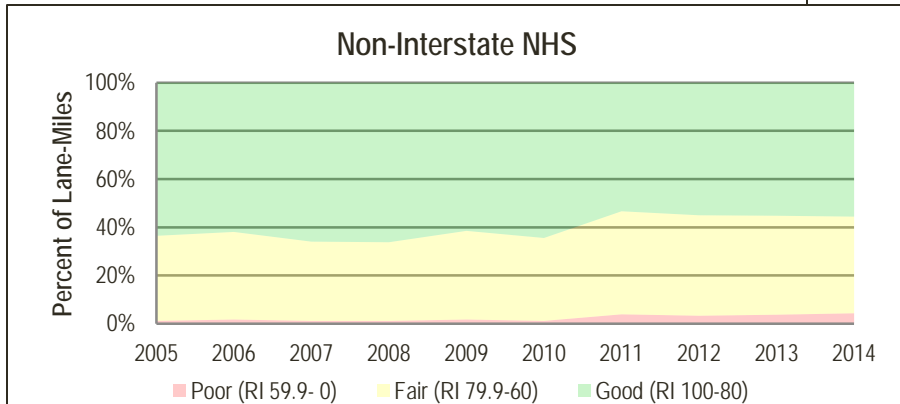
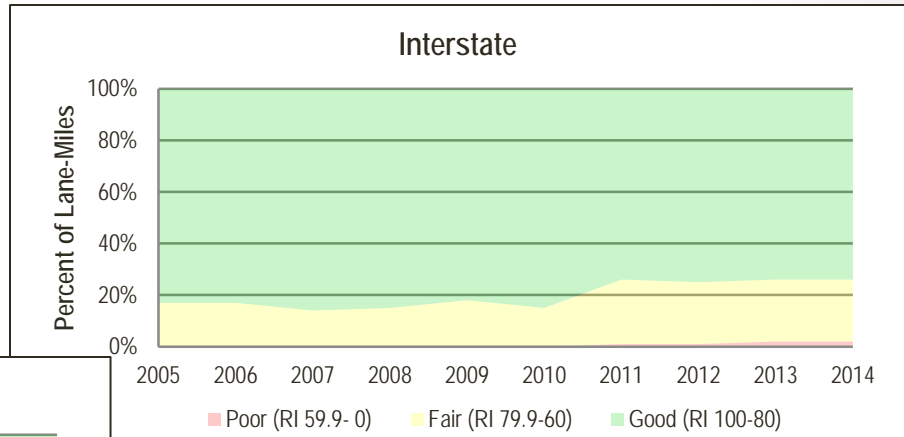
Ride index, a measurement of road "smoothness", is just one index considered in the overall pavement condition. Performance Goal: Maintain average ride in the desirable (or superior) range with less than 3% of the miles in unsatisfactory condition.



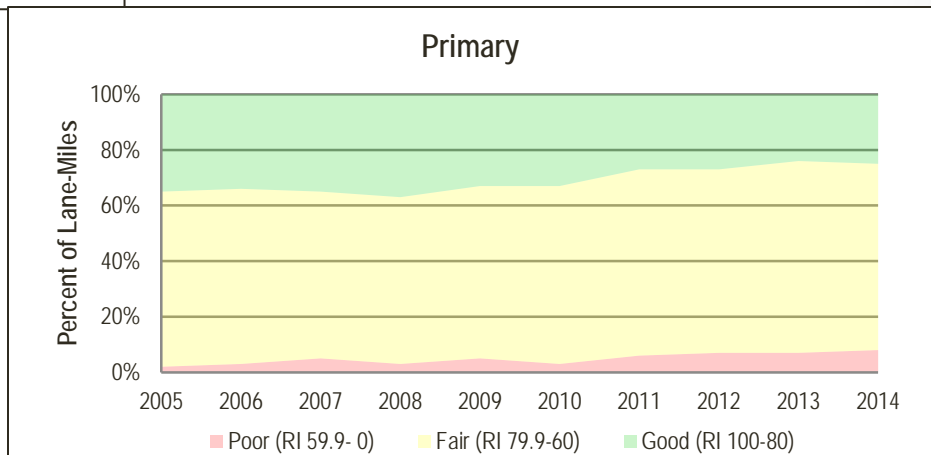
Number of deficient bridges is decreasing. Deficient bridges could have reduced load-carrying capacity or have roadway geometry that does not meet today's design standards. "Deficient bridges" does not mean they are unsafe for travel. (Includes deficient bridge-sized culverts.)

Historic Pavement Condition by System

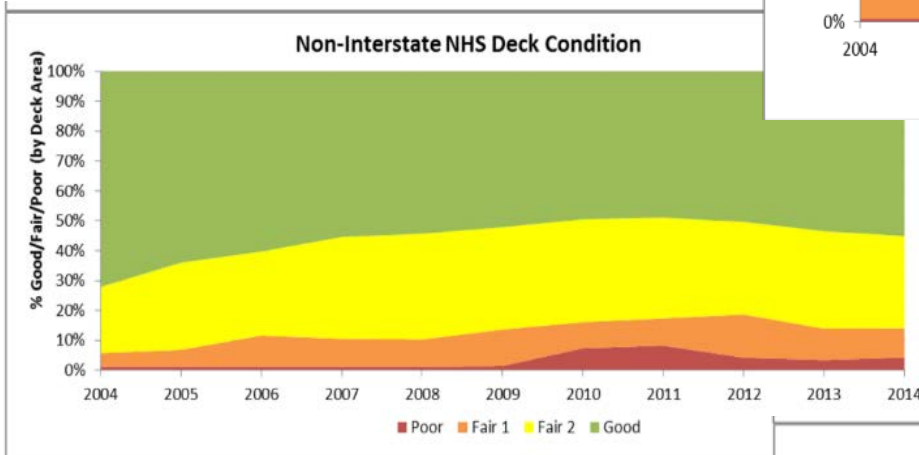
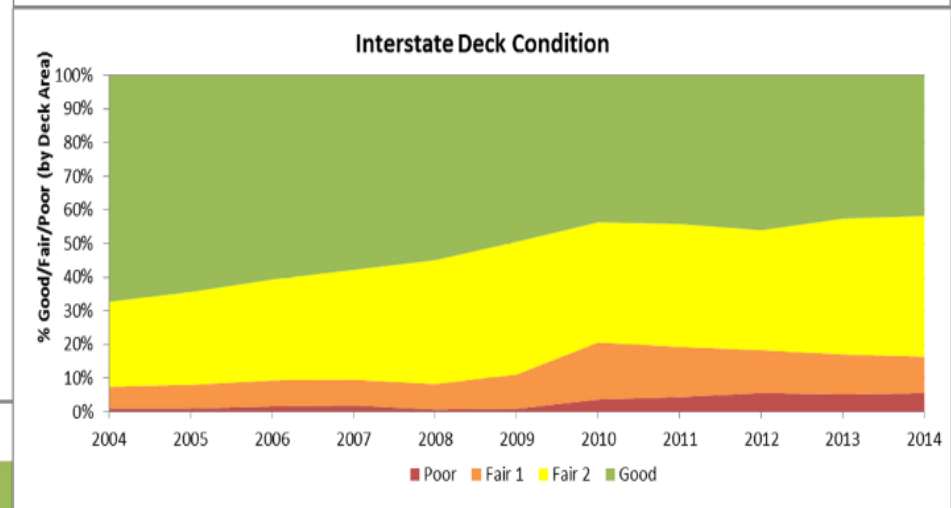
% Lane Miles



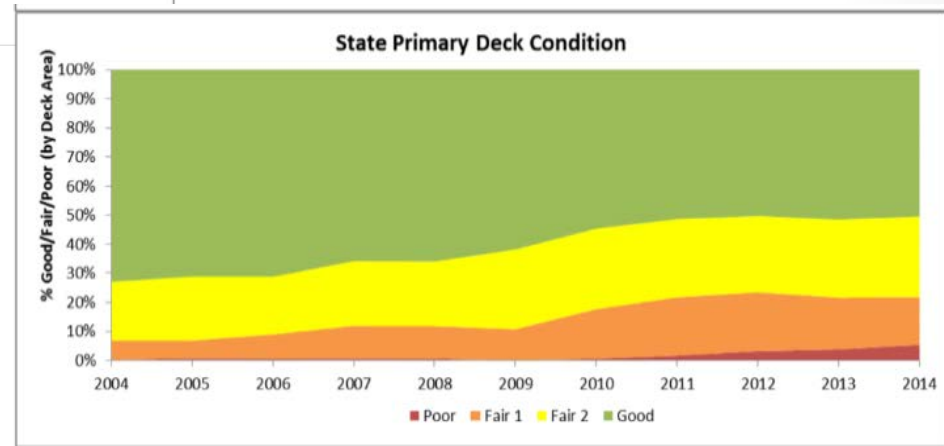
Percent of Good pavements across core systems is starting to trend downward, while fair and poor are trending upward



Historic Bridge Condition by System

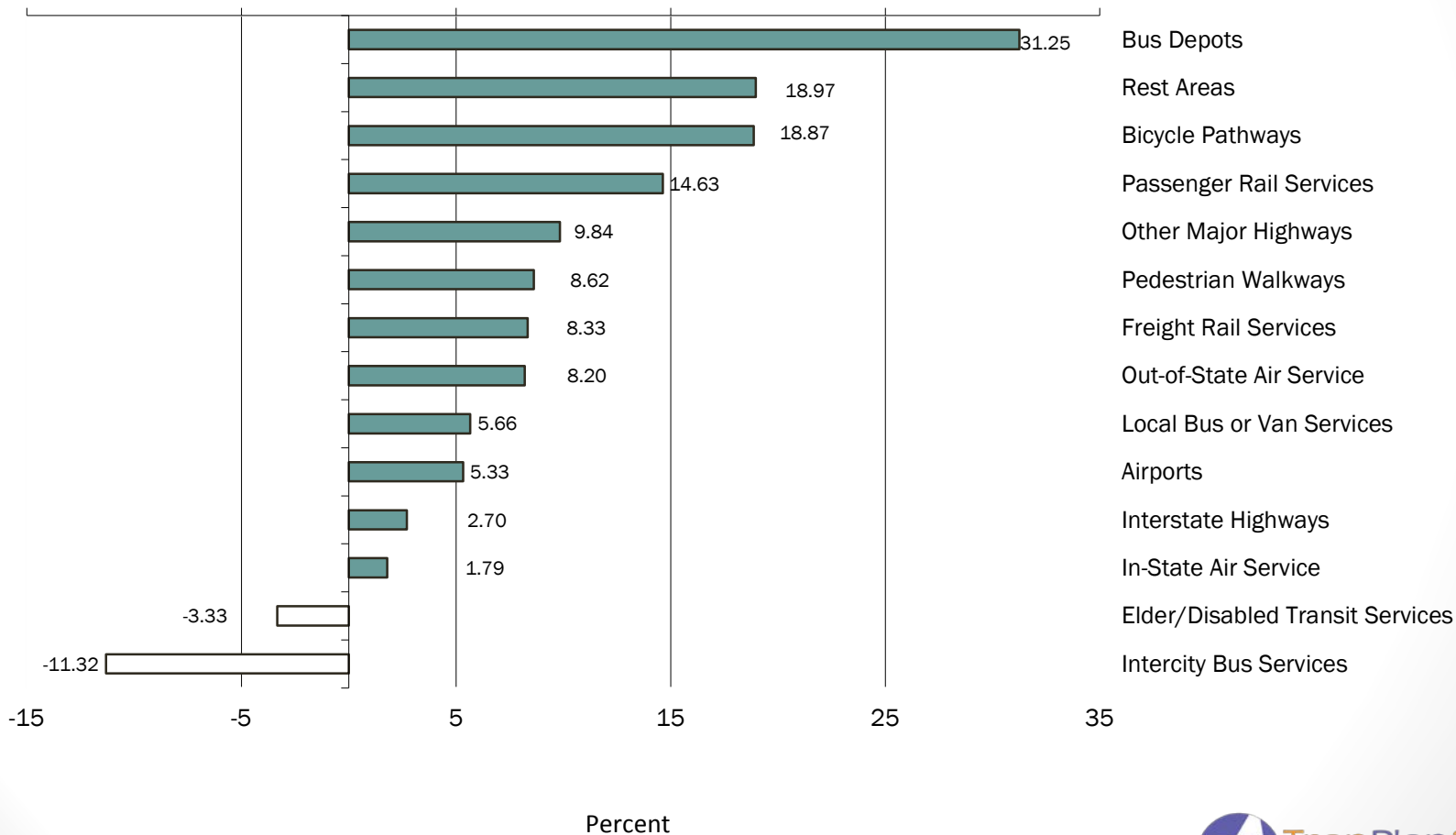


Percent of Good bridge decks across core systems is starting to trend downward, while fair and poor are trending upward



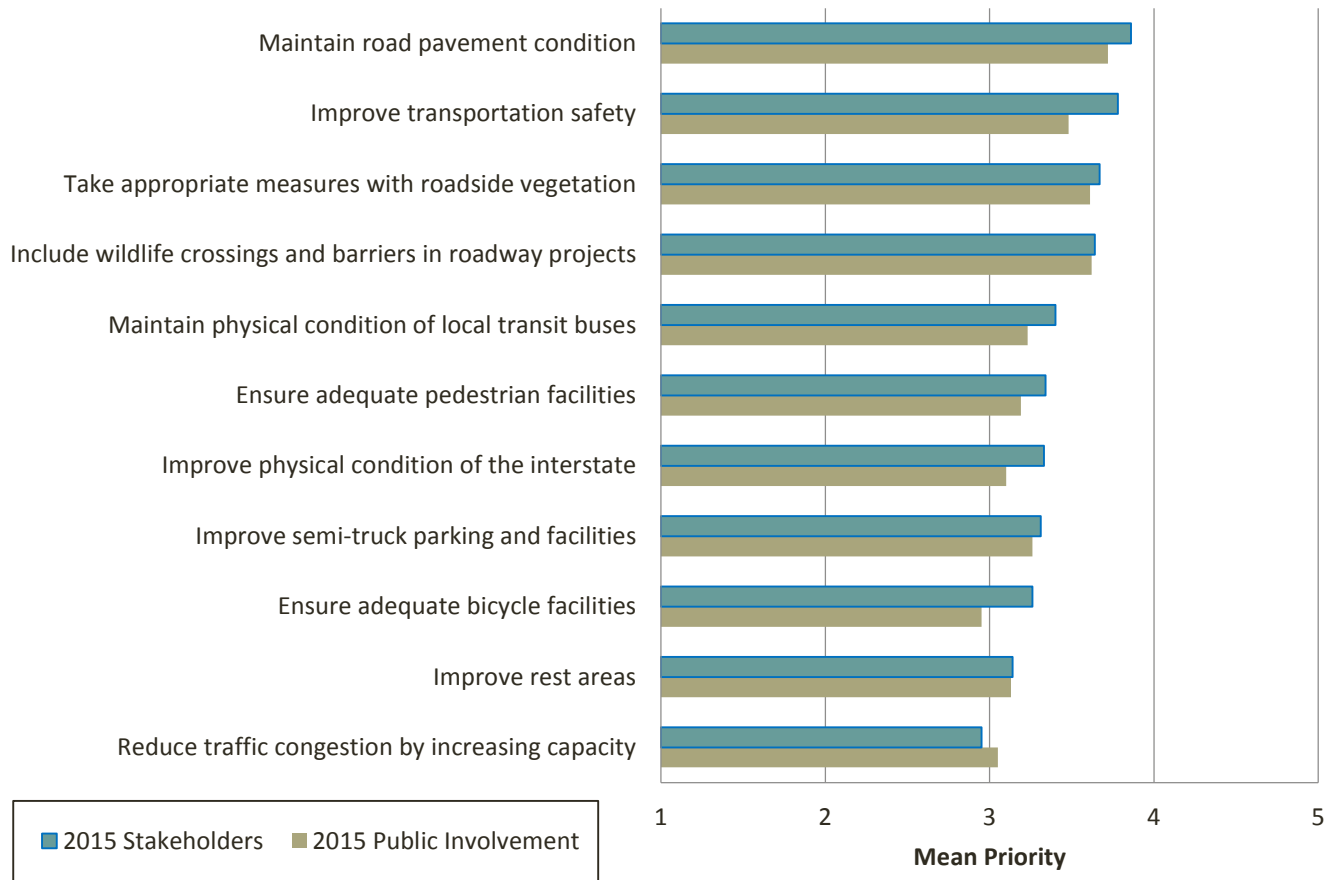
Public Satisfaction % Change 2001-2015

How satisfied are you with the condition of the transportation system and availability of service?



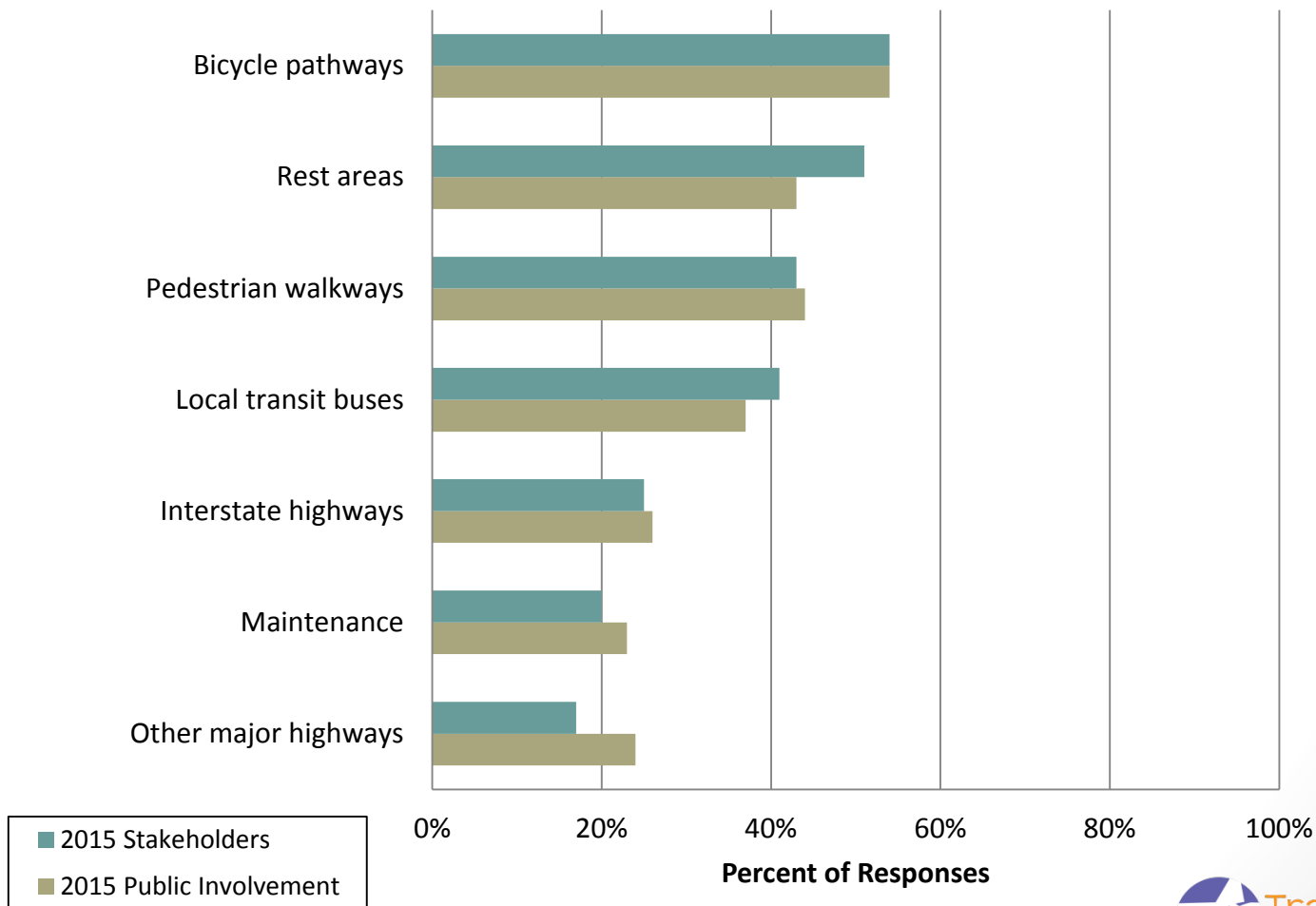
Actions to Improve Transportation System

Please tell me the priority MDT should assign to the actions to improve the transportation system in Montana.



Customer Responses to: Reductions if Overall Funding Decreases

If funding for Montana's transportation systems decreases, which of the following should be funded at a lower level?



QUESTIONS

