

©WYDOT/Rick



LONG RANGE TRANSPORTATION PLAN







MAY 2013

CORRIDOR VISIONS

CORRIDOR 4 PLAN







The Integrated Planning Framework describes the planning process in detail, including the linkage between

strategic goals and project programming - and all the steps in between.

The Long Range Transportation Plan evaluates the state transportation needs from a

systems level, describes the issues and problems facing the State including future revenue and programming, and presents options for future investments, all within the context of the Integrated Planning Framework.

Corridor Visions are created for each State Significant Corridor (SSC) as a supplement to the LRTP. These define long term goals and objectives for each corridor based on the strategic goals of the Department, the investment goals of the LRTP, and the specific context of each corridor. The SSC system represents high volume routes in the state that connect major activity centers to each other and to points external to Wyoming. Urban areas are also evaluated as a group.

Corridor Plans build on the Corridor Visions by providing a more detailed look at specific needs and locationbased solutions. The plans identify a set of solutions and a recommended program of improvements to be implemented over time that address specific, documented needs.

CORRIDOR PLAN PURPOSE

This Corridor Plan is part of a set of documents created through a comprehensive planning process entitled Wyoming Connects. This set of documents captures consistent, transparent, and repeatable planning steps, analysis, and results designed to provide information to guide project selection and programming decision makers. Each document is designed to build upon prior documents and cascade the Strategic Goals of WYDOT forward from the overarching Strategic Plan to the system wide Long Range Transportation Plan, applied in the development of Corridor Visions, and the definition of Needs and potential Solutions to achieve the vision in Corridor Plans.

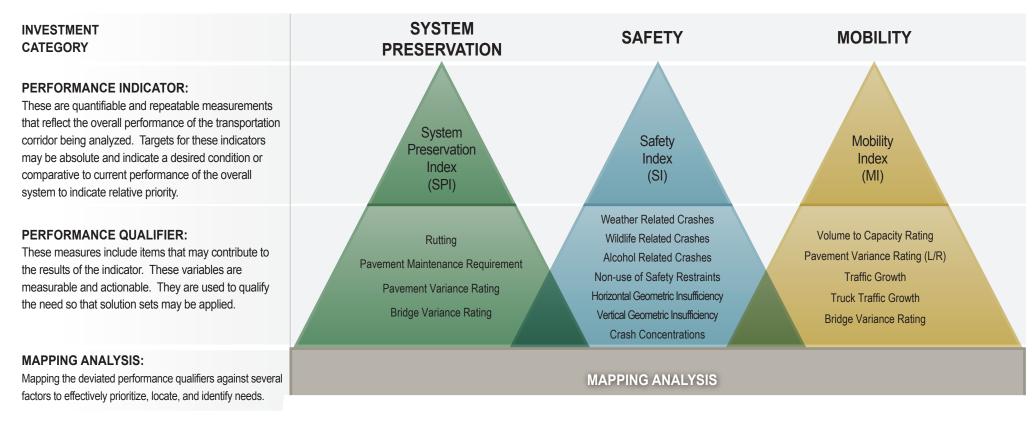
PERFORMANCE BASED NEEDS

The Corridor Plan utilizes a performance based approach to needs definition. A system of performance measures is used to evaluate the corridor. The architecture of this tiered system is focused on the three Investment Categories identified in the Long Range Transportation Plan: System Preservation, Safety, and Mobility. Performance measures include both absolute and comparative targets. Absolute measures gauge progress towards long term goals, while comparative measures between corridor and system performance provide information to assist in prioritization.

A need is defined as a deviation between these targets and measured performance. The first tier of the system allows for rapid identification of need in each of the Investment Categories through a Performance Indicator. The second tier provides additional information to qualify potential causes through a set of Performance Qualifiers. GIS based Mapping Analysis tools provide for a spatial analysis of these measurements to further investigate causes and identify overlapping needs.

TIERED APPROACH:

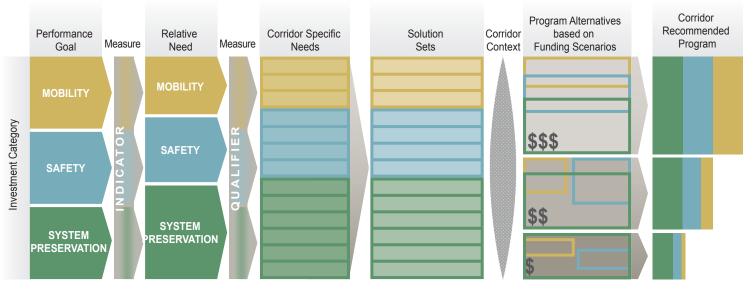
A method to evaluate performance goals at a general level and then advance through the system/hierarchy to filter data and define needs.



NEEDS DRIVEN SOLUTIONS:

Performance based needs are captured and documented. These needs remain until the performance is changed. This approach also separates the discussion of need from the discussion of projects, which enhances the transparency of prioritization.

From WYDOT's list of preferred remedies to specific problems, preliminary solutions sets are developed for the identified needs. These sets may be tailored by the specific context of the corridor. For each of the three funding scenarios of the long range plan, the solutions to be considered may vary and the size of the program change. A recommended program can be selected based on anticipated funding levels.



SSC 4 - ROCK SPRINGS TO JACKSON - US 191/US 189 **CORRIDOR PLAN**

CONTENTS

CORR	IDOR PLAN PURPOSE	INSIDE FRONT COVER
н.	STATE SIGNIFICANT CORRIDOR 4 - DESCRIPTI	ON 1
	Corridor Description	1
	Corridor Segments	1
III.	EVALUATION OF CORRIDOR PERFORMANCE	3
	Step 1: Summary of Indicator and Qualifier Performance Measures	3
	Step 2: System Preservation - Index Maps	4
	Analysis of Investment Category Needs System Preservation	- 5
	Step 2: Safety - Index Maps	6
	Analysis of Investment Category Needs	- Safety 7
	Step 2: Mobility - Index Maps	8
	Analysis of Investment Category Needs	- Mobility 9
	Step 3: Analysis of Planning Segment Needs	10
	Environmental Overview	
	Step 4: Summary of Corridor Needs	12
IV.	SOLUTION SETS	13
V.	RECOMMENDATIONS	14
	Realizing the Corridor Vision	15
	Corridor Performance	15

TABLES

TABLE 1	Segments for State Significant Corridor 4	2	SYSTEM PRESERVATION MAPS	
TABLE 2	Indicator and Qualifier Performance of Planning Segments	3	Rutting	A-1
TABLE 3	STIP by Year and Corridor Segment	5	Pavement Maintenance Requirement	A-2
TABLE 4	Horizontal Geometry Insufficiency	7	Pavement Variance Rating	A-3
TABLE 5	Vertical Geometry Insufficiency	7	Bridge Variance Rating	A-4
TABLE 6	Critical Crash Concentrations	7	SAFETY MAPS	
TABLE 7	Major Traffic Generators	9		
TABLE 8	Traffic Growth	9	Weather Related Crashes	A-5
TABLE 9	Truck Traffic Growth	9	Wildlife Related Crashes	A-6
TABLE 10	Local/Regional Routes with Poor PSR	9	Alcohol Related Crashes	A-7
TABLE 11	SSC 4 Structurally Deficient Bridges (L&R)	9	Non-use of Safety Restraints per Crash Data	A-8
TABLE 12	Important Environmental Considerations	11	Horizontal Geometry Insufficiency	A-9
TABLE 13	Recommended Solution Sets to Improve		Vertical Geometry Insufficiency	A-10
	Performance in Each Index	13	Crash Concentrations	A-11
TABLE 14	SSC 4 Recommended Strategies for Long Range Plan Funding Scenarios	14	MOBILITY MAPS	
TABLE 15	Review of Corridor Vision Goals and		Volume to Capacity Rating	A-12
	Other Considerations	15	Pavement Variance Rating (L/R)	A-13
TABLE 16	Corridor Performance	15	Traffic Growth	A-14
			Truck Traffic Growth	A-15
			Bridge Variance Rating (L/R)	A-16
			ENVIRONMENTAL CHARACTERISTICS	
			Environmental Data Summary	A-17



APPENDIX

STATE SIGNIFICANT CORRIDOR 4 - DESCRIPTION Ι. CORRIDOR DESCRIPTION

State Significant Corridor (SSC) 4 includes 175 miles of US 191/189 from Rock Springs to Jackson. It connects Interstate 80 (I-80) on the south at Rock Springs to the Town of Jackson on the north. SSC 4 travels through Hoback Junction, Daniel, Pinedale, Boulder, Farson and Eden. The corridor passes through WYDOT District 3 and three counties in western Wyoming.

The corridor spans a region of diverse geography and economics. The high plains area to the south has been heavily developed by extractive energy interests across agricultural and public lands, primarily Bureau of Land Management. North of Pinedale, the corridor transitions to mountainous terrain, with some agriculture, and a recreationally based tourism industry centered on the Grand Teton and Yellowstone to the north. National Parks, as well as the Bridger-Teton National Forest.

The section of SSC 4 from Pinedale to Jackson includes part of the Centennial Scenic Byway. The Centennial Scenic Byway is the longest Byway in Wyoming and connects Pinedale, Jackson, and Dubois through a region of high mountains and deep valleys, abundant with wildlife. Truck traffic and oil field service dominates the traffic mix to the south, while recreational travelers us the corridor as a major access to the national park area north of Jackson. The Jonah field and the Pinedale Anticline in the Green River Basin west of US 191 between Pinedale and Marbleton represent two of the most active oil and gas field in the state. Blowing and drifting snow affects winter travel, especially south of Pinedale, while deeper snowfall accumulation affects the northern end of the corridor. Wildlife/vehicle crashes are problematic, especially

SSC 4 passes through two urban areas with a population of 5,000 or greater. Jackson and Rock Springs each have unique characteristics that differentiate them from each other. Jackson is located on the north end of SSC 4 at an elevation of 6,500 feet. As a tourism destination, Jackson experiences the highest percentage of tourism year round as it is one of the gateways to Grand Teton and Yellowstone National Park. In the winter time, Jackson serves Jackson Hole Mountain Resort, a ski area renowned for its challenging terrain and deep snow. Rock Springs is located on the south end of the corridor. Located in an energy-rich region, Rock Springs is the regional center for a large amount of wind, oil, and natural gas production. Jonah Field is a large natural gas field in the Green River Basin located 65 miles north of Rock Springs. US 191 is used as Main Street in both Rock Springs and Jackson which leads to pedestrian safety, noise, truck traffic, and landscaping issues for the communities.

Additional information including environmental context, key issues, and emerging trends is provided in the Corridor Visions and LRTP phases of Wyoming Connects. This Corridor Plan focuses on the identification of the corridor needs through the analysis of corridor performance.

CORRIDOR SEGMENTS

SSC 4 has been divided into 9 planning segments. Planning segments identify generally consistent sections of the corridor for planning level analysis. The planning segments vary in length depending on the context of the corridor. The corridor was segmented at all urban areas and at the intersection of other SSCs. Other context changes may include: roadway typical section (through lanes, shoulders, etc.), average daily traffic, intersecting routes, and terrain. Each segment break or endpoint was assigned as closely as possible to the nearest maintenance section endpoint; segments generally encompass multiple maintenance sections. The planning segments allow for an appropriate analysis and evaluation of corridor needs at a planning level while still providing geographic reference.

Table 1 and the accompanying map on the next page describe general characteristics of each corridor segment.



Snake River Canyon Bridge at Hoback Junction



DESCRIPTION

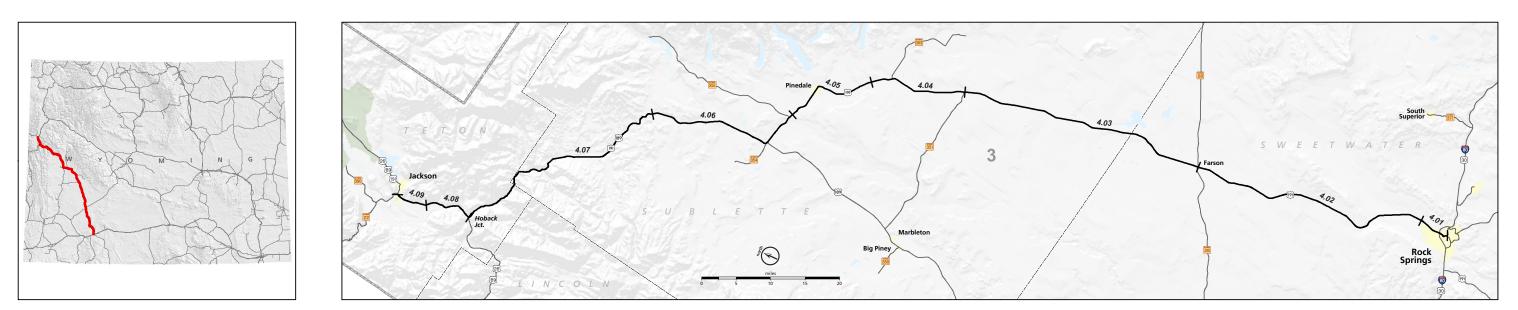


Table 1 - Segments for State Significant Corridor 4

_			<u> </u>			
	Segment	ML Route	Begin	End	Length	Description
	4.01	13	0.00	4.71	4.71	Rock Springs Urban Area (pop. 20,905). Features: mixed laneage from 5-lanes with center turn lane to 2-lane; Elk Street interchange; Bitter Creek and Killper signs; local public fixed route bus service in Rock Springs; urban with mixed use commercial and light industrial uses.
	4.02	13	4.71	40.00	35.29	Rock Springs to Farson. Features: 2-lane cross section with multiple 3-lane passing areas; segment passes through Eden and breaks at Regional Route WY and ranch lands; rolling terrain.
	4.03	13	40.00	76.75	36.75	Farson to WYO 351. Features: 2-lane cross section with multiple 3-lane passing areas; segment breaks at Regional Route WYO 351; unnamed rest area; wild Reservoirs; BLM range and ranch lands; flat terrain.
4	4.04	13	76.75	91.00	14.25	WYO 351 to MP 91.0. Features: 2-lane cross section with several 3-lane passing areas; intersection with Local Route WYO 353; town of Boulder; East Fork Ri ranch lands, with some irrigated lands; oil and gas development; flat to rolling terrain.
Corrido	4.05	13	91.00	105.31	14.31	Pinedale area. Features: Transition from rural 2-lane to urban cross section with curb/gutter, multiple through lanes, and auxiliary lanes; intersects Local Route Barber Creek, New York River, and Duck Creek; tourism and dispersed recreation center on federal lands; mixed use business, commercial, and residential lan gas fields; wind energy; exceedance of Ozone standards is a risk factor; Centennial Scenic Byway; Trappers Point wildlife migration area; mixed terrain - rolling
	4.06	13	105.31	128.80	23.49	Pinedale north. Features: 2-lane cross section; intersects Regional Route US 189 and Local Route WYO 352, 354; Stock Pass; Duck Creek, Green River, Hay Scenic Byway; Trappers Point wildlife migration area; federal recreational lands access; BLM range and ranch lands; rolling terrain.
	4.07	13	128.80	163.67	34.87	MP 128.8 to Hoback Jct. Features: 2-lane cross section; intersects SSC 2 (US 26/89); town of Bondurant; Muddy Creek, Hoback River (canyon) (9 bridges), L federal recreational lands access; Teton-Bridger National Forest; mountainous terrain.
	4.08	10	140.77	148.00	7.23	Hoback Jct. to Jackson. Features: 2-lane cross section with multiple access points and auxiliary lanes; begins at intersection with SSC 2 (US 26/89); Snake F urban features to north; federal recreational lands access (Hoback Canyon); Teton-Bridger National Forest; Centennial Scenic Byway; intercity bus route; flat te
	4.09	10	148.00	152.60	4.60	Jackson Urban Area (pop. 9,806). Features: 4- to 5-lane section through urban area with curb/gutter/sidewalks; terminates at intersection with Regional Route developed with many accesses; southern gateway to Grand Teton and Yellowstone National Parks; National Elk Refuge; Centennial Scenic Byway; tourism, re- bus and bus station; local public fixed route bus system; urban terrain.

Source: URS Windshield Survey June 2012; Maintenance Section Reference Book 2012; Wyoming Connects: LRTP and Corridor Visions. Note: Descriptions of beginning and endpoints are approximate.

CORRIDOR SEGMENTS

CORRIDOR 4

Ipecker Creek; 2 at-grade RR crossings; changeable message

YO 28 at Farson; Little Sandy and Big Sandy Rivers; BLM range

ildlife crossing area; access to Big Sandy and Eden Valley

River and Boulder Creek; adjacent to Green River; BLM range and

and uses; irrigated pastures; center of the Pinedale Anticline oil/ ng flat and urban.

lay Gulch, North Beaver Creek; road close gates; Centennial

, Lower Hoback River, Cliff Creek; Centennial Scenic Byway;

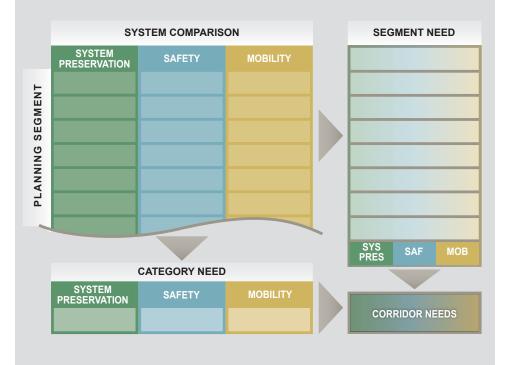
e River (3), Flat Creek; changeable message signs; increasing exterrain.

ute WYO 22 and end point of SSC 5 (US 26/89/191); heavily recreation, and employment center; Jackson Hole Airport; intercity

II. EVALUATION OF CORRIDOR PERFORMANCE

This section describes the evaluation of specific corridor needs based on the performance based process defined in the IPF. The Performance Based Needs Process, shown below, illustrates the steps followed for this corridor plan. Indicative Performance measures based on existing or simply defined index measurements for each investment category of System Preservation, Safety, and Mobility were evaluated to preliminarily identify need relative to long term goals. Qualifying performance measures were evaluated to better assess contributing factors to the primary need indicators. The indicators and qualifiers were evaluated and analyzed relative to system averages and, when available, previously specified performance targets. This gap analysis identifies locations where needs exist, qualifies the nature of the need, and provides information on the priority relative to the system of SSCs and available funding.

Many of the measures were established as comparisons to the system average, therefore good performance indicates performance better than the system average. The reverse is also true, poor performance indicates that performance is below the average or rated as poor for a particular indicator or qualifier. As additional corridors are evaluated, specific performance targets may be set to measure absolute performance. The IPF process recommends a mix of absolute measures to evaluate true need relative to long term goals and comparative measures to assist in determining priority.





STEP 1: SUMMARY OF INDICATOR AND QUALIFIER PERFORMANCE MEASURES

This corridor plan evaluates System Preservation, Safety, and Mobility performance using the process described in the Integrated Planning Framework, published separately. The plan analyzes the performance of planning segments described in Table 1 as compared to system averages. It identifies good, fair, poor or less, average, more performance for each segment in an overall index and for each contributing qualifier measurement.

Throughout this report, the color green is used to represent System Preservation, blue represents Safety, and yellow represents Mobility. Lighter shades represent better performance and darker shades represent worse performance compared to the system average.

Table 2 summarizes the results for each performance index and qualifier for each planning segment on the corridor.

Table 2 - Indicator and Qualifier Performance of SSC 4

		SYSTEM	/I PRESER\	ATION					SAF	ETY						MOB	LITY		
Segment	System Preservation Index	Rutting	Pavement Maint. Requirement	Pavement Variance Rating	Bridge Variance Rating	Safety Index	Weather Related Crashes	Wildlife Related Crashes	Alcohol Related Crashes	Non-use of Safety Restraints	Horizontal Geometric Insufficiency	Vertical Geometric Insufficiency	Crash Concen- trations	Mobility Index	Volume to Capacity Rating	Pavement Variance Rating (L/R)	Traffic Growth	Truck Traffic Growth	Bridge Variance (L/R)
4.01	Worse	Fair	Average	Poor	Less	Poor	Less	Less	More	More	Less	Less	Good	Worse	Good	Good	Average	Average	More
4.02	Worse	Good	More	Good	More	Fair	Average	Less	Average	More	Less	Less	Poor	Average	Good	Poor	Average	Average	Average
4.03	Average	Good	More	Good	Less	Poor	Average	Average	More	Average	Less	Average	Poor	Average	Good	Fair	Average	Average	Average
4.04	Average	Fair	Average	Fair	Less	Fair	Less	More	Average	Less	Less	Less	Good	Worse	Good	Good	Average	Average	More
4.05	Average	Good	Less	Good	Less	Poor	Average	More	More	Less	Less	Average	Good	Average	Good	Fair	Average	Average	Less
4.06	Average	Good	Average	Good	Average	Good	Less	More	Average	Less	Less	Less	Good	Average	Good	Fair	Average	Average	Less
4.07	Average	Good	Average	Fair	Less	Fair	Average	Average	Average	Average	More	Average	Good	Better	Good	Fair	More	Average	Less
4.08	Worse	Fair	More	Fair	More	Poor	Average	Average	More	Average	Less	Average	Good	Average	Good	Fair	More	Average	Less
4.09	Average	Fair	More	Fair	Less	Poor	Average	Average	Average	Average	Less	Less	Good	Average	Good	Good	More	Average	Less





4 SSC 4 Rock Springs to Jackson US191/US189

STEP 2: ANALYSIS OF INVESTMENT CATEGORY NEEDS - SYSTEM PRESERVATION



Performance Index

The System Preservation Index is average, with the exception of segments 4.01, 4.02, and 4.08, which are worse than average.

Performance qualifiers with a negative effect on the System Preservation Index:

- The Pavement Maintenance Requirement is more than average on segments 4.02, 4.03, 4.08, and 4.09.
- The Pavement Variance Rating on segment 4.01 is poor.

• The Bridge Variance Rating on segments 4.02 is poor.

Refer to the sections below for more information. SYSTEM DESERVATION

		SISIE	VI PRESERV	ATION	
Segment	System Preservation Index	Rutting	Pavement Maint. Requirement	Pavement Variance Rating	Bridge Variance Rating
4.01	Worse	Fair	Average	Poor	Less
4.02	Worse	Good	More	Good	More
4.03	Average	Good	More	Good	Less
4.04	Average	Fair	Average	Fair	Less
4.05	Average	Good	Less	Good	Less
4.06	Average	Good	Average	Good	Average
4.07	Average	Good	Average	Fair	Less
4.08	Worse	Fair	More	Fair	More
4.09	Average	Fair	More	Fair	Less

Table 3 - SSC 4 STIP by Year and Corridor Segment

Performance Qualifiers

Rutting

There are two location where rutting falls within the poor category: one mile on ML 13 between route marker (RM) 2 and 3 in Segment 4.01 and three miles on ML 10 between RM 151 and 154 in Segment 4.09.

Pavement Maintenance Requirements

The pavement maintenance sections that were recommended by the Pavement Management System (Agile Assets) and not yet selected to receive funding within the STIP will continue to decline. If not treated fairly soon, the treatments will become more costly as conditions deteriorate.

Approximately 27% of SSC 4 has been identified as having a 1S need. This represents 47 miles of pavement. Segments 4.02, 4.03, 4.05, 4.06, and 4.07 had 1S treatments recommended by the Pavement Management System. Based upon current available funding, only one project, representing 24.4 miles of pavement, has been selected to be completed within the next several years.

Approximately 52% of SSC 4 has been identified as having a 2S need. This represents 92 miles of pavement. Segments 4.02, 4.03, 4.05, 4.06, 4.07, 4.08, and 4.09 have 2S treatment recommended by the Pavement Management System. Based upon current available funding, only three projects, representing 22.7 miles of pavement, have been selected to be completed within the next several years

Approximately 21% of SSC 4 has been identified as having a 3S need. This represents 37 miles of pavement. Segments 4.01, 4.02, 4.04, 4.05, 4.07, 4.08, and 4.09 have 3S treatment recommended by the Pavement Management System. Based upon current available funding, no projects have been selected to be completed within the next several years.

Based upon current available funding within the STIP, SSC 4 has identified one 4S projects, representing 3.9 miles of pavement..

Pavement Variance Rating

The Pavement Variance Rating is fair or better for the entire corridor with the exception of a Poor rating in Segment 4.01 (Rock Springs). Pavement hotspots, identified by length and severity, occur at two locations in Rock Springs Segment 4.01 (moderately severe), and four other locations (most, moderately, least severe).

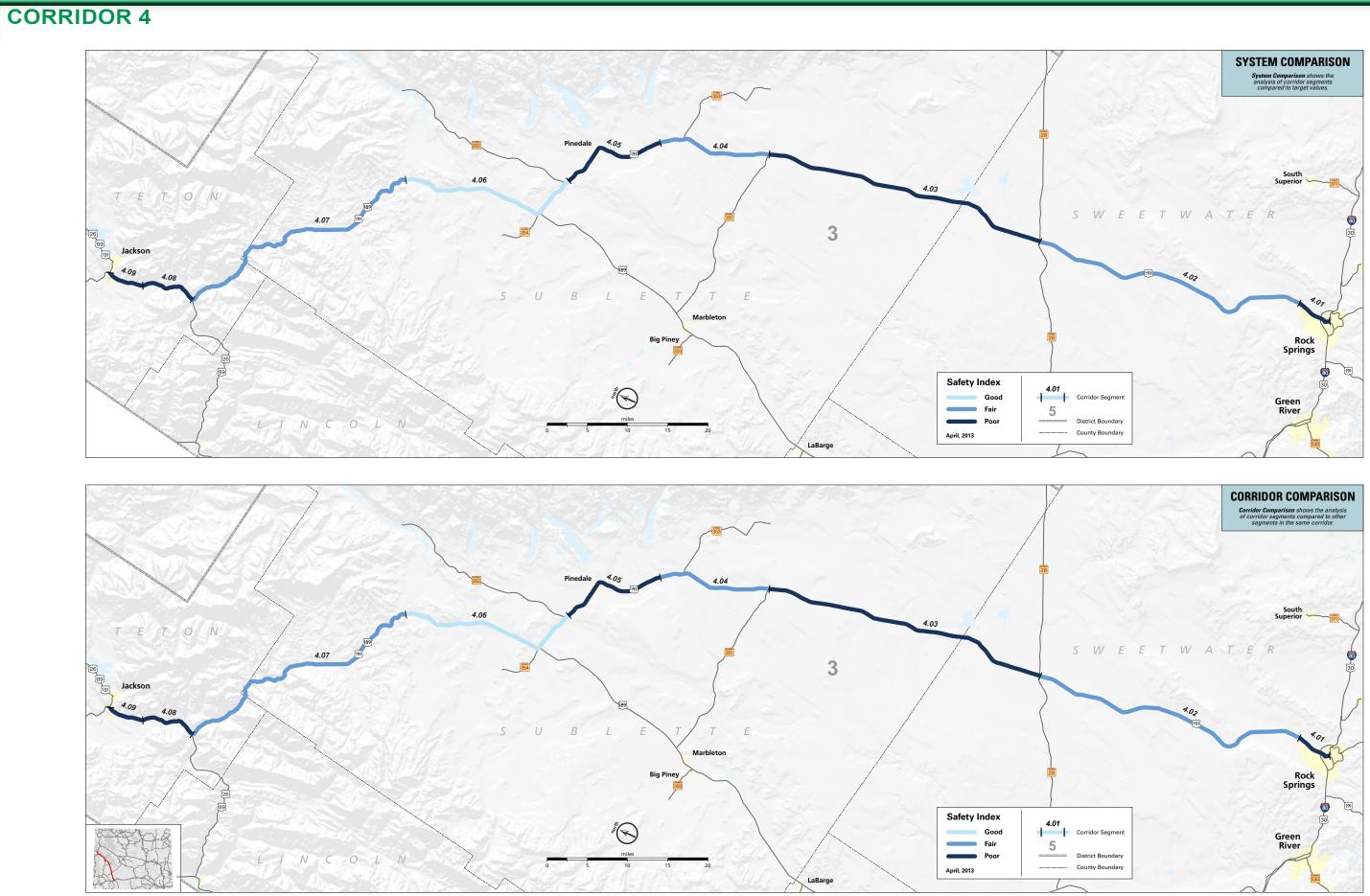
Bridge Variance Rating

The Bridge Variance Rating for most of the corridor is average or better than the system average. All segments have at least one bridge. There are five structurally deficient bridges along SSC 4, three with bridge decks under 15,000 ft² and two under 30,000 ft². The structurally deficient bridges are in Segments 4.02 (1), 4.06 (1), 4.07 (1), and 4.08 (2), resulting in a Bridge Variance Rating of average or more when compared to the system average.

NOTE: See Appendix for maps documenting each performance qualifier.

													Miles																	
5	10 15	5 20	25	30	35	40	45 50	55	60	65 70	75	80	85 9	0 9	5 10	00 105	110	115	120	125	130	135	140	145	150	155	160	165	170	17
													Corridor	Segment																
ear 4.01			4.02						4.03				4.04			4.05			4.06						4.07				4.08	4
010																					-									
011																					-			-						
12																					=									_
013																														_
)14																					1									_
015 016																														_
017													****								14									-
018												1000000																	///	-
	N131051 Widen to 5 L	anes					B143034 Chip Seal					Wie	32095 den to 5 Lanes	5		to 5 Lanes	Ove					P132064 Reconstru	uction					N1 Re str 175	18, 45 04066 econ- uction/ S/Turn- t	
SUMMARY PROJECT I.D.							Year 2017, 1S N132101 Mill & Overlay					N1	ar 2017, 2S 32101 I & Overlay		Year 20 B14303 Chip Se		B14	r 2014, 1 3034 o Seal	IS			Year 2017 N132099 Mill & Ove								
PROJI												N1	ar 2017, 2S 32102 I & Overlay						Logon	4		Year 2012 B123016 Overlay	2, 1S							
																	//////	3S	Legeno		/	Year 2014 143034 Chip Sea								
																						Year 201 N132104 Mill & Ove								
																					10				SS	C 4 Rock S	Springs to Jac	kson US19	1/US189	





SAFETY – INDEX

STEP 2: ANALYSIS OF INVESTMENT CATEGORY NEEDS - SAFETY



Performance Index

The Safety Performance Index ranges from good to poor across the corridor. Segments rated poor include 4.01, 4.03, 4.05, 4.08, and 4.09.

Performance qualifiers with poor performance include:

- Wildlife Related Crashes are more than the average on segments 4.04, 4.05, and 4.06.
- Alcohol Related Crashes are more than the average on segments 4.01, 4.03, 4.04 and 4.08.
- Non-Use of Safety Restraints is more than the average on segments 4.01 and 4.02.
- · Crashes on Horizontal Geometric Insufficient Curves are more than the average on segment 4.07.
- Crash Concentrations are rated poor on segments 4.02 and 4.03.

Refer to the sections below for more information.

				SAF	ETY			
Segment	Safety Index	Weather Related Crashes	Wildlife Related Crashes	Alcohol Related Crashes	Non-use of Safety Restraints	Horizontal Geometric Insufficiency	Vertical Geometric Insufficiency	Crash Concen- trations
4.01	Poor	Less	Less	More	More	Less	Less	Good
4.02	Fair	Average	Less	Average	More	Less	Less	Poor
4.03	Poor	Average	Average	More	Average	Less	Average	Poor
4.04	Fair	Less	More	Average	Less	Less	Less	Good
4.05	Poor	Average	More	More	Less	Less	Average	Good
4.06	Good	Less	More	Average	Less	Less	Less	Good
4.07	Fair	Average	Average	Average	Average	More	Average	Good
4.08	Poor	Average	Average	More	Average	Less	Average	Good
4.09	Poor	Average	Average	Average	Average	Less	Less	Good

Performance Qualifiers

Weather Related Crashes

The ratio of weather related crashes to total crashes varied within SSC 4 from below the system average to slightly above the system average. Segments 4.07, 4.08, and 4.09 each had a weather related crash rate of approximately 30% and the adverse conditions were identified as snowing with snow or ice/frost on the roads.

Wildlife Related Crashes

SSC 4 is varied in it's wildlife related collisions. Segments 4.04 (54%), 4.05 (52%), and 4.06 (74%) have a high rate of accidents involving wildlife when compared to the statewide average (31%). Segment 4.06 is the highest rate of wildlife related accidents in the state.

The wildlife related crashes within segment 4.06 are mostly deer (72%), but also include antelope (12%), elk (9%), and other animals (7%). These crashes occurred mostly during darkness and throughout the segment. However, the wildlife related crashes were slightly higher from RM 106 to 111 and from RM 125 to 126. The Wyoming Game and Fish Department have documented significant migration routes within Segment 4.06

Alcohol Related Crashes

The percentage of alcohol related crashes is above the system average in most of the corridor, with the highest percentage of alcohol related crashes occurring in Segments 4.01, 4.03, 4.05, and 4.08. Crash locations in Segment 4.01 were concentrated near RM 1 and 2. Half of the alcohol related crashes in Segment 4.05 were at RM 100 and 104. All of the alcohol related crashes in Segment 4.08, a 7.2mile segment, occurred in the 3-mile section from RM 144 to 146.

Non-use of Safety Restraint

The ratio of crashes in which a restraint device was not worn to total crashes varies within SSC 4 from below the system average to higher than the system average. Segments 4.01 and 4.02, in the Rock Springs area, had the highest percentage of crashes in which seat belts were not worn, both at 83.7%.

Horizontal Geometry Insufficiency

Several horizontal alignments were found to be insufficient based on the associated posted speed and an assumed emax of 8%. Segment 4.07 has the most insufficient horizontal alignments within the segment. Further study will need to take place to determine specific needs of each alignment and the constraints to which it was designed and built.

Following is a summary of locations where a horizontal insufficiency corresponded to a crash. The data is not clear if the crash was directly related to geometry. However, locations with several accidents should be further studied. Table 4 summarizes locations of insufficient curves with more than one crash in near vicinity within the 5 year accident analysis period.

Table 4 - Horizontal Geometry Insufficiency

Segment	ML Route	Route Marker	# of Crashes
4.07	ML13	131.43	4
4.07	ML13	132.57	2
4.07	ML13	147.53	2
4.07	ML13	154.79	4
4.07	ML13	156.91	2
4.07	ML13	157.96	4

Vertical Geometry Insufficiency

Several vertical alignments were found to be insufficient based on the associated posted speed and the length of the curve for stopping sight distance. Segments 4.03, 4.05, 4.07, and 4.08 have the most insufficient vertical alignments within the segment. Further study will need to take place to determine specific needs of each alignment and the constraints to which it was designed and built.

Table 5 summarizes locations of insufficient profiles with more than one crash in the near vicinity within the 5 year crash analysis. The data is not clear if the crash was directly related to the geometry. However, locations with several crashes should be further studied.

Table 5 - Vertical Geometry Insufficiency

	al deelineary mea	mereney		
Segment	ML Route	Route Marker	Curve Type	# of Crashes
4.07	ML13	129.67	CREST	3
4.07	ML13	161.96	CREST	3
4.07	ML13	163.00	CREST	4
4.08	ML10	141.68	SAG	2

Crash Concentrations

Crash concentrations are identified by locating spatially significant clusters of individual crash events that are of a similar severity level. The concentrations fall into one of two severity types: Critical, which consists of only "Critical" level crashes, and Other, which consists of "Severe" and "Damage" level crashes.

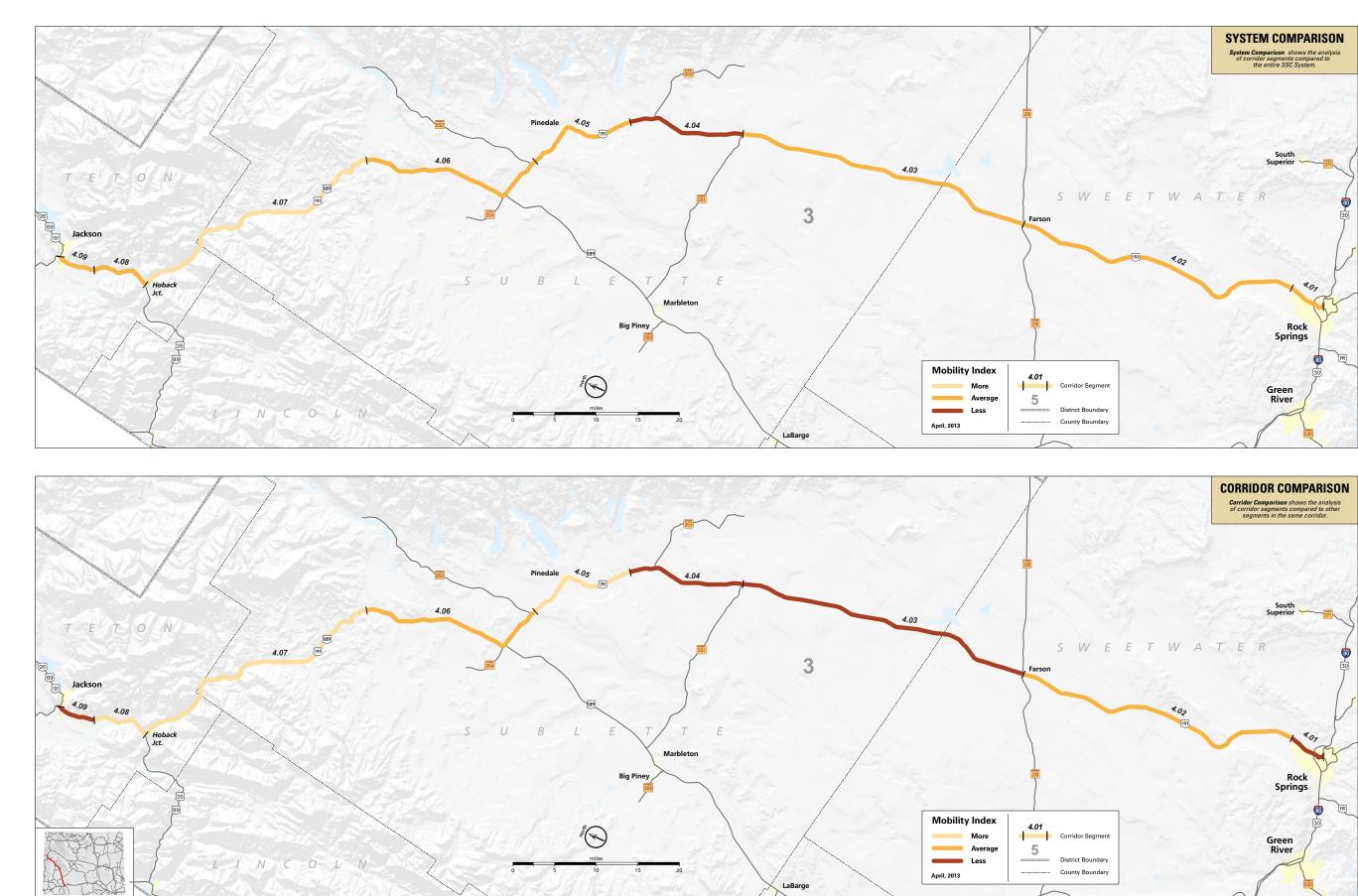
There are seven Critical concentrations on Corridor 4, which are listed in Table 6. Additionally, there is one Other type concentration. Segment 4.03 exhibits the most crash concentrations with 4 Critical concentrations, which occur between RM 40.5 and 41.25, RM 41.8 and 42.3, RM 43.7 and 44, and RM 72.3 and 73.9. Segments 4.05 and 4.06 have Other type concentrations resulting primarily from Damage level crashes.

Table 6 - Critical Crash Concentrations

Cormont	ML Douto	Route Marker						
Segment	ML Route	From	То					
4.02	ML13	29.9	30.5					
4.02	ML13	34	35.2					
4.02	ML13	38	38.2					
4.03	ML13	40.5	41.25					
4.03	ML13	41.8	42.3					
4.03	ML13	43.7	44					
4.03	ML13	72.3	73.9					

NOTE: See Appendix for maps documenting each performance qualifier.





8 SSC 4 Rock Springs to Jackson US191/US189

MOBILITY – INDEX

CORRIDOR 4



Performance Index

The Mobility Performance Index for segments on SSC 4 ranges from better to worse than average. Segments rated worse than average include 4.01 and 4.04.

			MOB	ILITY		
Segment	Mobility Index	Volume to Capacity Rating	Pavement Variance Rating (L/R)	Traffic Growth	Truck Traffic Growth	Bridge Variance (L/R)
4.01	Worse	Good	Good	Average	Average	More
4.02	Average	Good	Poor	Average	Average	Average
4.03	Average	Good	Fair	Average	Average	Average
4.04	Worse	Good	Good	Average	Average	More
4.05	Average	Good	Fair	Average	Average	Less
4.06	Average	Good	Fair	Average	Average	Less
4.07	Better	Good	Fair	More	Average	Less
4.08	Average	Good	Fair	More	Average	Less
4.09	Average	Good	Good	More	Average	Less

Three regional routes connect to SSC 4. The condition of each local and regional route is associated with a planning segment and directly influences the mobility of that segment. The condition of these local and regional routes is in fair to poor condition for the most part with some routes in good condition. There are currently four structurally deficient bridges on the local and regional routes.

SSC 4 connects SS 1 (Interstate 80) to the towns of Pinedale and Jackson. The south end of SSC 4 has high truck and oil field service traffic, while recreational travelers use the corridor as a major access to the national park(s) north of Jackson. Shoulder widths vary from 2' to 4' with some rumble strips noted. This is adequate for low volume highways.

Table 7 - Major Traffic Generators

Major Traffic Generators
Energy industry truck traffic - Pinedale Anticline & Jonah Field
Yellowstone & Grand Teton National Parks - Tourism - Jackson area
Employment centers - Jackson, Rock Springs
Other dispersed local/regional recreation on public lands

Performance Qualifiers

Volume to Capacity Rating

Volume to Capacity Ratio (V/C) is a measure that reflects mobility and quality of travel of a corridor or section of a corridor. It compares roadway demand (vehicle volumes) with roadway supply (carrying capacity). The volume to capacity rating for the entire SSC 4 is good.

Traffic Growth

The average traffic growth within the SSC System is 1.42%. All segments in this corridor are above this average except Segment 4.01. Segment 4.09 has the highest average annual traffic growth rate. This segment is located north of Hoback Junction entering the urban area of Jackson on ML10.

Table 8 - Traffic Growth

Segment	AADT 2010	Average 20 Year Growth
4.01	11,671	1.38%
4.02	3,187	1.48%
4.03	3,484	1.75%
4.04	2,761	1.61%
4.05	5,205	1.50%
4.06	2,123	1.82%
4.07	2,010	1.95%
4.08	7,095	2.02%
4.09	12,914	2.14%

Truck Traffic Growth

The average truck traffic growth within the SSC System is 1.34%. All segments within SSC 4 are above this average. The majority of the corridor is a 2-lane rural classification. Segment 4.03 has the highest average annual truck growth rate. This segment is from Farson north to State Highway 351 via ML13.

Table 9 - Truck Traffic Growth

Segment	AADTT 2010	% Trucks 2010	Truck Traffic Growth
4.01	675	7.38%	1.38%
4.02	660	20.61%	1.77%
4.03	715	19.99%	2.13%
4.04	339	12.48%	2.10%
4.05	357	8.25%	2.02%
4.06	212	10.17%	1.79%
4.07	188	9.43%	1.69%
4.08	361	5.42%	1.97%
4.09	579	4.50%	1.81%

Local and Regional Roads

Local and Regional Routes that connect to the SSC affect the Mobility Performance Indicator. These routes serve the important function of connecting rural areas to the primary routes. While traffic volumes are typically low on these secondary routes, maintaining them in acceptable condition is important to general mobility for the state. This analysis includes pavement and bridge condition as qualifiers.

Local and Regional Roads Impacting Pavement Variance Rating (L/R)

The Mobility Index may be affected by local and regional routes that have poor pavement condition as reflected by the Pavement Variance Rating (PVR). The PVR is the product of Pavement Sufficiency Rating (PSR) calculated as the deviation from the system average. Poor PSR is reported on local/regional routes associated with segments 4.02, and 4.03. Table 10 lists the local/regional routes with Poor PSR.

Table 10 - Local/Regional Routes with Poor PSR

Sogmont	Average	ML Route	Route Marker		Average
Segment	PVR	ML Roule	Begin	End	PSR
4.02	0.87	ML1912	100.00	128.22	2.72
4.03	0.87	ML1912	100.00	128.22	0.87

Bridge Variance Rating (L/R)

The bridge variance rating for local and regional routes on SSC 4 shows 8 structurally deficient bridges. The locations of the bridges are shown in the table below.

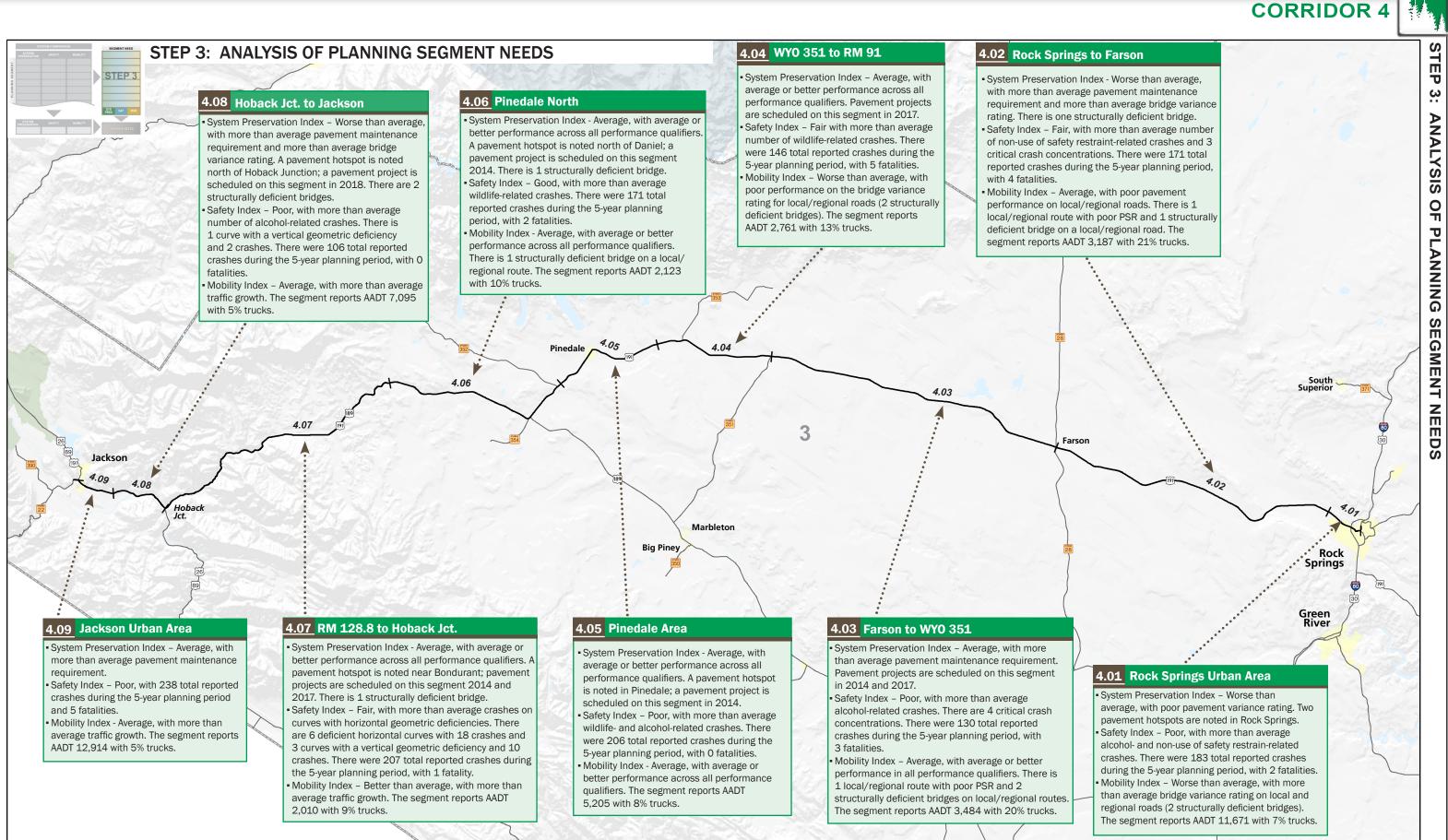
		8
Segment	ML Route	Route Marker
4.01	ML53	104.29
4.01	ML53	105.25
4.02	ML14	3.23
4.03	ML14	3.23
4.03	ML1801	7.30
4.04	ML1801	7.30
4.04	ML1804	14.40
4.06	ML11	123.70

NOTE: See Appendix for maps documenting each performance qualifier.





Table 11 - SSC 4 Structurally Deficient Bridges on Local/Regional Routes



CORRIDOR 4

Environmental Overview

The Wyoming Interagency Spatial Database and Online Management System (WISDOM) was queried to identify natural resources that could be impacted by transportation projects. The following summary lists the general type of potentially impacted resources. The project development phase should investigate these resources in more detail to determine if mitigation activities are required. Please see Appendix and http://wisdom.wygisc.org/ for detailed information.

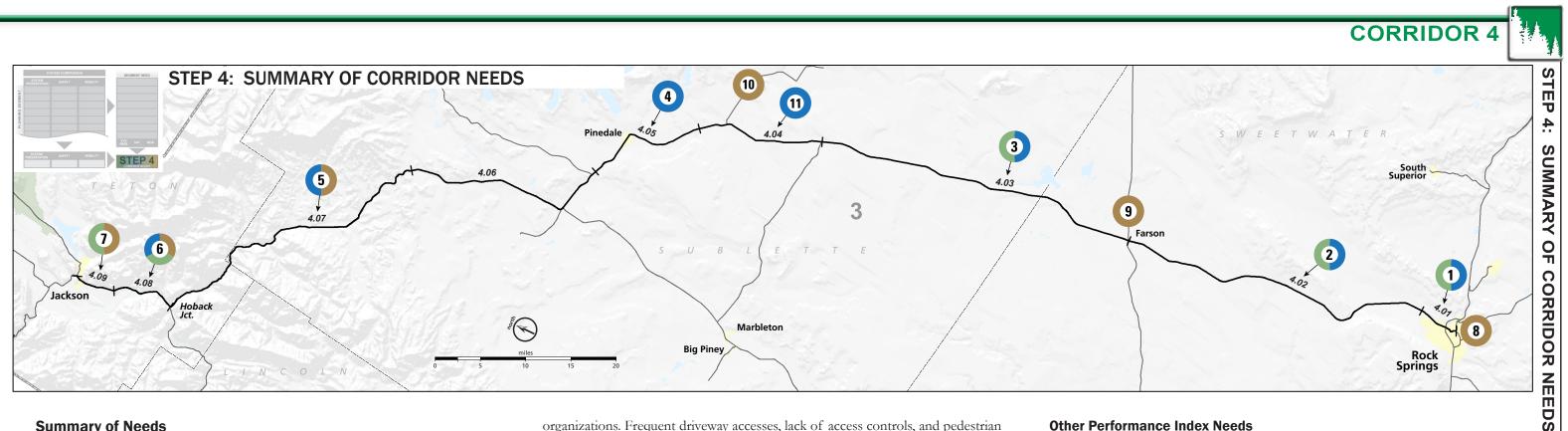
There are eleven different terrestrial habitat types located throughout the five special management areas within SSC 4. Ten federally listed species within the corridor fall into one of three categories, candidate, endangered, and threatened. Five big game species and nineteen raptor species are found in SSC 4. There are five different categories that fall under the aquatic habitat. There are twenty watersheds, three aquatic crucial priority areas, three aquatic enhancement priority areas, two combined crucial priority area, and one combined enhancement priority area. See Table 12 for general locations.

Ozone Nonattainment Area

The Upper Green River Basin Region Ozone nonattainment area intersects SSC 4 from RM 39.82 to 154.75. Improvements along this section of the corridor, including those on local and regional routes, are subject to either ozone conformity determination or exemption by FHWA utilizing guidelines in the Code of Federal Regulations. Projects designed with the intent of increasing capacity would not likely be determined exempt by FHWA and EPA. Such projects might still be allowable if a net reduction of ozone could be substantiated via increased mobility, congestion mitigation, or reduction of idling.

Table 12 - Environmental Considerations

Category	SOUTH (Rock Springs - State Hwy 351)	CENTRAL (State Hwy 351 - Rim Road)	NORTH (Rim Road - Jackson)
Big Game Crucial Range	Elk Pronghorn Antelope	Moose Mule Deer Pronghorn Antelope	Bighorn Sheep Elk Moose Mule Deer
Big Game Migration Route	Pronghorn Antelope	Elk Moose Mule Deer Pronghorn Antelope	Elk Moose Mule Deer
WGFD Aquatic Crucial Priority Areas SHP	The Sandy	na	Southwestern Hoback Snake River
WGFD Terrestrial Crucial Priority Areas SHP	Big Sandy-Prospects Mesa-Jonah Sands Wind River Front	Hoback Mesa-Jonah Wind River Front	Greys-Hoback River 6th Order Hydrologic Units Hoback
WGFD Combined Crucial Priority Areas SHP	na	Green-New Fork River Corridors Wyoming Range- Cottonwood & Horse Creek Watersheds	na
Occurrence & Distribution (Federally Listed Species)	Black-footed Ferret Canada Lynx Gray Wolf Greater Sage Grouse Whooping Crane	Black-footed Ferret Canada Lynx Gray Wolf Greater Sage Grouse Grizzly Bear North American Wolverine Whooping Crane	Canada Lynx Gray Wolf Greater Sage Grouse Grizzly Bear North American Wolverine Whooping Crane Yellow-billed Cuckoo



Summary of Needs

This section summarizes needs by planning segment for each of the three performance indicators and the supporting performance qualifiers. The summary identifies overlapping needs, which provides guidance in the efficient prioritization of projects to best address deficiencies. The practice of completing projects that simultaneously address multiple needs may present cost savings as well as being most effective in improving performance indexes across the system. The summary also lists other needs in each of the three performance measurement areas. For more information about needs at the corridor level, see the maps in the appendix which compare both system level and corridor level needs.

SSC 4 needs occur across all categories: within System Preservation, pavement needs are noted on eight segments. Within Safety, wildlife, alcohol, and non-use of safety restraint related crashes are frequent, often in overlapping areas. A series of crash concentrations in the Farson areas appears to be related to wildlife, alcohol, and excessive speed. Traffic growth rates on the north end of the corridor approaching Jackson are associated with a high level of pavement need in that area. In addition, six structurally deficient bridges either on the mainline or on local/regional routes require attention as does pavement condition on WYO 28 west of Farson.

Big game crucial range and migration routes intersect much of the corridor and should be investigated for concurrence with wildlife related crashes. Numerous federally listed endangered species are found in the corridor and should be considered in all project planning.

Based on the needs identified in this analysis and the recommended strategies and solution sets, this plan does not identify specific needs to preserve or acquire additional rights of way to accommodate needed improvements. Local and specific ROW requirements based on urban on needs in urban areas should be evaluated in the Urban Areas Corridor Plan in cooperation with local governments and planning organizations. Frequent driveway accesses, lack of access controls, and pedestrian traffic on US 191 in the Jackson urban area present challenges for traffic management. ROW in the Rock Springs and Jackson areas should be evaluated for future improvements.

Overlapping Needs

Overlapping needs are identified on seven segments:

- 4.01 SYSTEM PRESERVATION/SAFETY: Pavement Variance Rating, 1 Pavement Hotspots, Alcohol Related Crashes, Non-use of Safety Restraints
- **2** 4.02 SYSTEM PRESERVATION/SAFETY: Pavement Maintenance Requirement, Bridge Variance Rating/Structurally Deficient Bridges, Non-use of Safety Restraints, Crash Concentrations
- **3** 4.03 SYSTEM PRESERVATION/SAFETY: Pavement Maintenance Requirement, Alcohol Related Crashes, Crash Concentrations
- 4 4.05 - SAFETY: Wildlife Related Crashes, Alcohol Related Crashes
- 5 4.07 SAFETY/MOBILITY: Pavement Hotspot, Crashes on Curves with Horizontal Deficiency, Traffic Growth
- 6 4.08 SYSTEM PRESERVATION/SAFETY/MOBILITY: Pavement Maintenance Requirement, Pavement Hotspot, Bridge Variance Rating/ Structurally Deficient Bridges, Alcohol Related Crashes, Traffic Growth
- 1.09 SYSTEM PRESERVATION/MOBILITY: Pavement Maintenance Requirement, Traffic Growth

Other Performance Index Needs Mabilit

NOD	lity
8	4.01 - Bridge
9	4.02 - Paverr
10	4.04 - Bridge

Safety



- e Variance Rating (L&R)
- nent Variance Rating (L&R)
- e Variance Rating (L&R)
- 4.04 Wildlife Related crashes



III. SOLUTION SETS

A solutions menu was created to address the needs identified in the previous sections. This menu identifies potential solution strategies grouped by performance measure categories. The strategies are a preliminary list based on industry accepted approaches and the efforts to date of WYDOT programs to document preferred approaches. This list is not intended to be all-inclusive, but represents types of improvements that may be employed to address documented needs.

Section IV recommends how the solution sets may be efficiently grouped depending on funding availability.

Table 13 - Recommended Solution Sets to Improve Performance in Each Index

System Preservation	Safety		
 Pavement Maintenance Requirement & Pavement Variance Rating Rutting Mill Mill and overlay 1S Treatments Mill and overlay Seal Coat Cleaning and sealing joints Patching pavement Micro surfacing 2S Treatments Roadway Restoration 3S Treatments Reconstruct Roadway Roadway widening Upgrade geometric design Bridge Variance Rating Bridge Replacement Channel reconstruction Cleaning and sealing bridge members Lower weight limits Restore drainage systems Scour countermeasures 	Weather RelatedSignageAutomated anti-icing systemsGrooved pavementITSLarger signsSnow berms/gradingSnow fencingWarning beaconsWildlife RelatedAnimal detection systemsAnimal jump-out or one-way gatesITSRemove brush from ROWSignageWarning beaconsWildlife bridge/underpassWildlife fencingAlcohol RelatedCenterline rumble stripsITSLaw EnforcementMedia campaignShoulder rumble strips	Horizontal Geometry Centerline rumble strips Dynamic curve warning system Guardrail Improve/restore superelevation Lighting Oversize/length restrictions Reconstruction/realignment Reduce posted speed Reflectors Shoulder rumble strips Signage Warning beacons Vertical Geometry Larger signs Reconstruction/realignment Reduce posted speed Reflectors Signage Warning beacons Safety Restraints ITS Law Enforcement Media campaign	Volume to C Traffic Grown Accelerati Capacity i Decelerat Increase I Intersectio improvem Multimoda Passing la Shoulder Through I Turn lane Bridge Varia Bridge Varia Bridge Re Channel r Cleaning i members Lower allo bridge Restore d Scour cou



Mobility

Capacity Rating & wth / Truck Traffic Growth ation lane y improvements ation lane e lane width tion/interchange ments dal improvements lanes or widening lanes

iance (L/R) Replacement I reconstruction g and sealing bridge 's llowable weight limits on

drainage systems ountermeasures Pavement Variance Rating (L/R)

Rutting Mill Mill and overlay

1S Treatments Cleaning and sealing joints Micro surfacing Mill and overlay Patching pavement Seal Coat

2S Treatments Roadway Restoration

3S Treatments Reconstruct Roadway Roadway widening Upgrade geometric design SOLUTION SETS

IV. RECOMMENDATIONS

This section describes recommendations for strategies and priorities to address corridor needs. The selected strategies address the needs described in previous sections and are organized by the three strategic performance areas: System Preservation, Safety, and Mobility. These recommendations provide information and guidance consistent with the Strategic and Long Range Plans to help WYDOT select projects in coordination with the STIP process.

The recommended strategies have been packaged into solution sets that recognize the inherent overlap that investments may have across performance areas. For example, truck passing lanes may simultaneously improve traffic flow (Mobility) and reduce crashes (Safety).

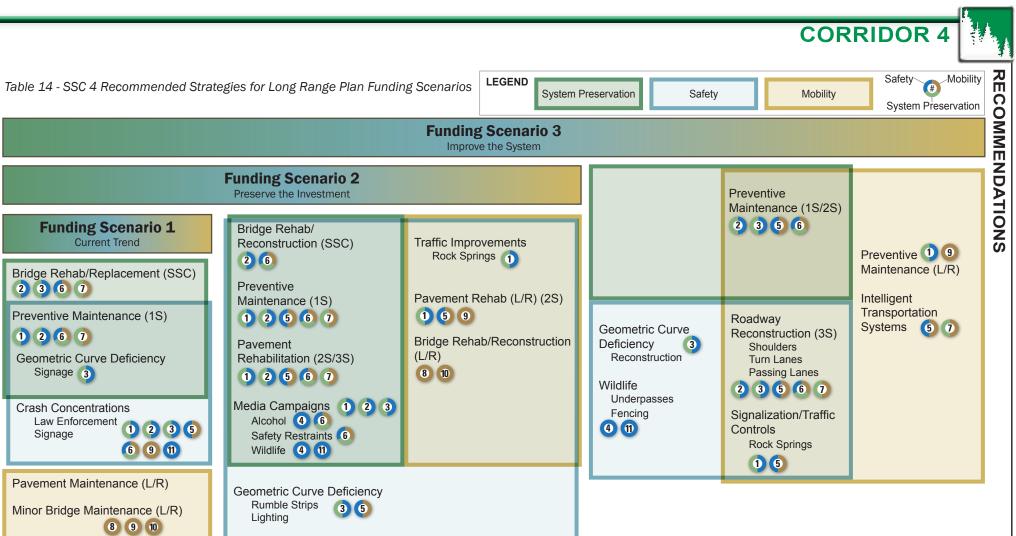
The solution sets are tiered to the three Funding Scenarios identified in the Long Range Transportation Plan. The funding scenarios describe a progressively increasing budget, with generally defined allocations to System Preservation, Safety, and Mobility. With each succeeding level of investment, additional funding is allocated to address shortfalls in performance-based goals.

- Funding Scenario 1 The continuation of program funding at current levels. Most funding is directed to System Preservation needs. System characteristics are expected to decline with inflation and increasing construction costs over time. Few major projects to address Safety, other than with specially restricted and allocated funds, or Mobility would be implemented.
- Funding Scenario 2 Funding over and above the base level would allow additional investments in pavement and bridge projects to meet WYDOT goals.
- Funding Scenario 3 Additional funding over and above Scenario 2 would allow WYDOT to maintain and improve existing conditions, achieve pavement and bridge condition goals, plus invest in major projects to improve Mobility.

Funding Scenario 1

Funding Scenario 1, defined as the continuation of current program funding, is focused primarily on addressing System Preservation needs through preventive maintenance efforts. For this corridor, the plan recommends that these funds remain allocated to preventive pavement maintenance, along with reserving a portion to address identified safety needs. Safety needs include specific wildlife-related crash prone areas, alcohol-related crashes, and the non-use of safety restraints. In addition, geometric insufficiencies related to critical crashes are documented at nine locations and seven areas are identified as critical crash concentrations. These needs may be only partially met under current funding and should be focused on areas with documented overlapping needs. Additional needs that cannot be met under Scenario 1 may be delayed pending additional funds under Scenarios 2 or 3.

- Minor surface treatments on the SSC mainline, including mill and overlay, including pavement hotspots.
- Bridge rehabilitation and replacement of structurally deficient bridges on the SSC mainline.
- Minor projects to improve safety not involving major construction, such as signage on deficient curves and wildlife crash areas, as well as alcohol/seatbelt-related law enforcement.



Funding Scenario 2

If sufficient funds to preserve the system in at least its current operational form are made available, WYDOT will direct funding to strengthen pavement and bridge conditions across the system, including on local and regional routes. This scenario would allow investments to fully achieve WYDOT goals in the System Preservation investment category. Additional investments should be made to improve safety for wildlife/alcohol related crashes and the non-use of safety restraints.

- Preventive maintenance could be deferred and/or advanced, depending on life cycle, as recommended by the Pavement Management System.
- Reconstruction (2S) to address geometric insufficiencies on the SSC mainline.
- Reconstruction (2S/3S) to address higher traffic volumes in near or in Jackson.
- Improvement of pavement condition of Local and Regional Routes, to include preventive maintenance or mill and overlay.
- Bridge rehabilitation and replacement of structurally deficient bridges on local/regional roads.
- Minor projects to improve safety not involving major construction, such as rumble strips, lighted signage (geometric deficiencies and wildlife-related crashes), and alcohol-related media campaigns.

Funding Scenario 3

If additional funds are made available to WYDOT under Funding Scenario 3, opportunities would be created to address all three investment categories, thus preserving the investment and improving the overall "health" of the system. Additional funds allow project selection to address overlapping needs, therefore investing funds most effectively. The additional funds would expand to include other items to improve performance in the Mobility Index.

- deficiencies.
- safety issues in Jackson.
- Intersection and signalization improvements in Jackson.

Performance Measurement Over Time

As these performance measures are continually monitored over time it will become evident how the recommended solution strategies and the selected projects address the needs of the corridor and the overall system. Addressing deficiencies documented in the corridor plan will effectively improve the System Preservation, Safety, and Mobility indexes at both the corridor and system level.

Ongoing performance measure documentation is critical to identify trends, capture the existing health of the system, and allowing an accurate forecast of the future health of Wyoming's Transportation system. The need for additional funding and/or more aggressive solutions will become evident if performance measures fail to meet WYDOT goals.

• Roadway reconstruction (3S) to meet long term goals, including correction of geometric

• Turn lanes, passing lanes, and other auxiliary lanes to address spot congestion, traffic control, and

REALIZING THE CORRIDOR VISION

As part of the statewide Wyoming Connects and Long Range Transportation Plan, the Corridor Vision for SSC 4 and all SSCs - focuses on the identification of overall system performance aggregated from the evaluations of each individual corridor's "health" relative to WYDOT's long-term Strategic Goals. The identified types of investment needs (system preservation, safety, and mobility) expressed in the Corridor Vision are reflected in the three primary need indicators of this Corridor Plan. The analysis of each investment type generated goals representing corridor health issues as communicated by the planning and public process used in development of the Vision. See Wyoming Connects: Corridor Visions for more information.

Corridor Vision Goals

The Rock Springs to Jackson Corridor Vision captured Key Issues and Emerging Trends of critical importance and how SSC 4 could best serve the communities it connects over the long term. While issues were identified relative to



each investment type, the Primary Investment Type is System Preservation and Safety:

Primary investments for the corridor should focus on preserving the existing system, including level of service and condition for traffic, pavement, and bridges. While certain spot locations may require minor capacity, the general capacity of the highway is adequate for current and future traffic volumes. In addition, a segment of US 191 and WYO 351 require safety improvements. Additional mobility options will become more important in future years in the Jackson area to accommodate recreational and commuter traffic with public transportation and associated facilities. Plans should include the rehabilitation and replacement of deficient bridges.

Additional goals which reflect the full context, character, and issues of SSC 4 were set as high priority goals as indicated in Table 15. A review of these Vision Goals compared to the findings of this Corridor Plan provides for a conformance check and identifies additional issues to be considered when evaluating potential projects and implementation plans.

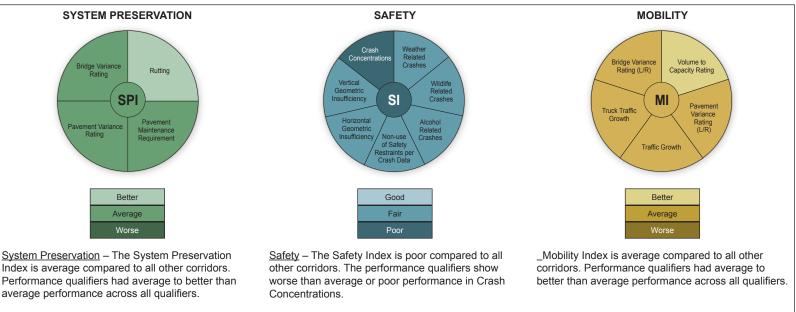
Table 15 - Review of Corridor Vision Goals and Other Considerations

Corridor Visions			
Investment Category	Goal	High Priority	
Quetem	Preserve the existing transportation system		Numerous big game h planning.
System Preservation	Plan for continuing energy industry impacts to road system	~	Corridor Vision identified pavement and bridge r truck traffic is critical to
Safety	Reduce fatalities, injuries, and property damage crash rate	~	Several critical crash crestraints, and wildlife-
	Accommodate growth in truck freight transport		Truck traffic from Pine condition is important
Mobility	Support commuter travel in the Jackson area		Traffic growth rates are widening in the future.
	Support recreation travel		Traffic growth rates are widening in the future.

CORRIDOR PERFORMANCE

Table 16 shows SSC 4 corridor performance compared to the system. The center of each chart indicates the value of the performance index, with each section indicating the performance qualifier for each measure.

Table 16 - Corridor Performance



Index is average compared to all other corridors. Performance qualifiers had average to better than average performance across all qualifiers.

Coordination with System Priorities

The corridor comparison can be used to help assign a priority level to entire corridors, if conditions warrant. The Corridor Plans – Executive Summary is published under separate cover and provides an overview of corridor comparisons. The summary identifies areas of greatest need within all performance indexes and for performance qualifiers across the state system. By addressing these areas of greatest need, whether by program, corridor, or corridor segment WYDOT will ensure positive changes in reported conditions throughout Wyoming.

Dashboard from Corridor Visions

the rehabilitation and replacement of deficient bridges



Other Considerations

abitat, migration routes, and endangered species require careful

ies System Preservation as the primary investment area. Continued maintenance and repair, partly as a result of heavy energy-related o corridor operations.

concentrations and problems with alcohol-related, non-use of safety -related crashes are identified in the plan.

edale south is relatively high. Maintaining the highway in acceptable as support for regional economies.

re high on the north end of the corridor, leading to possible minor

re high on the north end of the corridor, leading to possible minor