

Road Inventory and Condition Assessment



Big Bend National ParkBIBE - 7130

Cycle 5 Report

Prepared By: Federal Highway Administration

Road Inventory Program (RIP)

Data Collected: 01/2012 Report Date: 10/2012

Big Bend National Park in Texas





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Section 1 Introduction



Big Bend National Park



INTRODUCTION

The Federal Highway Administration, (FHWA), in the mid 1970s, was charged with the task of identifying surface condition deficiencies and corrective priorities on National Park Service (NPS) roads and parkways. Additionally, FHWA was tasked with establishing an integrated maintenance features inventory, locating features such as culverts, guardrails, and signs, among others, along NPS roads and parkways. As a result, in 1976 the NPS and FHWA entered into an MOA (Memorandum Of Agreement) which established the RIP (Road Inventory Program). This MOA was terminated and revised in 1980 to establish a new MOA aiming to update RIP data and develop a long-range program to improve and maintain NPS roads to designated condition standards and establish a maintenance management program.

The FHWA completed this initial phase of the RIP in the early 1980s. As a result of this effort, each NPS site included in the study received a RIP Report known as the "Brown Book" which included the information collected during this first RIP phase.

In the 1990s, the effort was again renewed to update and maintain the RIP data. By this time the computer age was upon us and a process was employed that relied heavily on electronic data collection and computer technology. A cyclical program was developed and the RIP completed two cycles of data collection from 1994 to 2001. Cycle 1, starting in 1994, was conducted in 44 "large parks" (parks containing 10 or more paved route miles). Cycle 2 began in 1997 and comprised 79 large parks and 5 small parks totaling 4,874 paved route miles. Each of these parks received a RIP Report known as the "Blue Book". Cycle 3, from 2001 to 2004, was conducted in all parks, large and small, that contained any paved routes, including parking areas and, again, each park received a RIP Report and associated electronic files.

Cycle 4 was initiated in the spring of 2006 covering 86 large parks and several associated small parks consisting of 5,553 paved route miles and 6,232 paved parking areas. Data collection has been completed for Cycle 4 and all data has been delivered to the NPS.

In 2005, the FHWA began implementing the use of a Pavement Management System (PMS) to assist the NPS in prioritizing Pavement Maintenance and Rehabilitation activities. The PMS used by FHWA is the Highway Pavement Management Application (HPMA) and this software has the ability to store inventory and condition data from RIP and forecast future performance using prediction models. Outputs include performance and condition reports at the National, Regional, Park, or Route level. A regional prioritized list and optimization have been produced for most regions and the Federal Highway Deferred Maintenance is calculated via the HPMA.

In an effort to improve the accuracy of treatment recommendations and pavement condition descriptions, an extensive study was completed throughout 2010 that has resulted in changes to the RIP condition reporting method, specifically the distresses and indexes that comprise the Pavement Condition Rating (PCR). It was determined that a better representation of PCR could

be achieved by modifying the relative impact certain distresses would have on the overall rating. The changes that were implemented were endorsed by management at both the FHWA and NPS in October 2010. These changes will allow greater use of RIP and HPMA data for not simply condition data reporting, but also as a reliable tool for project identification and selection. Because of these changes, the PCR Condition ratings reported in Cycle 5 do not directly relate to the condition ratings reported in previous cycle RIP Reports. For more detailed information about the changes, see Section 3 and Section 10 in this RIP Report.

Cycle 5 has launched in the summer of 2010 and will again comprise all parks, large and small, that are served by paved roads and/or parking areas. For Cycle 5, the decision was made to collect condition data in large parks on Functional Class 1, 2, and 7 paved routes only, as well as any new routes that were previously not collected. In small parks, all paved routes and parking areas will be collected. As a result, this will include 81 large parks with 4,459 paved route miles and 168 small parks with 529 paved route miles and associated paved parking areas.

Since 1984, the Road Inventory Program has been funded through the Federal Lands Highway Park Roads and Parkways (PRP) Program. Currently, coordination of the RIP with FLH is under the NPS Washington Headquarters Park Facility Management Division. The FLH Washington office coordinates policy and prepares national reports and needs assessment studies for Congress.

In 1998, the Transportation Equity Act for the 21st Century (TEA-21) amended Title 23 U.S.C., and inserted Section 204(a)(6) requiring the FHWA and NPS, to develop by rule, a Pavement Management System (PMS) applied to park roads and parkways serving the National Park System.

FLH is responsible for the accuracy of all data presented in this report. Any questions or comments concerning the contents of this report should be directed to the national RIP Coordinator located in Sterling, Virginia.

Respectfully,

FHWA RIP Team

FHWA/Eastern Federal Lands 21400 Ridgetop Circle Sterling, VA 20166 (703) 404-6371 FHWA/Central Federal Lands 12300 West Dakota Ave Lakewood, CO 80228 (720) 963-3560

Section 2 Park Route Inventory



Big Bend National Park



Road Inventory Program 10/05/2012

(Numerical By Route #)

Green = All Unpaved Parking Areas

Shading Color Key: Red text denotes approx. mileage

White = Paved Routes, DCV Driven

Yellow = Unpaved Routes, DCV not Driven

Blue = All Paved Parking Areas

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Grey = Paved Routes, DCV not Driven

Black = State, Local or Private non-NPS Routes

= Concession Route Flag ON

*Unpaved route data was obtained from NPS and was not inventoried by the Road Inventory Program (RIP).

** DCV - Data Collection Vehicle

*** Only Functional Class 1, 2, & 7 routes, and previously uncollected routes were collected in Cycle 5

BIBE

Rte. No.	Cycle Collected	FMSS No.	Concess Route	Route Name	Route Des From	cription To	Maint. District	Paved Miles	Un- Paved Miles	Total Route Length	Func. Class	Manual Rated SQ/FT	Surf. Type	Area Maps
0011	5	53230		NORTH ENTRANCE ROAD	FROM INTERSECTION OF ROUTES 0900 (PANTHER JUNCTION VISITOR CENTER PARKING), 0012 (RIO GRANDE ROAD), AND 0013 (WEST ENTRANCE ROAD)	TO NORTH PARK BOUNDARY	N/A	27.46	0.00	27.46	1		AS	1
0012	5	53231		RIO GRANDE ROAD	FROM INTERSECTION OF ROUTES 0900 (PANTHER JUNCTION VISITOR CENTER PARKING), 0011 (NORTH ENTRANCE ROAD), AND 0013 (WEST ENTRANCE ROAD)	TO ROUTE 0201 (RIO GRANDE VILLAGE ROAD) AT RIO GRANDE VILLAGE	N/A	20.31	0.00	20.31	1		AS	1,4
0013	5	53232		WEST ENTRANCE ROAD	FROM INTERSECTION OF ROUTES 0900 (PANTHER JUNCTION VISITOR CENTER PARKING), 0011 (NORTH ENTRANCE ROAD), AND 0012 (RIO GRANDE ROAD)	TO WEST PARK BOUNDARY	N/A	21.91	0.00	21.91	1		AS	1,2
0014	5	53233		CHISOS BASIN ROAD	FROM ROUTE 0013 (WEST ENTRANCE ROAD) AT MP 3.18, SOUTH	TO ROUTE 0919 (BASIN VISITORS CENTER PARKING)	N/A	6.34	0.00	6.34	1		AS	2
0015	5	53234		ROSS MAXWELL SCENIC DRIVE	FROM ROUTE 0013 (WEST ENTRANCE ROAD) AT MP 12.71	TO ROUTE BEGINNING OF ROUTE 0016 (SANTA ELENA CANYON ROAD)	N/A	23.25	0.00	23.25	1		AS	2,3
0016	5	53235		SANTA ELENA CANYON ROAD	FROM END OF ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE)	TO END OF LOOP	N/A	7.70	0.00	7.70	1		AS	3
0100	NC	54472		TERLINGUA RANCH ROAD	FROM ROUTE 0011 (NORTH ENTRANCE ROAD) AT MP 21.89	TO WEST BOUNDARY	N/A	0.00	23.89	23.89	2		GR	
0101	NC	54473		DAGGER FLAT ROAD	FROM ROUTE 0011 (NORTH ENTRANCE ROAD) EAST	TO END	N/A	0.00	7.73	7.73	2		GR	
0102	NC	54474		OLD ORE ROAD	FROM ROUTE 0012 (RIO GRANDE ROAD)	TO ROUTE 0101 (DAGGER FLAT ROAD)	N/A	0.00	27.35	27.35	2		GR	
0103	5	54475		FOSSIL BONE ROAD	FROM ROUTE 0011 (NORTH ENTRANCE ROAD) AT MP 8.09	TO ROUTE 1015 (FOSSIL BONE PARKING)	N/A	0.23	0.00	0.23	2		AS	1
0104	NC	54476		GLENN SPRINGS ROAD	FROM ROUTE 0012 (RIO GRANDE ROAD)	TO ROUTE 0106 (RIVER ROAD)	N/A	0.00	16.17	16.17	2		GR	

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0105	NC	54477		DUGOUT WELLS ROAD	FROM ROUTE 0012 (RIO GRANDE ROAD)	TO END	N/A	0.00	0.66	0.66	2		GR	
0106	NC	54478		RIVER ROAD	FROM ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE)	TO ROUTE 0012 (RIO GRANDE ROAD)	N/A	0.00	53.30	53.30	2		GR	
0107	NC	54479		HOT SPRINGS ROAD	GRANDE ROAD)	TO HOT SPRINGS PARKING	N/A	0.00	1.91	1.91	2		GR	
0109	5	54480		BOQUILLAS CANYON ROAD	FROM ROUTE 0012 (RIO GRANDE ROAD) AT MP 19.30	TO ROUTE 0905 (BOQUILLAS CANYON TRAIL PARKING)	N/A	3.61	0.00	3.61	2		AS	4
0110	5	54481		BOQUILLAS CANYON OVERLOOK	FROM ROUTE 0109 (BOQUILLAS CANYON ROAD)	TO END OF LOOP	N/A	0.57	0.00	0.57	2		AS	4
0111	NC	54482		GRAPEVINE HILLS ROAD	FROM ROUTE 0013 (WEST ENTRANCE ROAD)	TO SPRING	N/A	0.00	7.85	7.85	2		GR	
0112	5	54483		SOTOL VISTA OVERLOOK ROAD	FROM ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 8.33	TO END OF LOOP	N/A	0.41	0.00	0.41	2		AS	3
0113	5	54484		BURRO MESA POUROFF ROAD	FROM ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 11.57	TO END OF LOOP	N/A	1.86	0.00	1.86	2		AS	3
0114	5	54486		MULE EARS OVERLOOK ROAD	FROM ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 15.46	TO END OF LOOP	N/A	0.61	0.00	0.61	2		AS	3
0115	NC	54487		OLD MAVERICK ROAD	FROM ROUTE 0016 (SANTA ELENA CANYON ROAD)	TO ROUTE 0013 (WEST ENTRANCE ROAD)	N/A	0.00	12.89	12.89	2		GR	
0200	NC	54489		HANNOLD DRAW ROAD	FROM ROUTE 0011 (NORTH ENTRANCE ROAD) AT MP 4.75	TO GRAVEL PIT	N/A	0.00	0.25	0.25	3		GR	
0201	4	54490		RIO GRANDE VILLAGE ROAD	FROM ROUTE 0907 (DANIELS RANCH PICNIC AREA)	TO END	N/A	1.41	0.00	1.41	3		AS	4
0202	NC	54491		BOQUILLAS CROSSING	FROM ROUTE 0109 (BOQUILLAS CANYON ROAD)	TO PARKING	N/A	0.00	0.41	0.41	3		GR	
0203ZZ	5	54492		RIO GRANDE VILLAGE CAMPGROUND	FROM ROUTE 0201 (RIO GRANDE VILLAGE ROAD)	THROUGH CAMPGROUND	N/A	1.30	0.00	1.30	3		AS	4
0204	NC	54494		TELEGRAPH CANYON ROAD	FROM ROUTE 0102 (OLD ORE ROAD)	TO END	N/A	0.00	0.04	0.04	3		GR	

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0206	5	54495		LOWER BASIN CAMPGROUND ROAD	FROM ROUTE 0014 (CHISOS BASIN ROAD) AT MP 6.17	TO ROUTE 0924 (BASIN REMUDA PARKING) AND ROUTE 0417 (BASIN RESIDENCE ROAD)	N/A	0.63	0.00	0.63	2		AS	2
0207	NC	54496		PAINT GAP ROAD	FROM ROUTE 0013 (WEST ENTRANCE ROAD)	TO SPRING	N/A	0.00	3.79	3.79	3		GR	
0208	NC	54497		CROTON SPRING ROAD	FROM ROUTE 0013 (WEST ENTRANCE ROAD)	TO SPRING	N/A	0.00	0.52	0.52	3		GR	
0209	NC	90987		CALVARY ROAD	FROM ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 22.50 ON LEFT	TO CASTOLON HISTORIC DISTRICT	N/A	0.00	0.10	0.10	3		GR	
0210	NC	54498		SANTA ELENA CROSSING	FROM ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 22.68	TO PARKING	N/A	0.00	0.21	0.21	3		GR	
0211	NC	54499		COTTONWOOD CAMPGROUND	FROM END OF ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE)	THROUGH CAMPGROUND	N/A	0.00	0.82	0.82	3		GR	
0212	NC	54500		TERLINGUA ABAJA ROAD	FROM ROUTE 0115 (OLD MAVERICK ROAD)	TO GAGING STATION	N/A	0.00	1.59	1.59	3		GR	
0213	NC	54501		BUENOS AIRES ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO SOUTH PARK BOUNDARY	N/A	0.00	0.60	0.60	3		GR	
0215	NC	54502		SIERRA CHINO ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO SOUTH PARK BOUNDARY	N/A	0.00	1.05	1.05	3		GR	
0216	NC	54503		GAUGING STATION ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO SOUTH PARK BOUNDARY	N/A	0.00	0.42	0.42	3		GR	
0217	NC	54504		JOHNSON RANCH ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO SOUTH PARK BOUNDARY	N/A	0.00	0.37	0.37	3		GR	
0220	NC	54506		WOODSON / PETTITS ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO SOUTH PARK BOUNDARY	N/A	0.00	4.50	4.50	3		GR	
0221	NC	54507		TALLEY ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO SOUTH PARK BOUNDARY	N/A	0.00	5.99	5.99	3		GR	
0223	NC	54508		SOLIS ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO SOUTH PARK BOUNDARY	N/A	0.00	1.55	1.55	3		GR	
0225	NC	54509		ROONEY'S ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO SOUTH PARK BOUNDARY	N/A	0.00	0.41	0.41	3		GR	
0226	NC	54510		SAN VICENTE CROSSING	FROM ROUTE 0106 (RIVER ROAD)	TO SOUTH PARK BOUNDARY	N/A	0.00	1.52	1.52	3		GR	
0228	NC	54511		LA CLOCHA ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO SOUTH PARK BOUNDARY	N/A	0.00	0.76	0.76	3		GR	
0229	NC	54512		BLACK GAP ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO ROUTE 0104 (GLENN SPRINGS ROAD)	N/A	0.00	8.76	8.76	3		GR	

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(Numerical By Route #)

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Rte.	cted	FMSS	Concess Route	Route Name	Route Des	·	Maint.	Paved	Un- Paved	Total Route	Func.	Manual Rated	Surf.	Area
NO.	Cycle Collected	No.	Con		From	То	District	Miles	Miles	Length	Class	SQ/FT	Туре	Maps
0230	NC	54513		JUNIPER CANYON ROAD	FROM ROUTE 0104 (GLENN SPRINGS ROAD)	TO END	N/A	0.00	5.59	5.59	3		GR	
0232	NC	54514		PINE CANYON ROAD	FROM ROUTE 0104 (GLENN SPRINGS ROAD)	TO END	N/A	0.00	4.21	4.21	3		GR	
0233ZZ	5	54515		BASIN CAMPGROUND LOOPS	FROM ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD) AT MP 0.38	THROUGH CAMPGROUND	N/A	0.70	0.00	0.70	3		AS	2
0234	5	54516		BASIN GROUP CAMPGROUND	FROM ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD) AT MP 0.61	TO END OF LOOP	N/A	0.40	0.00	0.40	3		AS	2
0235	NC	54525		LOOP CAMP ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO SOUTH PARK BOUNDARY	N/A	0.00	0.66	0.66	4		GR	
0236	NC	54526		JEWEL'S CAMP ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO SOUTH PARK BOUNDARY	N/A	0.00	1.10	1.10	4		GR	
0237	NC	54527		GRAVEL PIT ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO SOUTH PARK BOUNDARY	N/A	0.00	0.94	0.94	4		GR	
0238	NC	54528		CHIMNEYS WEST ROAD	FROM ROUTE 0115 (OLD MAVERICK ROAD)	TO END	N/A	0.00	0.09	0.09	4		GR	
0239	NC	54529		NINE POINT DRAW ROAD	FROM ROUTE 0011 (NORTH ENTRANCE ROAD)	TO CAMPSITE	N/A	0.00	0.63	0.63	4		GR	
0240	NC	54530		ROYS PEAK ROAD	FROM ROUTE 0102 (OLD ORE ROAD)	TO END	N/A	0.00	0.16	0.16	4		GR	
0241	NC	54531		LA NORIA ROAD	FROM ROUTE 0102 (OLD ORE ROAD)	TO END	N/A	0.00	0.21	0.21	4		GR	
0242	NC	54532		ERNST TINAJA ROAD	FROM ROUTE 0102 (OLD ORE ROAD)	TO END	N/A	0.00	0.48	0.48	4		GR	
0243	NC	54533		RICE TANK ROAD	FROM ROUTE 0104 (GLENN SPRINGS ROAD)	TO END	N/A	0.00	0.21	0.21	4		GR	
0244	NC	54535		MARISCAL MINE ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO MARISCAL MINE	N/A	0.00	0.22	0.22	4		GR	
0245	NC	54536		PETTITS ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO SOUTH PARK BOUNDARY AT PETTITS	N/A	0.00	0.37	0.37	4		GR	
0246	NC	54537		DOMINQUEZ SPRING ROAD	FROM ROUTE 0106 (RIVER ROAD)	TO END	N/A	0.00	0.30	0.30	4		GR	
0400	NC	54538		PERSIMMON GAP RANCH ROAD	FROM ROUTE 0011 (NORTH ENTRANCE ROAD) WEST	TO PARK BOUNDARY	N/A	0.00	0.47	0.47	5		GR	
0401	NC	54539		PITCOCK ROSILLOS MOUNTAIN RANCH ROAD	FROM ROUTE 0011 (NORTH ENTRANCE ROAD) WEST	TO PARK BOUNDARY	N/A	0.00	1.35	1.35	5		GR	

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0402	NC	54540		PERSIMMON GAP RESIDENCE ROAD	FROM ROUTE 0011 (NORTH ENTRANCE ROAD) AT MP 25.93	TO END	N/A	0.00	0.44	0.44	5		GR	
0403	NC	102751		K-BAR MONITORING STATION ROAD	FROM ROUTE 0404 (K-BAR RANCH ROAD)	TO MONITORING STATION	N/A	0.00	0.20	0.20	5		GR	
0404	NC	54541		K-BAR RANCH ROAD	FROM ROUTE 0012 (RIO GRANDE ROAD)	TO CAMPSITE	N/A	0.00	0.79	0.79	5		GR	
0405	5	54542		HUISACHE ROAD	FROM ROUTE 0012 (RIO GRANDE ROAD) AT MP 19.72	TO END OF LOOP	N/A	0.45	0.00	0.45	5		AS	4
0406	NC	54543		RIO GRANDE VILLAGE LAGOON ROAD	FROM ROUTE 0405 (HUISACHE ROAD)	TO ROUTE 0201 (RIO GRANDE VILLAGE ROAD)	N/A	0.00	1.23	1.23	5		GR	
0411	NC	54544		RIO GRANDE WATER TANK ROAD	FROM ROUTE 0201 (RIO GRANDE VILLAGE ROAD), NORTH	TO END	N/A	0.00	0.87	0.87	5		GR	
0412	NC	54545		RIO GRANDE VILLAGE BRUSH PILE	FROM ROUTE 0109 (BOQUILLAS CANYON ROAD)	TO END	N/A	0.00	0.46	0.46	5		GR	
0416	4	54546		LOWER BASIN LAGOON ROAD	FROM ROUTE 0233ZZ (BASIN CAMPGROUND LOOPS)	TO LAGOONS	N/A	0.00	0.00	0.00	5	8,137	AS	2
0417	4	54547		BASIN RESIDENCE ROAD	FROM END OF ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD), LEFT	TO END	N/A	0.00	0.00	0.00	5	15,174	AS	2
0418	4	54548		BASIN RESIDENCE ROAD BEHIND MOTEL	FROM ROUTE 0920 (BASIN MOTEL PARKING)	TO END	N/A	0.00	0.00	0.00	5	7,370	AS	2
0419	NC	54549		OAK SPRINGS ROAD	FROM ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE)	TO WATER TANK	N/A	0.00	2.22	2.22	5		GR	
0422	NC	54550		BLUE CREEK DRIVE	FROM END OF ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE), NORTH	TO END OF LOOP	N/A	0.00	0.19	0.19	5		GR	
0423	NC	54551		BLUE CREEK GRAVEL PIT ROAD	FROM ROUTE 0016 (SANTA ELENA CANYON ROAD), NORTH	TO END	N/A	0.00	0.48	0.48	5		GR	
0424	NC	54552		SMITH RANCH ROAD	FROM ROUTE 0115 (OLD MAVERICK ROAD) WEST	TO PARK BOUNDARY	N/A	0.00	2.91	2.91	5		GR	
0426	4	54553		MESA DRIVE	FROM ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE)AT MP 21.87	TO ROUTE 0932 (CASTOLON MAINTENANCE PARKING)	N/A	0.47	0.00	0.47	5		AS	3
0427	4	54554		PALO VERDE DRIVE	FROM ROUTE 0426 (MESA DRIVE)	TO END	N/A	0.00	0.00	0.00	5	8,743	AS	3

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BIBE

Rte. No.	Cycle Collected	FMSS No.	Concess Route	Route Name	Route Des From	cription To	Maint. District	Paved Miles	Un- Paved Miles	Total Route Length	Func. Class	Manual Rated SQ/FT	Surf. Type	Area Maps
0428	4	53087		ALSATE AVENUE	FROM ROUTE 0012 (RIO GRANDE ROAD) AT MP 0.07	TO ROUTE 0939 (PANTHER JUNCTION MAINTENANCE PARKING)	N/A	0.53	0.00	0.53	5		AS	1
0429	4	53088		BOBCAT LOOP	FROM ROUTE 0428 (ALSATE AVENUE)	TO ROUTE 0428 (ALSATE AVENUE)	N/A	0.44	0.00	0.44	5		AS	1
0430	4	53094		JAVELINA DRIVE	FROM ROUTE 0428 (ALSATE AVENUE)	TO ROUTE 0429 (BOBCAT LOOP)	N/A	0.13	0.00	0.13	5		AS	1
0431	4	53102		QUAIL RUN	FROM ROUTE 0429 (BOBCAT LOOP) AT MP 0.21	TO END	N/A	0.00	0.00	0.00	5	2,923	AS	1
0432	4	53091		CHUPAROSA	FROM ROUTE 0429 (BOBCAT LOOP) AT MP 0.26	TO END	N/A	0.00	0.00	0.00	5	2,327	AS	1
0433	4	53103		TECOLOTE DRIVE	FROM END OF ROUTE 0428 (ALSATE AVENUE)	TO ROUTE 0436 (NOLINA DRIVE)	N/A	0.34	0.00	0.34	5		AS	1
0434	4	53096		LA JUNTA CIRCLE	FROM ROUTE 0433 (TECOLOTE DRIVE)	TO END	N/A	0.00	0.00	0.00	5	2,738	AS	1
0435	4	53099		OCOTILLA LOOP	FROM ROUTE 0433 (TECOLOTE DRIVE)	TO ROUTE 0433 (TECOLOTE DRIVE)	N/A	0.13	0.00	0.13	5		AS	1
0436	4	53098		NOLINA DRIVE	FROM ROUTE 0429 (BOBCAT LOOP)	TO END	N/A	0.36	0.00	0.36	5		AS	1
0439	4	53100		PAISANO PLACE	FROM ROUTE 0436 (NOLINA DRIVE) AT MP 0.21, LEFT	TO END	N/A	0.00	0.00	0.00	5	11,203	AS	1
0440	4	53101		PANTHER CANYON DRIVE	FROM ROUTE 0436 (NOLINA DRIVE) AT MP 0.27	TO END OF LOOP	N/A	0.18	0.00	0.18	5		AS	1
0443	4	90989		ESCUELA VISTA	FROM ROUTE 0429 (BOBCAT LOOP) AT MP 0.40	TO ROUTE 0937 (PANTHER JUNCTION SCHOOL PARKING)	N/A	0.00	0.00	0.00	5	6,789	AS	1
0444	5	54556		PJ SEWAGE TREATMENT PLANT ROAD	FROM ROUTE 0012 (RIO GRANDE ROAD) AT MP 0.27	TO ROUTE 1020 (PJ SEWAGE TREATMENT PLANT PARKING)	N/A	0.12	0.00	0.12	5		AS	1
0445	NC	54557		MAPLE CANYON ROAD	FROM ROUTE 0014 (CHISOS BASIN ROAD)	TO END	N/A	0.00	0.40	0.40	6		GR	
0446	NC	54558		HARTE RANCH ROAD	FROM ROUTE 0100 (TERLINGUA RANCH ROAD)	TO AIRPORT LODGE	N/A	0.00	3.50	3.50	6		GR	
0447	NC	54559		MOUNTAIN LODGE ROAD	FROM ROUTE 0100 (TERLINGUA RANCH ROAD)	TO MOUNTAIN LODGE	N/A	0.00	0.50	0.50	6		GR	
0448	NC	54560		LONE MOUNTAIN ROAD	FROM ROUTE 0011 (NORTH ENTRANCE ROAD)	TO END	N/A	0.00	0.25	0.25	6		GR	
0449	NC	54561		NUGENT MOUNTAIN GRAVEL PIT ROAD	FROM ROUTE 0012 (RIO GRANDE ROAD)	TO END	N/A	0.00	0.20	0.20	6		GR	

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Road Inventory Program 10/05/2012

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BIBE

Rte.	e ted	FMSS	ess		Route Des	scription	Maint.	Paved	Un-	Total	Func.	Manual	Surf.	Area
No.	Cycle Collected	No.	Concess Route	Route Name	From	То	District	Miles	Paved Miles	Route Length	Class	Rated SQ/FT	Туре	Maps
0450	NC	54769		MAVERICK GRAVEL PIT ROAD	FROM ROUTE 0115 (OLD MAVERICK ROAD)	TO END	N/A	0.00	0.23	0.23	6		GR	
0451	NC	54597		TORNILLO CREEK SERVICE ROAD	FROM ROUTE 0011 (NORTH ENTRANCE ROAD)	TO END	N/A	0.00	0.38	0.38	6		GR	
0452	NC	54598		MILE 19 GRAVEL PIT	FROM ROUTE 0013 (WEST ENTRANCE ROAD)	TO END	N/A	0.00	0.21	0.21	6		GR	
0453	NC	54600		TIN ACCESS ROAD	FROM ROUTE 0013 (WEST ENTRANCE ROAD) / ROUTE 0115 (OLD MAVERICK ROAD) INTERSECTION	TO END	N/A	0.00	0.33	0.33	6		GR	
0455	NC	54602		BONEYARD/CORRAL ROAD, PJ	FROM ROUTE 0428 (ALSATE AVENUE)	TO ROUTE 0436 (NOLINA DRIVE)	N/A	0.00	0.81	0.81	6		GR	
0900	4	53078		PANTHER JUNCTION VISITOR CENTER PARKING	FROM INTERSECTION OF ROUTES 0011 (NORTH ENTRANCE ROAD), 0012 (RIO GRANDE ROAD), AND 0013 (WEST ENTRANCE ROAD)	TO ROUTE 0013 (WEST ENTRANCE ROAD)	N/A	0.00	0.00	0.00		21,789	AS	1
0901	4	54604		PERSIMMON GAP RANGER STATION PARKING	FROM ROUTE 0011 (NORTH ENTRANCE ROAD) AT MP 25.95	TO ROUTE 0011 (NORTH ENTRANCE ROAD) AT MP 30.01	N/A	0.00	0.00	0.00		11,322	AS	1
0902	4	54606		RIO GRANDE OVERLOOK PARKING	FROM ROUTE 0012 (RIO GRANDE ROAD) AT MP 18.62 (EAST OF TUNNEL)	TO PARKING	N/A	0.00	0.00	0.00		14,924	AS	4
0903	NC	54607		RIO GRANDE VILLAGE MAINTENANCE	ADJACENT TO ROUTE 0405 (HUISACHE ROAD)		N/A	0.00	0.00	0.00		20,000	GR	
0905	4	54609		BOQUILLAS CANYON TRAIL PARKING	FROM END OF ROUTE 0109 (BOQUILLAS CANYON ROAD)	TO PARKING	N/A	0.00	0.00	0.00		15,008	AS	4
0906	4	54610		RIO GRANDE VISITOR CENTER PARKING	FROM ROUTE 0012 (RIO GRANDE ROAD) AT MP 20.12, NEAR RIO GRANDE VILLAGE	TO ROUTE 0012 (RIO GRANDE ROAD) AT MP 20.21	N/A	0.00	0.00	0.00		38,555	AS	4
0907	4	54612		DANIELS RANCH PICNIC AREA	FROM BEGINNING OF ROUTE 0201 (RIO GRANDE VILLAGE ROAD)	TO PARKING	N/A	0.00	0.00	0.00		5,996	AS	4
0908	4	54613		RIO GRANDE VILLAGE TRAILER PARKING	FROM ROUTE 0201 (RIO GRANDE VILLAGE ROAD) AT MP 0.52	TO ROUTE 0909 (RIO GRANDE VILLAGE GROUP PARKING)	N/A	0.00	0.00	0.00		37,041	AS	4
0909	4	54615		RIO GRANDE VILLAGE GROUP PARKING	FROM ROUTE 0201 (RIO GRANDE VILLAGE ROAD) AT MP 0.71	TO ROUTE 0201 (RIO GRANDE VILLAGE ROAD) AT MP 0.78	N/A	0.00	0.00	0.00		44,064	AS	4

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BIBE

Rte.	e ted	FMSS	ess te		Route Des	cription	Maint.	Paved	Un-	Total	Func.	Manual	Surf.	Area
No.	Cycle Collected	No.	Concess Route	Route Name	From	То	District	Miles	Paved Miles	Route Length	Class	Rated SQ/FT	Туре	Maps
0910	4	54617		RIO GRANDE AMPHITHEATER PARKING	FROM ROUTE 0201 (RIO GRANDE VILLAGE ROAD) AT MP 0.91	TO PARKING	N/A	0.00	0.00	0.00		38,773	AS	4
0912	4	90991		PANTHER JUNCTION GAS STATION	FROM ROUTE 0013 (WEST ENTRANCE ROAD) AT MP 0.18	TO ROUTE 0013 (WEST ENTRANCE ROAD) AT MP 0.21	N/A	0.00	0.00	0.00		9,061	AS	1
0913	4	54620		BADLANDS PARKING AREA	FROM ROUTE 0013 (WEST ENTRANCE ROAD) AT MP 20.69, NEAR WEST ENTRANCE	TO ROUTE 0013 (WEST ENTRANCE ROAD) AT MP 20.73, NEAR WEST ENTRANCE	N/A	0.00	0.00	0.00		7,102	AS	2
0914	4	54622		MAVERICK INFORMATION KIOSK PARKING	FROM ROUTE 0013 (WEST ENTRANCE ROAD) AT MP 20.81, NEAR WEST ENTRANCE	TO PARKING	N/A	0.00	0.00	0.00		6,827	AS	2
0915	4	54623		WEST ENTRANCE CONTACT STATION PARKING	FROM ROUTE 0013 (WEST ENTRANCE ROAD) AT MP 20.75, NEAR WEST CONTACT STATION	TO PARKING	N/A	0.00	0.00	0.00		3,098	AS	2
0917	4	54625		LOST MINE TRAIL PARKING	ADJACENT TO ROUTE 0014 (CHISOS BASIN ROAD) AT MP 5.17		N/A	0.00	0.00	0.00		6,813	AS	2
0918	4	54627		BASIN RANGER STATION PARKING	FROM ROUTE 0014 (CHISOS BASIN ROAD), JUST BEFORE END ON RIGHT	TO PARKING	N/A	0.00	0.00	0.00		16,731	AS	2
0919	4	54629		BASIN VISITORS CENTER PARKING	FROM END OF ROUTE 0014 (CHISOS BASIN ROAD)	TO PARKING	N/A	0.00	0.00	0.00		45,477	AS	2
0920	4	54631		BASIN MOTEL PARKING	FROM ROUTE 0919 (BASIN VISITORS CENTER PARKING)	TO ROUTE 0919 (BASIN VISITORS CENTER PARKING)	N/A	0.00	0.00	0.00		17,808	AS	2
0921	4	54634		CHISOS MOUNTAIN LODGE PARKING	FROM ROUTE 0920 (BASIN MOTEL PARKING), NEXT TO CHISOS MOUNTAIN LODGE	TO PARKING	N/A	0.00	0.00	0.00		27,225	AS	2
0922	4	54637		CHISOS COTTAGE PARKING	FROM ROUTE 0920 (BASIN MOTEL PARKING)	TO PARKING	N/A	0.00	0.00	0.00		22,221	AS	2
0923	4	54639		BASIN AMPHITHEATER PARKING	FROM ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD)	TO ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD)	N/A	0.00	0.00	0.00		22,814	AS	2
0924	4	54641		BASIN REMUDA PARKING	FROM END OF ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD)	TO PARKING	N/A	0.00	0.00	0.00		8,964	AS	2
														<u> </u>

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Rte.	e ted	FMSS	ess		Route Des	scription	Maint.	Paved	Un-	Total	Func.	Manual	Surf.	Area
No.	Cycle Collected	No.	Concess Route	Route Name	From	То	District	Miles	Paved Miles	Route Length	Class	Rated SQ/FT	Туре	Maps
0925	4	54643		BLUE CREEK OVERLOOK PARKING	ADJACENT TO ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 8.11		N/A	0.00	0.00	0.00		5,851	AS	3
0926 ZZ	4	54644		SOTOL VISTA OVERLOOK PARKING	ADJACENT TO ROUTE 0112 (SOTOL VISTA OVERLOOK ROAD) AT END OF LOOP		N/A	0.00	0.00	0.00		5,813	AS	3
0927	4	54646		BURRO MESA POUROFF PARKING	ADJACENT TO ROUTE 0113 (BURRO MESA POUROFF ROAD) AT END OF LOOP		N/A	0.00	0.00	0.00		5,469	AS	3
0928	4	54647		CHIMNEY TRAILS PARKING	ADJACENT TO ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 12.75		N/A	0.00	0.00	0.00		4,347	AS	3
0929	4	54649		GOAT MOUNTAIN PARKING	ADJACENT TO ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 14.82		N/A	0.00	0.00	0.00		4,436	AS	3
0930	4	54651		MULE EARS OVERLOOK PARKING	ADJACENT TO ROUTE 0114 (MULE EARS OVERLOOK ROAD) AT END OF LOOP		N/A	0.00	0.00	0.00		6,549	AS	3
0931	4	54652		TUFF CANYON OVERLOOK PARKING	ADJACENT TO ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 19.84		N/A	0.00	0.00	0.00		4,675	AS	3
0932	4	54654		CASTOLON MAINTENANCE PARKING	FROM END OF ROUTE 0426 (MESA DRIVE)	TO PARKING	N/A	0.00	0.00	0.00		15,561	AS	3
0933	4	54655		DESERT MOUNTAIN OVERLOOK	ADJACENT TO ROUTE 0016 (SANTA ELENA CANYON ROAD) AT MP 1.09		N/A	0.00	0.00	0.00		2,660	AS	3
0934	4	54669		SANTA ELENA CANYON RIVER ACCESS	FROM ROUTE 0016 (SANTA ELENA CANYON ROAD) AT MP 5.72	TO PARKING	N/A	0.00	0.00	0.00		41,257	AS	3
0935	4	54670		SANTA ELENA CANYON OVERLOOK PARKING	FROM ROUTE 0016 (SANTA ELENA CANYON ROAD) AT MP 6.82	TO PARKING	N/A	0.00	0.00	0.00		26,160	AS	3
0936	4	54672		SANTA ELENA CANYON PICNIC AREA	ADJACENT TO ROUTE 0016 (SANTA ELENA CANYON ROAD) AT END OF LOOP		N/A	0.00	0.00	0.00		8,725	AS	3
0937	4	53154		PANTHER JUNCTION SCHOOL PARKING	FROM END OF ROUTE 0443 (ESCUELA VISTA)	TO PARKING	N/A	0.00	0.00	0.00		5,132	AS	1
0938	4	53073		PANTHER JUNCTION HEADQUARTERS PARKING	FROM ROUTE 0428 (ALSATE AVENUE)	TO ROUTE 0428 (ALSATE AVENUE)	N/A	0.00	0.00	0.00		12,905	AS	1

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Rte.	e ted	FMSS	ess		Route Des	scription	Maint.	Paved	Un-	Total	Func.	Manual	Surf.	Area
No.	Cycle Collected	No.	Concess Route	Route Name	From	То	District	Miles	Paved Miles	Route Length	Class	Rated SQ/FT	Туре	Maps
0939	4	53159		PANTHER JUNCTION MAINTENANCE PARKING	FROM END OF ROUTE 0428 (ALSATE AVENUE)	TO PARKING	N/A	0.00	0.00	0.00		29,915	AS	1
1000	4	54674		ANIMAL HIGHWAYS INTERPRETIVE PULLOUT	FROM ROUTE 0014 (CHISOS BASIN ROAD) AT MP 0.158	TO ROUTE 0014 (CHISOS BASIN ROAD) AT MP 0.21	N/A	0.00	0.00	0.00		8,662	AS	2
1001	5	54675		CHISOS MOUNTAIN INTERPRETIVE PULLOFF	ADJACENT TO ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 2.0		N/A	0.00	0.00	0.00		4,379	AS	2
1002	5	54676		SAM NAIL INTERPRETIVE PULLOFF	ADJACENT TO ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 3.0		N/A	0.00	0.00	0.00		3,317	AS	2
1003	5	54677		FINS OF FIRE INTERPRETIVE PULLOFF	ADJACENT TO ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 4.14		N/A	0.00	0.00	0.00		3,635	AS	2
1004	4	54678		THE CAMEL EXPERIMENT INTERPRETIVE PULLOUT	ADJACENT TO ROUTE 0011 (NORTH ENTRANCE ROAD) AT MP 22.57		N/A	0.00	0.00	0.00		3,431	AS	1
1005	5	54679		INVISIBLE WILDLIFE INTERPRETIVE PULLOFF	ADJACENT TO ROUTE 0013 (WEST ENTRANCE ROAD) AT MP 6.47		N/A	0.00	0.00	0.00		2,589	AS	1
1006	5	54680		VERTICAL SCENERY PULLOFF	ADJACENT TO ROUTE 0013 (WEST ENTRANCE ROAD) AT MP 19.32		N/A	0.00	0.00	0.00		2,643	AS	2
1007	NC	54681		CHIHUAHUAN DESERT INTERPRETIVE PULLOUT	ADJACENT TO ROUTE 0012 (RIO GRANDE ROAD) AT MP 5.94		N/A	0.00	0.00	0.00		3,200	GR	
1008	4	54682		A DESERT GRAVE INTERPRETIVE PULLOUT	ADJACENT TO ROUTE 0011 (NORTH ENTRANCE ROAD) AT MP 3.91		N/A	0.00	0.00	0.00		1,285	AS	1
1009	5	54684		FLASH FLOOD INTERPRETIVE PULLOFF	ADJACENT TO ROUTE 0011 (NORTH ENTRANCE ROAD) AT MP 21.0		N/A	0.00	0.00	0.00		1,097	AS	1
1010	NC	54685		MOVE A MOUNTAIN INTERPRETIVE PULLOUT	ADJACENT TO ROUTE 0109 (BOQUILLAS CANYON ROAD) AT MP 3.45		N/A	0.00	0.00	0.00		360	GR	

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No.	Cycle Collected	No.	Concess Route	Route Name	From	То	District	Miles	Paved Miles	Route Length	Class	Rated SQ/FT	Туре	Maps
1011	NC	54686		BOQUILLAS CANYON INTERPRETIVE PULLOUT	ADJACENT TO ROUTE 0110 (BOQUILLAS CANYON OVERLOOK) AT END OF LOOP		N/A	0.00	0.00	0.00		720	GR	
1012	NC	54687		BOQUILLAS MEXICO INTERPRETIVE PULLOUT	ADJACENT TO ROUTE 0109 (BOQUILLAS CANYON ROAD) AT MP 2.40		N/A	0.00	0.00	0.00		900	GR	
1013	5	54689		BEAR & MOUNTAIN LION COUNTRY INTERPRETIVE PULLOFF	ADJACENT TO ROUTE 0014 (CHISOS BASIN ROAD) AT MP 2.2		N/A	0.00	0.00	0.00		2,128	AS	2
1014	5	54690		TREE ZONE INTERPRETIVE PULLOFF	ADJACENT TO ROUTE 0014 (CHISOS BASIN ROAD) AT MP 4.25		N/A	0.00	0.00	0.00		2,464	AS	2
1015	4	54691		FOSSIL BONE PARKING	FROM END OF ROUTE 0103 (FOSSIL BONE ROAD)	TO PARKING	N/A	0.00	0.00	0.00		8,650	AS	1
1016	NC	54692		CERRO VISTA COURT	ADJACENT TO ROUTE 0426 (MESA DRIVE) AT APARTMENTS		N/A	0.00	0.00	0.00		7,500	GR	
1017	NC	53146		BBNHA OFFICE PARKING LOT	FROM ROUTE 0428 (ALSATE AVENUE)	TO PARKING	N/A	0.00	0.00	0.00		333	GR	
1018	NC	53166		EMERGENCY SERVICES PARKING AREA	FROM ROUTE 0433 (TECOLOTE DRIVE)	TO PARKING	N/A	0.00	0.00	0.00		29,997	GR	
1020	5	236705		PJ SEWAGE TREATMENT PLANT PARKING	FROM ROUTE 0444 (PJ SEWAGE TREATMENT PLANT ROAD)	TO PARKING	N/A	0.00	0.00	0.00		1,745	AS	1
1021	NC	236700		CATTAIL FALLS PARKING AREA	FROM ROUTE 0419 (OAK SPRINGS ROAD)	TO PARKING	N/A	0.00	0.00	0.00		1,600	GR	
1022	4	53090		CHINO COURT PARKING	FROM ROUTE 0436 (NOLINA DRIVE) AT MP 0.06	TO PARKING	N/A	0.00	0.00	0.00		9,348	AS	1
1023	4	53093		HOLLY LANE PARKING	FROM ROUTE 0436 (NOLINA DRIVE) AT MP 0.14	TO PARKING	N/A	0.00	0.00	0.00		10,537	AS	1
1024	4	53092		DESERT WILLOW STREET PARKING	FROM ROUTE 0436 (NOLINA DRIVE) AT MP 0.21 RIGHT	TO PARKING	N/A	0.00	0.00	0.00		5,704	AS	1
1025	4	53097		MESQUITE STREET PARKING	FROM ROUTE 0436 (NOLINA DRIVE) AT MP 0.10	TO PARKING	N/A	0.00	0.00	0.00		4,330	AS	1

^{**} DCV - Data Collection Vehicle

Road Inventory Program 10/05/2012 (Numerical By Route #) Page 12 of 14

Shading Color Key: Red text denotes approx. mileage White = Paved Routes, DCV Driven

Yellow = Unpaved Routes, DCV not Driven

Blue = All Paved Parking Areas

Green = All Unpaved Parking Areas

Grey = Paved Routes, DCV not Driven

Black = State, Local or Private non-NPS Routes

= Concession Route Flag ON

*** Only Functional Class 1, 2, & 7 routes, and previously uncollected routes were collected in Cycle 5

BIBE

Rte.	sle cted	FMSS	cess ute	Route Name	Route Desc	ription	Maint.	Paved	Un- Paved	Total Route	Func.	Manual Rated	Surf.	Area
No.	Colle	No.	Con	Route Nume	From	То	District	Miles	Miles	Length	Clace	SQ/FT	Туре	Maps
1026	5	238380		BASIN GROUP CAMPSITE PARKING	ADJACENT TO ROUTE 0234 (BASIN GROUP CAMGROUND)		N/A	0.00	0.00	0.00		1,194	AS	2

^{*}Unpaved route data was obtained from NPS and was not inventoried by the Road Inventory Program (RIP).

^{**} DCV - Data Collection Vehicle

Road Inventory Program 10/05/2012

(Numerical By Route #)

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Areas

Shading Color Key: Red text denotes approx. mileage

White = Paved Routes, DCV Driven	Yellow = Unpaved Routes, DCV not Driven	Blue = All Paved Parking Areas	Green = All Unpaved Parking
Grey = Paved Routes, DCV not Driven	Black = State, Local or Private non-NPS Route	= Concession Route Flag ON	

CYCLE 5 COLLECTED SUMMARY TOTALS FOR BIG BEND NATIONAL PARK CYCLE 5 COLLECTED CONCESSION TOTALS **CYCLE 5 COLLECTED ROUTE TOTALS Concession Paved Route Miles** 0.00 **DCV Driven Route Miles** 117.85 Concession Paved Parking Area SQFT **Manually Rated Route Miles** 0.00 TOTAL PARK ROUTE MILES COLLECTED IN CYCLE 5 117.85 **Concession Manually Rated Rotes SQFT** Manually Rated Routes (SQFT) 0 CYCLE 5 COLLECTED WEIGHTED AVERAGE PARK VALUES CYCLE 5 COLLECTED PARKING AREA TOTALS DCV Driven PCR 94 Paved Parking (SQFT) 25,191 **Manually Rated Routes PCR N/A * *Parking PCR 88 ***Total Equivalent Lane Miles 242.11

TOTAL PARI	TOTAL PARK SUMMARY FOR BIG BEND NATIONAL PARK										
ROUTE TOTALS											
TOTAL PAVED PARK ROUTE MILES	121.84										
TOTAL PAVED PARKING (SQFT)	678,206										

^{* -} The Parking Area Totals SQFT value represents all parking areas collected in Cycle 5, both park and concessionaire.

^{*}Unpaved route data was obtained from NPS and was not inventoried by the Road Inventory Program (RIP).

^{**} DCV - Data Collection Vehicle

^{***} Only Functional Class 1, 2, & 7 routes, and previously uncollected routes were collected in Cycle 5

^{** -} Parking and Manually Rated Routes are assigned the following PCR values based on their observed condition: Construction=-1, Excellent=97, Good=90, Fair=73, and Poor=45.

^{*** -} Equivalent Lane Miles are calculated by route using the following equations: DCV and Manually Rated Lines Routes=(PAVE_WIDTHxPAVED_MI)/11 foot lane. Parking Areas=SQ_FEET/5280/11. Manually Rated Polygons=SQ_FEET/5280/11.

Road Inventory Program 10/05/2012

(Numerical By Route #)

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Yellow = Unpaved Routes, DCV not Driven

Blue = All Paved Parking Areas

ved Parking Areas

Green = All Unpaved Parking Areas

Grey = Paved Routes, DCV not Driven

Black = State, Local or Private non-NPS Routes

= Concession Route Flag ON

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** DCV - Data Collection Vehicle

*** Only Functional Class 1, 2, & 7 routes, and previously uncollected routes were collected in Cycle 5

General Park Road Functional Classification Table

- Class 1 Principal Park Road/Rural Parkway (Public Roads) Roads which constitute the main access route, circulatory tour, or thoroughfare for park visitors. Route Numbers 1 99. Note: Rural parkways (e.g. Natchez Trace) are numbered 1 9. State Routes Inventoried for Park. Route Numbers 5000-5999
- Class 2 Connector Park Road (Public Roads) Roads which provide access within a park to areas of scenic, scientific, recreational or cultural interest, such as overlooks, camparounds, etc. Route Numbers 100-199.
- <u>Class 3</u> Special Purpose Park Road (Public Roads) Roads which provide circulation within public areas, such as campgrounds, picnic areas, visitor center complexes, concessionaire facilities, etc. These roads generally serve low-speed traffic and are often designed for one-way circulation. Route Numbers 200-299.
- Class 4 Primitive Park Roads (Public Roads) Roads which provide circulation through remote areas and/or access to primitive campgrounds and undeveloped areas. These roads frequently have no minimum design standards and their use may be limited to specially equipped vehicles. Route Numbers 200-299.

 Note: Functional Classes 3 and 4 have the same route numbers because, historically, they were numbered similarly.
- Class 5 Administrative Access Road (Administrative Roads) All public roads intended for access to administrative developments or structures such as park offices, employee quarters, or utility areas. Route Numbers 400-499.
- Class 6
 Restricted Road (Administrative Roads) All roads normally closed to the public, including patrol roads, truck trails, and other similar roads. Route Numbers 400-499.
 Note: Functional Classes 5 and 6 have the same route numbers because historically they were numbered similarly and often there is little distinction between these routes. For example, because utility areas and employee housing are often closed to the public, this restriction would result in classification of FC 6 rather
- Class 7 Urban Parkway (Urban Parkways and City Streets) These facilities serve high volumes of park and non-park related traffic and are restricted, limited-access facilities in an urban area. This category of roads primarily encompasses the major parkways which serve as gateways to our nation's capital. Other major park roads or portions thereof, however, may be included in this category. Route Numbers 1-9.
- Class 8 City Streets (Urban Parkways and City Streets) City streets are usually extensions of the adjoining street system that are owned and maintained by the National Park Service. The construction and/or reconstruction should conform with accepted local engineering practice and local conditions. Route Numbers 600-699.

A park road system contains those roads within or giving access to a park or other unit of the NPS which are administered by the NPS, or by the Service in cooperation with other agencies. The assignment of a functional classification (FC) to a park road is not based on traffic volumes or design speed, but on the intended use or function of that road or route.

The historic route numbering system also included a 300 number series for interpretive roads, and a 500 series for one-way roads. There are approximately 250 roads nationwide which are designated by the 300 and 500 series. The numbers for these roads will be maintained for reporting consistency. However, since these interpretive and one-way routes are not as clearly tied to a specific functional class, the 300 and 500 series will be discontinued for future use.

5000 route numbers are assigned to Non-NPS Routes that are State, County or City owned which border, traverse, or provide access to Park Facilities or Assets. 5000 Routes are driven for GPS and Video Log only.

Surface Type Abbreviations:

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- **AS Asphaltic Concrete Pavement**
- CO Portland Cement Concrete Pavement
- BR Brick or Pavers Road Bed CB - Cobble Stone Road Bed
- GR Gravel Road Bed
- SA Sand Road Bed
- NV Native or Dirt Material Road Bed
- OT Other Materials Road Bed

NPS/RIP Subcomponent Details for BIBE

Road Inventory Program 10/05/2012

(Numerical By Subcomponent #)

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Blue = All Paved Parking Areas

Green = All Unpaved Parking Areas

Grey = Paved Routes, DCV not Driven

Black = State, Local or Private non-NPS Routes

= Concession Route Flag ON

*Unpaved route data was obtained from NPS and was not inventoried by the Road Inventory Program (RIP).

BIBE

Asset	Entere	ed i	n FMSS System								
Rte. No.	FMSS No.	Cycle Collected	Route Name	Concess Route	Func. Class	Paved Miles	Un- Paved Miles	Total Route Length	Manual Rated SQ/FT		
0203ZZ	54492	5	RIO GRANDE VILLAGE CAMPGROUND	FROM ROUTE 0201 (RIO GRANDE VILLAGE ROAD)	THROUGH CAMPGROUND		3	1.30	0.00	1.30	
0233ZZ	54515	5	BASIN CAMPGROUND LOOPS	FROM ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD) AT MP 0.38	THROUGH CAMPGROUND		3	0.70	0.00	0.70	
0926ZZ	54644	4	SOTOL VISTA OVERLOOK PARKING	ADJACENT TO ROUTE 0112 (SOTOL VISTA OVERLOOK ROAD) AT END OF LOOP				0.00	0.00	0.00	5,813

Asset	Asset BIBE-0203ZZ Subcomponent Breakdown												
Rte. No.	FMSS No.	Cycle Collected	Route Name	Route De From	Route Description From To						Manual Rated SQ/FT		
0203AZ	54492	5	RIO GRANDE VILLAGE CAMPGROUND LOOP A	FROM ROUTE 0201 (RIO GRANDE VILLAGE ROAD)	TO END OF LOOP		3	0.73	0.00	0.73			
0203BZ	54492	5	RIO GRANDE VILLAGE CAMPGROUND LOOP B	FROM ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)	TO ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)		3	0.29	0.00	0.29			
0203CZ	54492	5	RIO GRANDE VILLAGE CAMPGROUND LOOP C	FROM ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)	TO ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)		3	0.07	0.00	0.07			
0203DZ	54492	5	RIO GRANDE VILLAGE CAMPGROUND LOOP D	FROM ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)	TO ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)		3	0.08	0.00	0.08			
0203EZ	54492	5	RIO GRANDE VILLAGE CAMPGROUND LOOP E	FROM ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)	TO ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)		3	0.14	0.00	0.14			

NPS/RIP Subcomponent Details for BIBE

Road Inventory Program 10/05/2012

(Numerical By Subcomponent #)

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Blue = All Paved Parking Areas

Green = All Unpaved Parking Areas

Grey = Paved Routes, DCV not Driven

Black = State, Local or Private non-NPS Routes

= Concession Route Flag ON

*Unpaved route data was obtained from NPS and was not inventoried by the Road Inventory Program (RIP).

BIBE

Asset BIBE-0233ZZ Subcomponent Breakdown														
FMSS No.	Cycle Collected	Route Name	Route Description 98			Func. Class	Paved Miles	Un- Paved Miles	Total Route Length	Manual Rated SQ/FT				
54515	5	BASIN CAMPGROUND LOOP A	FROM ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)	TO ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)		3	0.20	0.00	0.20					
54515	5	BASIN CAMPGROUND LOOP B	FROM ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)	TO ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)		3	0.17	0.00	0.17					
54515	5	BASIN CAMPGROUND MAIN LOOP	FROM ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD) AT MP 0.38	TO END OF LOOP		3	0.34	0.00	0.34					
	FMSS No. 54515 54515	FMSS No. 20 20 20 20 20 20 20 20 20 20 20 20 20	FMSS No. 200 Route Name 54515 5 BASIN CAMPGROUND LOOP A 54515 5 BASIN CAMPGROUND LOOP B	FMSS No. So Route Name From 54515 5 BASIN CAMPGROUND LOOP A FROM ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP) 54515 5 BASIN CAMPGROUND LOOP B FROM ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP) 54515 5 BASIN CAMPGROUND MAIN LOOP 54515 5 BASIN CAMPGROUND MAIN LOOP FROM ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD) AT	FMSS No. 20 0 Route Name From To 54515 5 BASIN CAMPGROUND LOOP A FROM ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP) 54515 5 BASIN CAMPGROUND LOOP B FROM ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP) 54515 5 BASIN CAMPGROUND MAIN LOOP FROM ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP) 54515 5 BASIN CAMPGROUND MAIN LOOP FROM ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD) AT	FMSS No. $\frac{9}{\sqrt{5}} = \frac{9}{\sqrt{5}}$ Route Name From To $\frac{8}{\sqrt{5}} = \frac{9}{\sqrt{5}} = $	FMSS No. $\frac{9}{\sqrt{50}}$ Route Name From To $\frac{8}{\sqrt{50}}$ BASIN CAMPGROUND LOOP A FROM ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP) 54515 5 BASIN CAMPGROUND LOOP B FROM ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP) 54515 5 BASIN CAMPGROUND MAIN LOOP FROM ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP) 54515 5 BASIN CAMPGROUND MAIN LOOP FROM ROUTE 0206 (LOWER BASIN CAMPGROUND MAIN LOOP) 3 3	Route Description From To Route Description To Route Description To Route Description From To Route Description To Route Description From To Route Description From To Route Description From Route Description To Route Description Route Description To R	Route Description To Route Description Route Description To Route Description Paved Miles Miles Paved Miles Paved Miles Paved Miles No. Sala D.20 O.00 Sala D.20 O.00 Sala D.20 O.00 O.00 Sala D.20 O.00 O.0	Route Description To Solve So				

Asset	Asset BIBE-0926ZZ Subcomponent Breakdown													
Rte.		/cle ollected	Parts Name	Route Description	1	Concess Route	Func. Class	Paved	Un- Paved	Total Route	Manual Rated			
No.	No.	ე 	Route Name	From	То	<u>۵</u> ک	3 S	Miles	Miles	Length	SQ/FT			
0926AZ	54644	4	SOTOL VISTA OVERLOOK PARKING A	ADJACENT TO ROUTE 0112 (SOTOL VISTA OVERLOOK ROAD) AT END OF LOOP ON LEFT				0.00	0.00	0.00	1,567			
0926BZ	54644	4	SOTOL VISTA OVERLOOK PARKING B	ADJACENT TO ROUTE 0112 (SOTOL VISTA OVERLOOK ROAD) AT END OF LOOP ON RIGHT				0.00	0.00	0.00	4,246			

	ROUTES	S ADDED FROM PREVIOUS IN	VENTORY:
Route #	Route Name	Reason for Addition	Comments
1001	CHISOS MOUNTAIN INTERPRETIVE PULLOFF	OTHER	THIS ROUTE WAS REMOVED FROM THE INVENTORY IN CYCLE 4 AS A PULLOUT. IT WAS ADDED BACK IN CYCLE 5 BECAUSE IT IS CONSIDERED A PARKING AREA, NOT A PULLOUT.
1002	SAM NAIL INTERPRETIVE PULLOFF	OTHER	THIS ROUTE WAS REMOVED FROM THE INVENTORY IN CYCLE 4 AS A PULLOUT. IT WAS ADDED BACK IN CYCLE 5 BECAUSE IT IS CONSIDERED A PARKING AREA, NOT A PULLOUT.
1003	FINS OF FIRE INTERPRETIVE PULLOFF	OTHER	THIS ROUTE WAS REMOVED FROM THE INVENTORY IN CYCLE 4 AS A PULLOUT. IT WAS ADDED BACK IN CYCLE 5 BECAUSE IT IS CONSIDERED A PARKING AREA, NOT A PULLOUT.
1005	INVISIBLE WILDLIFE INTERPRETIVE PULLOFF	OTHER	THIS ROUTE WAS REMOVED FROM THE INVENTORY IN CYCLE 4 AS A PULLOUT. IT WAS ADDED BACK IN CYCLE 5 BECAUSE IT IS CONSIDERED A PARKING AREA, NOT A PULLOUT.
1006	VERTICAL SCENERY PULLOFF	OTHER	THIS ROUTE WAS REMOVED FROM THE INVENTORY IN CYCLE 4 AS A PULLOUT. IT WAS ADDED BACK IN CYCLE 5 BECAUSE IT IS CONSIDERED A PARKING AREA, NOT A PULLOUT.
1009	FLASH FLOOD INTERPRETIVE PULLOFF	OTHER	THIS ROUTE WAS REMOVED FROM THE INVENTORY IN CYCLE 4 AS A PULLOUT. IT WAS ADDED BACK IN CYCLE 5 BECAUSE IT IS CONSIDERED A PARKING AREA, NOT A PULLOUT.
1013	BEAR & MOUNTAIN LION COUNTRY INTERPRETIVE PULLOFF	OTHER	THIS ROUTE WAS REMOVED FROM THE INVENTORY IN CYCLE 4 AS A PULLOUT. IT WAS ADDED BACK IN CYCLE 5 BECAUSE IT IS CONSIDERED A PARKING AREA, NOT A PULLOUT.
1014	TREE ZONE INTERPRETIVE PULLOFF	OTHER	THIS ROUTE WAS REMOVED FROM THE INVENTORY IN CYCLE 4 AS A PULLOUT. IT WAS ADDED BACK IN CYCLE 5 BECAUSE IT IS CONSIDERED A PARKING AREA, NOT A PULLOUT.

	ROUTES MODIFIED FROM PREVIOUS INVENTORY:											
Route #	Route Name	Type of Modification	Comments									
0233ZZ	BASIN CAMPGROUND LOOPS	RECONSTRUCTED	ROUTE 0233 WAS RECONSTUCTED SINCE CYCLE 4. IT WAS MANUALLY RATED IN CYCLE 4, BUT WAS SPLIT INTO 3 SUBCOMPONENTS (0233AZ, 0233BZ, AND 0233Z) AND DRIVEN BY THE DATA COLLECTION VEHICLE IN CYCLE 5.									
0405	HUISACHE ROAD	ROUTES COMBINED	THE END OF ROUTE 0405 WAS EXTENDED BY 400 FT TO INCLUDE THE PORTION OF ROAD THAT WAS PART OF ROUTE 0904 IN CYCLE 4. (THE ROUTE NUMBER 0904 HAS BEEN REMOVED).									

	OTHER (CHANGES FROM PREVIOUS IN	IVENTORY:
Route #	Route Name	Type of Change	Comments
0103	FOSSIL BONE ROAD	COLLECTION METHOD CHANGE	THIS ROUTE WAS MANUALLY RATED IN CYCLE 4 BUT WAS COLLECTED WITH THE DATA COLLECTION VEHICLE IN CYCLE 5.
0203ZZ	RIO GRANDE VILLAGE CAMPGROUND	COLLECTION METHOD CHANGE	ROUTE 0203 WAS MANUALLY RATED IN CYCLE 4, BUT WAS SPLIT INTO 5 SUBCOMPONENTS (0203AZ THROUGH EZ) AND DRIVEN BY THE DATA COLLECTION VEHICLE IN CYCLE 5.
0206	LOWER BASIN CAMPGROUND ROAD	FUNCTIONAL CLASS CHANGE	FUNCTION CLASS (FC) CHANGED FROM FC 3 TO FC 2 IN CYCLE 5.
0234	BASIN GROUP CAMPGROUND	ROUTE SPLIT	ROUTE 0234 WAS MANUALLY RATED IN CYCLE 4. IN CYCLE 5, A PIECE OF ROUTE 0234 WAS SPLIT OUT AND COLLECTED AS A PARKING AREA (ROUTE 1026) AND THE REMAINING PORTION WAS COLLECTED BY THE DATA COLLECTION VEHICLE.
0444	PJ SEWAGE TREATMENT PLANT ROAD	ROUTE SPLIT	ROUTE 0444 WAS MANUALLY RATED IN CYCLE 4. IN CYCLE 5, A PIECE AT THE END OF ROUTE 0444 WAS SPLIT OUT AND COLLECTED AS A PARKING AREA (ROUTE 1020) AND THE REMAINING PORTION WAS COLLECTED BY THE DATA COLLECTION VEHICLE.
1020	PJ SEWAGE TREATMENT PLANT PARKING	ROUTE SPLIT	ROUTE 1020 WAS SPLIT OUT OF THE SHAPE OF ROUTE 0444 IN CYCLE 5.
1022	CHINO COURT PARKING	OTHER	ROUTE 0437 WAS CHANGED TO A PARKING AREA (ROUTE 1022) IN CYCLE 5. (THE ROUTE NUMBER 0437 HAS BEEN REMOVED).
1023	HOLLY LANE PARKING	OTHER	ROUTE 0438 WAS CHANGED TO A PARKING AREA (ROUTE 1023) IN CYCLE 5. (THE ROUTE NUMBER 0438 HAS BEEN REMOVED).
1024	DESERT WILLOW STREET PARKING	OTHER	ROUTE 0441 WAS CHANGED TO A PARKING AREA (ROUTE 1024) IN CYCLE 5. (THE ROUTE NUMBER 0441 HAS BEEN REMOVED).
1025	MESQUITE STREET PARKING	OTHER	ROUTE 0442 WAS CHANGED TO A PARKING AREA (ROUTE 1025) IN CYCLE 5. (THE ROUTE NUMBER 0442 HAS BEEN REMOVED).

	OTHER CHANGES FROM PREVIOUS INVENTORY:										
Route #	Route Name	Type of Change	Comments								
1026	BASIN GROUP CAMPSITE PARKING	ROUTE SPLIT	ROUTE 1026 WAS SPLIT OUT OF THE SHAPE OF ROUTE 0234 IN CYCLE 5.								

Section 3 Park Summary Information



Big Bend National Park



BIBE: PAVED ROUTE MILES AND PERCENTAGES BY FUNCTIONAL CLASS AND PCR

		Р	avement C	ondition R	Rating (PCF	₹)			
	Poor (0-60)	Fair (6	1-84)	Good (85-94)		Excellent	TOTAL	
F.C.	MILES %		MILES	%	MILES %		MILES	%	MILES
1	0.66	0.56%	8.20	6.96%	29.48	25.01%	68.63	58.24%	106.97
2	0.97	0.82%	2.66	2.26%	1.53	1.30%	2.76	2.34%	7.92
3	0.20	0.17%	0.28	0.24%	0.67	0.57%	1.25	1.06%	2.40
4									
5	0.10	0.08%	0.30	0.25%	0.12	0.10%	0.04	0.03%	0.56
6									
7									
8									
Totals	1.93	1.64%	11.44	9.71%	31.80	26.98%	72.68	61.67%	117.85

Note:

The information in this table is derived from the PMS_20 table in the Park database, which only contains processed data from routes collected with the Data Collection Vehicle (DCV). Information for Manually Rated Routes (MRR) and Parking Areas is not reported in this table. Only Functional Class 1, 2, & 7 routes, and any new routes not previously collected by RIP, are collected in Large Parks.

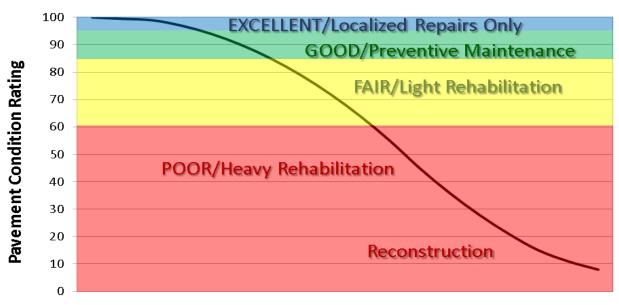
Explanation of the Excellent, Good, Fair and Poor Condition Descriptions

In addition to the RIP Index changes that have been implemented in Cycle 5, we will also aim to provide greater assistance in translating excellent/good/fair/poor categories into pavement needs categories. The PCR can be used to indicate the place in the Pavement Life Cycle and the types of treatments that should be considered now and into the future.

- Excellent/New: PCR of 95-100. Pavements in this range will require only spot repairs
- Good: PCR of 85-94. Pavements in this range will likely be candidates for Preventive Maintenance. Examples include Chip and Slurry Seals, Micro Surfacing and Thin Overlays.
- Fair: PCR of 61-84. Pavements in this range will likely be candidates of Light Rehabilitation (L3R). Examples include single-lift overlays up to 2.5 inches in total thickness, milling and overlays.
- Poor: PCR of 0-60. Pavements in this range will likely be candidates of Heavy Rehabilitation or Reconstruction (H3R or 4R). Examples include Pulverization, Multiple Lift Overlays, and Reconstruction.

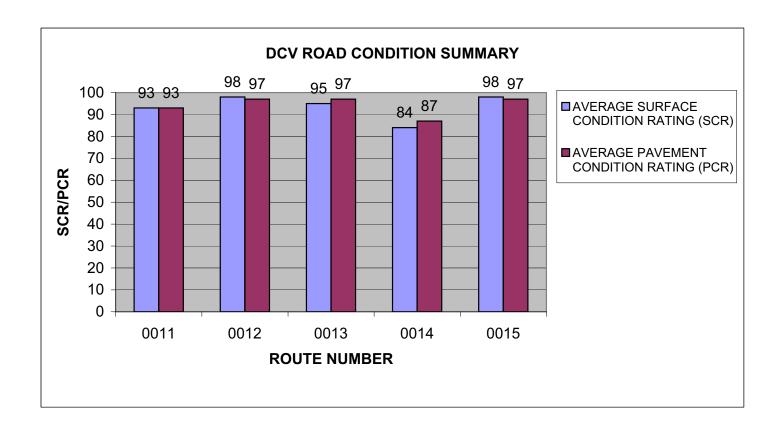
At this time, specific Maintenance and Rehabilitation activities should be evaluated and recommended at the project level. Site-specific conditions that influence treatment type should be determined based on performing a subsurface investigation and/or pavement condition survey, and not be based solely on RIP data. Additionally, RIP produces a snapshot of conditions the year in which the data was collected. For further information or to obtain additional Pavement Management System's data from our Highway Pavement Management Application (HPMA) please contact the Eastern Federal Lands pavement team.

Condition Categories and Treatments

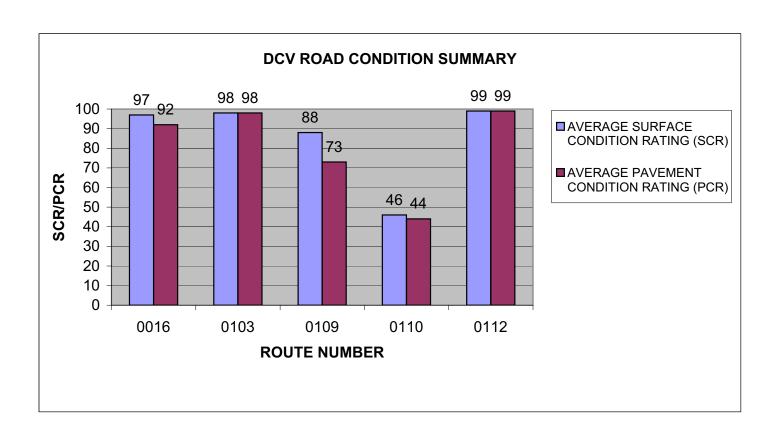


Pavement Age

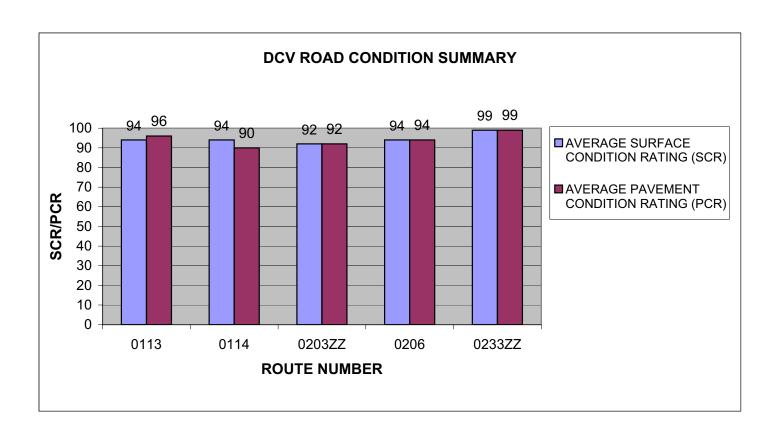
ROUTE NUMBER	ROUTE NAME	101.01	PAVED LENGTH		AVERAGE SURFACE CONDITION RATING (SCR)	AVERAGE PAVEMENT CONDITION RATING (PCR)
0011	NORTH ENTRANCE ROAD	1	27.46	ASPHALT	93	93
0012	RIO GRANDE ROAD	1	20.31	ASPHALT	98	97
0013	WEST ENTRANCE ROAD	1	21.91	ASPHALT	95	97
0014	CHISOS BASIN ROAD	1	6.34	ASPHALT	84	87
0015	ROSS MAXWELL SCENIC DRIVE	1	23.25	ASPHALT	98	97



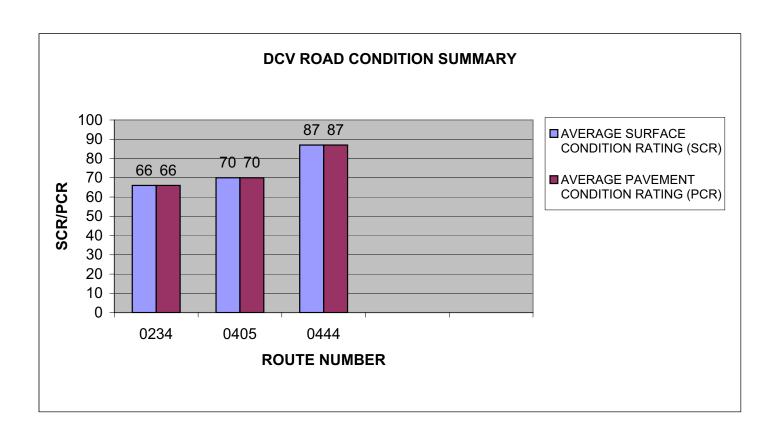
ROUTE		FUNCT	PAVED	SURFACE	AVERAGE SURFACE CONDITION	AVERAGE PAVEMENT CONDITION
NUMBER	ROUTE NAME	CLASS	LENGTH	TYPE	RATING (SCR)	RATING (PCR)
0016	SANTA ELENA CANYON ROAD	1	7.70	ASPHALT	97	92
0103	FOSSIL BONE ROAD	2	0.23	ASPHALT	98	98
0109	BOQUILLAS CANYON ROAD	2	3.61	ASPHALT	88	73
0110	BOQUILLAS CANYON OVERLOOK	2	0.57	ASPHALT	46	44
0112	SOTOL VISTA OVERLOOK ROAD	2	0.41	ASPHALT	99	99



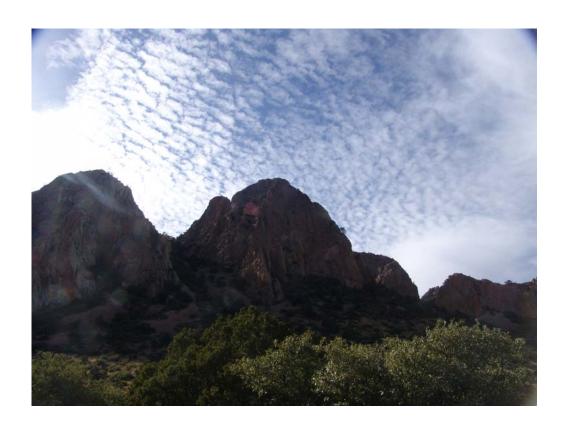
ROUTE		FUNCT	PAVED	SURFACE	AVERAGE SURFACE CONDITION	AVERAGE PAVEMENT CONDITION
NUMBER	ROUTE NAME	CLASS	LENGTH	TYPE	RATING (SCR)	RATING (PCR)
0113	BURRO MESA POUROFF ROAD	2	1.86	ASPHALT	94	96
0114	MULE EARS OVERLOOK ROAD	2	0.61	ASPHALT	94	90
0203ZZ	RIO GRANDE VILLAGE CAMPGROUND	3	1.30	ASPHALT	92	92
0206	LOWER BASIN CAMPGROUND ROAD	2	0.63	ASPHALT	94	94
0233ZZ	BASIN CAMPGROUND LOOPS	3	0.70	ASPHALT	99	99



					AVERAGE SURFACE	AVERAGE PAVEMENT
ROUTE		FUNCT	PAVED	SURFACE	CONDITION	CONDITION
NUMBER	ROUTE NAME	CLASS	LENGTH	TYPE	RATING (SCR)	RATING (PCR)
0234	BASIN GROUP CAMPGROUND	3	0.40	ASPHALT	66	66
0405	HUISACHE ROAD	5	0.45	ASPHALT	70	70
0444	PJ SEWAGE TREATMENT PLANT ROAD	5	0.12	ASPHALT	87	87



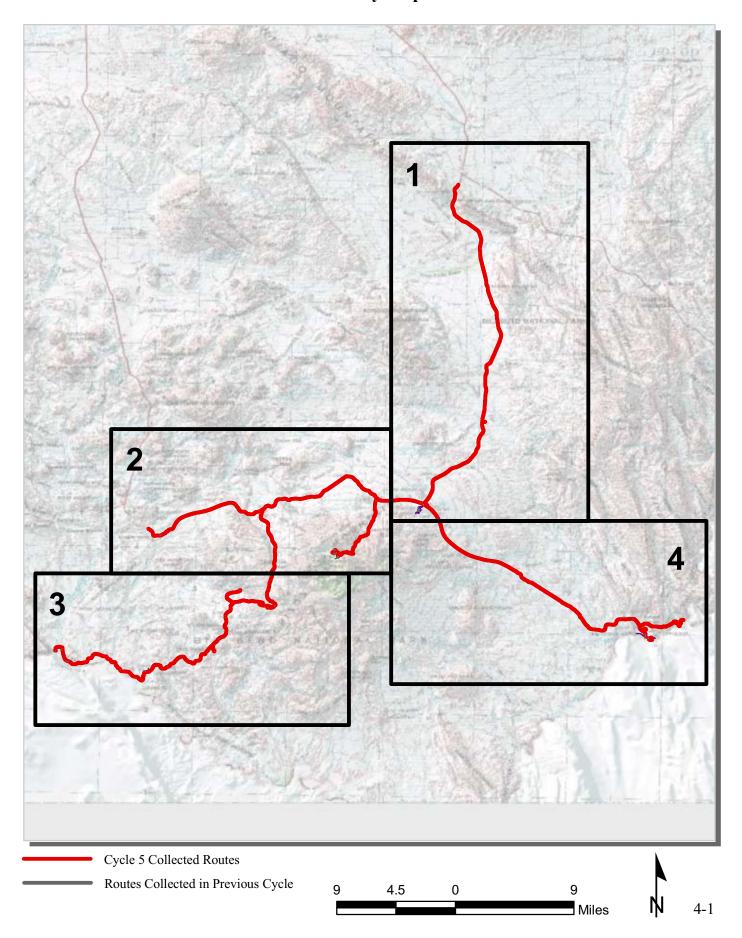
Section 4 Park Route Location Maps

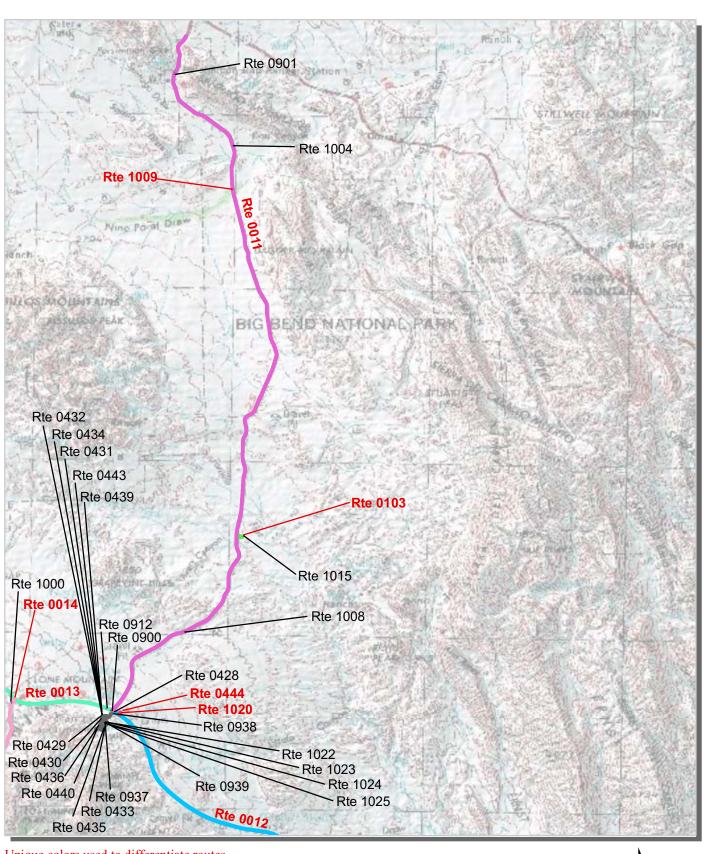


Big Bend National Park



Big Bend National Park Route Location Map Key Map

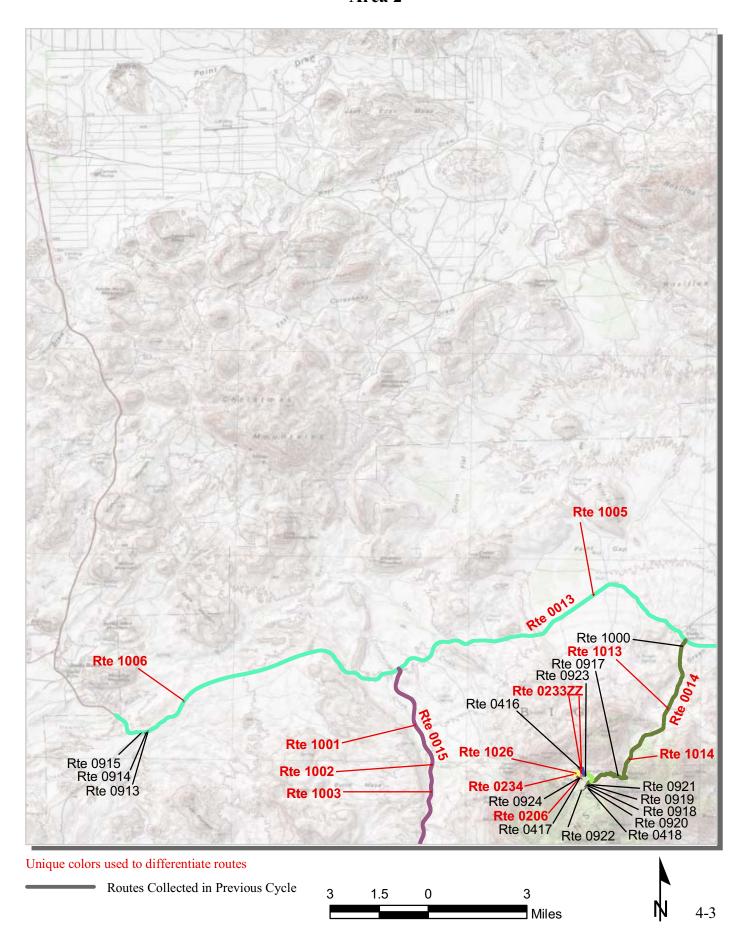




Unique colors used to differentiate routes

Routes Collected in Previous Cycle

4-2

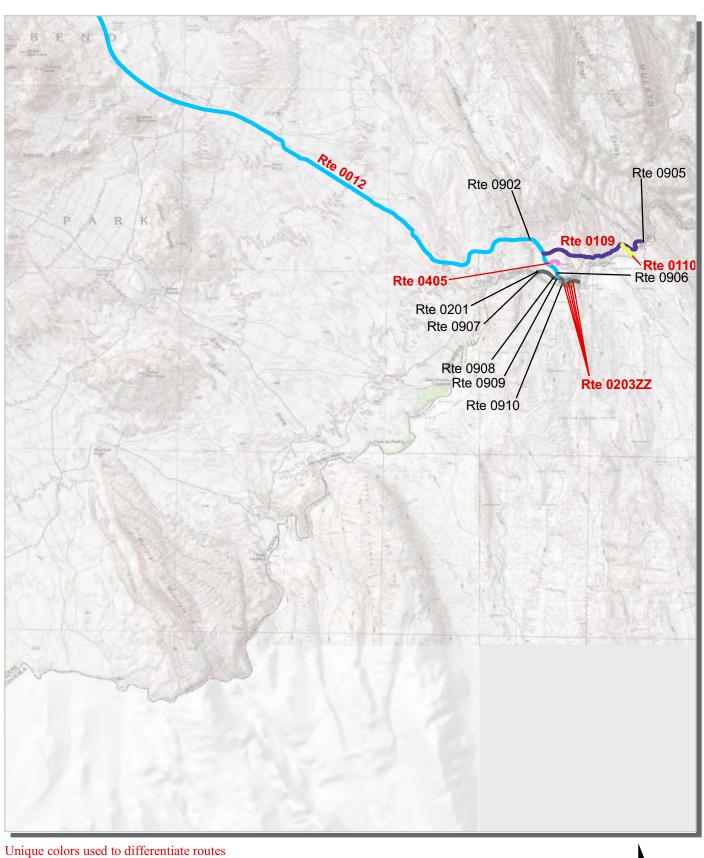




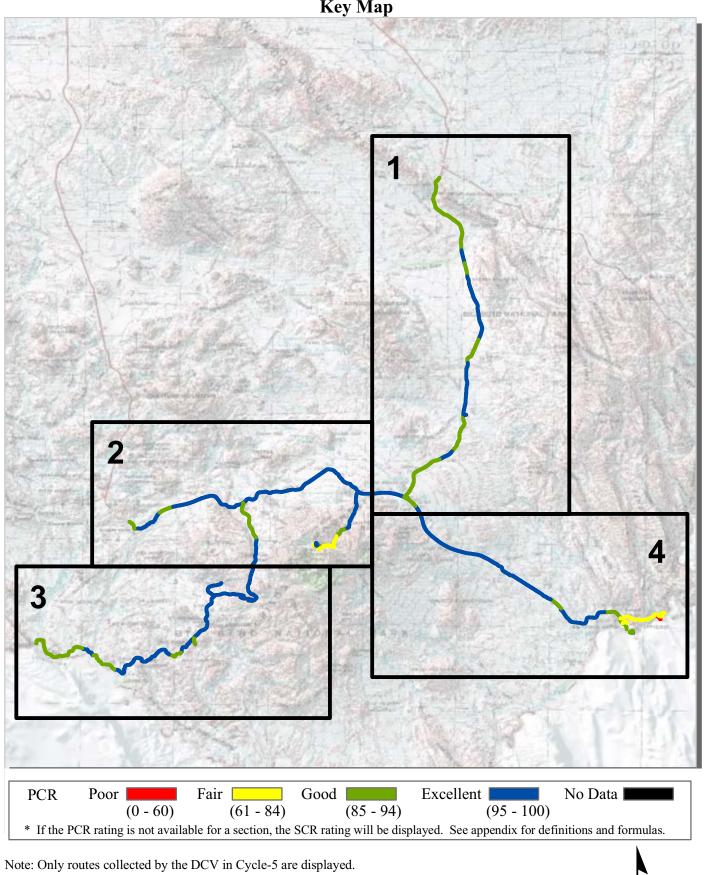
Unique colors used to differentiate routes

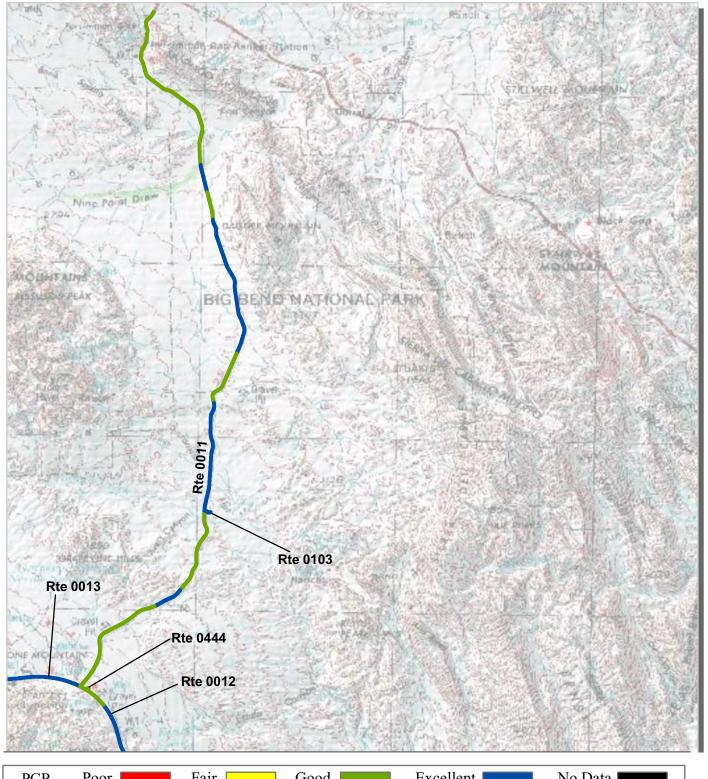
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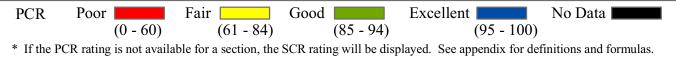
3 1.5 0 3 Miles

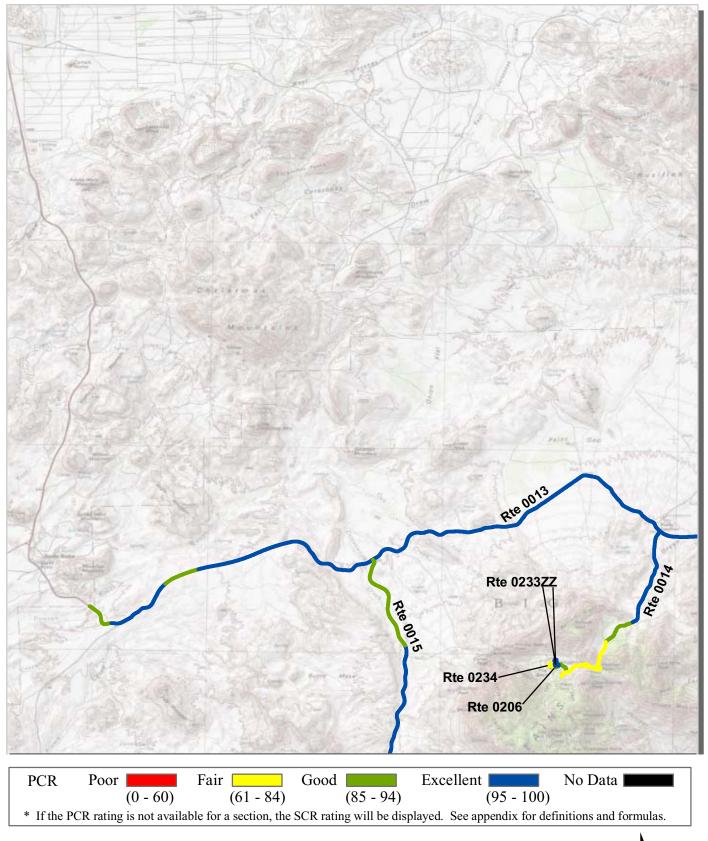


Routes Collected in Previous Cycle





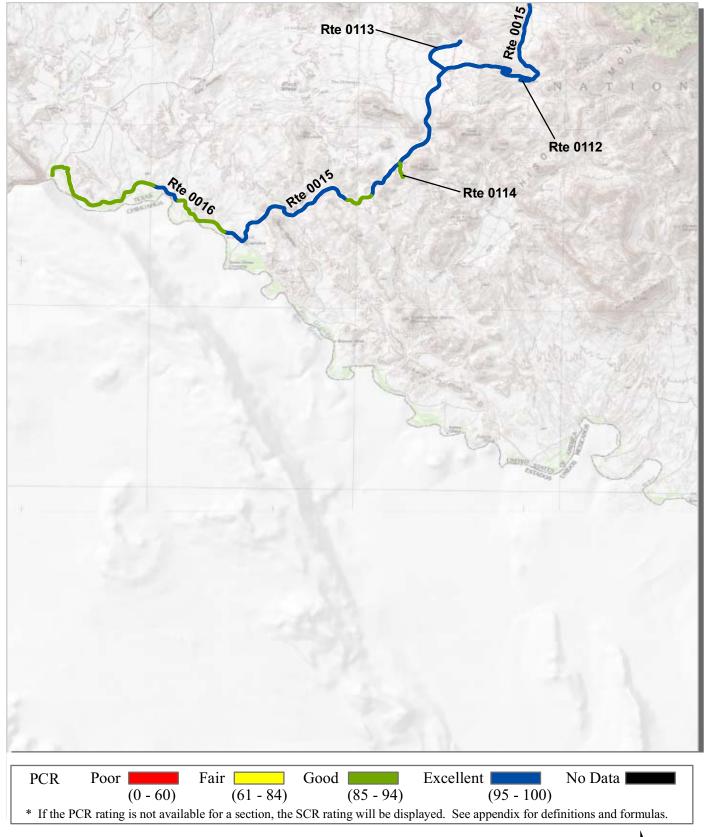




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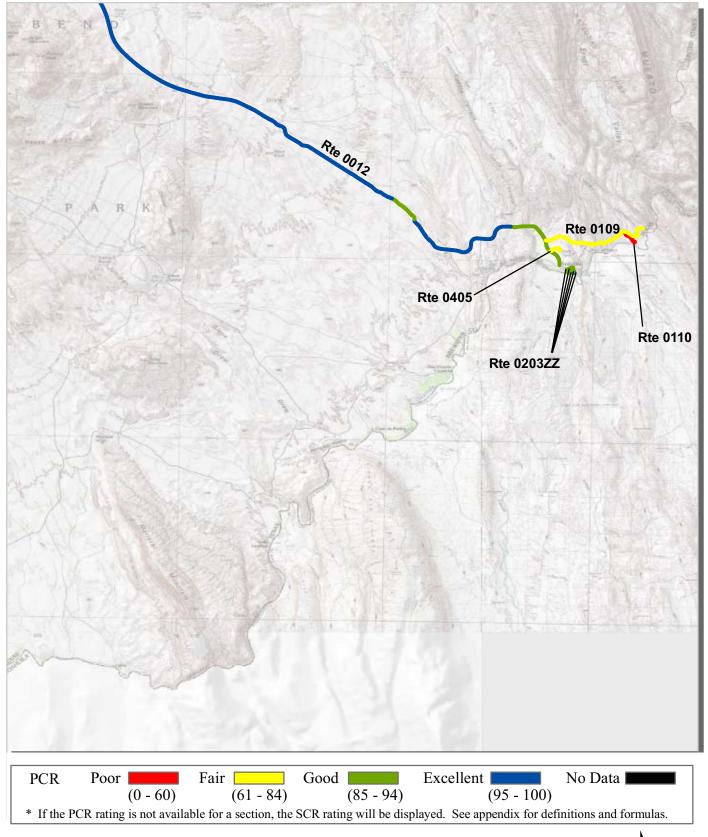


3



1.5

4-9



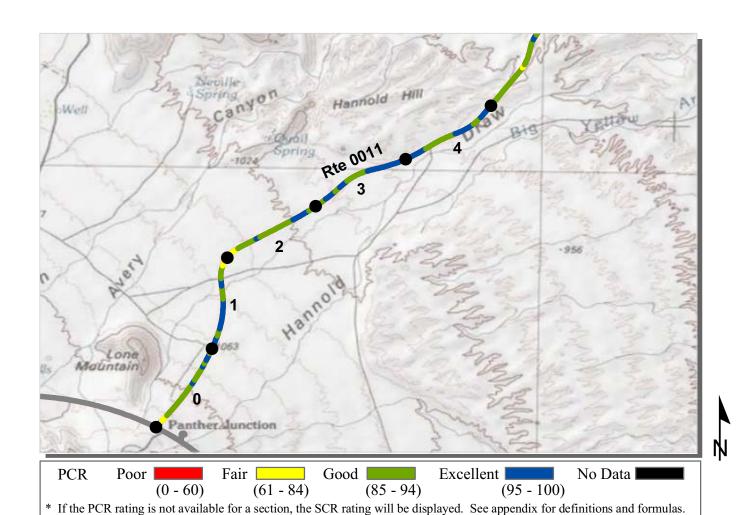


Section 5 Paved Route Condition Rating Sheets



Big Bend National Park



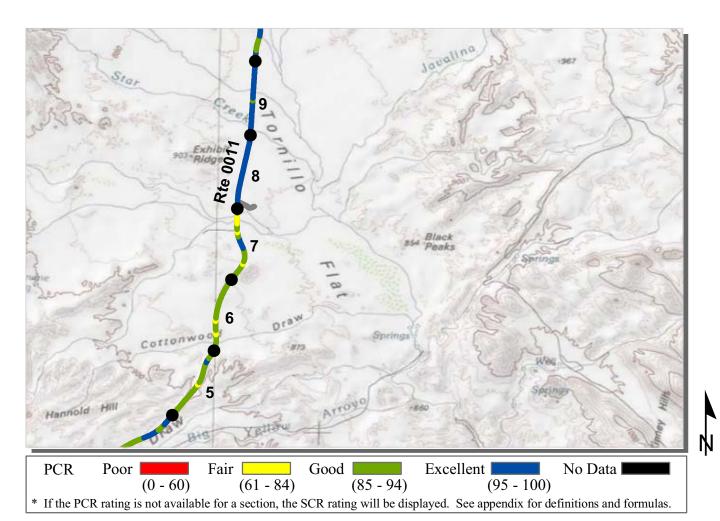


1/14/2012

ROUTE: 0011 NORTH ENTRANCE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION

INTERMOUNTAIN REGION			TOTAL	LENGTH:	27.46 Miles
Section Number	0	1	2	3	4
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	25	25	24	24	24
Lane Width (ft)	10	10	10	10	10
Roadway Condition Information					
SCR (Surface Condition Rating)	93	96	95	96	96
PCR (Pavement Condition Rating)	89	92	90	94	95
Distress Index Values					
Structural Crack Index	100	100	100	100	100
Transverse Cracking Index	100	100	100	100	100
Patching Index	100	100	100	100	100
Rutting Index	93	96	95	96	96
Roughness Condition Index (RCI)	83	85	83	91	93

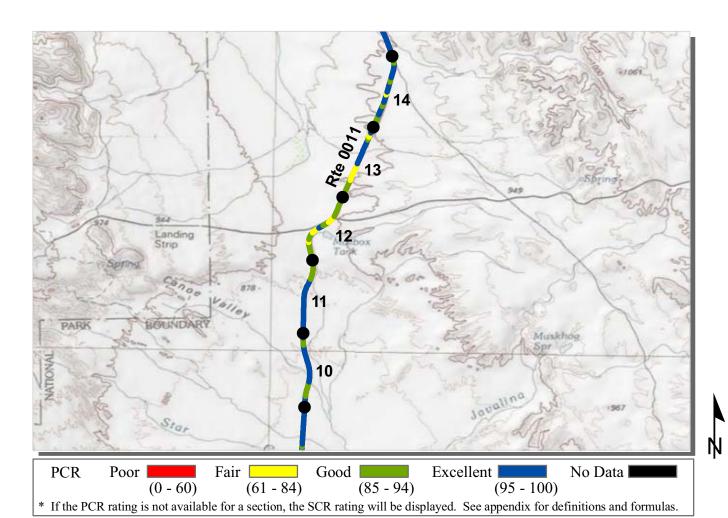


1/14/2012

ROUTE: 0011 NORTH ENTRANCE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN RECION

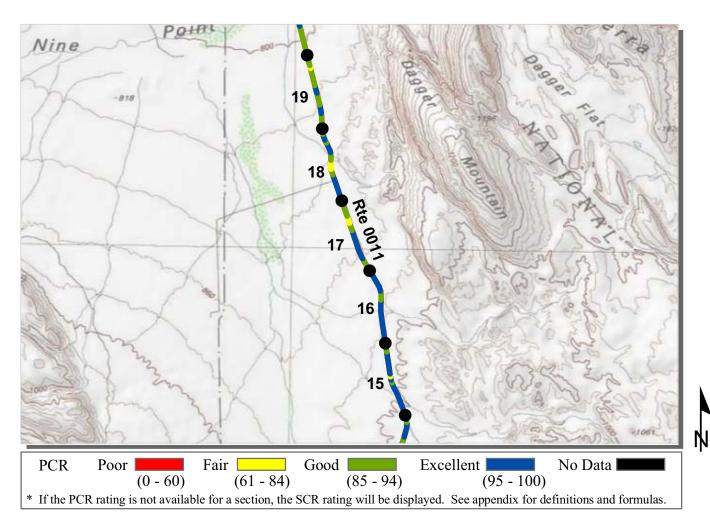
INTERMOUNTAIN REGION		TOTAL LENGTH:				
Section Number	5	6	7	8	9	
Section Length (mi)	1.00	1.00	1.00	1.00	1.00	
Cross Section Information						
Number of Lanes	2	2	2	2	2	
Paved Width (ft)	24	24	25	23	22	
Lane Width (ft)	10	10	10	10	10	
Roadway Condition Information						
SCR (Surface Condition Rating)	94	91	94	97	98	
PCR (Pavement Condition Rating)	89	87	89	98	99	
Distress Index Values						
Structural Crack Index	100	100	100	99	100	
Transverse Cracking Index	100	100	99	97	98	
Patching Index	100	100	100	100	100	
Rutting Index	94	91	94	100	100	
Roughness Condition Index (RCI)	81	80	82	100	100	



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ROUTE: 0011 NORTH ENTRANCE ROAD BIBE: BIG BEND NATIONAL PARK

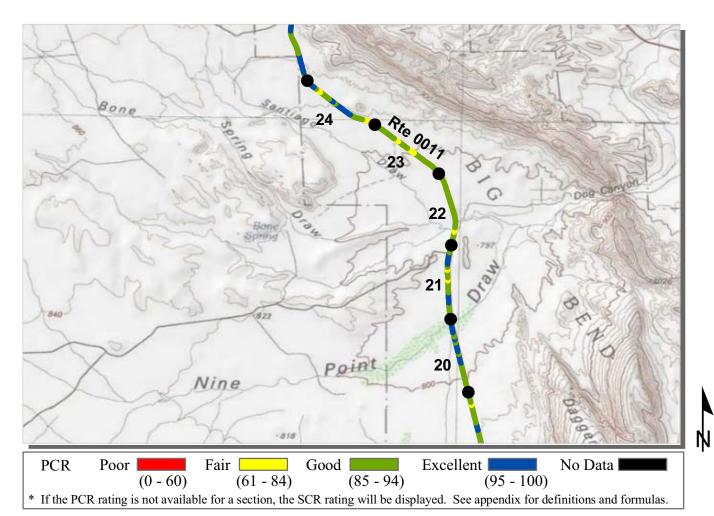
INTERMOUNTAIN REGION			TOTAL LENGTH:			
Section Number	10	11	12	13	14	
Section Length (mi)	1.00	1.00	1.00	1.00	1.00	
Cross Section Information						
Number of Lanes	2	2	2	2	2	
Paved Width (ft)	22	23	23	22	23	
Lane Width (ft)	10	10	10	10	10	
Roadway Condition Information						
SCR (Surface Condition Rating)	95	94	88	92	95	
PCR (Pavement Condition Rating)	97	96	88	90	96	
Distress Index Values						
Structural Crack Index	99	98	96	93	98	
Transverse Cracking Index	95	94	88	92	95	
Patching Index	100	100	100	100	100	
Rutting Index	99	99	98	97	98	
Roughness Condition Index (RCI)	100	100	87	87	97	



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ROUTE: 0011 NORTH ENTRANCE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION			TOTAL LENGTH:			
Section Number	15	16	17	18	19	
Section Length (mi)	1.00	1.00	1.00	1.00	1.00	
Cross Section Information						
Number of Lanes	2	2	2	2	2	
Paved Width (ft)	22	22	22	22	23	
Lane Width (ft)	10	10	10	10	10	
Roadway Condition Information						
SCR (Surface Condition Rating)	94	93	91	92	91	
PCR (Pavement Condition Rating)	96	96	95	95	94	
Distress Index Values						
Structural Crack Index	99	100	99	99	97	
Transverse Cracking Index	94	93	91	92	91	
Patching Index	100	100	100	95	100	
Rutting Index	99	100	100	99	99	
Roughness Condition Index (RCI)	100	100	100	100	99	

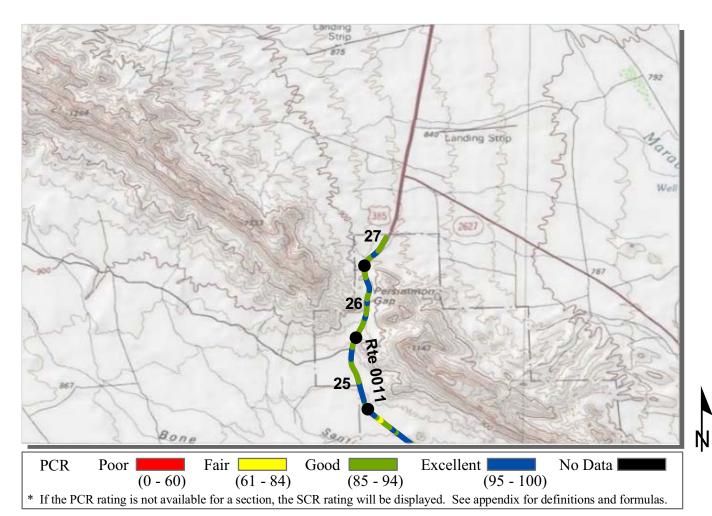


1/14/2012

ROUTE: 0011 NORTH ENTRANCE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION

INTERMOUNTAIN REGION			TOTAL	LENGTH:	27.46 Miles
Section Number	20	21	22	23	24
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	23	22	23	22	22
Lane Width (ft)	10	10	10	10	10
Roadway Condition Information					
SCR (Surface Condition Rating)	91	94	88	90	97
PCR (Pavement Condition Rating)	95	94	90	90	92
Distress Index Values					
Structural Crack Index	97	98	94	95	97
Transverse Cracking Index	91	94	88	90	97
Patching Index	100	100	100	100	100
Rutting Index	99	99	99	99	99
Roughness Condition Index (RCI)	100	94	92	89	84

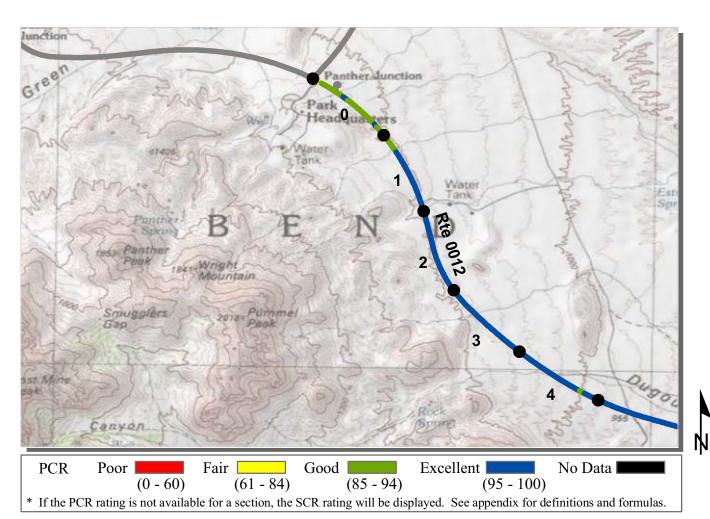


1/14/2012

ROUTE: 0011 NORTH ENTRANCE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION

INTERMOUNTAIN REGION			TOT	AL LENGTH:	27.46 Miles
Section Number	25	26	27		
Section Length (mi)	1.00	1.00	0.46		
Cross Section Information					
Number of Lanes	2	2	2		
Paved Width (ft)	22	23	22		
Lane Width (ft)	10	10	10		
Roadway Condition Information					
SCR (Surface Condition Rating)	93	90	89		
PCR (Pavement Condition Rating)	94	94	93		
Distress Index Values					
Structural Crack Index	98	99	100		
Transverse Cracking Index	93	90	89		
Patching Index	100	100	100		
Rutting Index	99	99	100		
Roughness Condition Index (RCI)	96	100	100		

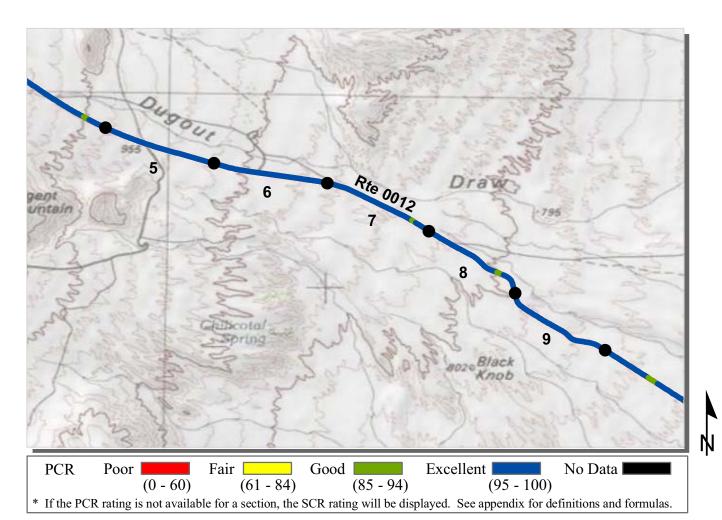


1/14/2012

ROUTE: 0012 RIO GRANDE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION		TOTAL LENGTH:			20.31 Miles
Section Number	0	1	2	3	4
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	24	24	25	24	25
Lane Width (ft)	11	11	10	10	10
Roadway Condition Information					
SCR (Surface Condition Rating)	93	98	99	100	98
PCR (Pavement Condition Rating)	91	99	99	100	99
Distress Index Values					
Structural Crack Index	100	100	100	100	100
Transverse Cracking Index	100	100	100	100	100
Patching Index	100	100	100	100	100
Rutting Index	93	98	99	100	98
Roughness Condition Index (RCI)	88	100	100	100	100

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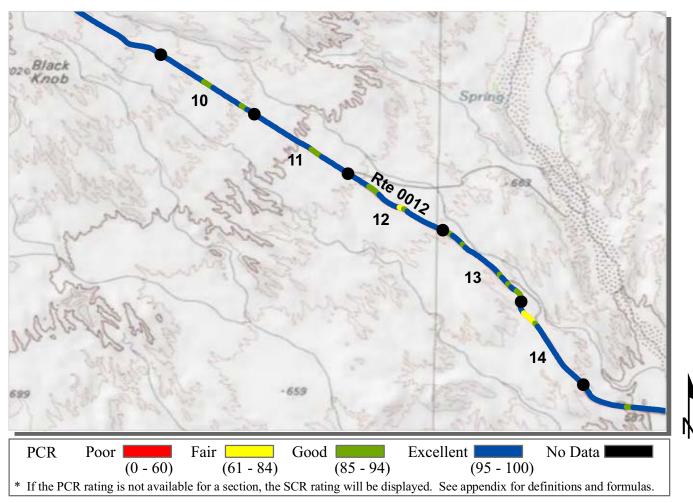
COLLECTED:

1/14/2012

ROUTE: 0012 RIO GRANDE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION

INTERMOUNTAIN REGION			TOTAL	LENGTH:	20.31 Miles
Section Number	5	6	7	8	9
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	24	24	24	24	24
Lane Width (ft)	10	10	10	10	10
Roadway Condition Information					
SCR (Surface Condition Rating)	98	99	99	100	99
PCR (Pavement Condition Rating)	99	99	99	100	99
Distress Index Values					
Structural Crack Index	100	100	100	100	100
Transverse Cracking Index	100	100	100	100	100
Patching Index	100	100	100	100	100
Rutting Index	98	99	99	100	99
Roughness Condition Index (RCI)	100	100	100	100	100

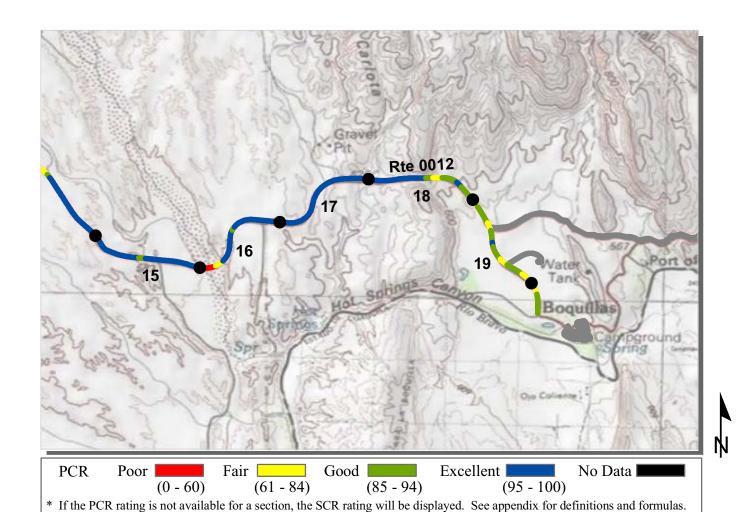


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ROUTE: 0012 RIO GRANDE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION

INTERMOUNTAIN REGION			TOTAL	LENGTH:	20.31 Miles
Section Number	10	11	12	13	14
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	25	25	25	25	25
Lane Width (ft)	10	10	10	10	10
Roadway Condition Information					
SCR (Surface Condition Rating)	99	99	99	97	98
PCR (Pavement Condition Rating)	99	99	99	94	95
Distress Index Values					
Structural Crack Index	100	100	100	100	100
Transverse Cracking Index	100	100	100	100	100
Patching Index	100	100	100	100	100
Rutting Index	99	99	99	97	98
Roughness Condition Index (RCI)	100	100	99	90	90



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ROUTE: 0012 RIO GRANDE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION

INTERMOUNTAIN REGION			TOTAL	LENGTH:	20.31 Miles
Section Number	15	16	17	18	19
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	25	25	24	23	22
Lane Width (ft)	10	11	10	11	10
Roadway Condition Information					
SCR (Surface Condition Rating)	99	100	99	97	95
PCR (Pavement Condition Rating)	99	96	99	93	86
Distress Index Values					
Structural Crack Index	100	100	100	100	100
Transverse Cracking Index	100	100	100	100	100
Patching Index	100	100	100	100	100
Rutting Index	99	100	99	97	95
Roughness Condition Index (RCI)	100	91	100	88	73



PCR Poor Fair Good Excellent No Data (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

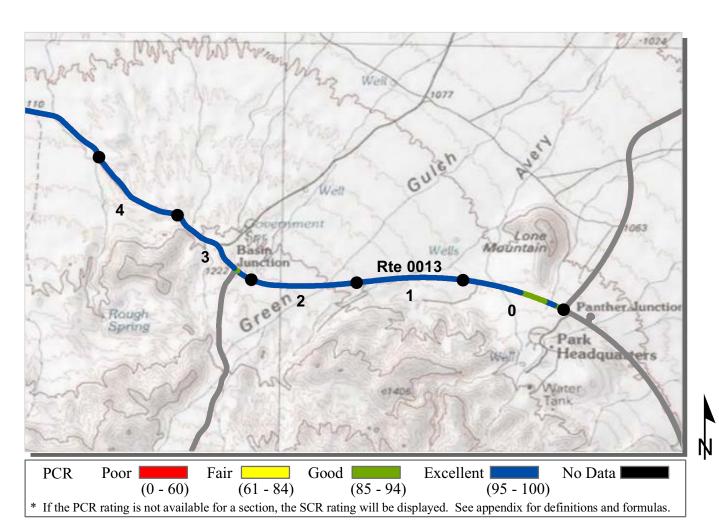
COLLECTED:

1/14/2012

ROUTE: 0012 RIO GRANDE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION

INTERMOUNTAIN REGION		TOTAL	LENGTH:	20.31 Miles
Section Number	20			
Section Length (mi)	0.31			
Cross Section Information				
Number of Lanes	2			
Paved Width (ft)	21			
Lane Width (ft)	10			
Roadway Condition Information				
SCR (Surface Condition Rating)	93			
PCR (Pavement Condition Rating)	85			
Distress Index Values				
Structural Crack Index	100			
Transverse Cracking Index	100			
Patching Index	100			
Rutting Index	93			
Roughness Condition Index (RCI)	74			

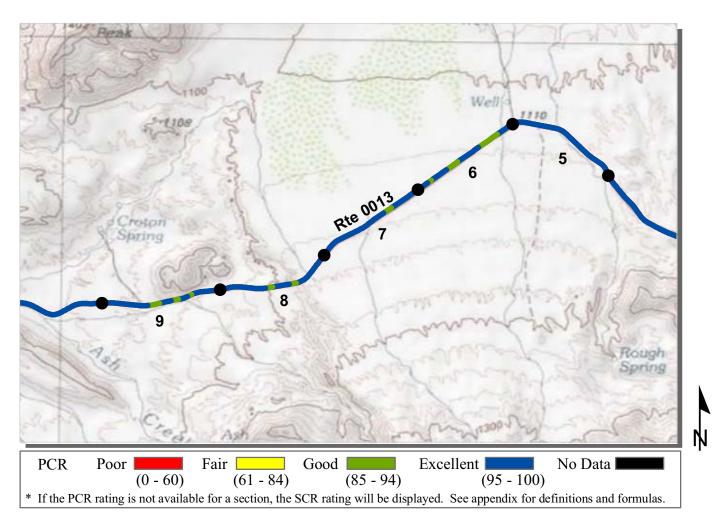


1/14/2012

ROUTE: 0013 WEST ENTRANCE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN RECION

INTERMOUNTAIN REGION		TH: 21.91 Miles			
Section Number	0	1	2	3	4
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	24	23	23	23	23
Lane Width (ft)	10	10	10	10	10
Roadway Condition Information					
SCR (Surface Condition Rating)	93	97	96	98	97
PCR (Pavement Condition Rating)	96	98	98	99	98
Distress Index Values					
Structural Crack Index	100	100	100	100	100
Transverse Cracking Index	93	97	96	98	97
Patching Index	100	100	100	100	100
Rutting Index	100	100	100	100	100
Roughness Condition Index (RCI)	100	100	100	100	100

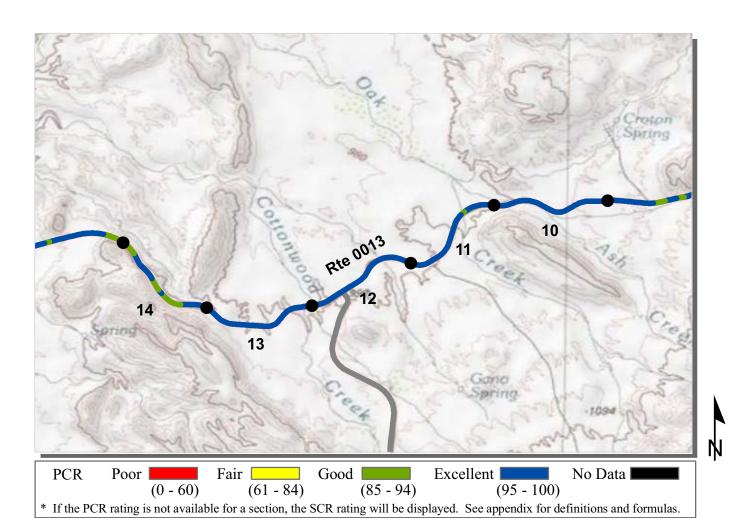


1/14/2012

ROUTE: 0013 WEST ENTRANCE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN DECION

INTERMOUNTAIN REGION	TOTAL	LENGTH:	21.91 Miles		
Section Number	5	6	7	8	9
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	22	22	22	27	22
Lane Width (ft)	10	10	10	10	10
Roadway Condition Information					
SCR (Surface Condition Rating)	95	93	95	96	94
PCR (Pavement Condition Rating)	97	96	97	98	96
Distress Index Values					
Structural Crack Index	100	100	100	100	100
Transverse Cracking Index	95	93	95	96	94
Patching Index	100	100	100	100	100
Rutting Index	100	97	99	99	98
Roughness Condition Index (RCI)	100	100	100	100	100

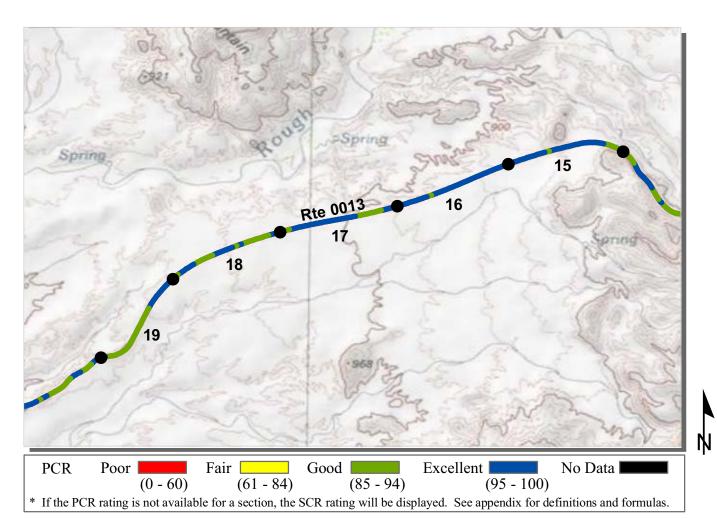


1/14/2012

ROUTE: 0013 WEST ENTRANCE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN RECION

INTERMOUNTAIN REGION			TOTAL LENGTH: 21.91		
Section Number	10	11	12	13	14
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	23	23	25	25	24
Lane Width (ft)	10	10	10	10	10
Roadway Condition Information					
SCR (Surface Condition Rating)	100	100	100	100	95
PCR (Pavement Condition Rating)	100	100	100	100	97
Distress Index Values					
Structural Crack Index	100	100	100	100	100
Transverse Cracking Index	100	100	100	100	95
Patching Index	100	100	100	100	100
Rutting Index	100	100	100	100	99
Roughness Condition Index (RCI)	100	100	100	100	100

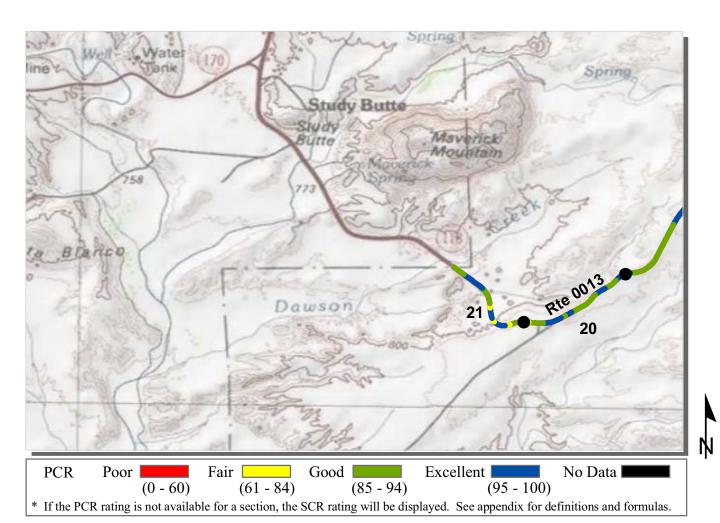


1/14/2012

ROUTE: 0013 WEST ENTRANCE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN DECION

INTERMOUNTAIN REGION	TOTAL	LENGTH:	21.91 Miles		
Section Number	15	16	17	18	19
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	23	23	22	22	24
Lane Width (ft)	10	10	11	10	10
Roadway Condition Information					
SCR (Surface Condition Rating)	97	92	91	90	91
PCR (Pavement Condition Rating)	98	95	95	94	95
Distress Index Values					
Structural Crack Index	100	99	99	100	100
Transverse Cracking Index	97	92	91	90	91
Patching Index	100	100	100	100	100
Rutting Index	99	97	96	99	99
Roughness Condition Index (RCI)	100	100	100	100	100

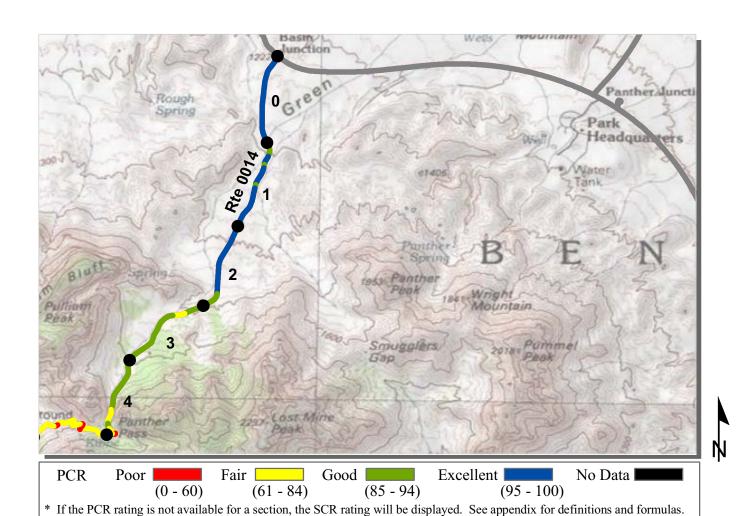


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ROUTE: 0013 WEST ENTRANCE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN DECION

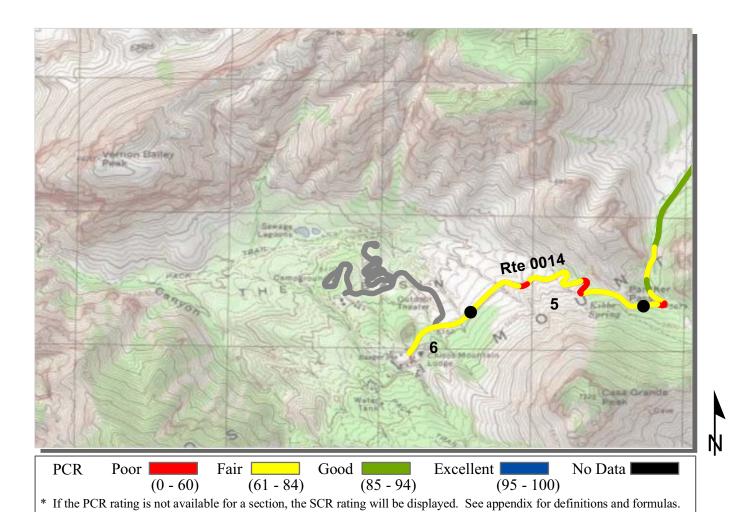
INTERMOUNTAIN REGION				LENGTH:	21.91 Miles
Section Number	20	21			
Section Length (mi)	1.00	0.91			
Cross Section Information					
Number of Lanes	2	2			
Paved Width (ft)	25	25			
Lane Width (ft)	10	10			
Roadway Condition Information					
SCR (Surface Condition Rating)	91	94			
PCR (Pavement Condition Rating)	95	91			
Distress Index Values					
Structural Crack Index	100	97			
Transverse Cracking Index	91	94			
Patching Index	100	100			
Rutting Index	99	98			
Roughness Condition Index (RCI)	100	86			



1/14/2012

ROUTE: 0014 CHISOS BASIN ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION	TOTAL	LENGTH:	6.34 Miles		
Section Number	0	1	2	3	4
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	22	20	20	21	21
Lane Width (ft)	10	9	9	9	9
Roadway Condition Information					
SCR (Surface Condition Rating)	92	92	93	86	77
PCR (Pavement Condition Rating)	95	95	96	92	83
Distress Index Values					
Structural Crack Index	99	98	98	86	77
Transverse Cracking Index	92	92	93	91	93
Patching Index	100	100	100	100	99
Rutting Index	99	100	98	99	98
Roughness Condition Index (RCI)	100	100	100	100	91

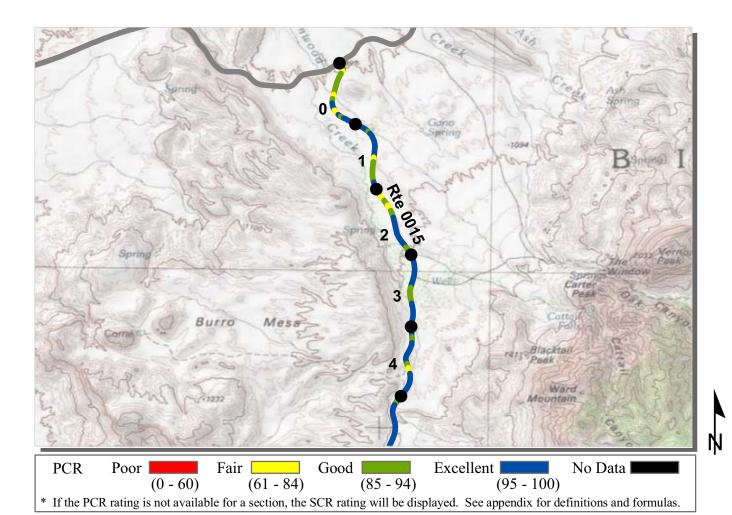


1/14/2012

ROUTE: 0014 CHISOS BASIN ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION

INTERMOUNTAIN REGION	TOTAL LENGTH:	6.34 Miles		
Section Number	5	6		
Section Length (mi)	1.00	0.34		
Cross Section Information				
Number of Lanes	2	2		
Paved Width (ft)	21	21		
Lane Width (ft)	9	9		
Roadway Condition Information				
SCR (Surface Condition Rating)	66	76		
PCR (Pavement Condition Rating)	69	65		
Distress Index Values				
Structural Crack Index	66	76		
Transverse Cracking Index	92	95		
Patching Index	100	100		
Rutting Index	96	94		
Roughness Condition Index (RCI)	73	49		

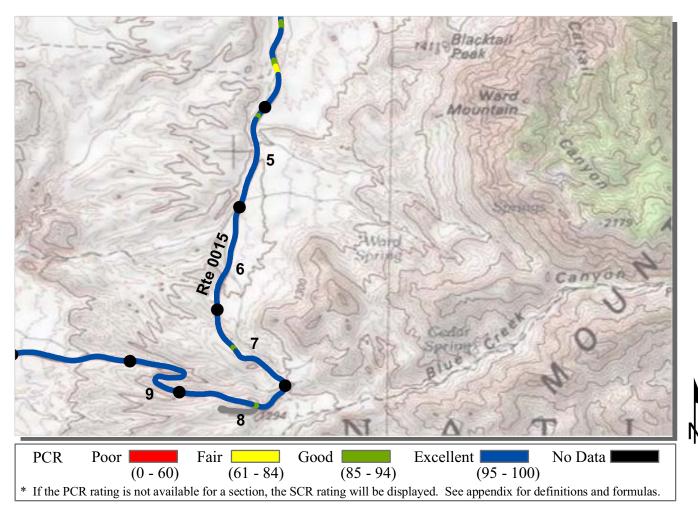


1/14/2012

ROUTE: 0015 ROSS MAXWELL SCENIC DRIVE

BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION	TOTAL LENGTH:		23.25 Miles		
Section Number	0	1	2	3	4
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	23	21	21	21	21
Lane Width (ft)	9	9	9	9	9
Roadway Condition Information					
SCR (Surface Condition Rating)	97	97	98	98	97
PCR (Pavement Condition Rating)	89	93	91	98	97
Distress Index Values					
Structural Crack Index	99	99	100	100	100
Transverse Cracking Index	97	97	98	98	97
Patching Index	100	100	100	100	100
Rutting Index	99	100	100	100	100
Roughness Condition Index (RCI)	77	88	81	99	97



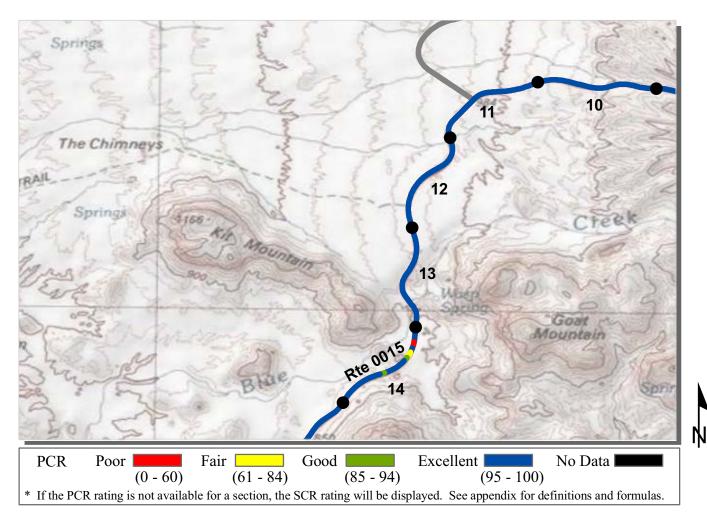
1/14/2012

ROUTE: 0015 ROSS MAXWELL SCENIC DRIVE

BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN DECION

INTERMOUNTAIN REGION	TOTAL	LENGTH:	23.25 Miles		
Section Number	5	6	7	8	9
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	21	22	22	22	24
Lane Width (ft)	9	9	9	9	10
Roadway Condition Information					
SCR (Surface Condition Rating)	99	99	99	100	100
PCR (Pavement Condition Rating)	99	99	99	100	100
Distress Index Values					
Structural Crack Index	100	100	100	100	100
Transverse Cracking Index	99	99	100	100	100
Patching Index	100	100	100	100	100
Rutting Index	100	100	99	100	100
Roughness Condition Index (RCI)	100	100	100	100	100

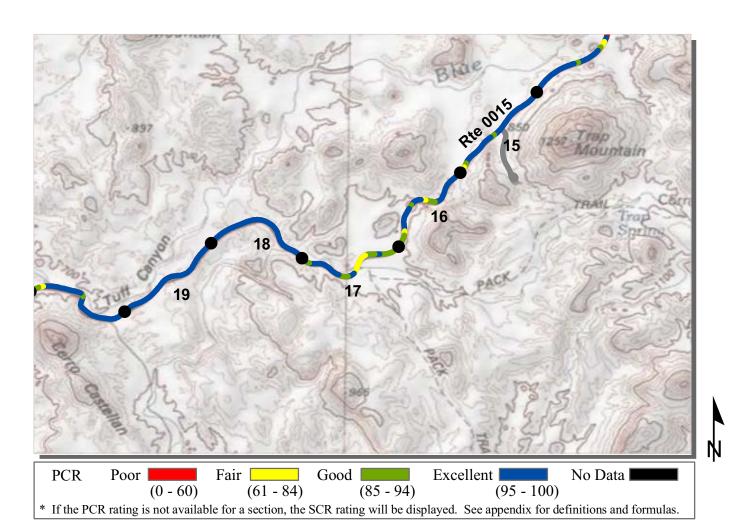


1/14/2012

ROUTE: 0015 ROSS MAXWELL SCENIC DRIVE

BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION	ERMOUNTAIN REGION				
Section Number	10	11	12	13	14
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	21	22	22	22	23
Lane Width (ft)	9	9	9	10	9
Roadway Condition Information					
SCR (Surface Condition Rating)	100	99	99	99	98
PCR (Pavement Condition Rating)	100	99	99	99	96
Distress Index Values					
Structural Crack Index	100	100	100	100	98
Transverse Cracking Index	100	99	99	99	98
Patching Index	100	100	100	100	100
Rutting Index	100	100	100	100	100
Roughness Condition Index (RCI)	100	100	100	100	93



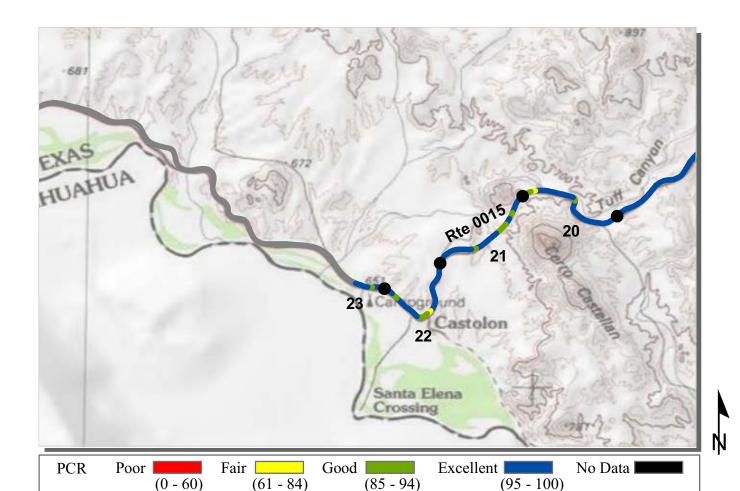
1/14/2012

ROUTE: 0015 ROSS MAXWELL SCENIC DRIVE

BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION

INTERMOUNTAIN REGION	TO	TOTAL LENGTH: 23.25 Mile			
Section Number	15	16	17	18	19
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	23	24	23	22	22
Lane Width (ft)	9	10	9	9	9
Roadway Condition Information					
SCR (Surface Condition Rating)	99	97	92	96	97
PCR (Pavement Condition Rating)	99	95	93	98	98
Distress Index Values					
Structural Crack Index	99	99	97	100	100
Transverse Cracking Index	99	97	92	96	97
Patching Index	100	100	100	100	100
Rutting Index	100	99	98	99	98
Roughness Condition Index (RCI)	100	92	94	100	100



* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

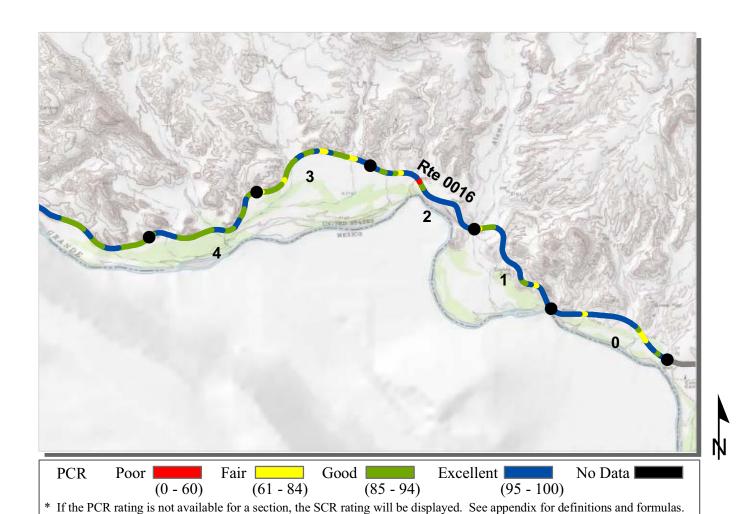
COLLECTED:

1/14/2012

ROUTE: 0015 ROSS MAXWELL SCENIC DRIVE

BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION	TERMOUNTAIN REGION				
Section Number	20	21	22	23	
Section Length (mi)	1.00	1.00	1.00	0.25	
Cross Section Information					
Number of Lanes	2	2	2	2	
Paved Width (ft)	23	23	22	22	
Lane Width (ft)	9	9	9	9	
Roadway Condition Information					
SCR (Surface Condition Rating)	96	95	94	93	
PCR (Pavement Condition Rating)	98	97	96	96	
Distress Index Values					
Structural Crack Index	98	99	97	95	
Transverse Cracking Index	96	95	94	93	
Patching Index	100	100	100	100	
Rutting Index	100	100	100	99	
Roughness Condition Index (RCI)	100	100	100	100	

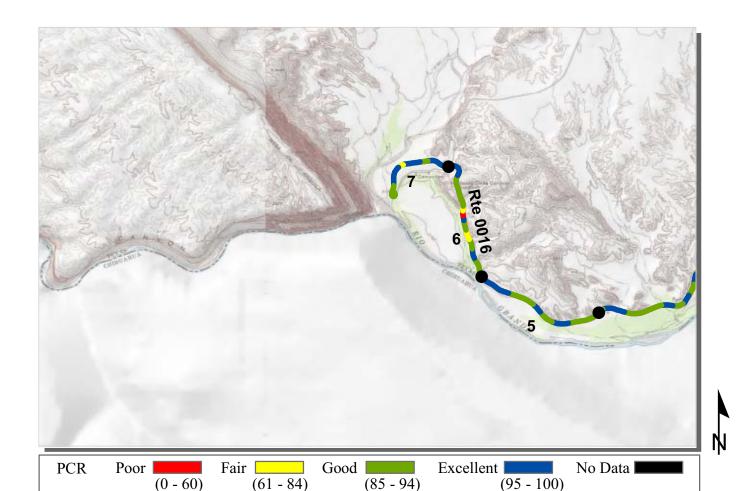


1/14/2012

ROUTE: 0016 SANTA ELENA CANYON ROAD

BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION	TO	TAL LENGTE	I: 7.70 Miles		
Section Number	0	1	2	3	4
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	23	22	23	23	23
Lane Width (ft)	9	9	9	9	9
Roadway Condition Information					
SCR (Surface Condition Rating)	96	98	99	97	97
PCR (Pavement Condition Rating)	94	94	95	90	91
Distress Index Values					
Structural Crack Index	100	100	100	99	100
Transverse Cracking Index	100	100	100	99	100
Patching Index	96	98	99	100	100
Rutting Index	98	99	99	97	97
Roughness Condition Index (RCI)	91	89	90	79	83



* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

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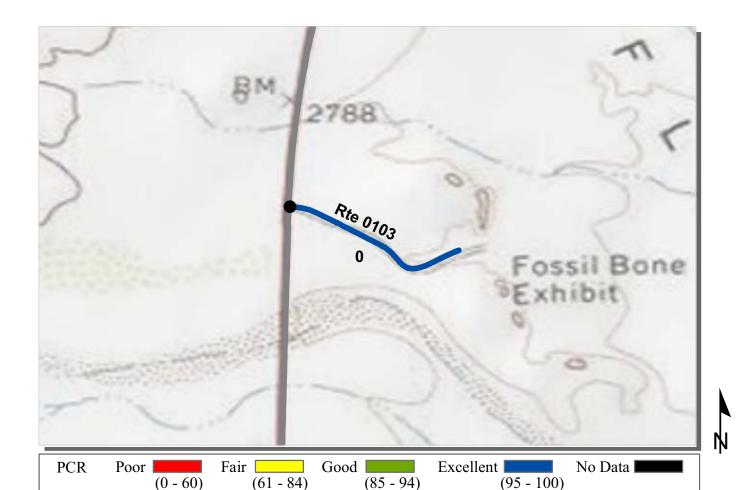
ROUTE: 0016 SANTA ELENA CANYON ROAD

BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION			TOTAL	TOTAL LENGTH:	
Section Number	5	6	7		
Section Length (mi)	1.00	1.00	0.70		
Cross Section Information					
Number of Lanes	2	2	2		
Paved Width (ft)	23	22	24		
Lane Width (ft)	9	9	13		
Roadway Condition Information					
SCR (Surface Condition Rating)	97	97	97		
PCR (Pavement Condition Rating)	93	88	94		
Distress Index Values					
Structural Crack Index	100	100	100		
Transverse Cracking Index	100	100	100		
Patching Index	100	100	100		
Rutting Index	97	97	97		
Roughness Condition Index (RCI)	88	75	90		

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index. See Section 10 for explanation of SCR, PCR, & all Distress Index Values.



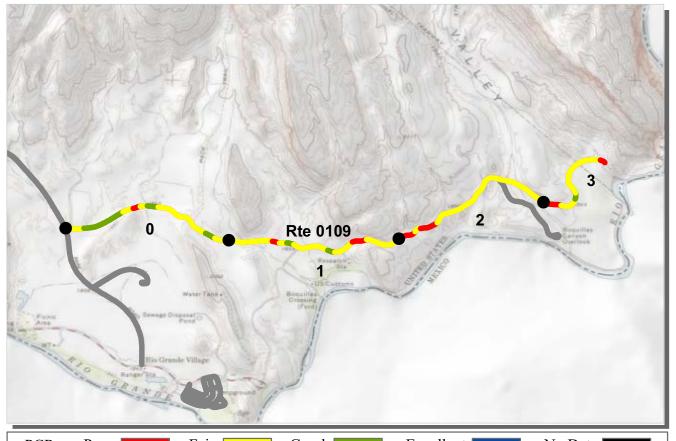
* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

COLLECTED:

1/14/2012

ROUTE: 0103 FOSSIL BONE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION		TOTAL LENGTH:		0.23 Miles	
Section Number	0				
Section Length (mi)	0.23				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	23				
Lane Width (ft)	11				
Roadway Condition Information					
SCR (Surface Condition Rating)	98				
PCR (Pavement Condition Rating)	98				
Distress Index Values					
Structural Crack Index	98				
Transverse Cracking Index	98				
Patching Index	100				
Rutting Index	98				
Roughness Condition Index (RCI)	NC				



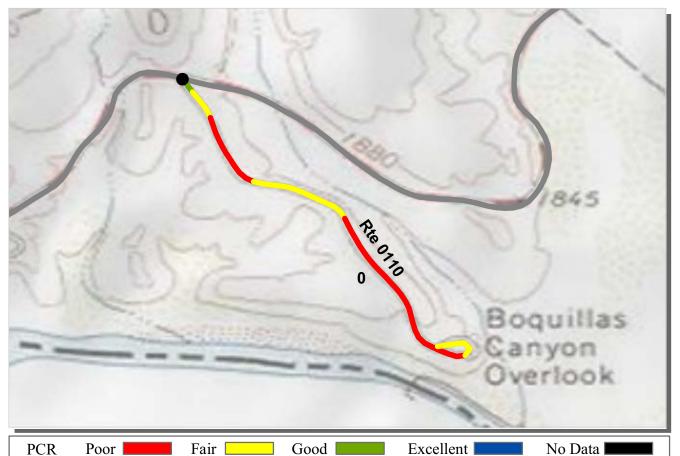
Excellent | Fair [Good | No Data **PCR** Poor | (0 - 60)(61 - 84)(85 - 94)(95 - 100)* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

COLLECTED:

1/14/2012

ROUTE: 0109 BOQUILLAS CANYON ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION	TOTAL	LENGTH:	3.61 Miles		
Section Number	0	1	2	3	
Section Length (mi)	1.00	1.00	1.00	0.61	
Cross Section Information					
Number of Lanes	2	2	2	2	
Paved Width (ft)	19	19	19	19	
Lane Width (ft)	9	9	9	9	
Roadway Condition Information					
SCR (Surface Condition Rating)	93	85	84	89	
PCR (Pavement Condition Rating)	81	70	65	77	
Distress Index Values					
Structural Crack Index	96	99	100	99	
Transverse Cracking Index	93	99	99	95	
Patching Index	100	100	100	100	
Rutting Index	96	85	84	89	
Roughness Condition Index (RCI)	62	47	37	58	



* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

COLLECTED:

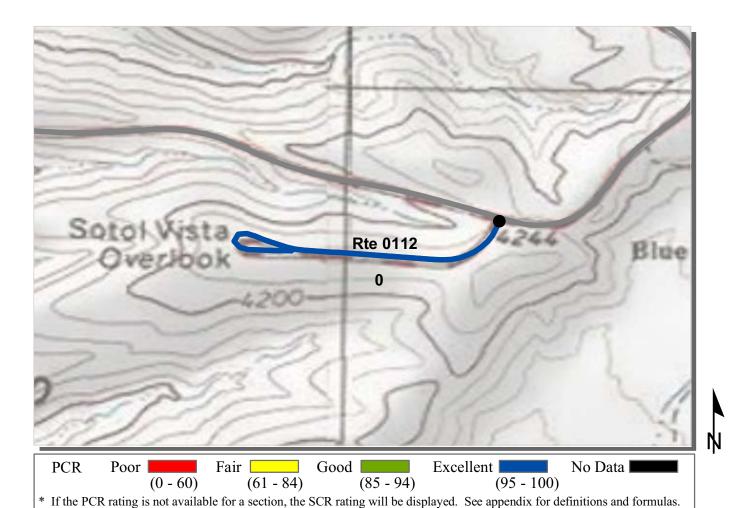
1/14/2012

ROUTE: 0110 BOQUILLAS CANYON OVERLOOK

BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION

INTERMOUNTAIN REGION		TOTAL	TOTAL LENGTH:		
Section Number	0				
Section Length (mi)	0.57				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	18				
Lane Width (ft)	10				
Roadway Condition Information					
SCR (Surface Condition Rating)	46				
PCR (Pavement Condition Rating)	44				
Distress Index Values					
Structural Crack Index	46				
Transverse Cracking Index	98				
Patching Index	100				
Rutting Index	81				
Roughness Condition Index (RCI)	42				

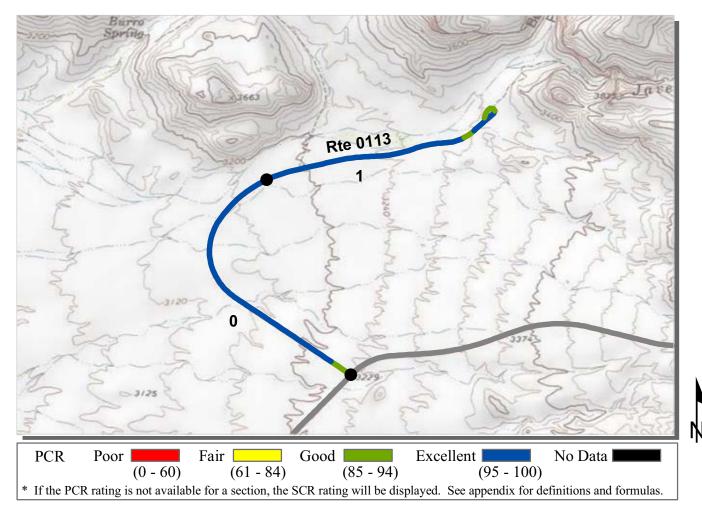


ROUTE: 0112 SOTOL VISTA OVERLOOK ROAD

BIBE: BIG BEND NATIONAL PARK

COLLECTED: 1/15/2012 INTERMOUNTAIN REGION TOTAL LENGTH: 0.41 Miles

Section Number	0		
Section Length (mi)	0.41		
Cross Section Information			
Number of Lanes	2		
Paved Width (ft)	20		
Lane Width (ft)	10		
Roadway Condition Information			
SCR (Surface Condition Rating)	99		
PCR (Pavement Condition Rating)	99		
Distress Index Values			
Structural Crack Index	100		
Transverse Cracking Index	100		
Patching Index	100		
Rutting Index	99		
Roughness Condition Index (RCI)	NC		



COLLECTED:

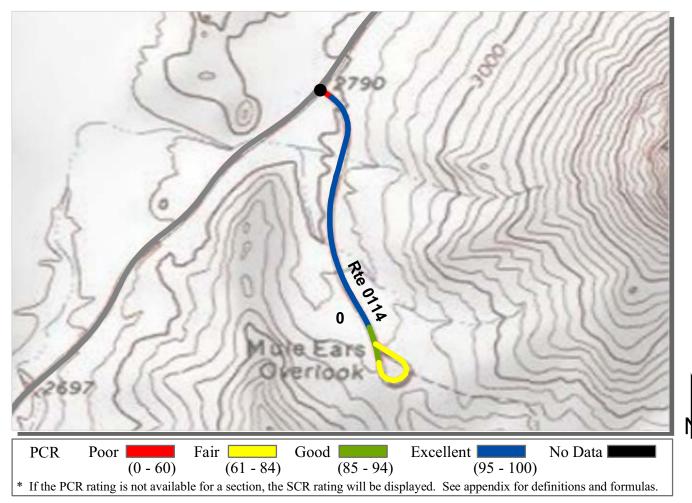
1/15/2012

ROUTE: 0113 BURRO MESA POUROFF ROAD

BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION

INTERMOUNTAIN REGION	TOTAL LENGTH:	1.86 Miles		
Section Number	0	1		
Section Length (mi)	1.00	0.86		
Cross Section Information				
Number of Lanes	2	2		
Paved Width (ft)	23	22		
Lane Width (ft)	11	12		
Roadway Condition Information				
SCR (Surface Condition Rating)	94	94		
PCR (Pavement Condition Rating)	96	96		
Distress Index Values				
Structural Crack Index	100	100		
Transverse Cracking Index	94	94		
Patching Index	100	100		
Rutting Index	98	99		
Roughness Condition Index (RCI)	100	100		



COLLECTED:

1/15/2012

ROUTE: 0114 MULE EARS OVERLOOK ROAD

BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION

INTERMOUNTAIN REGION		TOTAL	LENGTH:	0.61 Miles
Section Number	0			
Section Length (mi)	0.61			
Cross Section Information				
Number of Lanes	2			
Paved Width (ft)	22			
Lane Width (ft)	14			
Roadway Condition Information				
SCR (Surface Condition Rating)	94			
PCR (Pavement Condition Rating)	90			
Distress Index Values				
Structural Crack Index	97			
Transverse Cracking Index	94			
Patching Index	100			
Rutting Index	99			
Roughness Condition Index (RCI)	84			



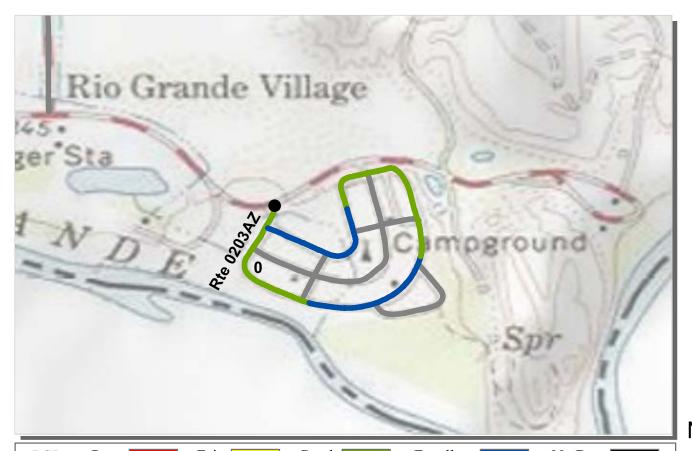
(85 - 94)(95 - 100)(0 - 60)(61 - 84)* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0203ZZ RIO GRANDE VILLAGE CAMPGROUND

BIBE: BIG BEND NATIONAL PARK

COLLECTED: 1/14/2012 **Summary Record** INTERMOUNTAIN REGION **TOTAL LENGTH: 1.30 Miles**

ITTERMOONTHIN REGION		101711	LENGIII.	1.50 111105
Section Number				
Section Length (mi)				
Cross Section Information				
Number of Lanes	N/A			
Paved Width (ft)	N/A			
Lane Width (ft)	N/A			
Roadway Condition Information				
SCR (Surface Condition Rating)	92			
PCR (Pavement Condition Rating)	92			
Distress Index Values				
Structural Crack Index	N/A			
Transverse Cracking Index	N/A			
Patching Index	N/A			
Rutting Index	N/A			
Roughness Condition Index (RCI)	N/A			



PCR Poor Fair Good Excellent No Data (0 - 60) (61 - 84) (85 - 94) (95 - 100)

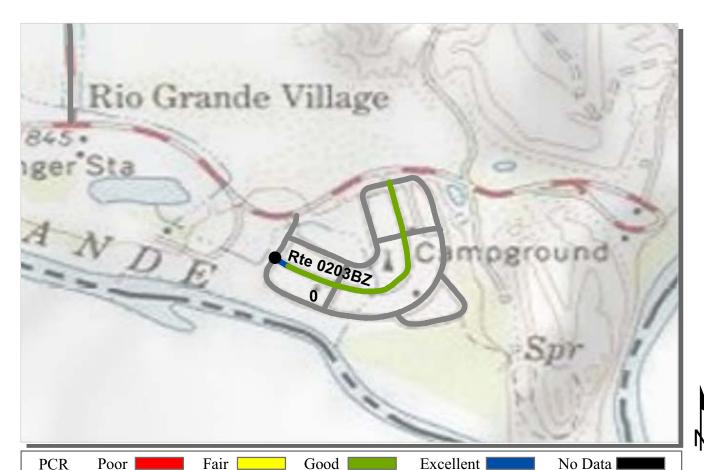
* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0203AZ RIO GRANDE VILLAGE CAMPGROUND LOOP A

BIBE: BIG BEND NATIONAL PARK

Subcomponent Record COLLECTED: 1/14/2012
INTERMOUNTAIN REGION TOTAL LENGTH: 0.73 Miles

INTERMOUNTAIN REGION		IOIAL	LENGIII.	0.75 Willes
Section Number	0			
Section Length (mi)	0.73			
Cross Section Information				
Number of Lanes	2			
Paved Width (ft)	16			
Lane Width (ft)	8			
Roadway Condition Information				
SCR (Surface Condition Rating)	93			
PCR (Pavement Condition Rating)	93			
Distress Index Values				
Structural Crack Index	100			
Transverse Cracking Index	100			
Patching Index	100			
Rutting Index	93			
Roughness Condition Index (RCI)	NC			



(0 - 60) (61 - 84) (85 - 94) (95 - 100)

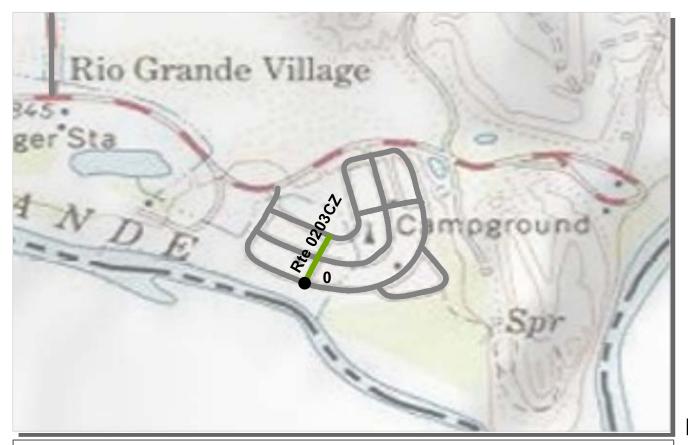
* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0203BZ RIO GRANDE VILLAGE CAMPGROUND LOOP B

BIBE: BIG BEND NATIONAL PARK

Subcomponent Record COLLECTED: 1/14/2012
INTERMOUNTAIN REGION TOTAL LENGTH: 0.29 Miles

INTERMOUNTAIN REGION		IOIAL	LENGIII.	0.29 Willes
Section Number	0			
Section Length (mi)	0.29			
Cross Section Information				
Number of Lanes	2			
Paved Width (ft)	15			
Lane Width (ft)	8			
Roadway Condition Information				
SCR (Surface Condition Rating)	91			
PCR (Pavement Condition Rating)	91			
Distress Index Values				
Structural Crack Index	100			
Transverse Cracking Index	100			
Patching Index	100			
Rutting Index	91			
Roughness Condition Index (RCI)	NC			





ROUTE: 0203CZ RIO GRANDE VILLAGE CAMPGROUND LOOP C

BIBE: BIG BEND NATIONAL PARK

Subcomponent Record COLLECTED: 1/14/2012
INTERMOUNTAIN REGION TOTAL LENGTH: 0.07 Miles

INTERMOUNTAIN REGION		IOIAL	LENGIII.	0.07 Miles
Section Number	0			
Section Length (mi)	0.07			
Cross Section Information				
Number of Lanes	1			
Paved Width (ft)	13			
Lane Width (ft)	13			
Roadway Condition Information				
SCR (Surface Condition Rating)	91			
PCR (Pavement Condition Rating)	91			
Distress Index Values				
Structural Crack Index	100			
Transverse Cracking Index	100			
Patching Index	100			
Rutting Index	91			
Roughness Condition Index (RCI)	NC			



PCR Poor Fair Good Excellent No Data (0 - 60) (61 - 84) (85 - 94) (95 - 100)

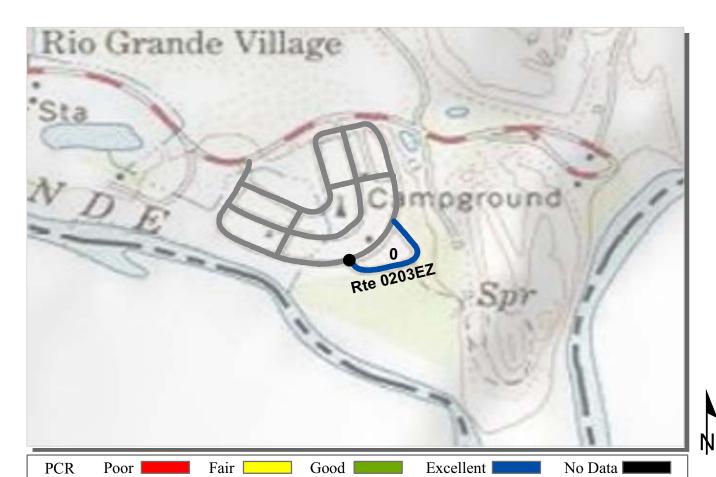
* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0203DZ RIO GRANDE VILLAGE CAMPGROUND LOOP D

BIBE: BIG BEND NATIONAL PARK

Subcomponent Record COLLECTED: 1/14/2012
INTERMOUNTAIN REGION TOTAL LENGTH: 0.08 Miles

INTERMOUNTAIN REGION		IOIAL	LENGIII.	0.00 Miles
Section Number	0			
Section Length (mi)	0.08			
Cross Section Information				
Number of Lanes	1			
Paved Width (ft)	12			
Lane Width (ft)	12			
Roadway Condition Information				
SCR (Surface Condition Rating)	81			
PCR (Pavement Condition Rating)	81			
Distress Index Values				
Structural Crack Index	100			
Transverse Cracking Index	100			
Patching Index	100			
Rutting Index	81			
Roughness Condition Index (RCI)	NC			



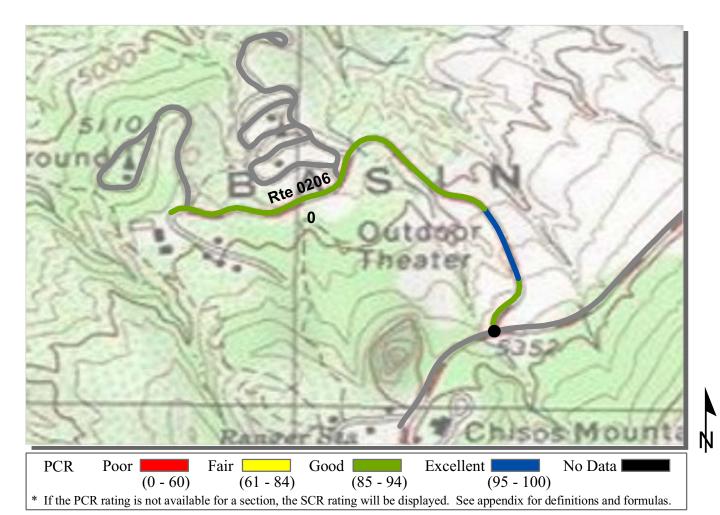
 $(0-60) \qquad (61-84) \qquad (85-94) \qquad (95-100)$ * If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

ROUTE: 0203EZ RIO GRANDE VILLAGE CAMPGROUND LOOP E

BIBE: BIG BEND NATIONAL PARK

Subcomponent Record COLLECTED: 1/14/2012
INTERMOUNTAIN REGION TOTAL LENGTH: 0.14 Miles

INTERMOUNTAIN REGION		IOIAL	LENGIII.	U.17 MINES
Section Number	0			
Section Length (mi)	0.14			
Cross Section Information				
Number of Lanes	1			
Paved Width (ft)	13			
Lane Width (ft)	13			
Roadway Condition Information				
SCR (Surface Condition Rating)	97			
PCR (Pavement Condition Rating)	97			
Distress Index Values				
Structural Crack Index	100			
Transverse Cracking Index	100			
Patching Index	100			
Rutting Index	97			
Roughness Condition Index (RCI)	NC			



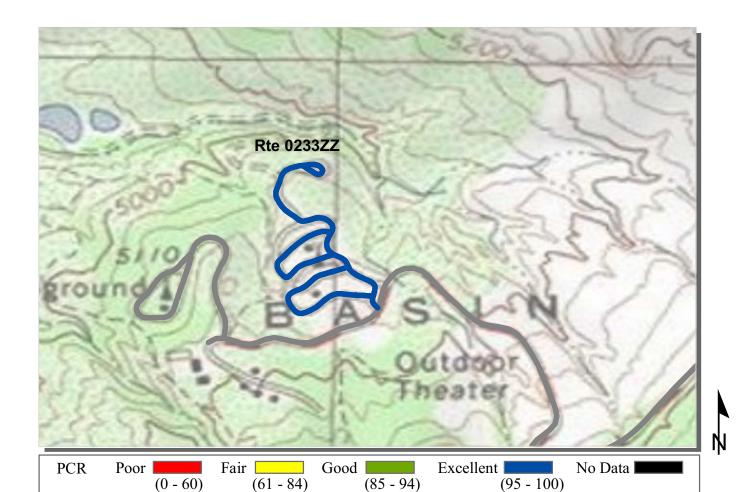
COLLECTED:

1/14/2012

ROUTE: 0206 LOWER BASIN CAMPGROUND ROAD

BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION		TOTAL	LENGTH:	0.63 Miles
Section Number	0			
Section Length (mi)	0.63			
Cross Section Information				
Number of Lanes	2			
Paved Width (ft)	21			
Lane Width (ft)	9			
Roadway Condition Information				
SCR (Surface Condition Rating)	94			
PCR (Pavement Condition Rating)	94			
Distress Index Values				
Structural Crack Index	96			
Transverse Cracking Index	94			
Patching Index	100			
Rutting Index	98			
Roughness Condition Index (RCI)	NC			



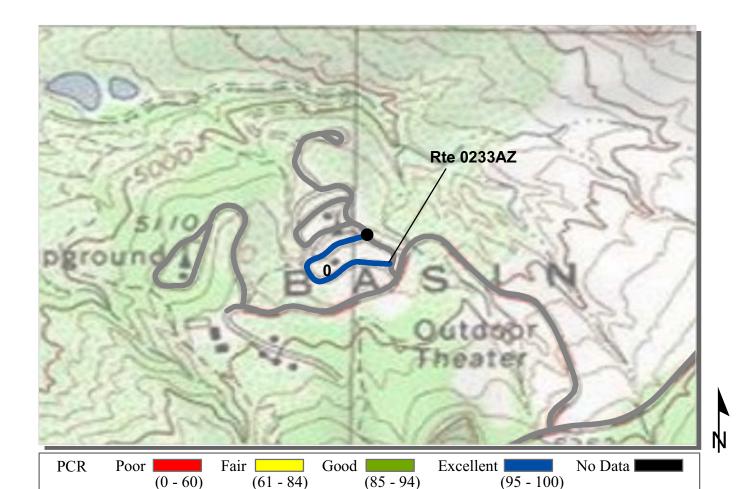
ROUTE: 0233ZZ BASIN CAMPGROUND LOOPS

BIBE: BIG BEND NATIONAL PARK

Summary Record COLLECTED: 1/14/2012
INTERMOUNTAIN REGION TOTAL LENGTH: 0.70 Miles

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

INTERMOUNTAIN REGION	TOTAL LENGTH:			0.70 Miles	
Section Number					
Section Length (mi)					
Cross Section Information					
Number of Lanes	N/A				
Paved Width (ft)	N/A				
Lane Width (ft)	N/A				
Roadway Condition Information					
SCR (Surface Condition Rating)	99				
PCR (Pavement Condition Rating)	99				
Distress Index Values					
Structural Crack Index	N/A				
Transverse Cracking Index	N/A				
Patching Index	N/A				
Rutting Index	N/A				
Roughness Condition Index (RCI)	N/A				



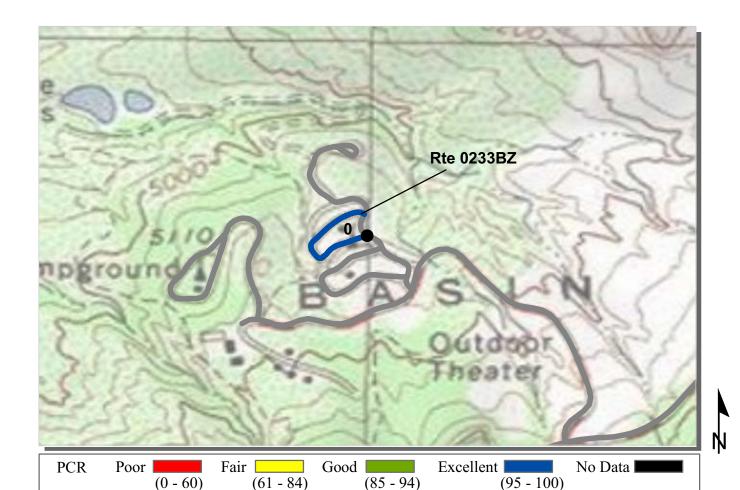
ROUTE: 0233AZ BASIN CAMPGROUND LOOP A

BIBE: BIG BEND NATIONAL PARK

Subcomponent Record COLLECTED: 1/14/2012
INTERMOUNTAIN REGION TOTAL LENGTH: 0.20 Miles

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

INTERMOUNTAIN REGION		IOIAL	LENGIII.	0.20 Miles
Section Number	0			
Section Length (mi)	0.20			
Cross Section Information				
Number of Lanes	1			
Paved Width (ft)	19			
Lane Width (ft)	19			
Roadway Condition Information				
SCR (Surface Condition Rating)	99			
PCR (Pavement Condition Rating)	99			
Distress Index Values				
Structural Crack Index	100			
Transverse Cracking Index	100			
Patching Index	100			
Rutting Index	99			
Roughness Condition Index (RCI)	NC			



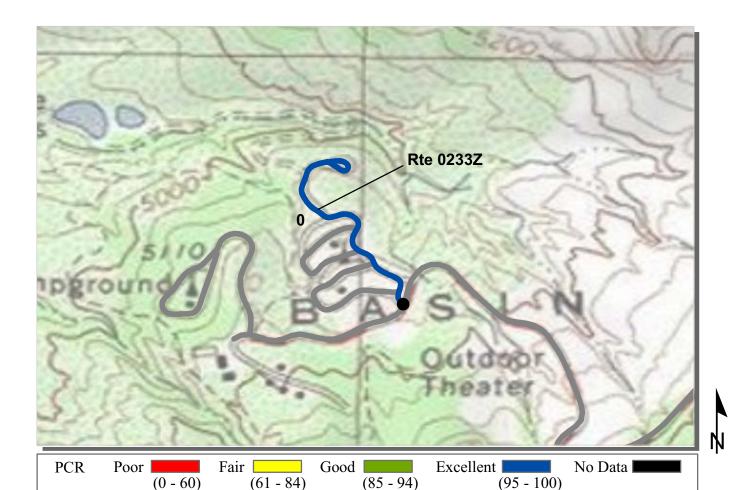
ROUTE: 0233BZ BASIN CAMPGROUND LOOP B

BIBE: BIG BEND NATIONAL PARK

Subcomponent Record COLLECTED: 1/14/2012
INTERMOUNTAIN REGION TOTAL LENGTH: 0.17 Miles

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

IIII ERMOOTI IIIII REGIOTI		101711	LENGIII.	U.I / IVIIICS
Section Number	0			
Section Length (mi)	0.17			
Cross Section Information				
Number of Lanes	1			
Paved Width (ft)	17			
Lane Width (ft)	17			
Roadway Condition Information				
SCR (Surface Condition Rating)	99			
PCR (Pavement Condition Rating)	99			
Distress Index Values				
Structural Crack Index	100			
Transverse Cracking Index	100			
Patching Index	100			
Rutting Index	99			
Roughness Condition Index (RCI)	NC			



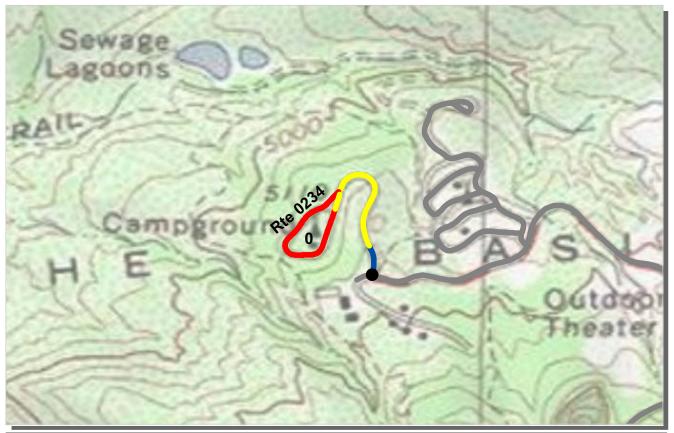
ROUTE: 0233Z BASIN CAMPGROUND MAIN LOOP

BIBE: BIG BEND NATIONAL PARK

Subcomponent Record COLLECTED: 1/14/2012
INTERMOUNTAIN REGION TOTAL LENGTH: 0.34 Miles

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

IIII ERMOONITHIII REGION		101711	LENGTH.	0.54 1/11105
Section Number	0			
Section Length (mi)	0.34			
Cross Section Information				
Number of Lanes	2			
Paved Width (ft)	19			
Lane Width (ft)	10			
Roadway Condition Information				
SCR (Surface Condition Rating)	99			
PCR (Pavement Condition Rating)	99			
Distress Index Values				
Structural Crack Index	100			
Transverse Cracking Index	100			
Patching Index	100			
Rutting Index	99			
Roughness Condition Index (RCI)	NC			





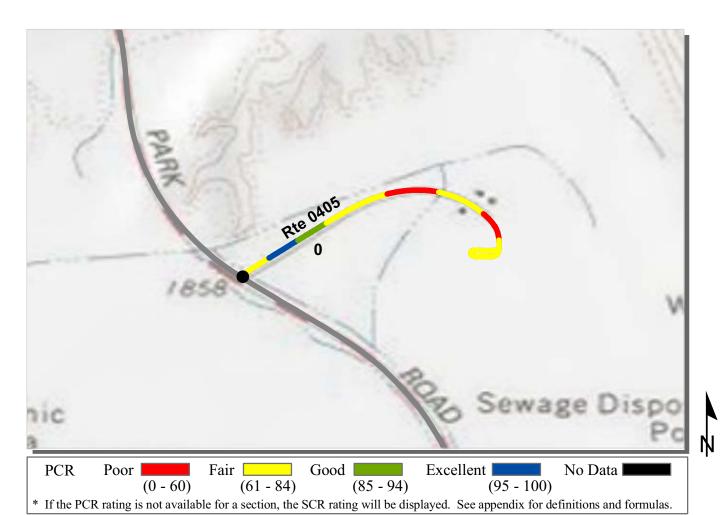
COLLECTED:

1/14/2012

ROUTE: 0234 BASIN GROUP CAMPGROUND

BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION		TOTAL	LENGTH:	0.40 Miles
Section Number	0			
Section Length (mi)	0.40			
Cross Section Information				
Number of Lanes	2			
Paved Width (ft)	19			
Lane Width (ft)	12			
Roadway Condition Information				
SCR (Surface Condition Rating)	66			
PCR (Pavement Condition Rating)	66			
Distress Index Values				
Structural Crack Index	66			
Transverse Cracking Index	72			
Patching Index	100			
Rutting Index	99			
Roughness Condition Index (RCI)	NC			



COLLECTED:

1/14/2012

ROUTE: 0405 HUISACHE ROAD BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION

INTERMOUNTAIN REGION	TOTAL LENGTH			LENGTH:	0.45 Miles
Section Number	0				
Section Length (mi)	0.45				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	17				
Lane Width (ft)	9				
Roadway Condition Information					
SCR (Surface Condition Rating)	70				
PCR (Pavement Condition Rating)	70				
Distress Index Values					
Structural Crack Index	70				
Transverse Cracking Index	89				
Patching Index	99				
Rutting Index	98				
Roughness Condition Index (RCI)	NC				



PCR Poor Fair Good Excellent No Data (0 - 60) (61 - 84) (85 - 94) (95 - 100)

* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

COLLECTED:

1/14/2012

ROUTE: 0444 PJ SEWAGE TREATMENT PLANT ROAD

BIBE: BIG BEND NATIONAL PARK

INTERMOUNTAIN REGION

INTERMOUNTAIN REGION		TOTAL	LENGTH:	0.12 Miles
Section Number	0			
Section Length (mi)	0.12			
Cross Section Information				
Number of Lanes	1			
Paved Width (ft)	14			
Lane Width (ft)	14			
Roadway Condition Information				
SCR (Surface Condition Rating)	87			
PCR (Pavement Condition Rating)	87			
Distress Index Values				
Structural Crack Index	94			
Transverse Cracking Index	99			
Patching Index	100			
Rutting Index	87			
Roughness Condition Index (RCI)	NC			

Section 6 Manually Rated Paved Route Condition Rating Sheets



Big Bend National Park



MANUALLY RATED ROUTE CONDITION RATING SHEETS

This park is classified as a Large Park. Therefore, in Cycle 5, no manually rated routes were collected unless the route was modified or previously uncollected by RIP.

Section 7 Parking Area Condition Rating Sheets



Big Bend National Park



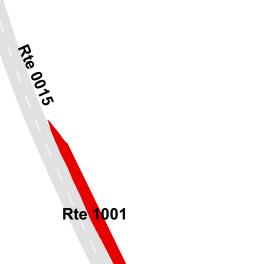
CHISOS MOUNTAIN INTERPRETIVE PULLOFF ADJACENT TO ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 2.0

Route	Public /				
Number	NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
1001	PUBLIC	1/13/2012	4,379	0.08	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
			NO CURB AND		
0	0	0	GUTTER	NO CURB	GOOD/90

^{*} Lane miles are based on 11' lane widths











SAM NAIL INTERPRETIVE PULLOFF ADJACENT TO ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 3.0

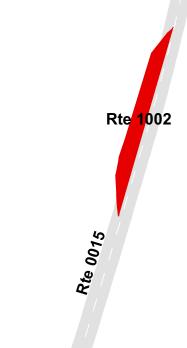
Route	Public /				
Number	NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
1002	PUBLIC	1/13/2012	3,317	0.06	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
			NO CURB AND		
0	0	0	GUTTER	NO CURB	GOOD/90

^{*} Lane miles are based on 11' lane widths









FINS OF FIRE INTERPRETIVE PULLOFF ADJACENT TO ROUTE 0015 (ROSS MAXWELL SCENIC DRIVE) AT MP 4.14

Route	Public /				
Number	NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
1003	PUBLIC	1/13/2012	3,635	0.06	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
			NO CURB AND		
0	0	0	GUTTER	NO CURB	EXCELLENT/97

^{*} Lane miles are based on 11' lane widths









INVISIBLE WILDLIFE INTERPRETIVE PULLOFF ADJACENT TO ROUTE 0013 (WEST ENTRANCE ROAD) AT MP 6.47

Route	Public /				
Number	NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
1005	PUBLIC	1/13/2012	2,589	0.05	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
			NO CURB AND		
0	0	0	GUTTER	NO CURB	EXCELLENT/97

^{*} Lane miles are based on 11' lane widths







150

Rte 0013



Rte 1005

VERTICAL SCENERY PULLOFF

ADJACENT TO ROUTE 0013 (WEST ENTRANCE ROAD) AT MP 19.32

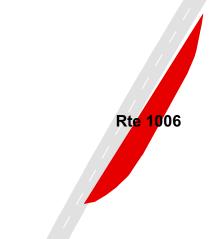
Route	Public /				
Number	NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
1006	PUBLIC	1/13/2012	2,643	0.05	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
			CONCRETE CURB		
0	0	0	AND GUTTER	NO CURB	EXCELLENT/97

^{*} Lane miles are based on 11' lane widths









Ate 0013

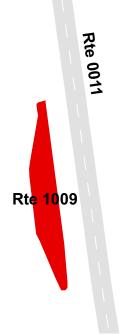
FLASH FLOOD INTERPRETIVE PULLOFF ADJACENT TO ROUTE 0011 (NORTH ENTRANCE ROAD) AT MP 21.0

Route	Public /				
Number	NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
1009	PUBLIC	1/14/2012	1,097	0.02	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
			CONCRETE CURB		
0	0	0	AND GUTTER	NO CURB	FAIR/73

^{*} Lane miles are based on 11' lane widths







100

50



BEAR & MOUNTAIN LION COUNTRY INTERPRETIVE PULLOFF ADJACENT TO ROUTE 0014 (CHISOS BASIN ROAD) AT MP 2.2

Route	Public /				
Number	NonPublic	Date Visited	ate Visited Area (sq ft)		Surface Type
1013	PUBLIC	1/13/2012	2,128	0.04	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
			CONCRETE CURB		
0	0	0	AND GUTTER	NO CURB	GOOD/90

^{*} Lane miles are based on 11' lane widths









A. 60074

TREE ZONE INTERPRETIVE PULLOFF ADJACENT TO ROUTE 0014 (CHISOS BASIN ROAD) AT MP 4.25

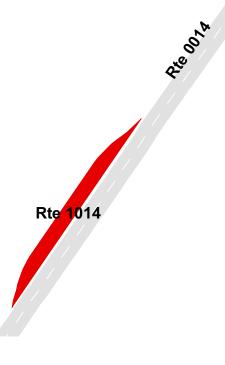
Route	Public /					
Number	NonPublic	Date Visited	Pate Visited Area (sq ft)		Surface Type	
1014	PUBLIC	1/13/2012	2,464	0.04	AS	
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR	
			CONCRETE CURB			
0	0	0	AND GUTTER	NO CURB	GOOD/90	

^{*} Lane miles are based on 11' lane widths









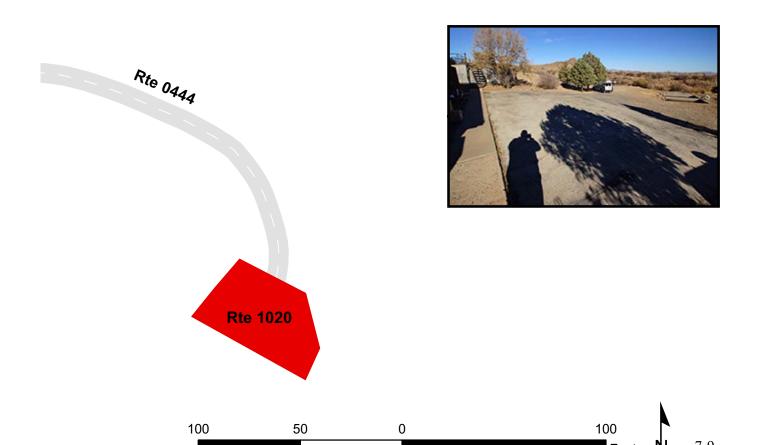
PJ SEWAGE TREATMENT PLANT PARKING FROM ROUTE 0444 (PJ SEWAGE TREATMENT PLANT ROAD) TO PARKING

Route	Public /				
Number	NonPublic	Date Visited Area (sq ft)		Lane Miles *	Surface Type
1020	NONPUBLIC	1/13/2012	1,745	0.03	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
			NO CURB AND		
0	0	0	GUTTER	NO CURB	POOR/45

^{*} Lane miles are based on 11' lane widths







BASIN GROUP CAMPSITE PARKING ADJACENT TO ROUTE 0234 (BASIN GROUP CAMGROUND)

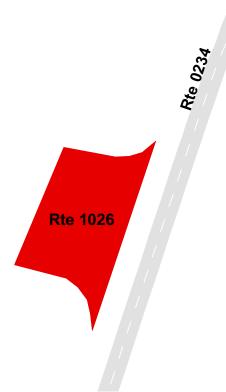
Route	Public /				
Number	NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
1026	PUBLIC	1/14/2012	1,194	0.02	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
			NO CURB AND		
0	0	0	GUTTER	NO CURB	FAIR/73

^{*} Lane miles are based on 11' lane widths









Section 8 Route Maintenance Features Summaries



Big Bend National Park



BIBE: DCV ROUTE MAINTENANCE FEATURES SUMMARY

Notice: Culverts and drop inlets were NOT marked by NPS in Cycle 5 along new or re-aligned DCV driven routes.

FEATURE	ROUTE 0103 FOSSIL BONE ROAD	ROUTE 0203ZZ RIO GRANDE VILLAGE CAMPGROUND	ROUTE 0233ZZ BASIN CAMPGROUND LOOPS	ROUTE 0234 BASIN GROUP CAMPGROUND	ROUTE 0405 HUISACHE ROAD	ROUTE 0444 PJ SEWAGE TREATMENT PLANT ROAD	UNIT
BRIDGE	0	0	0	0	0	0	EACH
CATTLE GUARD	0	0	0	0	0	0	EACH
CULVERT	0	0	0	0	0	0	EACH
CURB	37	0	396	0	0	0	LINEAR FEET
DROP INLET	0	0	0	0	0	0	EACH
GATE	0	0	0	0	0	1	EACH
GUARD/GUIDE RAIL	0	0	0	0	0	0	LINEAR FEET
CABLE	0	0	0	0	0	0	LINEAR FEET
NON-CABLE	0	0	0	0	0	0	LINEAR FEET
GUARD/GUIDE WALL	116	329	47	0	0	0	LINEAR FEET
BOLLARD	116	329	47	0	0	0	LINEAR FEET
TEMPORARY BARRIER	0	0	0	0	0	0	LINEAR FEET
NON TEMP/BOLLARD	0	0	0	0	0	0	LINEAR FEET
INTERSECTION	3	39	18	7	7	3	EACH
LOW WATER CROSSING	0	0	0	0	0	0	EACH
LOW WATER CROSSING	0	0	0	0	0	0	LINEAR FEET
MILE MARKER	0	0	0	0	0	0	EACH
OVERPASS	0	0	0	0	0	0	EACH
PARK BOUNDARY	0	0	0	0	0	0	EACH
PAVED DITCH	0	0	0	0	0	0	LINEAR FEET
PULLOUT	0	1	2	0	0	0	EACH
PULLOUT	0	53	164	0	0	0	LINEAR FEET
RAILROAD CROSSING	0	0	0	0	0	0	EACH
RETAINING WALL	0	0	0	0	0	0	EACH
RETAINING WALL	0	0	0	0	0	0	LINEAR FEET
SIGN	1	17	31	3	5	4	EACH
STATE BOUNDARY	0	0	0	0	0	0	EACH
TRAFFIC LIGHT	0	0	0	0	0	0	EACH
TUNNEL	0	0	0	0	0	0	EACH
TUNNEL	0	0	0	0	0	0	LINEAR FEET

STRUCTURE LIST

This park is classified as a large park. Therefore, in Cycle 5, BIP-Structures were inventoried only if they were located along routes that were modified or previously uncollected by RIP, so this report does not provide an all-inclusive listing of all BIP-Structures in the park.

Data Collected 01/2012

Section 9 Route Maintenance Features Road Logs



Big Bend National Park



ROUTE 0103: FOSSIL BONE ROAD

<u>Notice:</u> Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 5 on any new or re-aligned DCV driven routes. Therefore no culverts or drop inlets are reported in Section 9, unless a culvert has a BIP structure number attached to it.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0011 (NORTH ENTRANCE ROAD) AT MP 8.09
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0011 (NORTH ENTRANCE ROAD)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0011 (NORTH ENTRANCE ROAD)
0.004	0.004	SIGN	LEFT	REGULATORY, STOP
0.124	0.132	GUARD/GUIDE WALL	LEFT	N/A
0.151	0.165	GUARD/GUIDE WALL	RIGHT	N/A
0.218	0.225	CURB-AND-GUTTER	RIGHT	N/A
0.225	0.225	INTERSECTION	N/A	ROUTE 1015 (FOSSIL BONE PARKING)
0.225	0.225	ROUTE END	N/A	TO ROUTE 1015 (FOSSIL BONE PARKING)

ROUTE 0203AZ: RIO GRANDE VILLAGE CAMPGROUND LOOP A

Notice: Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 5 on any new or re-aligned DCV driven routes. Therefore no culverts or drop inlets are reported in Section 9, unless a culvert has a BIP structure number attached to it.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0201 (RIO GRANDE VILLAGE ROAD)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0201 (RIO GRANDE VILLAGE ROAD)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0201 (RIO GRANDE VILLAGE ROAD)
0.000	0.017	GUARD/GUIDE WALL	LEFT	N/A
0.005	0.015	PULLOUT	LEFT	N/A
0.020	0.020	INTERSECTION	LEFT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.022	0.022	SIGN	RIGHT	GUIDE, DURING IRRIGATION LOW AREAS SUBJECT TO FLOODING
0.022	0.022	SIGN	RIGHT	WARNING, GRAPHIC SIGN NO TEXT
0.024	0.024	SIGN	LEFT	REGULATORY, SPEED LIMIT 15
0.030	0.030	INTERSECTION	LEFT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.050	0.050	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.063	0.063	INTERSECTION	LEFT	ROUTE 0203BZ (RIO GRANDE VILLAGE CAMPGROUND LOOP B)
0.064	0.066	GUARD/GUIDE WALL	LEFT	N/A
0.071	0.071	SIGN	LEFT	WARNING, GRAPHIC SIGN NO TEXT
0.077	0.077	SIGN	RIGHT	REGULATORY, GRAPHIC SIGN NO TEXT
0.077	0.077	SIGN	RIGHT	REGULATORY, GRAPHIC SIGN NO TEXT
0.158	0.158	SIGN	LEFT	GUIDE, CAMPGROUND HOST
0.169	0.169	INTERSECTION	LEFT	ROUTE 0203CZ (RIO GRANDE VILLAGE CAMPGROUND LOOP C)
0.177	0.177	SIGN	RIGHT	GUIDE, GRAPHIC SIGN NO TEXT
0.244	0.254	GUARD/GUIDE WALL	RIGHT	N/A
0.258	0.258	INTERSECTION	RIGHT	ROUTE 0203EZ (RIO GRANDE VILLAGE CAMPGROUND LOOP E)
0.258	0.258	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.281	0.284	GUARD/GUIDE WALL	RIGHT	N/A
0.304	0.316	GUARD/GUIDE WALL	RIGHT	N/A
0.330	0.330	INTERSECTION	RIGHT	ROUTE 0203EZ (RIO GRANDE VILLAGE CAMPGROUND LOOP E)
0.332	0.332	SIGN	LEFT	GUIDE, GRAPHIC SIGN NO TEXT
0.333	0.333	SIGN	RIGHT	GUIDE, NO GENERATOR ZONE
0.390	0.390	INTERSECTION	LEFT	ROUTE 0203DZ (RIO GRANDE VILLAGE CAMPGROUND LOOP D)
0.494	0.494	INTERSECTION	LEFT	ROUTE 0203BZ (RIO GRANDE VILLAGE CAMPGROUND LOOP B)

ROUTE 0203AZ: RIO GRANDE VILLAGE CAMPGROUND LOOP A

<u>Notice:</u> Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 5 on any new or re-aligned DCV driven routes. Therefore no culverts or drop inlets are reported in Section 9, unless a culvert has a BIP structure number attached to it.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.586	0.586	SIGN	LEFT	GUIDE, NO GENERATOR ZONE
0.590	0.590	INTERSECTION	LEFT	ROUTE 0203DZ (RIO GRANDE VILLAGE CAMPGROUND LOOP D)
0.649	0.649	INTERSECTION	LEFT	ROUTE 0203CZ (RIO GRANDE VILLAGE CAMPGROUND LOOP C)
0.713	0.713	INTERSECTION	RIGHT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A) SPUR
0.725	0.725	INTERSECTION	LEFT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.725	0.725	INTERSECTION	RIGHT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.725	0.725	ROUTE END	N/A	TO END OF LOOP
		•		

ROUTE 0203BZ: RIO GRANDE VILLAGE CAMPGROUND LOOP B

Notice: Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 5 on any new or re-aligned DCV driven routes. Therefore no culverts or drop inlets are reported in Section 9, unless a culvert has a BIP structure number attached to it.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.073	0.073	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.074	0.076	GUARD/GUIDE WALL	RIGHT	N/A
0.080	0.080	INTERSECTION	LEFT	ROUTE 0203CZ (RIO GRANDE VILLAGE CAMPGROUND LOOP C)
0.080	0.080	INTERSECTION	RIGHT	ROUTE 0203CZ (RIO GRANDE VILLAGE CAMPGROUND LOOP C)
0.220	0.220	INTERSECTION	LEFT	ROUTE 0203DZ (RIO GRANDE VILLAGE CAMPGROUND LOOP D)
0.220	0.220	INTERSECTION	RIGHT	ROUTE 0203DZ (RIO GRANDE VILLAGE CAMPGROUND LOOP D)
0.223	0.223	SIGN	LEFT	GUIDE, NO GENERATOR ZONE
0.290	0.290	INTERSECTION	RIGHT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.290	0.290	INTERSECTION	LEFT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.290	0.290	ROUTE END	N/A	TO ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)

ROUTE 0203CZ: RIO GRANDE VILLAGE CAMPGROUND LOOP C

Notice: Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 5 on any new or re-aligned DCV driven routes. Therefore no culverts or drop inlets are reported in Section 9, unless a culvert has a BIP structure number attached to it.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.030	0.033	GUARD/GUIDE WALL	LEFT	N/A
0.035	0.035	INTERSECTION	LEFT	ROUTE 0203BZ (RIO GRANDE VILLAGE CAMPGROUND LOOP B)
0.035	0.035	INTERSECTION	RIGHT	ROUTE 0203BZ (RIO GRANDE VILLAGE CAMPGROUND LOOP B)
0.060	0.063	GUARD/GUIDE WALL	LEFT	N/A
0.067	0.067	INTERSECTION	LEFT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.067	0.067	INTERSECTION	RIGHT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.067	0.067	ROUTE END	N/A	TO ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)

ROUTE 0203DZ: RIO GRANDE VILLAGE CAMPGROUND LOOP D

Notice: Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 5 on any new or re-aligned DCV driven routes. Therefore no culverts or drop inlets are reported in Section 9, unless a culvert has a BIP structure number attached to it.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.013	0.013	SIGN	LEFT	GUIDE, NO GENERATOR ZONE
0.017	0.021	GUARD/GUIDE WALL	LEFT	N/A
0.043	0.043	INTERSECTION	LEFT	ROUTE 0203BZ (RIO GRANDE VILLAGE CAMPGROUND LOOP B)
0.043	0.043	INTERSECTION	RIGHT	ROUTE 0203BZ (RIO GRANDE VILLAGE CAMPGROUND LOOP B)
0.045	0.048	GUARD/GUIDE WALL	RIGHT	N/A
0.076	0.076	INTERSECTION	LEFT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.076	0.076	INTERSECTION	RIGHT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.076	0.076	ROUTE END	N/A	TO ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)

ROUTE 0203EZ: RIO GRANDE VILLAGE CAMPGROUND LOOP E

Notice: Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 5 on any new or re-aligned DCV driven routes. Therefore no culverts or drop inlets are reported in Section 9, unless a culvert has a BIP structure number attached to it.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.081	0.081	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
0.127	0.130	GUARD/GUIDE WALL	RIGHT	N/A
0.141	0.141	INTERSECTION	LEFT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.141	0.141	INTERSECTION	RIGHT	ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)
0.141	0.141	ROUTE END	N/A	TO ROUTE 0203AZ (RIO GRANDE VILLAGE CAMPGROUND LOOP A)

ROUTE 0233AZ: BASIN CAMPGROUND LOOP A

Notice: Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 5 on any new or re-aligned DCV driven routes. Therefore no culverts or drop inlets are reported in Section 9, unless a culvert has a BIP structure number attached to it.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)
0.049	0.049	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
0.082	0.082	SIGN	RIGHT	GUIDE, LODGE
0.085	0.085	SIGN	RIGHT	GUIDE, TRAILERS
0.086	0.086	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.087	0.087	SIGN	RIGHT	REGULATORY, NOTICE
0.088	0.088	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
0.111	0.111	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
0.122	0.122	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.146	0.146	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
0.197	0.197	INTERSECTION	LEFT	ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)
0.197	0.197	INTERSECTION	RIGHT	ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)
0.197	0.197	ROUTE END	N/A	TO ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)

ROUTE 0233BZ: BASIN CAMPGROUND LOOP B

Notice: Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 5 on any new or re-aligned DCV driven routes. Therefore no culverts or drop inlets are reported in Section 9, unless a culvert has a BIP structure number attached to it.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)
0.061	0.065	GUARD/GUIDE WALL	LEFT	N/A
0.063	0.063	SIGN	LEFT	GUIDE, UNABLE TO READ FROM VIDEO
0.092	0.092	SIGN	LEFT	REGULATORY, GRAPHIC SIGN NO TEXT
0.092	0.092	SIGN	LEFT	REGULATORY, GRAPHIC SIGN NO TEXT
0.124	0.137	PULLOUT	RIGHT	N/A
0.153	0.153	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
0.165	0.165	INTERSECTION	LEFT	ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)
0.165	0.165	INTERSECTION	RIGHT	ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)
0.165	0.165	ROUTE END	N/A	TO ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)

ROUTE 0233Z: BASIN CAMPGROUND MAIN LOOP

Notice: Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 5 on any new or re-aligned DCV driven routes. Therefore no culverts or drop inlets are reported in Section 9, unless a culvert has a BIP structure number attached to it.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD) AT MP 0.38
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD)
0.000	0.000	SIGN	N/A	REGULATORY, OVERFLOW PARKING
0.001	0.014	CURB-AND-GUTTER	LEFT	N/A
0.004	0.004	SIGN	LEFT	REGULATORY, STOP
0.005	0.055	CURB-AND-GUTTER	RIGHT	N/A
0.006	0.006	SIGN	LEFT	GUIDE, AMPHITHEATER CAMPGROUND
0.015	0.015	INTERSECTION	LEFT	ROUTE 0233AZ (BASIN CAMPGROUND LOOP A)
0.016	0.034	PULLOUT	RIGHT	N/A
0.018	0.018	SIGN	LEFT	REGULATORY, DO NOT ENTER
0.033	0.033	SIGN	RIGHT	GUIDE, DO NOT FEED THE ANIMALS
0.063	0.063	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
0.066	0.066	SIGN	RIGHT	REGULATORY, ONE WAY
0.072	0.072	INTERSECTION	LEFT	ROUTE 0233AZ (BASIN CAMPGROUND LOOP A)
0.078	0.078	SIGN	LEFT	GUIDE, NO GENERATOR ZONE
0.100	0.100	INTERSECTION	LEFT	ROUTE 0233BZ (BASIN CAMPGROUND LOOP B)
0.101	0.101	SIGN	LEFT	REGULATORY, ONE WAY
0.124	0.124	SIGN	LEFT	REGULATORY, DO NOT ENTER
0.130	0.130	INTERSECTION	LEFT	ROUTE 0233BZ (BASIN CAMPGROUND LOOP B)
0.132	0.132	SIGN	LEFT	REGULATORY, DO NOT ENTER
0.176	0.176	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.183	0.195	CURB	RIGHT	N/A
0.184	0.184	SIGN	LEFT	REGULATORY, DEAD END
0.244	0.244	SIGN	LEFT	REGULATORY, DO NOT ENTER
0.248	0.248	INTERSECTION	LEFT	ROUTE 0416 (LOWER BASIN LAGOON ROAD)
0.282	0.282	INTERSECTION	LEFT	ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)
0.283	0.335	ONE-WAY	N/A	N/A
0.284	0.284	SIGN	LEFT	REGULATORY, KEEP RIGHT

ROUTE 0233Z: BASIN CAMPGROUND MAIN LOOP

Notice: Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 5 on any new or re-aligned DCV driven routes. Therefore no culverts or drop inlets are reported in Section 9, unless a culvert has a BIP structure number attached to it.

FROM MILEDOST	TO MILEPOST	EE ATUDE	SIDE	COMMENT
WIILEFOST	MILLEFOST	FEATURE	SIDE	COMMENT
0.284	0.284	SIGN	LEFT	REGULATORY, ONE WAY
0.292	0.292	SIGN	RIGHT	REGULATORY, NO PARKING BETWEEN SIGNS
0.300	0.300	SIGN	RIGHT	REGULATORY, NO PARKING BETWEEN SIGNS
0.307	0.312	GUARD/GUIDE WALL	RIGHT	N/A
0.335	0.335	INTERSECTION	LEFT	ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)
0.335	0.335	INTERSECTION	RIGHT	ROUTE 0233Z (BASIN CAMPGROUND MAIN LOOP)
0.335	0.335	ROUTE END	N/A	TO END OF LOOP

ROUTE 0234: BASIN GROUP CAMPGROUND

Notice: Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 5 on any new or re-aligned DCV driven routes. Therefore no culverts or drop inlets are reported in Section 9, unless a culvert has a BIP structure number attached to it.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD) AT MP 0.61
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0206 (LOWER BASIN CAMPGROUND ROAD)
0.007	0.007	SIGN	LEFT	REGULATORY, STOP
0.180	0.180	INTERSECTION	LEFT	ROUTE 0234 (BASIN GROUP CAMPGROUND)
0.180	0.180	SIGN	LEFT	GUIDE, GROUP CAMPGROUND RESERVATION ONLY NO WOOD FIRES
0.180	0.180	SIGN	LEFT	REGULATORY, ONE WAY
0.180	0.399	ONE-WAY	N/A	N/A
0.202	0.202	INTERSECTION	RIGHT	PAVED SPUR
0.380	0.380	INTERSECTION	LEFT	PAVED SPUR
0.399	0.399	INTERSECTION	LEFT	ROUTE 0234 (BASIN GROUP CAMPGROUND)
0.399	0.399	INTERSECTION	RIGHT	ROUTE 0234 (BASIN GROUP CAMPGROUND)
0.399	0.399	ROUTE END	N/A	TO END OF LOOP

ROUTE 0405: HUISACHE ROAD

Notice: Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 5 on any new or re-aligned DCV driven routes. Therefore no culverts or drop inlets are reported in Section 9, unless a culvert has a BIP structure number attached to it.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0012 (RIO GRANDE ROAD) AT MP 19.72
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0012 (RIO GRANDE ROAD)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0012 (RIO GRANDE ROAD)
0.005	0.005	SIGN	LEFT	REGULATORY, STOP
0.006	0.006	SIGN	RIGHT	GUIDE, RESIDENTIAL AREA EMPLOYEES ONLY
0.210	0.210	INTERSECTION	LEFT	ROUTE 0903 (RIO GRANDE VILLAGE MAINTENANCE)
0.216	0.216	SIGN	LEFT	GUIDE, RGV MAINTENANCE SHOP
0.241	0.241	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.241	0.241	SIGN	RIGHT	WARNING, CHILDREN PLAYING
0.372	0.372	INTERSECTION	RIGHT	ROUTE 0405 (HUISACHE ROAD)
0.375	0.375	INTERSECTION	LEFT	ROUTE 0406 (RIO GRANDE VILLAGE LAGOON ROAD)
0.444	0.444	INTERSECTION	LEFT	ROUTE 0405 (HUISACHE ROAD)
0.444	0.444	INTERSECTION	RIGHT	ROUTE 0405 (HUISACHE ROAD)
0.445	0.445	ROUTE END	N/A	TO END OF LOOP

ROUTE 0444: PJ SEWAGE TREATMENT PLANT ROAD

Notice: Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 5 on any new or re-aligned DCV driven routes. Therefore no culverts or drop inlets are reported in Section 9, unless a culvert has a BIP structure number attached to it.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0012 (RIO GRANDE ROAD) AT MP 0.27
0.000	0.000	INTERSECTION	LEFT	ROUTE 0012 (RIO GRANDE ROAD)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0012 (RIO GRANDE ROAD)
0.009	0.009	SIGN	RIGHT	REGULATORY, DO NOT ENTER
0.009	0.009	SIGN	RIGHT	GUIDE, SERVICE ROAD ONLY
0.095	0.095	SIGN	LEFT	REGULATORY, DANGER KEEP OUT
0.095	0.095	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.096	0.096	GATE	N/A	N/A
0.124	0.124	INTERSECTION	N/A	ROUTE 1020 (PJ SEWAGE TREATMENT PLANT PARKING)
0.124	0.124	ROUTE END	N/A	TO ROUTE 1020 (PJ SEWAGE TREATMENT PLANT PARKING)

Section 10 Appendix



Big Bend National Park



Explanation of Changes to the RIP Index Equations and Determination of PCR

In 2005, the FHWA began implementing the use of a Pavement Management System to assist the National Park Service in prioritizing Pavement Maintenance and Rehabilitation activities. The PMS used by FHWA is the Highway Pavement Management Application (HPMA) and this software has the ability to store inventory and condition data from RIP and forecast future performance using prediction models. Outputs include performance and condition reports at the National, Region, Park, or Route level. A regional prioritized list and optimization have been produced for most regions and the Federal Highway Deferred Maintenance is calculated via the HPMA as well.

In an effort to improve the accuracy of treatment recommendations and pavement condition descriptions vis a vis the distresses and indexes that comprise the Pavement Condition Rating (PCR), an extensive study was completed throughout 2010 that has resulted in changes to the Road Inventory Program condition reporting method and specifically, the calculation of PCR. It was determined that a better representation of PCR could be achieved by modifying the relative impact certain distresses would have on the overall rating.

Through the use of HPMA data, it was noted that false failure indicators existed with the existing PCR model, and that it would be necessary to reduce their impact. The distresses affected in this way were Rutting and Roughness. Conversely, experience showed that roadways with extensive cracking present were often shown to have a high PCR. Therefore, the crack index models were adjusted to be more sensitive to changes in crack severity or quantity. It was also determined that these issues were not due to a problem with data acquisition (i.e. the RIP "van"), but with the way the collected data was processed. The final change was to provide guidance on when to use the Roughness Condition Index (RCI) in the PCR calculation. Roughness data is of little value to determining overall condition on routes that, due to their length or geometrics, have lower vehicle operating speeds. Therefore, in Cycle 5, only routes that have lengths of one half mile or greater and posted speed limits of 25 mph or greater will have RCI reported and included in the PCR calculations.

The changes that were implemented were endorsed by management at both the FHWA and NPS. In order to show the effectiveness of these changes, several sites were ground truth tested to ensure that an improvement was achieved between the relationship of PCR and the actual Maintenance and Rehabilitation needs that were represented. The changes will allow greater use of RIP and HPMA data for not simply condition data reporting, but also as a reliable tool for project identification and selection.

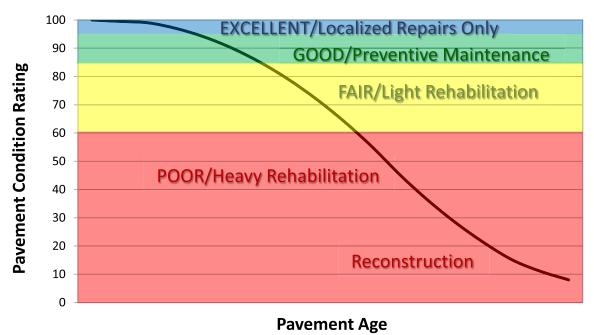
Explanation of the Excellent, Good, Fair and Poor Condition Descriptions

In addition to the RIP Index changes that will be implemented in Cycle 5, we will also aim to provide greater assistance in translating good/fair/poor categories into pavement needs categories. The PCR can be used to indicate the place in the Pavement Life Cycle and the types of treatments that should be considered now and into the future.

- Excellent/New: PCR of 95-100. Pavements in this range will require only spot repairs
- Good: PCR of 85-94. Pavements in this range will likely be candidates for Preventive Maintenance. Examples include Chip and Slurry Seals, Micro Surfacing and Thin Overlays.
- Fair: PCR of 61-84. Pavements in this range will likely be candidates of Light Rehabilitation (L3R). Examples include single-lift overlays up to 2.5 inches in total thickness, milling and overlays.
- Poor: PCR of 60 or below. Pavements in this range will likely be candidates of Heavy Rehabilitation or Reconstruction (H3R or 4R). Examples include Pulverization, Multiple Lift Overlays, and Reconstruction.

At this time, specific Maintenance and Rehabilitation activities should be evaluated and recommended at the project level. Site-specific conditions that influence treatment type should be determined based on performing a subsurface investigation and/or pavement condition survey, and not be based solely on RIP data. Additionally, RIP produces a snapshot of conditions the year in which the data was collected. For further information or to obtain additional Pavement Management System's data from our Highway Pavement Management Application (HPMA) please contact the Eastern Federal Lands pavement team.

Condition Categories and Treatments



DESCRIPTION OF RATING SYSTEM

The Federal Highway Administration (FHWA), Road Inventory Program (RIP) for the National Park Service (NPS), collects roadway condition data on paved surfaces (asphalt, concrete, brick, and cobblestone) on roads, parkways, and parking areas in national parks nationwide. The road surface condition data is collected using an automated Data Collection Vehicle (DCV). Roads having brick or cobblestone surfacing are not normally surveyed with the DCV, but are manually rated for condition rating.

The FHWA RIP is implemented based on the premise that an accurate pavement surface condition assessment can be accomplished using automated crack detection technology as applied to digital images. Various methods of pavement condition assessment have been developed over the years with varying degrees of accuracy and acceptance. The use of digital photography to record pavement images and subsequent crack detection and classification has undergone continuous improvements over the past decade. Digital cameras with increasingly superior resolution and high definition have become more affordable, and the proprietary programming code and algorithms have been improved in crack detection software.

With the use of quality digital photography and automated crack detection software, FHWA RIP is tasked with executing a pavement condition assessment on about 5000 miles of National Park Service roads and parkways. Foremost in setting up the basis of pavement distress identification is employing the distress identification protocols used by FHWA. There is no single distress identification system that is universal among entities conducting a program of distress identification. For the purpose of the NPS RIP, FHWA employs distress identification protocols that are specific to this program.

FHWA has referenced the "Distress Identification Manual for the Long-Term Pavement Performance Program", Publication No. FHWA-RD 03-031, June 2003, as the point-of-reference for distress types on NPS pavement. In truth, the FHWA RIP distress types are similar to those described in the LTPP manual with some modifications. This document, "Distress Identification Manual for the NPS Road Inventory Program, Cycle 5, 2010-2013" was developed using the "Distress Identification Manual for the Long-Term Pavement Performance Program" as a guideline. Definitions of severity levels based on crack width contained in this document adhere to the LTPP Distress ID Manual. Modifications have been made to the definition of Alligator and Longitudinal Cracking and determination of Alligator Cracking severity. This manual also addresses Rutting and Roughness and its application to RIP.

In 2010, FHWA RIP began the fifth cycle of data collection in national parks. For Cycle 5, data will be collected in approximately 81 large parks (10 or more paved route miles) on Functional Class 1, 2, and 7 routes plus any new routes or parking areas previously not collected, totaling an estimated 4,459 paved route miles. Additionally, 168 small parks will be collected comprising approximately 529 paved route miles and associated paved parking areas. The data is used to support the National Park Service road maintenance program and Pavement Management System (PMS) developed and maintained by FHWA.

This "Distress Identification Manual for the NPS Road Inventory Program, Cycle 5, 2010-2013" will be used as a reference resource in crack detection and classification, determination of distress severity and extent, and in the calculation of distress index values for the FHWA RIP Cycle 5.

SURFACE DISTRESSES

Surface Condition Rating - SCR

Surface distresses are measured in the primary lane only. In the classification and measurement of all paved surface condition data, results will be reported in the database in record intervals of 0.02 miles (105.6 feet) (smallest granularity) along the route.

Surface distresses determined from digital images

- Transverse Cracks
- Longitudinal Cracks
- Alligator Cracks
- Patching/Potholes

Surface distress measured by DCV (Data Collection Vehicle) LRMS (Laser Rut Measuring System)

Rutting

Each of the five surface distresses is assigned a computed surface distress index

- Transverse Crack Index
- Longitudinal Crack Index
- Alligator Crack Index
- Patching/Pothole Index
- Rutting Index

Surface distress data are classified as listed above, measured for severity, and quantified for extent. Classification, severity, and extent of these five surface distresses comprise the three main elements for calculation of SCR (Surface Condition Rating).

In addition to the five surface distresses, a **Structural Crack Index** is computed, which is a combination of the Longitudinal Crack Index and the Alligator Crack Index. The Structural Crack Index is then used in lieu of the LC and AC indices to compute SCR.

Roughness Condition Index - RCI

Additional condition data measured by DCV (lasers and accelerometers)

• Roughness (IRI)

Roughness is measured by FHWA's DCV and reported as International Roughness Index (IRI) in inches/mile. Using IRI, the Roughness Condition Index (RCI) is computed.

Pavement Condition Rating - PCR

Using the SCR (computed from the five surface distresses) and the RCI, an overall Pavement Condition Rating (PCR) is computed. The formula for PCR is:

```
Asphalt PCR = (0.60 * SCR) + (0.40 * RCI)
Concrete PCR = RCI
```

A detailed description of each distress index formula, roughness index formula, SCR and PCR is provided in this document beginning on page 23.

Each classified surface distress will fall into one or more severity...LOW, MEDIUM, or HIGH based on criteria listed. For each severity, an extent is established based on the measured quantity of the distress within that severity. Within each severity individual distresses are assigned a Maximum Allowable Extent (MAE). For example, LOW severity transverse cracking may be allowed up to 21.1 cracks within a 0.02 interval before it reaches MAE and fails.

The index formulas are based on a scale of 0-100. A PCR index value of 100 would indicate a "new" road with no measurable distresses or rough ride. A PCR value of 60 is determined to be *terminable serviceability* and the road is considered failed. The range of index values with condition descriptors is:

Index values are generally computed based on cumulative deducts of the measured severities. As shown in the index formulas below, as any single severity reaches or exceeds MAE, the index computes to a value of 60 or less, and the road fails for that 0.02 interval.

Note: As a result of a unique combination of measured surface distresses and IRI, index values occasionally compute to less than 0 or greater than 100. In this instance, an index value < 0 defaults to 0. Index values > 100 default to 100. For all indices, a higher value indicates a better road condition, and a lower value indicates a poorer road condition.

On the following page, Table 1 summarizes the different types of distresses measured.

TABLE 1: Distress Summary

ASPHALT-SURFACED PAVEMENT DISTRESS TYPES with RUTTING and ROUGHNESS				
DISTRESS TYPE	UNIT OF MEASURE	CONVERTED TO	DEFINED SEVERITY LEVELS?	MEASURED BY
Alligator Cracking	Square Feet	Percent of Lane Per 0.02 Mile	Yes	Digital Image Crack Detection Software
Transverse Cracking	Linear Feet	Number of Cracks Per 0.02 Mile	Yes	Digital Image Crack Detection Software
Longitudinal Cracking	Linear feet	Percent of Lane Length Per 0.02 Mile	Yes	Digital Image Crack Detection Software
Patching/Potholes	Square Feet	Percent of Lane Per 0.02 Mile	No	Digital Image Crack Detection Software
Rutting	Inches	Rut Depth Per 0.02 Mile	Yes	DCV – Laser Rut Measuring System (LRMS)
Roughness	IRI	*RCI Per 0.02 Mile	No	DCV – Lasers /Accelerometers

*Note: Roughness is measured on concrete roadways, but surface distresses and rutting are not measured. For concrete, PCR = RCI

ALLIGATOR CRACKING

Description

Alligator cracking is considered a combination of fatigue and block cracking. It is a series of interconnected cracks in various stages of development. Alligator cracking develops into a many-sided pattern that resembles chicken wire or alligator skin. It can occur anywhere in the road lane. Alligator cracking must have a quantifiable area.

Severity Levels

LOW

An area of cracks with no or very few interconnecting cracks and the cracks are not spalled. Cracks are ≤ 0.25 in (6mm) in mean width. Cracks in the pattern are no further apart than 1 foot (0.328 m). May be sealed cracks with sealant in good condition and a crack width that cannot be determined.

MEDIUM

An area of interconnected cracks that form a complete pattern. Cracks may be slightly spalled. Cracks are >0.25 in. (6 mm) and <=0.75 in. (19 mm) or any crack with a mean width <=19 mm and adjacent low severity cracking. Cracks in the pattern are no further apart than 6 in. (150 mm).

HIGH

An area of interconnected cracks forming a complete pattern. Cracks are moderately or severely spalled. Cracks are >0.75 in (19mm) or any crack with a mean width <= 0.75 in (19mm) and adjacent medium to high severity random cracking.

A combination of observed crack width and crack pattern is used to determine overall severity of alligator cracking. Based on above description of each severity, the highest level of crack width and crack pattern determines overall severity. Table 2 illustrates this.

TABLE 2: Alligator Crack Severity Levels

ALLIGATOR CRACKING SEVERITY LEVELS		Crack Pattern		
		LOW	MED	HIGH
	LOW	L	M	Н
ack	MED	M	M	Н
C _r	HI	Н	Н	Н

LONGITUDINAL CRACKING

Description

Longitudinal cracking occurs predominantly parallel to the pavement centerline. It can occur anywhere within the lane. Longitudinal cracks occurring in the wheelpath may be noteworthy.

Severity Levels

LOW

Cracks with a mean width of < 0.25 in. (6 mm). Sealed cracks with sealant in good condition and a width that cannot be determined.

MED

Cracks with a mean width > 0.25 in. (6 mm) and <= 0.75 in. (19 mm). Also, any crack with a mean width < 0.75 in. (19 mm) and adjacent random low severity cracking.

HIGH

Cracks with a mean width > 0.75 in. (19 mm). Also, any crack with a mean width < 0.75 in. (19 mm) and adjacent random medium to high severity cracking.

TRANSVERSE CRACKING

Description

Transverse cracking occurs predominantly perpendicular to the pavement centerline. It can occur anywhere within the lane.

Severity Levels

LOW

Cracks with a mean width of < 0.25 in. (6 mm). Sealed cracks with sealant in good condition and a width that cannot be determined.

MED

Cracks with a mean width > 0.25 in. (6 mm) and <= 0.75 in. (19 mm). Also, any crack with a mean width < 0.75 in. (19 mm) and adjacent random low severity cracking.

HIGH

Cracks with a mean width > 0.75 in. (19 mm). Also, any crack with a mean width < 0.75 in. (19 mm) and adjacent random medium to high severity cracking.

PATCHING AND POTHOLES

Description

Patching is an area of pavement surface that has been removed and replaced with patching material or an area of pavement surface that has had additional patching material applied. Patching may encompass partial lane or full lane width On full lane width patching; the total, contiguous length of patch may not exceed 0.30 mi. (0.48 km). (Any full-lane patch exceeding 0.30 mi. in length is considered a pavement change). Patching must have a quantifiable area.

Potholes are bowl-shaped holes of various sizes occurring in the pavement surface.

Severity Levels

There are no stratified severities for Patching/Potholes. They either are present or they are not.

RUTTING

Description

Rutting is a longitudinal surface depression in the wheelpath.

Severity Levels

LOW

Ruts with a measured depth ≥ 0.20 " and ≤ 0.49 "

MED

Ruts with a measured depth ≥ 0.50 " and ≤ 0.99 "

HIGH

Ruts with a measured depth ≥ 1.00 "

Ruts < 0.20" are not included in the distress calculations.

ROUGHNESS

Description

Roughness is the measurement of the unevenness of the pavement in the direction of travel. It is measured in units of IRI (International Roughness Index), inches per mile, and is indicative of ride comfort.

Severity Levels

There are no stratified severity levels for roughness. The roughness (or smoothness) of a road surface can be defined by IRI in the following table.

TABLE 3: IRI

IRI Descriptions		
Type of Road	Typical IRI (in/mile)	
New Road, no noticeable roughness	<90	
Small level of roughness	90 – 126	
Road of average roughness	126 – 190	
Road with above average roughness	190 – 253	
Road with severe roughness	253 – 380	
Nearly impassable	>380	

INDEX FORMULAS

Note: All index formulas listed below contain MAE applicable to 0.02 mile (105.6 feet) interval.

Alligator Crack Index

$$AC_{INDEX} = 100 - 40 * [(\%LOW / 35) + (\%MED / 15) + (\%HI / 5)]$$

Where:

The values %LOW, %MED and %HI report the percentage of the observed pavement (0.02 mile, primary lane) that contains alligator cracking within the respective severities. These values range from 0 to 100.

%LOW = Percent of total area (primary lane, 0.02 in length), low severity %MED = Percent of total area (primary lane, 0.02 in length), medium severity %HI = Percent of total area (primary lane, 0.02 in length), high severity

Percent of total area is computed as:

square foot area of alligator crack severity
0.02 mile * lane width

In AC_INDEX, the denominators 35, 15, and 5 are the Maximum Allowable Extents (MAE) for each severity. In other words, we will allow up to 35% of low severity alligator cracking for a 0.02 interval before failure, 15% for medium severity, and so on. As you can see, if any single severity reaches MAE the resulting index value is 60, or failure.

Longitudinal Crack Index

LC INDEX =
$$100 - 40 * [(\%LOW / 175) + (\%MED / 75) + (\%HI / 25)]$$

Where:

The values %LOW, %MED, and %HI report the length of longitudinal cracking within each severity as a percent of the section length (0.02 mile, primary lane). These values are ≥ 0 and can exceed 100.

%LOW = Percent of interval length (primary lane, 0.02 in length), low severity %MED = Percent of interval length (primary lane, 0.02 in length), medium severity %HI = Percent of interval length (primary lane, 0.02 in length), high severity

Percent of interval length is computed as:

length of respective longitudinal cracking 0.02 mile (105.6 feet)

In LC_INDEX, the denominators 175, 75, and 25 are the Maximum Allowable Extents (MAE) for each severity. In other words, we will allow up to 175% of low severity alligator cracking for a 0.02 interval before failure, 75% for medium severity, and so on. As you can see, if any single severity reaches MAE the resulting index value is 60, or failure.

Structural Crack Index

SC INDEX =
$$[100 - ((100 - AC \text{ INDEX}) + (100 - LC \text{ INDEX}))]$$

Structural Crack Index is a combination of Alligator Cracking and Longitudinal Cracking, and is used in the SCR formula in lieu of AC and LC separately.

Transverse Crack Index

$$TC_{INDEX} = 100 - 40 * [(LOW / 21.1) + (MED / 4.4) + (HI / 2.6)]$$

Where:

The values LOW, MED and HI report a count of the total number of transverse cracks (reported to three decimals) within each severity level, where one transverse crack is equal to the lane width. These values are ≥ 0 .

LOW = Number of cracks in interval (primary lane, 0.02 in length), low severity MED = Number of cracks in interval (primary lane, 0.02 in length), medium severity HI = Number of cracks in interval (primary lane, 0.02 in length), high severity

Number of cracks is computed as:

Total length of transverse cracks
Lane width

In TC_INDEX, the denominators 21.1, 4.4, and 2.6 are the Maximum Allowable Extents (MAE) for each severity. In other words, we will allow up to 21.1 low severity transverse cracks for a 0.02 interval before failure, 4.4 cracks for medium severity, and so on. As you can see, if any single severity reaches MAE the resulting index value is 60, or failure.

Patching Index

PATCH_INDEX =
$$100 - 40 * (\%PATCHING / 80)$$

Where:

The value *%PATCHING* reports the percentage of the observed pavement (0.02 mile, primary lane) that contains patching/potholes. This value ranges from 0 to 100.

%PATCHING = Percent of total area (primary lane, 0.02 in length)

Percent of total area is computed as:

square foot area of patching/potholes
0.02 mile * lane width

There are no severity levels for patching. It either exists or does not.

In PATCH_INDEX, the denominator 80 is the Maximum Allowable Extent (MAE) for each severity. In other words, we will allow up to 80% patching for a 0.02 interval before failure. As you can see, if patching/potholes reaches MAE the resulting index value is 60, or failure.

Rutting Index

RUT_INDEX =
$$100 - 40 * [(\%LOW / 535) + (\%MED / 205) + (\%HI / 40)]$$

Where:

20 rut depth measurements are taken per 0.02 interval for each of 2 wheel paths (left and right), resulting in a total of 40 measurements taken for both wheel paths. *Each wheelpath is analyzed independently for rut severities*. The values %LOW, %MED and %HI are a *total percentage* of left wheelpath percentage and right wheelpath percentage added together for the respective severity. These values range from 0 to 200.

%LOW = Percent of LOW ruts in left wheelpath based on 20 ruts, plus percent of LOW ruts in right wheelpath based on 20 ruts.

%MED = Percent of MED ruts in left wheelpath based on 20 ruts, plus percent of MED ruts in right wheelpath based on 20 ruts.

%HI = Percent of HI ruts in left wheelpath based on 20 ruts, plus percent of HI ruts in right wheelpath based on 20 ruts.

Percent of rut measurements within each severity can also be computed as:

total number of ruts within each severity in both wheelpaths 20 * 100

In RUT_INDEX, the denominators 535, 205, and 40 are the Maximum Allowable Extents for each severity. In other words, the formula allows up to 535% low severity

ruts for a 0.02 interval before. However, since 200 is the highest measurable percentage allowed, 535% is unattainable and therefore, no amount of LOW severity rutting will cause the RUT_INDEX to fail a road. Similarly, since the MAE for MED severity rutting is 205, no amount of MED severity rutting will cause the RUT_INDEX to reach 60 and fail the road. As you can see, LOW severity rutting reaches MAE the resulting index value is 60, or failure. This formula was intentionally designed to minimize the impact of LOW and MED severity rutting on RUT INDEX.

Roughness Condition Index (Asphalt)

$$RCI = 32 * [5 * (2.718282 \land (-0.0041 * AVG IRI))]$$

Where:

The value AVG IRI reports the average value of the Left IRI and Right IRI measurements for the interval (0.02 mile, primary lane). This value can range from approximately 40 to 999.0.

Average IRI is computed as:

There is no applicable threshold for failure for this index.

Roughness Condition Index (Concrete)

$$\mathbf{RCI} = -0.0012(\mathbf{IRI}^2) + 0.0499(\mathbf{IRI}) + 99.542$$

For concrete, PCR = RCI

Surface Condition Rating Index

SCR = Lowest Index Value Of: [SC_INDEX, TC_INDEX, PATCH_INDEX, RUT INDEX]

Note: The modified SCR equation above combines AC_INDEX and LC_INDEX, and considers that a single AC/LC index value of the Structural Crack Index (SC_INDEX). The lowest of the four computed index values (SC_INDEX, TC_INDEX, PATCH_INDEX, or RUT_INDEX) becomes the SCR.

Where:

See above for determinations of SC_INDEX, TC_INDEX, PATCH_INDEX and RUT INDEX.

The threshold for failure for this index is SCR = 60.

Data Collection Vehicle Subsystems

Data on paved roads in Cycle 5 is collected by FHWA using a Pathway Services Inc. Data Collection Vehicle (DCV), called PathRunner. The DCV is driven in the primary-direction lane at posted speed limits and less.

CAMERAS

Forward-facing and rear-facing video is collected as .jpg digital imagery at a frequency of 26.4 feet.

Two forward-facing cameras are mounted above the vehicle cab, one pointed straight ahead and the other to the right shoulder providing seamless 120 degree viewing.

CAMERA SPECIFICATIONS		
Two Forward/ One Rear Facing		
Camera lens/type	FUJINON CCTV LENS H16x10B-Y41	
Focal length	10 mm – 160 mm	
Image size	8.8 mm x 6.6mm	
Image format	*.jpg	
Image resolution	HD 2000 X 1200	
Image pixel size	depends on distance	
Zoom ratio	16x	
Max Relative Aperture	1:2.5	
Iris range	F25-T800 (Equivalent to F800)	

Pavement images are created using a Laser Scan Imaging System. This system is composed of a single high resolution line-scan camera and two lasers configured to image an approximate 11-foot wide lane with 1 mm resolution.

CAMERA SPECIFICATIONS		
Pavement Line Scan		
Image size	4280 pixels/line	
Image width	4 meters (3950 mm nominal)	
Laser class	3B	
Power	250W	
Vehicle speed limitations	62 mph	
Environment	Dry pavement, day or night	
Sensor size (approx)	300 mm(H) x 375 mm(L) x 200 mm(D)	
Image frame length	26.4 feet	

DMI (Distance Measuring Instrument)

The DMI (Distance Measuring Instrument) obtains road length measurements that are accurate to 0.1% for speeds up to 60 mph. The DMI is connected to the hub of the rear wheel on the driver's side, and is calibrated to the revolutions of the rear vehicle axle on a regular basis.

ROUGHNESS (IRI)

The collection system includes a South Dakota type laser profiler manufactured based on active Class 1 ASTM E950 standards. The dynamic profile of the pavement surface is collected from which the IRI roughness data is computed. The sensors include one accelerometer on each wheelpath, one height sensor (laser) on each wheelpath, and a distance transducer.

IRI SPECIFICATIONS	
Reported IRI units	Inches/mile
Vehicle speed limitations	12-62 mph
IRI equipment certification	Texas Transportation Institute (TTI)
Wavelengths accommodated	6 in. – 300 feet
IRI computed & reported	World Bank Technical Paper Number 46
Environment	Dry pavement, day or night, above 32 degrees F
Adherence to specifications	ASTM E950-98 (2004), ASTM E 1926-08,
	AASHTO MP 11-08, AASHTO PP 49-08

RUTTING

Rutting depths are measured using an INO Laser Rut Measurement System (LRMS). This system is a transverse profiling device that detects and characterizes pavement rutting. The LRMS can acquire full 4 meter width profiles of a pavement lane at normal traffic speeds and uses two laser profilers that digitize transverse sections of the pavement.

RUTTING SPECIFICATIONS	
Reported rut depth units	Inches
Vehicle speed limitations	Up to 62 mph
Sampling rate	30-150 profiles/second
Transverse resolution	1280 points/profile
Transverse field-of-view	4 m
Depth accuracy (nominal)	+/- 1 mm
Environment	Dry pavement, day or night, above 32 degrees F
Adherence to specifications	ASTM E1703M-95 (reapproved 2005)

GPS & INERTIAL SYSTEMS

GPS is collected by an onboard system employing Omnistar real time correction and a gyroscope Inertial Measuring Unit (IMU) to provide accurate positioning data in instances of satellite obstruction. All GPS coordinates are tied to image and linear distance measurements.

GPS SPECIFICATIONS		
Static accuracy	Sub-meter	
Dynamic accuracy	2-3 meters	
Receiver	12 satellite tracking	
Coordinate system	Lat Lon WGS 84	
Environment	Day or night	
Cross-slope	+- 0.1 degrees	
Grade	+- 0.1 degrees	

GPS on Manually Rated Roads (MRR)

Parking areas, some roads, and other paved areas that are not fully drivable with the DCV are collected manually by field technicians. GPS is collected for these routes using portable Trimble GPS backpack units.

Geodatabase - Background and Metadata

In addition to this park report, a *geodatabase* containing both tabular and spatial data specific to this park has been provided. All data disseminated in the preceding report has been obtained from the tables and fields within said geodatabase. The geodatabase can be referenced for tabular data via Microsoft Access or for both tabular and spatial data via ESRI's ArcGIS Suite of software which consists of; ArcMap, ArcCatalog and ArcExplorer. Consolidating the RIP data into one database creates a seamless relationship of tables and geographic data. It will allow RIP to facilitate easier updates and enhancements in the future.

A geodatabase can be thought of as simply a database containing spatial data. Many different tables are contained with the park's geodatabase. A complete and thorough description of the tables and fields contained within this geodatabase can be found in the *metadata*. The metadata is attached directly within the geodatabase and can be accessed via ESRI's ArcCatalog.

GLOSSARY OF TERMS AND ABBREVIATIONS

TERM OR

<u>ABBREVIATION</u> <u>DESCRIPTION OR DEFINITION</u>

AC Alligator Cracking

CRS Condition Rating Sheets (Section 5)

DCV Data Collection Vehicle

Excellent rating with an index value of 95 to 100

Fair Fair rating with an index value from 61 to 84

FUNCT CLASS Functional Classification (see Route ID, Section 2)

Good Good rating with an index value from 85 to 94

IRI International Roughness Index

Lane Width Width from road centerline to fogline, or from centerline to edge-

of-pavement when no fogline exists

LC Longitudinal Cracking

MRR Manually Rated Route

MRL Manually Rated Line

MRP Manually Rated Polygon

N/A Not Applicable

NC Not Collected

PATCH Patching and Potholes

Paved Width Width from edge-of-pavement to edge-of-pavement

PCR Pavement Condition Rating

PKG Parking Area

Poor Poor rating with an index value of 0 to 60

RCI Roughness Condition Index

SC Structural Cracking

SCR Surface Condition Rating

TC Transverse Cracking