The Road Inventory
of
Wind Cave National Park
WICA - 1560

national park service

Road Inventory Program

Prepared By:
Federal Highway Administration
Eastern Federal Lands Highway Division
Cycle 3

Wind Cave National Park
in
South Dakota

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INTRODUCTION

Background: In July 1976, the National Park Service (NPS) and the Federal Highway Administration (FHWA) entered into a Memorandum of Agreement (MOA), establishing the Road Inventory Program (RIP). In 1980, the NPS and the FHWA terminated the 1976 MOA and entered into a new MOA that provided for the completion of the initial phase of the RIP. The purpose of the RIP, per the 1980 MOA, was to maintain and update RIP data in order to develop long-range and short-range costs and programs to bring National Park Service (NPS) roads up to, or to maintain, designated standards, and to establish a maintenance management program.

The FHWA's Federal Lands Highway (FLH) was assigned the task of identifying condition deficiencies and corrective priorities along with associated corrective costs, inventorying maintenance features (e.g., culverts, signs, guardrail, etc.), summarizing the data and findings in a report, and providing a photographic record of the road system.

The FLH completed the initial phase of the RIP in the early 1980's. As a result of this effort, each park received a RIP book, also known as the "Brown Book," that included the information collected during this initial RIP phase.

In an effort to maintain and update the RIP data, a cyclical data collection and reporting process was re-established in the 1990's. The FLH completed two cycles of RIP data collection between 1994 and 2001. Cycle 1 data was collected in 44 large parks from 1994 to 1995. This data was found to be unusable for comparison to future cycles. Cycle 2 data was collected from March 1997 to January 2001 in 79 large parks and 5 small parks containing 4,874 route miles. Each park received a copy of a Cycle 2 RIP Report, also known as the "Blue Book."

Since 1984, the RIP Program has been funded through the Federal Lands Highway Program's Park Roads and Parkways (PRP) Program. Currently, the NPS Washington Headquarters' Park Facility Management Division is responsible for coordinating the RIP program with the FLH. 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) which requires the Federal Highway Administration and the National Park Service, to develop, by rule, a Pavement Management System (PMS) for the park roads and parkways serving the National Park System. As a result of the requirements in TEA-21, the NPS and the FHWA are in the process of developing a PMS. The PMS will assist the decision-makers in effectively spending limited PRP Program funds. The PMS will provide information for planning and programming road maintenance, rehabilitation, and reconstruction activities. RIP data will provide the basic information for this system.

Key information included in the RIP is the mileage inventory and condition assessments accomplished by the RIP Program. The mileage and condition data are used in the current allocation formula of PRP Program funds.

RIP Cycle 3: A third RIP cycle was initiated in 2001. Data was collected from March 2001 to July 2004, and is included in the Cycle 3 Reports. Cycle 3 includes 254 large and small parks with a combined total of 5,455 route miles.

In the Cycle 3 Reports, a general condition rating of excellent, good, fair and poor is ascribed to each one-mile section of paved roadway, and to each paved parking area. This condition rating system provides a realistic means of assessing the general funding needs for road improvements. Along with these descriptive condition ratings, a numerical rating between 0 and 100 is ascribed to each mile of road and to each parking area.. This numerical rating is called a Pavement Condition Rating (PCR). The PCR rating system is described in Section 10 of this report.

All of the fieldwork required for obtaining inventory, condition, and maintenance feature information is coordinated with each park and the regional offices to ensure that the information in the RIP reports is accurate.

The FLH is responsible for all of the data presented in this report. Anyone having questions or comments regarding the contents of this report is encouraged to contact the FHWA RIP Coordinator. It is our aim to provide exceptional customer satisfaction in our delivery of the RIP program.

FHWA RIP Coordinator:

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Wind Cave National Park Summaries

Overall Park Mileage Summary

PARK TOTAL SUMMARY ITEMS	TOTAL	DATE
Paved ARAN Driven Route Miles	17.08	2/3/2002
Unpaved Estimated Route Miles	37.98	2/3/2002
Paved ARAN and Unpaved Route Miles	55.06	
Paved ARAN Driven Lane Miles	34.16	2/3/2002
Paved MRR Lane Miles	1.37	2/3/2002
Parking Lot Lane Miles	4.40	2/3/2002
Total Paved Lane Miles	39.94	

Notes: Total Paved Lane Miles includes the sum of Paved ARAN Driven Lane Miles, Paved MRR Lane Miles, and Parking Lot Lane Miles

Unpaved Route Miles are estimates, they have not been inventoried by the Roadway Inventory Program (RIP)

Wind Cave National Park Summaries

Cost to Improve to "Excellent" Condition

SOURCE	WORK PERFORMED	COST PER MILE	INITIAL CONDITION
FHWA Awarded Projects	Surface Maintenance	$30,000	Excellent
FHWA Awarded Projects	3-R (Resurfacing)	$110,000	Good
FHWA Awarded Projects	3-R (Resurfacing, Restoration, and Rehabilitation) Projects	$560,000	Fair
FHWA Awarded Projects	4-R (Resurfacing, Restoration, Rehabilitation, and Reconstruction) Projects	$1,540,000	Poor

Based on the above table, the cost to improve ARAN driven paved road condition miles to "Excellent" PCR are:

Existing Condition	Existing Miles	Estimated Cost to Improve
Excellent	0.24	$7,200
Good	0.97	$106,700
Fair	6.76	$3,785,600
Poor	9.11	$14,029,400
Totals	**17.08**	**$17,928,900**

The above numbers include the 35% PE, CE and contingency costs and are national averages. The cost estimates were used in the calculations for the 2004 Reauthorization Bill to determine the level of funding required to bring all the NPS roads into a Pavement Condition Rating (PCR) of Good (85).

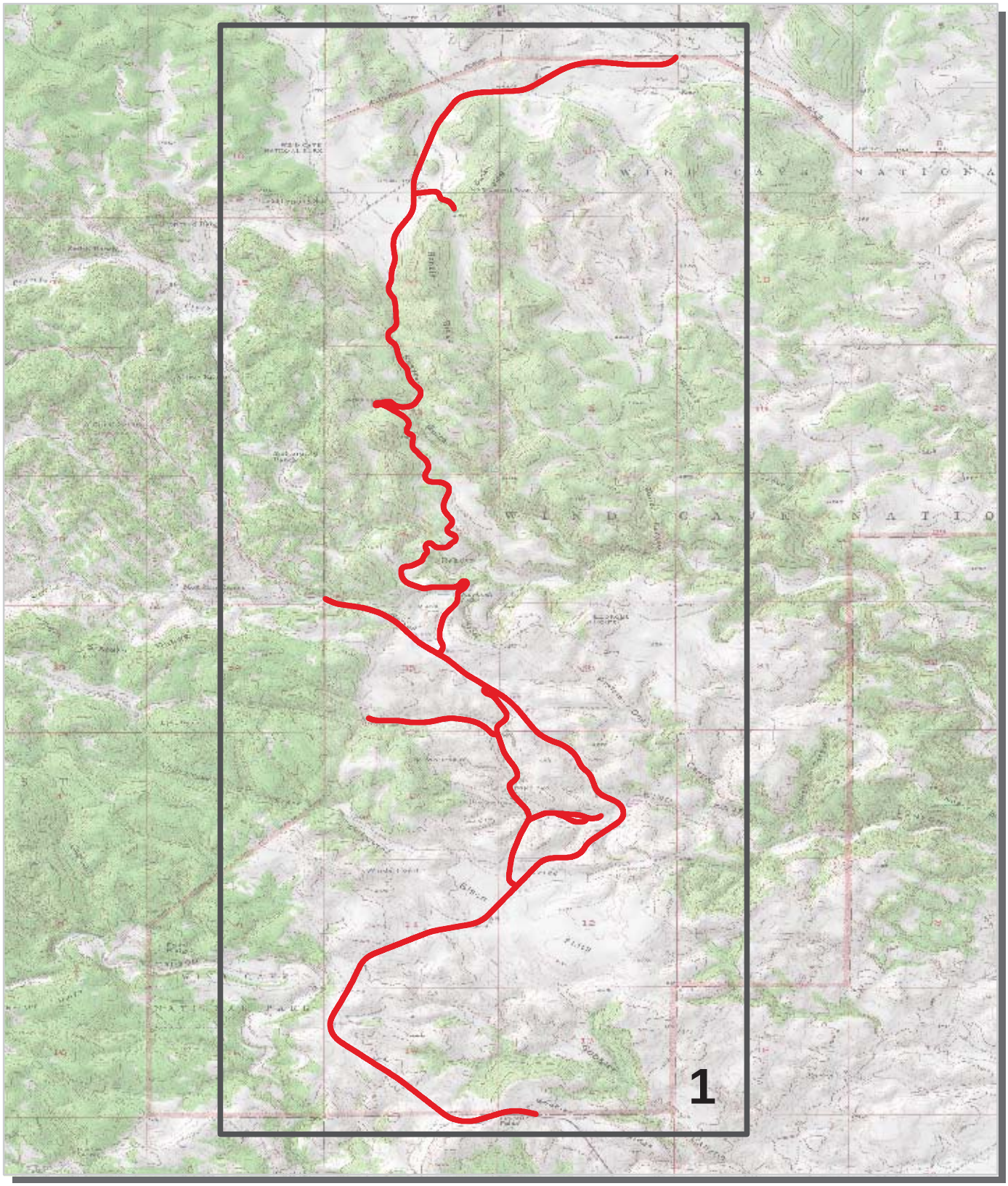
These numbers are for preliminary planning purposes only and should not be used for project level proposals. For park planning level analysis, apply your park multiplier for more accurate regional costs.

Wind Cave National Park Summaries

Paved Route Miles and Percentages by Functional Class and PCR for ARAN Driven Paved Roads

F.C.	Pavement Condition Rating								TOTAL MILES
	Poor (<=60)		Fair (61-84)		Good (85-94)		Excellent (95-100)		
	MILES	%	MILES	%	MILES	%	MILES	%	
1	7.66	44.85%	6.42	37.59%	0.97	5.68%	0.24	1.41%	15.29
2									
3	0.86	5.04%	0.26	1.52%					1.12
4									
5	0.59	3.45%	0.08	0.47%					0.67
6									
7									
8									
Totals	**9.11**	**53.34%**	**6.76**	**39.58%**	**0.97**	**5.68%**	**0.24**	**1.41%**	**17.08**

Wind Cave National Park
Route Location
Key Map

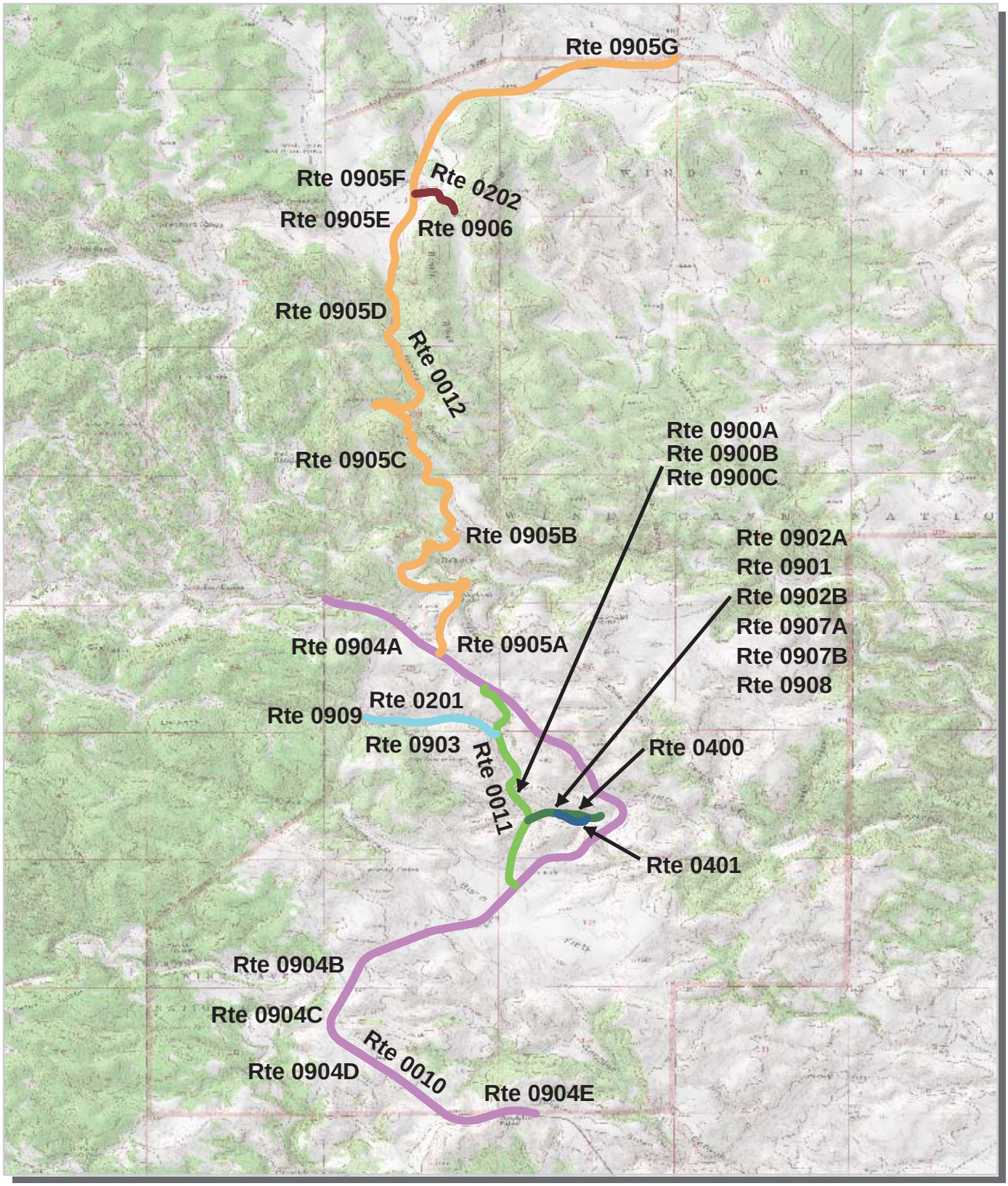


Park Owned Routes

2 1 0 2 Miles

N

Wind Cave National Park
Route Location Map
Area Map 1

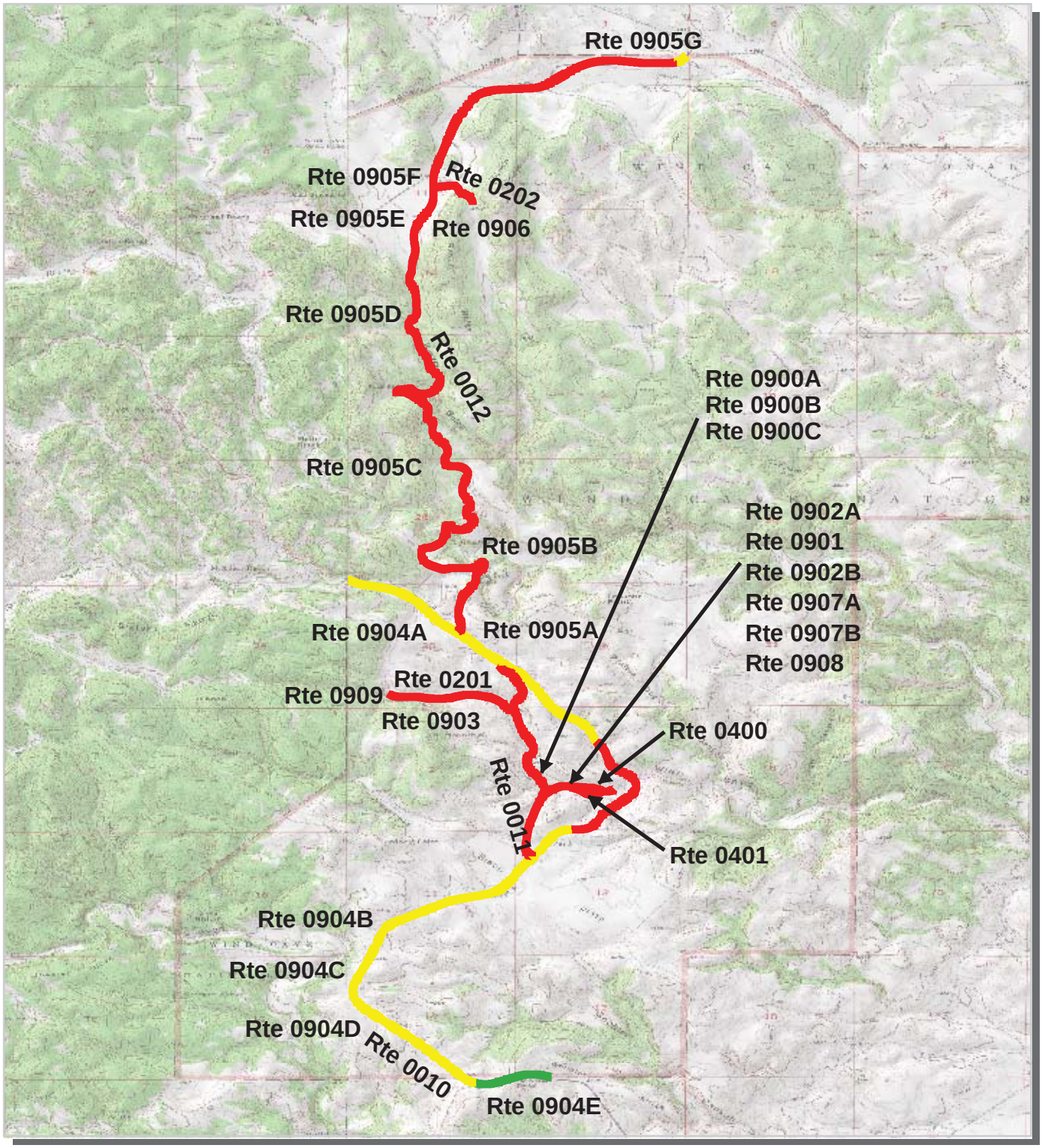


Unique colors used to differentiate routes

2 1 0 2 Miles

N

Wind Cave National Park
Route Condition Key Map
PCR - Mile by Mile



PCR	Poor	Fair	Good	Excellent
	(<=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.

2 1 0 2 Miles

N

NPS/RIP Route ID Report

(Numerical By Route #)

Shading Color Key:
Red text denotes approx. mileage

White = Paved Routes, ARAN Driven
Yellow = Unpaved Routes, ARAN not Driven
Blue = All Paved Parking Areas
Grey = Paved Routes, ARAN not Driven
Red =
Green = All Unpaved Parking Areas
Black = Paved State, Local or Private non-NPS Routes, ARAN Driven
Purple =

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Wind Cave National Park

Rte. #	FMSS Asset #	Route Name	Route Description From	Route Description To	Paved Miles	Un-Paved Miles	Rte. Lgth	Func. Class	Rte. Lanes	Manual Rated SQ/FT	Surf. Type
0010	27766	WIND CAVE HIGHWAY (U.S. 385)	From West Park Boundary	To South Park Boundary	6.47	0.00	6.47	1	2	0	AS
0011	27804	VISITOR CENTER / CAVE ACCESS ROAD	From Route 0010 at MP 3.32 on Right	To Route 0010 at MP 1. 16	1.72	0.00	1.72	1	2	0	AS
0012	27767	NORTH ENTRANCE ROAD (HWY 87)	From Route 0010 at MP 0.8 on Left	To North Park Boundary	7.10	0.00	7.10	1	2	0	OC
0200	27775	Picnic Area Access Road	From Route 0011 at MP 0.98 on Right	To End of Loop	0.15	0.00	0.15	3	1	7,920	OC
0201	27995	ELK MOUNTAIN CAMPGROUND ROAD	From Route 0011 at MP 1.28 on Left	To Route 0206C	0.80	0.00	0.80	3	2	0	OC
0202	27730	RANKIN RIDGE TRAIL ACCESS ROAD	From Route 0012 at MP 5.0 on Right	To Route 0906	0.32	0.00	0.32	3	2	0	OC
0203	27770	PRINGLE CUTOFF ROAD	From Route 0012	To West Park Boundary	0.00	0.69	0.69	4	2	0	GR
0204	27768	WILDLIFE OBSERVATION ROAD (NPS 5)	From Route 0012	To Route 0205	0.00	7.60	7.60	4	2	0	GR
0205	27769	PARK BOUNDARY ACCESS ROAD (NPS 6)	From South Park Boundary	To North Park Boundary	0.00	4.99	4.99	4	2	0	GR
0206A	53324	Elk Mountain Campground Loop A	From Route 0201	To End of Loop	0.24	0.00	0.24	3	1	15,333	OC
0206B	53933	Elk Mountain Campground Loop B	From Route 0201	To End of Loop	0.10	0.00	0.10	3	1	6,146	OC
0206C	53934	Elk Mountain Campground Loop C	From Route 0201	To Route 0206D	0.13	0.00	0.13	3	1	8,173	OC
0206D		Elk Mountain Campground Loop D	From Route 0206C	To End of Loop	0.17	0.00	0.17	3	1	10,898	OC
0400	27764	ADMINISTRATIVE MAINTENANCE ACCESS ROAD	From Route 0011 at MP 0.55 on Right	To Route 0901	0.46	0.00	0.46	5	2	0	OC
0401	27790	LOWER RESIDENCE SERVICE ROAD	From Route 0400 at MP 0.19	To Route 0400 at MP 0. 37	0.21	0.00	0.21	5	2	0	OC
0402	27793	Upper Residence Service Road	From Route 0011 at MP 0.78 on Left	To End	0.17	0.00	0.17	5	1	31,162	OC
0403	27950	MIXING PAD ROAD	From Route 0011	To End	0.00	0.80	0.80	4	2	0	GR
0404	27980	WELL ROAD	From Route 0010	To End	0.00	2.00	2.00	4	2	0	GR
0405	27982	RESERVOIR ROAD	From	To	0.00	0.50	0.50	4	2	0	GR
0407	27998	CAMPGROUND RESERVOIR ROAD	From End of Route 0403	To Reservoir	0.00	0.90	0.90	4	2	0	GR
0408	27779	WILDLIFE TRAP ROAD	From Route 0205	To End at Bison Corrals	0.00	0.30	0.30	4	2	0	GR
0409	53329	FIRE & SERVICE ROADS	From	To	0.00	19.80	19.80	4	2	0	GR
0700	56875	Fire Tower Access Road	From	To	0.00	0.40	0.40	ZZ	1	0	GR
0900	27806	Visitor Center Parking	Adjacent to Route 0011 at MP 0.6 on Left and Right		0.00	0.00	0.00	9		69,363	AS
0901	27799	Maintenance Yard Parking	At End of Route 0400		0.00	0.00	0.00	9		18,256	AS
0902A	27792	Lower Residence Parking A	Adjacent to Route 0401 on Right		0.00	0.00	0.00	9		9,894	OC
0902B	53935	Lower Residence Parking B	Adjacent to Route 0401 on Left		0.00	0.00	0.00	9		2,186	OC
0903	28002	Elk Mountain Campground Registration Parking	Adjacent to Route 0201 at MP 0.4 on Right		0.00	0.00	0.00	9		3,085	OC

NPS/RIP Route ID Report

(Numerical By Route #)

Shading Color Key:
Red text denotes approx. mileage

White = Paved Routes, ARAN Driven	Yellow = Unpaved Routes, ARAN not Driven	Blue = All Paved Parking Areas
Grey = Paved Routes, ARAN not Driven	Red =	Green = All Unpaved Parking Areas
Black = Paved State, Local or Private non-NPS Routes, ARAN Driven	Purple =	

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Wind Cave National Park

Rte. #	FMSS Asset #	Route Name	Route Description From	Route Description To	Paved Miles	Un-Paved Miles	Rte. Lgth	Func. Class	Rte. Lanes	Manual Rated SQ/FT	Surf. Type
0904A	53327	U.S. 385 Parking A	Adjacent to Route 0010 at MP 0.6 on Left		0.00	0.00	0.00	9		17,490	OC
0904B	53936	U.S. 385 "Prairie Restoration" Parking	Adjacent to Route 0010 at MP 4.6 on Left		0.00	0.00	0.00	9		13,285	OC
0904C	53937	U.S. 385 "Mineral Lick" Parking	Adjacent to Route 0010 at MP 4.9 on Left		0.00	0.00	0.00	9		20,863	OC
0904D	53938	U.S. 385 "Return Of Bison" Parking	Adjacent to Route 0010 at MP 5.35 on Left		0.00	0.00	0.00	9		14,560	OC
0904E	53939	U.S. 385 "South Entrance" Parking	Adjacent to Route 0010 at MP 6.5 on Left		0.00	0.00	0.00	9		6,823	OC
0905A	53328	State Highway 87 " Little House on the Prairie" Parking	Adjacent to Route 0012 at MP 0.1 on Left		0.00	0.00	0.00	9		18,298	OC
0905B	53942	State Highway 87 " American Elk" Parking	Adjacent to Route 0012 at MP 1.6 on Right		0.00	0.00	0.00	9		4,122	AS
0905C	53944	State Highway 87 " Ancient Foundations" Parking	Adjacent to Route 0012 at MP 2.4 on Right		0.00	0.00	0.00	9		10,579	AS
0905D	53946	State Highway 87 "East Meets West" Parking	Adjacent to Route 0012 at MP 4.0 on Left		0.00	0.00	0.00	9		4,154	AS
0905E	53947	State Highway 87 Parking E	Adjacent to Route 0012 at MP 4.72 on Left		0.00	0.00	0.00	9		4,412	AS
0905F	53948	State Highway 87 Parking F	Adjacent to Route 0012 at MP 5.0 on Right		0.00	0.00	0.00	9		4,067	AS
0905G		State Highway 87 " Welcome Sign" Parking	Adjacent to Route 0012 at MP 6.8 on Left		0.00	0.00	0.00	9		6,984	OC
0906	27737	Rankin Ridge Trail Parking	At End of Route 0202		0.00	0.00	0.00	9		5,539	OC
0907A	53326	Elevator Parking A	Adjacent to Route 0400 on Left		0.00	0.00	0.00	9		2,371	OC
0907B	53941	Elevator Parking B	Adjacent to Route 0400 on Right		0.00	0.00	0.00	9		552	OC
0908	53325	Picnic Area Parking	Adjacent to Route 0011 at MP 0.9 on Right		0.00	0.00	0.00	9		15,989	OC
0909		Elk Mountain Trailhead / Ampitheater Parking	Adjacent to Route 0201 at MP 0.74 on Right		0.00	0.00	0.00	9		2,958	OC
				Totals:	18.04	37.98	**56.02**			335,464	

NPS/RIP Route ID Report

(Numerical By Route #)

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Red text denotes approx. mileage

White = Paved Routes, ARAN Driven	Yellow = Unpaved Routes, ARAN not Driven	Blue = All Paved Parking Areas
Grey = Paved Routes, ARAN not Driven	Red =	Green = All Unpaved Parking Areas
Black = Paved State, Local or Private non-NPS Routes, ARAN Driven	Purple =	

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 Invetoried 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, campgrounds, etc. Route Numbers 100-199.

Class 3 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 than FC 5.

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.

Class 9 Boat Ramp - (Public and Administrative) Route Numbers 800-899.
Parking Area - (Public and Administrative) Route Numbers 900-1999.

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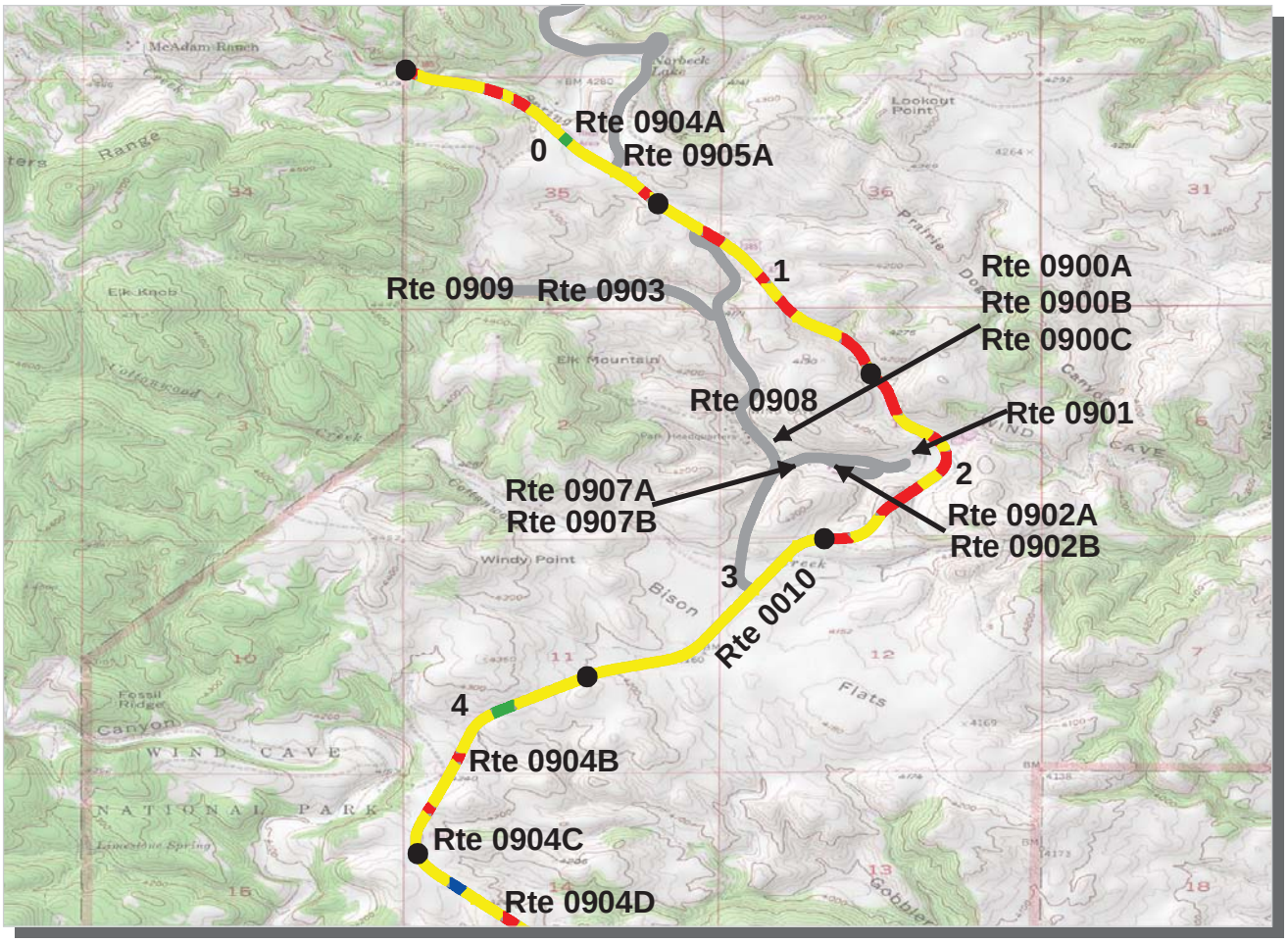
A park road system contains those roads within or giving access to a park or other unit of the NPS which are administered by the NPS, or by the Service in cooperation with other agencies. The assignment of a functional classification (FC) to a park road is not based on traffic volumes or design speed,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

ZZ Functional Class Routes were added from FMSS Database. Final Route Number and Functional Class will be established during Park visit for Cycle 4 data collection.

Surface Type Abbreviations:

AS - Asphaltic Concrete Pavement
CO - Portland Cement Concrete Pavement
NC - New Chip Seal Pavement (Under 5 Years)
OC - Old Chip Seal Pavement (5 Years and Greater)
SS - Slurry Seal Pavement
GR - Gravel Road Bed
BR - Brick or Pavers Road Bed
CB - Cobble Stone Road Bed
SA - Sand Road Bed
DT - Dirt or Native Material Road Bed
OT - Other Materials Road Bed



PCR	Poor	Fair	Good	Excellent
	(<=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.

Midwest Region
WICA : Wind Cave National Park

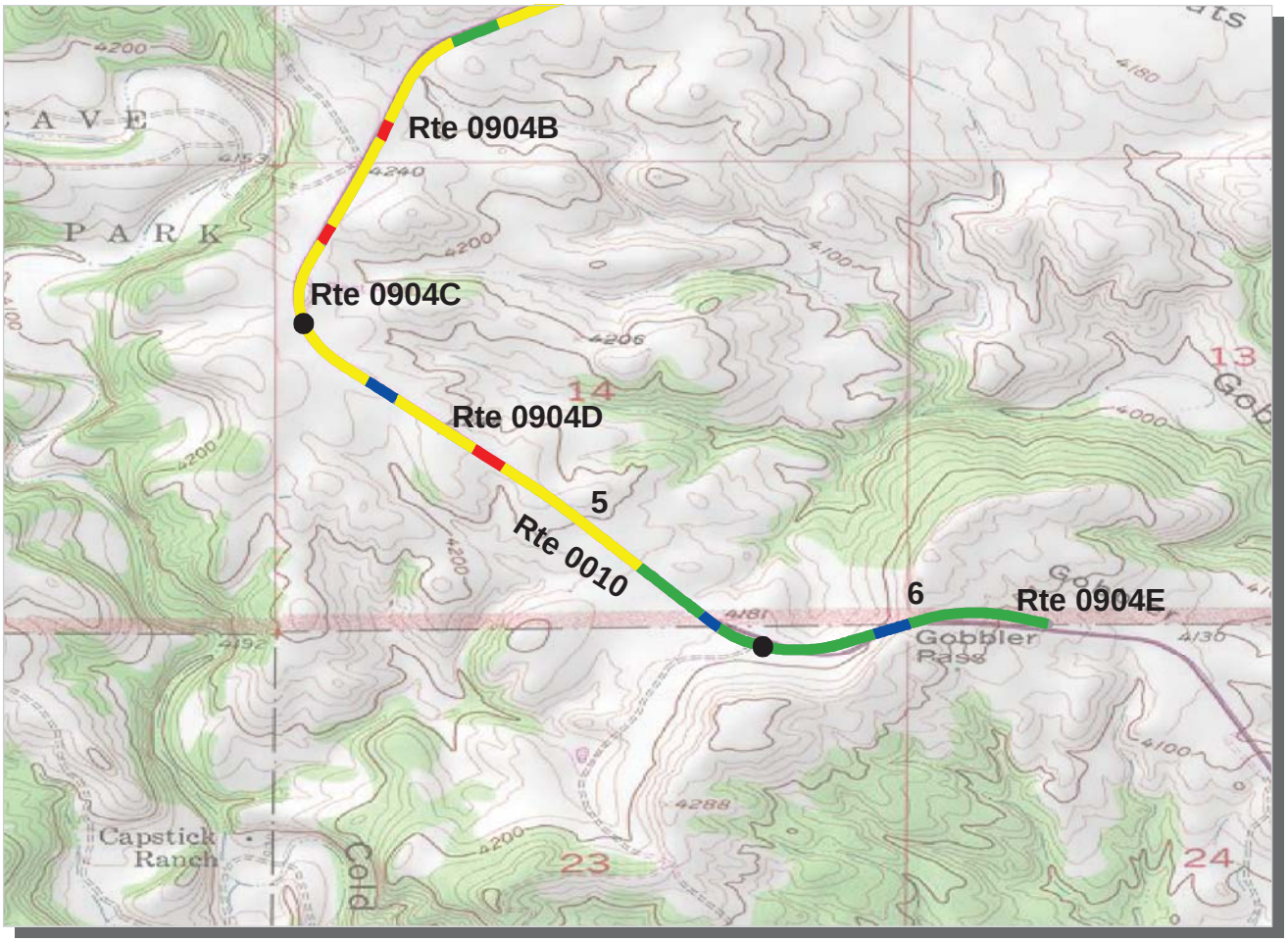
ROUTE: 0010 Wind Cave Highway (U.S. 385) **TOTAL LENGTH: 6.47 Miles**

Section Number	0	1	2	3	4
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	24	27	28	27	26
Lane Width (ft)	11	13	15	14	13
Shoulder Width (ft)	3	3	5	7	2
Roadway Condition Information					
PCR (Pavement Condition Rating)	65	61	57	69	69
RCI (Roughness Condition Index)	90	87	78	91	89
SCR (Surface Condition Rating)	49	44	43	54	55
Alligator Cracking Index	93	96	93	98	100
Rutting Index	57	52	52	57	56
Patching Index	100	98	99	100	100
Tranverse Cracking Index	99	97	97	98	99
Longitudinal Cracking Index	98	98	98	99	99
Shoulder Condition Rating	GOOD	GOOD	GOOD	GOOD	GOOD
Drainage Condition Rating	GOOD	GOOD	GOOD	GOOD	GOOD

* NC designates data not collected NA designates not applicable

** See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm

ROUTE: 0010 Wind Cave Highway (U.S. 385)



PCR	Poor	Fair	Good	Excellent
	(<=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.

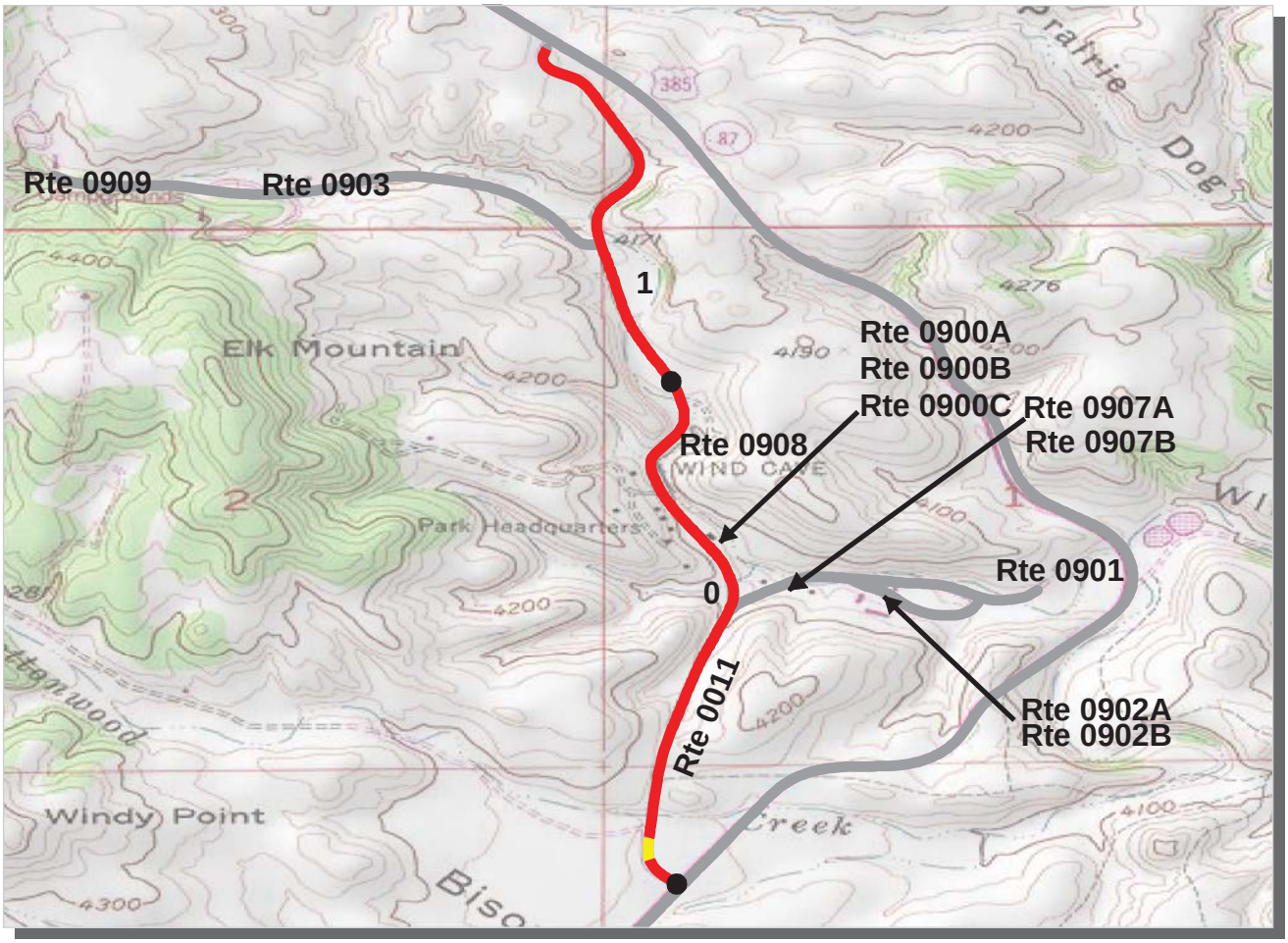
Midwest Region
WICA : Wind Cave National Park

ROUTE: 0010 Wind Cave Highway (U.S. 385) **TOTAL LENGTH: 6.47 Miles**

Section Number	5	6			
Section Length (mi)	1.00	0.47			
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2	2			
Paved Width (ft)	24	26			
Lane Width (ft)	13	13			
Shoulder Width (ft)	9	10			
Roadway Condition Information					
PCR (Pavement Condition Rating)	74	89			
RCI (Roughness Condition Index)	89	99			
SCR (Surface Condition Rating)	63	82			
Alligator Cracking Index	99	100			
Rutting Index	64	82			
Patching Index	100	100			
Tranverse Cracking Index	99	100			
Longitudinal Cracking Index	100	100			
Shoulder Condition Rating	GOOD	GOOD			
Drainage Condition Rating	GOOD	GOOD			

* NC designates data not collected NA designates not applicable

** See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm



PCR	Poor	Fair	Good	Excellent
	(<=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.

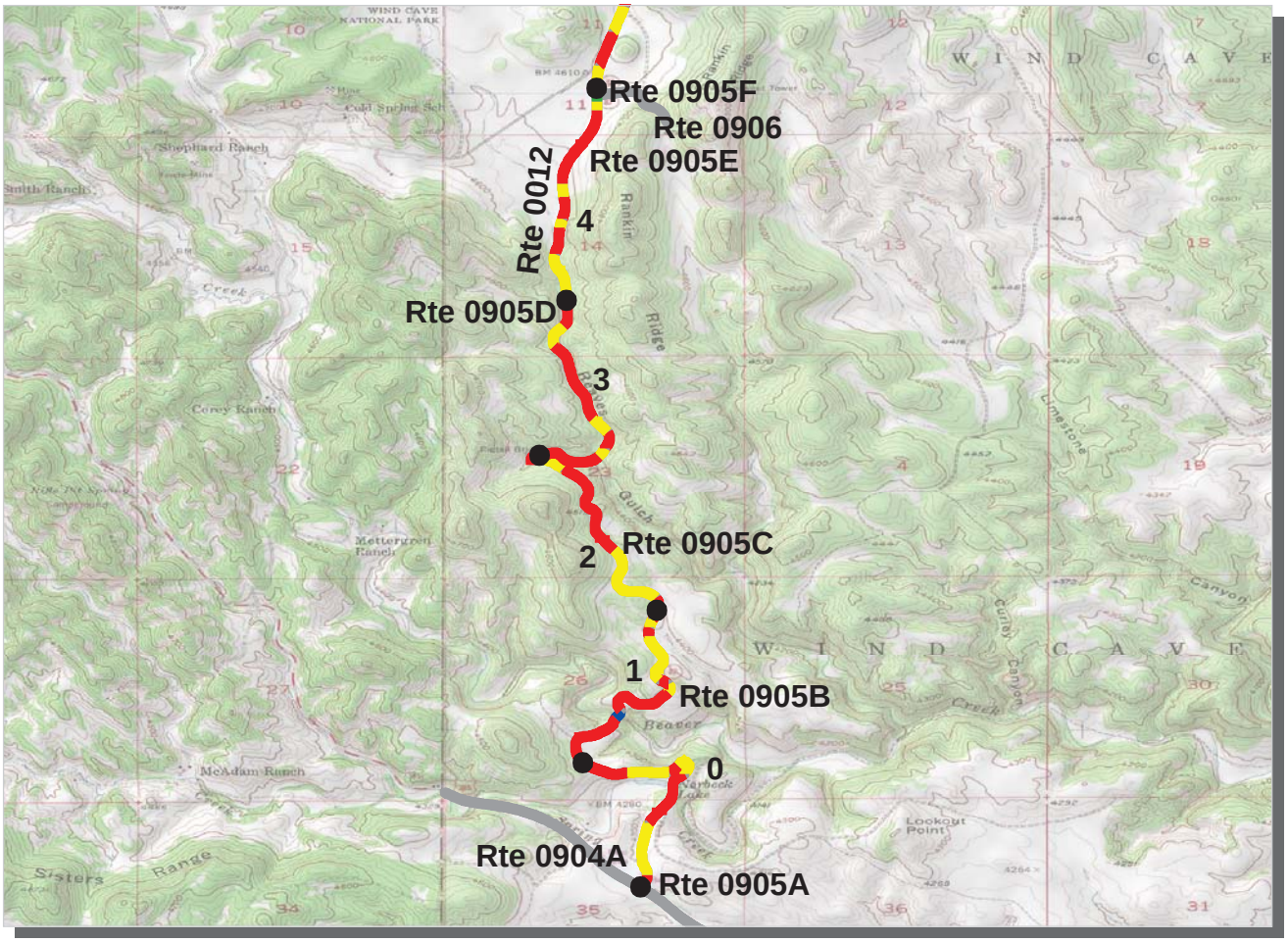
Midwest Region
WICA : Wind Cave National Park

ROUTE: 0011 Visitor Center / Cave Access Road **TOTAL LENGTH: 1.72 Miles**

Section Number	0	1			
Section Length (mi)	1.00	0.72			
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2	2			
Paved Width (ft)	25	26			
Lane Width (ft)	11	14			
Shoulder Width (ft)	4	0			
Roadway Condition Information					
PCR (Pavement Condition Rating)	39	45			
RCI (Roughness Condition Index)	58	60			
SCR (Surface Condition Rating)	28	36			
Alligator Cracking Index	81	100			
Rutting Index	42	39			
Patching Index	99	100			
Tranverse Cracking Index	98	98			
Longitudinal Cracking Index	99	98			
Shoulder Condition Rating	GOOD	N/A			
Drainage Condition Rating	GOOD	GOOD			

* NC designates data not collected NA designates not applicable

** See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm



PCR Poor (<=60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100)

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Midwest Region

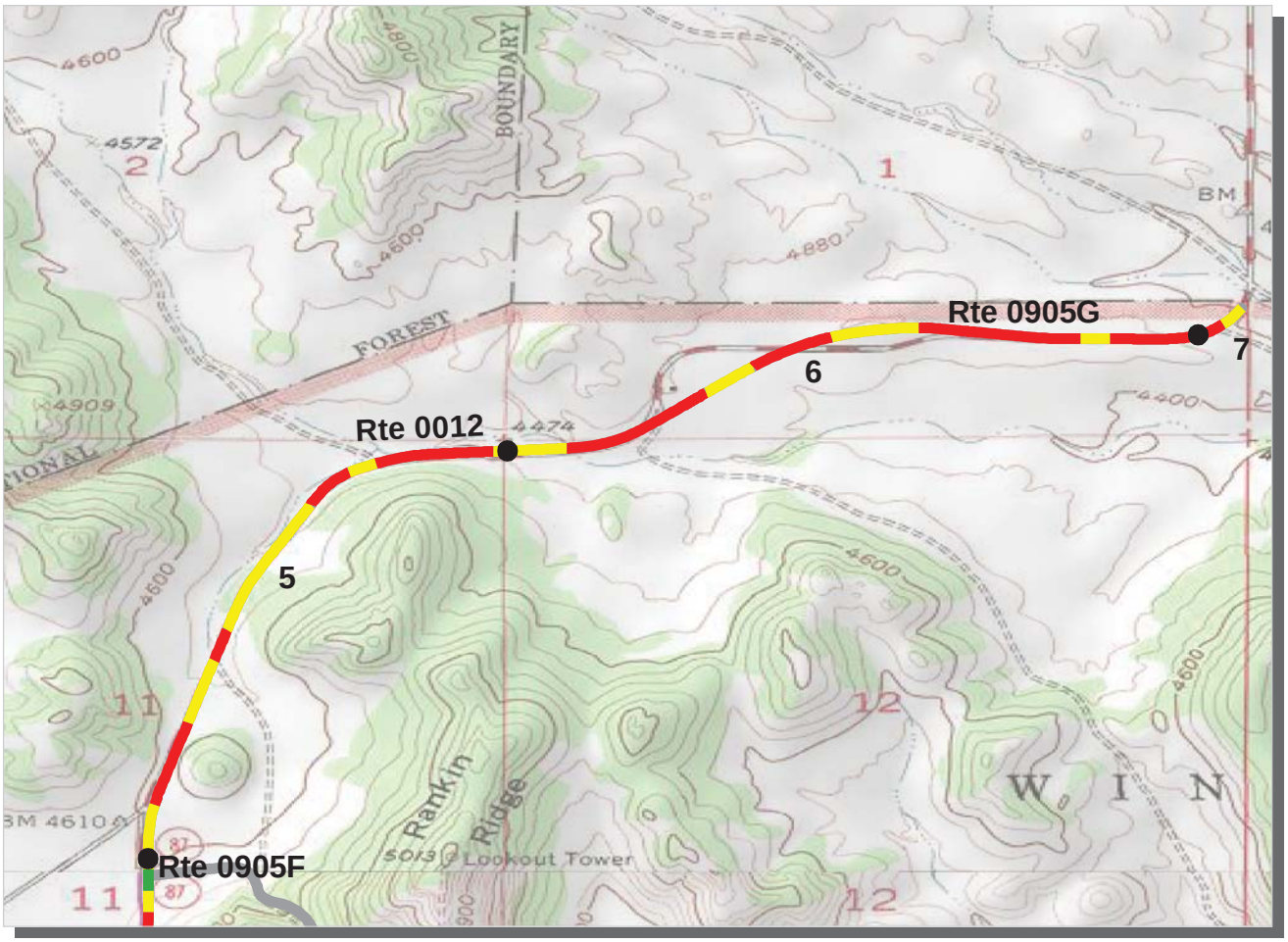
WICA : Wind Cave National Park

ROUTE: 0012 North Entrance Road (Hwy 87) **TOTAL LENGTH: 7.10 Miles**

Section Number	0	1	2	3	4
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	23	24	24	22	25
Lane Width (ft)	12	13	13	11	12
Shoulder Width (ft)	0	0	0	0	0
Roadway Condition Information					
PCR (Pavement Condition Rating)	55	53	56	53	59
RCI (Roughness Condition Index)	86	65	81	72	91
SCR (Surface Condition Rating)	37	44	42	40	38
Alligator Cracking Index	100	99	100	100	100
Rutting Index	37	47	44	41	41
Patching Index	100	100	100	100	100
Tranverse Cracking Index	99	97	98	99	97
Longitudinal Cracking Index	100	99	99	99	99
Shoulder Condition Rating	N/A	N/A	N/A	N/A	N/A
Drainage Condition Rating	GOOD	GOOD	GOOD	GOOD	GOOD

* NC designates data not collected NA designates not applicable

** See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm



PCR	Poor	Fair	Good	Excellent
	(<=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.

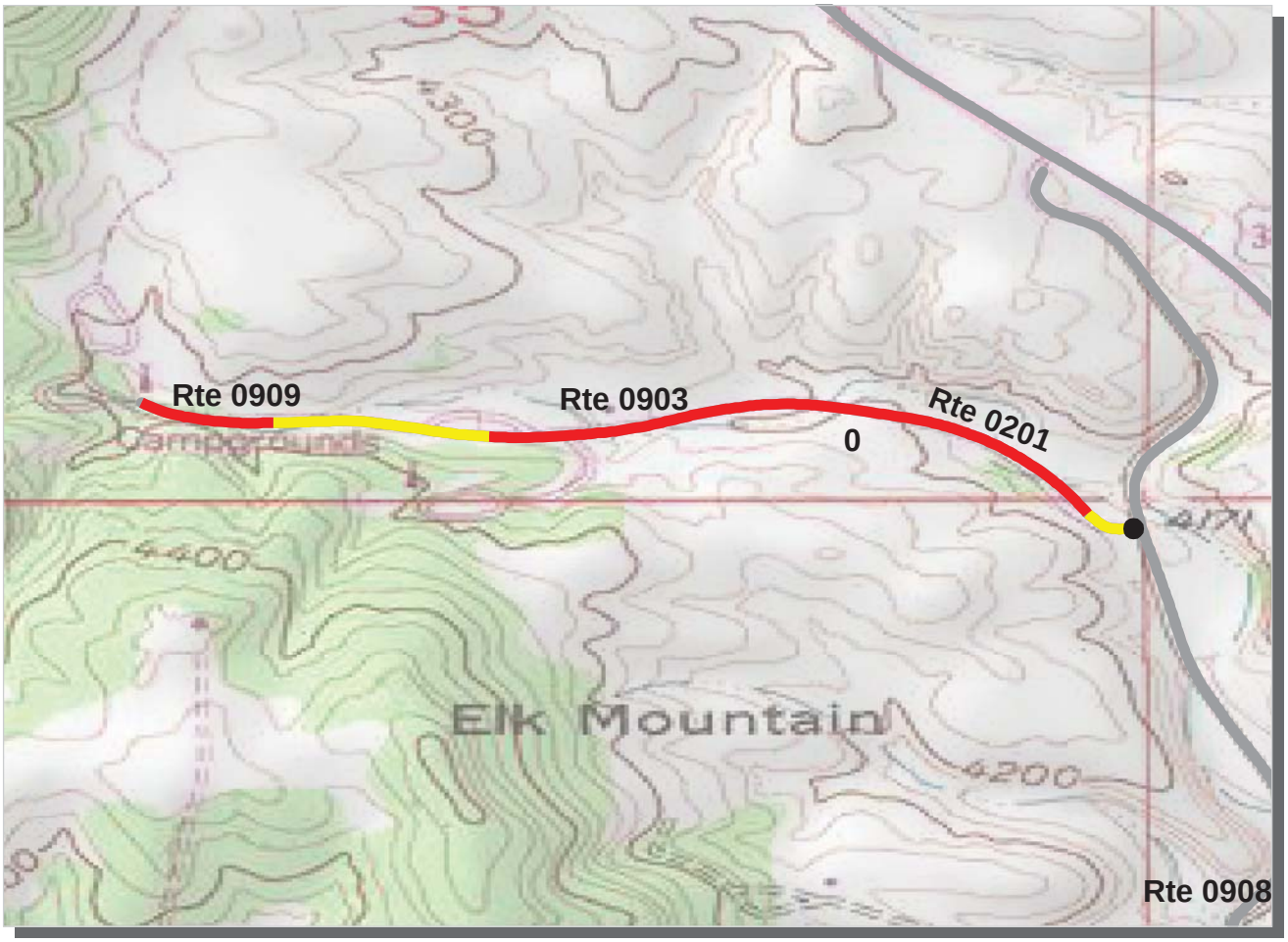
Midwest Region
WICA : Wind Cave National Park

ROUTE: 0012 North Entrance Road (Hwy 87) **TOTAL LENGTH: 7.10 Miles**

Section Number	5	6	7		
Section Length (mi)	1.00	1.00	0.10		
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2	2	2		
Paved Width (ft)	25	24	23		
Lane Width (ft)	13	13	13		
Shoulder Width (ft)	0	0	0		
Roadway Condition Information					
PCR (Pavement Condition Rating)	60	54	67		
RCI (Roughness Condition Index)	87	80	87		
SCR (Surface Condition Rating)	42	37	54		
Alligator Cracking Index	100	100	100		
Rutting Index	43	39	55		
Patching Index	100	100	100		
Tranverse Cracking Index	98	97	98		
Longitudinal Cracking Index	99	99	100		
Shoulder Condition Rating	N/A	N/A	N/A		
Drainage Condition Rating	GOOD	GOOD	GOOD		

* NC designates data not collected NA designates not applicable

** See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm



PCR	Poor	Fair	Good	Excellent
	(<=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.

Midwest Region
WICA : Wind Cave National Park

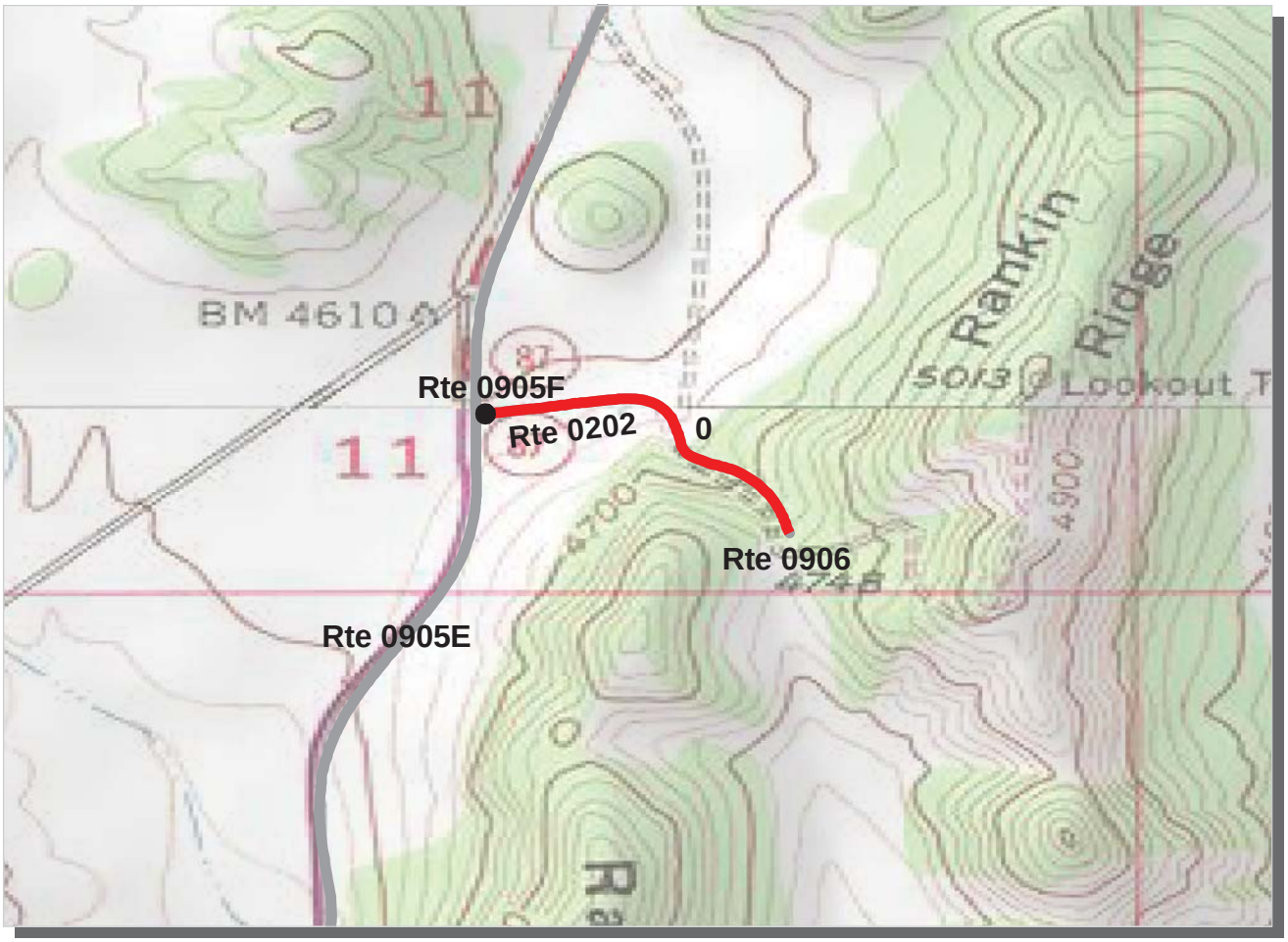
ROUTE: 0201 Elk Mountain Campground Road **TOTAL LENGTH: 0.80 Miles**

Section Number	0				
Section Length (mi)	0.80				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	19				
Lane Width (ft)	10				
Shoulder Width (ft)	1				
Roadway Condition Information					
PCR (Pavement Condition Rating)	54				
RCI (Roughness Condition Index)	74				
SCR (Surface Condition Rating)	42				
Alligator Cracking Index	100				
Rutting Index	43				
Patching Index	99				
Tranverse Cracking Index	99				
Longitudinal Cracking Index	99				
Shoulder Condition Rating	GOOD				
Drainage Condition Rating	GOOD				

* NC designates data not collected NA designates not applicable

** See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm

ROUTE: 0201 Elk Mountain Campground Road



PCR	Poor	Fair	Good	Excellent
	(<=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.

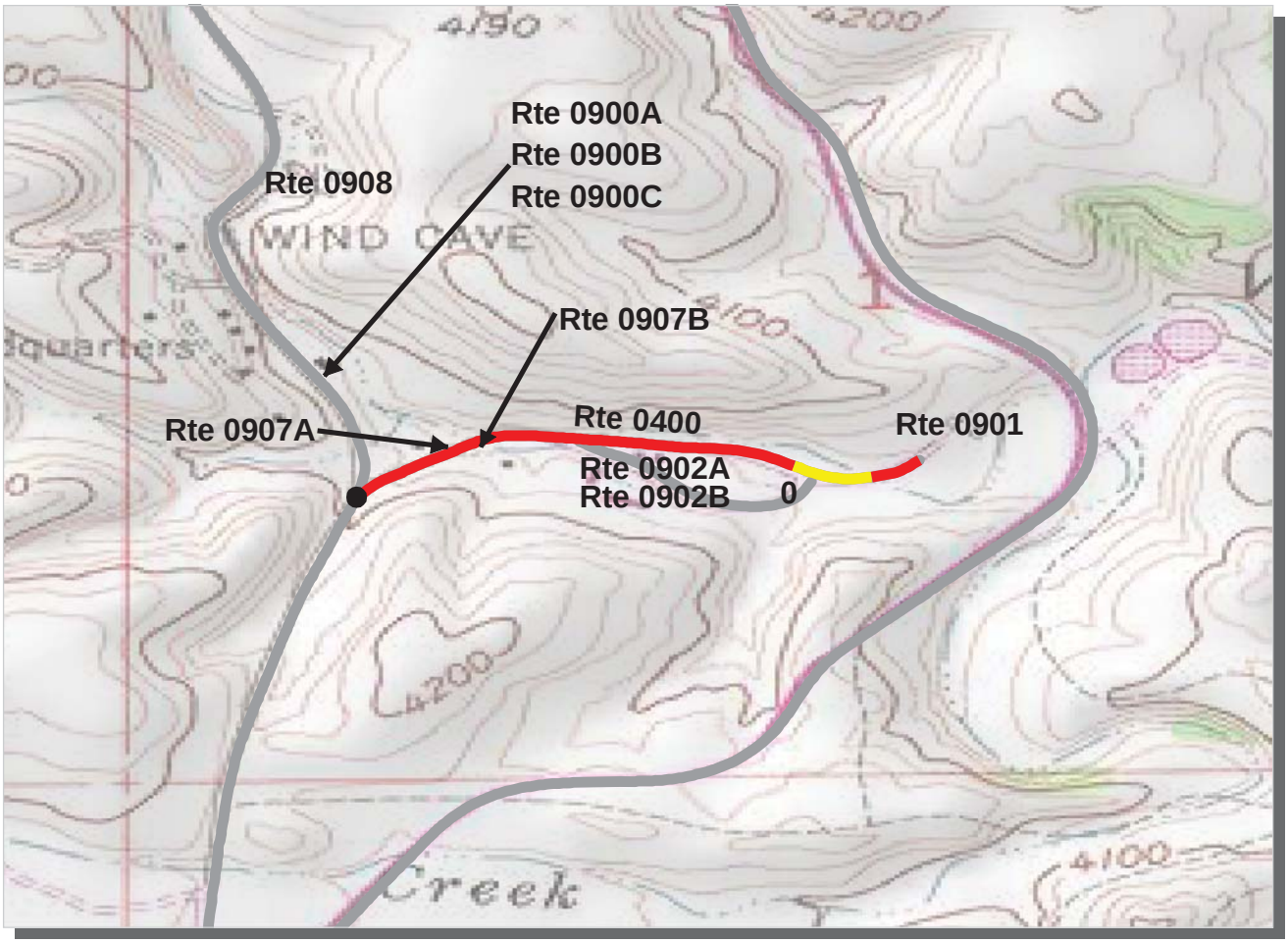
Midwest Region
WICA : Wind Cave National Park

ROUTE: 0202 Rankin Ridge Trail Access Road **TOTAL LENGTH: 0.32 Miles**

Section Number	0				
Section Length (mi)	0.32				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	18				
Lane Width (ft)	10				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	32				
RCI (Roughness Condition Index)	55				
SCR (Surface Condition Rating)	23				
Alligator Cracking Index	96				
Rutting Index	29				
Patching Index	100				
Tranverse Cracking Index	99				
Longitudinal Cracking Index	98				
Shoulder Condition Rating	N/A				
Drainage Condition Rating	GOOD				

* NC designates data not collected NA designates not applicable

** See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm



PCR	Poor	Fair	Good	Excellent
	(<=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.

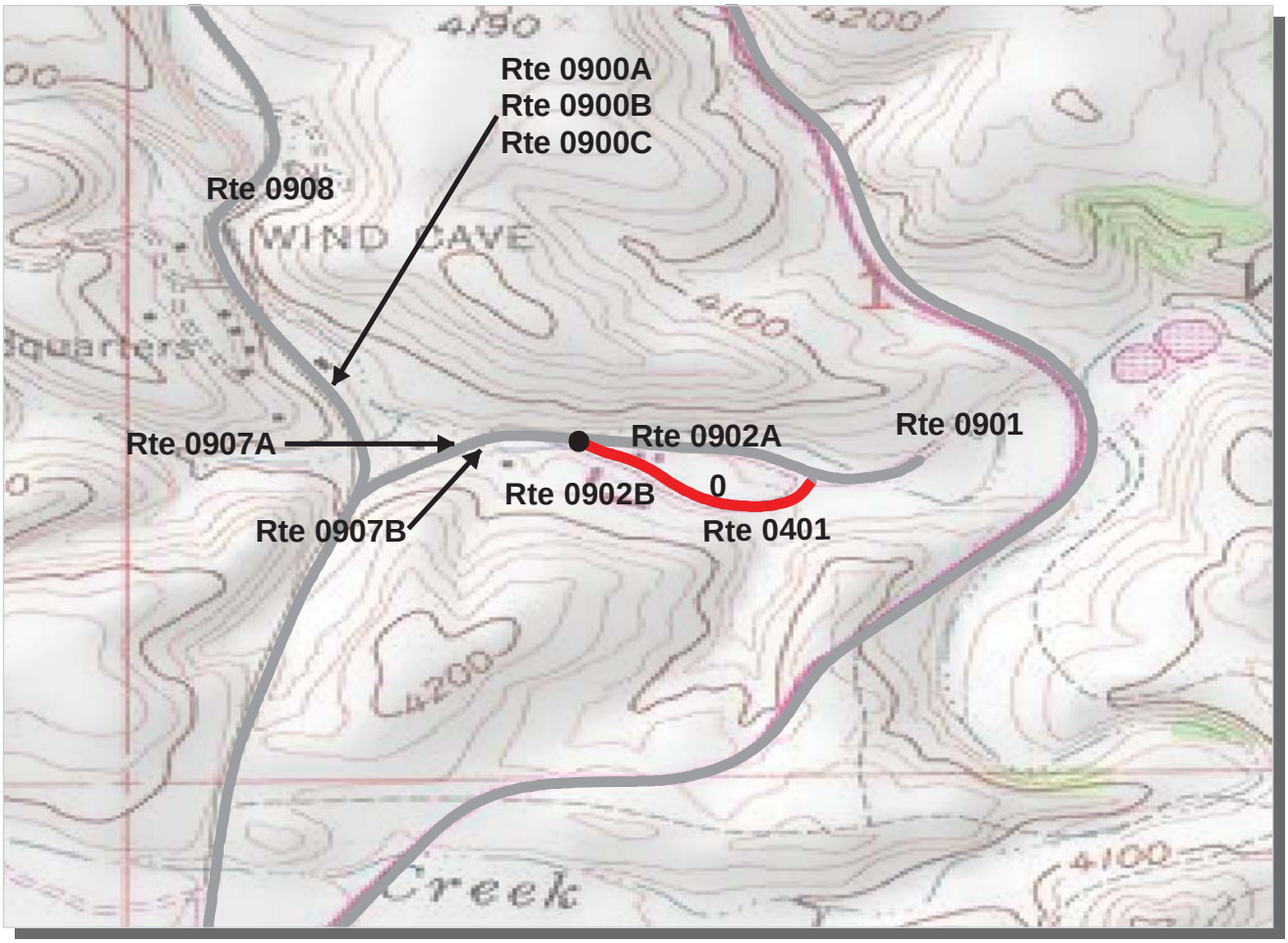
Midwest Region
WICA : Wind Cave National Park

ROUTE: 0400 Administrative Maintenance Access Road **TOTAL LENGTH: 0.46 Miles**

Section Number	0				
Section Length (mi)	0.46				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	22				
Lane Width (ft)	11				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	43				
RCI (Roughness Condition Index)	63				
SCR (Surface Condition Rating)	32				
Alligator Cracking Index	83				
Rutting Index	46				
Patching Index	99				
Tranverse Cracking Index	97				
Longitudinal Cracking Index	98				
Shoulder Condition Rating	N/A				
Drainage Condition Rating	GOOD				

* NC designates data not collected NA designates not applicable

** See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm



N

PCR	Poor	Fair	Good	Excellent
	(<=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.

Midwest Region
WICA : Wind Cave National Park

ROUTE: 0401 Lower Residence Service Road **TOTAL LENGTH: 0.21 Miles**

Section Number	0				
Section Length (mi)	0.21				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	23				
Lane Width (ft)	11				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	16				
RCI (Roughness Condition Index)	38				
SCR (Surface Condition Rating)	9				
Alligator Cracking Index	28				
Rutting Index	44				
Patching Index	98				
Tranverse Cracking Index	99				
Longitudinal Cracking Index	99				
Shoulder Condition Rating	N/A				
Drainage Condition Rating	GOOD				

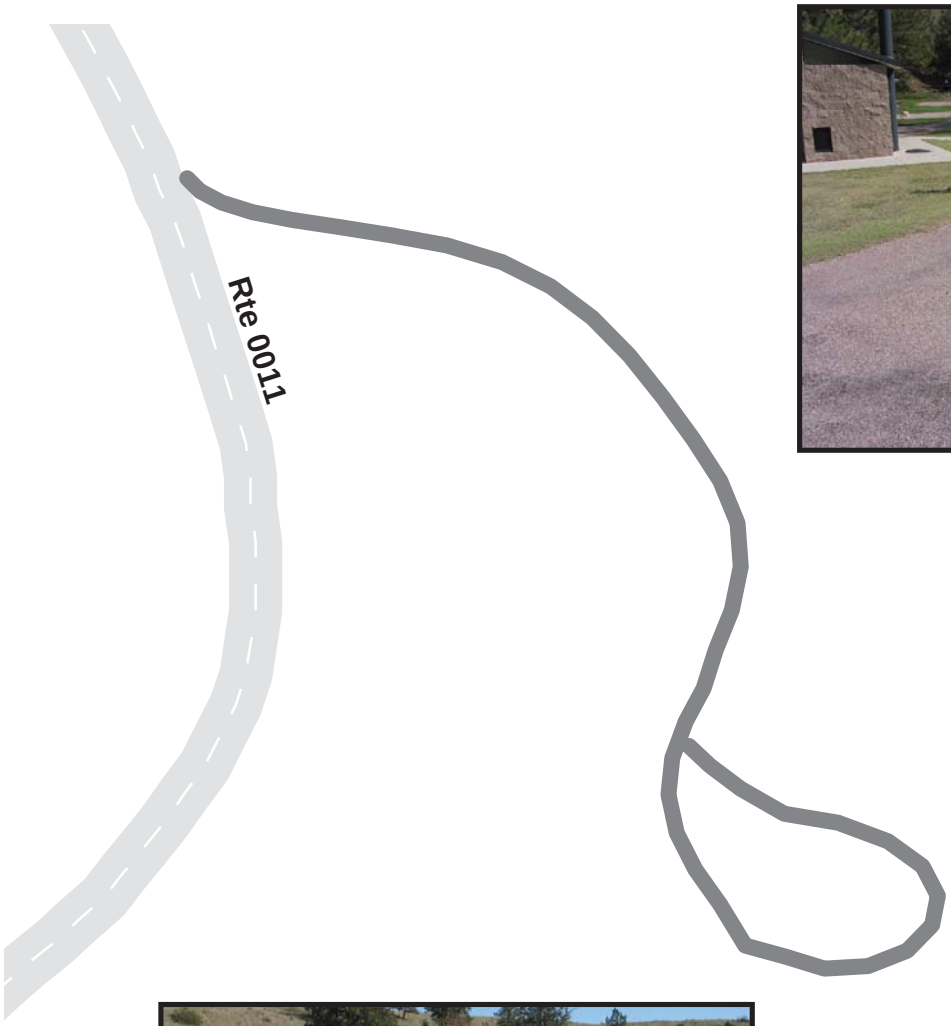
* NC designates data not collected NA designates not applicable

** See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm

Wind Cave National Park
Route 0200
Picnic Area Access Road
From Route 0011 at MP 0.98 on Right

Route	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles *	Condition / PCR	Surface Type
0200	0.15	10.00	7920	0.14	GOOD / 90	OC

* Lane miles are based on 11' lane widths



200 100 0 200
Feet

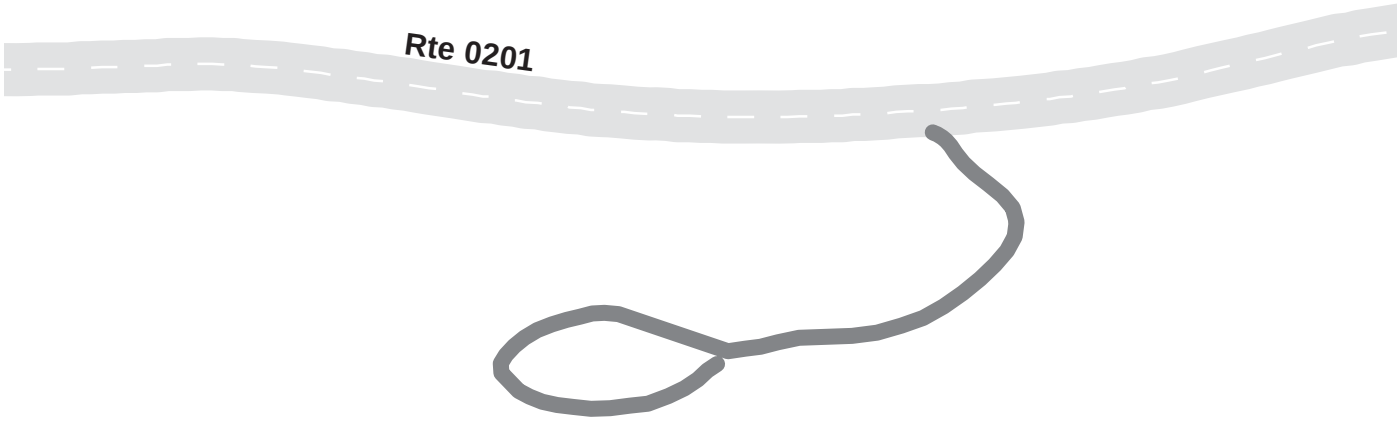
N

Wind Cave National Park
Route 0206A

Elk Mountain Campground Loop A
From Route 0201

Route	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles *	Condition / PCR	Surface Type
0206A	0.24	12.00	15333	0.26	GOOD / 90	OC

* Lane miles are based on 11' lane widths



400 200 0 400
Feet

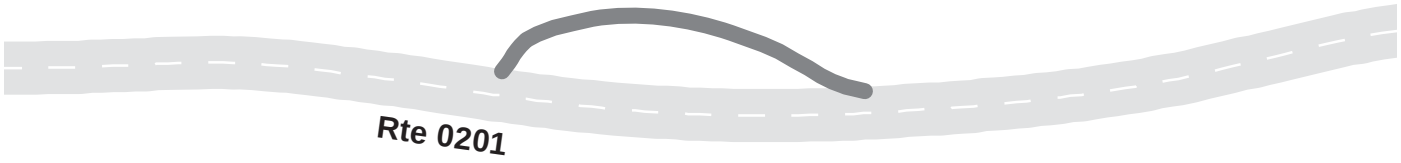
N

Wind Cave National Park
Route 0206B

Elk Mountain Campground Loop B
From Route 0201

Route	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles *	Condition / PCR	Surface Type
0206B	0.10	12.00	6146	0.11	GOOD / 90	OC

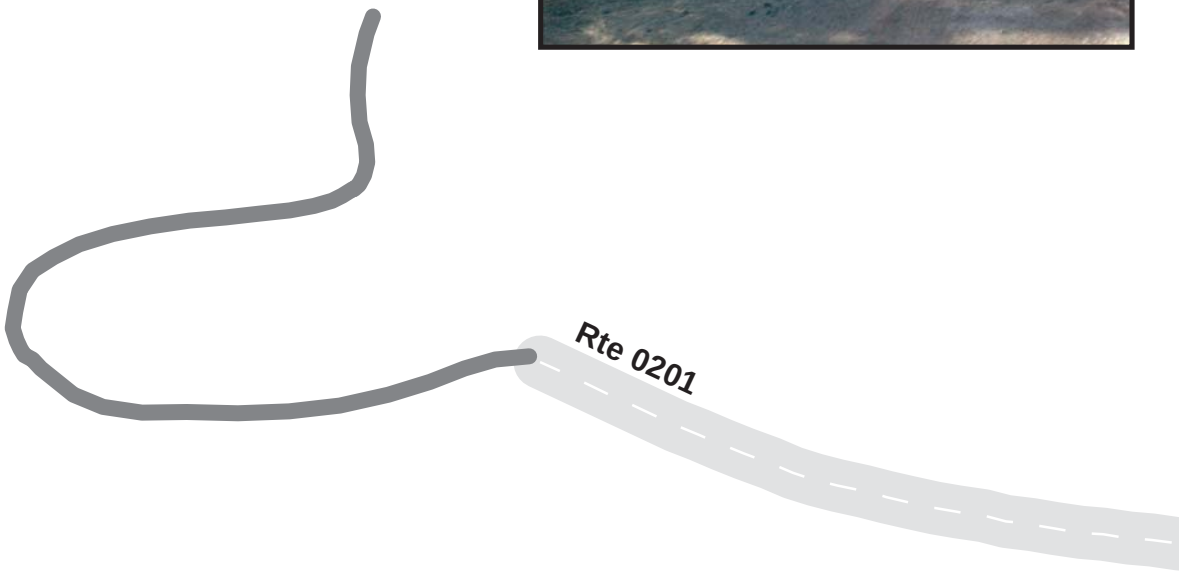
* Lane miles are based on 11' lane widths



Wind Cave National Park
Route 0206C
Elk Mountain Campground Loop C
From Route 0201

Route	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles *	Condition / PCR	Surface Type
0206C	0.13	12.00	8173	0.14	GOOD / 90	OC

* Lane miles are based on 11' lane widths



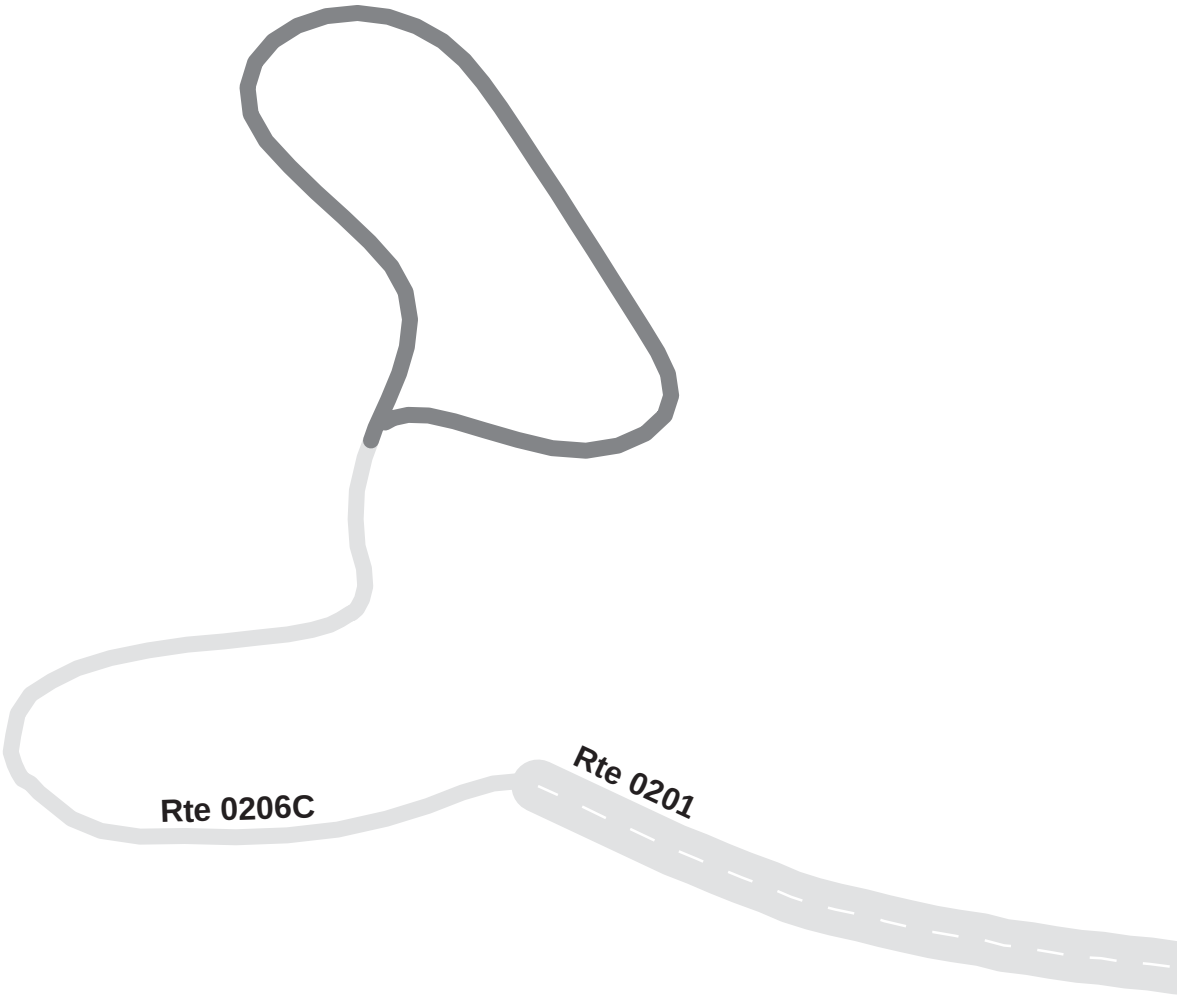
200 100 0 200
Feet

N

Wind Cave National Park
Route 0206D
Elk Mountain Campground Loop D
From Route 0206C

Route	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles *	Condition / PCR	Surface Type
0206D	0.17	12.00	10898	0.19	GOOD / 90	OC

* Lane miles are based on 11' lane widths



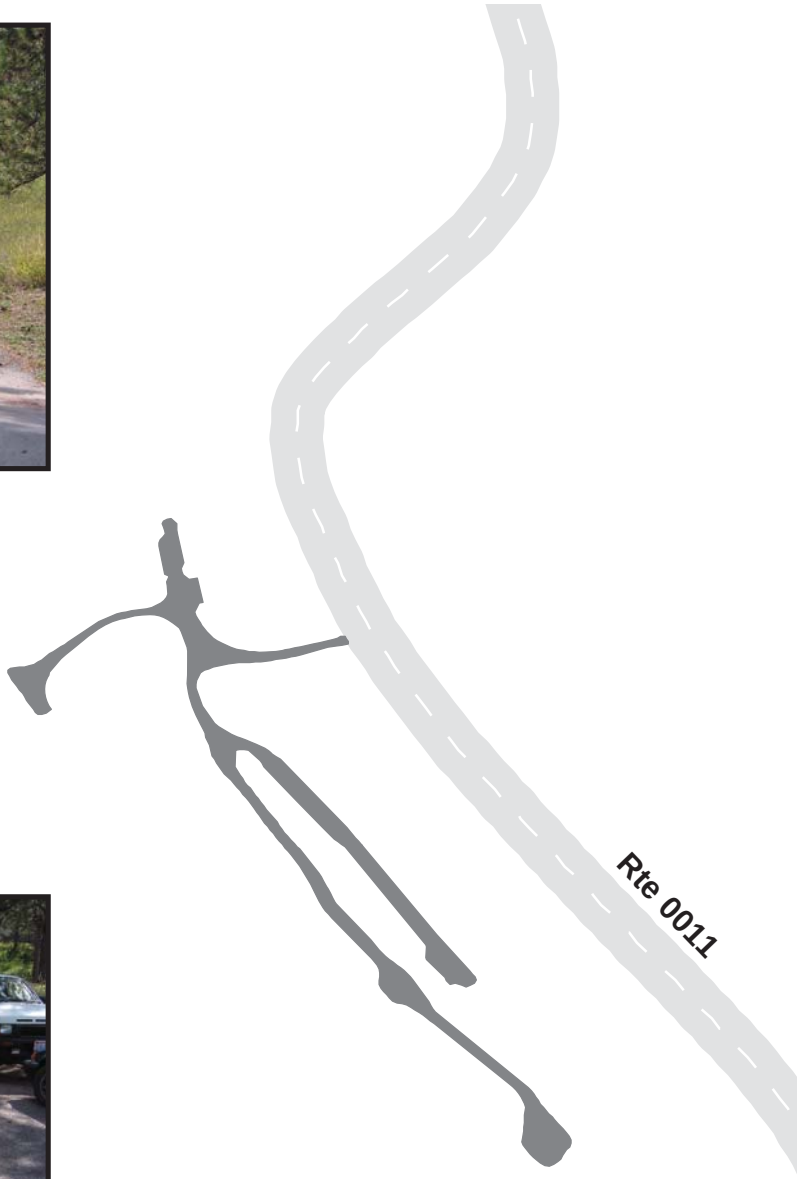
200 100 0 200
Feet

N

Wind Cave National Park
Route 0402
Upper Residence Service Road
From Route 0011 at MP 0.78 on Left

Route	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles *	Condition / PCR	Surface Type
0402	0.17	0.00	31162	0.54	FAIR / 73	OC

* Lane miles are based on 11' lane widths



300 150 0 300
Feet

N

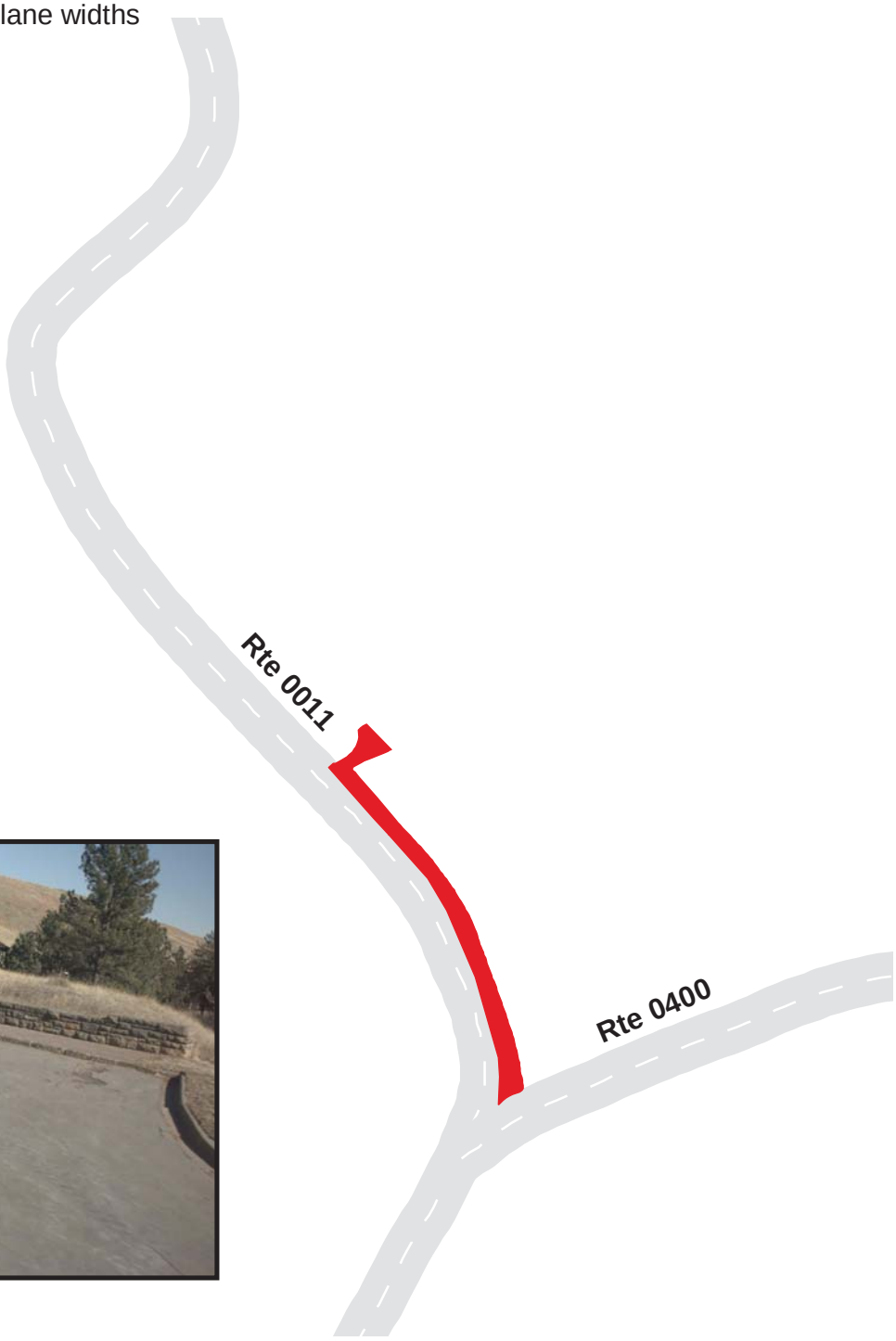
Wind Cave National Park
Route 0900A

Visitor Center Parking Area A

Adjacent to Route 0011 at MP 0.60 on Right

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0900A	Public	9/16/2002	17800	0.31	AS	FAIR / 73

* Lane miles are based on 11' lane widths



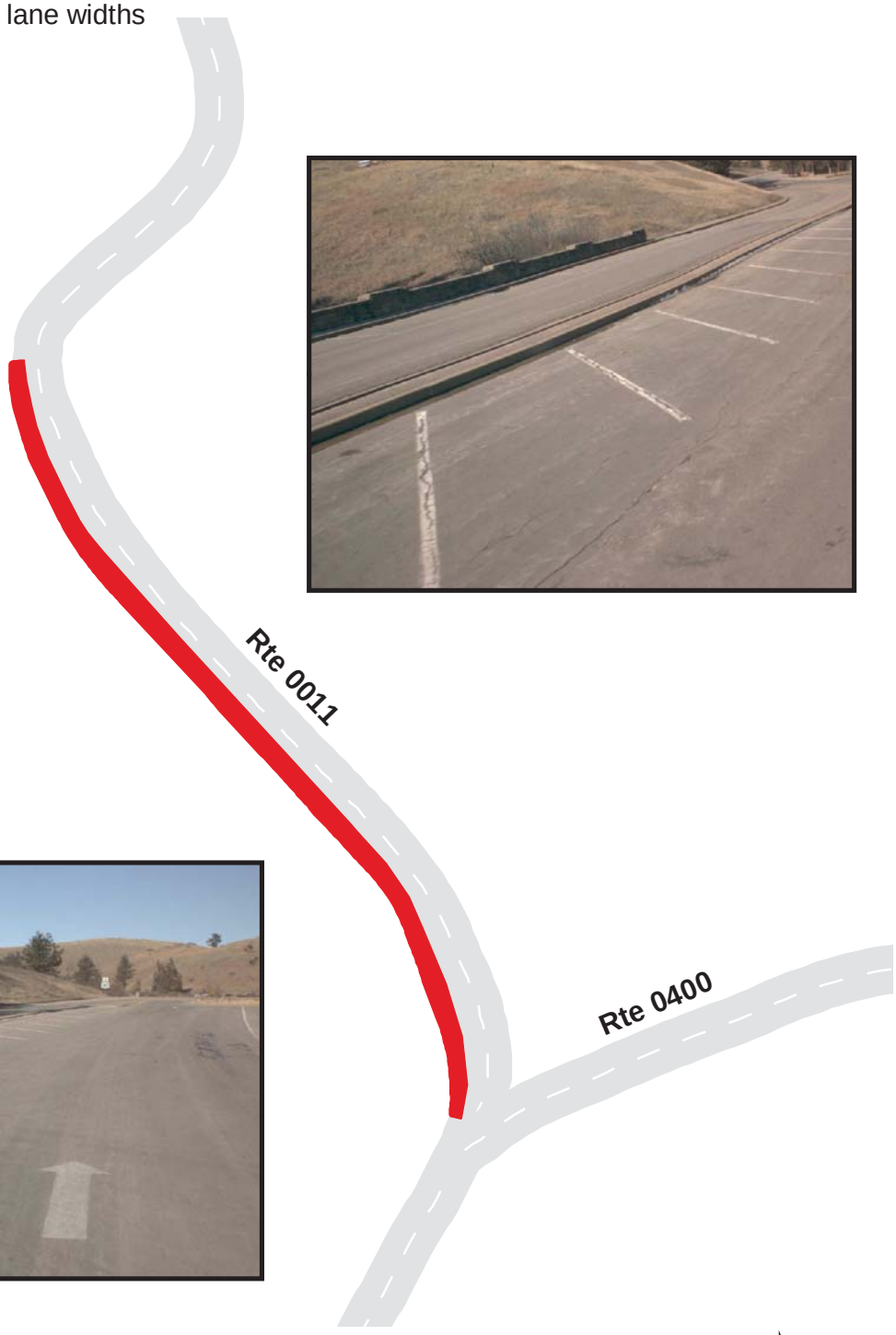
Wind Cave National Park
Route 0900B

Visitor Center Parking Area B

Adjacent to Route 0011 at MP 0.60 on Left

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0900B	Public	9/16/2002	40816	0.70	AS	FAIR / 73

* Lane miles are based on 11' lane widths



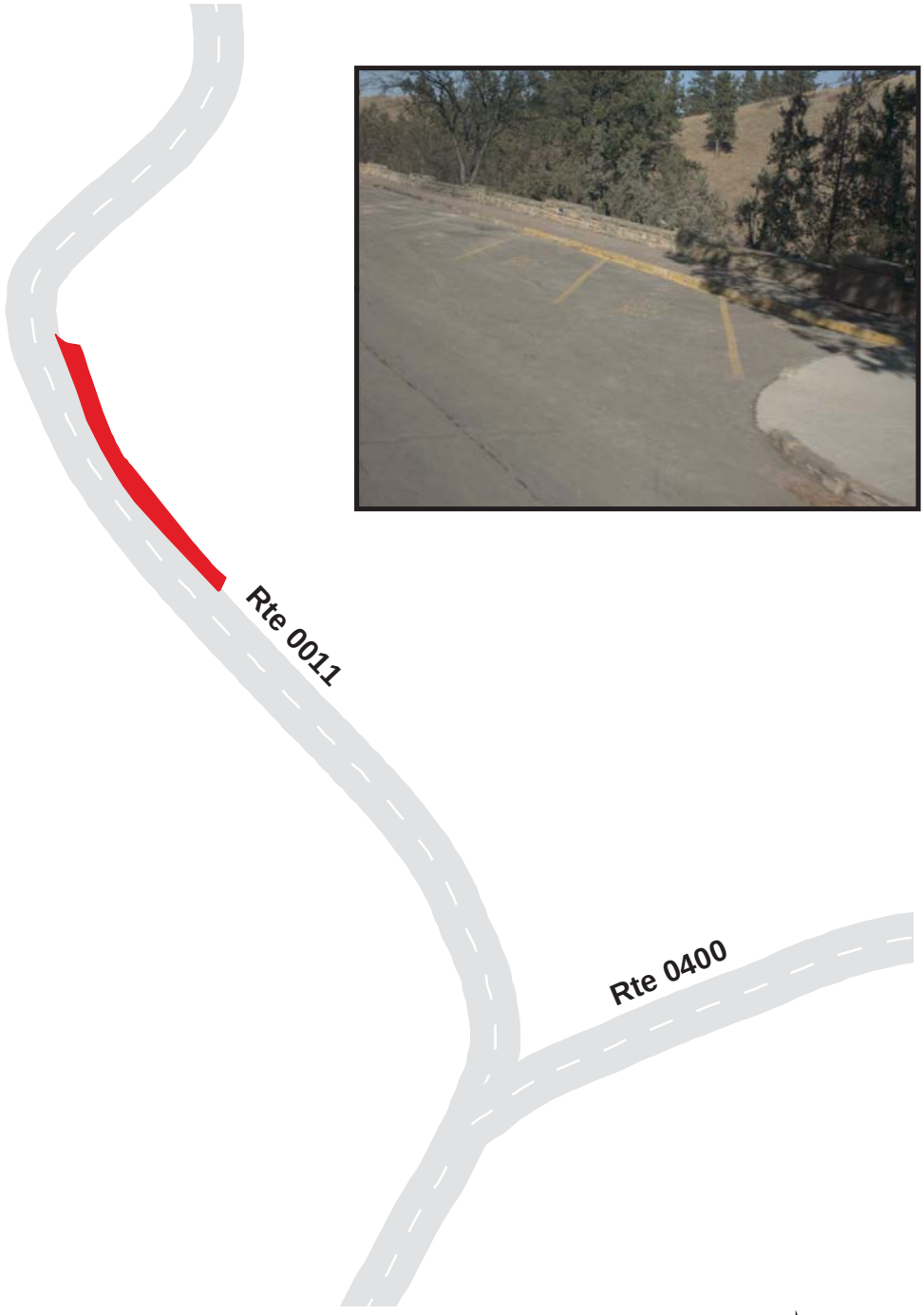
Wind Cave National Park
Route 0900C

Visitor Center Parking Area C

Adjacent to Route 0011 at MP 0.76 on Right

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0900C	Public	9/16/2002	10803	0.19	AS	FAIR / 73

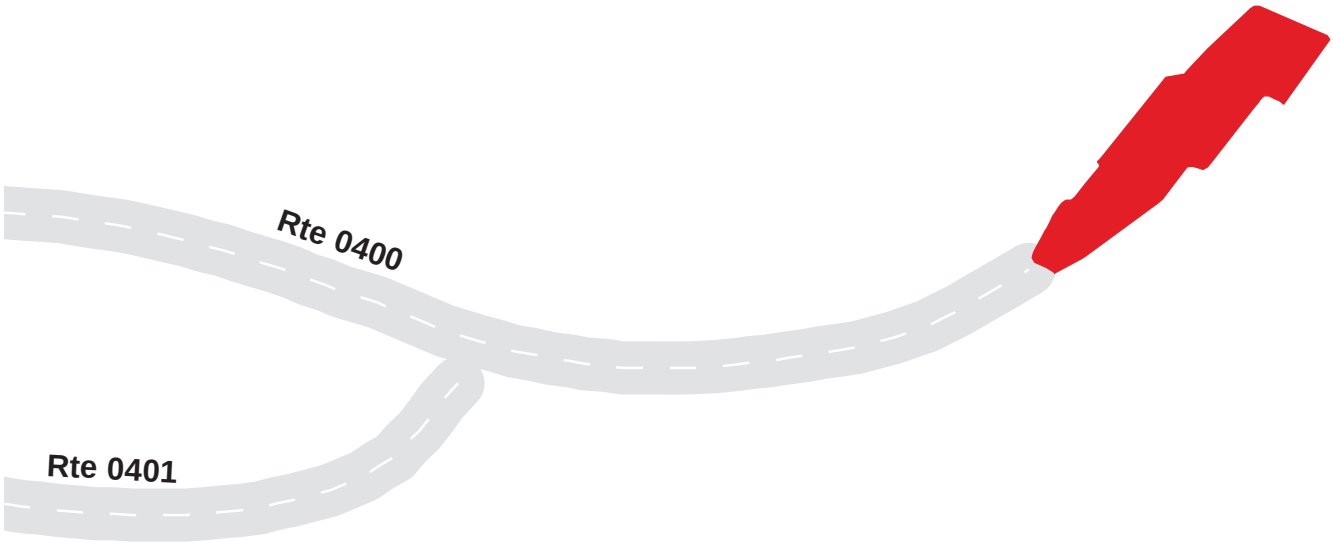
* Lane miles are based on 11' lane widths

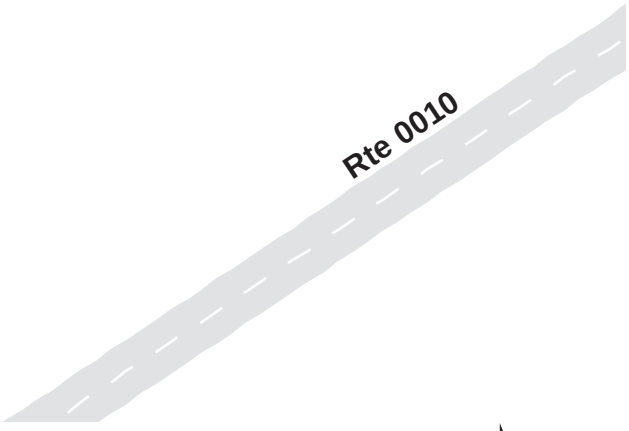


Wind Cave National Park
Route 0901
Maintenance Yard Parking
At End of Route 0400

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0901	NonPublic	9/16/2002	18256	0.31	AS	FAIR / 73

* Lane miles are based on 11' lane widths





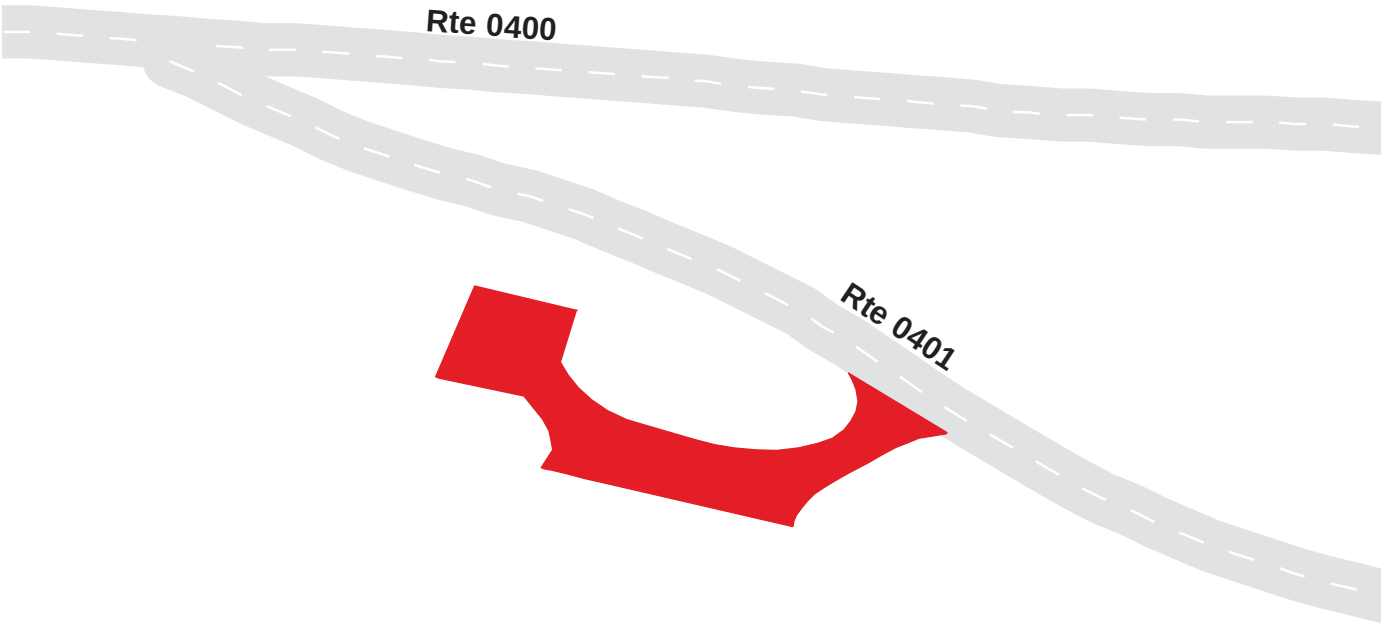
200 100 0 200
Feet

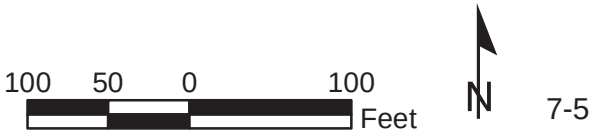
N

Wind Cave National Park
Route 0902A
Lower Residence Parking A
Adjacent to Route 0401 on Right

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0902A	Public	9/16/2002	9894	0.17	OC	FAIR / 73

* Lane miles are based on 11' lane widths



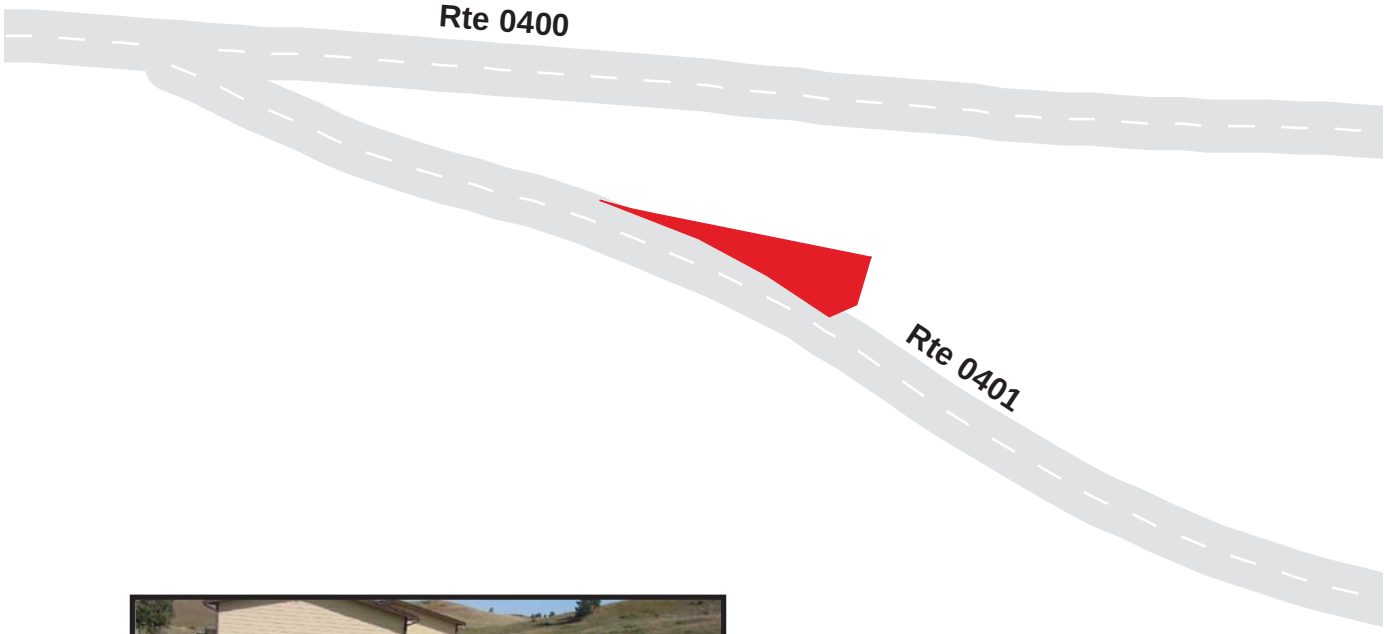


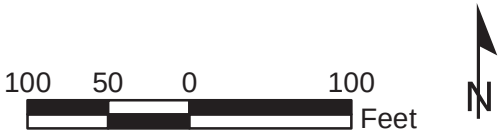
Wind Cave National Park
Route 0902B

Lower Residence Parking B
Adjacent to Route 0401 on Left

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0902B	Public	9/16/2002	2186	0.04	OC	FAIR / 73

* Lane miles are based on 11' lane widths

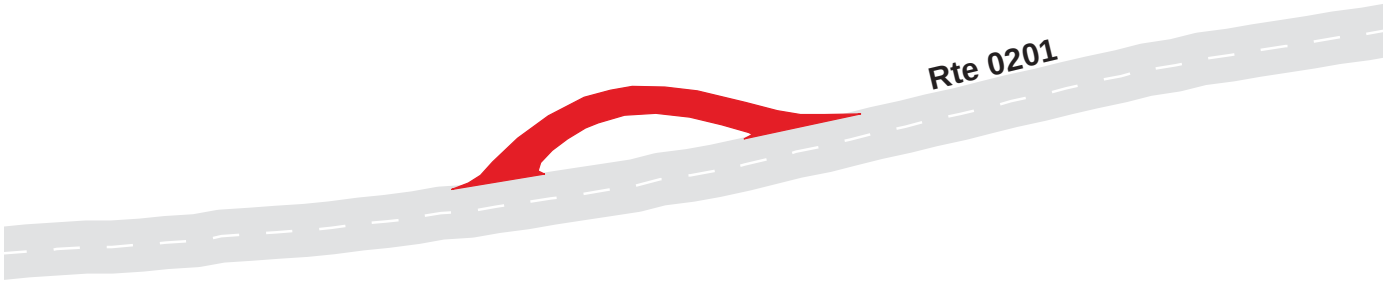


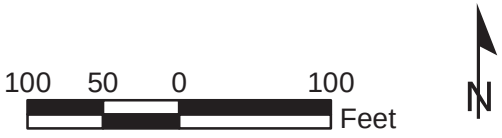


Wind Cave National Park
Route 0903
Elk Mountain Campground Registration Parking
Adjacent to Route 0201 at MP 0.4 on Right

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0903	Public	9/16/2002	3085	0.05	OC	GOOD / 90

* Lane miles are based on 11' lane widths





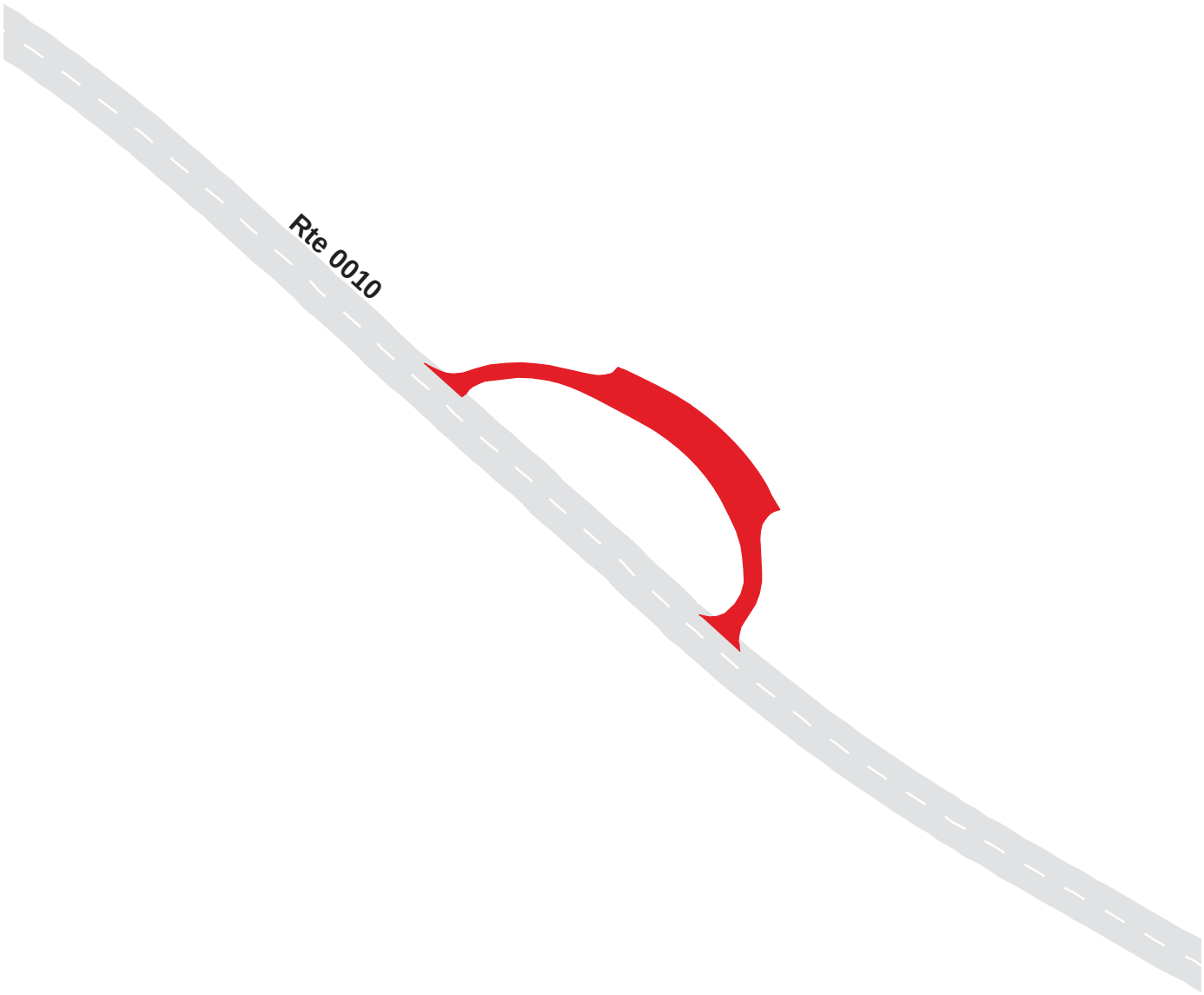
Wind Cave National Park
Route 0904A

U.S. 385 Parking A

Adjacent to Route 0010 at MP 0.6 on Left

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0904A	Public	9/16/2002	17490	0.30	OC	FAIR / 73

* Lane miles are based on 11' lane widths



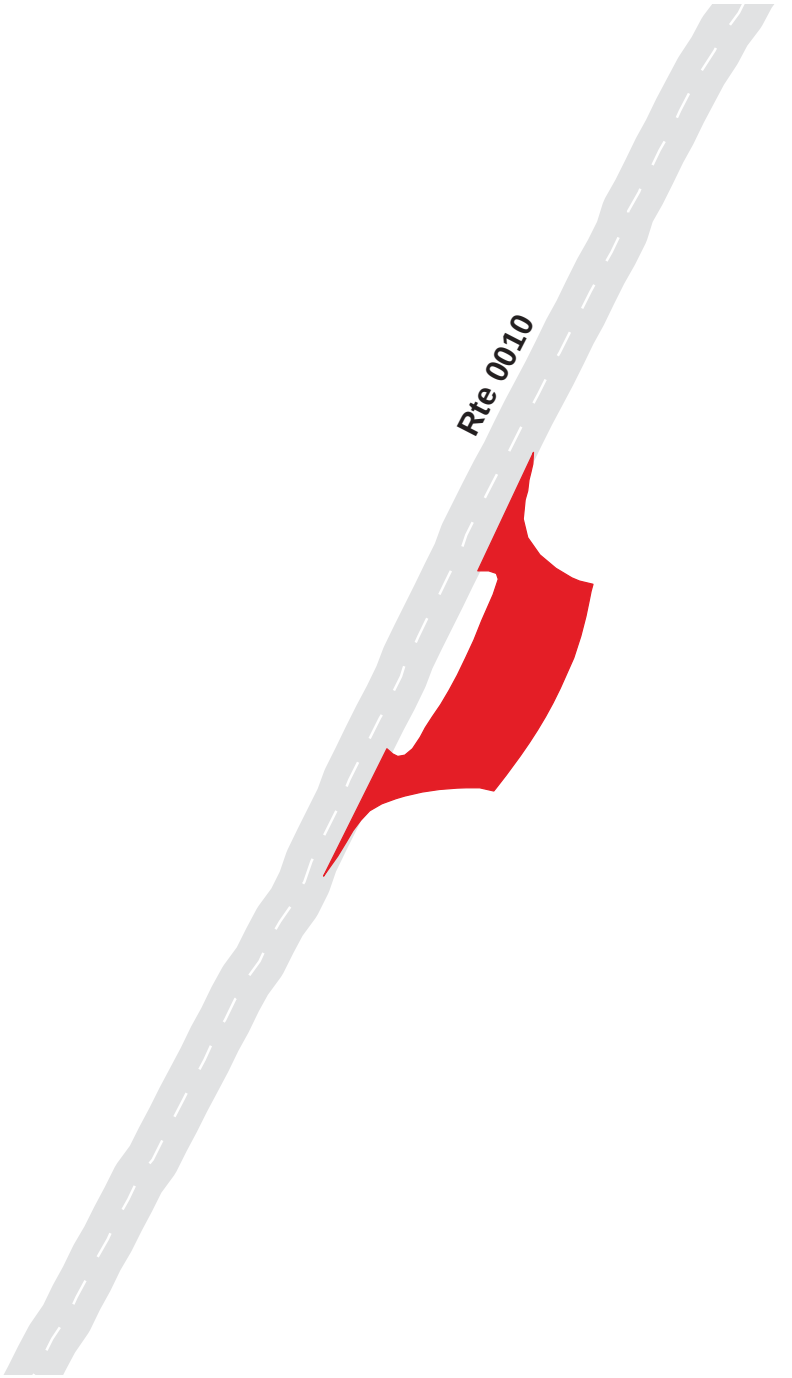
200 100 0 200 Feet

N

Wind Cave National Park
Route 0904B
U.S. 385 "Prairie Restoration" Parking
Adjacent to Route 0010 at MP 4.6 on Left

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0904B	Public	9/16/2002	13285	0.23	OC	FAIR / 73

* Lane miles are based on 11' lane widths



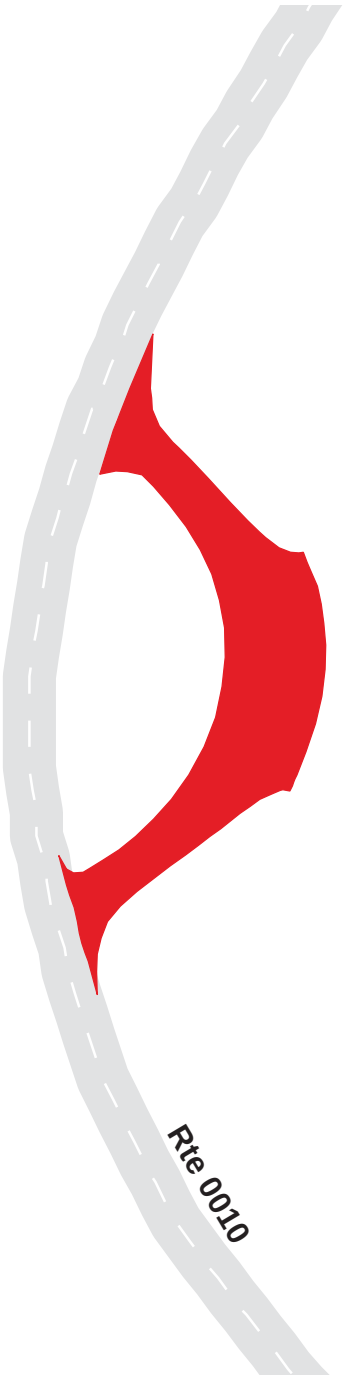
200 100 0 200
Feet

N

Wind Cave National Park
Route 0904C
U.S. 385 "Mineral Lick" Parking
Adjacent to Route 0010 at MP 4.9 on Left

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0904C	Public	9/16/2002	20863	0.36	OC	GOOD / 90

* Lane miles are based on 11' lane widths



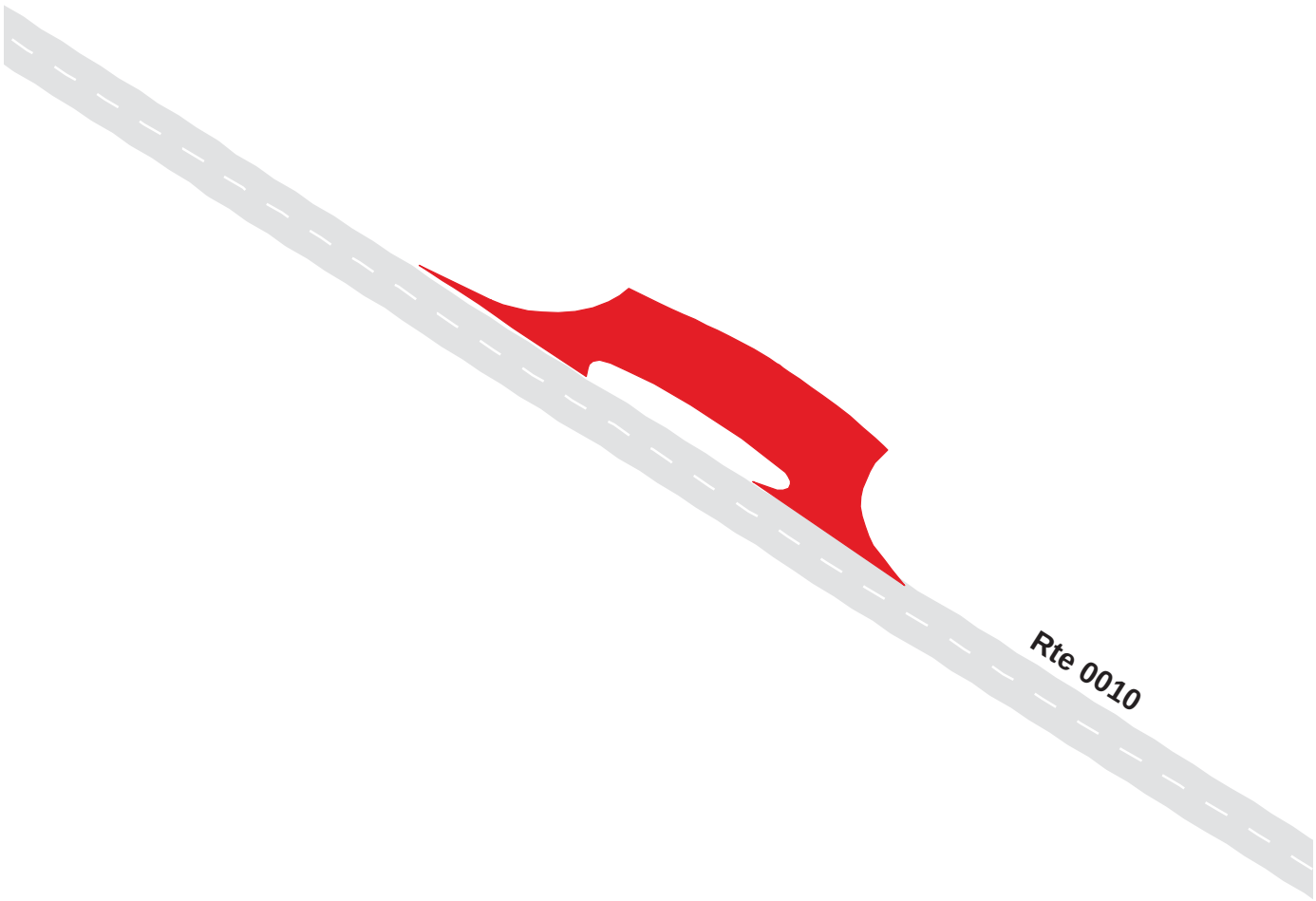
200 100 0 200 Feet

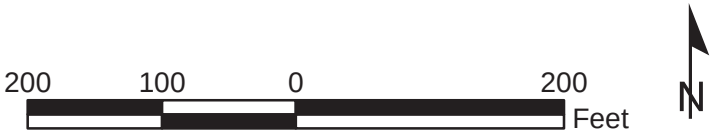
N

Wind Cave National Park
Route 0904D
U.S. 385 "Return Of Bison" Parking
Adjacent to Route 0010 at MP 5.35 on Left

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0904D	Public	9/16/2002	14560	0.25	OC	GOOD / 90

* Lane miles are based on 11' lane widths



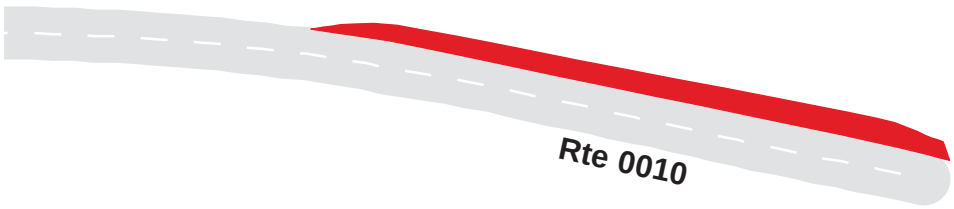


Wind Cave National Park
Route 0904E

U.S. 385 "South Entrance" Parking
Adjacent to Route 0010 at MP 6.5 on Left

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0904E	Public	9/16/2002	6823	0.12	OC	GOOD / 90

* Lane miles are based on 11' lane widths



200 100 0 200
Feet

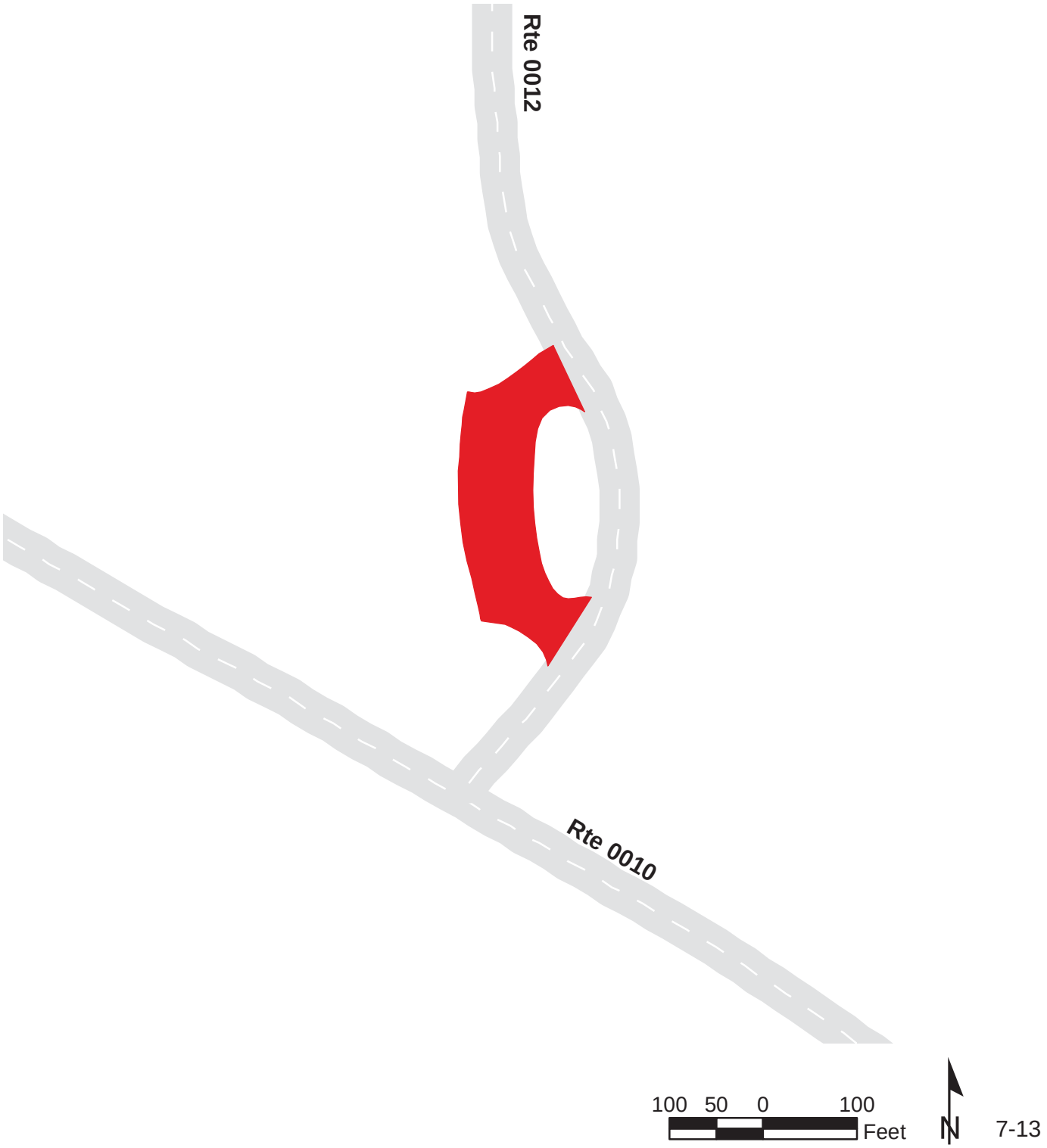
N

Wind Cave National Park
Route 0905A

State Highway 87 "Little House On The Prairie" Parking
Adjacent to Route 0012 at MP 0.1 on Left

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0905A	Public	9/16/2002	18298	0.32	OC	FAIR / 73

* Lane miles are based on 11' lane widths

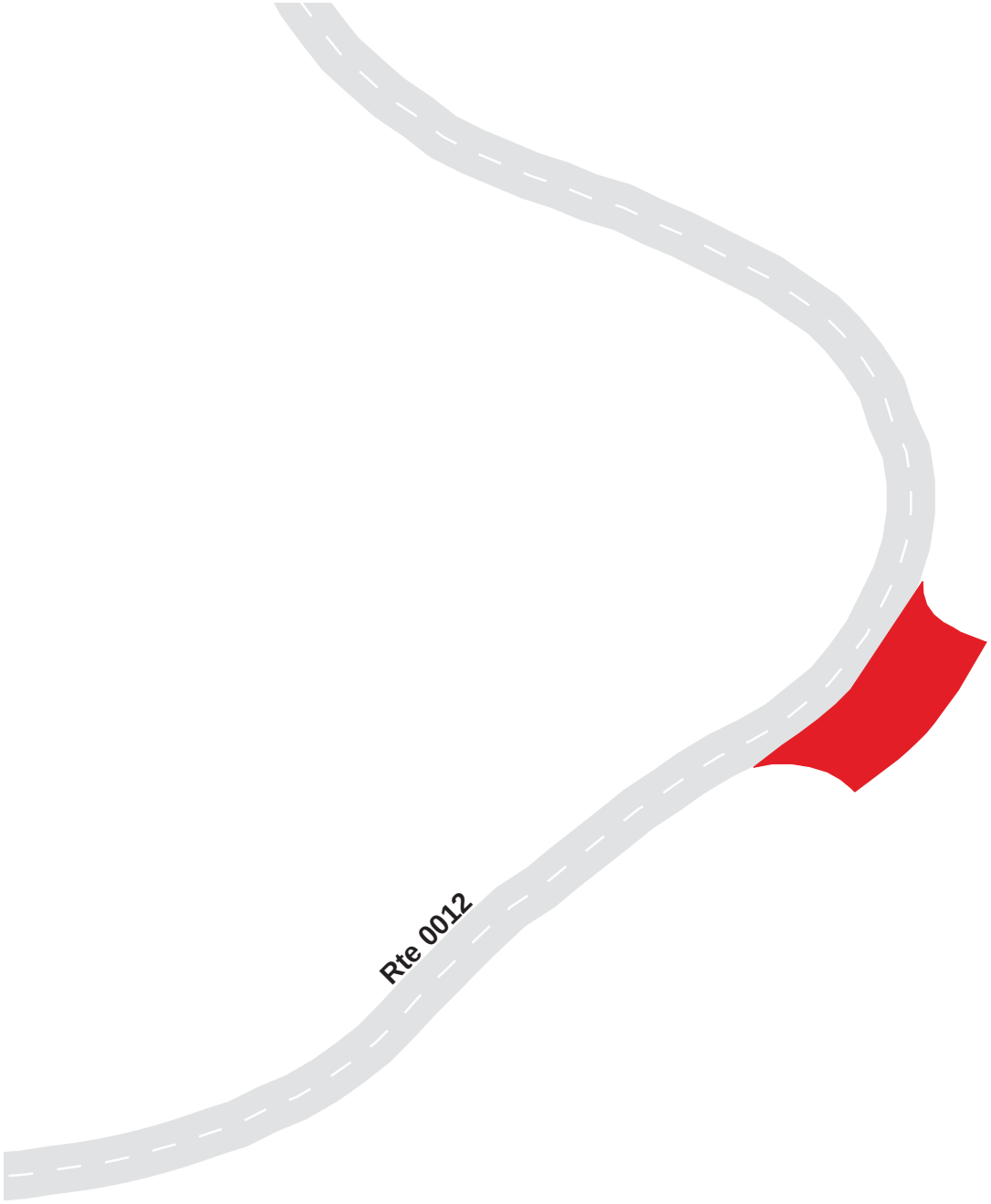


Wind Cave National Park
Route 0905B

State Highway 87 "American Elk" Parking
Adjacent to Route 0012 at MP 1.6 on Right

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0905B	Public	9/16/2002	4122	0.07	AS	FAIR / 73

* Lane miles are based on 11' lane widths



100 50 0 100
Feet

N

Wind Cave National Park
Route 0905C

State Highway 87 "Ancient Foundations" Parking
Adjacent to Route 0012 at MP 2.4 on Right

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0905C	Public	9/16/2002	10579	0.18	AS	GOOD / 90

* Lane miles are based on 11' lane widths

100 50 0 100
Feet

N

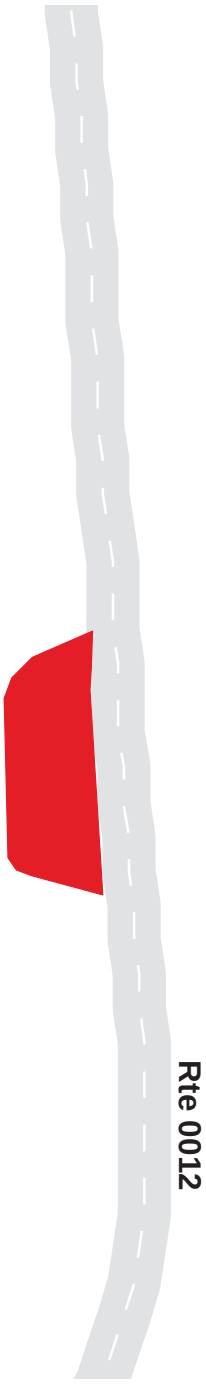
7-15

Wind Cave National Park
Route 0905D

State Highway 87 "East Meets West" Parking
Adjacent to Route 0012 at MP 4.0 on Left

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0905D	Public	9/16/2002	4154	0.07	AS	GOOD / 90

* Lane miles are based on 11' lane widths



100 50 0 100
Feet

N

7-16

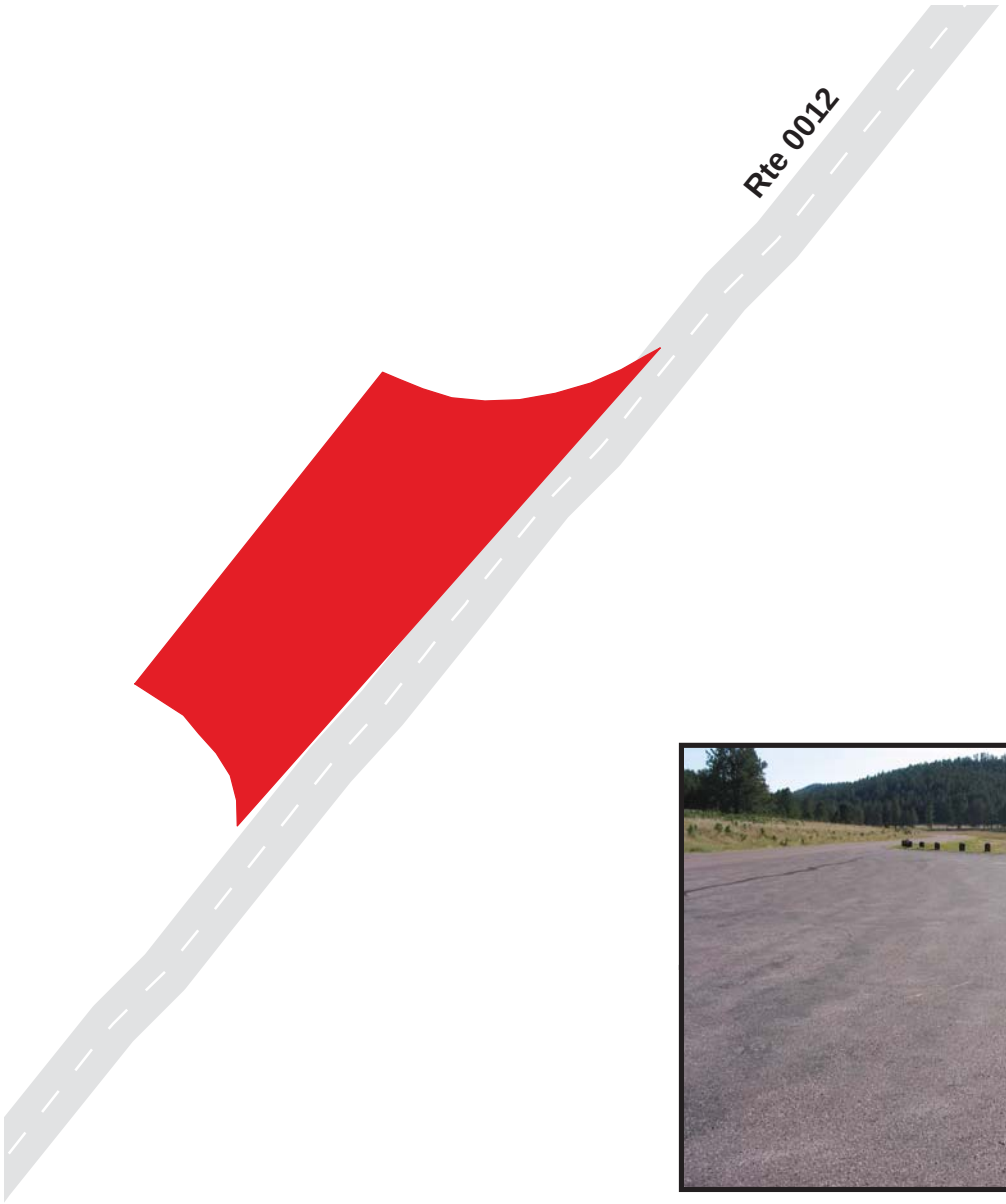
Wind Cave National Park
Route 0905E

State Highway 87 Parking E

Adjacent to Route 0012 at MP 4.72 on Left

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0905E	Public	9/16/2002	4412	0.08	AS	FAIR / 73

* Lane miles are based on 11' lane widths



70 35 0 70 Feet

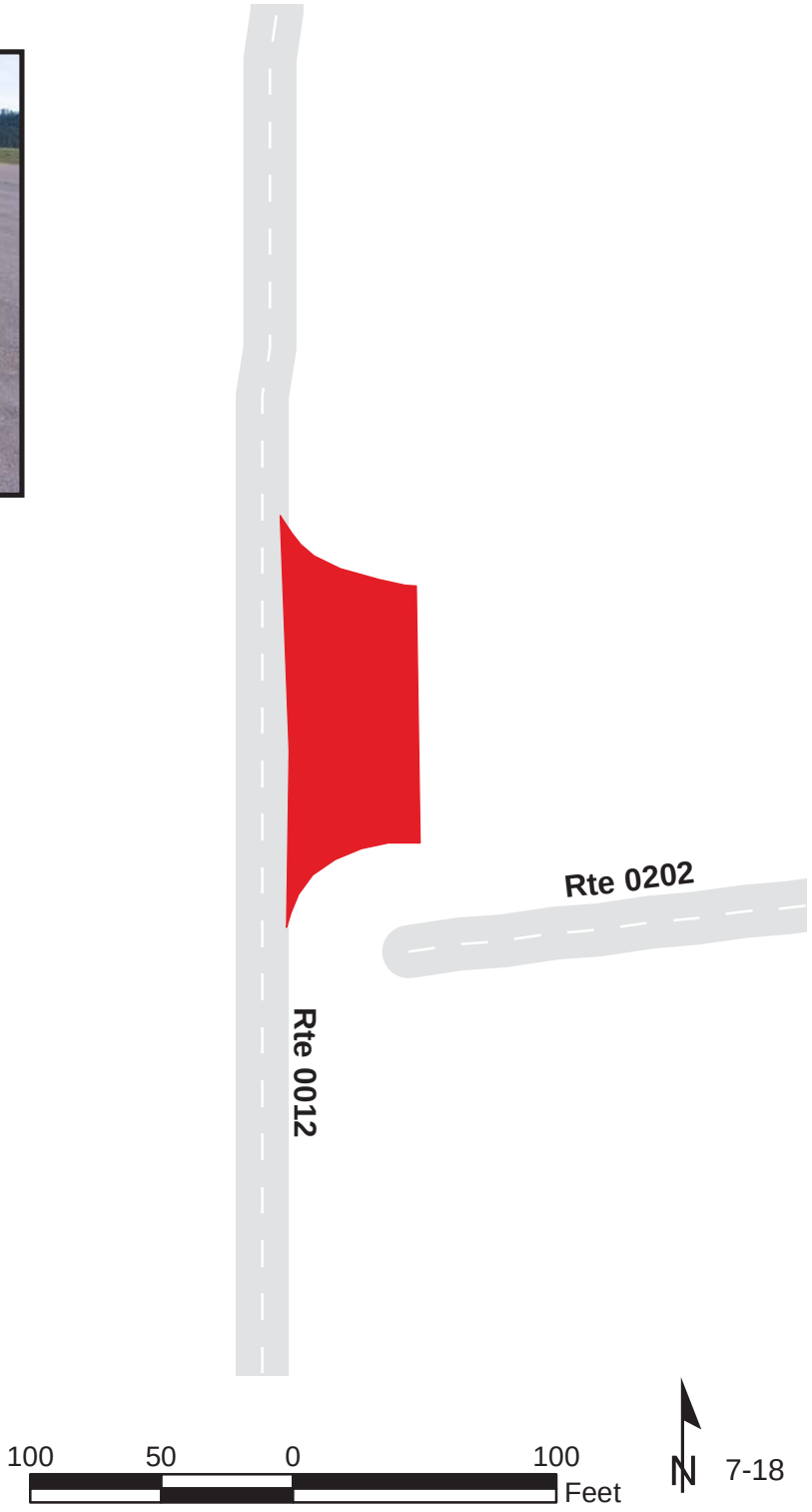
N

Wind Cave National Park
Route 0905F

State Highway 87 Parking F
Adjacent to Route 0012 at MP 5.0 on Right

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0905F	Public	9/16/2002	4067	0.07	AS	FAIR / 73

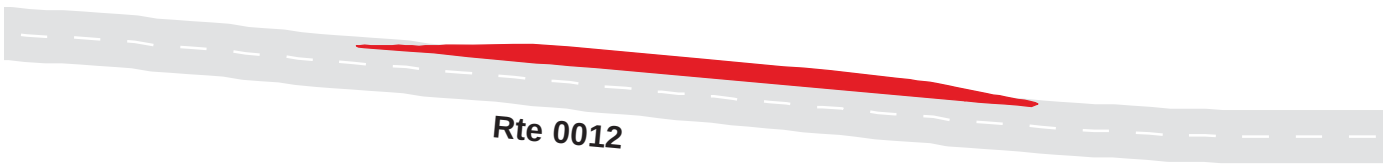
* Lane miles are based on 11' lane widths



Wind Cave National Park
Route 0905G
State Highway 87 "Welcome Sign" Parking
Adjacent to Route 0012 at MP 6.8 on Left

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0905G	Public	9/16/2002	6984	0.12	OC	GOOD / 90

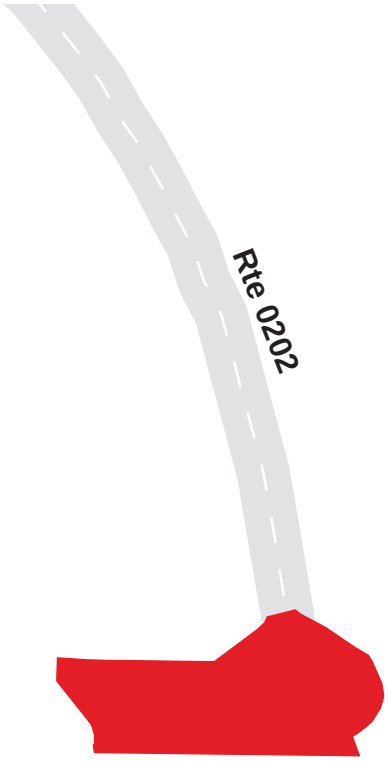
* Lane miles are based on 11' lane widths



Wind Cave National Park
Route 0906
Rankin Ridge Trail Parking
At End of Route 0202

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0906	Public	9/16/2002	5539	0.10	OC	FAIR / 73

* Lane miles are based on 11' lane widths



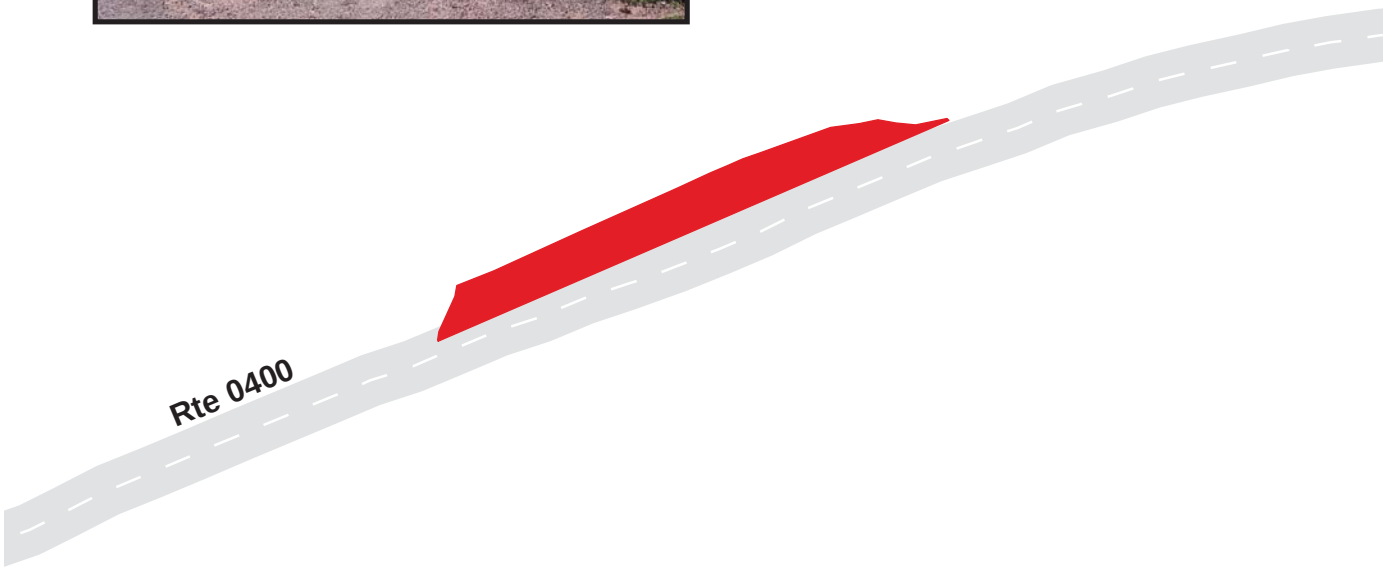
Wind Cave National Park
Route 0907A

Elevator Parking A

Adjacent to Route 0400 on Left

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0907A	Public	9/16/2002	2371	0.04	OC	FAIR / 73

* Lane miles are based on 11' lane widths



100 50 0 100 Feet

N

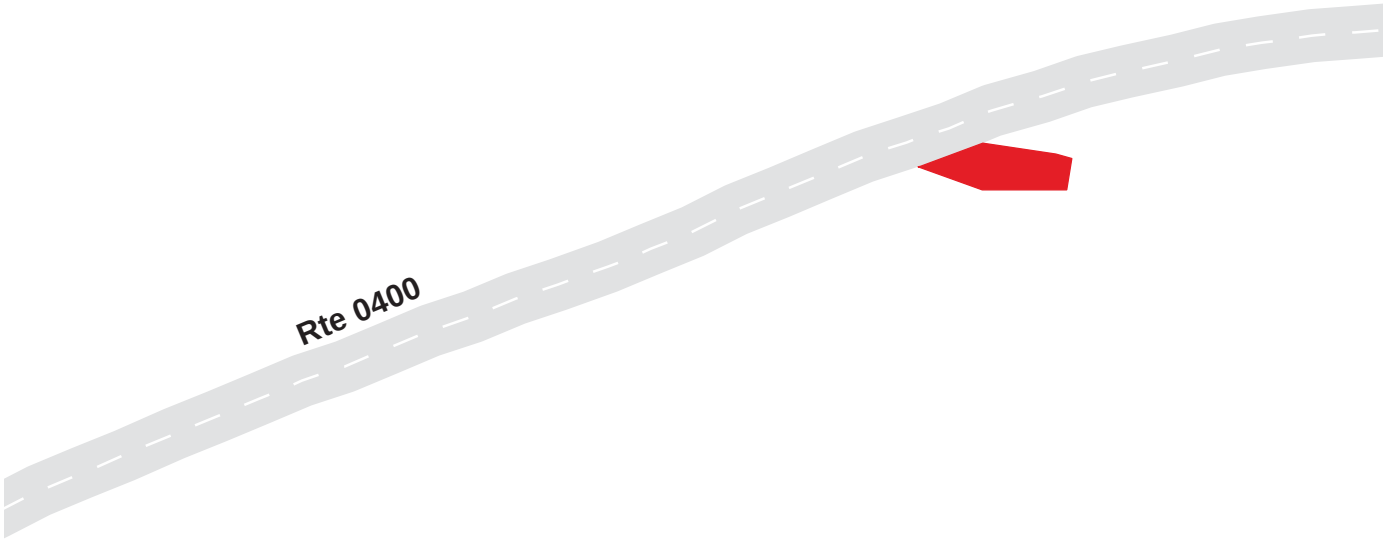
Wind Cave National Park
Route 0907B

Elevator Parking B

Adjacent to Route 0400 on Right

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0907B	Public	9/16/2002	552	0.01	OC	FAIR / 73

* Lane miles are based on 11' lane widths



Wind Cave National Park
Route 0908
Picnic Area Parking
Adjacent to Route 0011 at MP 0.9 on Right

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0908	Public	9/16/2002	15989	0.28	OC	FAIR / 73

* Lane miles are based on 11' lane widths

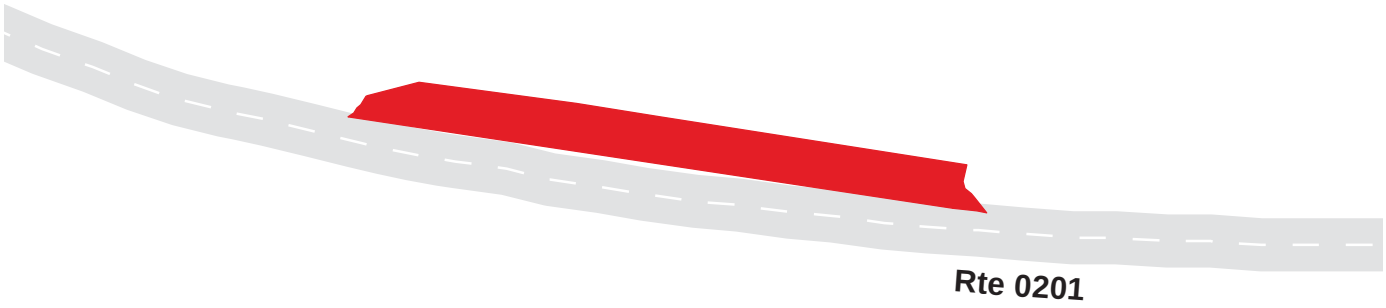
200 100 0 200
Feet

N

Wind Cave National Park
Route 0909
Elk Mountain Trailhead / Ampitheater Parking
Adjacent to Route 0201 at MP 0.74 on Right

Route	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type	Condition / PCR
0909	Public	9/16/2002	2958	0.05	OC	FAIR / 73

* Lane miles are based on 11' lane widths



WICA: PARKWIDE MAINTENANCE FEATURES SUMMARY

FEATURE	*PARK TOTAL*	*UNIT*
BRIDGE	2	EACH
CATTLE GUARD	4	EACH
CULVERT	104	EACH
CURB	31,518	LINEAR FEET
DROP INLET	8	EACH
GUARD WALL	0	LINEAR FEET
GUARDRAIL	8,284	LINEAR FEET
INTERSECTION	71	EACH
LOW WATER CROSSING	1	EACH
OVERHEAD SIGN	0	EACH
PARK BOUNDARY	1	EACH
PAVED DITCH	0	LINEAR FEET
PULLOUT	13	EACH
RAILROAD CROSSING	0	EACH
RETAINING WALL	0	EACH
STATE BOUNDARY	0	EACH
TRAFFIC LIGHT	0	EACH
TUNNEL	0	EACH
TURNOUT	0	LINEAR FEET

WICA: ROUTE MAINTENANCE FEATURES SUMMARY

FEATURE	ROUTE 0010 WIND CAVE HIGHWAY (US 385)	ROUTE 0011 VISITOR CENTER/CAVE ACCESS RD	ROUTE 0012 NORTH ENTRANCE RD (HWY 87)	ROUTE 0201 ELK MOUNTAIN CAMPGROUND RD	ROUTE 0202 RANKIN RIDGE TRAIL ACCESS RD	ROUTE 0400 ADMINISTRATIVE MAINTENANCE ACCESS R	UNIT
BRIDGE	0	0	2	0	0	0	EACH
CATTLE GUARD	1	2	0	1	0	0	EACH
CULVERT	30	14	44	8	4	3	EACH
CURB	27,722	3,432	275	0	0	90	LINEAR FEET
DROP INLET	7	1	0	0	0	0	EACH
GUARD WALL	0	0	0	0	0	0	LINEAR FEET
GUARDRAIL	6,241	0	2,043	0	0	0	LINEAR FEET
INTERSECTION	16	16	13	11	2	9	EACH
LOW WATER CROSSING	1	0	0	0	0	0	EACH
OVERHEAD SIGN	0	0	0	0	0	0	EACH
PARK BOUNDARY	1	0	0	0	0	0	EACH
PAVED DITCH	0	0	0	0	0	0	LINEAR FEET
PULLOUT	12	0	1	0	0	0	EACH
RAILROAD CROSSING	0	0	0	0	0	0	EACH
RETAINING WALL	0	0	0	0	0	0	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
TURNOUT	0	0	0	0	0	0	LINEAR FEET

WICA: ROUTE MAINTENANCE FEATURES SUMMARY

FEATURE	*ROUTE 0401 LOWER RESIDENCE SERVICE RD*	*UNIT*
BRIDGE	0	EACH
CATTLE GUARD	0	EACH
CULVERT	1	EACH
CURB	0	LINEAR FEET
DROP INLET	0	EACH
GUARD WALL	0	LINEAR FEET
GUARDRAIL	0	LINEAR FEET
INTERSECTION	4	EACH
LOW WATER CROSSING	0	EACH
OVERHEAD SIGN	0	EACH
PARK BOUNDARY	0	EACH
PAVED DITCH	0	LINEAR FEET
PULLOUT	0	EACH
RAILROAD CROSSING	0	EACH
RETAINING WALL	0	EACH
STATE BOUNDARY	0	EACH
TRAFFIC LIGHT	0	EACH
TUNNEL	0	EACH
TURNOUT	0	LINEAR FEET

WICA: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0010 : WIND CAVE HIGHWAY (US 385)

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT WEST BOUNDARY
0.025	0.133	CURB	LEFT	
0.066	0.103	CURB	RIGHT	
0.070	0.110	PULLOUT	RIGHT	
0.079	0.150	GUARDRAIL	LEFT	
0.109	0.139	GUARDRAIL	RIGHT	
0.264	0.298	GUARDRAIL	LEFT	
0.297	0.354	CURB	LEFT	
0.304	0.371	PULLOUT	LEFT	
0.408	0.623	CURB	RIGHT	
0.424	0.504	GUARDRAIL	RIGHT	
0.435	0.543	GUARDRAIL	LEFT	
0.545	0.545	INTERSECTION	LEFT	RTE 904A, US 385 PARKING
0.625	0.625	INTERSECTION	LEFT	RTE 904A, US 385 PARKING
0.767	0.931	CURB	RIGHT	
0.787	0.787	INTERSECTION	LEFT	RTE 012, NORTH ENTRANCE ROAD (HWY 87)
0.940	1.110	CURB	LEFT	
1.028	1.124	PULLOUT	LEFT	
1.033	1.152	CURB	RIGHT	
1.161	1.161	INTERSECTION	RIGHT	RTE 011, VISITOR CENTER/CAVE ACCESS RD
1.165	1.318	CURB	RIGHT	
1.348	1.504	CURB	RIGHT	
1.501	1.690	CURB	LEFT	
1.520	1.574	CURB	RIGHT	
1.712	1.757	CURB	LEFT	
1.739	1.835	GUARDRAIL	RIGHT	

WICA: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0010 : WIND CAVE HIGHWAY (US 385)

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
1.787	1.963	CURB	RIGHT	
1.795	1.848	GUARDRAIL	LEFT	
1.834	1.900	CURB	LEFT	
1.921	1.963	GUARDRAIL	RIGHT	
1.982	2.078	GUARDRAIL	RIGHT	
2.040	2.077	CURB	RIGHT	
2.044	2.086	GUARDRAIL	LEFT	
2.072	2.308	CURB	LEFT	
2.114	2.176	CURB	RIGHT	
2.119	2.163	GUARDRAIL	RIGHT	
2.286	2.457	CURB	RIGHT	
2.386	2.438	GUARDRAIL	RIGHT	
2.387	2.469	GUARDRAIL	LEFT	
2.474	2.474	INTERSECTION	LEFT	GRAVEL ROAD
2.495	2.495	INTERSECTION	RIGHT	
2.543	2.923	CURB	RIGHT	
2.544	2.812	CURB	LEFT	
2.557	2.668	GUARDRAIL	LEFT	
2.661	2.741	PULLOUT	LEFT	
2.804	2.918	GUARDRAIL	RIGHT	
2.822	2.949	GUARDRAIL	LEFT	
2.938	3.087	CURB	LEFT	
3.040	3.116	PULLOUT	RIGHT	
3.043	3.099	CURB	RIGHT	
3.301	3.373	PULLOUT	LEFT	
3.329	3.329	INTERSECTION	RIGHT	RTE 011, VISITOR CENTER/CAVE ACCESS RD
3.447	3.522	CURB	LEFT	

WICA: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0010 : WIND CAVE HIGHWAY (US 385)

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
3.451	3.526	CURB	RIGHT	
3.451	3.530	PULLOUT	LEFT	
3.457	3.535	PULLOUT	RIGHT	
3.645	3.763	CURB	RIGHT	
3.697	3.769	CURB	LEFT	
3.701	3.779	PULLOUT	LEFT	
3.921	4.081	CURB	LEFT	
3.925	4.000	CURB	RIGHT	
3.931	4.007	PULLOUT	RIGHT	
4.153	4.310	CURB	RIGHT	
4.166	4.304	CURB	LEFT	
4.173	4.251	PULLOUT	LEFT	
4.314	4.496	CURB	LEFT	
4.506	4.640	CURB	RIGHT	
4.512	4.512	INTERSECTION	LEFT	RTE 904B, PRAIRIE RESTORATION PARKING
4.521	4.578	CURB	LEFT	
4.526	4.559	CURB	LEFT	
4.560	4.560	INTERSECTION	LEFT	RTE 904B, PRAIRIE RESTORATION PARKING
4.637	4.637	INTERSECTION	RIGHT	TRAILHEAD PARKING, DAY USE:COLD BROOK CANYON
4.682	4.776	CURB	RIGHT	
4.686	4.786	CURB	LEFT	
4.883	4.883	INTERSECTION	LEFT	RTE 904C, MINERAL LICK PARKING
4.963	4.963	INTERSECTION	LEFT	RTE 904C, MINERAL LICK PARKING
5.100	5.175	CURB	RIGHT	
5.297	5.368	CURB	RIGHT	

WICA: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0010 : WIND CAVE HIGHWAY (US 385)

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
5.300	5.362	CURB	LEFT	
5.310	5.334	CURB	LEFT	
5.311	5.311	INTERSECTION	LEFT	
5.341	5.341	INTERSECTION	LEFT	RTE 904D, RETURN OF BISON PARKING
5.498	5.567	CURB	RIGHT	
5.738	5.738	LOW WATER CROSSING	RIGHT	
5.945	5.945	INTERSECTION	RIGHT	WIND RIDGE ROAD
6.193	6.383	CURB	RIGHT	
6.232	6.453	CURB	LEFT	
6.409	6.488	PULLOUT	LEFT	
6.424	6.424	INTERSECTION	RIGHT	GRAVEL
6.470	6.470			ROUTE ENDS AT EAST BOUNDARY

WICA: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0011 : VISITOR CENTER/CAVE ACCESS RD

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT US 385
0.112	0.112	INTERSECTION	LEFT	
0.534	0.534	INTERSECTION	RIGHT	RTE 201, ELK MOUNTAIN CAMPGROUND ROAD
0.546	0.669	CURB	RIGHT	
0.566	0.702	CURB	LEFT	
0.587	0.587	INTERSECTION	RIGHT	
0.590	0.590	INTERSECTION	LEFT	
0.673	0.673	INTERSECTION	RIGHT	
0.678	0.929	CURB	RIGHT	
0.706	0.706	INTERSECTION	LEFT	RTE 200, PICNIC AREA ACCESS ROAD
0.708	0.778	CURB	LEFT	
0.729	0.729	INTERSECTION	LEFT	RTE 908, PICNIC AREA PARKING
0.745	0.745	INTERSECTION	RIGHT	
0.779	0.779	INTERSECTION	LEFT	
0.780	0.820	CURB	LEFT	
0.838	0.859	CURB	LEFT	
0.887	0.887	INTERSECTION	RIGHT	
0.899	0.908	CURB	RIGHT	
0.911	0.911	INTERSECTION	RIGHT	RTE 402, UPPER RESIDENCE SERVICE ROAD
0.969	0.969	INTERSECTION	RIGHT	
0.974	0.974	INTERSECTION	RIGHT	
1.272	1.272	INTERSECTION	LEFT	RTE 400, ADMINISTRATIVE MAINTENANCE ACCESS ROAD
1.718	1.718	INTERSECTION	RIGHT	END AT RTE 010 (SOUTH SIDE)
1.720	1.720			ROUTE ENDS AT US 385
1.720	1.720	INTERSECTION	LEFT	END AT RTE 010 (SOUTH SIDE)

WICA: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0012 : NORTH ENTRANCE RD (HWY 87)

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT RTE 10
0.026	0.026	INTERSECTION	LEFT	RTE 905A, LITTLE HOUSE ON THE PRAIRIE PARKING
0.084	0.084	INTERSECTION	LEFT	RTE 905A,LITTLE HOUSE ON THE PRAIRIE PARKING
0.525	0.540	PULLOUT	LEFT	
0.620	0.620	INTERSECTION	RIGHT	GRAVEL
1.239	1.319	GUARDRAIL	RIGHT	
1.279	1.404	GUARDRAIL	LEFT	
1.583	1.583	INTERSECTION	RIGHT	RTE 905B, AMERICAN ELK PARKING
2.380	2.380	INTERSECTION	RIGHT	RTE 905C, ANCIENT FOUNDATIONS PARKING
2.417	2.417	INTERSECTION	RIGHT	RTE 905C, ANCIENT FOUNDATIONS PARKING
2.890	2.932	GUARDRAIL	RIGHT	
2.918	2.931	GUARDRAIL	LEFT	
3.958	3.958	INTERSECTION	LEFT	RTE 905D, 'EAST MEETS WEST' PARKING
4.720	4.720	INTERSECTION	LEFT	RTE 905E, STATE HIGHWAY 87 PARKING
4.967	4.967	INTERSECTION	RIGHT	RTE 202, RANKIN RIDGE TRAIL ACCESS ROAD
4.983	4.983	INTERSECTION	RIGHT	RTE 905F, STATE HIGHWAY 87 PARKING
5.107	5.107	INTERSECTION	LEFT	
6.076	6.114	GUARDRAIL	RIGHT	
6.090	6.127	GUARDRAIL	LEFT	
6.705	6.757	CURB	LEFT	
6.746	6.746	INTERSECTION	LEFT	RTE 905G, WIND CAVE NP WELCOME SIGN PARKING
7.041	7.041	INTERSECTION	RIGHT	NPS 5 CENTENNIAL TRAILHEAD ROAD

WICA: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0012 : NORTH ENTRANCE RD (HWY 87)

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
7.089	7.116	GUARDRAIL	RIGHT	
7.093	7.118	GUARDRAIL	LEFT	
7.100	7.100			ROUTE ENDS AT NORTH BOUNDARY

WICA: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0201 : ELK MOUNTAIN CAMPGROUND RD

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT RTE 11 @ MP 12
0.404	0.404	INTERSECTION	RIGHT	RTE 903, ELK MOUNTAIN CG REGISTRATION PKG
0.426	0.426	INTERSECTION	RIGHT	
0.461	0.461	INTERSECTION	LEFT	RTE 206A, CAMPGROUND LOOP A
0.477	0.477	INTERSECTION	LEFT	
0.486	0.486	INTERSECTION	RIGHT	RTE 206B, CAMPGROUND LOOP B
0.563	0.563	INTERSECTION	RIGHT	RTE 206B, CAMPGROUND LOOP B
0.612	0.612	INTERSECTION	LEFT	
0.732	0.732	INTERSECTION	RIGHT	RTE 909, ELK MOUNTAIN TRAILHEAD/AMPITHEATER PKG
0.777	0.777	INTERSECTION	LEFT	RTE 206C,CAMPGROUND LOOP C
0.799	0.799	INTERSECTION	LEFT	RTE 206C, CAMPGROUND LOOP C
0.800	0.800			ROUTE ENDS AT RTE 206 LOOP C
0.805	0.805	INTERSECTION	RIGHT	END AT RTE 206E, CAMPGROUND LOOP D

WICA: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0202 : RANKIN RIDGE TRAIL ACCESS RD

FROM MILEPOST	*TO MILEPOST*	*FEATURE*	*SIDE*	*COMMENT*
0.000	0.000			ROUTE BEGINS AT RTE 12 @ MP 50
0.320	0.320			ROUTE ENDS AT RTE 906
0.328	0.328	INTERSECTION	LEFT	END @ RTE 906, RANKIN RIDGE TRAIL PARKING
0.330	0.330	INTERSECTION	RIGHT	END @ RTE 906, RANKIN RIDGE TRAIL PARKING

WICA: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0400 : ADMINISTRATIVE MAINTENANCE ACCESS R

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT RTE 11 @ MP 05
0.014	0.014	INTERSECTION	LEFT	RTE 907A, ELEVATOR PARKING
0.074	0.091	CURB	LEFT	
0.085	0.085	INTERSECTION	LEFT	
0.091	0.091	INTERSECTION	RIGHT	GRAVEL ROAD
0.106	0.106	INTERSECTION	RIGHT	RTE 907B, ELEVATOR PARKING
0.192	0.192	INTERSECTION	RIGHT	RTE 401, LOWER RESIDENCE SERVICE ROAD
0.369	0.369	INTERSECTION	RIGHT	RTE LOWER RESIDENCE SERVICE ROAD
0.442	0.442	INTERSECTION	RIGHT	GRAVEL ROAD
0.460	0.460			ROUTE ENDS AT RTE 901
0.470	0.470	INTERSECTION	LEFT	END @ RTE 901, MAINTENANCE YARD PARKING
0.478	0.478	INTERSECTION	RIGHT	END @ RTE 901, MAINTENANCE YARD PARKING

WICA: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0401 : LOWER RESIDENCE SERVICE RD

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT RTE 401
0.012	0.012	INTERSECTION	LEFT	
0.052	0.052	INTERSECTION	LEFT	RTE 902B, LOWER RESIDENCE SERVICE RD PARKING B
0.081	0.081	INTERSECTION	RIGHT	RTE 902A, LOWER RESIDENCE SERVICE RD PARKING A
0.210	0.210			ROUTE ENDS AT RTE 401
0.211	0.211	INTERSECTION	LEFT	

APPENDIX A: GLOSSARY OF TERMS AND ABBREVIATIONS

TERM OR ABBREVIATION	DESCRIPTION OR DEFINITION
1560	Numeric Code for Wind Cave National Park
AADT	Annually Adjusted Daily Traffic. Average daily traffic adjusted for the term period comprising 80% of annual visitation
CRS	Condition Rating Sheets. (Section 5)
Drainage Condition Rating	A visual rating (Good, Poor) of the drainage condition. (see Section 10)
Excellent	Excellent rating with an index value of 95 or greater
Fair	Fair rating with an index value between 61 and 84
Func. Class	Functional Classification (see Route ID, Section 4)
Good	Good rating with an index value between 85 and 94
IRI	International Roughness Index
Lane Width	Distance from road centerline to fogline, or from centerline to edge-of-pavement when no fogline exists
MRR	Manually Rated Route
NA	Not Applicable
NC	Not Collected
Paved Width	Distance from edge-of-pavement to edge-of-pavement
PCR	Pavement Condition Rating (see Section 10)
Poor	Poor Rating with an index value of 60 or less

RCI	Roughness Condition Index
SADT	Seasonal Annual Daily Traffic. Average daily traffic for the total defined "season"
SCR	Surface Condition Rating (see Section 10)
Shoulder Condition Rating	Visual rating (Good, Poor) of the condition of shoulder. (see Section 10)
Shoulder Width	Distance from fogline to hinge point, or if no fogline, from edge-of-pavement to hinge point
WICA	Alpha Code for Wind Cave National Park

APPENDIX B: DESCRIPTION OF RATING SYSTEM

A numerical roadway rating system is used to describe the overall condition of the paved roadways and paved parking areas. In this system, a numerical rating between 1 and 100 is ascribed to each 0.02 miles of road. This numerical rating is called a Pavement Condition Rating (PCR). A "perfect" road, newly constructed with no surface distresses and a smooth surface, would be assigned a PCR rating of 100. Based on the type, severity, and extent of surface distresses points are deducted from 100 to arrive at the final PCR.

Data is collected on the following distresses and conditions:

- **Alligator Cracking** - a series of interconnecting cracks resembling alligator skin or chicken wire, which can ocurr anywhere in the lane.

- **Longitudinal Cracking** - cracks which are parallel to the pavement centerline or asphalt lay-down direction.

- **Transverse Cracking** - cracks perpendicular to the pavement centerline.

- **Pothole (patch)** - a bowl-shaped hole in the pavement surface. May be patched or not.

- **Rutting** - surface depressions in the wheel paths.

Roughness is collected as International Roughness Index (IRI) and is used in the PCR formula. Roughness is measured in inches of vertical displacement of the vehicle per mile traveled.

A Distress Rating Index value is calculated for each of the individual distresses at the 0.02 mile, or every 105.6 feet.

Rating Index Formulas

Alligator Cracking Index = 100 - [40 * (%low/70 + %medium/30 + %high/10)]
Longitudinal Cracking Index = 100 - [40 * (%low/350 + %medium/200 + %high/75)]
Transverse Cracking Index = 100 – [(20 * (low/15.1 + medium/7.5)) + (40 * (high/1.9))]
Patching Index = 100 - [40 * (%patching / 80)]
Rutting Index: 100-[40*((low/160) + (med/80) + (high/40))]
Roughness Condition Index: (RCI) = 32 * [5 * $e^{(-0.0041 * \text{average IRI})}$]

These 0.02 Distress Rating Index values are then averaged over one mile sections for the mile-by-mile Disitress Rating Indexes, Surface Condition Rating (SCR) and Pavement Condition Rating (PCR).

Surface Condition Rating (SCR) = 100 – [(100 – AC_INDEX) + (100 – LC_INDEX) + (100 – TC_INDEX) + (100 – PATCH_INDEX) + (100 – RUT_INDEX)]

Pavement Condition Rating (PCR) = (SCR * 0.60) + (RCI * 0.40)

NOTE: Collection of roughness data is dependant on the data collection vehicle traveling at a minimum speed of 12 mph. In the event that a route cannot be safely traveled at this minimum speed, and results in no roughness data, the SCR only will be calculated.

Parking Lot and Manually Rated Road Condition Rating

Surface Condition Distresses- Chip Seal:

Raveling – loss of surface rock chips revealing previous surface
Bleeding – asphalt or tar is bleeding through to the surface where surface looks slick with asphalt
Rutting
Potholes/Patching

Ratings - Chip Seal:

Excellent – None of the surface affected by the above (recently constructed)
Good – Less than 10% of surface affected by the above
Fair – Between 10% and 40% of surface affected by the above
Poor – More than 40% of surface affected by the above

Surface Condition - Asphalt:

Cracking of any type
Rutting
Potholes/Patching

Ratings - Asphalt:

Excellent – None of the surface affected by the above (recently constructed)
Good – Less than 10% of surface affected by the above
Fair – Between 10% and 40% of surface affected by the above
Poor – More than 40% of surface affected by the above

Index Values of Visual Ratings on Parking Lots and Manually Rated Roads

Excellent	97
Good	90
Fair	73
Poor	45

Drainage Condition Rating Definitions

Good: Minimal overall drainage problems. If funding were available for pavement maintenance, 25% or less is estimated to correct drainage deficiencies.

Poor: Problems exist that jeopardizes the integrity of the road in this section. If funding were available for pavement maintenance, 50% to 100% is estimated to correct drainage deficiencies.

Drainage Condition Rating Criteria

The following are examples of basic criteria to help the rater to identify the different drainage ratings. While in the field, many other flaws will be discovered, but these criteria should give a feel for where the flaws would apply in the ratings.

Good Drainage
Most water clears the road prism adequately with little concern of base saturation.

- X Pavement has minor deficiencies that interrupt water flow.
- X Shoulders are mostly adequate as they relate to surrounding terrain. Shoulder design generally coincides with the drainage design.
- X Curbs have deficiencies, but still function without erosion.
- X Down drains are placed properly, but show signs of some deterioration.
- X Culverts are adequate in numbers and size however, minor deficiencies are evident.
- X Ditches are not paved, but solid and have enough area to maintain and carry required volume of water.

Poor Drainage
This section has areas of inadequate drainage ability that is causing base saturation that could cause a road failure.

- X Pavement grade is irregular and holds dangerous amounts of water (hydroplaning is a concern), or shows massive alligator cracking.
- X Shoulder design induces ponding that encroaches on the pavement (drivers try to avoid ponds).
- X Portions of curbs are missing, allowing water to escape causing erosion.
- X Drop inlets, due to various reasons, are only able to drain 50% or less efficiently.
- X Down drains show signs of water exiting in areas by the down drain causing erosion.
- X Culverts are functionally deficient including size, installation, location, or grade giving water opportunity to saturate the road base.
- X Ditches allow water opportunity to saturate the road base through various reasons such as low places in ditch where design has not allowed for water to drain, little or no room in the road prism for a needed ditch, or water is disappearing within the ditch.

Shoulder Condition Rating Definitions

Good: The shoulder is generally in good functional condition.. If curbs are present, they are functional.

Poor: There is no shoulder because erosion has removed it. If curbs are present, they need to be replaced.

Shoulder Rating Criteria

The following are examples of basic criteria to help the rater to identify the different shoulder ratings. While in the field, many other flaws will be discovered, but these criteria should give a feel for where the flaws would apply in the ratings.

Good Shoulders

- X If shoulder is unpaved drop-offs are less than 1", but grading is required.
- X If shoulder is paved rut depth is less than 1/2", sealed cracks are present, and grading is required.
- X If curbs are present they are functional.

Poor Shoulder

- X If shoulder is unpaved drop-offs are greater than 4" and erosion has removed the shoulder.
- X If shoulder is paved rut depth is greater than 1". Open cracks are greater than 1/4" deep, and erosion has removed the shoulder.
- X If curbs are present they need replacement.
- X If curbs are present they need repairs, and there is erosion behind the curb.

APPENDIX C: DIGITAL IMAGE INFORMATION

All images collected in Cycle 3 are digital images. These images provide the best resolution for identifying sign inventories and pavement evaluations. The images can be viewed with an interactive software program called **Visi-Data**. Each park will have a copy of the Visi-Data program installed in the park for park personnel to access and use.

Only Cycle 3 data can be queried and reviewed using the Visi-Data software program. This program is a multimedia data presentation and analysis tool that can be accessed either at the individual park, park region or at NPS headquarters. The data is organized in a hierarchical manner and presented in tabular and graphical formats. The user is able to perform queries and drill down through the data to find the particular information they are trying to query. Associated digital right-of-way images from the either the LAN, USB port, individual DVD, or from the Visi-web application, can be presented along with the GPS locations.

APPENDIX D: METADATA

ARAN ROUTE GPS DATA

Background information of route spatial data.

GPS Records: GPS data for NPS routes is stored in the MS Access database for the park. The coordinates of the road traces are stored in the '**PMS_20**' table in the '**GPS_LAT**' and '**GPS_LON'** fields.

Data Collection Device:

Vehicle Information:	Ford Van
Type of GPS Unit:	NovAtel MiLLennium, 12 channel, dual frequency L1/L2, DGPS ready receiver w/MiLLennium 502 GPS antenna and OmniSTAR System 3000 LR
Inertial System:	Applanix POS LV

Accuracy: Expected ground accuracy is 1 meter *

*The above accuracy assumes good GPS mission planning resulting in maximum GPS satellite observation and ideal environmental conditions. Due to less than ideal satellite and environmental conditions, some routes may lack the expected ground accuracy.

Geographic Datum: WGS 1984

Post Collection GPS Correction: Due to unanticipated GPS collection inaccuracies, some route locations have been digitized using DOQQ's and other data sources.

FHWA – NPS Road Inventory Program
Cycle 3 Metadata for the Park Database

The purpose of these sheets is to provide users of the Road Inventory Program's data with data accuracies and tolerances to help users define ways in which the RIP data can and cannot be used. For further information on specifics of data collection equipment, data collection procedures, equipment calibrations, or quality control/quality assurance procedures, please contact Jim Kennedy, Project Manager, Data Quality Assurance, at 720-963-3560 or jim.kennedy@fhwa.dot.gov.

All Road Inventory Program data undergoes quality control and quality assurance testing. This document represents the known data accuracies and tolerances for the data collection equipment, data collection procedures, and data processing procedures currently in use. Many additional tests conducted on the park databases during the quality assurance phase to ensure data integrity are not listed as a part of this document. Before it is delivered, a park database undergoes a large set of table design consistency, field data format consistency, data completeness, uniqueness of key fields, data reasonableness, acceptable data range, within-field data consistency, between-field data consistency, and between-table data consistency tests. Additional data sampling checks are conducted to ensure proper data upload from raw files into the park database and to quality check the pavement crack analysis. Further information is detailed in the FHWA – NPS RIP Quality Assurance Manual, available upon request.

This description of metadata includes only the known accuracies with which a data field matches its expected value. The tables that follow this page show each database field's:

- Field – field name
- Format – data type and number of characters of field
- Expected Value – meaning of value assigned to field
- Source – when in process field value obtained
- Validation – how field value obtained
- Expected Accuracy – accuracy with which contents of field match Expected Value

Verifying and continually improving the accuracy of Road Inventory Program data is an ongoing goal of the Federal Highway Administration and the National Park Service. Field testing and post-collection analysis of ARAN (Automatic Road ANalyzer) -collected data will continue in Cycle 4. Data quality is expected to improve as the FHWA – NPS Road Inventory Program continues to operate, due to the fact that future data collection cycles will consist in large part of data updates. Also, technological improvements are expected to render the data increasingly consistent with actual roadway conditions as data collection cycles progress.

Specific Caveats

- Three canned reports are titled "Features in Good Condition", "Features in Fair Condition," and "Features in Poor Condition." These titles could be misleading. In Cycle 3, condition assessments have been conducted on **signs only**. Condition assessments have not been conducted on non-sign features, such as culverts, guardrails, pullouts, etc. Although the database and canned reports might report a default value of "good" for un-assessed features, these condition values are not valid for import into FMSS.
- Database records that show a concrete surface type sometimes include index values that seem to show a perfect roadway (e.g., a Pavement Condition Rating (PCR) of 100). The Road Inventory Program does not actually conduct condition assessments of concrete surfaces. The perfect values are just default values assigned to unassessed sections of pavement and do not represent an assessment of the roadway surface's quality.
- On the USB drive, in the Database folder, parks are provided with intersection lists and exceptions lists. These documents should be treated as raw files and are **not accurate**. Refer to the final database for accurately post-processed intersection data.
- Most roadway data is collected in the primary direction lane of a roadway. To save data storage

space and to reduce data analysis efforts, the assumption was made that the paved surface condition of a route's primary lane adequately represents the surface condition of the full roadway. Therefore, in the database, opposite-direction records in the PMS_Visidata table do not include assessed values for roadway surface distresses. Values such as 0, N/A, -1, or a repeat of the primary-direction assessed value indicate that no assessment was performed. The PMS_20 and PMS_Mile tables simply exclude all opposite routes.

- Most roadway features are collected relative to the primary direction lane of a roadway, using the primary-direction video. Signs are the only features collected using the opposite-direction video.

Key to Notes in Tables

(1): Note that only one value fits in field, so even if this value varies throughout the route, only one value is recorded here.
(2): Note that some MP values listed here are estimates recorded during the Route ID process for use by the data collection crew (e.g. "FROM ROUTE 0010 AT MILEPOST 30.3"). They are estimates only and are not expected to match the more accurate milepost values included elsewhere in the database in the BEG_MP, END_MP, and MP fields.
(3): Mileage is measured by the ARAN (Automatic Road ANalyzer) data collection vehicle out to the 0.001 decimal place. The DMI (distance measuring instrument) is very accurate, with extremely slight variations in measurement due to air temperature, tire inflation, curves, hills, and equipment calibration.
(4): Features are measured differently depending on whether they are visible in the forward-facing video of the roadway, but every feature milepost measurement depends on the baseline measurement of the data collection vehicle's mileage. The ARAN (Automatic Road ANalyzer) data collection vehicle's mileage is measured by the DMI (distance measuring instrument) out to the 0.001 decimal place. The DMI is very accurate, with extremely slight variations in measurement due to air temperature, tire inflation, curves, hills, and equipment calibration. If a feature will not be visible in the forward-facing video, its milepost is determined by the data collectors' key press tagging the milepost when the ARAN passes the feature. Key presses are entered into the ARAN software when the vehicle travels typically between 15 and 45 miles/hour, so a delay of a single second as the vehicle passes a feature would result in an inaccuracy of 0.004 miles (22 feet) to 0.012 miles (66 feet). If a feature is visible in the video, its milepost is determined during post-processing using a video measurement software called Surveyor. Features along the side of a roadway that are measured using the Surveyor software might not be located very accurately. Surveyor is known to be most accurate when measuring quantities near the center of the video frame, as opposed to in the edges of the video image.
(5): Only signs are evaluated for condition. No other features' conditions are assessed, so "N/A" was originally intended to be the default value for unassessed features. However, some non-sign features do have condition ratings in the database. These are not accurate, because no assessment was ever done on non-sign features.
(6): Condition assessments are not conducted on concrete (CO) surface types. Perfect values for concrete road sections are default values and do not represent a condition assessment of the concrete surfaces.
(7): Roadway cracking presence, type, severity, and extent are determined by filming the roadway in the primary lane continuously with two overlapping analog cameras of 640 x 480 resolution. The images from both cameras are stitched together in real time to create a continuous strip image of the roadway pavement in the primary lane. Cracks 3 mm or greater in width are visible in this video. A semi-automatic process running the WiseCrax software with additional input by human operators provides the cracking quantities recorded in these database fields. Quality checks have determined that a consistent 80% or better of the visible cracks are recorded.

Access Database Metadata

Master Table Metadata:

FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
RIP_CYCLE	X	3, for data collection cycle 3	Route ID Meeting	FHWA Determination	100%
STATE	XX	State where route is located	Route ID Meeting	Park Input/FHWA Determination	Untested. (1)
PARK_ALPHA	XXXX	Park alpha code	Route ID Meeting	NPS References	Untested
PARK_NO	XXXX	Park numeric code	Route ID Meeting	NPS References	Untested
RTE_NO	XXXXXX	Route number	Route ID Meeting	Park Input/FHWA Classification	Untested
RTE_NAME	(Text)	Route name	Route ID Meeting	Park Input	Untested. 50 characters fit in field
FUNCT_CLASS	X	Route functional classification	Route ID Meeting	Park Input/FHWA Classification	Untested
DIRECTION	XXX	Survey lane: PRI (primary) or OPP (opposite)	Route ID Meeting	Park Input/FHWA Determination	Untested
BEG_MP_EST	999.999 (miles)	Estimated starting MP	Route ID Meeting	Park Input/FHWA Determination	Estimated before data collected
END_MP_EST	999.999 (miles)	Estimated ending MP	Route ID Meeting	Park Input/FHWA Determination	Estimated before data collected
RTE_LENGTH	999.999 (miles)	Collected route length	ARAN Data Collection	Automatic Output	100%
FROM_DESC	(Text)	Beginning terminus of route	Route ID Meeting	Park Input/FHWA Determination	Estimated before data collected. (2)
TO_DESC	(Text)	Ending terminus of route	Route ID Meeting	Park Input/FHWA Determination	Estimated before data collected. (2)
NO_LANES	X	Number of lanes in route	ARAN Data Collection	Survey Crew Input	Untested. (1)
SURF_TYPE	XX	Surface type of route	ARAN Data Collection	Survey Crew Input	Untested. (1)
COMP_DIR	XX	Compass direction of route's primary lane (nearest cardinal direction)	Route ID Meeting	Park Input/FHWA Determination	Untested
COMMENTS	(Text)	Special information, if any	Contractor Post-processing	Contractor Input	Untested
FILENAME	XXXXXXXX	Filename of raw data files	ARAN Data Collection	Automatic Output	100%
SECTION	XXXXXX	Route section ID	Route ID Meeting/ARAN Data Collection	Survey Crew Input/Automatic Output	100%
FKEY	9999999	Unique record ID	Contractor Post-processing	Database Processing	100%
DATE	DD/MM/YY	Data collection date	ARAN Data Collection	Automatic Output	100%
BEG_MP	999.999 (miles)	Beginning MP collected	ARAN Data Collection	Automatic Output	100% (3)
END_MP	999.999 (miles)	Ending MP collected	ARAN Data Collection	Automatic Output	100% (3)

PMS_Feature Table Metadata:

FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
RIP_CYCLE	X	3, for data collection cycle 3	Route ID Meeting	FHWA Determination	100%
STATE	XX	State where route is located	Route ID Meeting	Park Input/FHWA Determination	Untested. (1)
PARK_ALPHA	XXXX	Park alpha code	Route ID Meeting	NPS References	Untested
PARK_NO	XXXX	Park numeric code	Route ID Meeting	NPS References	Untested
RTE_NO	XXXXXX	Route number	Route ID Meeting	Park Input/FHWA Classification	Untested
FUNCT_CLASS	X	Route functional class	Route ID Meeting	Park Input/FHWA Classification	Untested
DIRECTION	XXX	Survey lane: PRI (primary) or OPP (opposite)	Route ID Meeting	Park Input/FHWA Determination	Untested
MP	999.999 (miles)	Feature location along route	ARAN Data Collection/Contractor Post-processing	Survey Crew Input/Video Processing	Untested (4)
EVENT	XXXX	Event category of feature	Contractor Post-processing	Video Processing	Untested
EVENT_CODE	XXXX	Event sub-category of feature	Contractor Post-processing	Video Processing	Untested
EVENT_DESC	(Text)	Description of feature/contents of sign	Contractor Post-processing	Video Processing	Untested
MUTCD	"N/A"	N/A. Intended to be sign MUTCD code	Contractor Post-processing	Database Processing	Values inaccurate, defaulted to N/A
CONDITION	XXX	Sign condition (G-D, F-R, P-R, N/A)	Contractor Post-processing	Video Processing	Untested (5)
COMMENT	(Text)	Sign label, intersecting route, etc.	Contractor Post-processing	Database Processing	Untested
OFFSET	"N/A"	N/A. Intended to be offset from pavement edge	Contractor Post-processing	Database Processing	Values inaccurate, defaulted to N/A
SIDE	XXX	Side of route; "N/A" if not on one side	Contractor Post-processing	Video Processing	Untested
STR_NUMBER	XXXXXXXXXX	FHWA bridge structure number	FHWA Post-processing	Database Processing	Untested
GPS_LAT	"N/A"	N/A. Intended to be latitude coordinate	Contractor Post-processing	Database Processing	Values inaccurate, defaulted to N/A
GPS_LON	"N/A"	N/A. Intended to be longitude coordinate	Contractor Post-processing	Database Processing	Values inaccurate, defaulted to N/A
GPS_ELEV	"N/A"	N/A. Intended to be elevation	Contractor Post-processing	Database Processing	Values inaccurate, defaulted to N/A
GPS_MODE	"N/A"	N/A. Intended to be GPS mode	Contractor Post-processing	Database Processing	Values inaccurate, defaulted to N/A
VIDEO	<*Park*>C03VID<#>	Removable USB video hard drive number	Contractor Post-processing	Database Processing	Untested
IMAGE	(Text)	Filename of .jpg image showing feature	Contractor Post-processing	Automatic Output	Untested
DATE	DD/MM/YY	Data collection date	ARAN Data Collection	Automatic Output	100%
FILENAME	XXXXXXXX	Filename of raw data files	ARAN Data Collection	Automatic Output	100%
SECTION	XXXXXX	Route section ID	Route ID Meeting/ARAN Data Collection	Survey Crew Input/Automatic Output	100%
FKEY	9999999	Unique record ID	Contractor Post-processing	Database Processing	100%
VISI_FROM	999999 (millimiles)	Raw MP of first video frame showing feature	Contractor Post-processing	Database Processing	Untested
VISI_TO	999999 (millimiles)	Raw MP of last video frame showing feature	Contractor Post-processing	Database Processing	Untested

FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
IDKEY	(Text)	Unique record ID used by VisiData	Contractor Post-processing	Database Processing	Untested
MP_REF	(Text)	Range of mileage to play in VisiData	Contractor Post-processing	Database Processing	Untested

PMS_20, PMS_Mile & PMS_Visidata Tables Metadata:

FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
RIP_CYCLE	X	3, for data collection cycle 3	Route ID Meeting	FHWA Determination	100%
STATE	XX	State where route is located	Route ID Meeting	Park Input/FHWA Determination	Untested. (1)
PARK_ALPHA	XXXX	Park alpha code	Route ID Meeting	NPS References	Untested
PARK_NO	XXXX	Park numeric code	Route ID Meeting	NPS References	Untested
RTE_NO	XXXXXX	Route number	Route ID Meeting	Park Input/FHWA Classification	Untested
FUNCT_CLASS	X	Route functional class	Route ID Meeting	Park Input/FHWA Classification	Untested
DIRECTION	XXX	Survey lane: PRI (primary) or OPP (opposite)	Route ID Meeting	Park Input/FHWA Determination	Untested
BEG_MP	999.999 (miles)	MP at start of road interval described by database record	Contractor Post-processing	Database Processing	100% (3)
END_MP	999.999 (miles)	MP at end of road interval described by database record	Contractor Post-processing	Database Processing	100% (3)
INT_LENGTH	999.9 (ft)	Length of road interval as aggregated for data table	Contractor Post-processing	Database Processing	100%
RTE_LENGTH	999.999 (miles)	Collected route length	ARAN Data Collection	Automatic Output	100%
NO_LANES	X	Number of lanes in route	ARAN Data Collection	Survey Crew Input	Untested. (1)
LANE_NO	X	Data collection lane	Contractor Post-processing	Database Processing	Untested
WX_LANE_WIDTH	99.999 (ft)	WiseCrax (crack detection software) analysis width	Contractor Post-processing	Automatic Output	Untested
LANE_WIDTH	99.999 (ft)	Width of lane	Contractor Post-processing	Video Processing	Untested
PAVE_WIDTH	99.999 (ft)	Full pavement width	Contractor Post-processing	Video Processing	Untested
SHLD_WIDTH_L	99.999 (ft)	Left shoulder width	Contractor Post-processing	Video Processing	Untested
SHLD_WIDTH_R	99.999 (ft)	Right shoulder width	Contractor Post-processing	Video Processing	Untested
SHLD_COND_L	XXXX	Left shoulder condition	ARAN Data Collection	Survey Crew Input	Untested
SHLD_COND_R	XXXX	Right shoulder condition	ARAN Data Collection	Survey Crew Input	Untested
DRAIN_COND_L	XXXX	Left drainage condition	ARAN Data Collection	Survey Crew Input	Untested
DRAIN_COND_R	XXXX	Right drainage condition	ARAN Data Collection	Survey Crew Input	Untested
SURF_TYPE	XX	Surface type of route	ARAN Data Collection	Survey Crew Input	Untested. (1)
PCR	999	Pavement Condition Rating	Contractor Post-processing	Database Processing	100% for calculation (6)
RCI	999	Roughness Condition Index; -1 if invalid IRI	Contractor Post-processing	Database Processing	100% for calculation

FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
SCR	999	Surface Condition Rating	Contractor Post-processing	Database Processing	100% for calculation (6)
IRI_AVG	999.9 (inches/mile)	Average IRI	Contractor Post-processing	Database Processing	Untested
IRI_SD	999.9 (inches/mile)	IRI standard deviation	Contractor Post-processing	Database Processing	Untested
IRI_L	999.9 (inches/mile)	Left wheel path IRI	ARAN Data Collection	Automatic Output	Untested
IRI_R	999.9 (inches/mile)	Right wheel path IRI	ARAN Data Collection	Automatic Output	Untested
IRI_FLAG	0 or -1	-1 if invalid IRI data	Contractor Post-processing	Database Processing	Untested
RUT_INDEX	999	Rut index	Contractor Post-processing	Database Processing	100% for calculation (6)
RUT_AVG	99.99 (inches)	Average rut depth of both wheelpaths	Contractor Post-processing	Database Processing	Untested (6)
RUT_MAX	99.99 (inches)	Maximum rut depth of both wheelpaths	Contractor Post-processing	Database Processing	Untested (6)
RUT_SD	9.9	Rut depth standard deviation	Contractor Post-processing	Database Processing	Untested (6)
RUT_LOW	999 (%)	Percent of low severity ruts (on a 0-200% scale) in both wheelpaths	Contractor Post-processing	Database Processing	Untested (6)
RUT_MED	999 (%)	Percent of medium severity ruts (on a 0-200% scale) in both wheelpaths	Contractor Post-processing	Database Processing	Untested (6)
RUT_HI	999 (%)	Percent of high severity ruts (on a 0-200% scale) in both wheelpaths	Contractor Post-processing	Database Processing	Untested (6)
XFALL	999.9 (% slope)	Cross fall at start of road interval	ARAN Data Collection	Automatic Output	Precise but inaccurate. Not reported in Cycle 4
GRADE	999.9 (% slope)	Grade at start of road interval	ARAN Data Collection	Automatic Output	Precise but inaccurate. Not reported in Cycle 4
AC_INDEX	999	Alligator cracking index	Contractor Post-processing	Database Processing	100% for calculation (6)
AC_LOW	999.9999 (%)	Percent of WiseCrax measured lane area with low-severity alligator cracking	Contractor Post-processing	Automatic Output	(6) (7)
AC_MED	999.9999 (%)	Percent of WiseCrax measured lane area with medium-severity alligator cracking	Contractor Post-processing	Automatic Output	(6) (7)
AC_HI	999.9999 (%)	Percent of WiseCrax measured lane area with high-severity alligator cracking	Contractor Post-processing	Automatic Output	(6) (7)
LC_INDEX	999	Longitudinal cracking index	Contractor Post-processing	Database Processing	100% for calculation (6)
LC_LOW	999.99 (%)	Low-severity longitudinal cracking in lane as a percentage of road interval length	Contractor Post-processing	Automatic Output	(6) (7)
LC_MED	999.99 (%)	Medium-severity longitudinal cracking in lane as a percentage of road interval length	Contractor Post-processing	Automatic Output	(6) (7)
LC_HI	999.99 (%)	High-severity longitudinal cracking in lane as a percentage of road interval length	Contractor Post-processing	Automatic Output	(6) (7)
TC_INDEX	999	Transverse cracking index	Contractor Post-processing	Database Processing	100% for calculation (6)
TC_LOW	999.99 (cracks)	Count of low-severity transverse cracks, where one crack unit equals the WiseCrax measured lane width	Contractor Post-processing	Automatic Output	(6) (7)
TC_MED	999.99 (cracks)	Count of medium-severity transverse cracks, where one crack unit equals the WiseCrax measured lane width	Contractor Post-processing	Automatic Output	(6) (7)
TC_HI	999.99 (cracks)	Count of high-severity transverse cracks, where one crack unit equals the WiseCrax measured lane width	Contractor Post-processing	Automatic Output	(6) (7)
PATCH_INDEX	999	Patching index	Contractor Post-processing	Database Processing	100% for calculation (6)

FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
PATCHING	999.9999 (%)	Percent of WiseCrax measured lane area affected by patching	Contractor Post-processing	Manual Pavement Video Processing	Untested (6)
GPS_LAT	999.999999	Latitude coordinate	ARAN Data Collection	Automatic Output	See GPS Metadata sheet distributed with data
GPS_LON	-999.999999	Longitude coordinate	ARAN Data Collection	Automatic Output	See GPS Metadata sheet distributed with data
GPS_ELEV	99999.9	Elevation	ARAN Data Collection	Automatic Output	See GPS Metadata sheet distributed with data
GPS_MODE	XXX	GPS mode during collection	ARAN Data Collection	Automatic Output	See GPS Metadata sheet distributed with data
VIDEO	<*Park*>C03VID<#>	Removable USB video hard drive number	Contractor Post-processing	Database Processing	Untested
IMAGE	(Text)	Filename of .jpg image showing road interval	Contractor Post-processing	Automatic Output	Untested
SPEED	999 (miles/hour)	Average ARAN speed during data collection	ARAN Data Collection	Automatic Output	Untested
BRIDGE_FLAG	0 or 1	Flag indicating presence of bridge in interval	ARAN Data Collection	Survey Crew Input	Untested
CONSTR_FLAG	0 or 1	Flag indicating construction in interval	ARAN Data Collection	Survey Crew Input	Untested
LANEDEV_FLAG	0 or 1	Flag indicating lane deviation in interval	ARAN Data Collection	Survey Crew Input	Untested
DATE	DD/MM/YY	Data collection date	ARAN Data Collection	Automatic Output	100%
NODISTRESS	0 OR 1	Flag indicating absence of pavement distress	Contractor Post-processing	Database Processing	100%
FILENAME	XXXXXXXX	Filename of raw data files	ARAN Data Collection	Automatic Output	100%
SECTION	XXXXXX	Route section ID	Route ID Meeting/ARAN Data Collection	Survey Crew Input/Automatic Output	100%
FKEY	9999999	Unique record ID	Contractor Post-processing	Database Processing	100%
VISI_FROM	999999 (millimiles)	Raw MP of first video frame in section	Contractor Post-processing	Database Processing	Untested
VISI_TO	999999 (millimiles)	Raw MP of last video frame in section	Contractor Post-processing	Database Processing	Untested
IDKEY	(Text)	Unique record ID used by VisiData	Contractor Post-processing	Database Processing	Untested
MP_REF	(Text)	Range of mileage to play in VisiData	Contractor Post-processing	Database Processing	Untested

Cycle Shapefile Metadata

Metadata is provided for all shapefiles used for the creation of RIP report documents. The metadata for each shapefile associated with the park can be found in Section 10 of the PDF report provided on your park CD.

All shapefiles have the following spatial characteristics:

Geographic_Coordinate_Units: Decimal degrees
Spheroid: WGS 1984

wica_seg

Metadata also available as

Metadata:

Identification_Information:
Citation:
Citation_Information:
Originator:
REQUIRED: The name of an organization or individual that developed the data set.
Publication_Date:
REQUIRED: The date when the data set is published or otherwise made available for release.
Title: wica_seg
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage:
\\PANGEA\JOBS\FHWA_RoadInvProg\Data\Park_Source_Data\WICA_1560\TSR_Shapes\wica_seg.shp
Description:
Abstract: REQUIRED: A brief narrative summary of the data set.
Purpose:
REQUIRED: A summary of the intentions with which the data set was developed.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
REQUIRED: The year (and optionally month, or month and day) for which the data set corresponds to the ground.
Currentness_Reference:
REQUIRED: The basis on which the time period of content information is determined.
Status:
Progress: REQUIRED: The state of the data set.
Maintenance_and_Update_Frequency:
REQUIRED: The frequency with which changes and additions are made to the data set after the initial data set is completed.
Spatial_Domain:
Bounding_Coordinates:

West_Bounding_Coordinate: -103.500542
East_Bounding_Coordinate: -103.461006
North_Bounding_Coordinate: 43.640266
South_Bounding_Coordinate: 43.520309

Keywords:
Theme:
Theme_Keyword_Thesaurus:
REQUIRED: Reference to a formally registered thesaurus or a similar authoritative source of theme keywords.
Theme_Keyword:
REQUIRED: Common-use word or phrase used to describe the subject of the data set.

Access_Constraints:
REQUIRED: Restrictions and legal prerequisites for accessing the data set.

Use_Constraints:
REQUIRED: Restrictions and legal prerequisites for using the data set after access is granted.

Native_Data_Set_Environment:
Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 8.3.0.800

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: String
Point_and_Vector_Object_Count: 105

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 0.000000
Longitude_Resolution: 0.000000
Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.400000
Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: wica_seg
Attribute:

Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.

Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.

Attribute:
Attribute_Label: FNODE_

Attribute:
Attribute_Label: TNODE_

Attribute:
Attribute_Label: LPOLY_

Attribute:
Attribute_Label: RPOLY_

Attribute:
Attribute_Label: LENGTH

Attribute:
Attribute_Label: WICA_SEG_

Attribute:
Attribute_Label: WICA_SEG_I

Attribute:
Attribute_Label: ID

Attribute:
Attribute_Label: RTE_NO

Attribute:
Attribute_Label: BMP

Attribute:
Attribute_Label: EMP

Attribute:
Attribute_Label: PCR

Attribute:
Attribute_Label: PCR_RATE

Attribute:
Attribute_Label: RT_LENGTH

Attribute:
Attribute_Label: PCRMI

Attribute:
Attribute_Label: PCR_RATEMI

Attribute:
Attribute_Label: PCR_RATEAV

Attribute:
Attribute_Label: PCRAV

Distribution_Information:
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.137

Metadata_Reference_Information:
Metadata_Date: 20050701
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization:
REQUIRED: The organization responsible for the metadata information.
Contact_Person: REQUIRED: The person responsible for the metadata information.
Contact_Address:
Address_Type:
REQUIRED: The mailing and/or physical address for the organization or individual.
City: REQUIRED: The city of the address.
State_or_Province: REQUIRED: The state or province of the address.
Postal_Code: REQUIRED: The ZIP or other postal code of the address.
Contact_Voice_Telephone:
REQUIRED: The telephone number by which individuals can speak to the organization or individual.
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
Profile_Name: ESRI Metadata Profile

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wica_pkg_03_map

Metadata also available as

Metadata:

Identification_Information:
Citation:
Citation_Information:
Originator: Eastern Federal Lands Highway Division
Publication_Date: Unknown
Title: wica_pkg_03_map
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: Not Available
Description:
Abstract: Copy of Parking Areas
Purpose: Road Inventory Program
Supplemental_Information:
This shapefile is a copy of the source parking shapefile. The features are edited as needed for graphic purposes.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 10/16/1999
Currentness_Reference: ground condition
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As per RIP cycle
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -103.499928
East_Bounding_Coordinate: -103.466571
North_Bounding_Coordinate: 43.639681
South_Bounding_Coordinate: 43.521161
Keywords:
Theme:
Theme_Keyword_Thesaurus: WICA
Theme_Keyword: WICA
Access_Constraints: None

Use_Constraints: Redistribution needs permission from EFLHD/NPS
Point_of_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Dan VanGilder
Contact_Organization: EFLHD
Contact_Position: GIS Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: 21400 Ridgetop Circle
City: Sterling
State_or_Province: Virginia
Postal_Code: 20166
Country: United States
Contact_Voice_Telephone: 703-404-6361
Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov
Native_Data_Set_Environment:
Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 8.3.0.800

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report: Good
Completeness_Report: Complete for parking areas
Lineage:
Source_Information:
Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 24

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 0.000000
Longitude_Resolution: 0.000000
Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.400000

Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: wica_pkg_03_map
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: PARK_ALPHA
Attribute_Definition: Park alpha code
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: RTE_NO
Attribute_Definition: Route number
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: RTE_NAME
Attribute_Definition: Route name
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: FEATURE
Attribute:
Attribute_Label: SURF_TYPE
Attribute_Definition: Surface type of route
Attribute_Domain_Values:
Attribute:
Attribute_Label: CONDITION
Attribute_Definition: Condition rating for route
Attribute:
Attribute_Label: PHOTOS
Attribute_Definition: Photo filename associated with feature
Attribute:
Attribute_Label: COMMENT
Attribute_Definition: Field comment
Attribute:
Attribute_Label: GPS_DATE
Attribute_Definition: Date of GPS collection

Attribute:
Attribute_Label: DATAFILE
Attribute:
Attribute_Label: SQ_FT
Attribute_Definition: Feature area in square feet

Distribution_Information:
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.018

Metadata_Reference_Information:
Metadata_Date: 20050701
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: EFLHD Sterling
Contact_Person: Dan VanGilder
Contact_Position: GIS Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: 21400 Ridgetop Circle
City: Sterling
State_or_Province: Virginia
Postal_Code: 20166
Country: United States
Contact_Voice_Telephone: 703-404-6361
Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
Profile_Name: ESRI Metadata Profile

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wica_pkg_03

Metadata also available as

Metadata:

Identification_Information:
Citation:
Citation_Information:
Originator: Eastern Federal Lands Highway Division
Publication_Date: Unknown
Title: wica_pkg_03
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: Not Available
Description:
Abstract: Parking Areas
Purpose: Road Inventory Program
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 10/16/1999
Currentness_Reference: ground condition
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As per RIP cycle
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -103.499928
East_Bounding_Coordinate: -103.466581
North_Bounding_Coordinate: 43.639660
South_Bounding_Coordinate: 43.521108
Keywords:
Theme:
Theme_Keyword_Thesaurus: WICA
Theme_Keyword: WICA
Access_Constraints: None
Use_Constraints: Redistribution needs permission from EFLHD/NPS
Point_of_Contact:
Contact_Information:

Contact_Person_Primary:
Contact_Person: Dan VanGilder
Contact_Organization: EFLHD
Contact_Position: GIS Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: 21400 Ridgetop Circle
City: Sterling
State_or_Province: Virginia
Postal_Code: 20166
Country: United States
Contact_Voice_Telephone: 703-404-6361
Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov
Native_Data_Set_Environment:
Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 8.3.0.800

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report: Good
Completeness_Report: Complete for parking areas
Lineage:
Source_Information:
Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 24

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 0.000000
Longitude_Resolution: 0.000000
Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.400000
Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: wica_pkg_03
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: PARK_ALPHA
Attribute_Definition: Park alpha code
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: RTE_NO
Attribute_Definition: Route number
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: RTE_NAME
Attribute_Definition: Route name
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: FEATURE
Attribute:
Attribute_Label: SURF_TYPE
Attribute_Definition: Surface type of route
Attribute_Domain_Values:
Attribute:
Attribute_Label: CONDITION
Attribute_Definition: Condition rating for route
Attribute:
Attribute_Label: PHOTOS
Attribute_Definition: Photo filename associated with feature
Attribute:
Attribute_Label: COMMENT
Attribute_Definition: Field comment
Attribute:
Attribute_Label: GPS_DATE
Attribute_Definition: Date of GPS collection
Attribute:
Attribute_Label: DATAFILE
Attribute:
Attribute_Label: SQ_FT

Attribute_Definition: Feature area in square feet

Distribution_Information:
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.018

Metadata_Reference_Information:
Metadata_Date: 20050701
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: EFLHD Sterling
Contact_Person: Dan VanGilder
Contact_Position: GIS Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: 21400 Ridgetop Circle
City: Sterling
State_or_Province: Virginia
Postal_Code: 20166
Country: United States
Contact_Voice_Telephone: 703-404-6361
Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
Profile_Name: ESRI Metadata Profile

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wica_mrp_03_map

Metadata also available as

Metadata:

Identification_Information:
Citation:
Citation_Information:
Originator: Eastern Federal Lands Highway Division
Publication_Date: Unknown
Title: wica_mrp_03_map
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: Not Available
Description:
Abstract: Manually Rated Roads - Polygons
Purpose: Road Inventory Program
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 9/12/2002
Currentness_Reference: ground condition
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As per RIP cycle
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -103.480876
East_Bounding_Coordinate: -103.478736
North_Bounding_Coordinate: 43.557756
South_Bounding_Coordinate: 43.555298
Keywords:
Theme:
Theme_Keyword_Thesaurus: WICA
Theme_Keyword: WICA
Access_Constraints: None
Use_Constraints: None
Point_of_Contact:
Contact_Information:

Contact_Person_Primary:
Contact_Person: Dan VanGilder
Contact_Organization: EFLHD
Contact_Position: GIS Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: 21400 Ridgetop Circle
City: Sterling
State_or_Province: Virginia
Postal_Code: 20166
Country: United States
Contact_Voice_Telephone: 703-404-6361
Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov
Native_Data_Set_Environment:
Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 8.3.0.800

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report: Good
Completeness_Report: Complete for manually rated roads.
Lineage:
Source_Information:
Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 1

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 0.000000
Longitude_Resolution: 0.000000
Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.400000
Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: wica_mrp_03_map
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: PARK_ALPHA
Attribute_Definition: Park alpha code
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: RTE_NO
Attribute_Definition: Route Number
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: RTE_NAME
Attribute_Definition: Route Name
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: FEATURE
Attribute_Definition: Route section ID
Attribute:
Attribute_Label: SURF_TYPE
Attribute_Definition: Surface type of route
Attribute:
Attribute_Label: CONDITION
Attribute_Definition: Condition rating
Attribute:
Attribute_Label: PHOTOS
Attribute_Definition: Field comment
Attribute:
Attribute_Label: COMMENT
Attribute_Definition: Date of GPS collection
Attribute:
Attribute_Label: GPS_DATE
Attribute:
Attribute_Label: DATAFILE
Attribute_Definition: Area of manually rated road in squre feet
Attribute:
Attribute_Label: SQ_FT

Distribution_Information:
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.187

Metadata_Reference_Information:
Metadata_Date: 20050701
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: EFLHD Sterling
Contact_Person: Dan VanGilder
Contact_Position: GIS Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: 21400 Ridgetop Circle
City: Sterling
State_or_Province: Virginia
Postal_Code: 20166
Country: United States
Contact_Voice_Telephone: 703-404-6361
Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
Profile_Name: ESRI Metadata Profile

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wica_mrp_03

Metadata also available as

Metadata:

Identification_Information:
Citation:
Citation_Information:
Originator: Eastern Federal Lands Highway Division
Publication_Date: Unknown
Title: wica_mrp_03
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: Not Available
Description:
Abstract: Manually Rated Roads - Polygons
Purpose: Road Inventory Program
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 9/12/2002
Currentness_Reference: ground condition
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As per RIP cycle
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -103.480918
East_Bounding_Coordinate: -103.478778
North_Bounding_Coordinate: 43.557756
South_Bounding_Coordinate: 43.555298
Keywords:
Theme:
Theme_Keyword_Thesaurus: WICA
Theme_Keyword: WICA
Access_Constraints: None
Use_Constraints: None
Point_of_Contact:
Contact_Information:

Contact_Person_Primary:
Contact_Person: Dan VanGilder
Contact_Organization: EFLHD
Contact_Position: GIS Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: 21400 Ridgetop Circle
City: Sterling
State_or_Province: Virginia
Postal_Code: 20166
Country: United States
Contact_Voice_Telephone: 703-404-6361
Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov
Native_Data_Set_Environment:
Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 8.3.0.800

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report: Good
Completeness_Report: Complete for manually rated roads.
Lineage:
Source_Information:
Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 1

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 0.000000
Longitude_Resolution: 0.000000
Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.400000
Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: wica_mrp_03
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: PARK_ALPHA
Attribute_Definition: Park alpha code
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: RTE_NO
Attribute_Definition: Route Number
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: RTE_NAME
Attribute_Definition: Route Name
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: FEATURE
Attribute_Definition: Route section ID
Attribute:
Attribute_Label: SURF_TYPE
Attribute_Definition: Surface type of route
Attribute:
Attribute_Label: CONDITION
Attribute_Definition: Condition rating
Attribute:
Attribute_Label: PHOTOS
Attribute_Definition: Field comment
Attribute:
Attribute_Label: COMMENT
Attribute_Definition: Date of GPS collection
Attribute:
Attribute_Label: GPS_DATE
Attribute:
Attribute_Label: DATAFILE
Attribute_Definition: Area of manually rated road in squre feet
Attribute:
Attribute_Label: SQ_FT

Distribution_Information:
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.187

Metadata_Reference_Information:
Metadata_Date: 20050701
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: EFLHD Sterling
Contact_Person: Dan VanGilder
Contact_Position: GIS Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: 21400 Ridgetop Circle
City: Sterling
State_or_Province: Virginia
Postal_Code: 20166
Country: United States
Contact_Voice_Telephone: 703-404-6361
Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
Profile_Name: ESRI Metadata Profile

Generated by mp version 2.7.33 on Fri Jul 01 10:53:38 2005

wica_mrl_03_map

Metadata also available as

Metadata:

Identification_Information:
Citation:
Citation_Information:
Originator: Eastern Federal Lands Highway Division
Publication_Date: Published Materials
Title: wica_mrl_03_map
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: Not Available
Description:
Abstract: Copy of Manually Rated Roads - Lines
Purpose: Road Inventory Program
Supplemental_Information:
This shapefile is a copy of the source manually rated lines shapefile. The features are edited as needed for graphic purposes.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 9/15/1999
Currentness_Reference: ground condition
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As per RIP cycle
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -103.496959
East_Bounding_Coordinate: -103.477856
North_Bounding_Coordinate: 43.567434
South_Bounding_Coordinate: 43.558730
Keywords:
Theme:
Theme_Keyword_Thesaurus: WICA
Theme_Keyword: WICA
Access_Constraints: None

Use_Constraints: Redistribution needs permission from EFLHD/NPS
Point_of_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Dan VanGilder
Contact_Organization: EFLHD
Contact_Position: GIS Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: 21400 Ridgetop Circle
City: Sterling
State_or_Province: Virginia
Postal_Code: 20166
Country: United States
Contact_Voice_Telephone: 703-404-6361
Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov
Native_Data_Set_Environment:
Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 8.3.0.800

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report: Good
Completeness_Report: Complete for parking areas
Lineage:
Source_Information:
Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: String
Point_and_Vector_Object_Count: 5

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 0.000000
Longitude_Resolution: 0.000000
Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.400000

Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: wica_mrl_03_map
Entity_Type_Definition_Source: GPS
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Enumerated_Domain:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: PARK_ALPHA
Attribute_Definition: Park alpha code
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: RTE_NO
Attribute_Definition: Route Number
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: RTE_NAME
Attribute_Definition: Route Name
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: SECTION_
Attribute_Definition: Route Section ID
Attribute_Definition_Source: Route ID Meeting / ARAN Data Collection
Attribute:
Attribute_Label: SURF_TYPE
Attribute_Definition: Surface type of route
Attribute_Definition_Source: ARAN Data Collection
Attribute:
Attribute_Label: CONDITION
Attribute_Definition: Condition rating
Attribute_Domain_Values:
Attribute:
Attribute_Label: COMMENT
Attribute_Definition: Field comment
Attribute:

Attribute_Label: GPS_DATE
Attribute_Definition: Date of GPS Collection
Attribute:
Attribute_Label: DATAFILE
Attribute:
Attribute_Label: PAVED_MI
Attribute_Definition: Width of the paved area
Attribute:
Attribute_Label: PAVED_MI
Attribute_Definition: Calculated paved miles

Distribution_Information:
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.037

Metadata_Reference_Information:
Metadata_Date: 20050701
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: EFLHD Sterling
Contact_Person: Dan VanGilder
Contact_Position: GIS Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: 21400 Ridgetop Circle
City: Sterling
State_or_Province: Virginia
Postal_Code: 20166
Country: United States
Contact_Voice_Telephone: 703-404-6361
Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
Profile_Name: ESRI Metadata Profile

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wica_mrl_03

Metadata also available as

Metadata:

Identification_Information:
Citation:
Citation_Information:
Originator: Eastern Federal Lands Highway Division
Publication_Date: Published Materials
Title: wica_mrl_03
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: Not Available
Description:
Abstract: Manually Rated Roads - Lines
Purpose: Road Inventory Program
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 9/15/1999
Currentness_Reference: ground condition
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As per RIP cycle
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -103.496959
East_Bounding_Coordinate: -103.477890
North_Bounding_Coordinate: 43.567434
South_Bounding_Coordinate: 43.558730
Keywords:
Theme:
Theme_Keyword_Thesaurus: WICA
Theme_Keyword: WICA
Access_Constraints: None
Use_Constraints: Redistribution needs permission from EFLHD/NPS
Point_of_Contact:
Contact_Information:

Contact_Person_Primary:
Contact_Person: Dan VanGilder
Contact_Organization: EFLHD
Contact_Position: GIS Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: 21400 Ridgetop Circle
City: Sterling
State_or_Province: Virginia
Postal_Code: 20166
Country: United States
Contact_Voice_Telephone: 703-404-6361
Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov
Native_Data_Set_Environment:
Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 8.3.0.800

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report: Good
Completeness_Report: Complete for parking areas
Lineage:
Source_Information:
Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: String
Point_and_Vector_Object_Count: 5

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 0.000000
Longitude_Resolution: 0.000000
Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.400000
Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: wica_mrl_03
Entity_Type_Definition_Source: GPS
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Enumerated_Domain:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: PARK_ALPHA
Attribute_Definition: Park alpha code
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: RTE_NO
Attribute_Definition: Route Number
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: RTE_NAME
Attribute_Definition: Route Name
Attribute_Definition_Source: Route ID Meeting
Attribute:
Attribute_Label: SECTION_
Attribute_Definition: Route Section ID
Attribute_Definition_Source: Route ID Meeting / ARAN Data Collection
Attribute:
Attribute_Label: SURF_TYPE
Attribute_Definition: Surface type of route
Attribute_Definition_Source: ARAN Data Collection
Attribute:
Attribute_Label: CONDITION
Attribute_Definition: Condition rating
Attribute_Domain_Values:
Attribute:
Attribute_Label: COMMENT
Attribute_Definition: Field comment
Attribute:
Attribute_Label: GPS_DATE
Attribute_Definition: Date of GPS Collection
Attribute:
Attribute_Label: DATAFILE

Attribute:
Attribute_Label: PAVED_MI
Attribute_Definition: Width of the paved area
Attribute:
Attribute_Label: PAVED_MI
Attribute_Definition: Calculated paved miles

Distribution_Information:
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.037

Metadata_Reference_Information:
Metadata_Date: 20050701
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: EFLHD Sterling
Contact_Person: Dan VanGilder
Contact_Position: GIS Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: 21400 Ridgetop Circle
City: Sterling
State_or_Province: Virginia
Postal_Code: 20166
Country: United States
Contact_Voice_Telephone: 703-404-6361
Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
Profile_Name: ESRI Metadata Profile

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wica_mi_pt

Metadata also available as

Metadata:

Identification_Information:
Citation:
Citation_Information:
Originator:
REQUIRED: The name of an organization or individual that developed the data set.
Publication_Date:
REQUIRED: The date when the data set is published or otherwise made available for release.
Title: wica_mi_pt
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage:
\\PANGEA\JOBS\FHWA_RoadInvProg\Data\Park_Source_Data\WICA_1560\TSR_Shapes\wica_mi_pt.shp
Description:
Abstract: REQUIRED: A brief narrative summary of the data set.
Purpose:
REQUIRED: A summary of the intentions with which the data set was developed.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
REQUIRED: The year (and optionally month, or month and day) for which the data set corresponds to the ground.
Currentness_Reference:
REQUIRED: The basis on which the time period of content information is determined.
Status:
Progress: REQUIRED: The state of the data set.
Maintenance_and_Update_Frequency:
REQUIRED: The frequency with which changes and additions are made to the data set after the initial data set is completed.
Spatial_Domain:
Bounding_Coordinates:

West_Bounding_Coordinate: -103.500542
East_Bounding_Coordinate: -103.462173
North_Bounding_Coordinate: 43.639523
South_Bounding_Coordinate: 43.520416

Keywords:

Theme:

Theme_Keyword_Thesaurus:

REQUIRED: Reference to a formally registered thesaurus or a similar authoritative source of theme keywords.

Theme_Keyword:

REQUIRED: Common-use word or phrase used to describe the subject of the data set.

Access_Constraints:

REQUIRED: Restrictions and legal prerequisites for accessing the data set.

Use_Constraints:

REQUIRED: Restrictions and legal prerequisites for using the data set after access is granted.

Native_Data_Set_Environment:

Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 8.3.0.800

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Entity point
Point_and_Vector_Object_Count: 21

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.000000
Longitude_Resolution: 0.000000
Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.400000
Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:

Detailed_Description:

Entity_Type:

Entity_Type_Label: wica_mi_pt

Attribute:

Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.

Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.

Attribute:
Attribute_Label: RIP_CYCLE

Attribute:
Attribute_Label: STATE

Attribute:
Attribute_Label: PARK_ALPHA

Attribute:
Attribute_Label: PARK_NO

Attribute:
Attribute_Label: RTE_NO

Attribute:
Attribute_Label: FUNCT_CLAS

Attribute:
Attribute_Label: DIRECTION

Attribute:
Attribute_Label: BEG_MP

Attribute:
Attribute_Label: END_MP

Attribute:
Attribute_Label: INT_LENGTH

Attribute:
Attribute_Label: RTE_LENGTH

Attribute:
Attribute_Label: NO_LANES

Attribute:
Attribute_Label: LANE_NO

Attribute:
Attribute_Label: WX_LANE_WI

Attribute:
Attribute_Label: LANE_WIDTH

Attribute:
Attribute_Label: PAVE_WIDTH

Attribute:
Attribute_Label: SHLD_WIDTH

Attribute:
Attribute_Label: SHLD_WID_1

Attribute:
Attribute_Label: SHLD_COND_

Attribute:

Attribute_Label: SHLD_COND1
Attribute:
Attribute_Label: DRAIN_COND
Attribute:
Attribute_Label: DRAIN_CO_1
Attribute:
Attribute_Label: SURF_TYPE
Attribute:
Attribute_Label: PCR
Attribute:
Attribute_Label: RCI
Attribute:
Attribute_Label: SCR
Attribute:
Attribute_Label: IRI_AVG
Attribute:
Attribute_Label: IRI_SD
Attribute:
Attribute_Label: IRI_L
Attribute:
Attribute_Label: IRI_R
Attribute:
Attribute_Label: IRI_FLAG
Attribute:
Attribute_Label: RUT_INDEX
Attribute:
Attribute_Label: RUT_AVG
Attribute:
Attribute_Label: RUT_MAX
Attribute:
Attribute_Label: RUT_SD
Attribute:
Attribute_Label: RUT_LOW
Attribute:
Attribute_Label: RUT_MED
Attribute:
Attribute_Label: RUT_HI
Attribute:
Attribute_Label: XFALL
Attribute:
Attribute_Label: GRADE
Attribute:
Attribute_Label: AC_INDEX
Attribute:
Attribute_Label: AC_LOW
Attribute:
Attribute_Label: AC_MED
Attribute:
Attribute_Label: AC_HI
Attribute:
Attribute_Label: LC_INDEX

Attribute:
Attribute_Label: LC_LOW
Attribute:
Attribute_Label: LC_MED
Attribute:
Attribute_Label: LC_HI
Attribute:
Attribute_Label: TC_INDEX
Attribute:
Attribute_Label: TC_LOW
Attribute:
Attribute_Label: TC_MED
Attribute:
Attribute_Label: TC_HI
Attribute:
Attribute_Label: PATCH_INDE
Attribute:
Attribute_Label: PATCHING
Attribute:
Attribute_Label: GPS_LAT
Attribute:
Attribute_Label: GPS_LON
Attribute:
Attribute_Label: GPS_ELEV
Attribute:
Attribute_Label: GPS_MODE
Attribute:
Attribute_Label: VIDEO
Attribute:
Attribute_Label: IMAGE
Attribute:
Attribute_Label: SPEED
Attribute:
Attribute_Label: BRIDGE_FLA
Attribute:
Attribute_Label: CONSTR_FLA
Attribute:
Attribute_Label: LANEDEV_FL
Attribute:
Attribute_Label: DATE
Attribute:
Attribute_Label: NODISTRESS
Attribute:
Attribute_Label: FILENAME
Attribute:
Attribute_Label: SECTION
Attribute:
Attribute_Label: FKEY
Attribute:
Attribute_Label: VISI_FROM
Attribute:

Attribute_Label: VISI_TO
Attribute:
Attribute_Label: IDKEY
Attribute:
Attribute_Label: MP_REF

Distribution_Information:
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.046

Metadata_Reference_Information:
Metadata_Date: 20050701
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization:
REQUIRED: The organization responsible for the metadata information.
Contact_Person: REQUIRED: The person responsible for the metadata information.
Contact_Address:
Address_Type:
REQUIRED: The mailing and/or physical address for the organization or individual.
City: REQUIRED: The city of the address.
State_or_Province: REQUIRED: The state or province of the address.
Postal_Code: REQUIRED: The ZIP or other postal code of the address.
Contact_Voice_Telephone:
REQUIRED: The telephone number by which individuals can speak to the organization or individual.
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
Profile_Name: ESRI Metadata Profile

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wica_mi

Metadata also available as

Metadata:

Identification_Information:
Citation:
Citation_Information:
Originator:
REQUIRED: The name of an organization or individual that developed the data set.
Publication_Date:
REQUIRED: The date when the data set is published or otherwise made available for release.
Title: wica_mi
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage:
\\PANGEA\JOBS\FHWA_RoadInvProg\Data\Park_Source_Data\WICA_1560\TSR_Shapes\wica_mi.shp
Description:
Abstract: REQUIRED: A brief narrative summary of the data set.
Purpose:
REQUIRED: A summary of the intentions with which the data set was developed.
Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date:
REQUIRED: The year (and optionally month, or month and day) for which the data set corresponds to the ground.
Currentness_Reference:
REQUIRED: The basis on which the time period of content information is determined.
Status:
Progress: REQUIRED: The state of the data set.
Maintenance_and_Update_Frequency:
REQUIRED: The frequency with which changes and additions are made to the data set after the initial data set is completed.
Spatial_Domain:
Bounding_Coordinates:

West_Bounding_Coordinate: -103.500542
East_Bounding_Coordinate: -103.461006
North_Bounding_Coordinate: 43.640266
South_Bounding_Coordinate: 43.520309

Keywords:

Theme:

Theme_Keyword_Thesaurus:

REQUIRED: Reference to a formally registered thesaurus or a similar authoritative source of theme keywords.

Theme_Keyword:

REQUIRED: Common-use word or phrase used to describe the subject of the data set.

Access_Constraints:

REQUIRED: Restrictions and legal prerequisites for accessing the data set.

Use_Constraints:

REQUIRED: Restrictions and legal prerequisites for using the data set after access is granted.

Native_Data_Set_Environment:

Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 8.3.0.800

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: String
Point_and_Vector_Object_Count: 19

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.000000
Longitude_Resolution: 0.000000
Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.400000
Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:

Detailed_Description:

Entity_Type:

Entity_Type_Label: wica_mi

Attribute:

Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.

Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.

Attribute:
Attribute_Label: FNODE_

Attribute:
Attribute_Label: TNODE_

Attribute:
Attribute_Label: LPOLY_

Attribute:
Attribute_Label: RPOLY_

Attribute:
Attribute_Label: LENGTH

Attribute:
Attribute_Label: WICA_MI_

Attribute:
Attribute_Label: WICA_MI_ID

Attribute:
Attribute_Label: ID

Attribute:
Attribute_Label: RTE_NO

Attribute:
Attribute_Label: BMP

Attribute:
Attribute_Label: EMP

Attribute:
Attribute_Label: PCR

Attribute:
Attribute_Label: PCR_RATE

Attribute:
Attribute_Label: RT_LENGTH

Attribute:
Attribute_Label: PCRMI

Attribute:
Attribute_Label: PCR_RATEMI

Attribute:
Attribute_Label: PCR_RATEAV

Attribute:
Attribute_Label: PCRAV

Distribution_Information:
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.108

Metadata_Reference_Information:
Metadata_Date: 20050701
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization:
REQUIRED: The organization responsible for the metadata information.
Contact_Person: REQUIRED: The person responsible for the metadata information.
Contact_Address:
Address_Type:
REQUIRED: The mailing and/or physical address for the organization or individual.
City: REQUIRED: The city of the address.
State_or_Province: REQUIRED: The state or province of the address.
Postal_Code: REQUIRED: The ZIP or other postal code of the address.
Contact_Voice_Telephone:
REQUIRED: The telephone number by which individuals can speak to the organization or individual.
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Time_Convention: local time
Metadata_Extensions:
Online_Linkage: <http://www.esri.com/metadata/esriprof80.html>
Profile_Name: ESRI Metadata Profile

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