



Federal Lands Highway Road Inventory Program

Road Inventory and Condition Assessment

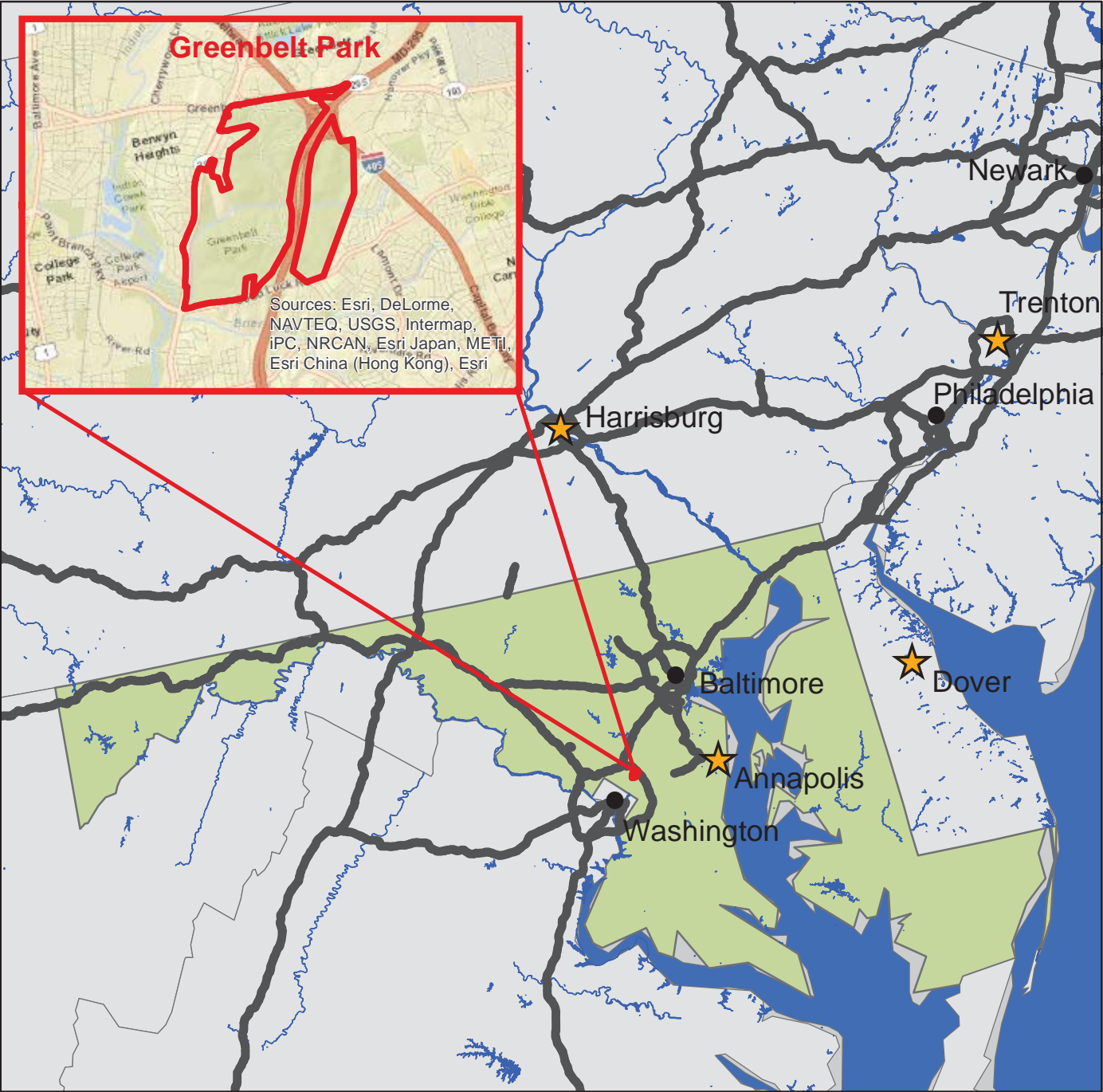


**National Capital Parks – East
Greenbelt Park
GREE**

Cycle 5 Report

**Prepared By: Federal Highway Administration
Road Inventory Program (RIP)
Data Collected: 02/2013
Report Date: 09/2013**

Greenbelt Park in Maryland



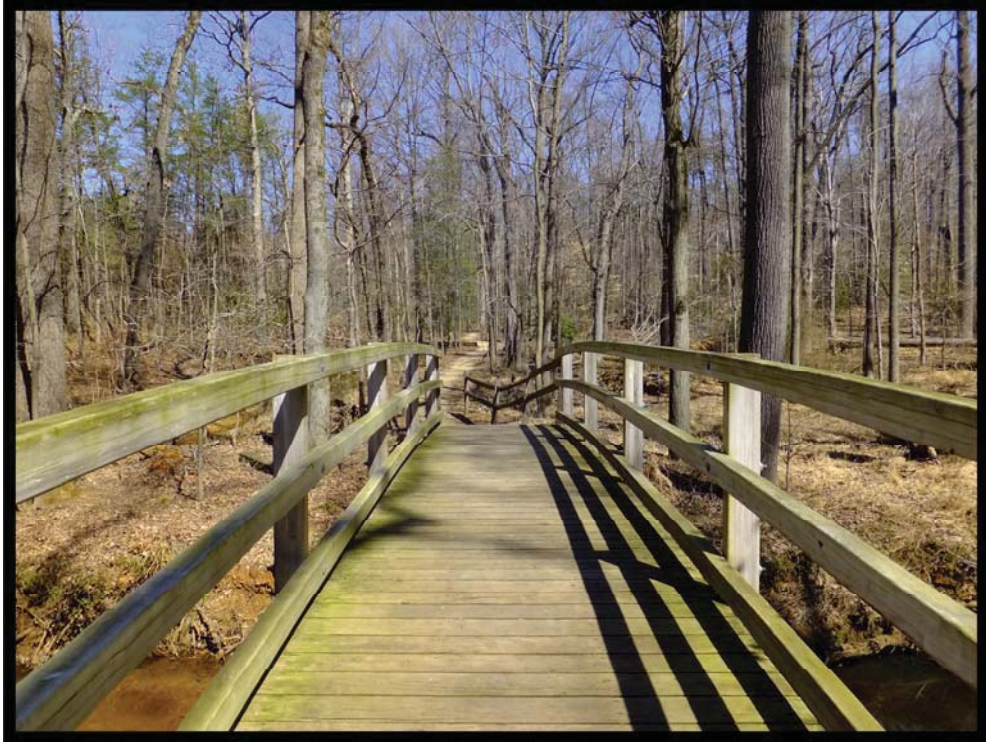


DCV = Data Collection Vehicle

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Section 1 Introduction



Greenbelt Park



**Federal Lands Highway
Road Inventory Program**

INTRODUCTION

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

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

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

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

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

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

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

Cycle 5 has launched in the summer of 2010 and will again comprise all parks, large and small, that are served by paved roads and/or parking areas. For Cycle 5, the decision was made to collect condition data in large parks on Functional Class 1, 2, and 7 paved routes only, as well as any new routes that were previously not collected. In small parks, all paved routes and parking areas will be collected. As a result, this will include 81 large parks with 4,459 paved route miles and 231 small parks with 529 paved route miles and associated paved parking areas.

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

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

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

Respectfully,

FHWA RIP Team

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Section 2 Park Route Inventory



Greenbelt Park



Federal Lands Highway
Road Inventory Program

Cycle 5 NPS/RIP Route ID Report

Road Inventory Program 09/06/2013

(Numerical By Route #)

Page 1 of 5

Shading Color Key:

White = Paved Routes, DCV Driven

Yellow = Unpaved Routes, DCV not Driven

Blue = All Paved Parking Areas

Green = All Unpaved Parking Areas

Red text denotes approx. mileage

Grey = Paved Routes, DCV not Driven

Black = State, Local or Private non-NPS Routes

■ = Concession Route Flag ON

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

** DCV - Data Collection Vehicle NC - Not Collected

GREE

GREENBELT PARK

Rte. No.	Cycle Collected	FMSS No.	Concess Route	Route Name	Route Description From To	Maint. District	Paved Miles	Un-Paved Miles	Total Route Length	Func. Class	Manual Rated SQ/FT	Surf. Type	Area Maps
0010	5	52758		MAIN ENTRANCE ROAD	FROM GREENBELT ROAD TO ROUTE 0011 (PARK CENTRAL ROAD)	N/A	0.15	0.00	0.15	1		AS	1
0011	5	52759		PARK CENTRAL ROAD	FROM ROUTE 0011 (PARK CENTRAL ROAD) AT BEGINNING OF LOOP TO BEGINNING OF ROUTE 0406 (PARK CENTRAL TO GOOD LUCK SERVICE ROAD) AT GATE	N/A	2.30	0.00	2.30	1		AS	1
0012	5	52760		CAMPGROUND ACCESS	FROM ROUTE 0011 (PARK CENTRAL ROAD) TO INTERSECTION OF ROUTE 0502 (GREENBELT CAMPGROUND LOOP C) AND ROUTE 0503 (GREENBELT CAMPGROUND LOOP D)	N/A	0.52	0.00	0.52	1		AS	1
0200	5	52761		SWEETGUM PICNIC LOOP	FROM ROUTE 0011 (PARK CENTRAL ROAD) TO END OF LOOP	N/A	0.21	0.00	0.21	3		AS	1
0201	5	52763		LAUREL PICNIC AREA	FROM ROUTE 0011 (PARK CENTRAL ROAD) TO END OF LOOP	N/A	0.27	0.00	0.27	3		AS	1
0400	5	52765		MAINTENANCE AREA ACCESS	FROM ROUTE 0010 (MAIN ENTRANCE ROAD) TO ROUTE 0910 (GREENBELT MAINTENANCE AREA)	N/A	0.04	0.00	0.04	5		AS	1
0401	NC	52772		FIRE ROAD 1	FROM ROUTE 0012 (CAMPGROUND ACCESS) TO ROUTE 0402 (FIRE ROAD 2) AND ROUTE 0403 (NEW TRACT ACCESS)	N/A	0.00	0.00	0.00	6		GR	
0402	NC	52782		FIRE ROAD 2	FROM KENILWORTH AVENUE TO ROUTE 0401 (FIRE ROAD 1) AND ROUTE 0403 (NEW TRACT ACCESS)	N/A	0.00	0.00	0.00	6		GR	
0403	NC	52783		NEW TRACT ACCESS	FROM WESTCHESTER PARK ROAD TO PUMP AND ROUTE 0401 (FIRE ROAD 1) AND ROUTE 0402 (FIRE ROAD 2)	N/A	0.00	0.00	0.00	6		GR	
0404	NC	52785		FIRE ROAD 3	FROM ROUTE 0503 (GREENBELT CAMPGROUND LOOP D) TO GOOD LUCK ROAD	N/A	0.00	0.00	0.00	6		GR	
0405	NC			FIRE ROAD	FROM ROUTE 0011 (PARK CENTRAL ROAD) TO END	N/A	0.00	0.00	0.00	6		GR	
0406	5			PARK CENTRAL TO GOOD LUCK SERVICE ROAD	FROM END OF ROUTE 0011 (PARK CENTRAL ROAD) AT GATE TO ROUTE 0905 (GOOD LUCK ROAD BIKE TRAIL PARKING)	N/A	0.56	0.00	0.56	6		AS	1

Cycle 5 NPS/RIP Route ID Report

Road Inventory Program 09/06/2013

(Numerical By Route #)

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GREENBELT PARK

Rte. No.	Cycle Collected	FMSS No.	Concess Route	Route Name	Route Description From To	Maint. District	Paved Miles	Un-Paved Miles	Total Route Length	Func. Class	Manual Rated SQ/FT	Surf. Type	Area Maps
0500	5	52788		GREENBELT CAMPGROUND LOOP A	FROM ROUTE 0012 (CAMPGROUND ACCESS) TO END OF LOOP	N/A	0.29	0.00	0.29	3		AS	1
0501	5	52791		GREENBELT CAMPGROUND LOOP B	FROM ROUTE 0012 (CAMPGROUND ACCESS) TO END OF LOOP	N/A	0.47	0.00	0.47	3		AS	1
0502	5	52792		GREENBELT CAMPGROUND LOOP C	FROM INTERSECTION OF ROUTE 0012 (CAMPGROUND ACCESS) AND ROUTE 0503 (GREENBELT CAMPGROUND LOOP D) TO END OF LOOP	N/A	0.20	0.00	0.20	3		AS	1
0503	5	52793		GREENBELT CAMPGROUND LOOP D	FROM INTERSECTION OF ROUTE 0012 (CAMPGROUND ACCESS) AND ROUTE 0502 (GREENBELT CAMPGROUND LOOP C) TO END OF LOOP	N/A	0.51	0.00	0.51	3		AS	1
0504	5			GROUP CAMPGROUND	FROM ROUTE 0503 (GREENBELT CAMPGROUND LOOP D) TO END OF LOOP	N/A	0.09	0.00	0.09	3	7,809	AS	1
0900	5	21416		PARK POLICE MAIN PARKING	FROM ROUTE 0010 (MAIN ENTRANCE ROAD) TO PARKING	N/A	0.00	0.00	0.00		9,083	AS	1
0901	5	52796		PARK POLICE REAR PARKING	FROM ROUTE 0010 (MAIN ENTRANCE ROAD) TO PARKING	N/A	0.00	0.00	0.00		6,201	AS	1
0902	5	21410		HOLLY PICNIC AREA	FROM ROUTE 0011 (PARK CENTRAL ROAD) TO ROUTE 0011 (PARK CENTRAL ROAD)	N/A	0.00	0.00	0.00		32,594	AS	1
0903	5	21409		DOGWOOD NATURE TRAIL PARKING	ADJACENT TO ROUTE 0011 (PARK CENTRAL ROAD)	N/A	0.00	0.00	0.00		6,834	AS	1
0904	5	52797		RANGER STATION PARKING	FROM ROUTE 0012 (CAMPGROUND ACCESS) TO ROUTE 0012 (CAMPGROUND ACCESS)	N/A	0.00	0.00	0.00		9,079	AS	1
0905	5	52798		GOOD LUCK ROAD BIKE TRAIL PARKING	FROM GOOD LUCK ROAD TO ROUTE 0406 (PARK CENTRAL TO GOOD LUCK SERVICE ROAD)	N/A	0.00	0.00	0.00		8,846	AS	1

Cycle 5 NPS/RIP Route ID Report

Road Inventory Program 09/06/2013

(Numerical By Route #)

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Green = All Unpaved Parking Areas

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GREE

GREENBELT PARK

Rte. No.	Cycle Collected	FMSS No.	Concess Route	Route Name	Route Description From To	Maint. District	Paved Miles	Un-Paved Miles	Total Route Length	Func. Class	Manual Rated SQ/FT	Surf. Type	Area Maps
0906	5	21417		PARK HEADQUARTERS PARKING	FROM ROUTE 0011 (PARK CENTRAL ROAD) TO ROUTE 0400 (MAINTENANCE AREA ACCESS)	N/A	0.00	0.00	0.00		15,404	AS	1
0907ZZ	5	90254		SWEET GUM PICNIC PARKING AREAS	ADJACENT TO ROUTE 0200 (SWEETGUM PICNIC LOOP) ON LEFT AND RIGHT	N/A	0.00	0.00	0.00		20,556	AS	1
0908ZZ	5	90255		LAUREL PICNIC AREA PARKING AREAS	ADJACENT TO ROUTE 0201 (LAUREL PICNIC AREA) ON LEFT AND RIGHT	N/A	0.00	0.00	0.00		20,293	AS	1
0909	5	90256		CAMPGROUND DUMPSTATION	FROM ROUTE 0502 (GREENBELT CAMPGROUND LOOP C) TO PARKING	N/A	0.00	0.00	0.00		6,690	AS	1
0910	5	90257		GREENBELT MAINTENANCE AREA	FROM END OF ROUTE 0400 (MAINTENANCE AREA ACCESS) TO PARKING	N/A	0.00	0.00	0.00		38,834	AS	1
0911	5			RANGER CAMPGROUND PARKING	ADJACENT TO ROUTE 0500 (GREENBELT CAMPGROUND LOOP A)	N/A	0.00	0.00	0.00		974	AS	1
0912	5			CAMPGROUND LOOP B HANDICAP PARKING	ADJACENT TO ROUTE 0501 (GREENBELT CAMPGROUND LOOP B)	N/A	0.00	0.00	0.00		516	AS	1

Cycle 5 NPS/RIP Route ID Report

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(Numerical By Route #)

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■ = Concession Route Flag ON

Green = All Unpaved Parking Areas

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CYCLE 5 SUMMARY TOTALS FOR GREENBELT PARK

<u>CYCLE 5 ROUTE TOTALS</u>	
DCV Driven Route Miles	5.51
Manually Rated Route Miles	0.09
TOTAL PARK ROUTE MILES COLLECTED IN CYCLE 5	5.60
Manually Rated Routes (SQFT)	0.00
TOTAL UNPAVED PARK ROUTE MILES	0.00

<u>CYCLE 5 CONCESSION TOTALS</u>	
Concession Paved Route Miles	0.00
Concession Unpaved Route Miles	0.00
TOTAL CONCESSION ROUTE MILES	0.00
Concession Paved Parking Area SQFT	0
Concession Unpaved Parking Area SQFT	0
TOTAL CONCESSION PARKING AREA SQFT	0
Concession Manually Rated Routes SQFT	0

<u>* CYCLE 5 PARKING AREA TOTALS</u>	
Paved Parking (SQFT)	175,904
Unpaved Parking (SQFT)	0
TOTAL PARKING (SQFT)	175,904

<u>CYCLE 5 WEIGHTED AVERAGE PARK VALUES</u>	
DCV Driven PCR	45
**Manually Rated Routes PCR	73
**Parking PCR	62
***Total Equivalent Lane Miles	12.74

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

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

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

Cycle 5 NPS/RIP Route ID Report

Road Inventory Program 09/06/2013

(Numerical By Route #)

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General Park Road Functional Classification Table

- Class 1** Principal Park Road/Rural Parkway (Public Roads) Roads which constitute the main access route, circulatory tour, or thoroughfare for park visitors. Route Numbers 1 - 99. Note: Rural parkways (e.g. Natchez Trace) are numbered 1 - 9. State Routes Inventoried for Park. Route Numbers 5000-5999
- Class 2** Connector Park Road (Public Roads) - Roads which provide access within a park to areas of scenic, scientific, recreational or cultural interest, such as overlooks, 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.

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

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

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

Surface Type Abbreviations:

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

NPS/RIP Subcomponent Details for GREE

Road Inventory Program 09/06/2013

(Numerical By Subcomponent #)

Page 1 of 2

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GREE

GREENBELT PARK

Rte. No.	FMSS No.	Cycle Collected	Route Name	From	To	Concess Route	Func. Class	Paved Miles	Un-Paved Miles	Total Route Length	Manual Rated SQ/FT
0907ZZ	90254	5	SWEET GUM PICNIC PARKING AREAS	ADJACENT TO ROUTE 0200 (SWEETGUM PICNIC LOOP) ON LEFT AND RIGHT				0.00	0.00	0.00	20,556
0908ZZ	90255	5	LAUREL PICNIC AREA PARKING AREAS	ADJACENT TO ROUTE 0201 (LAUREL PICNIC AREA) ON LEFT AND RIGHT				0.00	0.00	0.00	20,293

GREE-0907ZZ Subcomponent Breakdown

Rte. No.	FMSS No.	Cycle Collected	Route Name	From	To	Concess Route	Func. Class	Paved Miles	Un-Paved Miles	Total Route Length	Manual Rated SQ/FT
0907AZ	90254	5	SWEET GUM PICNIC PARKING A	ADJACENT TO ROUTE 0200 (SWEETGUM PICNIC LOOP) ON LEFT				0.00	0.00	0.00	5,206
0907BZ	90254	5	SWEET GUM PICNIC PARKING B	ADJACENT TO ROUTE 0200 (SWEETGUM PICNIC LOOP) ON RIGHT				0.00	0.00	0.00	5,240
0907CZ	90254	5	SWEET GUM PICNIC PARKING C	ADJACENT TO ROUTE 0200 (SWEETGUM PICNIC LOOP) ON LEFT				0.00	0.00	0.00	5,162
0907DZ	90254	5	SWEET GUM PICNIC PARKING D	ADJACENT TO ROUTE 0200 (SWEETGUM PICNIC LOOP) ON RIGHT				0.00	0.00	0.00	4,948

NPS/RIP Subcomponent Details for GREE

Road Inventory Program 09/06/2013

(Numerical By Subcomponent #)

Page 2 of 2

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GREE

GREENBELT PARK

GREE-0908ZZ Subcomponent Breakdown

Rte. No.	FMSS No.	Cycle Collected	Route Name	From	To	Concess Route	Func. Class	Paved Miles	Un-Paved Miles	Total Route Length	Manual Rated SQ/FT
0908AZ	90255	5	LAUREL PICNIC AREA PARKING A	ADJACENT TO ROUTE 0201 (LAUREL PICNIC AREA) ON LEFT				0.00	0.00	0.00	4,683
0908BZ	90255	5	LAUREL PICNIC AREA PARKING B	ADJACENT TO ROUTE 0201 (LAUREL PICNIC AREA) ON RIGHT				0.00	0.00	0.00	4,653
0908CZ	90255	5	LAUREL PICNIC AREA PARKING C	ADJACENT TO ROUTE 0201 (LAUREL PICNIC AREA) ON LEFT				0.00	0.00	0.00	4,792
0908DZ	90255	5	LAUREL PICNIC AREA PARKING D	ADJACENT TO ROUTE 0201 (LAUREL PICNIC AREA) ON RIGHT				0.00	0.00	0.00	6,165

ROUTE IDENTIFICATION CHANGES TO PAVED ROUTES FROM PREVIOUS CYCLE - GREE

ROUTES ADDED FROM PREVIOUS INVENTORY:

Route #	Route Name	Reason for Addition	Comments
0406	PARK CENTRAL TO GOOD LUCK SERVICE ROAD	OTHER	NEW PAVED ROUTE ADDED DURING THE CYCLE 5 ROUTE ID MEETING.
0912	CAMPGROUND LOOP B HANDICAP PARKING	OTHER	NEW PAVED ROUTE ADDED DURING THE CYCLE 5 MANUAL COLLECTION TRIP.

ROUTES MODIFIED FROM PREVIOUS INVENTORY:

Route #	Route Name	Type of Modification	Comments
0910	GREENBELT MAINTENANCE AREA	SQ FEET CHANGE	ROUTE AREA HAS DECREASED SINCE CYCLE 4 DATA COLLECTION BECAUSE TWO BUILDINGS AND GAS STATION WERE REMOVED FROM SHAPE.

OTHER CHANGES FROM PREVIOUS INVENTORY:

Route #	Route Name	Type of Change	Comments
0400	MAINTENANCE AREA ACCESS	FUNCTIONAL CLASS CHANGE	FUNCTIONAL CLASSIFICATION CHANGED FROM 6 TO 5 BECAUSE ROUTE IS AN ADMINISTRATIVE PARK ROAD WITH PUBLIC ACCESS PERMITTED.
0900	PARK POLICE MAIN PARKING	ROUTE NAME	ROUTE NAME CHANGED; WAS "PARK POLICE SUBSTATION PARKING".
0901	PARK POLICE REAR PARKING	ROUTE NAME	ROUTE NAME CHANGED; WAS "PARK POLICE MAINTENANCE".

Section 3

Park Summary Information



Greenbelt Park



Federal Lands Highway
Road Inventory Program

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

F.C.	Pavement Condition Rating (PCR)								TOTAL MILES
	Poor (0-60)		Fair (61-84)		Good (85-94)		Excellent (95-100)		
	MILES	%	MILES	%	MILES	%	MILES	%	
1	1.64	29.82%	0.82	14.91%	0.41	7.45%	0.10	1.82%	2.97
2									
3	0.29	5.27%	0.48	8.73%	0.67	12.18%	0.49	8.91%	1.93
4									
5	0.04	0.73%					0.00	0.00%	0.04
6	0.34	6.18%	0.12	2.18%	0.08	1.45%	0.02	0.36%	0.56
7									
8									
Totals	2.31	42.00%	1.42	25.82%	1.16	21.09%	0.61	11.09%	5.50

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

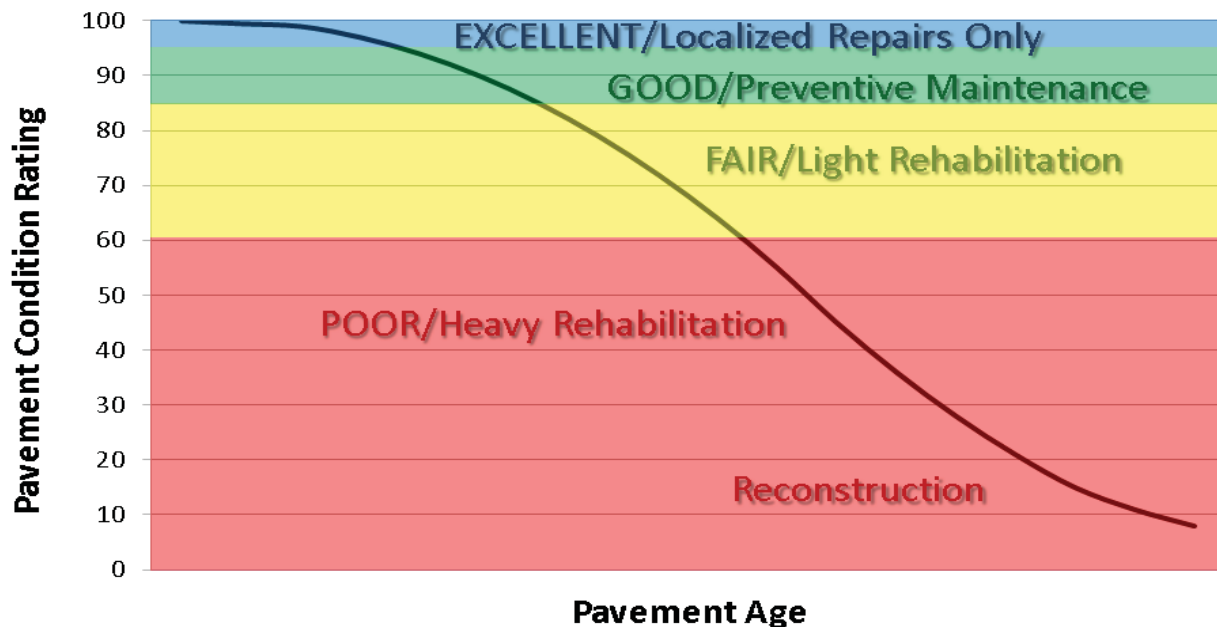
Explanation of the Excellent, Good, Fair and Poor Condition Descriptions

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

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

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

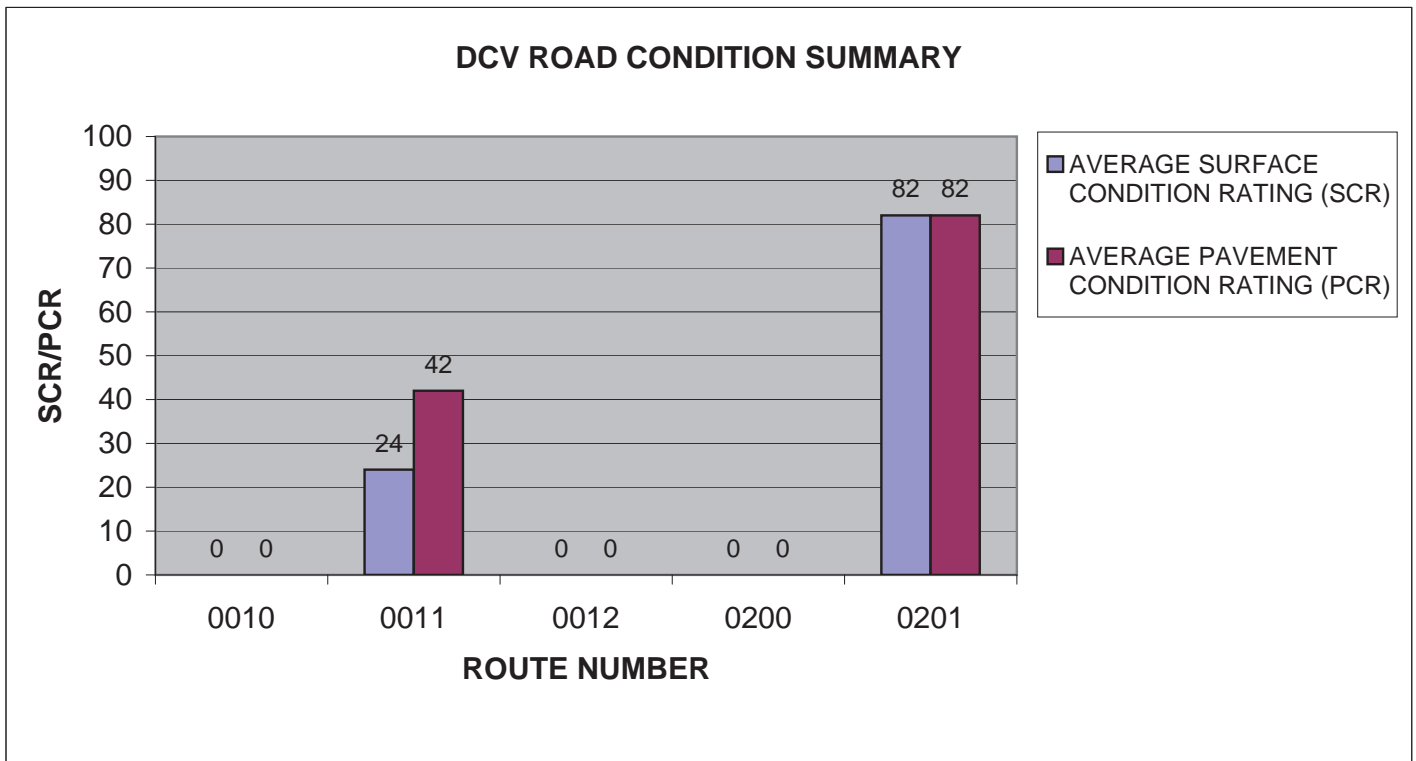
Condition Categories and Treatments



GREE: DCV ROAD CONDITION SUMMARY

DCV - Data Collection Vehicle

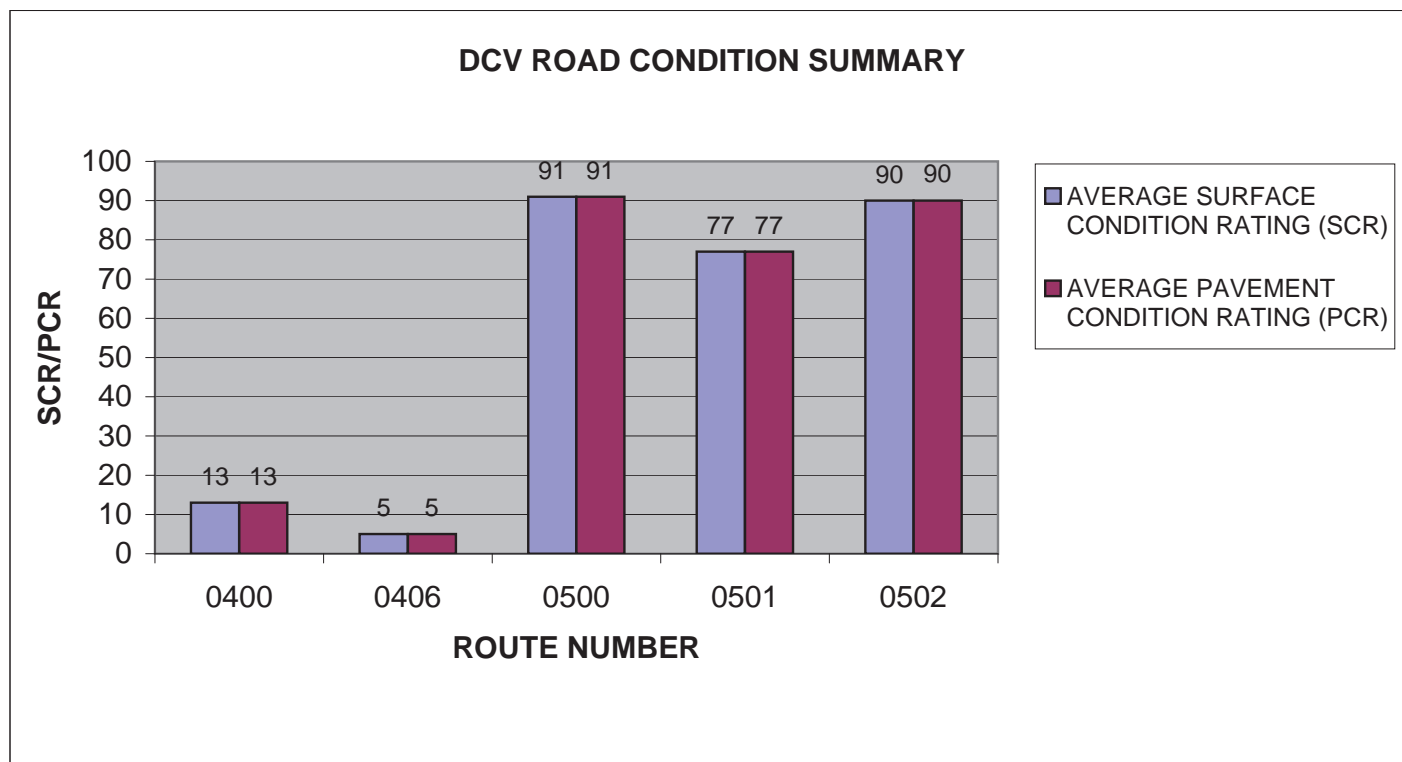
ROUTE NUMBER	ROUTE NAME	FUNCT CLASS	PAVED LENGTH	SURFACE TYPE	AVERAGE SURFACE CONDITION RATING (SCR)	AVERAGE PAVEMENT CONDITION RATING (PCR)
0010	MAIN ENTRANCE ROAD	1	0.15	ASPHALT	0	0
0011	PARK CENTRAL ROAD	1	2.30	ASPHALT	24	42
0012	CAMPGROUND ACCESS	1	0.52	ASPHALT	0	0
0200	SWEETGUM PICNIC LOOP	3	0.21	ASPHALT	0	0
0201	LAUREL PICNIC AREA	3	0.27	ASPHALT	82	82



GREE: DCV ROAD CONDITION SUMMARY

DCV - Data Collection Vehicle

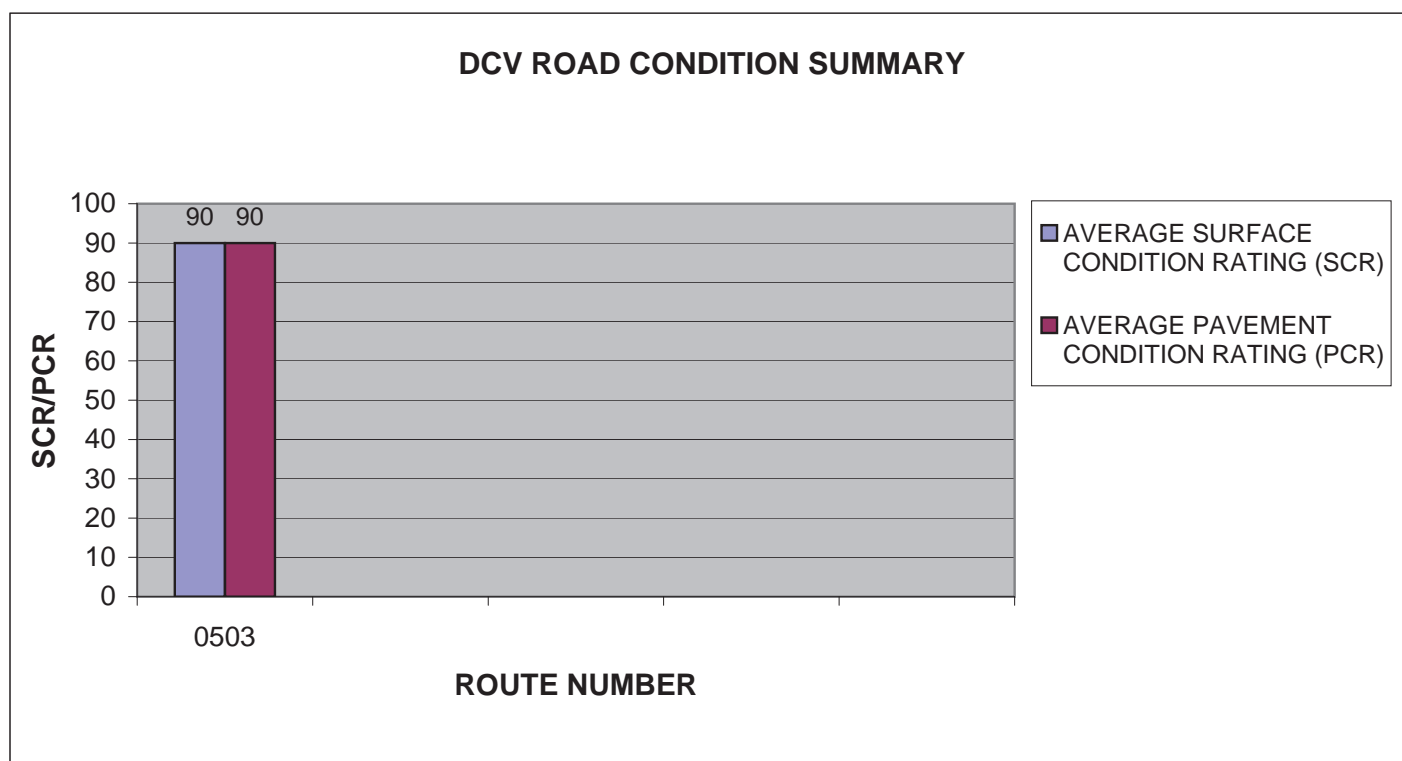
ROUTE NUMBER	ROUTE NAME	FUNCT CLASS	PAVED LENGTH	SURFACE TYPE	AVERAGE SURFACE CONDITION RATING (SCR)	AVERAGE PAVEMENT CONDITION RATING (PCR)
0400	MAINTENANCE AREA ACCESS	5	0.04	ASPHALT	13	13
0406	PARK CENTRAL TO GOOD LUCK SERVICE ROAD	6	0.56	ASPHALT	5	5
0500	GREENBELT CAMPGROUND LOOP A	3	0.29	ASPHALT	91	91
0501	GREENBELT CAMPGROUND LOOP B	3	0.47	ASPHALT	77	77
0502	GREENBELT CAMPGROUND LOOP C	3	0.20	ASPHALT	90	90



GREE: DCV ROAD CONDITION SUMMARY

DCV - Data Collection Vehicle

ROUTE NUMBER	ROUTE NAME	FUNCT CLASS	PAVED LENGTH	SURFACE TYPE	AVERAGE SURFACE CONDITION RATING (SCR)	AVERAGE PAVEMENT CONDITION RATING (PCR)
0503	GREENBELT CAMPGROUND LOOP D	3	0.51	ASPHALT	90	90

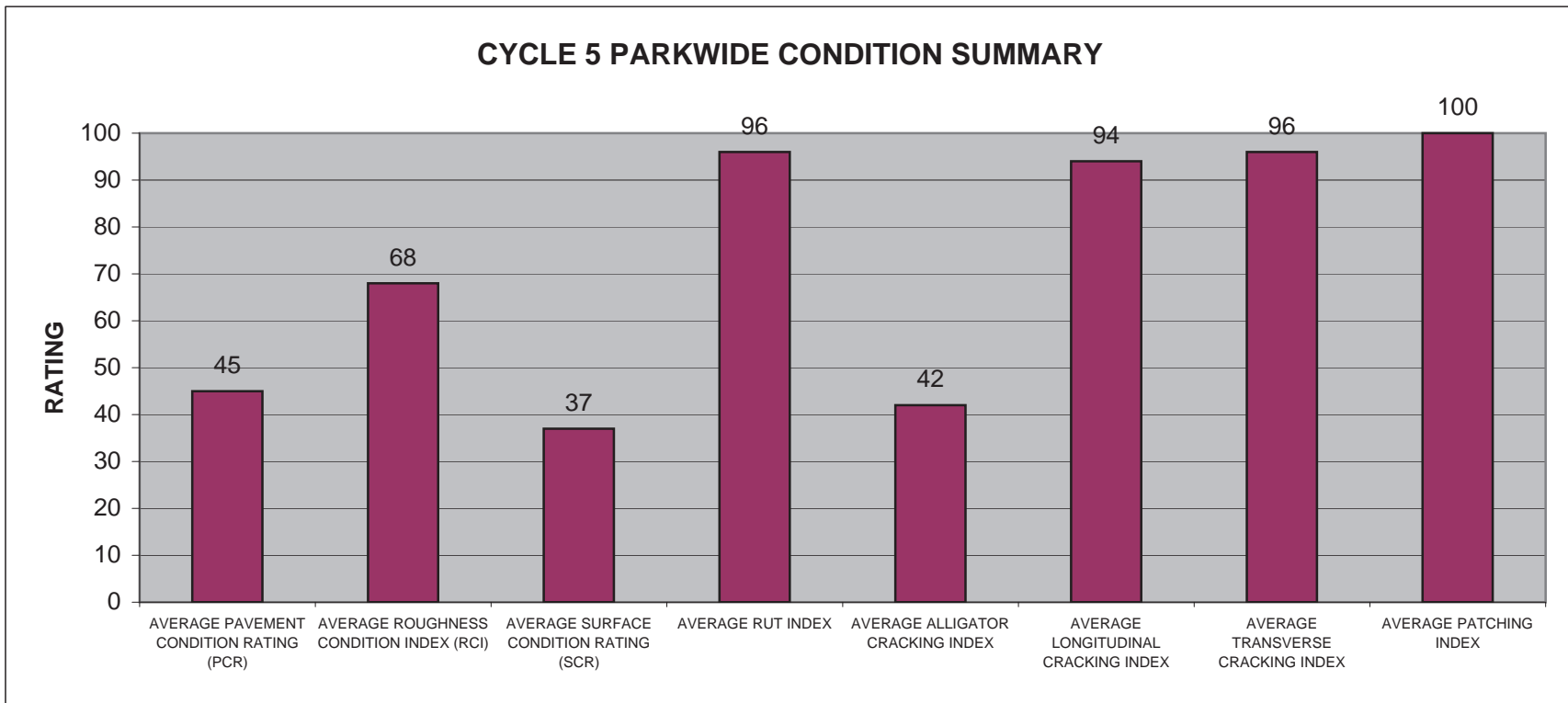


GREE: PARKWIDE DCV CONDITION SUMMARY

AVERAGE PAVEMENT CONDITION RATING (PCR)	AVERAGE ROUGHNESS CONDITION INDEX (RCI)	AVERAGE SURFACE CONDITION RATING (SCR)	AVERAGE RUT INDEX	AVERAGE ALLIGATOR CRACKING INDEX	AVERAGE LONGITUDINAL CRACKING INDEX	AVERAGE TRANSVERSE CRACKING INDEX	AVERAGE PATCHING INDEX
45	68	37	96	42	94	96	100

All Index values are based on Data Collection Vehicle (DCV) driven roads that were collected in Cycle-5.

Roughness data is only collected on routes with lengths greater than 0.5 miles and a posted speed limit of 25 MPH or greater.



Section 4

Park Route Location Maps

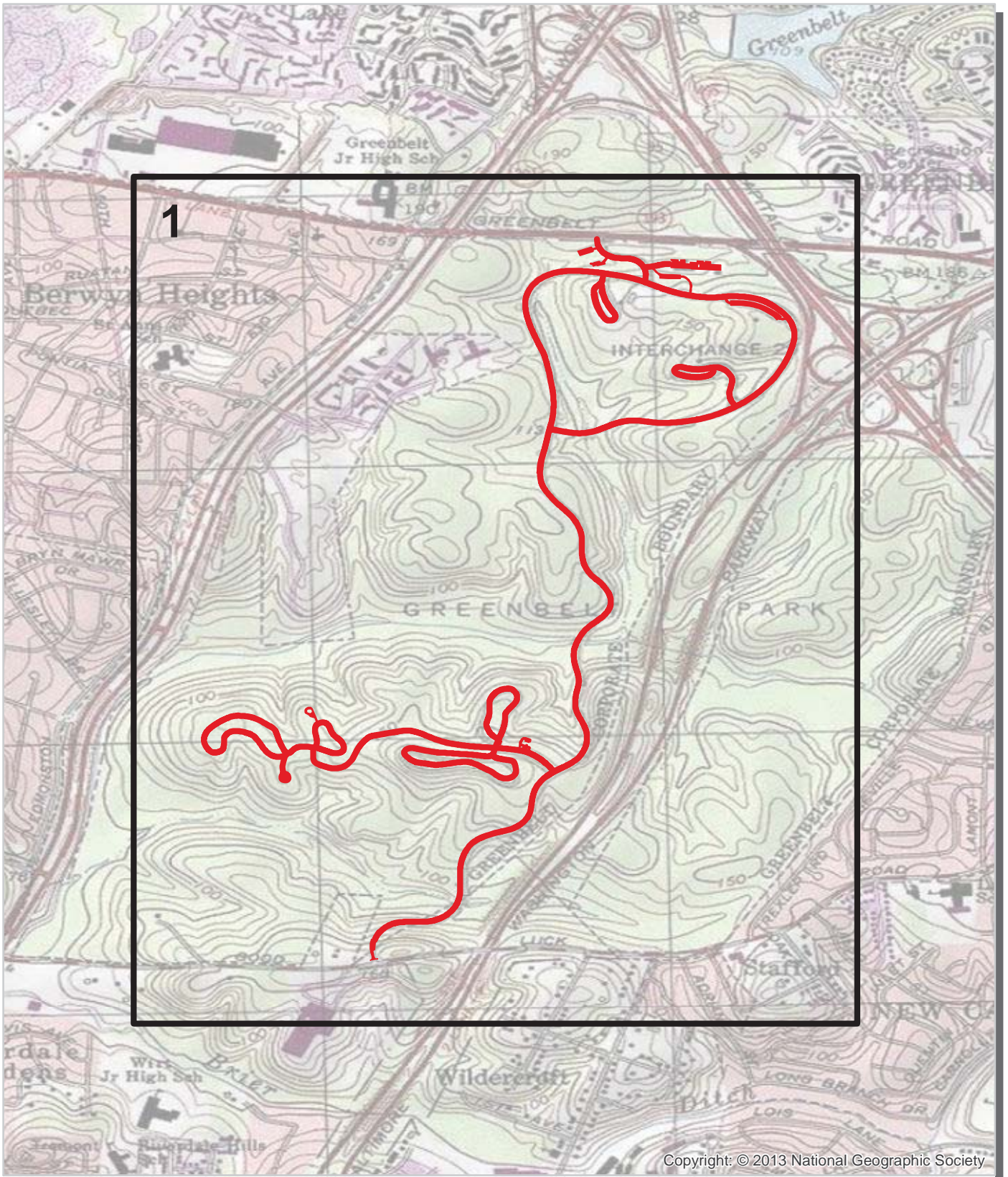


Greenbelt Park




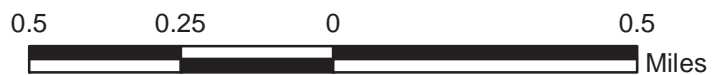
Federal Lands Highway
Road Inventory Program

Greenbelt Park Route Location Map Key Map

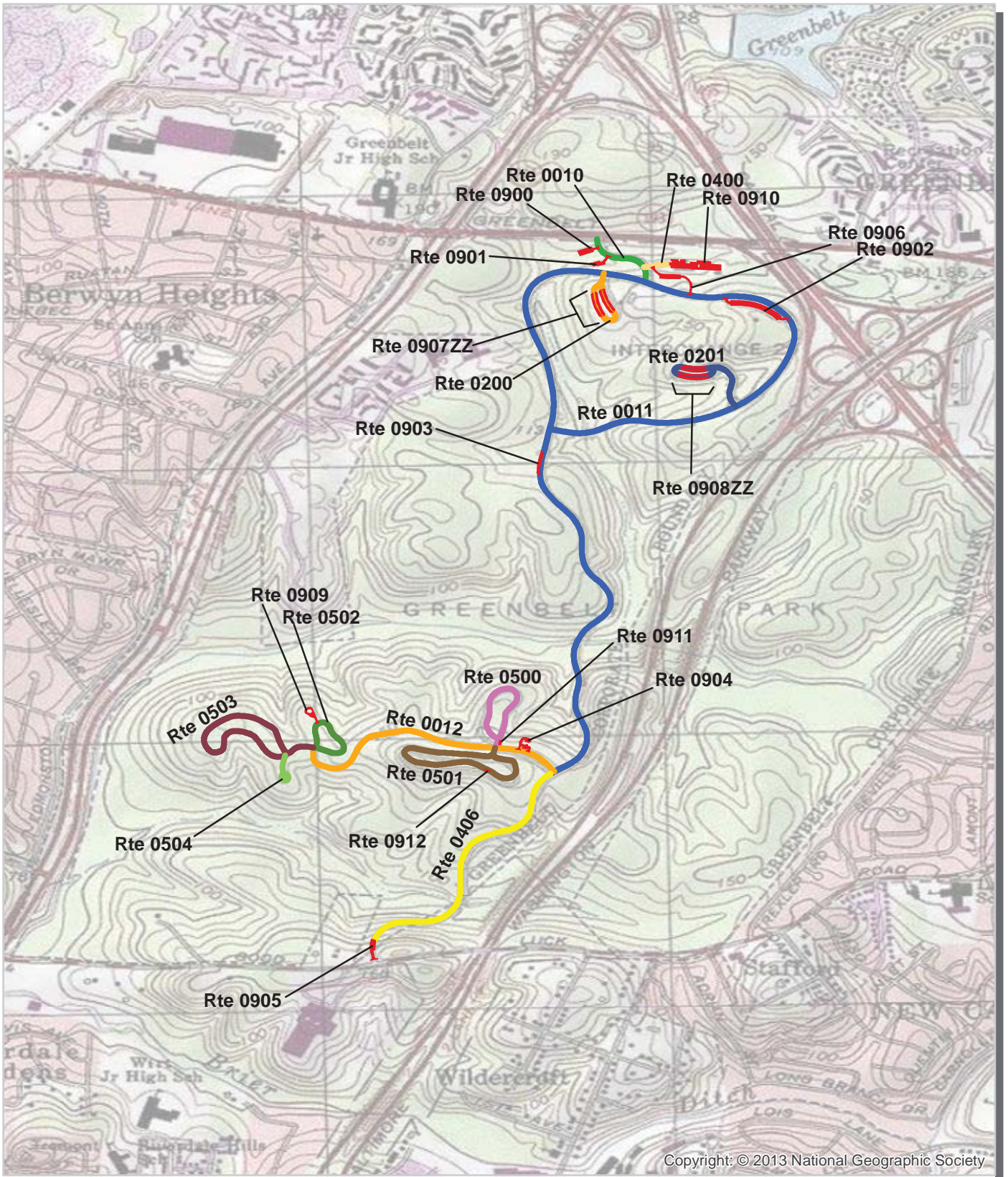


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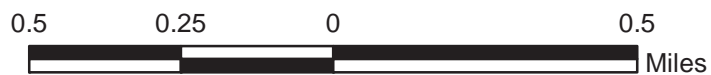
 Cycle 5 Collected Routes



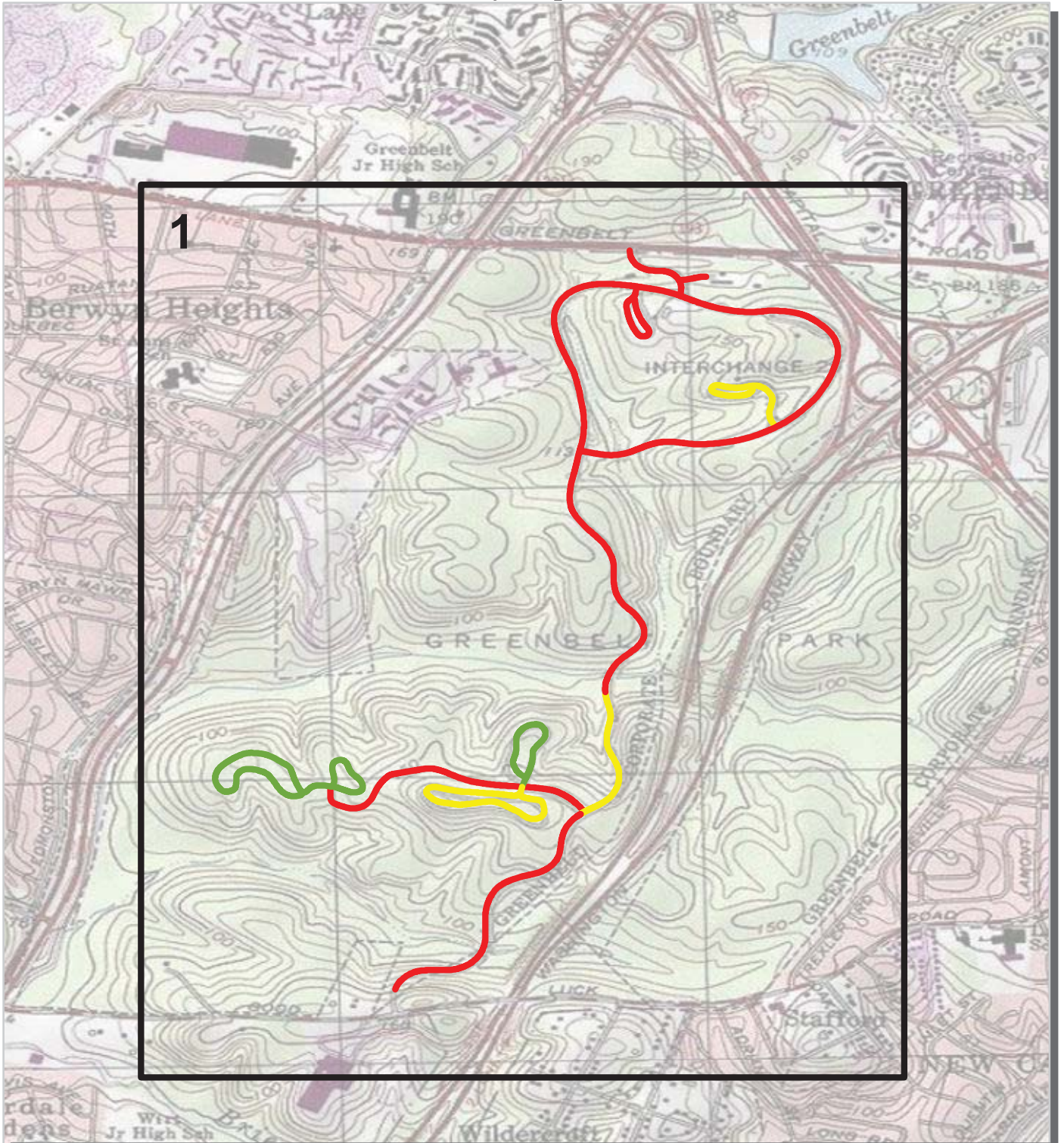
Greenbelt Park Route Location Map Area 1



Unique colors used to differentiate routes



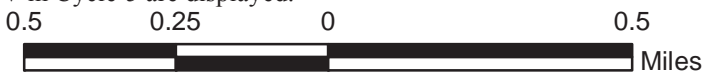
Greenbelt Park Route Condition Map PCR - Mile by Mile Key Map



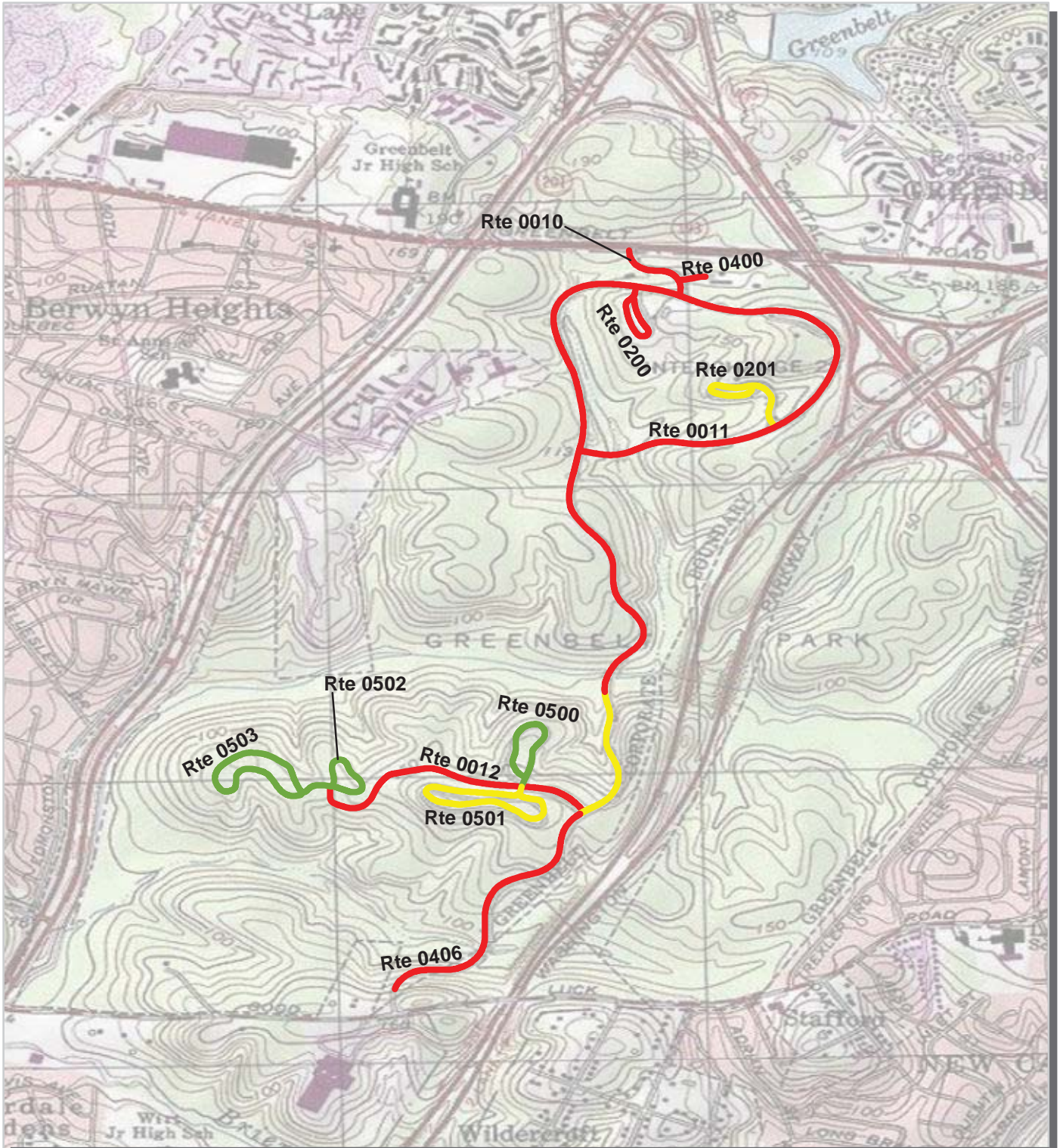
PCR	Poor		Fair		Good		Excellent		No Data	
	(0 - 60)		(61 - 84)	(85 - 94)	(95 - 100)					

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

Note: Only routes collected by the DCV in Cycle-5 are displayed.



Greenbelt Park Route Condition Map PCR - Mile by Mile Area 1



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

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



Section 5 Paved Route Condition Rating Sheets



Greenbelt Park



Federal Lands Highway
Road Inventory Program



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

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

**ROUTE: 0010 MAIN ENTRANCE ROAD
GREE : GREENBELT PARK**

**COLLECTED: 2/14/2013
TOTAL LENGTH: 0.15 Miles**

NATIONAL CAPITAL REGION

Section Number	0				
Section Length (mi)	0.15				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	22				
Lane Width (ft)	12				
Roadway Condition Information					
SCR (Surface Condition Rating)	0				
PCR (Pavement Condition Rating)	0				
Distress Index Values					
Structural Crack Index	0				
Transverse Cracking Index	96				
Patching Index	100				
Rutting Index	95				
Roughness Condition Index (RCI)	NC				

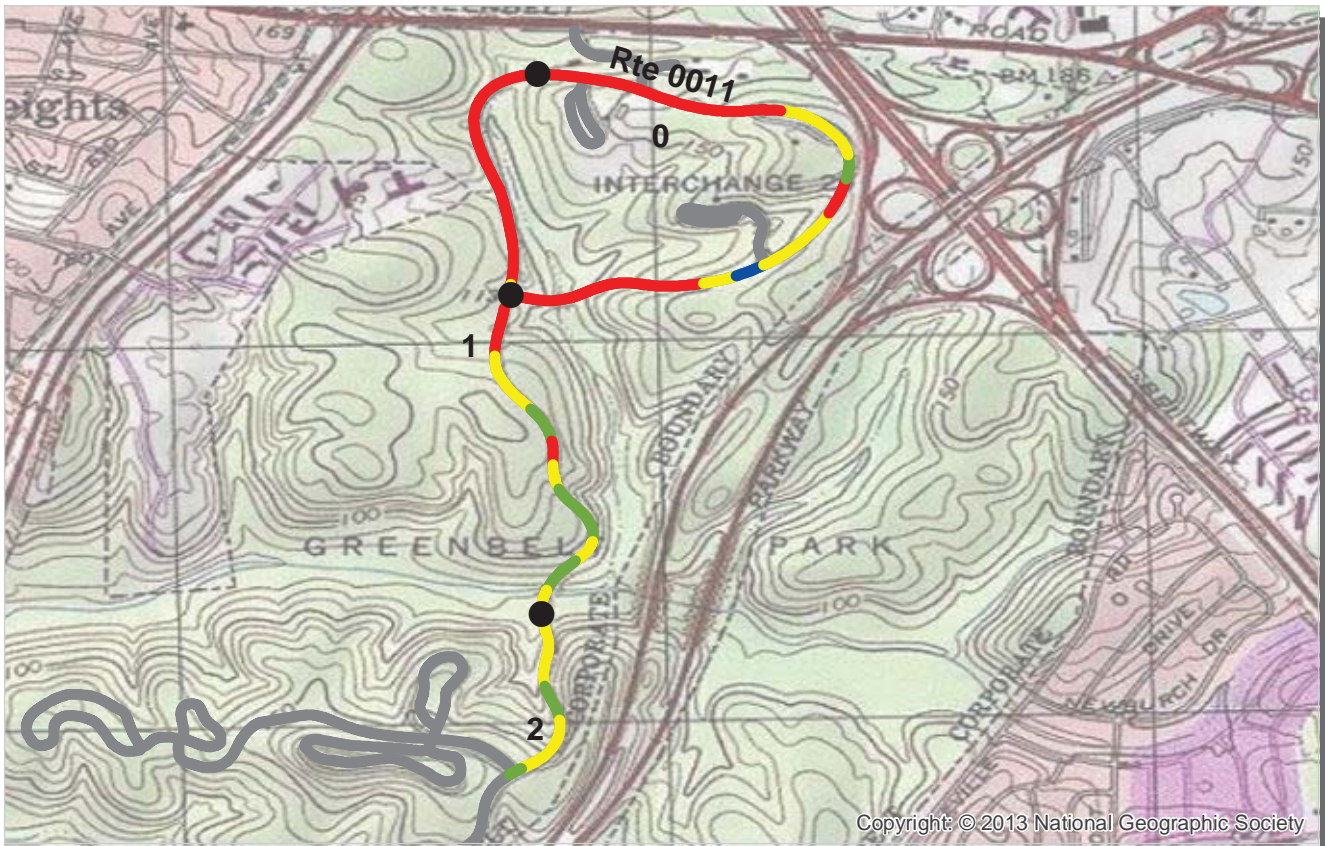
NOTES:

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

NC - Not Collected N/A - Not Applicable



ROUTE: 0010 MAIN ENTRANCE ROAD



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

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

ROUTE: 0011 PARK CENTRAL ROAD
GREE : GREENBELT PARK

COLLECTED: 2/14/2013
TOTAL LENGTH: 2.30 Miles

NATIONAL CAPITAL REGION

Section Number	0	1	2		
Section Length (mi)	1.00	1.00	0.30		
Cross Section Information					
Number of Lanes	2	2	2		
Paved Width (ft)	20	21	22		
Lane Width (ft)	10	10	10		
Roadway Condition Information					
SCR (Surface Condition Rating)	20	10	81		
PCR (Pavement Condition Rating)	37	35	78		
Distress Index Values					
Structural Crack Index	20	10	81		
Transverse Cracking Index	95	97	97		
Patching Index	100	100	100		
Rutting Index	96	98	96		
Roughness Condition Index (RCI)	63	72	74		

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0011 PARK CENTRAL ROAD



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

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

ROUTE: 0012 CAMPGROUND ACCESS
GREE : GREENBELT PARK

COLLECTED: 2/14/2013
TOTAL LENGTH: 0.52 Miles

NATIONAL CAPITAL REGION

<i>Section Number</i>	0				
<i>Section Length (mi)</i>	0.52				
<i>Cross Section Information</i>					
Number of Lanes	2				
Paved Width (ft)	19				
Lane Width (ft)	9				
<i>Roadway Condition Information</i>					
SCR (Surface Condition Rating)	0				
PCR (Pavement Condition Rating)	0				
<i>Distress Index Values</i>					
Structural Crack Index	0				
Transverse Cracking Index	95				
Patching Index	99				
Rutting Index	95				
Roughness Condition Index (RCI)	NC				

NOTES:

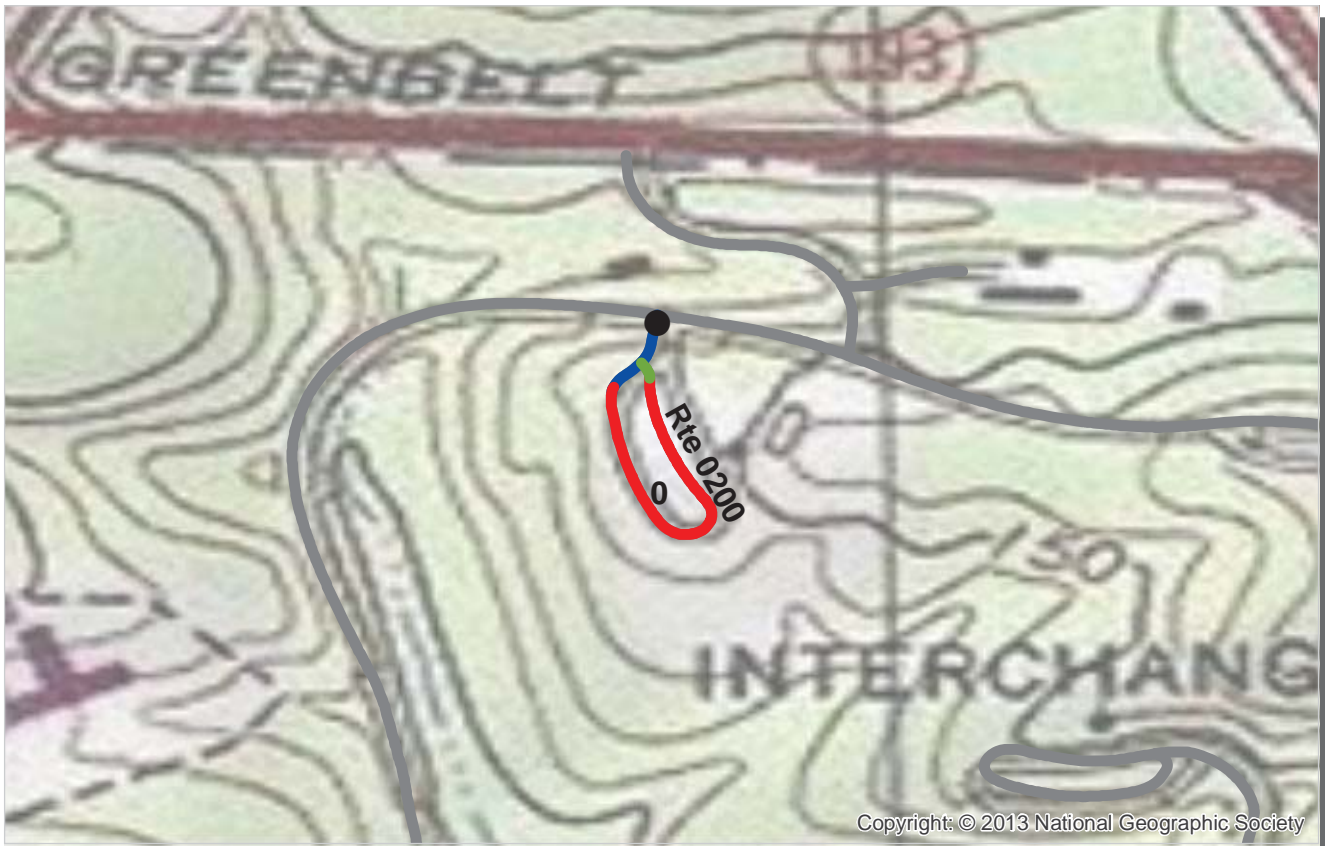
Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0012 CAMPGROUND ACCESS



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

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

ROUTE: 0200 SWEETGUM PICNIC LOOP
GREE : GREENBELT PARK

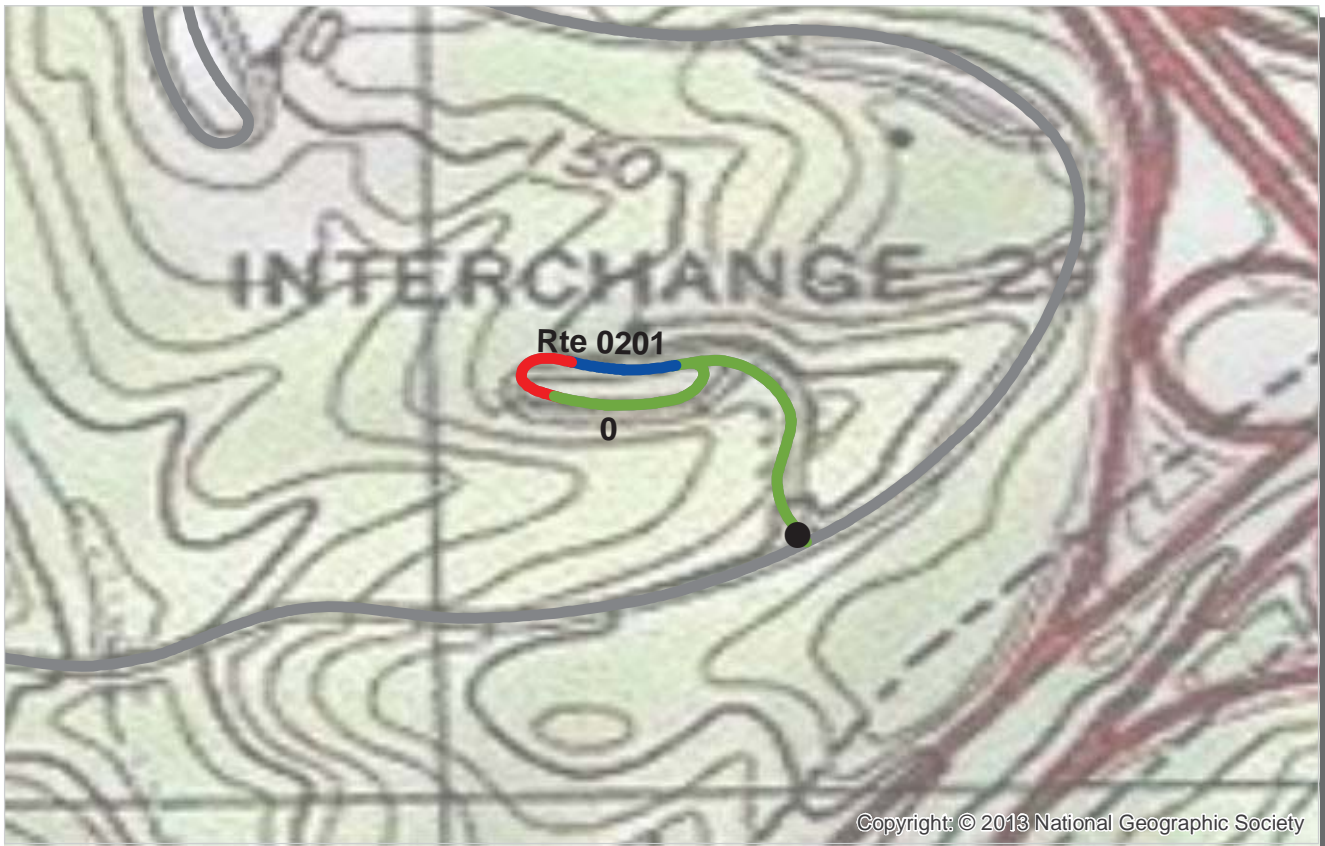
COLLECTED: 2/15/2013
TOTAL LENGTH: 0.21 Miles

NATIONAL CAPITAL REGION

Section Number	0				
Section Length (mi)	0.21				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	20				
Lane Width (ft)	17				
Roadway Condition Information					
SCR (Surface Condition Rating)	0				
PCR (Pavement Condition Rating)	0				
Distress Index Values					
Structural Crack Index	0				
Transverse Cracking Index	90				
Patching Index	100				
Rutting Index	100				
Roughness Condition Index (RCI)	NC				

NOTES:
 Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.
 NC - Not Collected N/A - Not Applicable

ROUTE: 0200 SWEETGUM PICNIC LOOP



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

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

ROUTE: 0201 LAUREL PICNIC AREA
GREE : GREENBELT PARK

COLLECTED: 2/15/2013
TOTAL LENGTH: 0.27 Miles

NATIONAL CAPITAL REGION

Section Number	0				
Section Length (mi)	0.27				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	21				
Lane Width (ft)	10				
Roadway Condition Information					
SCR (Surface Condition Rating)	82				
PCR (Pavement Condition Rating)	82				
Distress Index Values					
Structural Crack Index	82				
Transverse Cracking Index	99				
Patching Index	100				
Rutting Index	95				
Roughness Condition Index (RCI)	NC				

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0201 LAUREL PICNIC AREA



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

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

ROUTE: 0400 MAINTENANCE AREA ACCESS
GREE : GREENBELT PARK

COLLECTED: 2/15/2013
TOTAL LENGTH: 0.04 Miles

NATIONAL CAPITAL REGION

Section Number	0				
Section Length (mi)	0.04				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	20				
Lane Width (ft)	10				
Roadway Condition Information					
SCR (Surface Condition Rating)	13				
PCR (Pavement Condition Rating)	13				
Distress Index Values					
Structural Crack Index	13				
Transverse Cracking Index	99				
Patching Index	100				
Rutting Index	99				
Roughness Condition Index (RCI)	NC				

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0400 MAINTENANCE AREA ACCESS



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

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

ROUTE: 0406 PARK CENTRAL TO GOOD LUCK SERVICE ROAD
GREE : GREENBELT PARK

COLLECTED: 2/14/2013
TOTAL LENGTH: 0.56 Miles

NATIONAL CAPITAL REGION

Section Number	0				
Section Length (mi)	0.56				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	21				
Lane Width (ft)	11				
Roadway Condition Information					
SCR (Surface Condition Rating)	5				
PCR (Pavement Condition Rating)	5				
Distress Index Values					
Structural Crack Index	5				
Transverse Cracking Index	99				
Patching Index	100				
Rutting Index	95				
Roughness Condition Index (RCI)	NC				

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable

ROUTE: 0406 PARK CENTRAL TO GOOD LUCK SERVICE ROAD



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

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

ROUTE: 0500 GREENBELT CAMPGROUND LOOP A
GREE : GREENBELT PARK

COLLECTED: 2/14/2013
TOTAL LENGTH: 0.29 Miles

NATIONAL CAPITAL REGION

Section Number	0				
Section Length (mi)	0.29				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	14				
Lane Width (ft)	14				
Roadway Condition Information					
SCR (Surface Condition Rating)	91				
PCR (Pavement Condition Rating)	91				
Distress Index Values					
Structural Crack Index	91				
Transverse Cracking Index	97				
Patching Index	100				
Rutting Index	96				
Roughness Condition Index (RCI)	NC				

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.
 NC - Not Collected N/A - Not Applicable



ROUTE: 0500 GREENBELT CAMPGROUND LOOP A



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

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

ROUTE: 0501 GREENBELT CAMPGROUND LOOP B
GREE : GREENBELT PARK

COLLECTED: 2/14/2013
TOTAL LENGTH: 0.47 Miles

NATIONAL CAPITAL REGION

Section Number	0				
Section Length (mi)	0.47				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	13				
Lane Width (ft)	13				
Roadway Condition Information					
SCR (Surface Condition Rating)	77				
PCR (Pavement Condition Rating)	77				
Distress Index Values					
Structural Crack Index	77				
Transverse Cracking Index	96				
Patching Index	100				
Rutting Index	97				
Roughness Condition Index (RCI)	NC				

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.

See Section 10 for explanation of SCR, PCR, & all Distress Index Values.

NC - Not Collected N/A - Not Applicable



ROUTE: 0501 GREENBELT CAMPGROUND LOOP B



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

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

ROUTE: 0502 GREENBELT CAMPGROUND LOOP C
GREE : GREENBELT PARK

COLLECTED: 2/15/2013
TOTAL LENGTH: 0.20 Miles

NATIONAL CAPITAL REGION

Section Number	0				
Section Length (mi)	0.20				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	16				
Lane Width (ft)	16				
Roadway Condition Information					
SCR (Surface Condition Rating)	90				
PCR (Pavement Condition Rating)	90				
Distress Index Values					
Structural Crack Index	90				
Transverse Cracking Index	96				
Patching Index	100				
Rutting Index	96				
Roughness Condition Index (RCI)	NC				

NOTES:

Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.
 NC - Not Collected N/A - Not Applicable



ROUTE: 0502 GREENBELT CAMPGROUND LOOP C



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

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

ROUTE: 0503 GREENBELT CAMPGROUND LOOP D
GREE : GREENBELT PARK

COLLECTED: 2/15/2013
TOTAL LENGTH: 0.51 Miles

NATIONAL CAPITAL REGION

Section Number	0				
Section Length (mi)	0.51				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	16				
Lane Width (ft)	13				
Roadway Condition Information					
SCR (Surface Condition Rating)	90				
PCR (Pavement Condition Rating)	90				
Distress Index Values					
Structural Crack Index	90				
Transverse Cracking Index	98				
Patching Index	100				
Rutting Index	97				
Roughness Condition Index (RCI)	NC				

NOTES:
 Structural Crack Index is a combination of the Longitudinal Cracking Index and Alligator Cracking Index.
 See Section 10 for explanation of SCR, PCR, & all Distress Index Values.
 NC - Not Collected N/A - Not Applicable



ROUTE: 0503 GREENBELT CAMPGROUND LOOP D

Section 6

Manually Rated Paved Route Condition Rating Sheets



Greenbelt Park



Federal Lands Highway
Road Inventory Program

GREENBELT PARK

Route 0504

GROUP CAMPGROUND

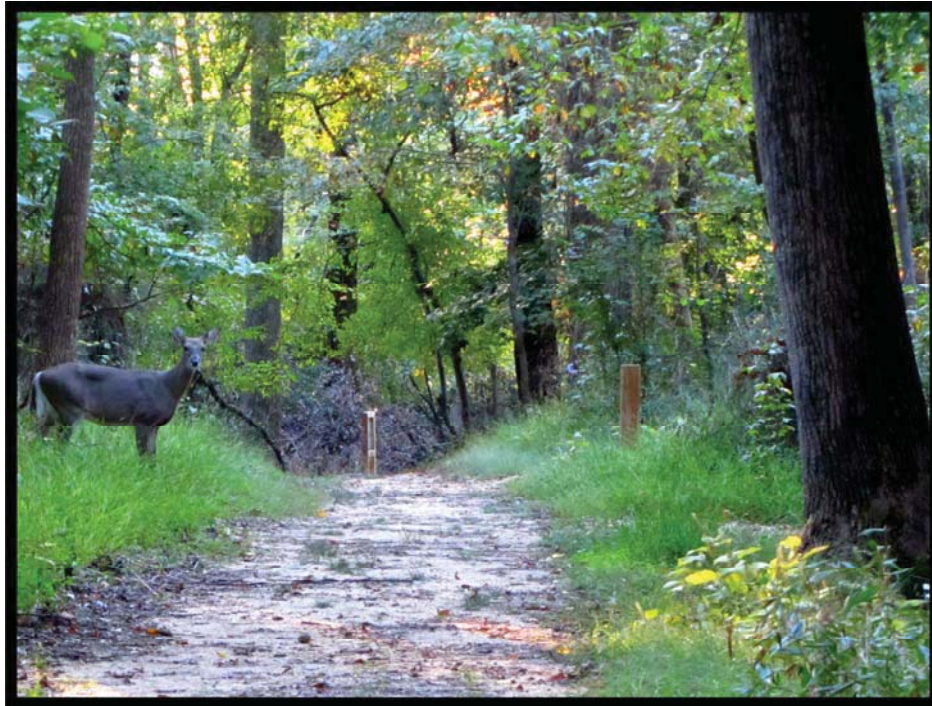
FROM ROUTE 0503 (GREENBELT CAMPGROUND LOOP D)
TO END OF LOOP

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Paved Length (mi)	Paved Width (ft)
0504	PUBLIC	1/14/2013	7,809	0.13	0.09	17
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR	Surface Type
0	0	1	NO CURB AND GUTTER	NO CURB	FAIR/73	AS

* Lane miles are based on 11' lane widths



Section 7
Parking Area
Condition Rating Sheets



Greenbelt Park



Federal Lands Highway
Road Inventory Program

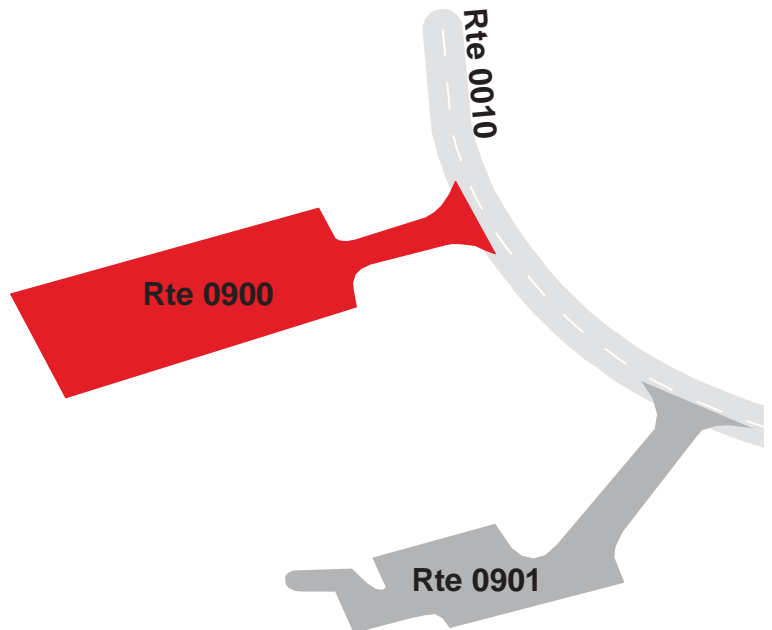
GREENBELT PARK

Route 0900

PARK POLICE MAIN PARKING
FROM ROUTE 0010 (MAIN ENTRANCE ROAD)
TO PARKING

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0900	PUBLIC	1/14/2013	9,083	0.16	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	0	0	CONCRETE CURB AND GUTTER	NO CURB	FAIR/73

* Lane miles are based on 11' lane widths



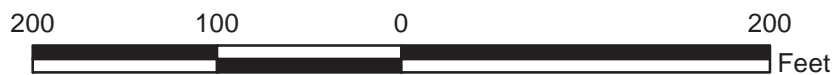
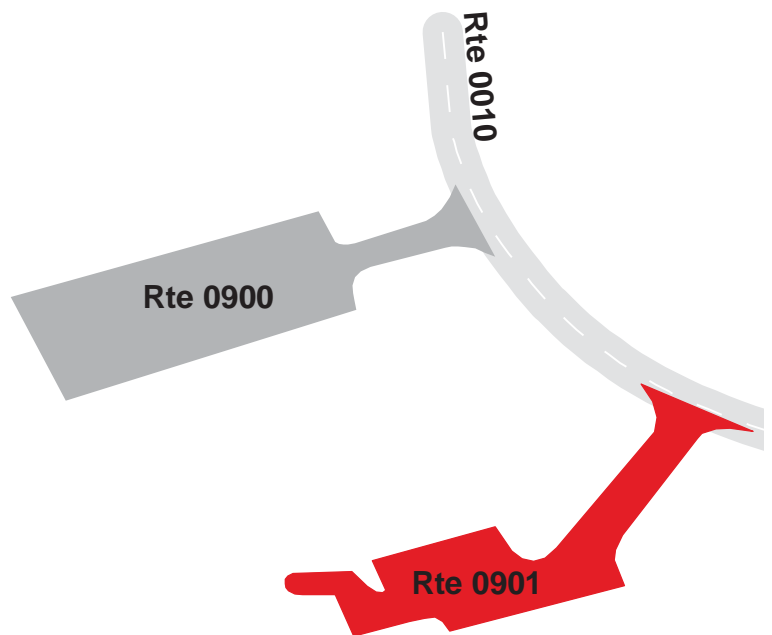
GREENBELT PARK

Route 0901

PARK POLICE REAR PARKING
FROM ROUTE 0010 (MAIN ENTRANCE ROAD)
TO PARKING

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0901	NONPUBLIC	1/14/2013	6,201	0.11	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
1	1	1	CONCRETE CURB AND GUTTER	CONCRETE CURB	GOOD/90

* Lane miles are based on 11' lane widths



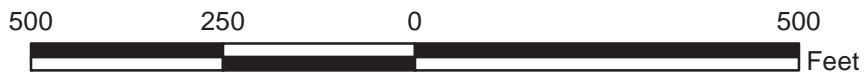
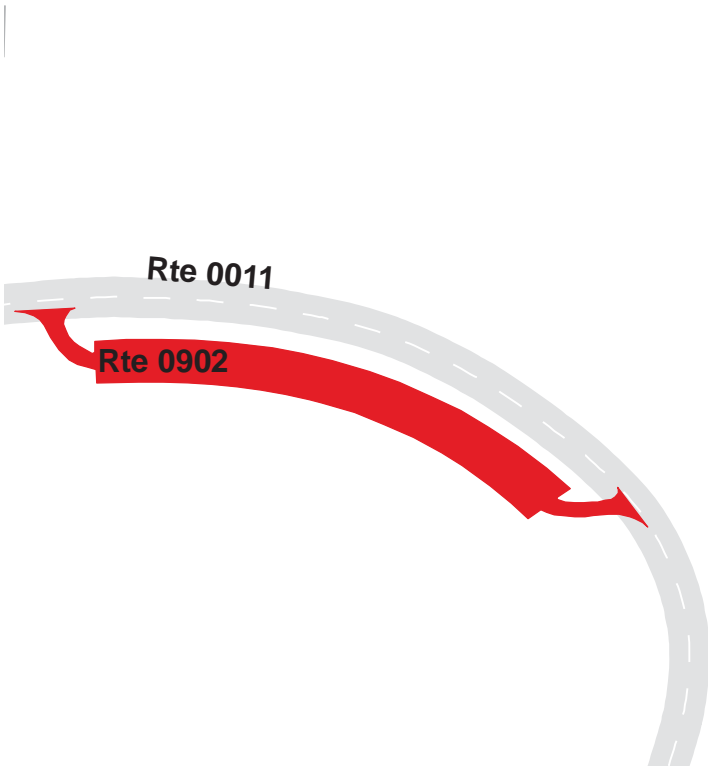
GREENBELT PARK

Route 0902

HOLLY PICNIC AREA
 FROM ROUTE 0011 (PARK CENTRAL ROAD)
 TO ROUTE 0011 (PARK CENTRAL ROAD)

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0902	PUBLIC	1/14/2013	32,594	0.56	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
2	0	2	NO CURB AND GUTTER	ASPHALT CURB	POOR/45

* Lane miles are based on 11' lane widths



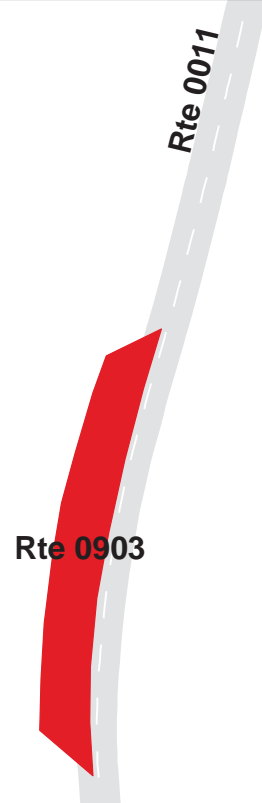
GREENBELT PARK

Route 0903

DOGWOOD NATURE TRAIL PARKING
ADJACENT TO ROUTE 0011 (PARK CENTRAL ROAD)

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0903	PUBLIC	1/14/2013	6,834	0.12	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	0	0	NO CURB AND GUTTER	NO CURB	FAIR/73

* Lane miles are based on 11' lane widths



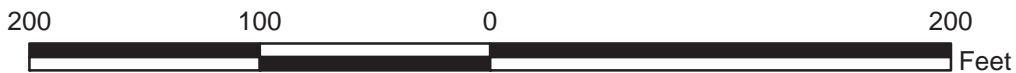
GREENBELT PARK

Route 0904

RANGER STATION PARKING
 FROM ROUTE 0012 (CAMPGROUND ACCESS)
 TO ROUTE 0012 (CAMPGROUND ACCESS)

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0904	PUBLIC	1/14/2013	9,079	0.16	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	0	0	NO CURB AND GUTTER	WOOD CURB	FAIR/73

* Lane miles are based on 11' lane widths



GREENBELT PARK

Route 0905

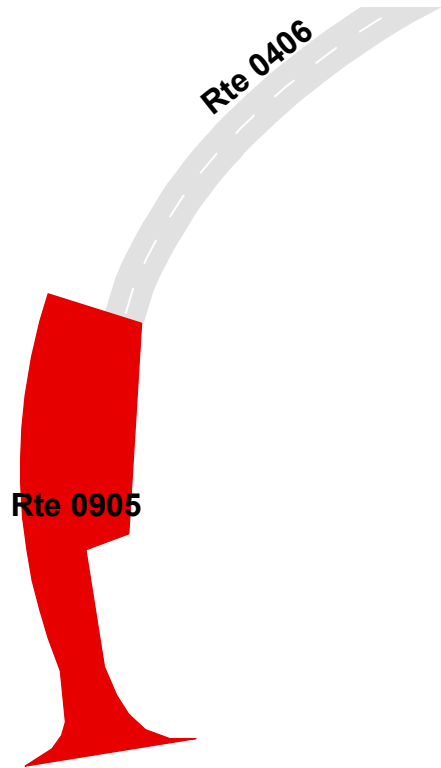
GOOD LUCK ROAD BIKE TRAIL PARKING

FROM GOOD LUCK ROAD

TO ROUTE 0406 (PARK CENTRAL TO GOOD LUCK SERVICE ROAD)

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0905	PUBLIC	1/14/2013	8,846	0.15	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
1	0	1	NO CURB AND GUTTER	NO CURB	FAIR/73

* Lane miles are based on 11' lane widths



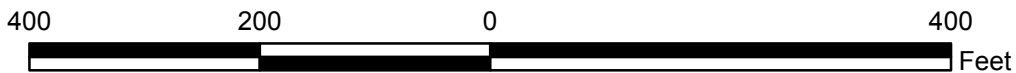
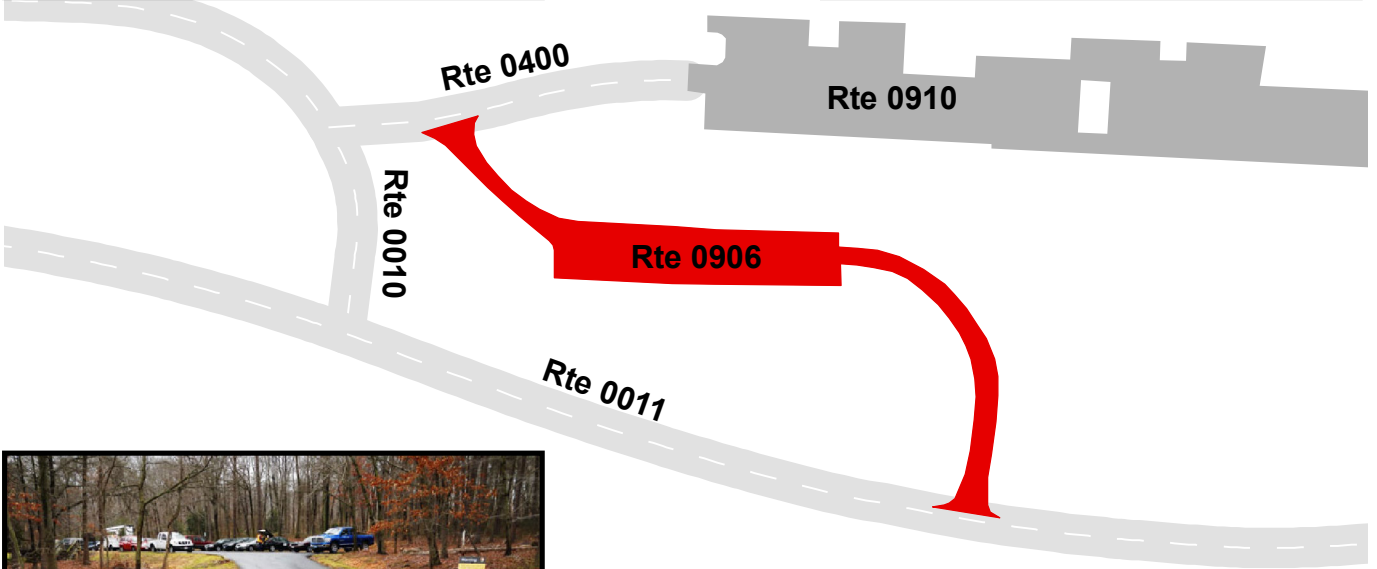
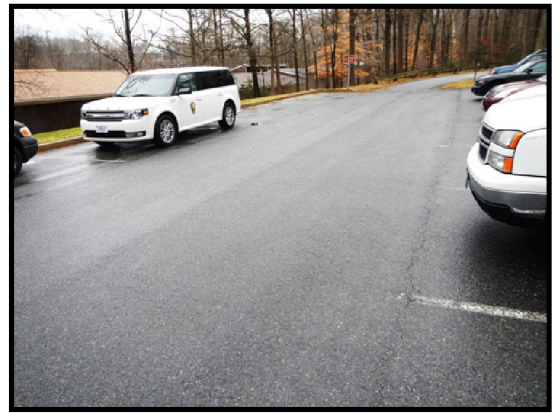
GREENBELT PARK

Route 0906

PARK HEADQUARTERS PARKING
 FROM ROUTE 0011 (PARK CENTRAL ROAD)
 TO ROUTE 0400 (MAINTENANCE AREA ACCESS)

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0906	PUBLIC	1/14/2013	15,404	0.27	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
1	1	0	NO CURB AND GUTTER	ASPHALT & CONCRETE	FAIR/73

* Lane miles are based on 11' lane widths



GREENBELT PARK

Route 0907ZZ

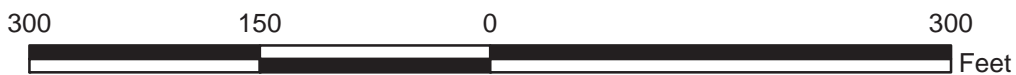
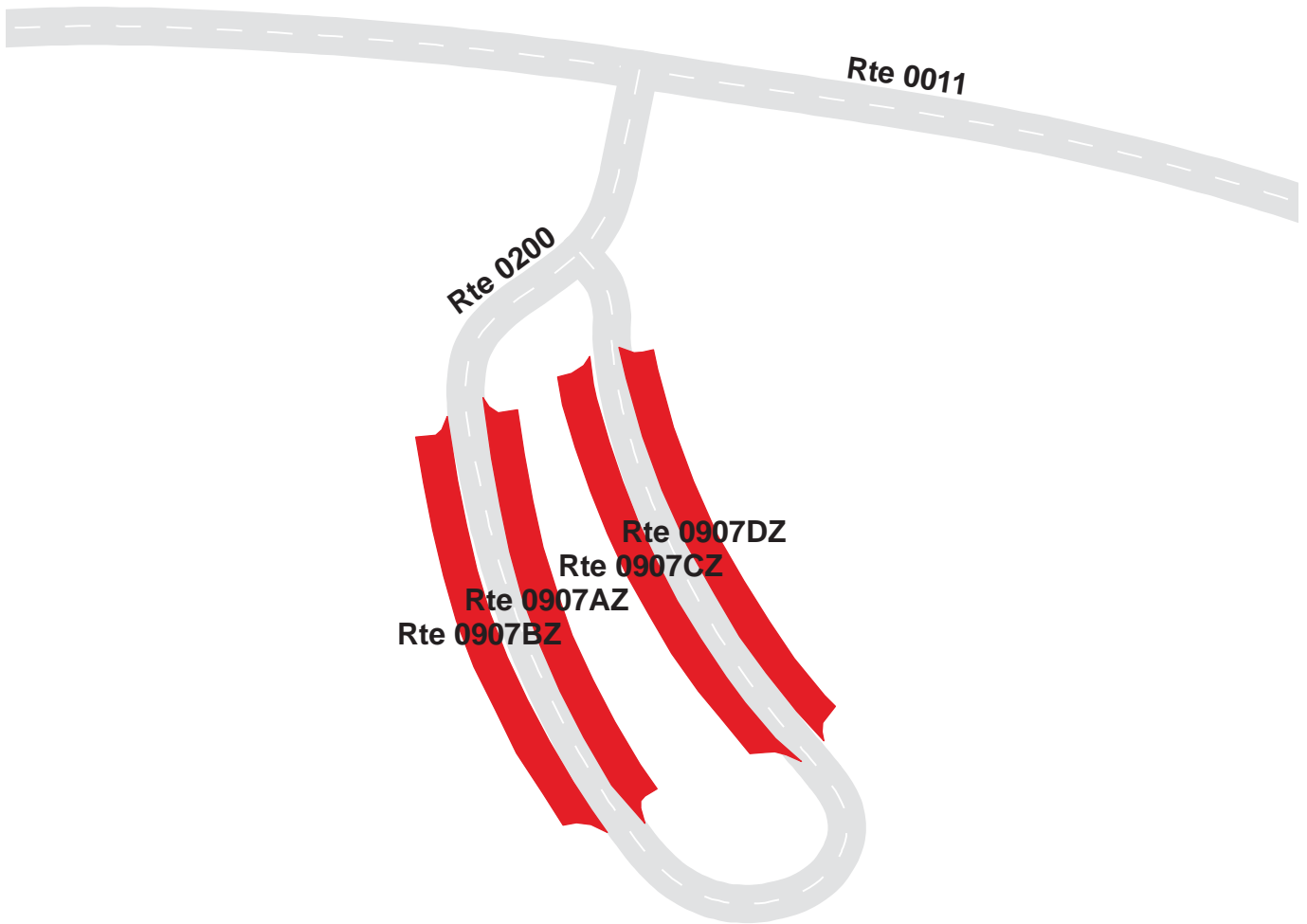
SWEET GUM PICNIC PARKING AREAS

ADJACENT TO ROUTE 0200 (SWEETGUM PICNIC LOOP) ON LEFT AND RIGHT

Summary Record

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0907ZZ	PUBLIC	1/14/2013	20,556	0.35	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	2	0	CONCRETE CURB AND GUTTER	NO CURB	SUMMARY/64

* Lane miles are based on 11' lane widths



GREENBELT PARK

Route 0907AZ

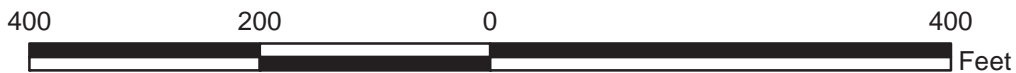
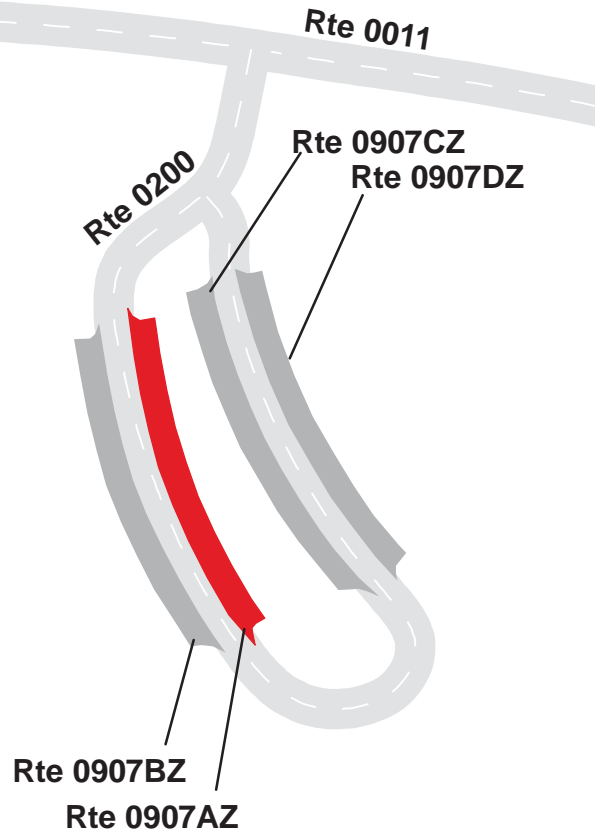
SWEET GUM PICNIC PARKING A

ADJACENT TO ROUTE 0200 (SWEETGUM PICNIC LOOP) ON LEFT

Subcomponent Record

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0907AZ	PUBLIC	1/14/2013	5,206	0.09	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	0	0	CONCRETE CURB AND GUTTER	NO CURB	FAIR/73

* Lane miles are based on 11' lane widths



GREENBELT PARK

Route 0907BZ

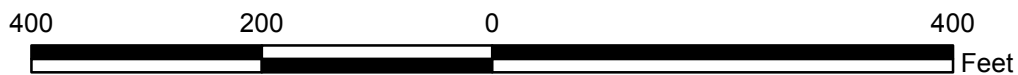
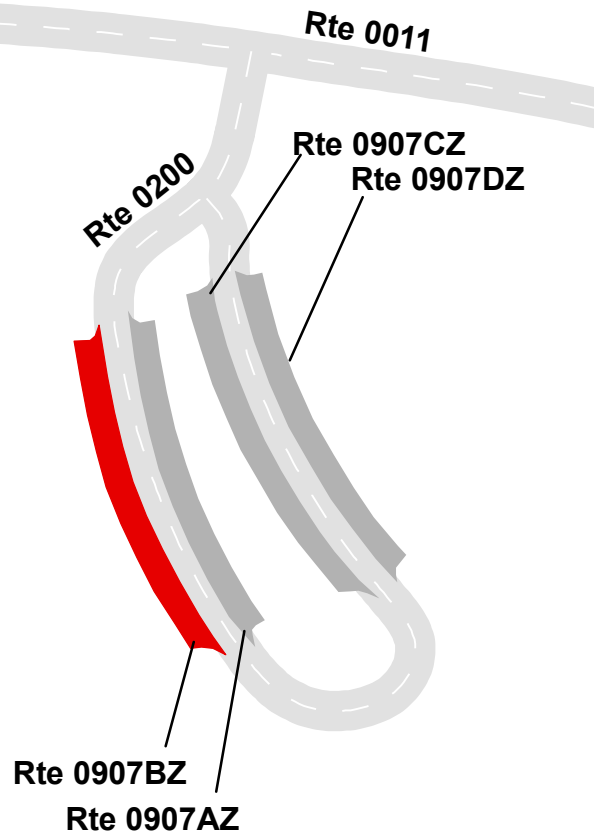
SWEET GUM PICNIC PARKING B

ADJACENT TO ROUTE 0200 (SWEETGUM PICNIC LOOP) ON RIGHT

Subcomponent Record

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0907BZ	PUBLIC	1/14/2013	5,240	0.09	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	1	0	CONCRETE CURB AND GUTTER	NO CURB	GOOD/90

* Lane miles are based on 11' lane widths



GREENBELT PARK

Route 0907CZ

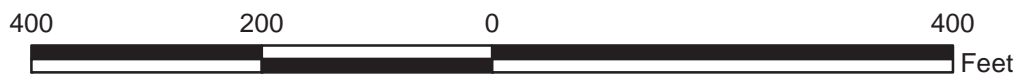
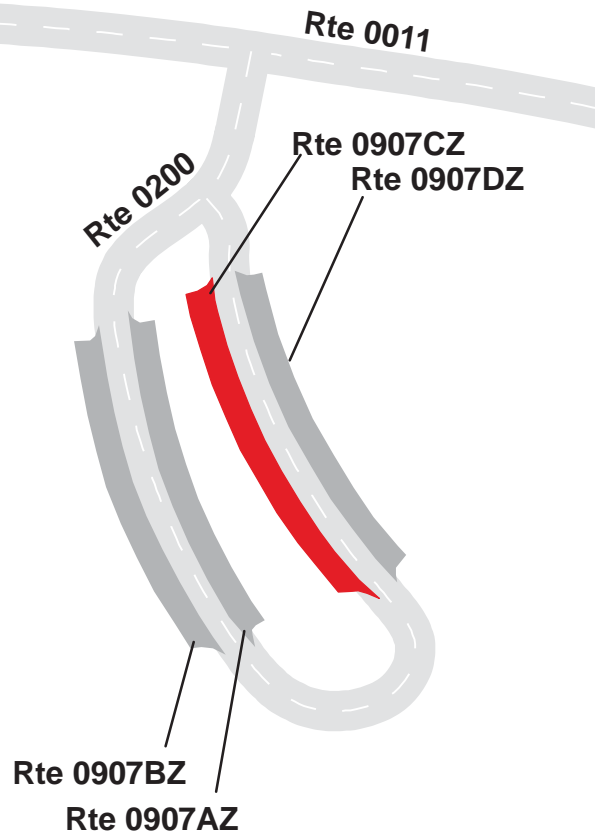
SWEET GUM PICNIC PARKING C

ADJACENT TO ROUTE 0200 (SWEETGUM PICNIC LOOP) ON LEFT

Subcomponent Record

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0907CZ	PUBLIC	1/14/2013	5,162	0.09	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	1	0	CONCRETE CURB AND GUTTER	NO CURB	POOR/45

* Lane miles are based on 11' lane widths



GREENBELT PARK

Route 0907DZ

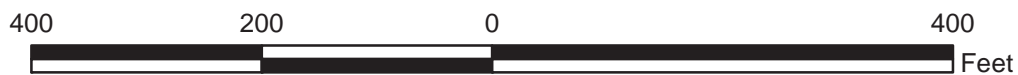
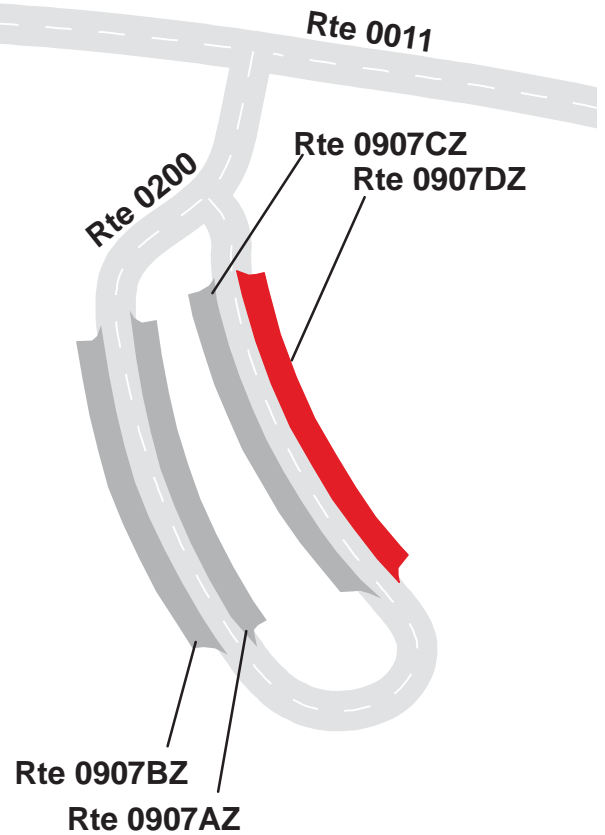
SWEET GUM PICNIC PARKING D

ADJACENT TO ROUTE 0200 (SWEETGUM PICNIC LOOP) ON RIGHT

Subcomponent Record

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0907DZ	PUBLIC	1/14/2013	4,948	0.09	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	0	0	CONCRETE CURB AND GUTTER	NO CURB	POOR/45

* Lane miles are based on 11' lane widths



GREENBELT PARK

Route 0908ZZ

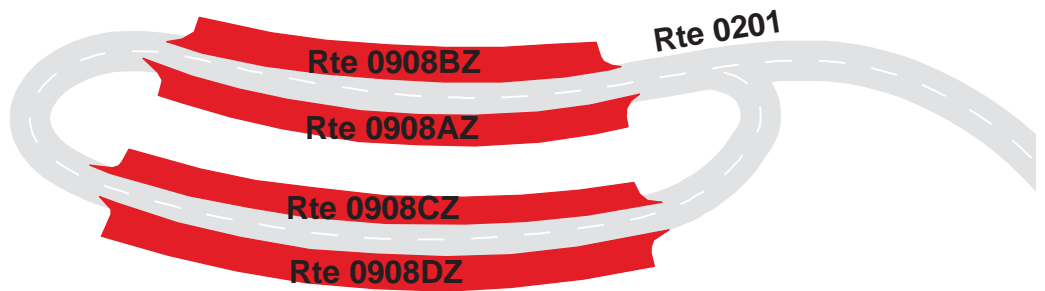
LAUREL PICNIC AREA PARKING AREAS

ADJACENT TO ROUTE 0201 (LAUREL PICNIC AREA) ON LEFT AND RIGHT

Summary Record

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0908ZZ	PUBLIC	1/14/2013	20,293	0.35	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	3	0	CONCRETE CURB AND GUTTER	NO CURB	SUMMARY/73

* Lane miles are based on 11' lane widths



GREENBELT PARK

Route 0908AZ

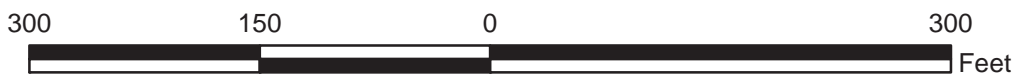
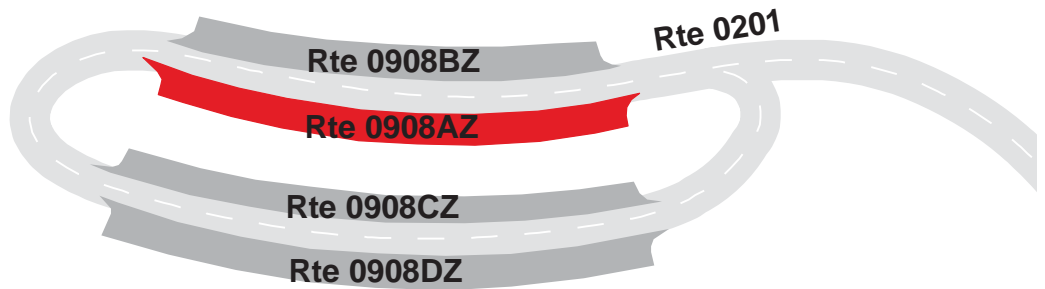
LAUREL PICNIC AREA PARKING A

ADJACENT TO ROUTE 0201 (LAUREL PICNIC AREA) ON LEFT

Subcomponent Record

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0908AZ	PUBLIC	1/14/2013	4,683	0.08	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	1	0	CONCRETE CURB AND GUTTER	NO CURB	FAIR/73

* Lane miles are based on 11' lane widths



GREENBELT PARK

Route 0908BZ

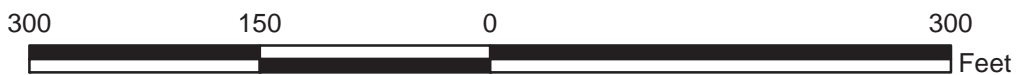
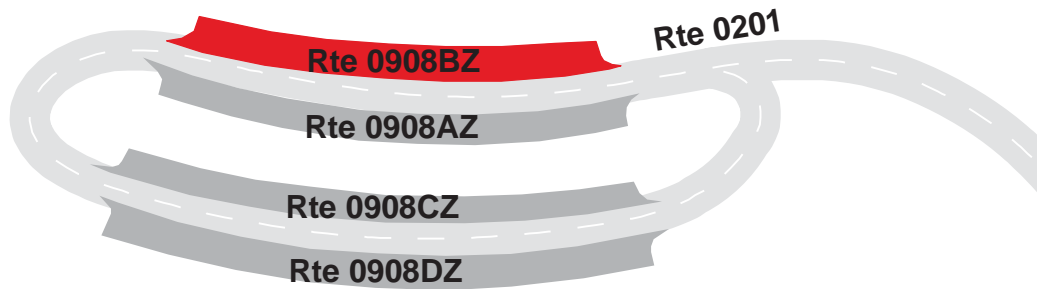
LAUREL PICNIC AREA PARKING B

ADJACENT TO ROUTE 0201 (LAUREL PICNIC AREA) ON RIGHT

Subcomponent Record

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0908BZ	PUBLIC	1/14/2013	4,653	0.08	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	0	0	CONCRETE CURB AND GUTTER	NO CURB	FAIR/73

* Lane miles are based on 11' lane widths



GREENBELT PARK

Route 0908CZ

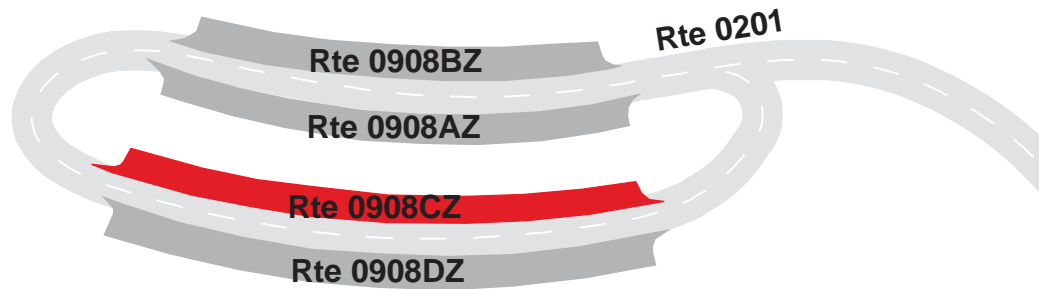
LAUREL PICNIC AREA PARKING C

ADJACENT TO ROUTE 0201 (LAUREL PICNIC AREA) ON LEFT

Subcomponent Record

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0908CZ	PUBLIC	1/14/2013	4,792	0.08	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	0	0	CONCRETE CURB AND GUTTER	NO CURB	FAIR/73

* Lane miles are based on 11' lane widths



GREENBELT PARK

Route 0908DZ

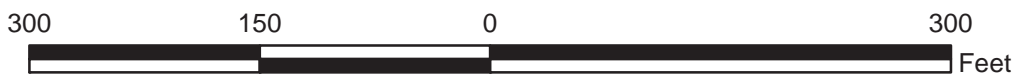
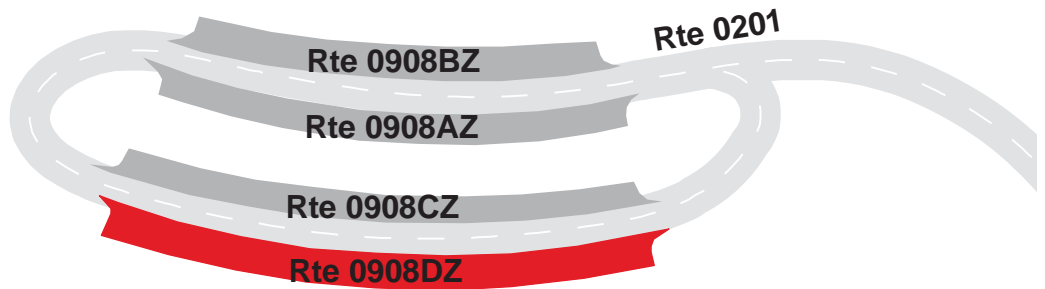
LAUREL PICNIC AREA PARKING D

ADJACENT TO ROUTE 0201 (LAUREL PICNIC AREA) ON RIGHT

Subcomponent Record

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0908DZ	PUBLIC	1/14/2013	6,165	0.11	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	2	0	CONCRETE CURB AND GUTTER	NO CURB	FAIR/73

* Lane miles are based on 11' lane widths



GREENBELT PARK

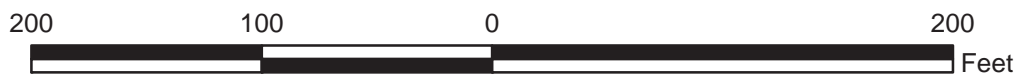
Route 0909

CAMPGROUND DUMPSTATION

FROM ROUTE 0502 (GREENBELT CAMPGROUND LOOP C)
TO PARKING

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0909	PUBLIC	1/14/2013	6,690	0.12	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	0	0	NO CURB AND GUTTER	NO CURB	GOOD/90

* Lane miles are based on 11' lane widths



GREENBELT PARK

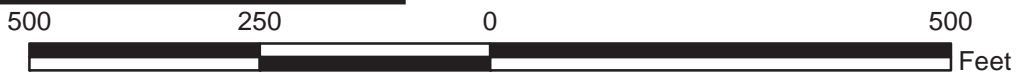
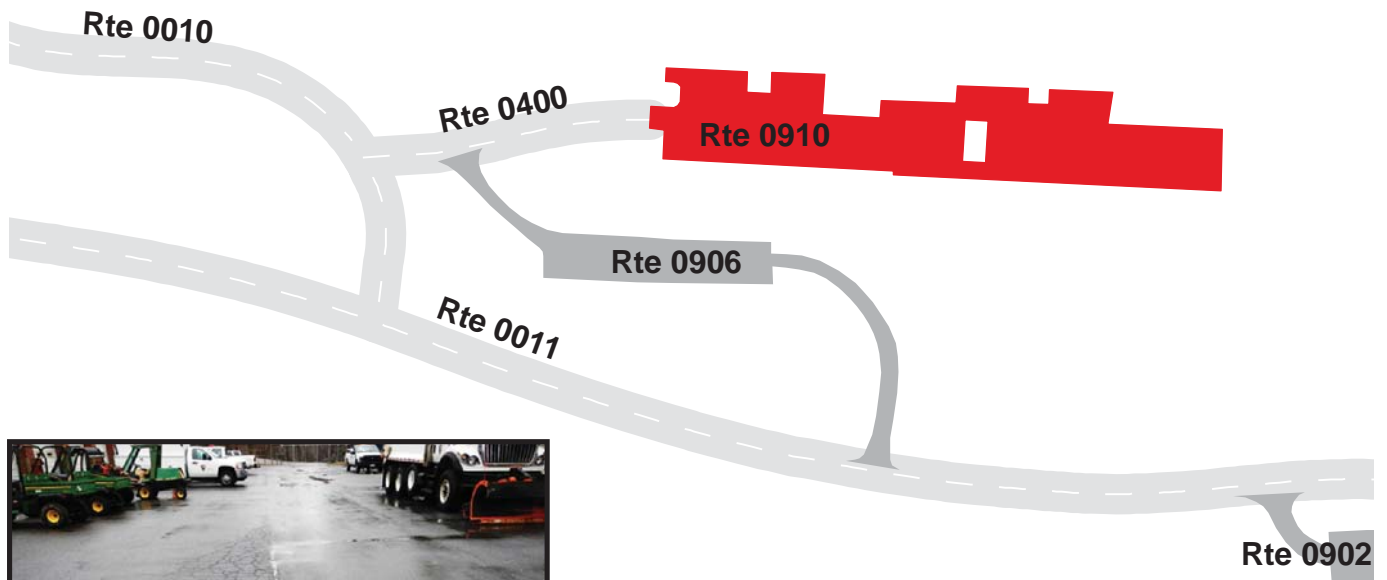
Route 0910

GREENBELT MAINTENANCE AREA

FROM END OF ROUTE 0400 (MAINTENANCE AREA ACCESS)
TO PARKING

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0910	NONPUBLIC	1/14/2013	38,834	0.67	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	2	1	NO CURB AND GUTTER	ASPHALT & CONCRETE	POOR/45

* Lane miles are based on 11' lane widths



GREENBELT PARK

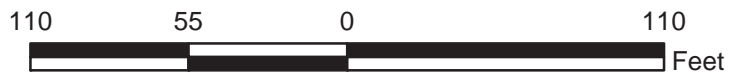
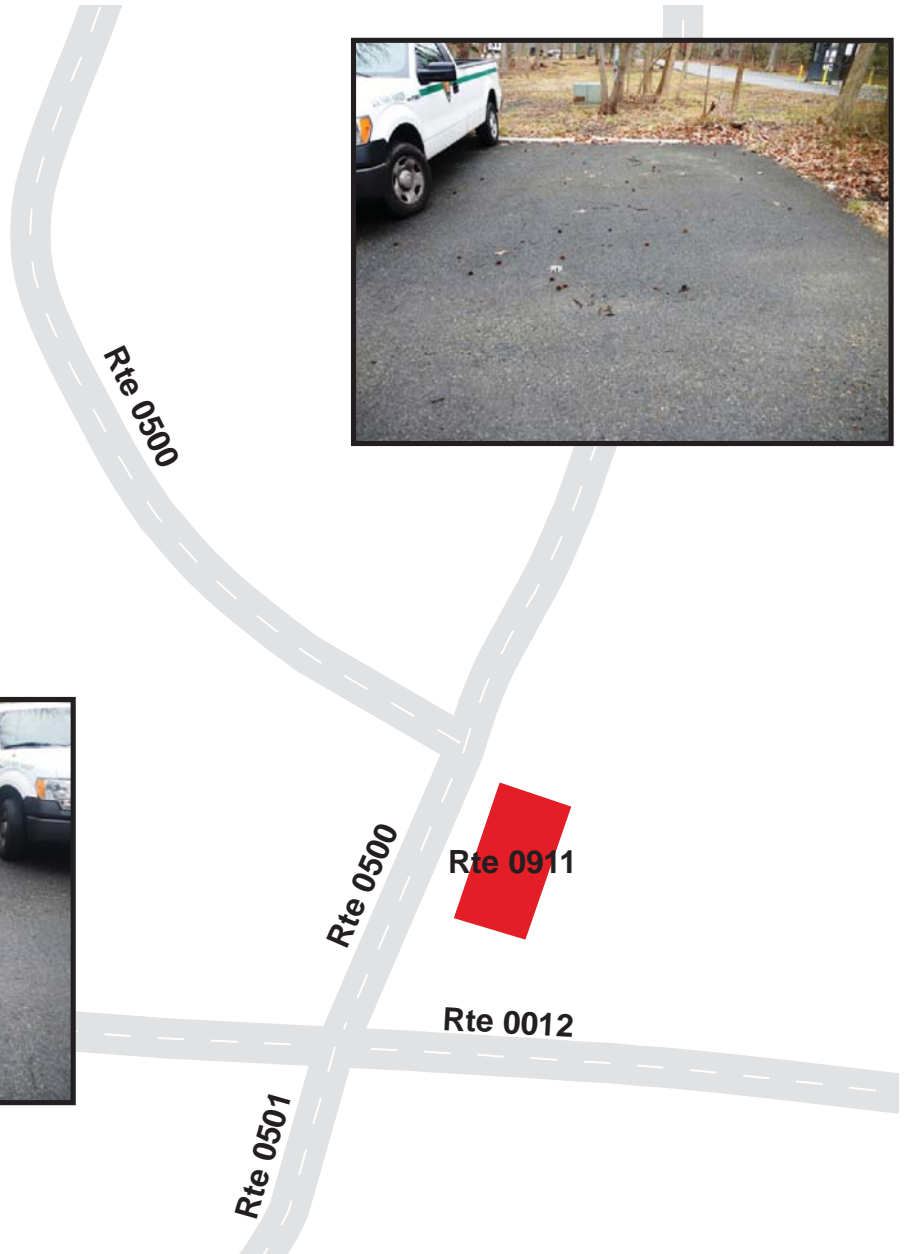
Route 0911

RANGER CAMPGROUND PARKING

ADJACENT TO ROUTE 0500 (GREENBELT CAMPGROUND LOOP A)

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0911	PUBLIC	1/14/2013	974	0.02	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	0	0	NO CURB AND GUTTER	NO CURB	GOOD/90

* Lane miles are based on 11' lane widths



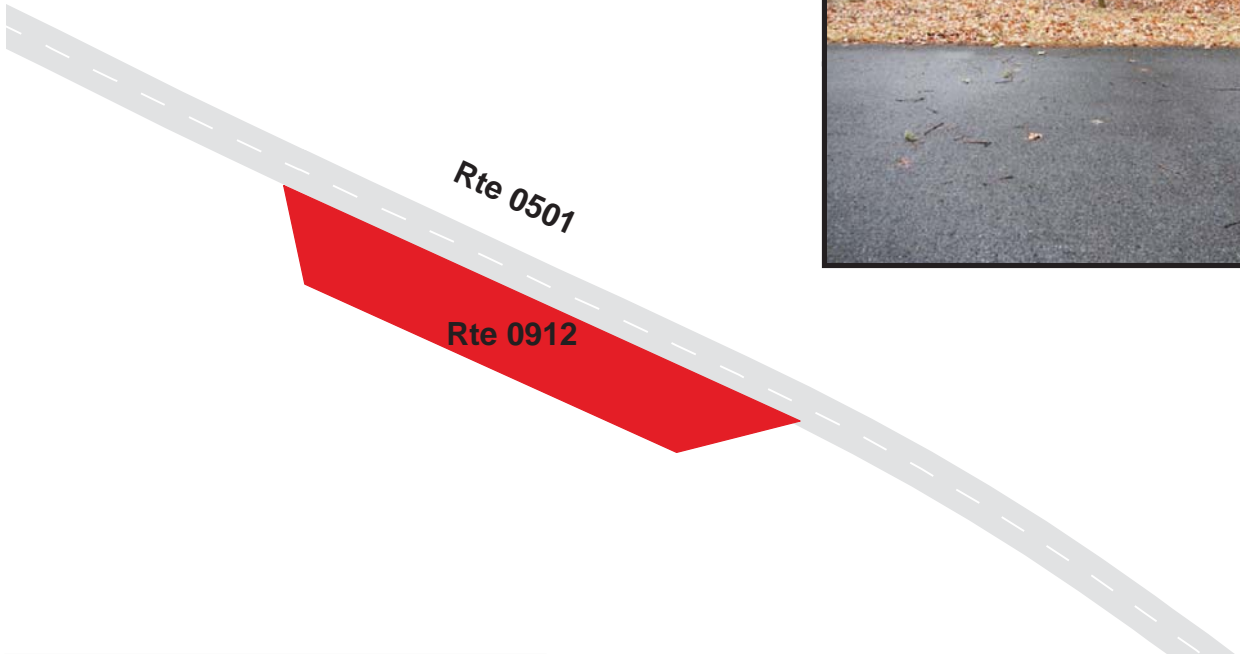
GREENBELT PARK

Route 0912

CAMPGROUND LOOP B HANDICAP PARKING
 ADJACENT TO ROUTE 0501 (GREENBELT CAMPGROUND LOOP B)

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0912	PUBLIC	1/14/2013	516	0.01	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	0	0	NO CURB AND GUTTER	NO CURB	GOOD/90

* Lane miles are based on 11' lane widths



Section 8

Parkwide/Route

Maintenance Features Summaries



Greenbelt Park



Federal Lands Highway
Road Inventory Program

GREE: PARKWIDE MAINTENANCE FEATURES SUMMARY

Includes DCV, MRL, MRP & PKG routes collected in Cycle-5

Notice: Culverts and drop inlets were NOT marked by NPS in Cycle 5 along DCV driven routes, therefore the culvert, drop inlet, and gate counts below reflect only the Manually Rated Routes and Paved Parking areas collected in Cycle 5.

FEATURE	LINEAR FEET	COUNT
BRIDGE	--	0
CATTLE GUARD	--	0
CULVERT	--	5
CURB	755	--
DROP INLET	--	9
GATE	--	17
GUARD/GUIDE RAIL	1,679	--
CABLE	0	--
NON-CABLE	1,679	--
GUARD/GUIDE WALL	0	--
BOLLARD	0	--
TEMPORARY BARRIER	0	--
NON TEMP/BOLLARD	0	--
INTERSECTION	--	84
LOW WATER CROSSING	0	0
MILE MARKER	--	0
OVERPASS	--	0
PARK BOUNDARY	--	0
PAVED DITCH	0	--
PULLOUT	106	2
RAILROAD CROSSING	--	0
RETAINING WALL	0	0
SIGN	--	142
STATE BOUNDARY	--	0
TRAFFIC LIGHT	--	5
TUNNEL	0	0

GREE: DCV ROUTE MAINTENANCE FEATURES SUMMARY

Notice: Culverts and drop inlets were NOT marked by NPS in Cycle 5. However a culvert could appear below if it has a BIP structure number associated with it.

FEATURE	ROUTE 0010 MAIN ENTRANCE ROAD	ROUTE 0011 PARK CENTRAL ROAD	ROUTE 0012 CAMPGROUND ACCESS	ROUTE 0200 SWEETGUM PICNIC LOOP	ROUTE 0201 LAUREL PICNIC AREA	ROUTE 0400 MAINTENANCE AREA ACCESS	UNIT
BRIDGE	0	0	0	0	0	0	EACH
CATTLE GUARD	0	0	0	0	0	0	EACH
CULVERT	0	0	0	0	0	0	EACH
CURB	0	0	0	0	755	0	LINEAR FEET
DROP INLET	0	0	0	0	0	0	EACH
GATE	1	1	0	1	1	1	EACH
GUARD/GUIDE RAIL	428	886	264	0	0	101	LINEAR FEET
CABLE	0	0	0	0	0	0	LINEAR FEET
NON-CABLE	428	886	264	0	0	101	LINEAR FEET
GUARD/GUIDE WALL	0	0	0	0	0	0	LINEAR FEET
BOLLARD	0	0	0	0	0	0	LINEAR FEET
TEMPORARY BARRIER	0	0	0	0	0	0	LINEAR FEET
NON TEMP/BOLLARD	0	0	0	0	0	0	LINEAR FEET
INTERSECTION	8	13	10	9	9	4	EACH
LOW WATER CROSSING	0	0	0	0	0	0	EACH
LOW WATER CROSSING	0	0	0	0	0	0	LINEAR FEET
MILE MARKER	0	0	0	0	0	0	EACH
OVERPASS	0	0	0	0	0	0	EACH
PARK BOUNDARY	0	0	0	0	0	0	EACH
PAVED DITCH	0	0	0	0	0	0	LINEAR FEET
PULLOUT	0	0	1	0	0	0	EACH
PULLOUT	0	0	58	0	0	0	LINEAR FEET
RAILROAD CROSSING	0	0	0	0	0	0	EACH
RETAINING WALL	0	0	0	0	0	0	EACH
RETAINING WALL	0	0	0	0	0	0	LINEAR FEET
SIGN	12	30	36	13	9	6	EACH
STATE BOUNDARY	0	0	0	0	0	0	EACH
TRAFFIC LIGHT	5	0	0	0	0	0	EACH
TUNNEL	0	0	0	0	0	0	EACH
TUNNEL	0	0	0	0	0	0	LINEAR FEET

GREE: DCV ROUTE MAINTENANCE FEATURES SUMMARY

Notice: Culverts and drop inlets were NOT marked by NPS in Cycle 5. However a culvert could appear below if it has a BIP structure number associated with it.

FEATURE	ROUTE 0406	PARK CENTRAL TO GOOD LUCK SERVICE ROAD	ROUTE 0500	GREENBELT CAMPGROUND LOOP A	ROUTE 0501	GREENBELT CAMPGROUND LOOP B	ROUTE 0502	GREENBELT CAMPGROUND LOOP C	ROUTE 0503	GREENBELT CAMPGROUND LOOP D	UNIT
BRIDGE	0	0	0	0	0	0	0	0	0	0	EACH
CATTLE GUARD	0	0	0	0	0	0	0	0	0	0	EACH
CULVERT	0	0	0	0	0	0	0	0	0	0	EACH
CURB	0	0	0	0	0	0	0	0	0	0	LINEAR FEET
DROP INLET	0	0	0	0	0	0	0	0	0	0	EACH
GATE	0	2	1	1	2	1	1	1	1	1	EACH
GUARD/GUIDE RAIL	0	0	0	0	0	0	0	0	0	0	LINEAR FEET
CABLE	0	0	0	0	0	0	0	0	0	0	LINEAR FEET
NON-CABLE	0	0	0	0	0	0	0	0	0	0	LINEAR FEET
GUARD/GUIDE WALL	0	0	0	0	0	0	0	0	0	0	LINEAR FEET
BOLLARD	0	0	0	0	0	0	0	0	0	0	LINEAR FEET
TEMPORARY BARRIER	0	0	0	0	0	0	0	0	0	0	LINEAR FEET
NON TEMP/BOLLARD	0	0	0	0	0	0	0	0	0	0	LINEAR FEET
INTERSECTION	2	7	8	8	7	7	7	7	7	7	EACH
LOW WATER CROSSING	0	0	0	0	0	0	0	0	0	0	EACH
LOW WATER CROSSING	0	0	0	0	0	0	0	0	0	0	LINEAR FEET
MILE MARKER	0	0	0	0	0	0	0	0	0	0	EACH
OVERPASS	0	0	0	0	0	0	0	0	0	0	EACH
PARK BOUNDARY	0	0	0	0	0	0	0	0	0	0	EACH
PAVED DITCH	0	0	0	0	0	0	0	0	0	0	LINEAR FEET
PULLOUT	0	1	0	0	0	0	0	0	0	0	EACH
PULLOUT	0	48	0	0	0	0	0	0	0	0	LINEAR FEET
RAILROAD CROSSING	0	0	0	0	0	0	0	0	0	0	EACH
RETAINING WALL	0	0	0	0	0	0	0	0	0	0	EACH
RETAINING WALL	0	0	0	0	0	0	0	0	0	0	LINEAR FEET
SIGN	0	6	17	17	4	4	9	9	9	9	EACH
STATE BOUNDARY	0	0	0	0	0	0	0	0	0	0	EACH
TRAFFIC LIGHT	0	0	0	0	0	0	0	0	0	0	EACH
TUNNEL	0	0	0	0	0	0	0	0	0	0	EACH
TUNNEL	0	0	0	0	0	0	0	0	0	0	LINEAR FEET

STRUCTURE LIST

No data available for this section.

Section 9
Route Maintenance Features
Road Logs



Greenbelt Park



**Federal Lands Highway
Road Inventory Program**

GREE: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0010: MAIN ENTRANCE ROAD

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

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM GREENBELT ROAD
0.000	0.000	INTERSECTION	RIGHT	PAVED ROUTE (GREENBELT ROAD / NON NPS)
0.000	0.000	TRAFFIC LIGHT	N/A	X3
0.000	0.000	INTERSECTION	LEFT	PAVED ROUTE (GREENBELT ROAD / NON NPS)
0.006	0.006	TRAFFIC LIGHT	N/A	X3
0.006	0.006	TRAFFIC LIGHT	N/A	X3
0.006	0.006	TRAFFIC LIGHT	N/A	X3
0.007	0.007	TRAFFIC LIGHT	N/A	X3
0.012	0.012	SIGN	RIGHT	GUIDE, GREENBELT PARK HEADQUARTERS AND INFORMATION
0.012	0.012	SIGN	RIGHT	GUIDE, 6501 GREENBELT ROAD PARK POLICE HEADQUARTERS
0.014	0.014	SIGN	LEFT	GUIDE, B.W. PARKWAY WASHINGTON
0.017	0.063	GUARD/GUIDE RAIL	LEFT	N/A
0.019	0.019	INTERSECTION	RIGHT	ROUTE 0900 (PARK POLICE MAIN PARKING)
0.023	0.023	SIGN	RIGHT	REGULATORY, SUBSTATION UNITED STATES PARK POLICE UNITED STATES DEPARTMENT OF INTERIOR NATIONAL PARK SERVICE
0.023	0.023	SIGN	RIGHT	REGULATORY, SUBSTATION UNITED STATES PARK POLICE UNITED STATES DEPARTMENT OF INTERIOR NATIONAL PARK SERVICE
0.045	0.045	INTERSECTION	RIGHT	ROUTE 0901 (PARK POLICE REAR PARKING)
0.046	0.046	SIGN	RIGHT	REGULATORY, AUTHORIZED POLICE VEHICLES ONLY
0.064	0.064	INTERSECTION	LEFT	UNPAVED ROUTE
0.077	0.077	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.081	0.116	GUARD/GUIDE RAIL	LEFT	N/A
0.106	0.106	SIGN	RIGHT	GUIDE, 6565 GREENBELT ROAD MAINTENANCE SHOP
0.106	0.106	SIGN	RIGHT	GUIDE, GRAPHIC SIGN NO TEXT
0.119	0.119	INTERSECTION	LEFT	ROUTE 0400 (MAINTENANCE AREA ACCESS)
0.130	0.130	GATE	N/A	N/A
0.147	0.147	SIGN	RIGHT	REGULATORY, STOP
0.148	0.148	INTERSECTION	RIGHT	ROUTE 0011 (PARK CENTRAL ROAD)
0.148	0.148	SIGN	N/A	GUIDE, SWEETGUM PICNIC AREA

GREE: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0010: MAIN ENTRANCE ROAD

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

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.148	0.148	SIGN	N/A	GUIDE, HOLLY & LAUREL PICNIC AREA
0.148	0.148	INTERSECTION	LEFT	ROUTE 0011 (PARK CENTRAL ROAD)
0.148	0.148	ROUTE END	N/A	TO ROUTE 0011 (PARK CENTRAL ROAD)

GREE: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0011: PARK CENTRAL ROAD

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

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0011 (PARK CENTRAL ROAD) AT BEGINNING OF LOOP
0.000	0.000	INTERSECTION	LEFT	ROUTE 0011 (PARK CENTRAL ROAD)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0011 (PARK CENTRAL ROAD)
0.000	0.000	SIGN	N/A	GUIDE, PARK EXIT
0.006	0.006	SIGN	LEFT	REGULATORY, STOP
0.034	0.066	GUARD/GUIDE RAIL	LEFT	N/A
0.036	0.066	GUARD/GUIDE RAIL	RIGHT	N/A
0.097	0.097	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
0.329	0.329	INTERSECTION	RIGHT	ROUTE 0405 (FIRE ROAD)
0.339	0.339	SIGN	RIGHT	GUIDE, LAUREL PICNIC AREA
0.343	0.343	INTERSECTION	LEFT	ROUTE 0201 (LAUREL PICNIC AREA)
0.468	0.468	SIGN	LEFT	REGULATORY, SPEED LIMIT 25
0.584	0.584	INTERSECTION	LEFT	ROUTE 0902 (HOLLY PICNIC AREA)
0.657	0.657	SIGN	LEFT	GUIDE, HOLLY PICNIC AREA
0.707	0.707	SIGN	LEFT	GUIDE, RESERVED PICNIC AREA CLOSED AT DUSK
0.707	0.707	SIGN	LEFT	WARNING, WARNING
0.715	0.715	INTERSECTION	LEFT	ROUTE 0902 (HOLLY PICNIC AREA)
0.776	0.776	SIGN	LEFT	GUIDE, CAMPGROUND PARK EXIT
0.781	0.781	INTERSECTION	RIGHT	ROUTE 0906 (PARK HEADQUARTERS PARKING)
0.782	0.782	SIGN	RIGHT	REGULATORY, DO NOT ENTER
0.822	0.822	SIGN	LEFT	REGULATORY, SPEED LIMIT 25
0.837	0.837	SIGN	RIGHT	GUIDE, PARK EXIT
0.867	0.867	INTERSECTION	RIGHT	ROUTE 0010 (MAIN ENTRANCE ROAD)
0.891	0.891	SIGN	LEFT	GUIDE, PARK EXIT WASHINGTON
0.939	0.939	SIGN	RIGHT	GUIDE, SWEETGUM PICNIC AREA
0.941	0.941	INTERSECTION	LEFT	ROUTE 0200 (SWEETGUM PICNIC LOOP)
0.981	0.981	SIGN	RIGHT	WARNING, GRAPHIC SIGN NO TEXT
1.039	1.050	GUARD/GUIDE RAIL	RIGHT	N/A
1.047	1.055	GUARD/GUIDE RAIL	LEFT	N/A

GREE: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0011: PARK CENTRAL ROAD

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

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
1.417	1.417	INTERSECTION	LEFT	ROUTE 0011 (PARK CENTRAL ROAD)
1.436	1.436	SIGN	RIGHT	GUIDE, U.S. FEE AREA
1.436	1.436	SIGN	RIGHT	GUIDE, INFORMATION CAMPGROUND
1.466	1.466	SIGN	RIGHT	REGULATORY, PARK CLOSED AT DARK
1.466	1.466	SIGN	RIGHT	REGULATORY, FRONT END PARKING ONLY
1.466	1.466	SIGN	RIGHT	WARNING, WARNING
1.496	1.496	SIGN	LEFT	GUIDE, DOGWOOD NATURE TRAIL
1.497	1.497	INTERSECTION	RIGHT	ROUTE 0903 (DOGWOOD NATURE TRAIL PARKING)
1.523	1.523	SIGN	RIGHT	REGULATORY, NO THRU ROAD
1.634	1.634	SIGN	LEFT	REGULATORY, NO STOPPING ON PAVEMENT
1.684	1.684	SIGN	LEFT	REGULATORY, NO PARKING
1.801	1.801	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
1.935	1.978	GUARD/GUIDE RAIL	LEFT	N/A
1.938	1.982	GUARD/GUIDE RAIL	RIGHT	N/A
2.228	2.228	SIGN	LEFT	WARNING, GRAPHIC SIGN NO TEXT
2.230	2.230	SIGN	RIGHT	WARNING, DEAD END
2.263	2.263	SIGN	RIGHT	GUIDE, CAMPGROUND INFO. STATION
2.291	2.291	INTERSECTION	RIGHT	ROUTE 0012 (CAMPGROUND ACCESS)
2.298	2.298	GATE	N/A	N/A
2.298	2.298	SIGN	N/A	REGULATORY, AUTHORIZED VEHICLES ONLY
2.298	2.298	SIGN	N/A	REGULATORY, NO PARKING
2.299	2.299	INTERSECTION	N/A	ROUTE 0406 (PARK CENTRAL TO GOOD LUCK SERVICE ROAD)
2.299	2.299	ROUTE END	N/A	TO BEGINNING OF ROUTE 0406 (PARK CENTRAL TO GOOD LUCK SERVICE ROAD) AT GATE

GREE: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0012: CAMPGROUND ACCESS

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

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0011 (PARK CENTRAL ROAD)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0011 (PARK CENTRAL ROAD)
0.000	0.000	SIGN	N/A	GUIDE, PARK EXIT
0.000	0.000	SIGN	N/A	REGULATORY, NO PARKING ANY TIME
0.000	0.000	INTERSECTION	LEFT	ROUTE 0011 (PARK CENTRAL ROAD)
0.005	0.005	SIGN	LEFT	REGULATORY, STOP
0.005	0.005	SIGN	LEFT	REGULATORY, BUCKLE UP IT'S THE LAW
0.027	0.027	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.062	0.062	INTERSECTION	RIGHT	ROUTE 0904 (RANGER STATION PARKING)
0.064	0.064	SIGN	RIGHT	REGULATORY, NO BUSES OR R.V.'S
0.065	0.065	SIGN	RIGHT	GUIDE, RANGER STATION
0.079	0.079	INTERSECTION	RIGHT	ROUTE 0904 (RANGER STATION PARKING)
0.080	0.080	SIGN	RIGHT	GUIDE, RV CAMPERS 30 FT AND OVER D-LOOP PARKING ONLY
0.097	0.097	SIGN	LEFT	REGULATORY, STOP
0.098	0.098	SIGN	RIGHT	REGULATORY, STOP
0.110	0.110	SIGN	RIGHT	GUIDE, SELF REGISTRATION MATERIALS ON BULLETIN BOARD
0.110	0.110	SIGN	RIGHT	GUIDE, U.S. FEE AREA
0.113	0.113	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
0.119	0.119	INTERSECTION	RIGHT	ROUTE 0500 (GREENBELT CAMPGROUND LOOP A)
0.119	0.119	INTERSECTION	LEFT	ROUTE 0501 (GREENBELT CAMPGROUND LOOP B)
0.121	0.121	SIGN	RIGHT	WARNING, WARNING
0.121	0.121	SIGN	RIGHT	GUIDE, AREA SCOUTS ONLY
0.121	0.121	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
0.121	0.132	PULLOUT	RIGHT	N/A
0.133	0.133	SIGN	RIGHT	GUIDE, DUMP STATION C & D LOOPS
0.138	0.138	SIGN	LEFT	GUIDE, CAMPFIRE CIRCLE
0.164	0.164	SIGN	RIGHT	GUIDE, NO
0.165	0.165	SIGN	RIGHT	GUIDE, GRAPHIC SIGN NO TEXT
0.165	0.165	SIGN	RIGHT	GUIDE, GRAPHIC SIGN NO TEXT

GREE: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0012: CAMPGROUND ACCESS

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.166	0.166	SIGN	RIGHT	GUIDE, BLUEBERRY NATURE TRAIL
0.265	0.265	SIGN	RIGHT	WARNING, GRAPHIC SIGN NO TEXT
0.276	0.276	SIGN	RIGHT	WARNING, GRAPHIC SIGN NO TEXT
0.287	0.287	SIGN	RIGHT	WARNING, GRAPHIC SIGN NO TEXT
0.351	0.351	SIGN	RIGHT	WARNING, GRAPHIC SIGN NO TEXT
0.413	0.413	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
0.413	0.413	INTERSECTION	LEFT	ROUTE 0401 (FIRE ROAD 1)
0.424	0.458	GUARD/GUIDE RAIL	LEFT	N/A
0.457	0.457	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.477	0.493	GUARD/GUIDE RAIL	LEFT	N/A
0.494	0.494	SIGN	LEFT	REGULATORY, SPEED LIMIT 15
0.517	0.517	SIGN	RIGHT	REGULATORY, YIELD
0.518	0.518	SIGN	RIGHT	GUIDE, LOOP C D
0.518	0.518	SIGN	RIGHT	REGULATORY, GRAPHIC SIGN NO TEXT
0.523	0.523	SIGN	RIGHT	WARNING, WARNING
0.523	0.523	INTERSECTION	LEFT	ROUTE 0503 (GREENBELT CAMPGROUND LOOP D)
0.523	0.523	SIGN	RIGHT	GUIDE, PARK EXIT
0.523	0.523	SIGN	RIGHT	GUIDE, C LOOP
0.523	0.523	INTERSECTION	N/A	ROUTE 0502 (GREENBELT CAMPGROUND LOOP C)
0.523	0.523	INTERSECTION	RIGHT	ROUTE 0502 (GREENBELT CAMPGROUND LOOP C)
0.523	0.523	SIGN	N/A	REGULATORY, GRAPHIC SIGN NO TEXT
0.523	0.523	ROUTE END	N/A	TO INTERSECTION OF ROUTE 0502 (GREENBELT CAMPGROUND LOOP C) AND ROUTE 0503 (GREENBELT CAMPGROUND LOOP D)

GREE: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0200: SWEETGUM PICNIC LOOP

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0011 (PARK CENTRAL ROAD)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0011 (PARK CENTRAL ROAD)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0011 (PARK CENTRAL ROAD)
0.003	0.003	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
0.004	0.004	GATE	N/A	N/A
0.005	0.005	SIGN	LEFT	REGULATORY, STOP
0.015	0.015	INTERSECTION	LEFT	ROUTE 0200 (SWEETGUM PICNIC LOOP)
0.015	0.208	ONE-WAY	N/A	N/A
0.018	0.018	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.018	0.018	SIGN	RIGHT	GUIDE, AZALEA NATURE TRAIL
0.019	0.019	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.026	0.026	SIGN	N/A	GUIDE, NO ALCOHOL DOGS MUST BE LEASHED
0.026	0.026	SIGN	N/A	REGULATORY, NO WASHING POLISHING OR REPAIRING CARS IN PARK
0.026	0.026	SIGN	N/A	REGULATORY, PARK CLOSED AT DARK
0.026	0.026	SIGN	N/A	GUIDE, NO LARGE GROUPS
0.027	0.027	SIGN	N/A	REGULATORY, WRONG WAY
0.045	0.045	SIGN	LEFT	REGULATORY, WRONG WAY
0.045	0.045	SIGN	RIGHT	WARNING, WARNING
0.045	0.045	SIGN	RIGHT	REGULATORY, WRONG WAY
0.073	0.073	INTERSECTION	RIGHT	ROUTE 0907BZ (SWEET GUM PICNIC PARKING B)
0.073	0.073	INTERSECTION	LEFT	ROUTE 0907AZ (SWEET GUM PICNIC PARKING A)
0.172	0.172	INTERSECTION	LEFT	ROUTE 0907CZ (SWEET GUM PICNIC PARKING C)
0.172	0.172	INTERSECTION	RIGHT	ROUTE 0907DZ (SWEET GUM PICNIC PARKING D)
0.208	0.208	INTERSECTION	LEFT	ROUTE 0200 (SWEETGUM PICNIC LOOP)
0.208	0.208	INTERSECTION	N/A	ROUTE 0200 (SWEETGUM PICNIC LOOP)
0.208	0.208	ROUTE END	N/A	TO END OF LOOP

GREE: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0201: LAUREL PICNIC AREA

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0011 (PARK CENTRAL ROAD)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0011 (PARK CENTRAL ROAD)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0011 (PARK CENTRAL ROAD)
0.006	0.006	SIGN	LEFT	REGULATORY, STOP
0.008	0.008	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
0.008	0.008	SIGN	LEFT	GUIDE, UNABLE TO READ FROM VIDEO
0.009	0.009	GATE	N/A	N/A
0.015	0.015	SIGN	LEFT	WARNING, UNABLE TO READ FROM VIDEO
0.025	0.025	SIGN	LEFT	GUIDE, AZALEA TRAIL
0.043	0.043	SIGN	RIGHT	GUIDE, AZALEA TRAIL
0.098	0.106	CURB	LEFT	N/A
0.098	0.120	CURB	RIGHT	N/A
0.106	0.106	INTERSECTION	LEFT	ROUTE 0201 (LAUREL PICNIC AREA)
0.106	0.115	CURB	LEFT	N/A
0.106	0.265	ONE-WAY	N/A	N/A
0.110	0.110	SIGN	N/A	REGULATORY, ONE WAY
0.110	0.110	SIGN	N/A	REGULATORY, UNABLE TO READ FROM VIDEO
0.110	0.110	SIGN	N/A	REGULATORY, UNABLE TO READ FROM VIDEO
0.146	0.146	INTERSECTION	LEFT	ROUTE 0908AZ (LAUREL PICNIC AREA PARKING A)
0.146	0.146	INTERSECTION	RIGHT	ROUTE 0908BZ (LAUREL PICNIC AREA PARKING B)
0.163	0.196	CURB	RIGHT	N/A
0.164	0.194	CURB	LEFT	N/A
0.221	0.221	INTERSECTION	RIGHT	ROUTE 0908DZ (LAUREL PICNIC AREA PARKING D)
0.221	0.221	INTERSECTION	LEFT	ROUTE 0908CZ (LAUREL PICNIC AREA PARKING C)
0.244	0.265	CURB	LEFT	N/A
0.245	0.265	CURB	RIGHT	N/A
0.265	0.265	INTERSECTION	LEFT	ROUTE 0201 (LAUREL PICNIC AREA)
0.265	0.265	INTERSECTION	RIGHT	ROUTE 0201 (LAUREL PICNIC AREA)
0.265	0.265	ROUTE END	N/A	TO END OF LOOP

GREE: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0400: MAINTENANCE AREA ACCESS

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0010 (MAIN ENTRANCE ROAD)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0010 (MAIN ENTRANCE ROAD)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0010 (MAIN ENTRANCE ROAD)
0.007	0.020	GUARD/GUIDE RAIL	LEFT	N/A
0.009	0.009	SIGN	LEFT	REGULATORY, BUCKLE UP IT'S THE LAW
0.009	0.009	SIGN	LEFT	REGULATORY, STOP
0.010	0.010	SIGN	RIGHT	WARNING, WARNING
0.013	0.013	INTERSECTION	RIGHT	ROUTE 0906 (PARK HEADQUARTERS PARKING)
0.014	0.014	SIGN	RIGHT	GUIDE, PARK HEADQUARTERS 6565 GREENBELT RD
0.014	0.014	SIGN	RIGHT	GUIDE, RECEIVING
0.037	0.043	GUARD/GUIDE RAIL	LEFT	N/A
0.041	0.041	SIGN	RIGHT	REGULATORY, STOP
0.043	0.043	INTERSECTION	N/A	ROUTE 0910 (GREENBELT MAINTENANCE AREA)
0.043	0.043	GATE	N/A	N/A
0.043	0.043	ROUTE END	N/A	TO ROUTE 0910 (GREENBELT MAINTENANCE AREA)

GREE: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0406: PARK CENTRAL TO GOOD LUCK SERVICE ROAD

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

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM END OF ROUTE 0011 (PARK CENTRAL ROAD) AT GATE
0.000	0.000	INTERSECTION	N/A	ROUTE 0011 (PARK CENTRAL ROAD)
0.558	0.558	INTERSECTION	N/A	ROUTE 0905 (GOOD LUCK ROAD BIKE TRAIL PARKING)
0.558	0.558	ROUTE END	N/A	TO ROUTE 0905 (GOOD LUCK ROAD BIKE TRAIL PARKING)

GREE: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0500: GREENBELT CAMPGROUND LOOP A

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

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0012 (CAMPGROUND ACCESS)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0012 (CAMPGROUND ACCESS)
0.000	0.000	INTERSECTION	N/A	ROUTE 0501 (GREENBELT CAMPGROUND LOOP B)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0012 (CAMPGROUND ACCESS)
0.008	0.008	SIGN	LEFT	REGULATORY, STOP
0.008	0.008	SIGN	LEFT	REGULATORY, GRAPHIC SIGN NO TEXT
0.010	0.010	INTERSECTION	RIGHT	ROUTE 0911 (RANGER CAMPGROUND PARKING)
0.012	0.012	SIGN	LEFT	GUIDE, CAMPGROUND HOST
0.015	0.015	INTERSECTION	LEFT	ROUTE 0500 (GREENBELT CAMPGROUND LOOP A)
0.018	0.018	SIGN	LEFT	REGULATORY, ONE WAY
0.019	0.289	ONE-WAY	N/A	N/A
0.021	0.021	GATE	N/A	N/A
0.078	0.087	PULLOUT	LEFT	N/A
0.217	0.217	SIGN	LEFT	GUIDE, GRAPHIC SIGN NO TEXT
0.287	0.287	GATE	N/A	N/A
0.287	0.287	SIGN	LEFT	REGULATORY, DO NOT ENTER
0.289	0.289	INTERSECTION	LEFT	ROUTE 0500 (GREENBELT CAMPGROUND LOOP A)
0.289	0.289	INTERSECTION	RIGHT	ROUTE 0500 (GREENBELT CAMPGROUND LOOP A)
0.289	0.289	ROUTE END	N/A	TO END OF LOOP

GREE: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0501: GREENBELT CAMPGROUND LOOP B

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

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0012 (CAMPGROUND ACCESS)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0012 (CAMPGROUND ACCESS)
0.000	0.000	INTERSECTION	N/A	ROUTE 0500 (GREENBELT CAMPGROUND LOOP A)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0012 (CAMPGROUND ACCESS)
0.005	0.005	GATE	N/A	N/A
0.006	0.006	SIGN	LEFT	REGULATORY, STOP
0.006	0.006	SIGN	LEFT	WARNING, UNABLE TO READ FROM VIDEO
0.006	0.006	SIGN	LEFT	GUIDE, U.S. FEE AREA
0.006	0.006	SIGN	LEFT	REGULATORY, B
0.006	0.006	SIGN	LEFT	GUIDE, GRAPHIC SIGN NO TEXT
0.015	0.472	ONE-WAY	N/A	N/A
0.015	0.015	INTERSECTION	LEFT	ROUTE 0501 (GREENBELT CAMPGROUND LOOP B)
0.018	0.018	SIGN	LEFT	REGULATORY, DO NOT ENTER
0.020	0.020	SIGN	N/A	REGULATORY, ONE WAY
0.024	0.024	SIGN	LEFT	GUIDE, CAMPGROUND HOST
0.245	0.245	SIGN	RIGHT	GUIDE, CAMPFIRE CIRCLE
0.276	0.276	SIGN	LEFT	GUIDE, GRAPHIC SIGN NO TEXT
0.304	0.304	SIGN	RIGHT	GUIDE, GRAPHIC SIGN NO TEXT
0.304	0.304	SIGN	RIGHT	GUIDE, GRAPHIC SIGN NO TEXT
0.304	0.304	SIGN	RIGHT	GUIDE, GRAPHIC SIGN NO TEXT
0.320	0.320	SIGN	LEFT	REGULATORY, RESERVED PARKING
0.346	0.346	INTERSECTION	RIGHT	ROUTE 0912 (CAMPGROUND LOOP B HANDICAP PARKING)
0.357	0.357	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
0.416	0.416	INTERSECTION	RIGHT	UNPAVED ROUTE (FIRE ROAD)
0.434	0.434	SIGN	RIGHT	REGULATORY, NO PARKING FIRE ROAD
0.447	0.447	SIGN	LEFT	GUIDE, UNABLE TO READ FROM VIDEO
0.472	0.472	INTERSECTION	RIGHT	ROUTE 0501 (GREENBELT CAMPGROUND LOOP B)
0.472	0.472	INTERSECTION	N/A	ROUTE 0501 (GREENBELT CAMPGROUND LOOP B)
0.472	0.472	ROUTE END	N/A	TO END OF LOOP

GREE: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0502: GREENBELT CAMPGROUND LOOP C

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

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM INTERSECTION OF ROUTE 0012 (CAMPGROUND ACCESS) AND ROUTE 0503 (GREENBELT CAMPGROUND LOOP D)
0.000	0.000	INTERSECTION	N/A	ROUTE 0503 (GREENBELT CAMPGROUND LOOP D)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0012 (CAMPGROUND ACCESS)
0.000	0.000	SIGN	LEFT	GUIDE, D LOOP
0.000	0.200	ONE-WAY	N/A	N/A
0.000	0.000	INTERSECTION	LEFT	ROUTE 0502 (GREENBELT CAMPGROUND LOOP C)
0.007	0.007	GATE	N/A	N/A
0.135	0.135	SIGN	LEFT	REGULATORY, WRONG WAY
0.138	0.138	GATE	N/A	N/A
0.145	0.145	INTERSECTION	RIGHT	ROUTE 0909 (CAMPGROUND DUMPSTATION)
0.191	0.191	SIGN	RIGHT	REGULATORY, STOP
0.200	0.200	INTERSECTION	LEFT	ROUTE 0502 (GREENBELT CAMPGROUND LOOP C)
0.200	0.200	INTERSECTION	N/A	ROUTE 0012 (CAMPGROUND ACCESS)
0.200	0.200	INTERSECTION	RIGHT	ROUTE 0503 (GREENBELT CAMPGROUND LOOP D)
0.200	0.200	SIGN	N/A	WARNING, WARNING
0.200	0.200	ROUTE END	N/A	TO END OF LOOP

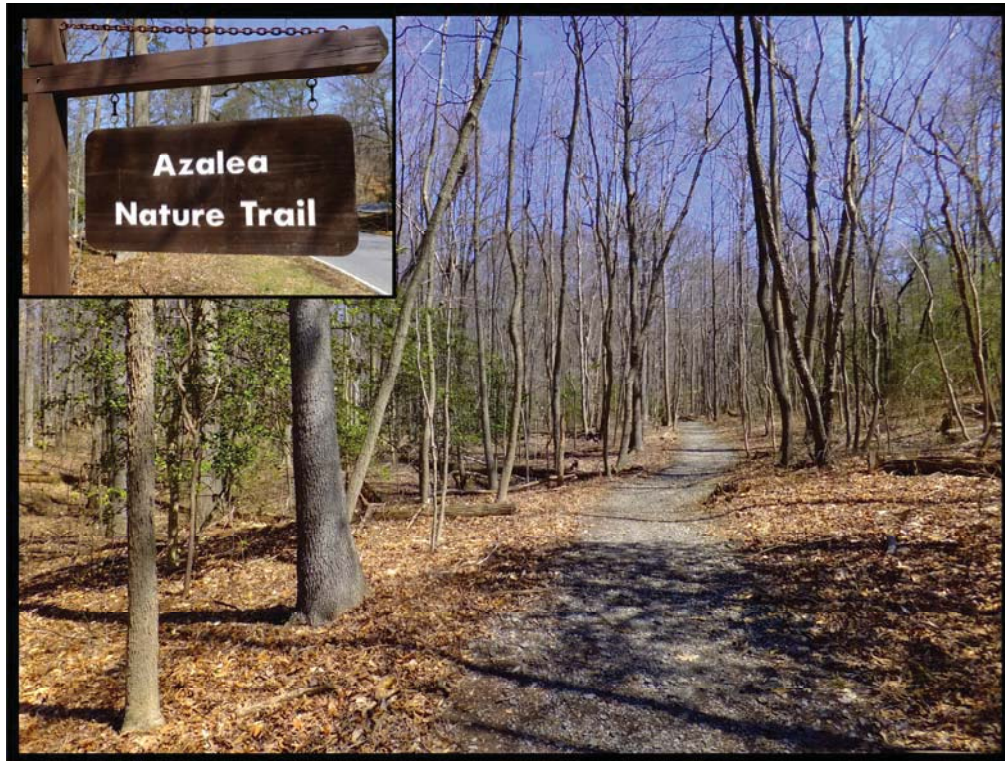
GREE: ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 0503: GREENBELT CAMPGROUND LOOP D

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

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM INTERSECTION OF ROUTE 0012 (CAMPGROUND ACCESS) AND ROUTE 0502 (GREENBELT CAMPGROUND LOOP C)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0012 (CAMPGROUND ACCESS)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0502 (GREENBELT CAMPGROUND LOOP C)
0.000	0.000	INTERSECTION	N/A	ROUTE 0502 (GREENBELT CAMPGROUND LOOP C)
0.002	0.002	SIGN	LEFT	GUIDE, PARK EXIT
0.002	0.002	SIGN	LEFT	WARNING, WARNING
0.002	0.002	SIGN	LEFT	GUIDE, C LOOP
0.006	0.006	GATE	N/A	N/A
0.007	0.007	SIGN	RIGHT	GUIDE, D LOOP
0.009	0.009	SIGN	LEFT	REGULATORY, STOP
0.018	0.018	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
0.048	0.048	INTERSECTION	LEFT	ROUTE 0503 (GREENBELT CAMPGROUND LOOP D)
0.048	0.505	ONE-WAY	N/A	N/A
0.059	0.059	SIGN	N/A	REGULATORY, ONE WAY
0.183	0.183	SIGN	LEFT	GUIDE, CAMPGROUND HOST
0.482	0.482	SIGN	RIGHT	REGULATORY, WRONG WAY
0.499	0.499	INTERSECTION	RIGHT	ROUTE 0504 (GROUP CAMPGROUND)
0.505	0.505	INTERSECTION	LEFT	ROUTE 0503 (GREENBELT CAMPGROUND LOOP D)
0.505	0.505	INTERSECTION	N/A	ROUTE 0503 (GREENBELT CAMPGROUND LOOP D)
0.505	0.505	ROUTE END	N/A	TO END OF LOOP

Section 10 Appendix



Greenbelt Park



Federal Lands Highway
Road Inventory Program

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

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

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

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

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

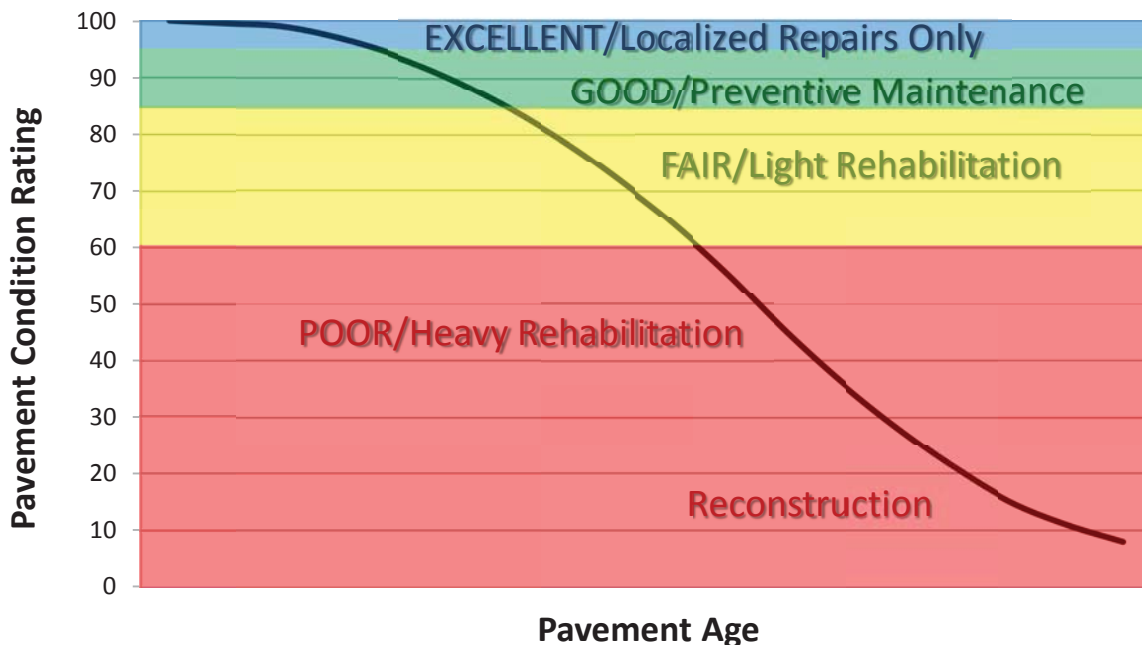
Explanation of the Excellent, Good, Fair and Poor Condition Descriptions

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

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

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

Condition Categories and Treatments



DESCRIPTION OF RATING SYSTEM

The Federal Highway Administration (FHWA), National Park Service Road Inventory Program (NPS-RIP), collects condition data on paved roads, parkways, and parking areas in park units nationwide. Road surface condition data is collected using an automated Data Collection Vehicle (DCV). Roads having brick, cobblestone, or wood surfaces are not normally surveyed with the DCV, but are manually rated for the purpose of assigning a condition rating. Unpaved roads, parkways, and parking areas are not currently being evaluated for condition. Paved campground pads and driveways are also not currently being evaluated for condition.

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

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

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

In 2010, FHWA RIP began the fifth cycle of data collection in national parks. For Cycle 5, data will be collected in approximately 81 large parks (10 or more paved route miles) on Functional Class 1, 2, and 7 routes plus any new routes or parking areas previously not collected, totaling an estimated 4,459 paved route miles. Additionally, 231 small parks will be collected comprising approximately 529 paved route miles and associated paved parking areas. The data is used to support the National Park Service road maintenance program and Pavement Management System (PMS) developed and maintained by FHWA.

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

SURFACE DISTRESSES

Surface Condition Rating - SCR

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

Surface distresses determined from digital images

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

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

- Rutting

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

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

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

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

Roughness Condition Index - RCI

Additional condition data measured by DCV (lasers and accelerometers)

- Roughness (IRI)

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

Pavement Condition Rating - PCR

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

$$\text{Asphalt PCR} = (0.60 * \text{SCR}) + (0.40 * \text{RCI})$$

$$\text{Concrete PCR} = \text{RCI}$$

A detailed description of each distress index formula, roughness index formula, SCR and PCR is provided in this document beginning on page 8.

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

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

POOR (≤ 60), FAIR (61 - 84), GOOD (85 - 94), EXCELLENT (95 - 100)

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

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

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

TABLE 1: Distress Summary

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

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

ALLIGATOR CRACKING

Description

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

Severity Levels

LOW

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

MEDIUM

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

HIGH

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

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

TABLE 2: Alligator Crack Severity Levels

ALLIGATOR CRACKING SEVERITY LEVELS		Crack Pattern		
		LOW	MED	HIGH
Crack Width	LOW	L	M	H
	MED	M	M	H
	HI	H	H	H

LONGITUDINAL CRACKING

Description

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

Severity Levels

LOW

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

MED

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

HIGH

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

TRANSVERSE CRACKING

Description

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

Severity Levels

LOW

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

MED

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

HIGH

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

PATCHING AND POTHOLES

Description

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

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

Severity Levels

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

RUTTING

Description

Rutting is a longitudinal surface depression in the wheelpath.

Severity Levels

LOW

Ruts with a measured depth $\geq 0.20''$ and $\leq 0.49''$

MED

Ruts with a measured depth $\geq 0.50''$ and $\leq 0.99''$

HIGH

Ruts with a measured depth $\geq 1.00''$

Ruts $< 0.20''$ are not included in the distress calculations.

ROUGHNESS

Description

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

Severity Levels

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

TABLE 3: IRI

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

INDEX FORMULAS

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

Alligator Crack Index

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

Where:

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

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

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

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

Percent of total area is computed as:

$$\frac{\text{square foot area of alligator crack severity}}{0.02 \text{ mile} * \text{lane width}}$$

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

Longitudinal Crack Index

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

Where:

The values *%LOW*, *%MED*, and *%HI* report the length of longitudinal cracking within each severity as a percent of the section length (0.02 mile, primary lane).

These values are ≥ 0 and can exceed 100.

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

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

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

Percent of interval length is computed as:

$$\frac{\text{length of respective longitudinal cracking}}{0.02 \text{ mile (105.6 feet)}}$$

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

Structural Crack Index

$$SC_INDEX = [100 - ((100 - AC_INDEX) + (100 - LC_INDEX))]$$

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

Transverse Crack Index

$$TC_INDEX = 100 - 40 * [(LOW / 21.1) + (MED / 4.4) + (HI / 2.6)]$$

Where:

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

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

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

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

Number of cracks is computed as:

$$\frac{\text{Total length of transverse cracks}}{\text{Lane width}}$$

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

Patching Index

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

Where:

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

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

Percent of total area is computed as:

$$\frac{\text{square foot area of patching/potholes}}{0.02 \text{ mile} * \text{lane width}}$$

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

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

Rutting Index

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

Where:

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

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

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

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

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

$$\frac{\text{total number of ruts within each severity in both wheelpaths}}{20} * 100$$

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

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

Roughness Condition Index (Asphalt)

$$RCI = 32 * [5 * (2.718282 ^ {(-0.0041 * AVG IRI)})]$$

Where:

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

Average IRI is computed as:

$$\frac{\text{Left wheelpath IRI} + \text{Right wheelpath IRI}}{2}$$

There is no applicable threshold for failure for this index.

Roughness Condition Index (Concrete)

$$RCI = -0.0012(IRI^2) + 0.0499(IRI) + 99.542$$

For concrete, PCR = RCI

Surface Condition Rating Index

SCR = *Lowest* Index Value Of: [SC_INDEX, TC_INDEX, PATCH_INDEX, RUT_INDEX]

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

Where:

See above for determinations of SC_INDEX, TC_INDEX, PATCH_INDEX and RUT_INDEX.

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

Data Collection Vehicle Subsystems

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

CAMERAS

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

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

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

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

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

DMI (Distance Measuring Instrument)

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

ROUGHNESS (IRI)

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

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

RUTTING

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

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

GPS & INERTIAL SYSTEMS

GPS is collected by an onboard system employing OmniSTAR real-time correction and a gyroscope (spin-type) to provide accurate positioning data (pitch/roll/heading) in instances of satellite obstruction. All GPS coordinates are tied to image and linear distance measurements.

GPS SPECIFICATIONS	
Static accuracy	Sub-meter
Dynamic accuracy	2-3 meters
Receiver	12 satellite tracking
Coordinate system	Lat Lon WGS 84
Environment	Day or night
Cross-slope	+ - 0.5 degrees
Grade	+ - 0.5 degrees

GPS on Manually Rated Roads (MRR)

Parking areas, some roads, and other paved areas that are not fully drivable with the DCV are collected manually by field technicians. GPS is collected for these routes using portable Trimble GPS backpack units. Paved campground pads and driveways are not typically included in the inventory or GPS.

Geodatabase – Background and Metadata

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

A geodatabase can be thought of as simply a database containing spatial data. Many different tables are contained with the park's geodatabase. A complete and thorough description of the tables and fields contained within this geodatabase can be found in the *metadata*. The metadata is attached directly within the geodatabase and can be accessed via ESRI's ArcCatalog. The metadata portion of the geodatabase also includes data dictionary report functionality that formats the metadata into an easy to read report.

GLOSSARY OF TERMS AND ABBREVIATIONS

<u>TERM OR ABBREVIATION</u>	<u>DESCRIPTION OR DEFINITION</u>
AC	Alligator Cracking
CRS	Condition Rating Sheets (Section 5)
DCV	Data Collection Vehicle
Excellent	Excellent rating with an index value of 95 to 100
Fair	Fair rating with an index value from 61 to 84
FUNCT_CLASS	Functional Classification (see Route ID, Section 2)
Good	Good rating with an index value from 85 to 94
IRI	International Roughness Index
Lane Width	Width from road centerline to fogline, or from centerline to edge-of-pavement when no fogline exists
LC	Longitudinal Cracking
MRR	Manually Rated Route
MRL	Manually Rated Line
MRP	Manually Rated Polygon
N/A	Not Applicable
NC	Not Collected
PATCH	Patching and Potholes
Paved Width	Width from edge-of-pavement to edge-of-pavement
PCR	Pavement Condition Rating
PKG	Parking Area
Poor	Poor rating with an index value of 0 to 60
RCI	Roughness Condition Index
SC	Structural Cracking
SCR	Surface Condition Rating
TC	Transverse Cracking