

HAVO Cycle 6

Final Report

Road Inventory and Condition Assessment of Paved Routes Hawaii Volcanoes National Park



**Federal Lands Highway
Road Inventory Program**

Prepared By:

**Federal Highway Administration
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Road Inventory Program (RIP)**

Report Date: December 2022

Hawaii Volcanoes National Park in Hawaii

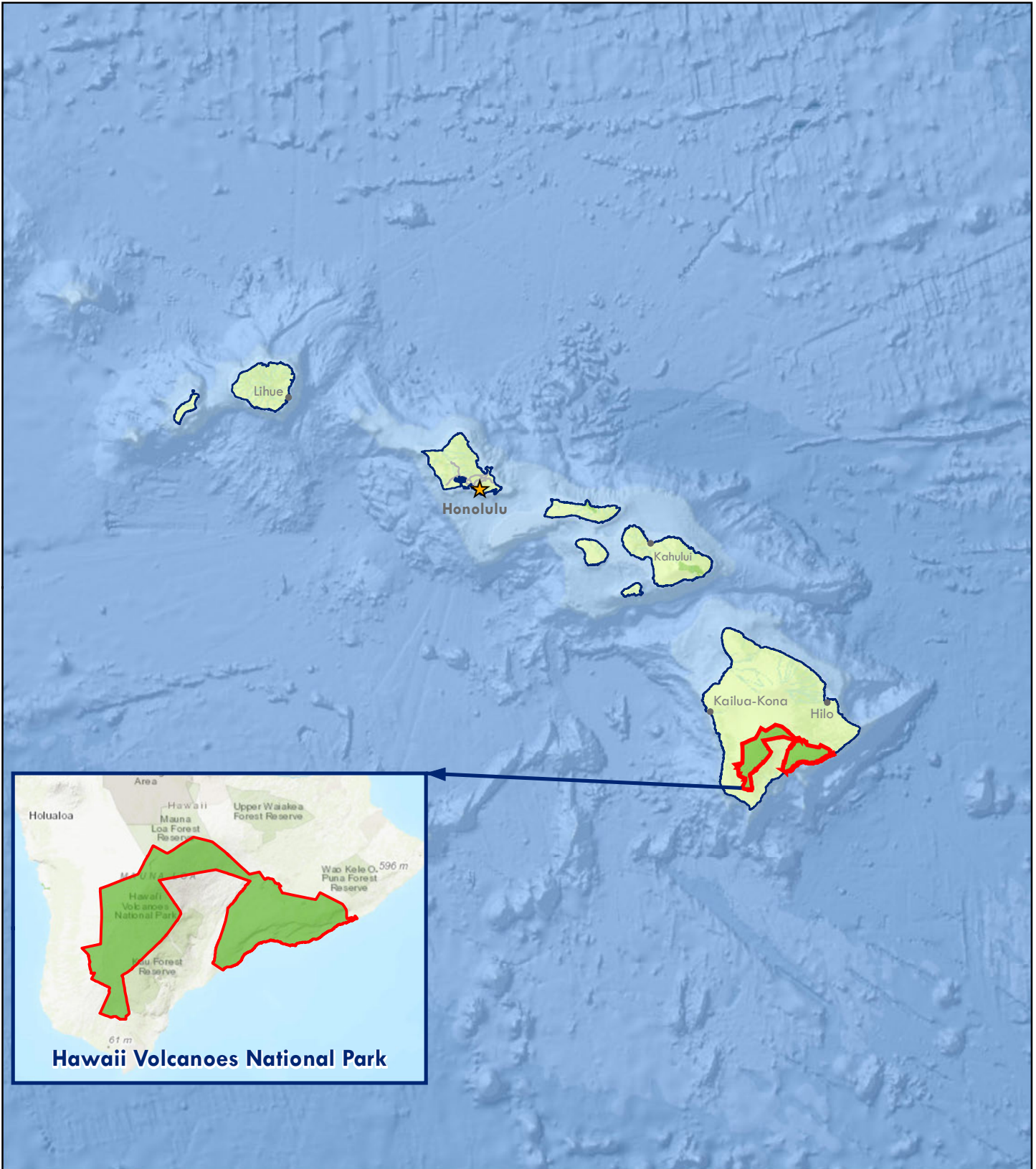


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Section 1 Introduction



Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program

Introduction

The Federal Highway Administration’s (FHWA), Road Inventory Program (RIP) inventories all roads and parking areas in the National Park System, and performs condition inspections on all paved roads and parking areas for the National Park Service (NPS). This report contains the results of the Cycle 6 condition assessment of paved roads and parking lots for this park unit. This assessment was done using an automated, state-of-the-art pavement inspection vehicle as well as manual ratings. This information represents the condition of the paved assets at the time of the inspection. The pavement management system utilized by FHWA and the NPS uses these assessments to estimate future conditions and help prioritize pavement maintenance and rehabilitation projects. Further information about RIP data and its role in managing paved roads and bridges can be obtained by contacting the NPS Regional Transportation Program Manager.

A History of the Road Inventory Program:

The FHWA, in the mid-1970s, was charged with the task of identifying surface condition deficiencies and corrective priorities on 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 a Memorandum of Agreement (MOA) which established the RIP. This MOA was revised in 1980 to update RIP data collection standards and develop a long-range program to improve and maintain NPS roads to designated condition standards and establish a pavement management program.

The FHWA completed the initial phase of inventory in the early 1980s. As a result of this effort, each NPS unit included in the collection received a RIP Report known as the “Brown Book” which contained information that was inventoried during this first RIP phase. In the 1990s, a cyclical program was developed, and since then five cycles of collection have been completed. Cycle 6 is currently in progress. A summary of the RIP collection cycles is shown in the table below.

Cycle	Years	Parks Collected
Cycle 1	1994 - 1997	◦ 44 Large Parks
Cycle 2	1997 - 2001	◦ 79 Large Parks ◦ 5 Small Parks
Cycle 3	2001 - 2004	◦ All Large Parks ◦ All Small Parks
Cycle 4	2006 - 2010	◦ 86 Large Parks ◦ Several Small Parks
Cycle 5	2010 - 2014	◦ All Large Parks (Only functional class 1, 2, 7, and new/modified routes collected) ◦ All Small Parks (all roads and parking areas collected)
Cycle 6	2014 – 2020 (±)	◦ All roads and parking areas collected at all Parks ◦ Additional partial collections of functional class 1, 2, and 7 roads at Large Parks ◦ Cycle 6 is expected to last 6 years

Note: Large Parks have ≥ 10 Paved Miles; Small Parks have < 10 Paved Miles

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 Federal Lands Highway (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.

In 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21) amended Title 23 U.S.C., and under Section 203(c)(1-2) stated that the National Park Service in cooperation with the DOT/FHWA, shall maintain a comprehensive national inventory of their transportation facilities, with the goal of quantifying transportation infrastructure needs within the National Park System.

A History of the Pavement Management System:

In 2005, the FHWA began implementing the use of a pavement management system to assist the NPS in prioritizing Pavement Maintenance and Rehabilitation activities. The system used by FHWA is the Highway Pavement Management Application (HPMA), which 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. Regional prioritized lists and optimizations have been produced for most regions, and the Service's overall roadway Deferred Maintenance is calculated via the HPMA.

Overview of Cycle 6:

Cycle 6 launched in the spring of 2014 and will again comprise all NPS park units that are served by paved roads and/or parking areas. For Cycle 6, all paved roads (approximately 5,700 miles) and parking areas will be collected in all parks at least once, while the primary routes (functional class 1, 2, and 7 roads) at Large Parks will have additional collections. These multiple collections will provide updated condition data on a majority of the NPS's primary road network and help build a better pavement management system, allowing for more accurate pavement performance prediction models.

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 Ashburn, Virginia.

Respectfully,

FHWA RIP Team

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Section 2 Park Route Inventory



Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program

Cycle 6 NPS / RIP Route ID Report

(Numerical By Summary Route and Subcomponent #)



Shading Color Key

White = Paved Routes, DCV Driven

Grey = Paved Routes, DCV not Driven

Black = Non-NPS Routes

■ = Concession Route

Yellow = Unpaved Routes, DCV not Driven

Blue = Paved Parking Areas

Green = Unpaved Parking Areas

DCV = Data Collection Vehicle
 MRL = Manually Rated Line
 MRP = Manually Rated Polygon
 PKG = Parking Areas
 NC = Not Collected

HAVO *Hawaii Volcanoes National Park*

ROAD INVENTORY (1 100 SERIES FMSS LOCATIONS)

Route No.	Cycle Collected	Iteration Collected	FMSS Number	Concession	Route Name	Route Description		Maintenance District	FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)	Surf. Type	Area Map
						From	To									
0010ZZ	6	1	22286		CRATER RIM DRIVE	FROM ROUTE 5011 (HAWAII STATE HIGHWAY 11) AT MP 0.89 ON LEFT	TO ROUTE 0913 (DEVASTATION TRAIL PARKING)	KILAUEA	YES	5.89	0.00	5.89	1		AS	1,1A,1B
0012	6	1	22294		CHAIN OF CRATERS ROAD	FROM ROUTE 0010BZ (CRATER RIM DRIVE - EAST) AT MP 3.045 ON LEFT	TO ROUTE 0927 (ERUPTION SITE TURN-AROUND PARKING)	KILAUEA	YES	18.56	0.00	18.56	1		AS	1,2,3
0013	6	1	22353		OFFICE AREA STREET	FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 0.26 ON RIGHT	TO ROUTE 0901 (KILAUEA VISITORS CENTER ADMINISTRATIVE PARKING)	KILAUEA	YES	0.05	0.00	0.05	3		AS	1,1A
0100A	6	1	22598		MAUNA LOA ROAD	FROM ROUTE 5011 (HAWAII STATE HIGHWAY 11)	TO ROUTE 0923 (KIPUKA PUAULU TRAILHEAD PARKING)	KILAUEA	YES	1.49	0.00	1.49	1		AS	1
0100B	6	1	21954		MAUNA LOA LOOKOUT ROAD	FROM ROUTE 0923 (KIPUKA PUAULU TRAILHEAD PARKING)	TO ROUTE 0944 (MAUNA LOA LOOKOUT PARKING)	KILAUEA	YES	9.81	0.00	9.81	2		AS	1,4
0101	6	1	33601		HILINA PALI ROAD	FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 2.21 ON RIGHT	TO ROUTE 0940 (HILINA PALI HANDICAP OVERLOOK PARKING)	KILAUEA	YES	8.50	0.00	8.50	2		AS	2
0201	6	1	42503		KILAUEA OVERLOOK ROAD	FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 2.38 ON LEFT	TO ROUTE 0910ZZ (KILAUEA OVERLOOK AND PICNIC AREA PARKING)	KILAUEA	YES	0.20	0.00	0.20	2		AS	1
0204A	6	1	21531	■	NAMAKANI PAIO CAMPGROUND ROAD	FROM ROUTE 5011 (HAWAII STATE HIGHWAY 11) AT MP 3.90 ON RIGHT	TO END OF LOOP	KILAUEA	YES	0.32	0.00	0.32	3		AS	1
0204BZZ	6	1	21540	■	NAMAKANI PAIO RENTAL CABIN ACCESS ROADS	FROM ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) AT MP 0.05 ON RIGHT	THROUGH RENTAL CABINS AREA	KILAUEA	YES	0.11	0.00	0.11	3		AS	1
0205	6	1	22600		TREE MOLDS ROAD	FROM ROUTE 0100A (MAUNA LOA ROAD) AT MP 0.17 ON RIGHT	TO END OF LOOP	KILAUEA	YES	0.56	0.00	0.56	2		AS	1

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ROAD INVENTORY (1 100 SERIES FMSS LOCATIONS)

Route No.	Cycle Collected	Iteration Collected	FMSS Number	Concession	Route Name	Route Description		Maintenance District	FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)	Surf. Type	Area Map
						From	To									
0208	6	1	42507		MAUNA ULU ACCESS ROAD	FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 3.66 ON LEFT	TO END OF LOOP	KILAUEA	YES	0.54	0.00	0.54	2		AS	3
0209	6	1	42508		PUU PUI OVERLOOK ROAD	FROM ROUTE 0010BZ (CRATER RIM DRIVE - EAST) AT MP 2.73 ON LEFT	TO ROUTE 0914 (PUU PUI PARKING)	KILAUEA	YES	0.20	0.00	0.20	2		AS	1
0211	6	1	42510		STEAM VENTS ROAD	FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 1.06 ON LEFT	TO ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 0.95 ON LEFT	KILAUEA	YES	0.12	0.00	0.12	2		AS	1
0213ZZ	6	1	88336		KAHUKU ENTRANCE ROAD	FROM HAWAII STATE HIGHWAY 11 (HAWAII BELT ROAD / MAMALAOA HIGHWAY)	TO ROUTE 0934 (KAHUKU ADMINISTRATIVE PARKING)	KAHUKU	YES	0.56	3.77	4.33	2		AS	5
0214	6	1	113874		KILAUEA MILITARY CAMP ROAD	FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 1.49 ON RIGHT	TO ROUTE 5011 (HAWAII STATE HIGHWAY 11) AT MP 2.59 ON LEFT	KILAUEA	YES	0.20	0.00	0.20	3		AS	1,1B
0215ZZ	6	1	239127		KILAUEA MILITARY CAMP ROADS	FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AND 0214 (KILAUEA MILITARY CAMP ROAD)	THROUGH KILAUEA MILITARY CAMP	KILAUEA	YES	1.71	0.00	1.71	3		AS	1,1B
0400	6	1	103274		WATER TANK ROAD	FROM ROUTE 0941 (VOLCANO ART CENTER PARKING)	TO ROUTE 5011 (HAWAII STATE HIGHWAY 11) AT MP 1.37 ON LEFT	KILAUEA	NO	0.34	0.00	0.34	6		AS	1,1A
0401	6	1	42514		NORTH RESIDENCE ROAD	FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 0.26 ON LEFT	TO ROUTE 0010BZ (CRATER RIM DRIVE - EAST) AT MP 0.142 ON LEFT	KILAUEA	YES	0.43	0.00	0.43	5		AS	1,1A
0403	6	1	42516		SOUTH RESIDENCE LOOP	FROM ROUTE 0401 (NORTH RESIDENCE ROAD)	TO END OF LOOP	KILAUEA	YES	0.42	0.00	0.42	5		AS	1,1A
0404	6	1	22601		TREE MOLDS STABLE ROAD	FROM ROUTE 0205 (TREE MOLDS ROAD) AT MP 0.12 ON LEFT	TO ROUTE 0413AZ (WINERY AND GOLF COURSE ROAD)	KILAUEA	YES	0.23	0.00	0.23	5		AS	1

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ROAD INVENTORY (1 100 SERIES FMSS LOCATIONS)

Route No.	Cycle Collected	Iteration Collected	FMSS Number	Concession	Route Name	Route Description		Maintenance District	FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)	Surf. Type	Area Map
						From	To									
0405ZZ	6	1	23431		AINAHOU ROAD	FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 4.30 ON RIGHT	TO END	KILAUEA	YES	0.06	1.66	1.72	2		AS	2
0406	NC		42647		AINAHOU RANCH SPUR	FROM ROUTE 0405BZ (AINAHOU ROAD UNPAVED)	TO RANCH HOUSE	KILAUEA	NO	0.00	0.22	0.22	4		GR	2
0408	NC		42648		EMERGENCY ESCAPE ROAD	FROM ROUTE 0208 (MAUNA ULU ACCESS ROAD) AT MP 0.13 ON LEFT	TO HAWAII STATE HIGHWAY 11	KILAUEA	NO	0.00	4.42	4.42	6		GR	1,2
0409	6	1	22347		RESOURCE MANAGEMENT ROAD	FROM ROUTE 0010BZ (CRATER RIM DRIVE - EAST) AT MP 0.526 ON LEFT	TO ROUTE 0917 (RESOURCE MANAGEMENT AREA PARKING)	KILAUEA	YES	0.47	0.00	0.47	3		AS	1,1A
0411ZZ	NC		21966		MAUNA LOA SPUR ROAD-FIRE BREAKS	FROM ROUTE 0100B (MAUNA LOA LOOKOUT ROAD) AT MP 2.55 ON LEFT	TO END	KILAUEA	NO	0.00	1.10	1.10	6		NV	4
0412	NC		21967		MAUNA LOA POWERLINE ROAD, UNPAVED	FROM 0.25 MILES NORTH OF ROUTE 0100B (MAUNA LOA LOOKOUT ROAD) AT MP 4.35	TO END	KILAUEA	NO	0.00	1.75	1.75	6		NV	4
0413ZZ	NC		22602		MAUNA LOA FIRE BREAK ROADS	FROM ROUTE 0404 (TREE MOLDS STABLE ROAD)	TO END	KILAUEA	NO	0.00	1.88	1.88	6		GR	1
0415ZZ	NC		22874		MAUNA LOA QUARRY ROADS	FROM ROUTE 0100B (MAUNA LOA LOOKOUT ROAD) AT MP 0.072 ON LEFT	TO MAUNA LOA QUARRY	KILAUEA	NO	0.00	0.51	0.51	6		GR	1
0416ZZ	6	1	21519		KILAUEA WATER TANKS AREA ROADS	FROM ROUTE 0400 (WATER TANK ROAD)	THROUGH WATER TANK AREA	KILAUEA	NO	0.68	0.00	0.68	6		AS	1,1A
0417	6	1	23386		MAUNA LOA EMERGENCY ACCESS ROAD	FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 2.06 ON RIGHT	TO INTERSECTION WITH ROUTES 0100A (MAUNA LOA ROAD) AND 5011 (HAWAII STATE HIGHWAY 11)	KILAUEA	NO	0.10	0.00	0.10	6		AS	1
0418	6	1	244101		KILAUEA MILITARY CAMP WATER TANK ROAD	FROM ROUTE 0215ZZ (KILAUEA MILITARY CAMP ROADS)	TO KILAUEA MILITARY CAMP WATER TANK	KILAUEA	NO	0.03	0.05	0.08	6		CO	1,1B

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HAVO Hawaii Volcanoes National Park

ROAD INVENTORY (1 100 SERIES FMSS LOCATIONS)

Route No.	Cycle Collected	Iteration Collected	FMSS Number	Concession	Route Name	Route Description		Maintenance District	FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)	Surf. Type	Area Map
						From	To									
0419ZZ	NC		240233		KILAUEA MILITARY CAMP UNPAVED ROADS	FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) AND ROUTE 0215ZZ (KILAUEA MILITARY CAMP ROADS)	TO POWERLINE AND BONEYARD	KILAUEA	NO	0.00	0.11	0.11	6		GR	1,1B
0420ZZ	NC		256460		UPPER KAHUKU ADMINISTRATIVE ROADS	FROM ROUTE 0213BZ (KAHUKU ENTRANCE ROAD - UNPAVED)	TO END	KAHUKU	NO	0.00	9.46	9.46	6		GR	5
0421	NC		256463		KAHUKU QUARRY ROAD	FROM ROUTE 0213AZ (KAHUKU ENTRANCE ROAD - PAVED)	TO QUARRY	KAHUKU	NO	0.00	0.17	0.17	6		GR	5
0422	NC		256464		KALAPANA ACCESS ROAD	FROM ROUTE 0927 (ERUPTION SITE TURN-AROUND PARKING)	TO EAST PARK BOUNDARY	KILAUEA	NO	0.00	8.31	8.31	6		GR	3
0423	6	1	256425		CRATER RIM DRIVE - ADMINISTRATIVE	FROM END OF ROUTE 0010AZ (CRATER RIM DRIVE - WEST)	TO END	KILAUEA	NO	2.19	0.00	2.19	6		AS	1
0424	6	1	256424		KAHUKU OLD MAMALAHOA HIGHWAY	FROM ROUTE 0949AZ (KAHUKU OLD MAMALAHOA HIGHWAY PARKING SOUTH)	FROM ROUTE 0949BZ (KAHUKU OLD MAMALAHOA HIGHWAY PARKING NORTH)	KAHUKU	NO	1.71	0.00	1.71	6		AS	5
0425	NC		256461		KAHUKU AIRPORT ROAD	FROM ROUTE 0213BZ (KAHUKU ENTRANCE ROAD - UNPAVED)	TO END	KAHUKU	NO	0.00	0.36	0.36	6		GR	5

NON-NPS ROADS INVENTORY

Route No.	Cycle Collected	Iteration Collected	FMSS Number	Concession	Route Name	Route Description		Maintenance District	FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)	Surf. Type	Area Map
						From	To									
5011	5	1	22863		HAWAII STATE HIGHWAY 11	FROM EAST PARK BOUNDARY	TO WEST PARK BOUNDARY	KILAUEA	NO	11.92	0.00	11.92			AS	1,1A,1B,4
5012	6	1			HAWAII STATE HIGHWAY 11 - KAHUKU	FROM EAST PARK BOUNDARY AT MP 70	TO INTERSECTION WITH TIKI LANE	KAHUKU	NO	5.66	0.00	5.66			AS	5

Cycle 6 NPS / RIP Route ID Report

(Numerical By Summary Route and Subcomponent #)



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Grey = Paved Routes, DCV not Driven

Black = Non-NPS Routes

Red = Concession Route

Yellow = Unpaved Routes, DCV not Driven

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HAVO Hawaii Volcanoes National Park

PARKING AREA INVENTORY (1300 SERIES FMSS LOCATIONS)

Route No.	Cycle Collected	Iteration Collected	FMSS Number	Concession	Route Name	Route Description		Maintenance District	FLTP	Access Level	Area (SQ FT)	Surf. Type	Area Map
						From	To						
0900ZZ	6	1	22571		KILAUEA VISITORS CENTER PARKING	FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 (ON RIGHT AND LEFT)	TO ROUTE 0400 (WATER TANK ROAD) AT MP 0.01 ON RIGHT	KILAUEA	YES	PUBLIC	55,106	AS	1,1A
0901	6	1	42652		KILAUEA VISITORS CENTER ADMINISTRATIVE PARKING	FROM END OF ROUTE 0013 (OFFICE AREA STREET)	TO PARKING	KILAUEA	NO	NONPUBLIC	8,974	AS	1,1A
0904	6	1	22490	Red	VOLCANO HOUSE PARKING	FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 0.35 ON LEFT	TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.06 ON RIGHT	KILAUEA	YES	PUBLIC	25,881	AS	1,1A
0905	6	1	109031		OHIA WING PARKING	FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.037 ON RIGHT	TO PARKING	KILAUEA	NO	NONPUBLIC	2,197	AS	1,1A
0906	6	1	42657	Red	VOLCANO HOUSE HOTEL SERVICE AREA (BUILDING #B167)	FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.089 ON RIGHT	TO PARKING	KILAUEA	NO	NONPUBLIC	8,396	AS	1,1A
0907	6	1	42658	Red	VOLCANO HOUSE DORM B2 PARKING	FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.112 ON RIGHT	TO PARKING	KILAUEA	NO	NONPUBLIC	7,848	AS	1,1A
0908D	6	1	244097		VISITORS EMERGENCY OPERATIONS CENTER PARKING	FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.386 ON RIGHT	TO PARKING	KILAUEA	YES	PUBLIC	9,263	AS	1,1A
0908ZZ	6	1	22831		KILAUEA MAINTENANCE YARD PARKING	FROM ROUTE 0401 (NORTH RESIDENCE ROAD) ON LEFT AND RIGHT	TO PARKING	KILAUEA	NO	NONPUBLIC	41,374	AS	1,1A
0909ZZ	6	1	22292		STEAM VENTS PARKING	ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) ON RIGHT AND LEFT		KILAUEA	YES	PUBLIC	6,054	AS	1
0910ZZ	6	1	22245		KILAUEA OVERLOOK AND PICNIC AREA PARKING	FROM ROUTE 0201 (KILAUEA OVERLOOK ROAD)	TO PARKING	KILAUEA	YES	PUBLIC	24,623	AS	1
0911	6	1	22266		VOLCANO OBSERVATORY PARKING	FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 2.78 ON LEFT	TO ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 2.83 ON LEFT	KILAUEA	YES	PUBLIC	47,271	AS	1
0913	6	1	42663		DEVASTATION TRAIL PARKING	FROM ROUTE 0010BZ (CRATER RIM DRIVE - EAST) AT MP 3.05 ON LEFT	TO PARKING	KILAUEA	YES	PUBLIC	23,316	AS	1
0914	6	1	22302		PUU PUI PARKING	FROM END OF ROUTE 0209 (PUU PUI OVERLOOK ROAD)	TO PARKING	KILAUEA	YES	PUBLIC	21,347	AS	1

Cycle 6 NPS / RIP Route ID Report

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Grey = Paved Routes, DCV not Driven

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■ = Concession Route

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HAVO *Hawaii Volcanoes National Park*

PARKING AREA INVENTORY (1300 SERIES FMSS LOCATIONS)

Route No.	Cycle Collected	Iteration Collected	FMSS Number	Concession	Route Name	Route Description		Maintenance District	FLTP	Access Level	Area (SQ FT)	Surf. Type	Area Map
						From	To						
0915ZZ	6	1	42665		THURSTON LAVA TUBE PARKING	ADJACENT TO ROUTE 0010BZ (CRATER RIM DRIVE - EAST) ON LEFT AND RIGHT		KILAUEA	YES	PUBLIC	16,588	AS	1
0916	6	1	42666		KILAUEA IKI PARKING	FROM ROUTE 0010BZ (CRATER RIM DRIVE - EAST) AT MP 1.22 ON LEFT	TO ROUTE 0010BZ (CRATER RIM DRIVE - EAST) AT MP 1.29 ON LEFT	KILAUEA	YES	PUBLIC	24,415	AS	1,1A
0917	6	1	42667		RESOURCE MANAGEMENT AREA PARKING	FROM END OF ROUTE 0409 (RESOURCE MANAGEMENT ROAD)	TO PARKING	KILAUEA	NO	NONPUBLIC	42,787	AS	1,1A
0918	6	1	23394		PUHIMAU CRATER PARKING	FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 0.97 ON LEFT	TO ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 1.01 ON LEFT	KILAUEA	YES	PUBLIC	13,447	AS	1
0919	6	1	42670		PAUHI CRATER PARKING	FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 3.20 ON LEFT	TO ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 3.25 ON LEFT	KILAUEA	YES	PUBLIC	16,886	AS	3
0920	6	1	23422		MAUNA ULU LAVA SHIELD PARKING	ADJACENT TO ROUTE 0208 (MAUNA ULU ACCESS ROAD) AT END		KILAUEA	YES	PUBLIC	8,508	AS	3
0921	6	1	23446		KEALAKOMO PICNIC AREA PARKING	FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 9.78 ON RIGHT	TO ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 9.85 ON RIGHT	KILAUEA	YES	PUBLIC	17,919	AS	3
0923	6	1	42676		KIPIKA PUAULU TRAILHEAD PARKING	FROM END OF ROUTE 0100A (MAUNA LOA ROAD)	TO BEGINNING OF ROUTE 0100B (MAUNA LOA LOOKOUT ROAD)	KILAUEA	YES	PUBLIC	26,506	AS	1
0924	6	1	97518		FORMER PLAYGROUND PARKING	FROM ROUTE 0401 (NORTH RESIDENCE ROAD)	TO PARKING	KILAUEA	NO	NONPUBLIC	6,056	GR	1,1A
0925	6	1	42671		KIPIKA PUAULU DAY USE AREA PARKING	FROM ROUTE 0100A (MAUNA LOA ROAD) AT MP 1.49 ON RIGHT	TO PARKING	KILAUEA	YES	PUBLIC	11,123	AS	1
0926	6	1	113876		ENVIRONMENTAL EDUCATION CENTER PARKING	FROM ROUTE 0403 (SOUTH RESIDENCE LOOP) AT MP 0.14 ON RIGHT	TO PARKING	KILAUEA	YES	PUBLIC	11,556	AS	1,1A
0927	6	1	23493		ERUPTION SITE TURN-AROUND PARKING	FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT END	TO PARKING	KILAUEA	YES	PUBLIC	9,989	AS	3
0928	6	1	113875		TREE MOLDS PARKING	ADJACENT TO ROUTE 0205 (TREE MOLDS ROAD) AT MP 0.44 ON RIGHT		KILAUEA	YES	PUBLIC	1,046	AS	1
0929	6	1	23092		PUNA COAST TRAILHEAD PARKING	ADJACENT TO ROUTE 0012 (CHAIN OF CRATERS ROAD) (EAST)		KILAUEA	NO	PUBLIC	3,199	GR	3

Cycle 6 NPS / RIP Route ID Report

(Numerical By Summary Route and Subcomponent #)



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HAVO Hawaii Volcanoes National Park

PARKING AREA INVENTORY (1300 SERIES FMSS LOCATIONS)

Route No.	Cycle Collected	Iteration Collected	FMSS Number	Concession	Route Description		Maintenance District	FLTP	Access Level	Area (SQ FT)	Surf. Type	Area Map
					From	To						
0930	6	1	22876		FOOTPRINTS TRAILHEAD PARKING	ADJACENT TO ROUTE 5011 (HAWAII STATE HIGHWAY 11)	KILAUEA	YES	PUBLIC	2,636	AS	4
0933	6	1	42511		KULANAOKUAIKI CAMPGROUND PARKING	FROM ROUTE 0101 (HILINA PALI ROAD) AT MP 3.61 ON RIGHT	KILAUEA	YES	PUBLIC	10,533	AS	2
0934	6	1	239121		KAHUKU ADMINISTRATIVE PARKING	FROM END OF ROUTE 0213AZ (KAHUKU ENTRANCE ROAD - PAVED)	KAHUKU	NO	PUBLIC	17,063	GR	5
0935	6	1	239122		JAGGAR EMPLOYEE PARKING	FROM ROUTE 0911 (VOLCANO OBSERVATORY PARKING)	KILAUEA	NO	NONPUBLIC	15,207	AS	1
0936	6	1	239124		PU'U LOA PETROGLYPHS TRAIL PARKING	ADJACENT TO ROUTE 0012 (CHAIN OF CRATERS ROAD)	KILAUEA	YES	PUBLIC	4,129	AS	3
0937ZZ	6	1	239125		KILAUEA MILITARY CAMP PARKING AREAS	FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) AND ROUTE 0215ZZ (KILAUEA MILITARY CAMP ROADS)	KILAUEA	YES	PUBLIC	114,055	AS	1,1B
0938ZZ	6	1	244100		KILAUEA MILITARY CAMP UNPAVED PARKING	FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) AND 0215ZZ (KILAUEA MILITARY CAMP ROADS)	KILAUEA	NO	PUBLIC	5,971	GR	1,1B
0939	6	1	240234		MULAWAI A PELE TRAILHEAD PARKING	ADJACENT TO ROUTE 0012 (CHAIN OF CRATERS ROAD)	KILAUEA	YES	PUBLIC	13,055	AS	3
0940	6	1	240235		HILINA PALI HANDICAP OVERLOOK PARKING	ADJACENT TO END OF ROUTE 0101 (HILINA PALI ROAD)	KILAUEA	YES	PUBLIC	406	AS	2
0941	6	1	240236		VOLCANO ART CENTER PARKING	FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 0.36 ON RIGHT	KILAUEA	YES	PUBLIC	7,440	AS	1,1A
0944	6	1	240231		MAUNA LOA LOOKOUT PARKING	FROM END OF ROUTE 0100B (MAUNA LOA LOOKOUT ROAD)	KILAUEA	NO	PUBLIC	3,468	AS	4
0945ZZ	6	1	240232	■	NAMAKANI PAIO CAMPGROUND UNPAVED PARKING	ADJACENT TO ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) ON LEFT AND RIGHT	KILAUEA	NO	PUBLIC	3,399	GR	1
0946	6	1	256462		MAUNA IKI UNPAVED TRAILHEAD PARKING	ADJACENT TO ROUTE 0101 (HILINA PALI ROAD) AT MP 3.80 ON RIGHT	KILAUEA	NO	PUBLIC	1,922	GR	2

Cycle 6 NPS / RIP Route ID Report

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HAVO *Hawaii Volcanoes National Park*

PARKING AREA INVENTORY (1300 SERIES FMSS LOCATIONS)

Route No.	Cycle Collected	Iteration Collected	FMSS Number	Concession	Route Description		Maintenance District	FLTP	Access Level	Area (SQ FT)	Surf. Type	Area Map
					From	To						
0947	6	1			HILINA PALI OVERLOOK PARKING (UNPAVED)	ADJACENT TO ROUTE 0101 (HILINA PALI ROAD) AT MP 8.53 ON RIGHT	KILAUEA	NO	PUBLIC	1,026	GR	2
0948	6	1	256427		KAHUKU VISTOR CENTER PARKING	ADJACENT TO ROUTE 0213AZ (KAHUKU ENTRANCE ROAD - PAVED)	KAHUKU	NO	PUBLIC	21,252	GR	5
0949ZZ	6	1	256423		KAHUKU OLD MAMALAHOA HIGHWAY PARKING	ADJACENT TO ROUTE 5012 (HAWAII STATE HIGHWAY 11 - KAHUKU)	KAHUKU	NO	PUBLIC	3,162	AS	5
0950ZZ	6	1	256426		KAHUKU ROAD PARKING	ADJACENT TO ROUTE 0213BZ (KAHUKU ENTRANCE ROAD - UNPAVED)	KAHUKU	NO	PUBLIC	34,708	GR	5
0951	6	1	256428		KILAUEA VISITOR CENTER OVERFLOW PARKING	ADJACENT TO ROUTE 0900BZ (KILAUEA VISITORS CENTER B PARKING)	KILAUEA	NO	PUBLIC	7,094	GR	1,1A
0952	6	1	256430		ENTRANCE STATION PARKING	ADJACENT TO ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 0.11 ON RIGHT	KILAUEA	NO	NONPUBLIC	3,133	GR	1,1A
0953	6	1	256457		KILAUEA MILITARY CAMP BALLFIELD PARKING	ADJACENT TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)	KILAUEA	NO	NONPUBLIC	9,354	GR	1,1B
0954	6	1	256458		KILAUEA VISITOR CENTER UNPAVED EMPLOYEE PARKING	ADJACENT TO ROUTE 0400 (WATER TANK ROAD)	KILAUEA	NO	NONPUBLIC	6,843	GR	1,1A
0955	6	1	256429		KAHUKU ENTRANCE PARKING	ADJACENT TO ROUTE 0213AZ (KAHUKU ENTRANCE ROAD - PAVED) AT MP 0.02 ON LEFT	KAHUKU	NO	PUBLIC	2,171	GR	5
0956ZZ	6	1		■	NAMAKANI PAIO CAMPGROUND PAVED PARKING	ADJACENT TO ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) ON RIGHT	KILAUEA	NO	PUBLIC	2,257	AS	1
0957	6	1			KAHUKU VISTOR CENTER HANDICAP PARKING	ADJACENT TO ROUTE 0213AZ (KAHUKU ENTRANCE ROAD - PAVED) AT MP 0.44 ON RIGHT	KAHUKU	NO	PUBLIC	786	AS	5

Cycle 6 NPS / RIP Route ID Report

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Cycle 6 Summary Totals for Hawaii Volcanoes National Park

Cycle 6 Route Totals			
	NPS Maintained	Concessionaire Maintained	Park Totals
Paved Roads, Data Collection Vehicle Rated (Miles)	0	0	0
Paved Roads, Manually Rated Length (Miles)	55.03	0.43	55.47
Paved Roads, Manually Rated Area (Sq. Ft.)	0	0	0
Unpaved Roads (Miles)	33.75	0	33.75
Paved Parking (Sq. Ft.)	615,172	44,382	659,554
Unpaved Parking (Sq. Ft.)	119,792	3,399	123,191

Cycle 6 Lane Miles and Overall Pavement Condition		
	Lanes Miles*	Pavement Condition Rating**
Data Collection Vehicle Routes	0	N/A
Manually Rated Roads	87.18	82
Parking Areas	11.36	90

* Equivalent Lane Miles are calculated by route using the following equations:
 - DCV and MRLs = (PAVE_WIDTH x PAVED_MI) / 11 foot lane
 - MRPs and PKGs = SQ_FEET / 5280 / 11 foot lane

**Parking and Manually Rated Routes are assigned the following PCR values based on the type of observed distresses:
 -Excellent = 97 -Good = 90 -Fair = 73
 -Poor = 53, 30, or 0 -Construction / Not Rated = -1

Cycle 6 NPS / RIP Route ID Report

(Numerical By Summary Route and Subcomponent #)



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General Park Road Functional Classification (FC) Table

FC	Type	User Access	Description	Route Numbers	Surface Types
1	Principal Park Road Rural Parkway	Public	Roads which constitute the main access route, circulatory tour, or thoroughfare for park visitors. Rural Parkways (e.g. Natchez Trace) are numbered 0001 - 0009.	0001 - 0009 0010 - 0099	AS - Asphaltic Concrete Pavement
2	Connector Park Road	Public	Roads which provide access within a park to areas of scenic, scientific, recreational or cultural interest, such as overlooks, campgrounds, etc.	0100 - 0199	BR - Brick or Pavers Road Bed CB - Cobble Stone Road Bed
3	Special Purpose Park Road	Public	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.	0200 - 0299	CO - Portland Cement Concrete Pavement GR - Gravel Road Bed
4	Primitive Park Road	Public	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. Note: Functional Classes 3 and 4 have the same route numbers because, historically, they were numbered similarly.	0200 - 0299	NV - Native or Dirt Material Road Bed
5	Administrative Park Road	Public	All public roads intended for access to administrative developments or structures such as park offices, employee quarters, or utility areas.	0400 - 0499	OT - Other Materials Road Bed
6	Administrative Park Road (Restricted Access)	Nonpublic	All roads normally closed to the public, including patrol roads, truck trails, and other similar roads. 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.	0400 - 0499	
7	Urban Parkway	Public	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.	0001 - 0009	
8	City Street	Public	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.	0600 - 0699	
N/A	Non-NPS Roads	Public	State, County, or City owned roads which border, traverse, or provide access to Park Facilities or Locations. Non-NPS roads are not assigned functional classes and are driven for GPS and Video Log only.	5000 - 5999	

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 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.

NPS / RIP Subcomponent Details for HAVO

(Numerical By Summary Route and Subcomponent #)



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HAVO *Hawaii Volcanoes National Park*

SUMMARY ROUTE INVENTORY FOR ROADS (1100 SERIES FMSS LOCATIONS)

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)
						From	To						
0010ZZ	22286	6	1		CRATER RIM DRIVE	FROM ROUTE 5011 (HAWAII STATE HIGHWAY 11) AT MP 0.89 ON LEFT	TO ROUTE 0913 (DEVASTATION TRAIL PARKING)	YES	5.89	0.00	5.89	1	
0204BZZ	21540	6	1	■	NAMAKANI PAIO RENTAL CABIN ACCESS ROADS	FROM ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) AT MP 0.05 ON RIGHT	THROUGH RENTAL CABINS AREA	YES	0.11	0.00	0.11	3	
0213ZZ	88336	6	1		KAHUKU ENTRANCE ROAD	FROM HAWAII STATE HIGHWAY 11 (HAWAII BELT ROAD / MAMALAOA HIGHWAY)	TO ROUTE 0934 (KAHUKU ADMINISTRATIVE PARKING)	YES	0.56	3.77	4.33	2	
0215ZZ	239127	6	1		KILAUEA MILITARY CAMP ROADS	FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AND 0214 (KILAUEA MILITARY CAMP ROAD)	THROUGH KILAUEA MILITARY CAMP	YES	1.71	0.00	1.71	3	
0405ZZ	23431	6	1		AINAHOA ROAD	FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 4.30 ON RIGHT	TO END	YES	0.06	1.66	1.72	2	
0411ZZ	21966				MAUNA LOA SPUR ROAD-FIRE BREAKS	FROM ROUTE 0100B (MAUNA LOA LOOKOUT ROAD) AT MP 2.55 ON LEFT	TO END	NO	0.00	1.10	1.10	6	
0413ZZ	22602				MAUNA LOA FIRE BREAK ROADS	FROM ROUTE 0404 (TREE MOLDS STABLE ROAD)	TO END	NO	0.00	1.88	1.88	6	
0415ZZ	22874				MAUNA LOA QUARRY ROADS	FROM ROUTE 0100B (MAUNA LOA LOOKOUT ROAD) AT MP 0.072 ON LEFT	TO MAUNA LOA QUARRY	NO	0.00	0.51	0.51	6	
0416ZZ	21519	6	1		KILAUEA WATER TANKS AREA ROADS	FROM ROUTE 0400 (WATER TANK ROAD)	THROUGH WATER TANK AREA	NO	0.68	0.00	0.68	6	
0419ZZ	240233				KILAUEA MILITARY CAMP UNPAVED ROADS	FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) AND ROUTE 0215ZZ (KILAUEA MILITARY CAMP ROADS)	TO POWERLINE AND BONEYARD	NO	0.00	0.11	0.11	6	
0420ZZ	256460				UPPER KAHUKU ADMINISTRATIVE ROADS	FROM ROUTE 0213BZ (KAHUKU ENTRANCE ROAD - UNPAVED)	TO END	NO	0.00	9.46	9.46	6	

NPS / RIP Subcomponent Details for HAVO

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HAVO *Hawaii Volcanoes National Park*

SUMMARY ROUTE INVENTORY FOR PARKING AREAS (1300 SERIES FMSS LOCATIONS)

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	User Access	Area (SQ FT)
						From	To			
0900ZZ	22571	6	1		KILAUEA VISITORS CENTER PARKING	FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 (ON RIGHT AND LEFT)	TO ROUTE 0941 (VOLCANO ART CENTER PARKING)	YES	PUBLIC	55,106
0908ZZ	22831	6	1		KILAUEA MAINTENANCE YARD PARKING	FROM ROUTE 0401 (NORTH RESIDENCE ROAD) ON LEFT AND RIGHT	TO PARKING	NO	NONPUBLIC	41,374
0909ZZ	22292	6	1		STEAM VENTS PARKING	ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) ON RIGHT AND LEFT		YES	PUBLIC	6,054
0910ZZ	22245	6	1		KILAUEA OVERLOOK AND PICNIC AREA PARKING	FROM ROUTE 0201 (KILAUEA OVERLOOK ROAD)	TO PARKING	YES	PUBLIC	24,623
0915ZZ	42665	6	1		THURSTON LAVA TUBE PARKING	ADJACENT TO ROUTE 0010BZ (CRATER RIM DRIVE - EAST) ON LEFT AND RIGHT		YES	PUBLIC	16,588
0937ZZ	239125	6	1		KILAUEA MILITARY CAMP PARKING AREAS	FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) AND ROUTE 0215ZZ (KILAUEA MILITARY CAMP ROADS)	THROUGH KILAUEA MILITARY CAMP	YES	PUBLIC	114,055
0938ZZ	244100	6	1		KILAUEA MILITARY CAMP UNPAVED PARKING	FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) AND 0215ZZ (KILAUEA MILITARY CAMP ROADS)	THROUGH KILAUEA MILITARY CAMP	NO	PUBLIC	5,971
0945ZZ	240232	6	1	■	NAMAKANI PAIO CAMPGROUND UNPAVED PARKING	ADJACENT TO ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) ON LEFT AND RIGHT		NO	PUBLIC	3,399
0949ZZ	256423	6	1		KAHUKU OLD MAMALAOA HIGHWAY PARKING	ADJACENT TO ROUTE 5012 (HAWAII STATE HIGHWAY 11 - KAHUKU)		NO	PUBLIC	3,162
0950ZZ	256426	6	1		KAHUKU ROAD PARKING	ADJACENT TO ROUTE 0213BZ (KAHUKU ENTRANCE ROAD - UNPAVED)		NO	PUBLIC	34,708
0956ZZ		6	1	■	NAMAKANI PAIO CAMPGROUND PAVED PARKING	ADJACENT TO ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) ON RIGHT		NO	PUBLIC	2,257

NPS / RIP Subcomponent Details for HAVO

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HAVO Hawaii Volcanoes National Park

HAVO-0010ZZ Subcomponent Breakdown

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)
						From	To						
0010AZ	22286	6	1		CRATER RIM DRIVE - WEST	FROM ROUTE 5011 (HAWAII STATE HIGHWAY 11) AT MP 0.89 ON LEFT	TO ROUTE 0423 (CRATER RIM DRIVE - ADMINISTRATIVE)	YES	2.83	0.00	2.83	1	
0010BZ	22286	6	1		CRATER RIM DRIVE - EAST	FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST)	TO ROUTE 0913 (DEVASTATION TRAIL PARKING)	YES	3.06	0.00	3.06	1	

HAVO-0204BZZ Subcomponent Breakdown

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)
						From	To						
0204BAZ	21540	6	1	■	NAMAKANI PAIO RENTAL CABIN ACCESS ROAD	FROM ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) AT MP 0.05 ON RIGHT	THROUGH RENTAL CABINS AREA	YES	0.08	0.00	0.08	3	
0204BBZ	21540	6	1	■	NAMAKANI PAIO RENTAL CABIN ACCESS ROAD SPUR	FROM ROUTE 0204BAZ (NAMAKANI PAIO RENTAL CABIN ACCESS ROAD)	TO END	YES	0.04	0.00	0.04	3	

HAVO-0213ZZ Subcomponent Breakdown

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)
						From	To						
0213AZ	88336	6	1		KAHUKU ENTRANCE ROAD - PAVED	FROM HAWAII STATE HIGHWAY 11 (HAWAII BELT ROAD / MAMALAOA HIGHWAY)	TO ROUTE 0934 (KAHUKU ADMINISTRATIVE PARKING)	YES	0.56	0.00	0.56	2	
0213BZ	88336	6	1		KAHUKU ENTRANCE ROAD - UNPAVED	FROM ROUTE 0213AZ (KAHUKU ENTRANCE ROAD - PAVED)	TO ROUTE 0950FZ (KAHUKU CROSS FENCE PARKING)	YES	0.00	3.77	3.77	2	

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Black = Paved Routes, Non-NPS

■ = Concession Route

Yellow = Unpaved Routes, DCV not Driven

Blue = Paved Parking Areas

Green = Unpaved Parking Areas

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HAVO *Hawaii Volcanoes National Park*

HAVO-0215ZZ Subcomponent Breakdown

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)
						From	To						
0215AZ	239127	6	1		KILAUEA MILITARY CAMP ROAD A	FROM ROUTE 0215BZ (KILAUEA MILITARY CAMP ROAD B)	TO ROUTE 0215CZ (KILAUEA MILITARY CAMP ROAD C)	YES	0.04	0.00	0.04	3	
0215BZ	239127	6	1		KILAUEA MILITARY CAMP ROAD B	FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 1.466 ON RIGHT	TO ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 1.381	YES	0.12	0.00	0.12	3	
0215CZ	239127	6	1		KILAUEA MILITARY CAMP ROAD C	FROM ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D)	TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)	YES	0.20	0.00	0.20	3	
0215DZ	239127	6	1		KILAUEA MILITARY CAMP ROAD D	FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 1.279 ON RIGHT	TO ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K)	YES	0.33	0.00	0.33	3	
0215EZ	239127	6	1		KILAUEA MILITARY CAMP ROAD E	FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)	TO ROUTE 0215FZ (KILAUEA MILITARY CAMP ROAD F)	YES	0.12	0.00	0.12	3	
0215FZ	239127	6	1		KILAUEA MILITARY CAMP ROAD F	FROM ROUTE 0215CZ (KILAUEA MILITARY CAMP ROAD C)	TO ROUTES 0215EZ (KILAUEA MILITARY CAMP ROAD E), 0215HZ (KILAUEA MILITARY CAMP ROAD H), AND 0215IZ (KILAUEA MILITARY CAMP ROAD I)	YES	0.07	0.00	0.07	3	
0215GZ	239127	6	1		KILAUEA MILITARY CAMP ROAD G	FROM ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J)	TO ROUTE 0215EZ (KILAUEA MILITARY CAMP ROAD E)	YES	0.09	0.00	0.09	3	
0215HZ	239127	6	1		KILAUEA MILITARY CAMP ROAD H	FROM ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D)	TO ROUTE 0215FZ (KILAUEA MILITARY CAMP ROAD F)	YES	0.18	0.00	0.18	3	
0215IZ	239127	6	1		KILAUEA MILITARY CAMP ROAD I	FROM ROUTE 0215FZ (KILAUEA MILITARY CAMP ROAD F)	TO ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H)	YES	0.13	0.00	0.13	3	
0215JZ	239127	6	1		KILAUEA MILITARY CAMP ROAD J	FROM ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D)	TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)	YES	0.18	0.00	0.18	3	
0215KZ	239127	6	1		KILAUEA MILITARY CAMP ROAD K	FROM ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J)	TO ROUTE 0937KZ (KILAUEA MILITARY CAMP K PARKING)	YES	0.23	0.00	0.23	3	
0215LZ	239127	6	1		KILAUEA MILITARY CAMP ROAD L	FROM ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D)	TO ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K)	YES	0.02	0.00	0.02	3	

NPS / RIP Subcomponent Details for HAVO

(Numerical By Summary Route and Subcomponent #)



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HAVO Hawaii Volcanoes National Park

HAVO-0405ZZ Subcomponent Breakdown

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)
						From	To						
0405AZ	23431	6	1		AINAHOU ROAD PAVED	FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 4.30 ON RIGHT	TO ROUTE 0405BZ (AINAHOU ROAD UNPAVED)	NO	0.06	0.00	0.06	2	
0405BZ	23431	6	1		AINAHOU ROAD UNPAVED	FROM ROUTE 0405AZ (AINAHOU ROAD PAVED)	TO TRAILHEAD AT RANCH HOUSE AT MP 2.06	NO	0.00	1.66	1.66	2	

HAVO-0411ZZ Subcomponent Breakdown

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)
						From	To						
0411AZ	21966				SPUR ROAD	FROM ROUTE 0100B (MAUNA LOA LOOKOUT ROAD) AT MP 2.55 ON LEFT	TO END	NO	0.00	0.78	0.78	6	
0411BZ	21966				SIX TANKS ROAD	FROM ROUTE 0100B (MAUNA LOA LOOKOUT ROAD) AT MP 2.99 ON RIGHT	TO END	NO	0.00	0.32	0.32	6	

HAVO-0413ZZ Subcomponent Breakdown

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)
						From	To						
0413AZ	22602				WINERY AND GOLF COURSE ROAD	FROM ROUTE 0404 (TREE MOLDS STABLE ROAD)	TO END	NO	0.00	0.78	0.78	6	
0413BZ	22602				WINERY AND GOLF COURSE SPUR	FROM ROUTE 0413AZ (WINERY AND GOLF COURSE ROAD)	TO ROUTE 0925 (KIPIKA PUAULU DAY USE AREA PARKING)	NO	0.00	1.10	1.10	6	

NPS / RIP Subcomponent Details for HAVO

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HAVO Hawaii Volcanoes National Park

HAVO-0415ZZ Subcomponent Breakdown

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)
						From	To						
0415AZ	22874				MAUNA LOA QUARRY ROAD	FROM ROUTE 0100B (MAUNA LOA LOOKOUT ROAD) AT MP 0.072 ON LEFT	TO MAUNA LOA QUARRY	NO	0.00	0.44	0.44	6	
0415BZ	22874				MAUNA LOA QUARRY ROAD HELIPAD ACCESS	FROM ROUTE 0415AZ (MAUNA LOA QUARRY ROAD) AT MP 0.30 ON RIGHT	TO HELIPAD	NO	0.00	0.07	0.07	6	

HAVO-0416ZZ Subcomponent Breakdown

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)
						From	To						
0416AZ	21519	6	1		KILAUEA WATER TANKS AREA ROAD A	FROM ROUTE 0400 (WATER TANK ROAD)	TO END OF LOOP	NO	0.58	0.00	0.58	6	
0416BZ	21519	5	1		KILAUEA WATER TANKS AREA ROAD B	FROM ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON LEFT	TO ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON LEFT	NO	0.06	0.00	0.06	6	
0416CZ	21519	6	1		KILAUEA WATER TANKS AREA ROAD C	FROM ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON RIGHT	TO ROUTE 0416AZ (KILAUEA WATER TANKS AREA ROAD A) ON RIGHT	NO	0.05	0.00	0.05	6	

HAVO-0419ZZ Subcomponent Breakdown

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)
						From	To						
0419AZ	240233				KILAUEA MILITARY CAMP POWERLINE ACCESS ROAD	FROM ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D)	TO POWERLINE	NO	0.00	0.05	0.05	6	
0419BZ	240233				KILAUEA MILITARY CAMP BONEYARD ROAD	FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)	TO BONEYARD	NO	0.00	0.07	0.07	6	

NPS / RIP Subcomponent Details for HAVO

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HAVO Hawaii Volcanoes National Park

HAVO-0420ZZ Subcomponent Breakdown													
Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	Paved Miles	Unpaved Miles	Total Mileage	Functional Class	Area (SQ FT)
						From	To						
0420AZ	256460				UPPER KAHUKU MAIN ROAD	FROM ROUTE 0213BZ (KAHUKU ENTRANCE ROAD - UNPAVED)	TO END	NO	0.00	2.81	2.81	6	
0420BZ	256460				KAHUKU CROSS FENCE ROAD	FROM ROUTE 0420AZ (UPPER KAHUKU MAIN ROAD)	TO END	NO	0.00	1.33	1.33	6	
0420CZ	256460				KAHUKU CROSS TO HAINOA ROAD	FROM ROUTE 0420BZ (KAHUKU CROSS FENCE ROAD)	TO END	NO	0.00	0.55	0.55	6	
0420DZ	256460				KAHUKU LOWER GLOVER ROAD	FROM ROUTE 0420AZ (UPPER KAHUKU MAIN ROAD)	TO END	NO	0.00	1.68	1.68	6	
0420EZ	256460				KAHUKU GLOVER CONNECTOR ROAD	FROM ROUTE 0420FZ (KAHUKU UPPER GLOVER ROAD)	TO ROUTE 0420DZ (KAHUKU LOWER GLOVER ROAD)	NO	0.00	0.52	0.52	6	
0420FZ	256460				KAHUKU UPPER GLOVER ROAD	FROM ROUTE 0420AZ (UPPER KAHUKU MAIN ROAD)	TO END	NO	0.00	1.10	1.10	6	
0420GZ	256460				KAHUKU KONA TRAIL ROAD	FROM ROUTE 0420AZ (UPPER KAHUKU MAIN ROAD)	TO END	NO	0.00	1.46	1.46	6	

HAVO-0900ZZ Subcomponent Breakdown													
Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	User Access	Area (SQ FT)			
						From	To						
0900AZ	22571	6	1		KILAUEA VISITORS CENTER A PARKING	FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 ON LEFT	TO ROUTE 0941 (VOLCANO ART CENTER PARKING)	YES	PUBLIC	33,911			
0900BZ	22571	6	1		KILAUEA VISITORS CENTER B PARKING	FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 ON RIGHT	TO PARKING	YES	PUBLIC	21,195			

NPS / RIP Subcomponent Details for HAVO

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HAVO *Hawaii Volcanoes National Park*

HAVO-0908ZZ Subcomponent Breakdown

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	User Access	Area (SQ FT)
						From	To			
0908AZ	22831	6	1		KILAUEA MAINTENANCE YARD A PARKING	FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.303 ON RIGHT	TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.324 ON RIGHT	NO	NONPUBLIC	15,389
0908BZ	22831	6	1		KILAUEA MAINTENANCE YARD B PARKING	FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.341 ON RIGHT	TO PARKING	NO	NONPUBLIC	9,444
0908CZ	22831	6	1		KILAUEA MAINTENANCE YARD C PARKING	ADJACENT TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.311 ON LEFT		NO	NONPUBLIC	11,250
0908EZ	22831	6	1		KILAUEA MAINTENANCE YARD E PARKING	FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.354 ON RIGHT	TO PARKING	NO	NONPUBLIC	3,227
0908FZ	22831	6	1		RESIDENCE ROAD A PARKING	ADJACENT TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP ON 0.180 ON LEFT		NO	NONPUBLIC	673
0908GZ	22831	6	1		RESIDENCE ROAD B PARKING	ADJACENT TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.196 ON LEFT		NO	NONPUBLIC	1,391

HAVO-0909ZZ Subcomponent Breakdown

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	User Access	Area (SQ FT)
						From	To			
0909AZ	22292	6	1		STEAM VENTS A PARKING	ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.07 ON LEFT		YES	PUBLIC	1,515
0909BZ	22292	6	1		STEAM VENTS B PARKING	ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.08 ON RIGHT		YES	PUBLIC	3,017
0909CZ	22292	6	1		STEAM VENTS C PARKING	ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.04 ON LEFT		YES	PUBLIC	1,522

NPS / RIP Subcomponent Details for HAVO

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HAVO *Hawaii Volcanoes National Park*

HAVO-0910ZZ Subcomponent Breakdown										
Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	User Access	Area (SQ FT)
						From	To			
0910AZ	22245	6	1		KILAUEA PICNIC AREA PARKING	FROM ROUTE 0201 (KILAUEA OVERLOOK ROAD) AT MP 0.15 ON RIGHT	TO PARKING	YES	PUBLIC	5,543
0910BZ	22245	6	1		KILAUEA OVERLOOK PARKING	FROM END OF ROUTE 0201 (KILAUEA OVERLOOK ROAD)	TO PARKING	YES	PUBLIC	19,080

HAVO-0915ZZ Subcomponent Breakdown										
Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	User Access	Area (SQ FT)
						From	To			
0915AZ	42665	6	1		THURSTON LAVA TUBE A BUS PARKING	ADJACENT TO ROUTE 0010BZ (CRATER RIM DRIVE - EAST) AT MP 1.62 ON LEFT		YES	PUBLIC	7,886
0915BZ	42665	6	1		THURSTON LAVA TUBE B PARKING	ADJACENT TO ROUTE 0010BZ (CRATER RIM DRIVE - EAST) AT MP 1.60 ON RIGHT		YES	PUBLIC	8,702

NPS / RIP Subcomponent Details for HAVO

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HAVO *Hawaii Volcanoes National Park*

HAVO-0937ZZ Subcomponent Breakdown

Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	User Access	Area (SQ FT)
						From	To			
0937AZ	239125	6	1		KILAUEA MILITARY CAMP A PARKING	FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)	TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)	YES	PUBLIC	37,418
0937BZ	239125	6	1		KILAUEA MILITARY CAMP B PARKING	ADJACENT TO ROUTES 0214 (KILAUEA MILITARY CAMP ROAD) AND 0215JZ (KILAUEA MILITARY CAMP ROAD J)		YES	PUBLIC	12,556
0937CZ	239125	6	1		KILAUEA MILITARY CAMP C PARKING	FROM ROUTES 0215EZ (KILAUEA MILITARY CAMP ROAD E), 0215GZ (KILAUEA MILITARY CAMP ROAD G), AND 0215HZ (KILAUEA MILITARY CAMP ROAD H)	TO PARKING	YES	PUBLIC	23,002
0937DZ	239125	6	1		KILAUEA MILITARY CAMP D PARKING	ADJACENT TO ROUTE 0215EZ (KILAUEA MILITARY CAMP ROAD E)		YES	PUBLIC	476
0937EZ	239125	6	1		KILAUEA MILITARY CAMP E PARKING	ADJACENT TO ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H)		YES	PUBLIC	566
0937FZ	239125	6	1		KILAUEA MILITARY CAMP F PARKING	ADJACENT TO ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H)		YES	PUBLIC	943
0937GZ	239125	6	1		KILAUEA MILITARY CAMP G PARKING	ADJACENT TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)		YES	PUBLIC	1,136
0937HZ	239125	6	1		KILAUEA MILITARY CAMP H PARKING	ADJACENT TO ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J)		YES	PUBLIC	2,549
0937IZ	239125	6	1		KILAUEA MILITARY CAMP I PARKING	ADJACENT TO ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J)		YES	PUBLIC	322
0937JZ	239125	6	1		KILAUEA MILITARY CAMP J PARKING	ADJACENT TO ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K)		YES	PUBLIC	3,513
0937KZ	239125	6	1		KILAUEA MILITARY CAMP K PARKING	FROM ROUTES 0215DZ (KILAUEA MILITARY CAMP ROAD D), 0215HZ (KILAUEA MILITARY CAMP ROAD H), AND 0215KZ (KILAUEA MILITARY CAMP ROAD K)	TO PARKING	YES	PUBLIC	14,942
0937LZ	239125	6	1		KILAUEA MILITARY CAMP L PARKING	ADJACENT TO ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D)		YES	PUBLIC	1,033
0937MZ	239125	6	1		KILAUEA MILITARY CAMP M PARKING	ADJACENT TO ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D)		YES	PUBLIC	1,411

NPS / RIP Subcomponent Details for HAVO

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HAVO Hawaii Volcanoes National Park

HAVO-0937ZZ Subcomponent Breakdown										
Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	User Access	Area (SQ FT)
						From	To			
0937NZ	239125	6	1		KILAUEA MILITARY CAMP N PARKING	FROM ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K)	TO PARKING	YES	PUBLIC	5,527
0937OZ	239125	6	1		KILAUEA MILITARY CAMP O PARKING	ADJACENT TO 0215KZ (KILAUEA MILITARY CAMP ROAD K)		YES	PUBLIC	8,661

HAVO-0938ZZ Subcomponent Breakdown										
Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	User Access	Area (SQ FT)
						From	To			
0938AZ	244100	6	1		KILAUEA MILITARY CAMP A UNPAVED PARKING	FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)	TO PARKING	NO	PUBLIC	3,609
0938BZ	244100	6	1		KILAUEA MILITARY CAMP B UNPAVED PARKING	ADJACENT TO ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D)		NO	PUBLIC	2,362

HAVO-0945ZZ Subcomponent Breakdown										
Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	User Access	Area (SQ FT)
						From	To			
0945AZ	240232	6	1	■	NAMAKANI PAIO CAMPGROUND A UNPAVED PARKING	ADJACENT TO ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) AT MP 0.137 ON LEFT		NO	PUBLIC	2,289
0945BZ	240232	6	1	■	NAMAKANI PAIO CAMPGROUND B UNPAVED PARKING	ADJACENT TO ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) AT MP 0.167 ON RIGHT		NO	PUBLIC	1,110

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HAVO *Hawaii Volcanoes National Park*

HAVO-0949ZZ Subcomponent Breakdown										
Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	User Access	Area (SQ FT)
						From	To			
0949AZ	256423	6	1		KAHUKU OLD MAMALAHOA HIGHWAY PARKING SOUTH	FROM ROUTE 501 2 (HAWAII STATE HIGHWAY 11 - KAHUKU) AT MP 1.37 ON RIGHT	TO ROUTE 0424 (KAHUKU OLD MAMALAHOA HIGHWAY)	NO	PUBLIC	1,698
0949BZ	256423	6	1		KAHUKU OLD MAMALAHOA HIGHWAY PARKING NORTH	FROM ROUTE 501 2 (HAWAII STATE HIGHWAY 11 - KAHUKU) AT MP 3.05 ON RIGHT	TO ROUTE 0424 (KAHUKU OLD MAMALAHOA HIGHWAY)	NO	PUBLIC	1,464

HAVO-0950ZZ Subcomponent Breakdown										
Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	User Access	Area (SQ FT)
						From	To			
0950AZ	256426	6	1		KAHUKU OLD AIRSTRIP TRAILHEAD PARKING	ADJACENT TO ROUTE 021 3BZ (KAHUKU ENTRANCE ROAD - UNPAVED)		NO	PUBLIC	5,667
0950BZ	256426	6	1		KAHUKU KAMAKAPA'A TRAILHEAD PARKING	ADJACENT TO ROUTE 021 3BZ (KAHUKU ENTRANCE ROAD - UNPAVED)		NO	PUBLIC	3,579
0950CZ	256426	6	1		KAHUKU LOWER PALM TRAILHEAD PARKING	ADJACENT TO ROUTE 021 3BZ (KAHUKU ENTRANCE ROAD - UNPAVED)		NO	PUBLIC	5,146
0950DZ	256426	6	1		KAHUKU UPPER PALM TRAILHEAD PARKING	ADJACENT TO ROUTE 021 3BZ (KAHUKU ENTRANCE ROAD - UNPAVED)		NO	PUBLIC	4,625
0950EZ	256426	6	1		KAHUKU PIT CRATER TRAILHEAD PARKING	ADJACENT TO ROUTE 021 3BZ (KAHUKU ENTRANCE ROAD - UNPAVED)		NO	PUBLIC	2,362
0950FZ	256426	6	1		KAHUKU CROSS FENCE PARKING	ADJACENT TO ROUTE 021 3BZ (KAHUKU ENTRANCE ROAD - UNPAVED)		NO	PUBLIC	6,100

NPS / RIP Subcomponent Details for HAVO

(Numerical By Summary Route and Subcomponent #)



Shading Color Key

White = Paved Routes, DCV Driven

Grey = Paved Routes, DCV not Driven

Black = Paved Routes, Non-NPS

■ = Concession Route

Yellow = Unpaved Routes, DCV not Driven

Blue = Paved Parking Areas

Green = Unpaved Parking Areas

DCV = Data Collection Vehicle
 MRL = Manually Rated Line
 MRP = Manually Rated Polygon
 PKG = Parking Areas
 NC = Not Collected

HAVO *Hawaii Volcanoes National Park*

HAVO-0956ZZ Subcomponent Breakdown										
Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concession	Route Name	Route Description		FLTP	User Access	Area (SQ FT)
						From	To			
0956AZ		6	1	■	NAMAKANI PAIO CAMPGROUND RESTROOM PARKING	ADJACENT TO ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) AT MP 0.174 ON RIGHT		NO	PUBLIC	884
0956BZ		6	1	■	NAMAKANI PAIO CAMPGROUND SHELTER PARKING	ADJACENT TO ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) AT MP 0.306 ON RIGHT		NO	PUBLIC	1,373

Route Identification Changes to Paved Routes from Previous Cycle Hawaii Volcanoes National Park

ROUTES REMOVED FROM PREVIOUS INVENTORY:			
Route No.	Route Name	Type of Change	Comments
0912	HALEMAUMAU OVERLOOK PARKING	OTHER	ROUTE NO LONGER EXISTS; REMOVED IN CYCLE 6.
0931ZZ	KEANAKAKOI PARKING	OTHER	ROUTE NO LONGER EXISTS; REMOVED IN CYCLE 6.
0932	SOUTH WEST RIFT ZONE PARKING	OTHER	ROUTE NO LONGER EXISTS; REMOVED IN CYCLE 6.

ROUTES ADDED FROM PREVIOUS INVENTORY:			
Route No.	Route Name	Type of Change	Comments
0423	CRATER RIM DRIVE - ADMINISTRATIVE	OTHER	NEW PAVED ROUTE ADDED IN CYCLE 6. FORMER SECTION OF ROUTE 0010.
0424	KAHUKU OLD MAMALAHOA HIGHWAY	OTHER	NEW PAVED ROUTE ADDED IN CYCLE 6.
0949ZZ	KAHUKU OLD MAMALAHOA HIGHWAY PARKING	OTHER	NEW PAVED PARKING ADDED IN CYCLE 6.
0956ZZ	NAMAKANI PAIO CAMPGROUND PAVED PARKING	OTHER	NEW PAVED PARKING ADDED IN CYCLE 6.
0957	KAHUKU VISTOR CENTER HANDICAP PARKING	OTHER	NEW PAVED PARKING ADDED IN CYCLE 6.
5012	HAWAII STATE HIGHWAY 11 - KAHUKU	OTHER	NON-NPS ROAD ADDED TO THE INVENTORY IN CYCLE 6.

ROUTES MODIFIED FROM PREVIOUS INVENTORY:			
Route No.	Route Name	Type of Change	Comments
0010ZZ	CRATER RIM DRIVE	LENGTH CHANGE & ROUTE SPLIT	ROUTE SHORTENED DUE TO VOLCANIC DAMAGE. ADMIN PORTION BECAME RTE. 0423.
0204BZZ	NAMAKANI PAIO RENTAL CABIN ACCESS ROADS	OTHER	ROUTE SPLIT INTO SUBCOMPONENTS TO REMOVE ROAD POLYGON.
0213ZZ	KAHUKU ENTRANCE ROAD	OTHER	ROUTE SPLIT INTO SUBCOMPONENTS TO ADD UNPAVED SECTION. (LENGTH CHANGE)
0400	WATER TANK ROAD	LENGTH CHANGE	PUBLIC PORTION OF ROUTE COMBINED INTO ROUTE 0941 GEOMETRY

Route Identification Changes to Paved Routes from Previous Cycle Hawaii Volcanoes National Park

ROUTES MODIFIED FROM PREVIOUS INVENTORY:			
Route No.	Route Name	Type of Change	Comments
0405ZZ	AINAHOU ROAD	OTHER	ROUTE SPLIT INTO SUBCOMPONENTS TO ADD UNPAVED SECTION. FUNC. CLASS FROM 5 TO 2.
0411ZZ	MAUNA LOA SPUR ROAD-FIRE BREAKS	OTHER	ROUTE SPLIT INTO SUBCOMPONENTS DUE TO IMPROVE GPS AND LENGTH COLLECTED IN CYCLE 6..
0417	MAUNA LOA EMERGENCY ACCESS ROAD	LENGTH CHANGE	IMPROVED GPS AND LENGTH COLLECTED IN CYCLE 6.
0941	VOLCANO ART CENTER PARKING	SQ FEET CHANGE	PUBLIC PORTION OF ROUTE 0400 COMBINED INTO THIS PARKING AREA.
0944	MAUNA LOA LOOKOUT PARKING	SURFACE TYPE CHANGE	SURFACE TYPE CHANGED FROM GRAVEL TO ASPHALT DURING ROUTE ID MEETING

Section 3 Park Summary Information



Hawaii Volcanoes National Park



**Federal Lands Highway
Road Inventory Program**

Parkwide Paved Route Condition Summary

Hawaii Volcanoes National Park

Table 1: Paved Route Miles and Parking Area Square Footages by Access Level and PCR

Breakdown of Pavement Condition Rating (PCR) Based on Access Level

	POOR (PCR of 0 - 60)	FAIR (PCR of 61 - 84)	GOOD (PCR of 85 - 94)	EXCELLENT (PCR of 95 -100)	
PAVED ROADS					
Functional Class	Length (miles)	Length (miles)	Length (miles)	Length (miles)	Total Mileage by FC
1			16.00	9.94	25.94
2	7.65		2.10	10.79	20.54
3	0.20	0.37	2.19	0.11	2.87
4					
5	0.23		0.28	0.57	1.08
6	3.95			1.08	5.03
7					
8					
Total Mileage by PCR	12.04	0.37	20.57	22.49	55.47
PAVED PARKING					
Access Level	Area (sq. ft.)	Area (sq. ft.)	Area (sq. ft.)	Area (sq. ft.)	Total Area
PUBLIC	21,596	1,702	180,072	329,401	532,771
NONPUBLIC	23,603		93,533	9,647	126,783
Total Area by PCR	45,199	1,702	273,605	339,048	659,554

NOTES:

1. Data are reported in the table only for paved roads and parking lots that received a condition rating.
2. Non-linear roads (MRP collected routes) are measured by area and converted to equivalent route miles based on a 22-ft pavement width in order to be included in the mileage totals for paved roads shown above.
3. Quantities in the table above are derived from the route condition data within the PMS_20, PMS_MRL, PMS_MRP, and PMS_PKG tables in the Park geodatabase.

Parkwide Condition Percentages

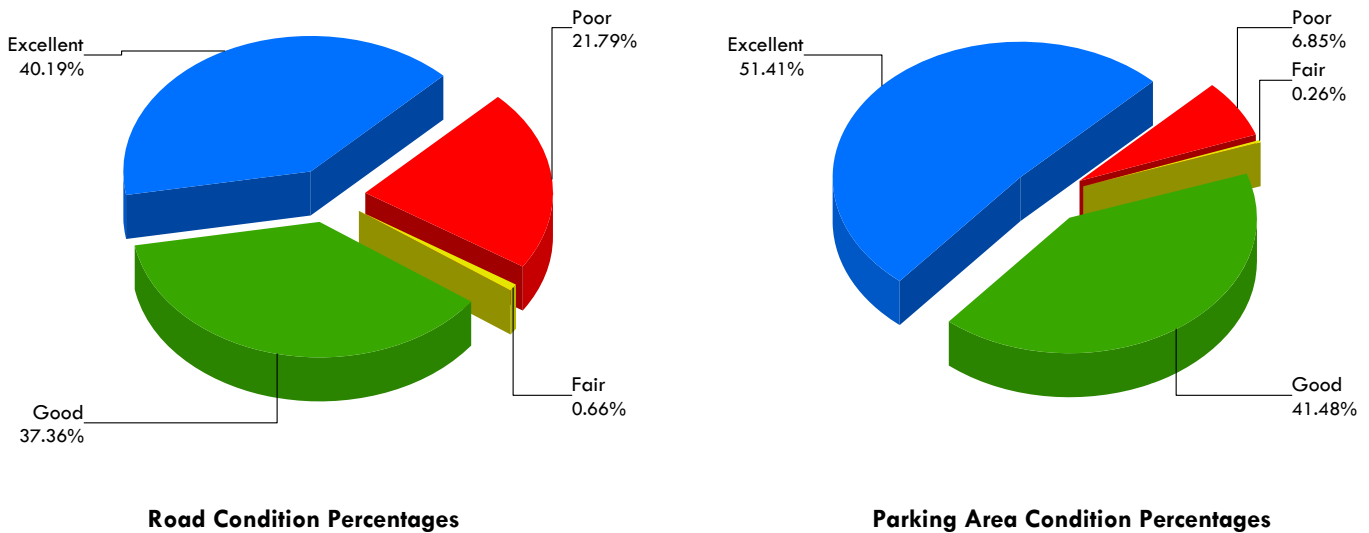
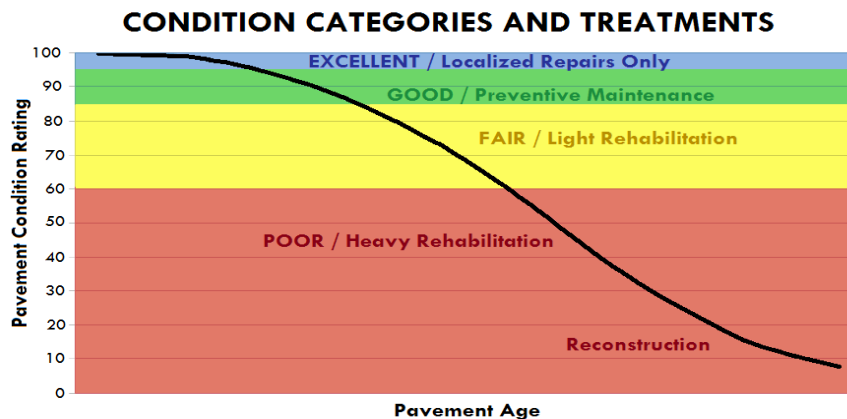


Figure 1: Pavement Condition Rating Breakdown for Paved Roads and Parking Areas

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

The Road Inventory Program aims to provide assistance in translating the excellent / good / fair / poor rating categories into pavement needs categories. The PCR can be used to indicate the place in the Pavement Life Cycle and the type 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 singlelift 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 at the time in which the data were 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.



Cycle 6 - Road Inventory Program Road Condition Summary Report for Manually Rated Roads

Condition (Rating / Index) Legend

EXCELLENT (95 - 100)
GOOD (85 - 94)
FAIR (61 - 84)
POOR (0 - 60)
NR = NOT RATED

Hawaii Volcanoes National Park

Notes:

- This condition summary report contains only the roads that were manually rated.
 - MRL: Manually Rated Line (a linear road)
 - MRP: Manually Rated Polygon (a non-linear road)
- Condition on roads that were rated with the Data Collection Vehicle (DCV) are shown in a separate report.
- A road is manually rated when it is determined to be unsuitable for the DCV to drive.
- Additional details on individual road ratings at 0.10-mile and 1-mile intervals can be found in Section 5 of the Cycle 6 RIP Report.
- Refer to the RIP Report Appendix for an explanation of the rating system and rating methods.

Route-Level Condition for Manually Rated Line (MRL) Roads

Route No.	FMSS No.	Route Name	Functional Class	Surf. Type	Paved Length (Miles)	Pavement Condition Rating (PCR)	Roughness Condition Index (RCI)	Surface Condition Rating (SCR)	Structural Crack Index	Alligator Crack Index	Longitudinal Cracking Index	Transverse Cracking Index	Patch / Pothole Index	Rutting Index
HAVO-0010AZ	22286	CRATER RIM DRIVE - WEST	1	AS	2.83	97	NR	97	NR	97	97	97	97	97
HAVO-0010BZ	22286	CRATER RIM DRIVE - EAST	1	AS	3.06	94	NR	94	NR	97	97	94	97	97
HAVO-0012	22294	CHAIN OF CRATERS ROAD	1	AS	18.56	92	NR	92	NR	97	96	92	97	97
HAVO-0013	22353	OFFICE AREA STREET	3	AS	0.05	97	NR	97	NR	97	97	97	97	97
HAVO-0100A	22598	MAUNA LOA ROAD	1	AS	1.49	97	NR	97	NR	97	97	97	97	97
HAVO-0100B	21954	MAUNA LOA LOOKOUT ROAD	2	AS	9.81	49	NR	49	NR	49	66	63	77	87
HAVO-0101	33601	HILINA PALI ROAD	2	AS	8.50	96	NR	96	NR	97	97	97	96	97
HAVO-0201	42503	KILAUEA OVERLOOK ROAD	2	AS	0.20	97	NR	97	NR	97	97	97	97	97
HAVO-0204A	21531	NAMAKANI PAIO CAMPGROUND ROAD	3	AS	0.32	90	NR	90	NR	97	90	90	97	97
HAVO-0204BAZ	21540	NAMAKANI PAIO RENTAL CABIN ACCESS ROAD	3	AS	0.08	90	NR	90	NR	97	90	90	97	97
HAVO-0204BBZ	21540	NAMAKANI PAIO RENTAL CABIN ACCESS ROAD SPUR	3	AS	0.04	90	NR	90	NR	97	90	90	97	97
HAVO-0205	22600	TREE MOLDS ROAD	2	AS	0.56	97	NR	97	NR	97	97	97	97	97
HAVO-0208	42507	MAUNA ULU ACCESS ROAD	2	AS	0.54	92	NR	92	NR	97	97	92	97	97
HAVO-0209	42508	PUU PUI OVERLOOK ROAD	2	AS	0.20	90	NR	90	NR	97	97	90	97	97
HAVO-0211	42510	STEAM VENTS ROAD	2	AS	0.12	97	NR	97	NR	97	97	97	97	97
HAVO-0213AZ	88336	KAHUKU ENTRANCE ROAD - PAVED	2	AS	0.56	97	NR	97	NR	97	97	97	97	97
HAVO-0214	113874	KILAUEA MILITARY CAMP ROAD	3	AS	0.20	53	NR	53	NR	73	53	53	97	97
HAVO-0215AZ	239127	KILAUEA MILITARY CAMP ROAD A	3	AS	0.04	97	NR	97	NR	97	97	97	97	97
HAVO-0215BZ	239127	KILAUEA MILITARY CAMP ROAD B	3	AS	0.12	90	NR	90	NR	97	90	90	97	97
HAVO-0215CZ	239127	KILAUEA MILITARY CAMP ROAD C	3	AS	0.20	73	NR	73	NR	73	73	73	90	97
HAVO-0215DZ	239127	KILAUEA MILITARY CAMP ROAD D	3	AS	0.33	90	NR	90	NR	97	90	90	90	97



Cycle 6 - Road Inventory Program Road Condition Summary Report for Manually Rated Roads

Condition (Rating / Index) Legend

EXCELLENT (95 - 100)
GOOD (85 - 94)
FAIR (61 - 84)
POOR (0 - 60)
NR = NOT RATED

Hawaii Volcanoes National Park

Notes:

- This condition summary report contains only the roads that were manually rated.
 - MRL: Manually Rated Line (a linear road)
 - MRP: Manually Rated Polygon (a non-linear road)
- Condition on roads that were rated with the Data Collection Vehicle (DCV) are shown in a separate report.
- A road is manually rated when it is determined to be unsuitable for the DCV to drive.
- Additional details on individual road ratings at 0.10-mile and 1-mile intervals can be found in Section 5 of the Cycle 6 RIP Report.
- Refer to the RIP Report Appendix for an explanation of the rating system and rating methods.

Route-Level Condition for Manually Rated Line (MRL) Roads

Route No.	FMSS No.	Route Name	Functional Class	Surf. Type	Paved Length (Miles)	Pavement Condition Rating (PCR)	Roughness Condition Index (RCI)	Surface Condition Rating (SCR)	Structural Crack Index	Alligator Crack Index	Longitudinal Cracking Index	Transverse Cracking Index	Patch / Pothole Index	Rutting Index
HAVO-0215EZ	239127	KILAUEA MILITARY CAMP ROAD E	3	AS	0.12	90	NR	90	NR	97	90	90	90	90
HAVO-0215FZ	239127	KILAUEA MILITARY CAMP ROAD F	3	AS	0.07	73	NR	73	NR	90	90	73	90	97
HAVO-0215GZ	239127	KILAUEA MILITARY CAMP ROAD G	3	AS	0.09	73	NR	73	NR	90	73	73	90	90
HAVO-0215HZ	239127	KILAUEA MILITARY CAMP ROAD H	3	AS	0.18	90	NR	90	NR	97	90	90	90	97
HAVO-0215IZ	239127	KILAUEA MILITARY CAMP ROAD I	3	AS	0.13	90	NR	90	NR	97	97	90	90	97
HAVO-0215JZ	239127	KILAUEA MILITARY CAMP ROAD J	3	AS	0.18	90	NR	90	NR	97	90	90	90	97
HAVO-0215KZ	239127	KILAUEA MILITARY CAMP ROAD K	3	AS	0.23	90	NR	90	NR	97	97	90	90	97
HAVO-0215LZ	239127	KILAUEA MILITARY CAMP ROAD L	3	AS	0.02	97	NR	97	NR	97	97	97	97	97
HAVO-0400	103274	WATER TANK ROAD	6	AS	0.34	97	NR	97	NR	97	97	97	97	97
HAVO-0401	42514	NORTH RESIDENCE ROAD	5	AS	0.43	97	NR	97	NR	97	97	97	97	97
HAVO-0403	42516	SOUTH RESIDENCE LOOP	5	AS	0.42	92	NR	92	NR	97	97	92	97	97
HAVO-0404	22601	TREE MOLDS STABLE ROAD	5	AS	0.23	0	NR	0	NR	NR	NR	NR	NR	NR
HAVO-0405AZ	23431	AINAHOU ROAD PAVED	2	AS	0.06	97	NR	97	NR	97	97	97	97	97
HAVO-0409	22347	RESOURCE MANAGEMENT ROAD	3	AS	0.47	90	NR	90	NR	97	97	90	97	97
HAVO-0416AZ	21519	KILAUEA WATER TANKS AREA ROAD A	6	AS	0.58	97	NR	97	NR	97	97	97	97	97
HAVO-0416CZ	21519	KILAUEA WATER TANKS AREA ROAD C	6	AS	0.05	97	NR	97	NR	97	97	97	97	97
HAVO-0417	23386	MAUNA LOA EMERGENCY ACCESS ROAD	6	AS	0.10	97	NR	97	NR	97	97	97	97	97
HAVO-0418	244101	KILAUEA MILITARY CAMP WATER TANK ROAD	6	CO	0.03	0	NR	0	NR	NR	NR	NR	NR	NR
HAVO-0423	256425	CRATER RIM DRIVE - ADMINISTRATIVE	6	AS	2.19	0	NR	0	NR	NR	NR	NR	NR	NR
HAVO-0424	256424	KAHUKU OLD MAMALAHOA HIGHWAY	6	AS	1.71	0	NR	0	NR	NR	NR	NR	NR	NR



Cycle 6 - Road Inventory Program

Parking Area Condition Summary Report

Hawaii Volcanoes National Park

Condition (Rating / Index) Legend

EXCELLENT (97)
GOOD (90)
FAIR (73)
POOR* (0, 30, 53)
NR = NOT RATED

- Notes:
- A PCR of 0 indicates a paved parking area in very poor condition. Individual distresses could not be identified.
 - Additional details on individual parking areas can be found in Section 6 of the Cycle 6 RIP Report.
 - Refer to the RIP Report Appendix for an explanation of the rating system and rating methods.

Route No.	FMSS No.	Route Name	User Access	Surf. Type	Area (Sq. Ft.)	Pavement Condition Rating (PCR)	Asphalt Surface Distresses					Concrete Surface Distresses						
							Alligator Cracking	Longitudinal / Transverse Cracking	Rutting / Distortions	Potholes / Patching	HMA Patching	Surface Raveling / Bleeding	Joint Faulting	Slab Cracking	Joint Distresses	Delamination / Pop-Outs	Potholes / Patching	
HAVO-0900AZ	22571	KILAUEA VISITORS CENTER A PARKING	PUBLIC	AS	33,911	97	97	97	97	97	97	97						
HAVO-0900BZ	22571	KILAUEA VISITORS CENTER B PARKING	PUBLIC	AS	21,195	97	97	97	97	97	97	97						
HAVO-0901	42652	KILAUEA VISITORS CENTER ADMINISTRATIVE PARKING	NONPUBLIC	AS	8,974	97	97	97	97	97	97	97						
HAVO-0904	22490	VOLCANO HOUSE PARKING	PUBLIC	AS	25,881	90	97	90	97	97	90	97						
HAVO-0905	109031	OHIA WING PARKING	NONPUBLIC	AS	2,197	90	97	90	97	97	90	90						
HAVO-0906	42657	VOLCANO HOUSE HOTEL SERVICE AREA (BUILDING #B167)	NONPUBLIC	AS	8,396	30	30	90	73	73	73	90						
HAVO-0907	42658	VOLCANO HOUSE DORM B2 PARKING	NONPUBLIC	AS	7,848	90	97	90	90	97	97	97						
HAVO-0908AZ	22831	KILAUEA MAINTENANCE YARD A PARKING	NONPUBLIC	AS	15,389	90	97	90	90	97	97	90						
HAVO-0908BZ	22831	KILAUEA MAINTENANCE YARD B PARKING	NONPUBLIC	AS	9,444	90	97	97	90	97	97	90						
HAVO-0908CZ	22831	KILAUEA MAINTENANCE YARD C PARKING	NONPUBLIC	AS	11,250	90	97	97	90	97	97	97						
HAVO-0908D	244097	VISITORS EMERGENCY OPERATIONS CENTER PARKING	PUBLIC	AS	9,263	90	97	97	97	97	97	90						
HAVO-0908EZ	22831	KILAUEA MAINTENANCE YARD E PARKING	NONPUBLIC	AS	3,227	90	97	97	97	97	97	90						
HAVO-0908FZ	22831	RESIDENCE ROAD A PARKING	NONPUBLIC	AS	673	97	97	97	97	97	97	97						
HAVO-0908GZ	22831	RESIDENCE ROAD B PARKING	NONPUBLIC	AS	1,391	90	97	90	97	90	97	97						
HAVO-0909AZ	22292	STEAM VENTS A PARKING	PUBLIC	AS	1,515	97	97	97	97	97	97	97						
HAVO-0909BZ	22292	STEAM VENTS B PARKING	PUBLIC	AS	3,017	97	97	97	97	97	97	97						
HAVO-0909CZ	22292	STEAM VENTS C PARKING	PUBLIC	AS	1,522	97	97	97	97	97	97	97						
HAVO-0910AZ	22245	KILAUEA PICNIC AREA PARKING	PUBLIC	AS	5,543	97	97	97	97	97	97	97						
HAVO-0910BZ	22245	KILAUEA OVERLOOK PARKING	PUBLIC	AS	19,080	97	97	97	97	97	97	97						
HAVO-0911	22266	VOLCANO OBSERVATORY PARKING	PUBLIC	AS	47,271	97	97	97	97	97	97	97						
HAVO-0913	42663	DEVASTATION TRAIL PARKING	PUBLIC	AS	23,316	97	97	97	97	97	97	97						
HAVO-0914	22302	PUU PUAI PARKING	PUBLIC	AS	21,347	97	97	97	97	97	97	97						
HAVO-0915AZ	42665	THURSTON LAVA TUBE A BUS PARKING	PUBLIC	AS	7,886	90	97	90	97	97	97	97						
HAVO-0915BZ	42665	THURSTON LAVA TUBE B PARKING	PUBLIC	AS	8,702	90	97	90	97	97	97	97						
HAVO-0916	42666	KILAUEA IKI PARKING	PUBLIC	AS	24,415	90	97	90	97	97	97	97						
HAVO-0917	42667	RESOURCE MANAGEMENT AREA PARKING	NONPUBLIC	AS	42,787	90	90	90	97	90	90	90						



Cycle 6 - Road Inventory Program

Parking Area Condition Summary Report

Hawaii Volcanoes National Park

Condition (Rating / Index) Legend

EXCELLENT (97)
GOOD (90)
FAIR (73)
POOR* (0, 30, 53)
NR = NOT RATED

- Notes:
- A PCR of 0 indicates a paved parking area in very poor condition. Individual distresses could not be identified.
 - Additional details on individual parking areas can be found in Section 6 of the Cycle 6 RIP Report.
 - Refer to the RIP Report Appendix for an explanation of the rating system and rating methods.

Condition Rating Details for Paved Parking Areas

Route No.	FMSS No.	Route Name	User Access	Surf. Type	Area (Sq. Ft.)	Pavement Condition Rating (PCR)	Asphalt Surface Distresses						Concrete Surface Distresses							
							Alligator Cracking	Longitudinal / Transverse Cracking	Rutting / Distortions	Potholes / Patching	HMA Patching	Surface Raveling / Bleeding	Joint Faulting	Slab Cracking	Joint Distresses	Delamination / Pop-Outs	Potholes / Patching			
HAVO-0918	23394	PUHIMAU CRATER PARKING	PUBLIC	AS	13,447	97	97	97	97	97	97	97								
HAVO-0919	42670	PAUHI CRATER PARKING	PUBLIC	AS	16,886	97	97	97	97	97	97	97								
HAVO-0920	23422	MAUNA ULU LAVA SHIELD PARKING	PUBLIC	AS	8,508	97	97	97	97	97	97	97								
HAVO-0921	23446	KEALAKOMO PICNIC AREA PARKING	PUBLIC	AS	17,919	97	97	97	97	97	97	97								
HAVO-0923	42676	KIPUKA PUAULU TRAILHEAD PARKING	PUBLIC	AS	26,506	97	97	97	97	97	97	97								
HAVO-0925	42671	KIPUKA PUAULU DAY USE AREA PARKING	PUBLIC	AS	11,123	97	97	97	97	97	97	97								
HAVO-0926	113876	ENVIRONMENTAL EDUCATION CENTER PARKING	PUBLIC	AS	11,556	97	97	97	97	97	97	97								
HAVO-0927	23493	ERUPTION SITE TURN-AROUND PARKING	PUBLIC	AS	9,989	90	97	90	97	97	97	97								
HAVO-0928	113875	TREE MOLDS PARKING	PUBLIC	AS	1,046	97	97	97	97	97	97	97								
HAVO-0930	22876	FOOTPRINTS TRAILHEAD PARKING	PUBLIC	AS	2,636	90	97	90	97	97	97	97								
HAVO-0933	42511	KULANAOKUAIKI CAMPGROUND PARKING	PUBLIC	AS	10,533	97	97	97	97	97	97	97								
HAVO-0935	239122	JAGGAR EMPLOYEE PARKING	NONPUBLIC	AS	15,207	53	97	53	73	73	97	90								
HAVO-0936	239124	PU'U LOA PETROGLYPHS TRAIL PARKING	PUBLIC	AS	4,129	90	97	97	97	97	97	90								
HAVO-0937AZ	239125	KILAUEA MILITARY CAMP A PARKING	PUBLIC	AS	37,418	90	97	90	97	97	90	97								
HAVO-0937BZ	239125	KILAUEA MILITARY CAMP B PARKING	PUBLIC	AS	12,556	90	97	90	97	97	90	97								
HAVO-0937CZ	239125	KILAUEA MILITARY CAMP C PARKING	PUBLIC	AS	23,002	90	97	90	97	97	90	97								
HAVO-0937DZ	239125	KILAUEA MILITARY CAMP D PARKING	PUBLIC	AS	476	90	97	90	97	97	97	97								
HAVO-0937EZ	239125	KILAUEA MILITARY CAMP E PARKING	PUBLIC	AS	566	73	90	90	73	90	90	73								
HAVO-0937FZ	239125	KILAUEA MILITARY CAMP F PARKING	PUBLIC	CO	943	30							73	30	73	73	97			
HAVO-0937GZ	239125	KILAUEA MILITARY CAMP G PARKING	PUBLIC	AS	1,136	73														
HAVO-0937HZ	239125	KILAUEA MILITARY CAMP H PARKING	PUBLIC	CO	2,549	53							90	53	73	90	90			
HAVO-0937IZ	239125	KILAUEA MILITARY CAMP I PARKING	PUBLIC	AS	322	90	97	90	97	97	90	90								
HAVO-0937JZ	239125	KILAUEA MILITARY CAMP J PARKING	PUBLIC	AS	3,513	90	97	97	97	97	90	97								
HAVO-0937KZ	239125	KILAUEA MILITARY CAMP K PARKING	PUBLIC	AS	14,942	53	73	53	90	97	97	73								
HAVO-0937LZ	239125	KILAUEA MILITARY CAMP L PARKING	PUBLIC	AS	1,033	90	90	90	97	97	97	90								
HAVO-0937MZ	239125	KILAUEA MILITARY CAMP M PARKING	PUBLIC	AS	1,411	90	97	97	97	97	97	90								



Cycle 6 - Road Inventory Program Parking Area Condition Summary Report

Hawaii Volcanoes National Park

Condition (Rating / Index) Legend

EXCELLENT (97)
GOOD (90)
FAIR (73)
POOR* (0, 30, 53)
NR = NOT RATED

- Notes:
- A PCR of 0 indicates a paved parking area in very poor condition. Individual distresses could not be identified.
 - Additional details on individual parking areas can be found in Section 6 of the Cycle 6 RIP Report.
 - Refer to the RIP Report Appendix for an explanation of the rating system and rating methods.

Condition Rating Details for Paved Parking Areas

Route No.	FMSS No.	Route Name	User Access	Surf. Type	Area (Sq. Ft.)	Pavement Condition Rating (PCR)	Asphalt Surface Distresses						Concrete Surface Distresses					
							Alligator Cracking	Longitudinal / Transverse Cracking	Rutting / Distortions	Potholes / Patching	HMA Patching	Surface Raveling / Bleeding	Joint Faulting	Slab Cracking	Joint Distresses	Delamination / Pop-Outs	Potholes / Patching	
HAVO-0937NZ	239125	KILAUEA MILITARY CAMP N PARKING	PUBLIC	AS	5,527	97	97	97	97	97	97	97						
HAVO-0937OZ	239125	KILAUEA MILITARY CAMP O PARKING	PUBLIC	AS	8,661	97	97	97	97	97	97	97						
HAVO-0939	240234	MULAWAI A PELE TRAILHEAD PARKING	PUBLIC	AS	13,055	97	97	97	97	97	97	97						
HAVO-0940	N/A	HILINA PALI HANDICAP OVERLOOK PARKING	PUBLIC	AS	406	97	97	97	97	97	97	97						
HAVO-0941	240236	VOLCANO ART CENTER PARKING	PUBLIC	AS	7,440	90	97	97	97	97	90	97						
HAVO-0944	240231	MAUNA LOA LOOKOUT PARKING	PUBLIC	AS	3,468	97	97	97	97	97	97	97						
HAVO-0949AZ	256423	KAHUKU OLD MAMALAHOA HIGHWAY PARKING SOUTH	PUBLIC	AS	1,698	0	NR	NR	NR	NR	NR	NR						
HAVO-0949BZ	256423	KAHUKU OLD MAMALAHOA HIGHWAY PARKING NORTH	PUBLIC	AS	1,464	0	NR	NR	NR	NR	NR	NR						
HAVO-0956AZ	N/A	NAMAKANI PAIO CAMPGROUND RESTROOM PARKING	PUBLIC	AS	884	97	97	97	97	97	97	97						
HAVO-0956BZ	N/A	NAMAKANI PAIO CAMPGROUND SHELTER PARKING	PUBLIC	AS	1,373	97	97	97	97	97	97	97						
HAVO-0957	N/A	KAHUKU VISTOR CENTER HANDICAP PARKING	PUBLIC	AS	786	97	97	97	97	97	97	97						

Section 4 Park Route Location Maps



Hawaii Volcanoes National Park

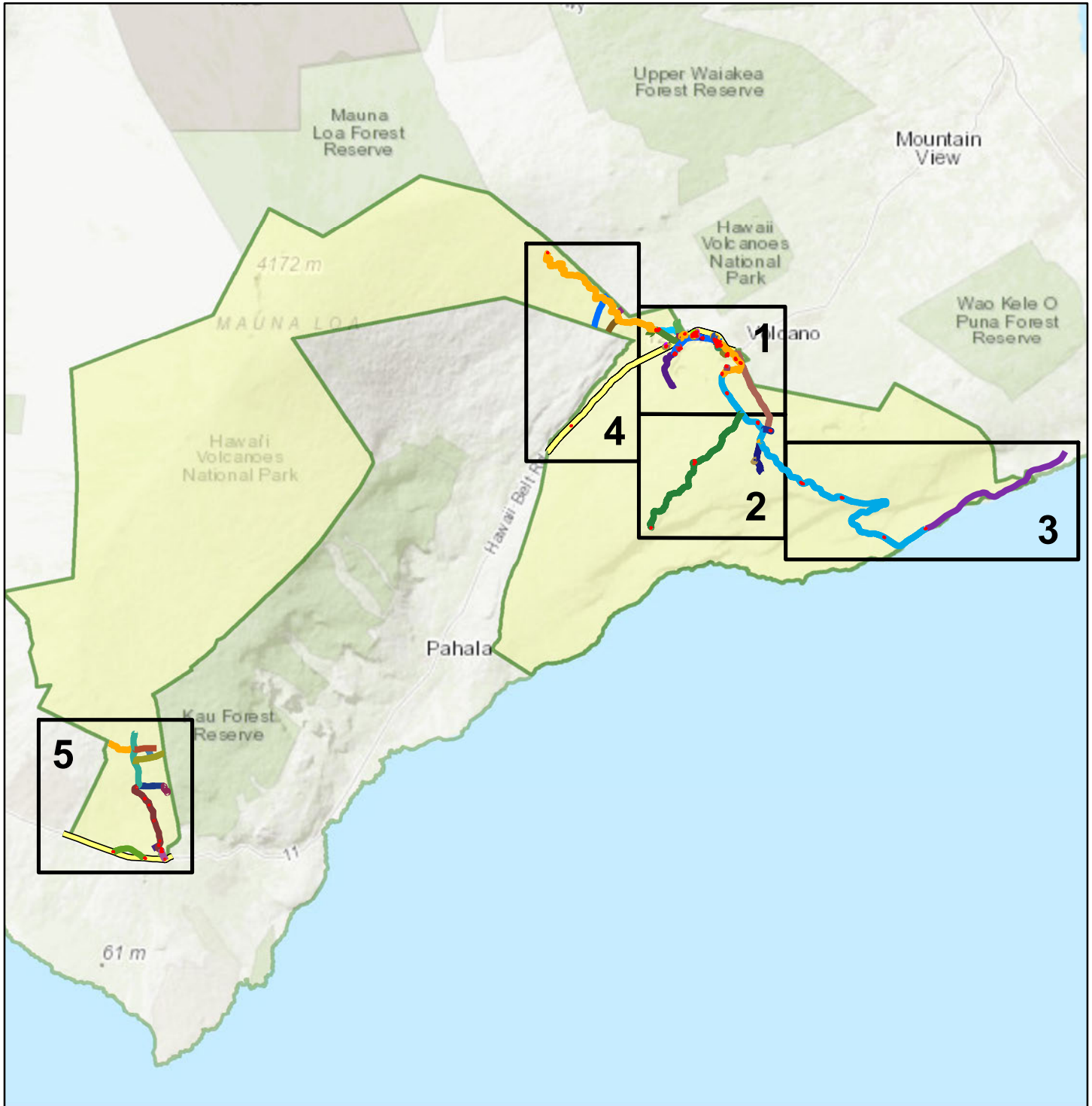


Federal Lands Highway
Road Inventory Program

Hawaii Volcanoes National Park

ROUTE LOCATION MAP

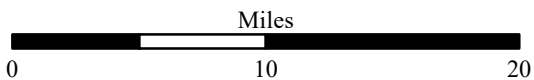
Key Map



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: Unique colors are used to differentiate roads

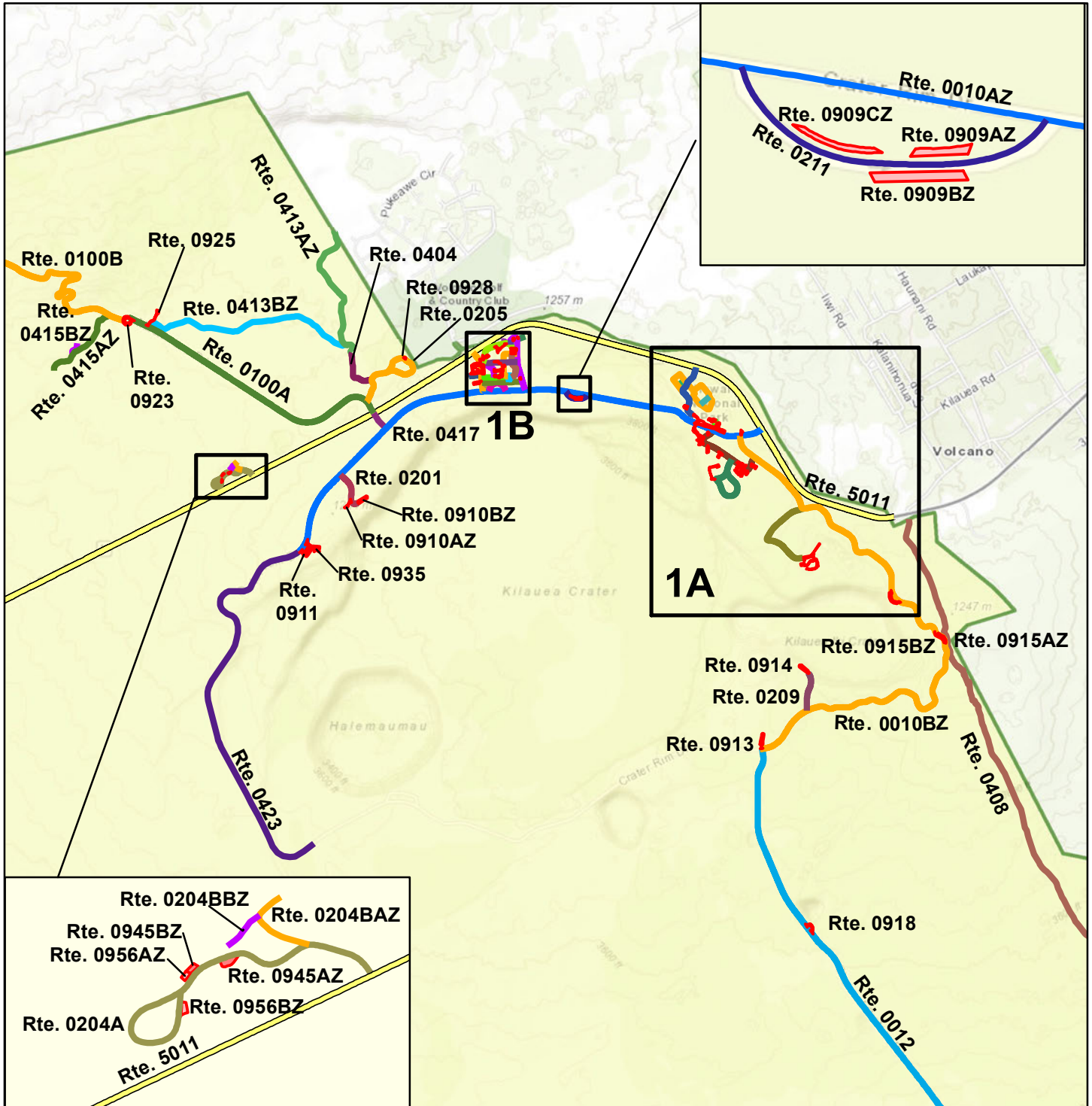
— Non-NPS Collected Routes



Hawaii Volcanoes National Park

ROUTE LOCATION MAP

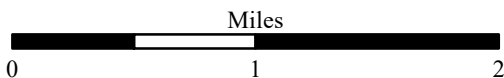
Area Map 1



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: Unique colors are used to differentiate roads

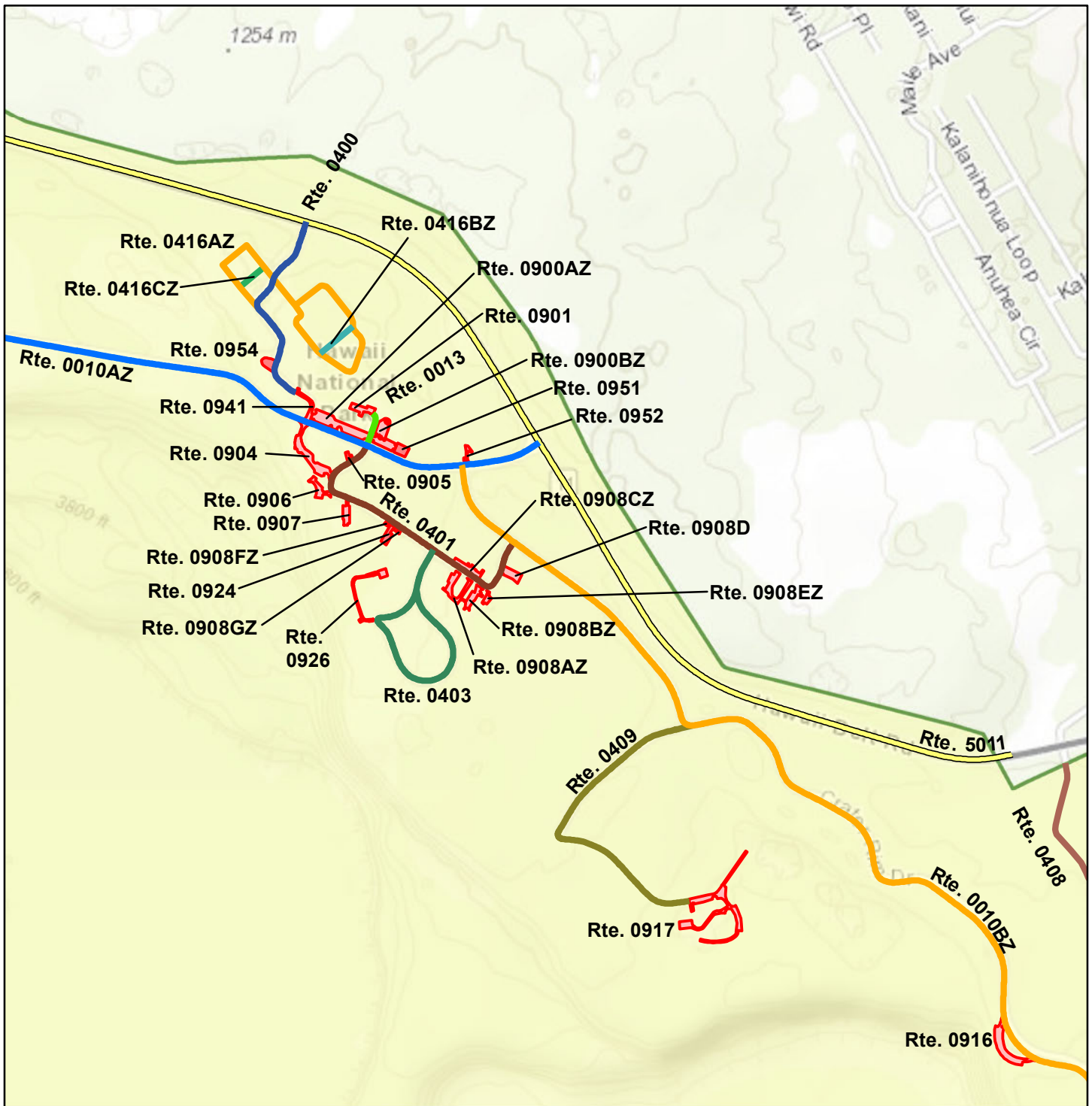
— Non-NPS Collected Routes



Hawaii Volcanoes National Park

ROUTE LOCATION MAP

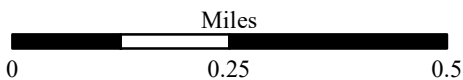
Area Map 1A



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: Unique colors are used to differentiate roads

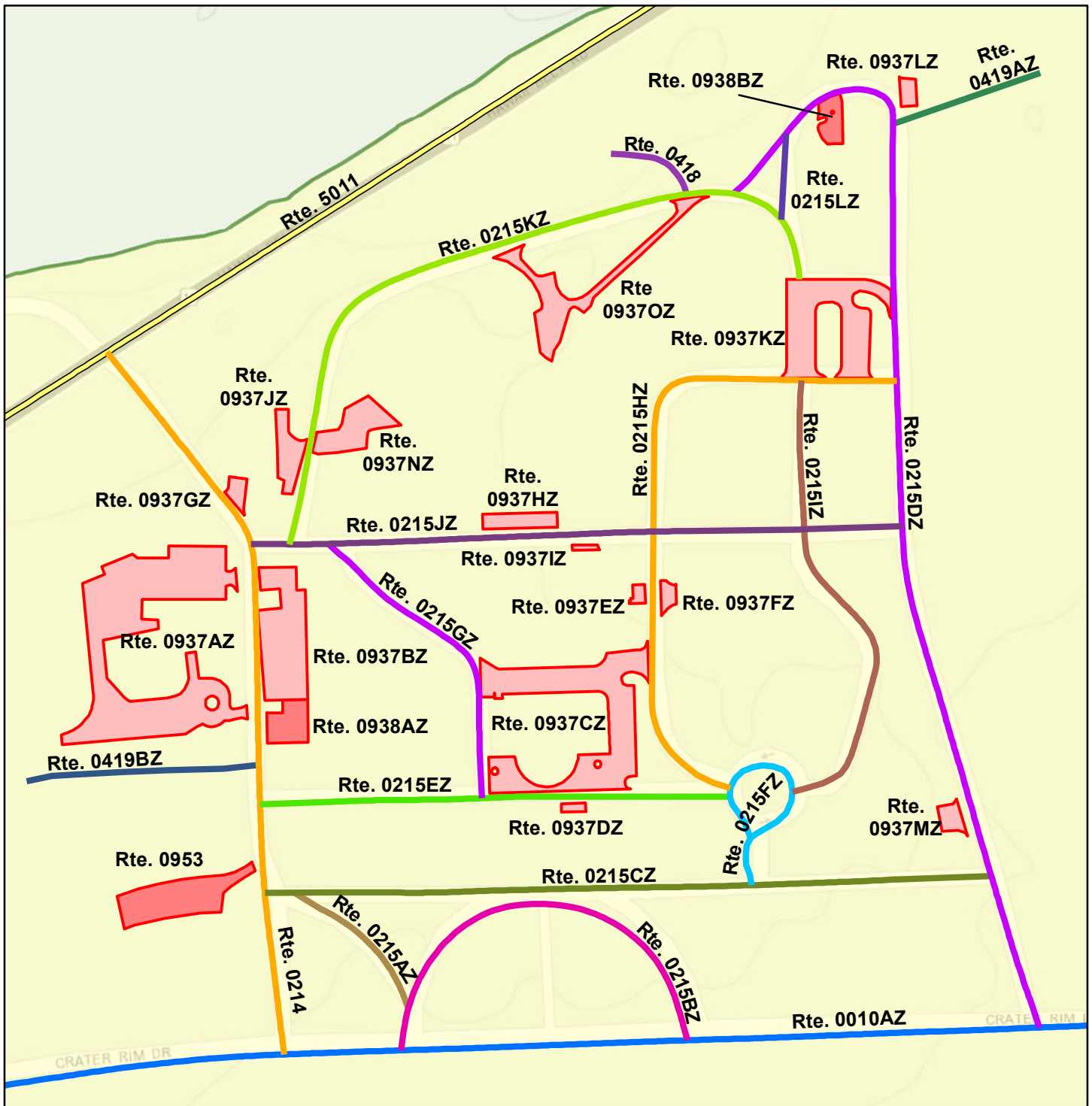
Non-NPS Collected Routes



Hawaii Volcanoes National Park

ROUTE LOCATION MAP

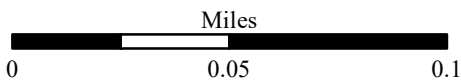
Area Map 1B



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: Unique colors are used to differentiate roads

Non-NPS Collected Routes



Hawaii Volcanoes National Park

ROUTE LOCATION MAP

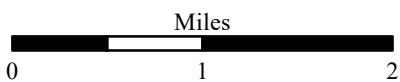
Area Map 2



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: Unique colors are used to differentiate roads

==== Non-NPS Collected Routes



Hawaii Volcanoes National Park

ROUTE LOCATION MAP

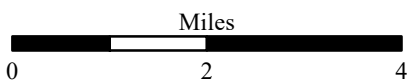
Area Map 3



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: Unique colors are used to differentiate roads

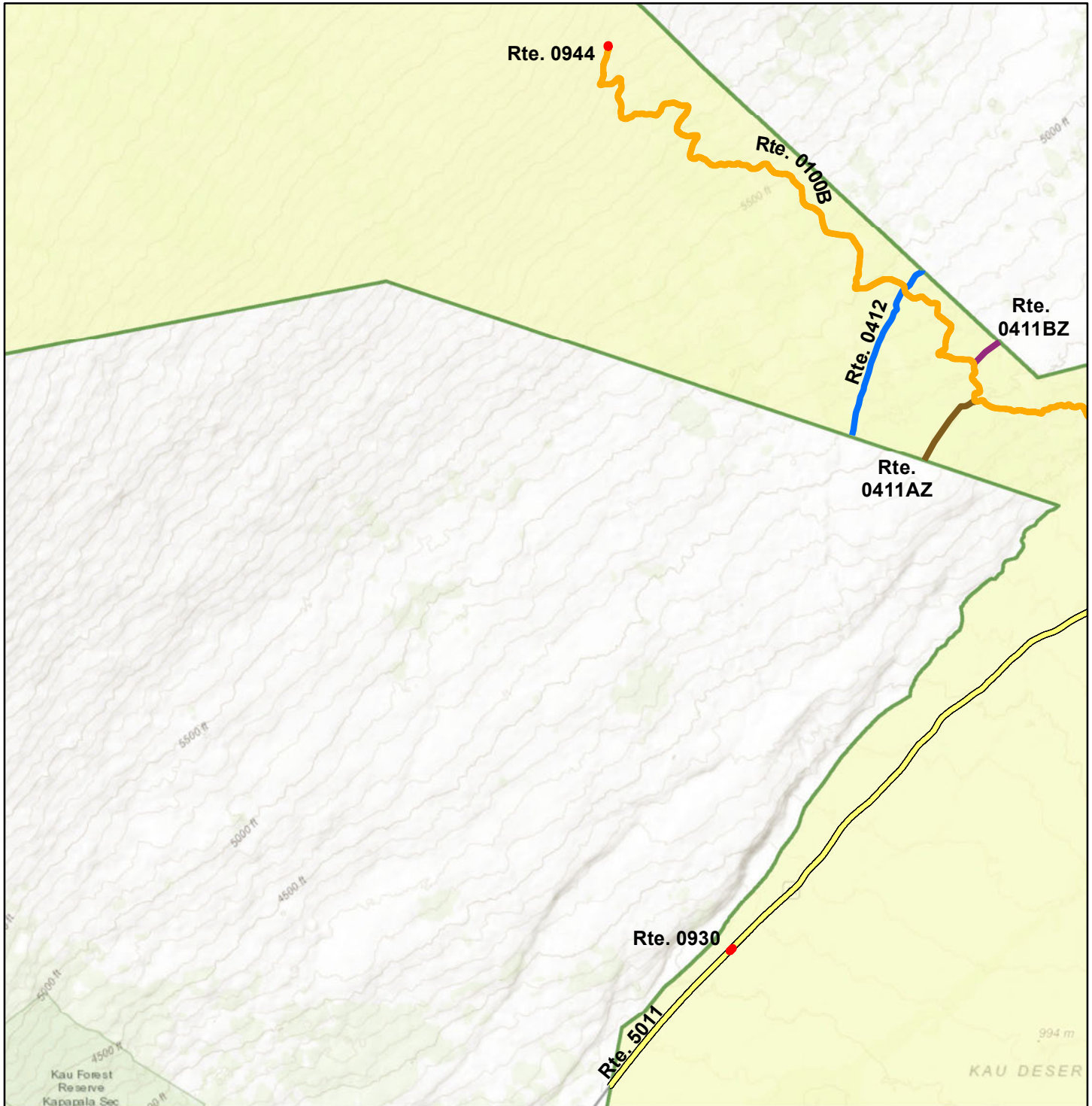
==== Non-NPS Collected Routes



Hawaii Volcanoes National Park


ROUTE LOCATION MAP

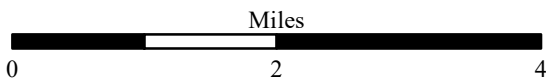
Area Map 4



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: Unique colors are used to differentiate roads

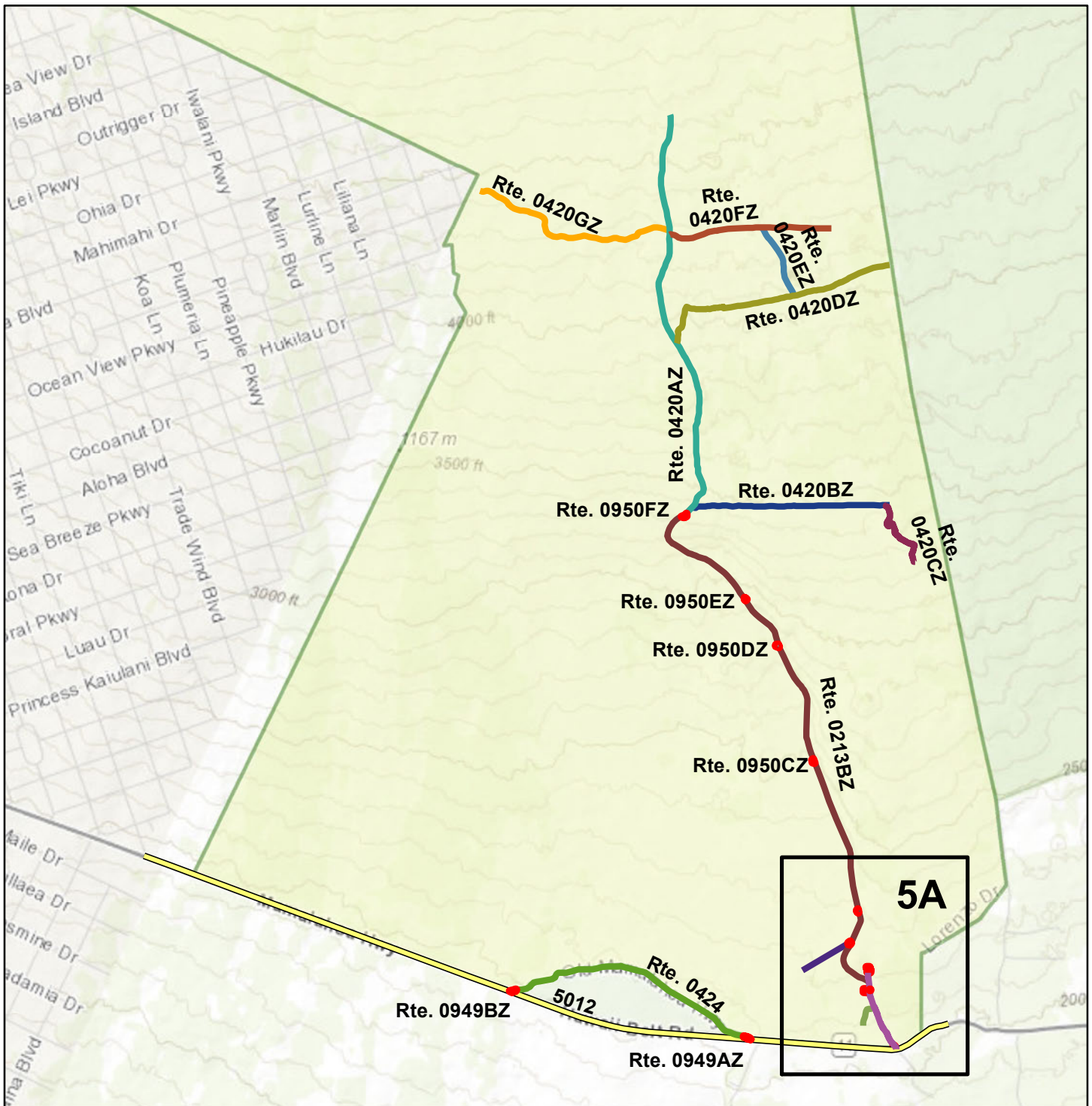
 Non-NPS Collected Routes



Hawaii Volcanoes National Park

ROUTE LOCATION MAP

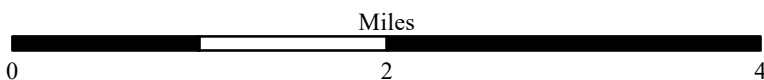
Area Map 5



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: Unique colors are used to differentiate roads

Non-NPS Collected Routes



Hawaii Volcanoes National Park


ROUTE LOCATION MAP

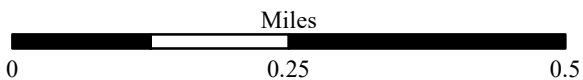
Area Map 5A



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: Unique colors are used to differentiate roads

 **Non-NPS Collected Routes**

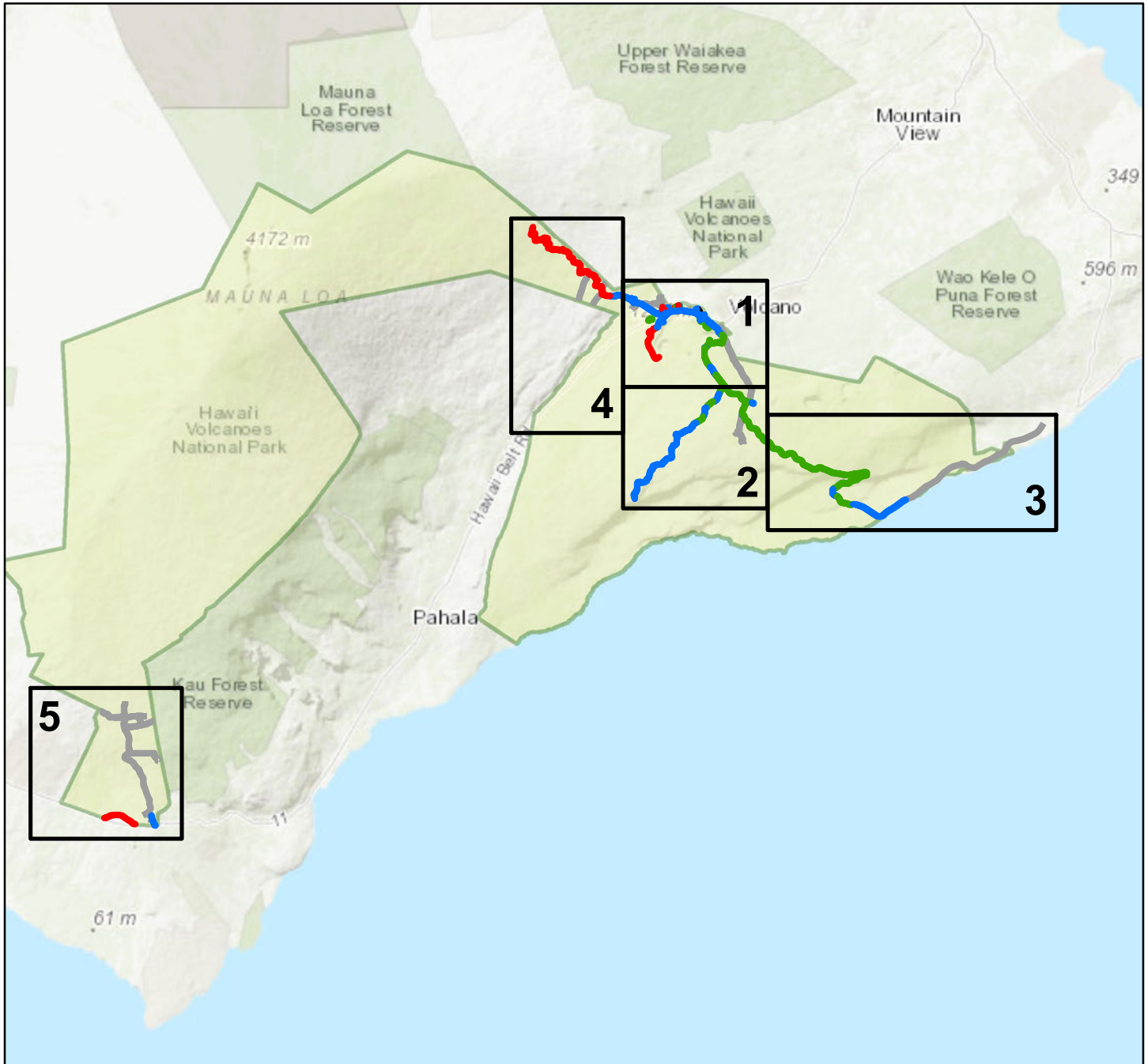


Hawaii Volcanoes National Park

ROUTE CONDITION MAP

PCR -MILE BY MILE

Key Map

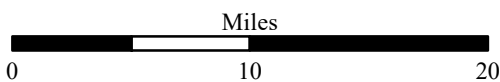


Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
----------------------	----------------------	-----------------------	-----------------------------	------------------

Colors on map represent condition scores at 1-mile intervals. See Appendix for definitions and formulas
Only Data Collection Vehicle and Manually Rated Roads are displayed

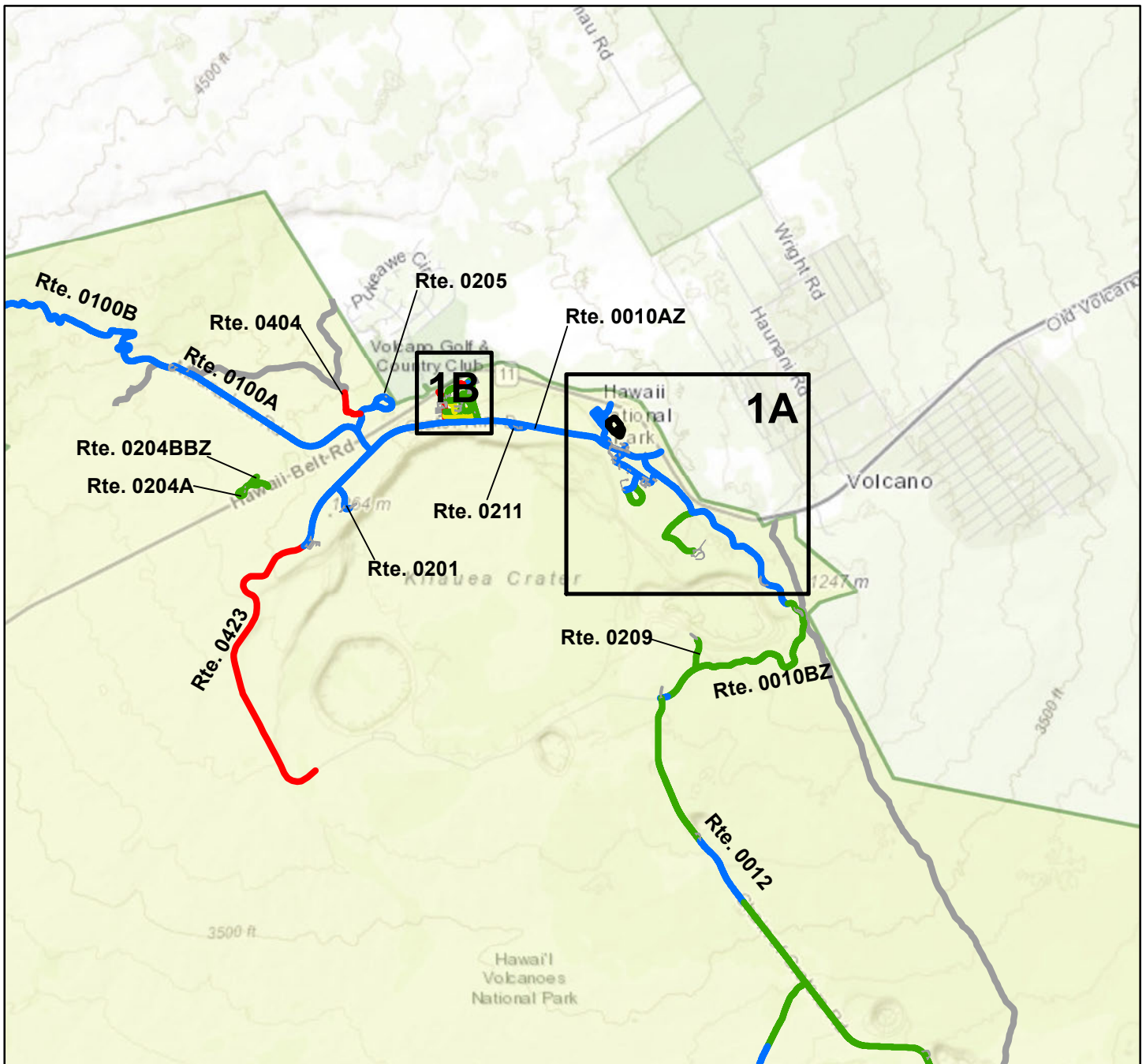


Hawaii Volcanoes National Park

ROUTE CONDITION MAP

PCR - MILE BY MILE

Area Map 1

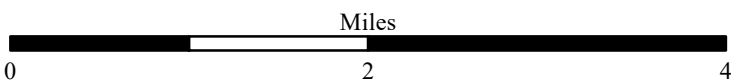


Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
---------------	---------------	----------------	----------------------	-----------

Colors on map represent condition scores at 1-mile intervals. See Appendix for definitions and formulas
Only Data Collection Vehicle and Manually Rated Roads are displayed

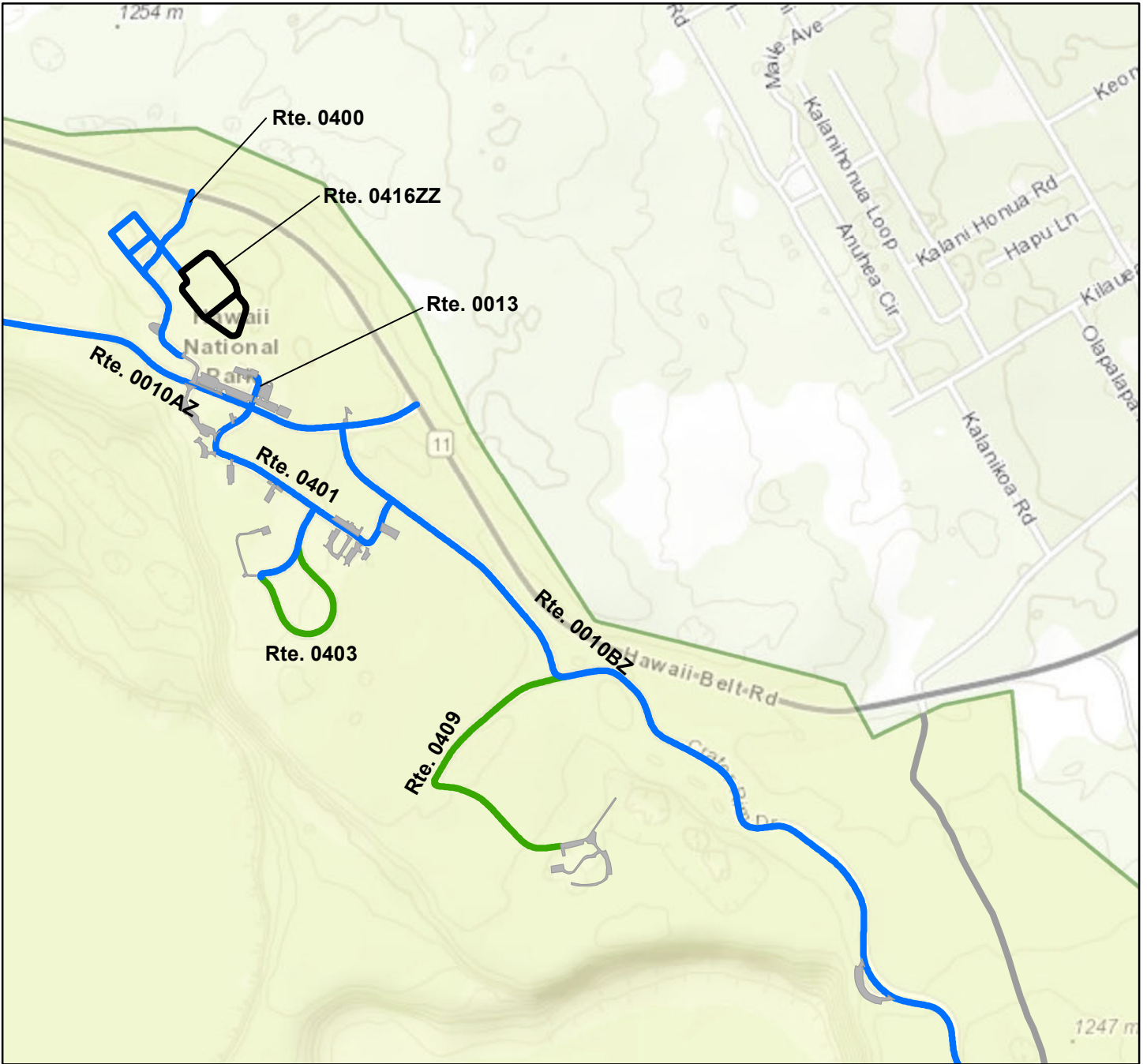


Hawaii Volcanoes National Park

ROUTE CONDITION MAP

PCR - MILE BY MILE

Area Map 1A

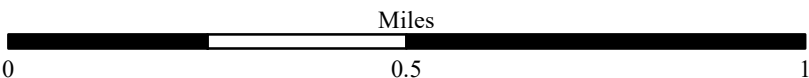


Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
----------------------	----------------------	-----------------------	-----------------------------	------------------

Colors on map represent condition scores at 1-mile intervals. See Appendix for definitions and formulas
Only Data Collection Vehicle and Manually Rated Roads are displayed

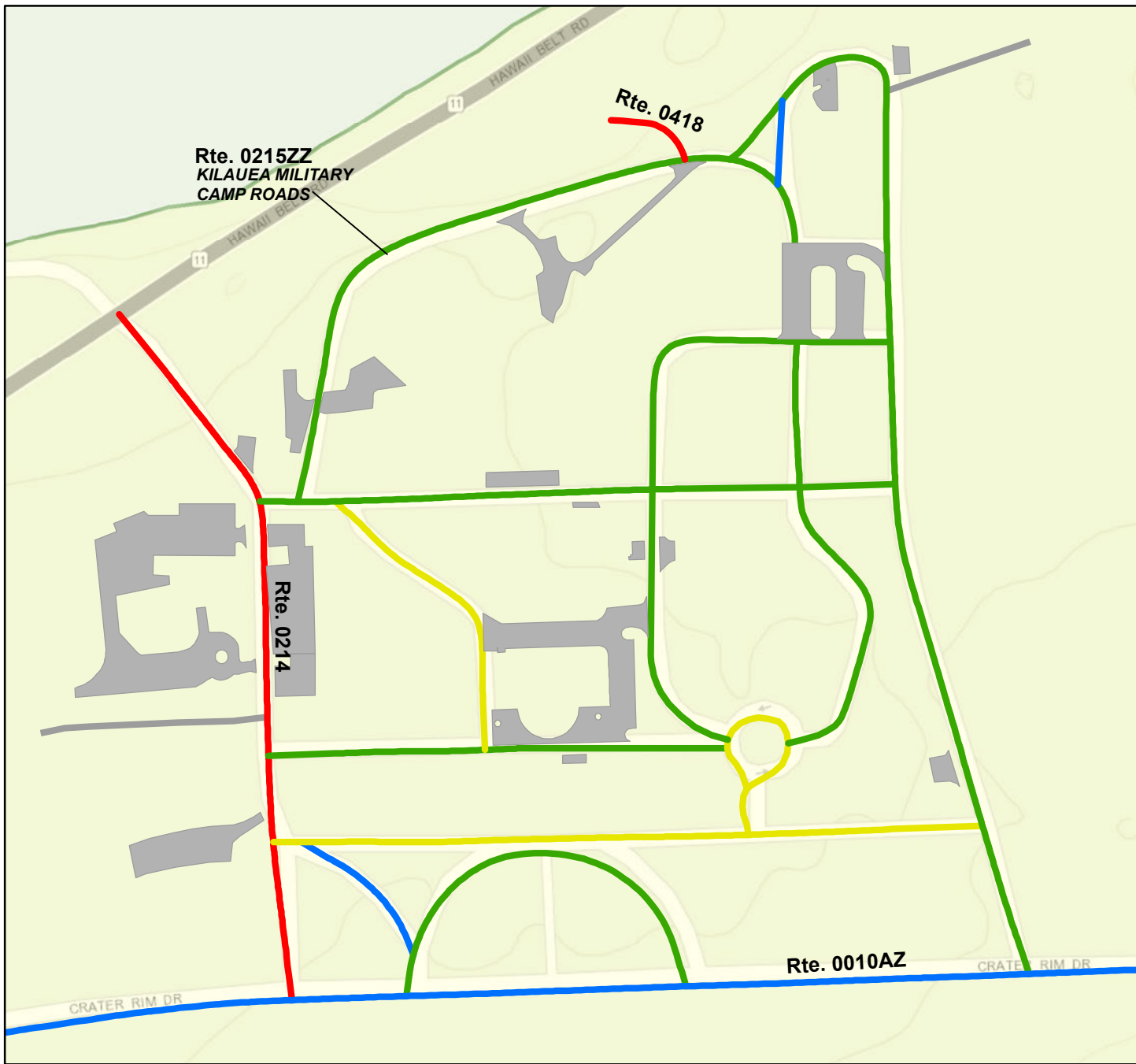


Hawaii Volcanoes National Park

ROUTE CONDITION MAP

PCR - MILE BY MILE

Area Map 1B

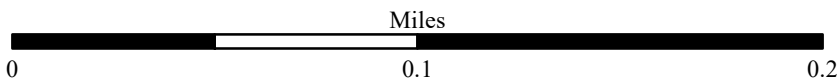


Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
----------------------	----------------------	-----------------------	-----------------------------	------------------

Colors on map represent condition scores at 1-mile intervals. See Appendix for definitions and formulas
Only Data Collection Vehicle and Manually Rated Roads are displayed

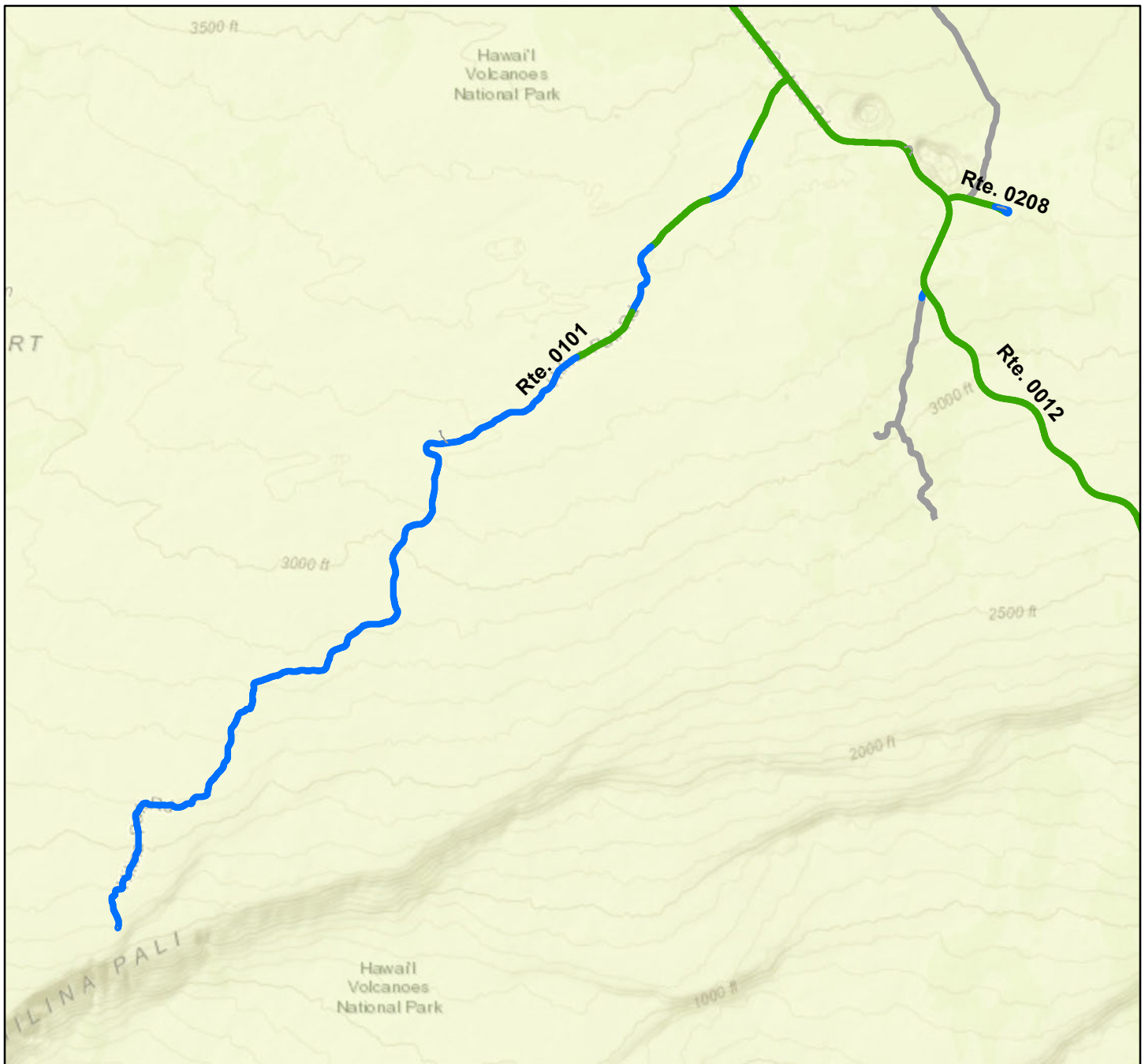


Hawaii Volcanoes National Park

ROUTE CONDITION MAP

PCR - MILE BY MILE

Area Map 2



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

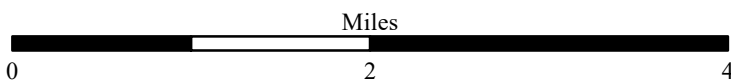
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

Colors on map represent condition scores at 1-mile intervals. See Appendix for definitions and formulas
Only Data Collection Vehicle and Manually Rated Roads are displayed



Hawaii Volcanoes National Park

ROUTE CONDITION MAP

PCR - MILE BY MILE

Area Map 3

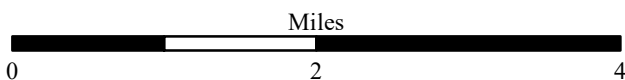


Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
----------------------	----------------------	-----------------------	-----------------------------	------------------

Colors on map represent condition scores at 1-mile intervals. See Appendix for definitions and formulas
Only Data Collection Vehicle and Manually Rated Roads are displayed

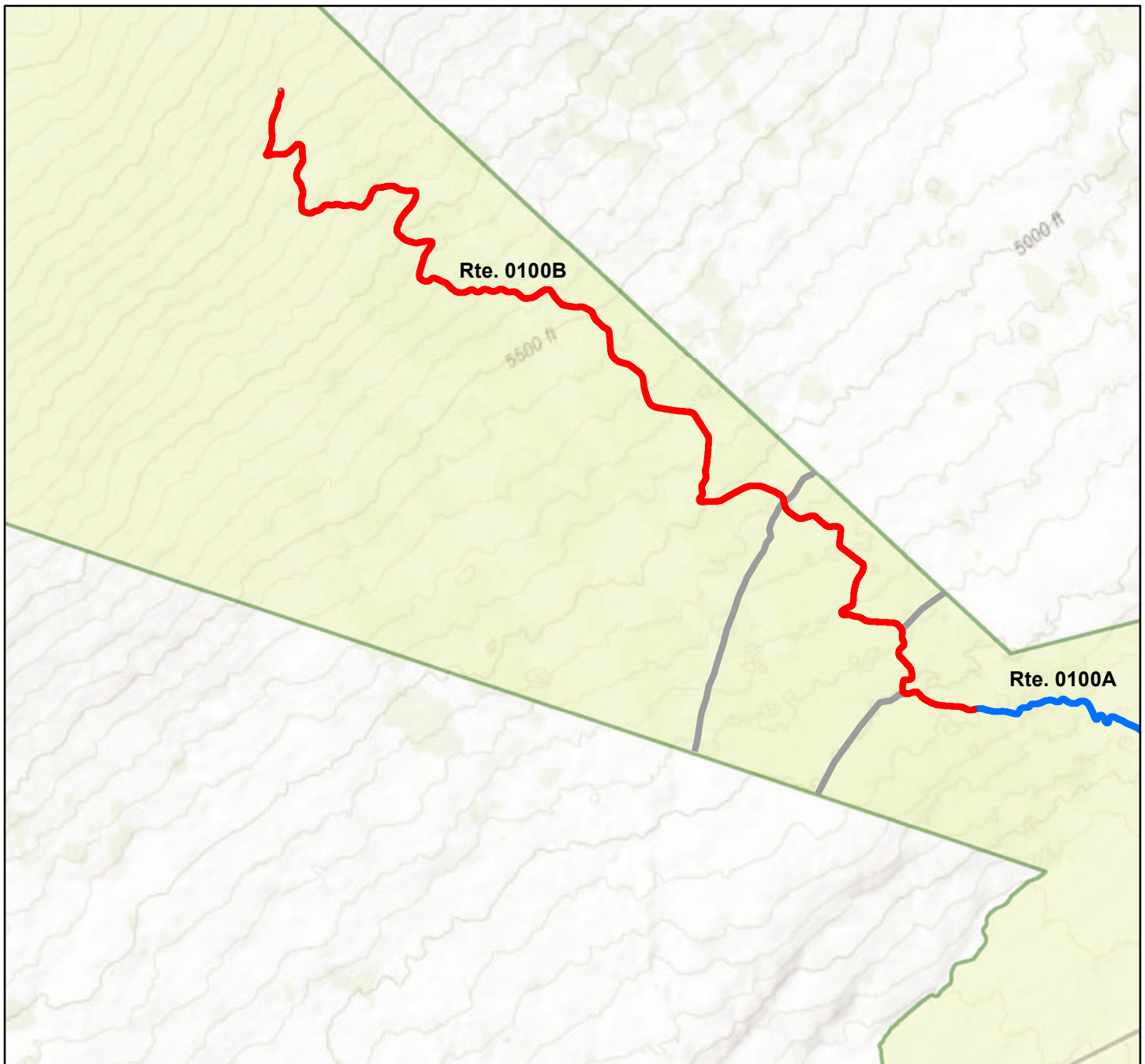


Hawaii Volcanoes National Park

ROUTE CONDITION MAP

PCR - MILE BY MILE

Area Map 4



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

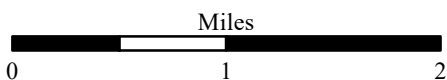
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

Colors on map represent condition scores at 1-mile intervals. See Appendix for definitions and formulas
Only Data Collection Vehicle and Manually Rated Roads are displayed

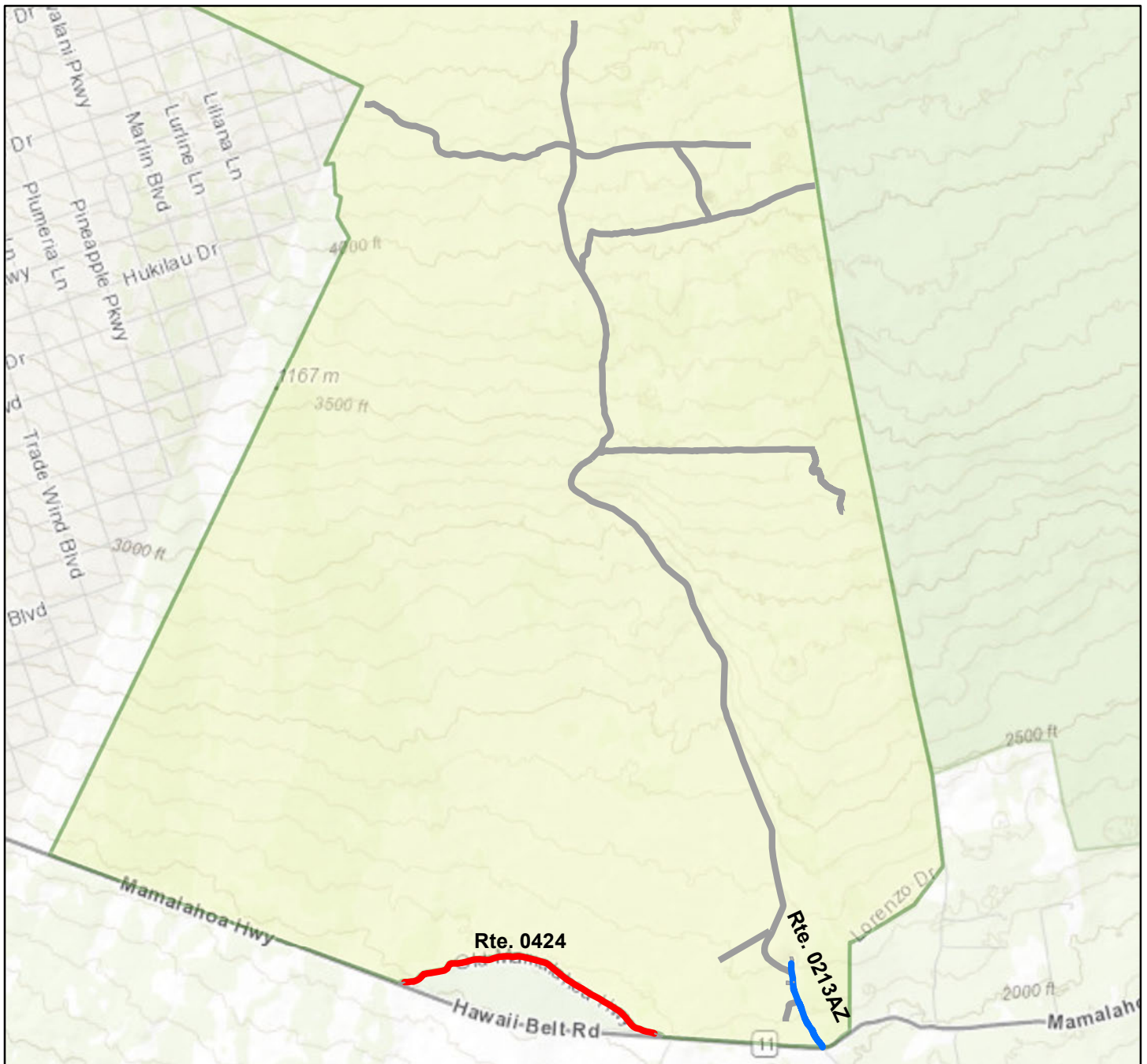


Hawaii Volcanoes National Park

ROUTE CONDITION MAP

PCR - MILE BY MILE

Area Map 5

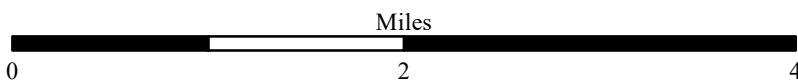


Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

- Poor (0 - 60)
- Fair (61- 84)
- Good (85 - 94)
- Excellent (95 - 100)
- Not Rated

Colors on map represent condition scores at 1-mile intervals. See Appendix for definitions and formulas
 Only Data Collection Vehicle and Manually Rated Roads are displayed



Section 5 Paved Road Condition Rating Sheets



Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program

Hawaii Volcanoes National Park

ROUTE 0010ZZ: CRATER RIM DRIVE

Summary Route



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: The weighted average summary PCR value is calculated from only the sections of road where the PCR was collected. The overall PCR for the summary route may not reflect individual subcomponent ratings.

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

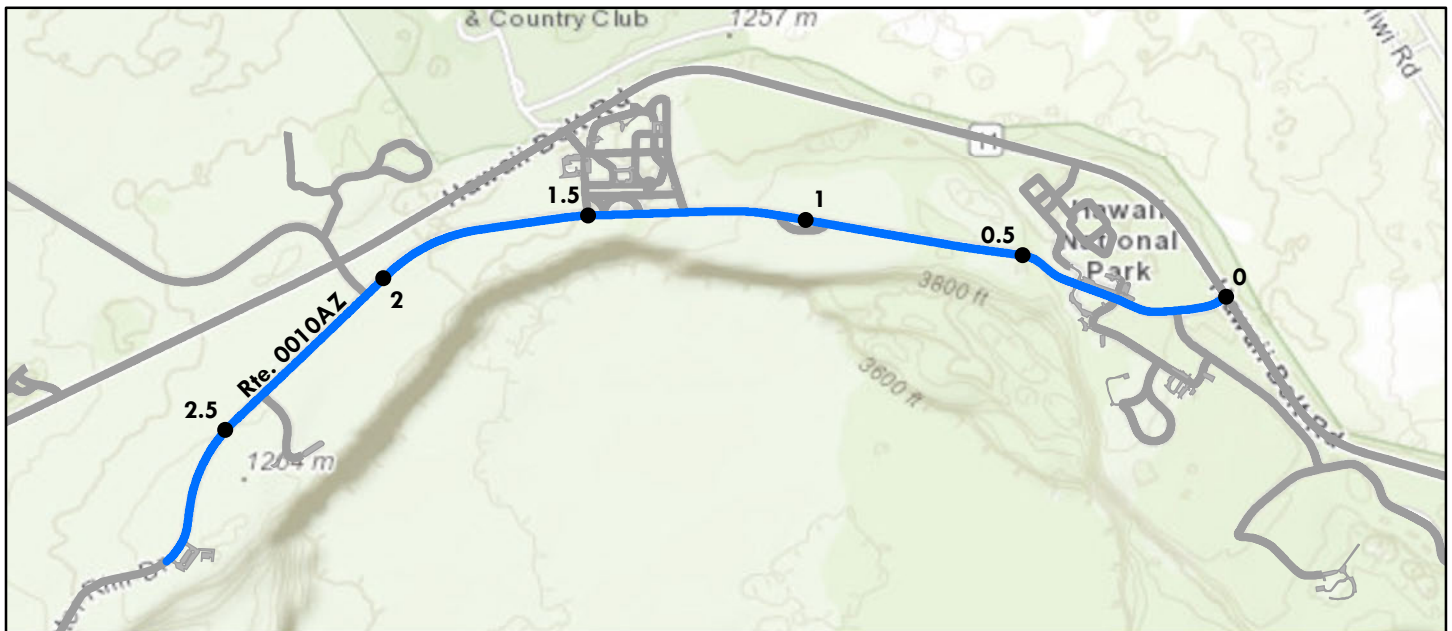
Inspection Date: 3/8/2022						
Paved Length (Miles): 5.89						
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	95					
Lane & Width Information						
Number of Lanes	2					
Paved Width (ft)	22.3					
Lane Width (ft)	10					

Hawaii Volcanoes National Park

ROUTE 0010AZ: CRATER RIM DRIVE - WEST

Subcomponent of Route HAVO-0010ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

Inspection Date:	3/8/2022	Beginning Section MP	0.00	0.50	1.00	1.50	2.00
		Paved Length (Miles):	2.83	Section Length (MI)	0.50	0.50	0.50
Surface Type:	ASPHALT	Route Summary					
Roadway Condition Information							
Pavement Condition Rating (PCR)	97	97	97	97	97	97	97
Surface Condition Rating (SCR)	97	97	97	97	97	97	97
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Distress Index Values							
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alligator Crack Index	97	97	97	97	97	97	97
Longitudinal Crack Index	97	97	97	97	97	97	97
Transverse Cracking Index	97	97	97	97	97	97	97
Patching Index	97	97	97	97	97	97	97
Rutting Index	97	97	97	97	97	97	97
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lane & Width Information							
Number of Lanes	2	2	2	2	2	2	2
Paved Width (ft)	22	22	22	22	22	22	22
Lane Width (ft)	10	10	10	10	10	10	10

Hawaii Volcanoes National Park

ROUTE 0010AZ: CRATER RIM DRIVE - WEST

Subcomponent of Route HAVO-0010ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

Inspection Date: 3/8/2022	Beginning Section MP	2.50				
Paved Length (Miles): 2.83	Section Length (MI)	0.33				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97	97				
Surface Condition Rating (SCR)	97	97				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	97	97				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	22	22				
Lane Width (ft)	10	10				

Hawaii Volcanoes National Park

ROUTE 0010AZ: CRATER RIM DRIVE - WEST

Condition Photos



HAVO_0010AZ_0.031.jpg



HAVO_0010AZ_0.204.jpg



HAVO_0010AZ_0.777.jpg



HAVO_0010AZ_1.241.jpg



HAVO_0010AZ_1.819.jpg



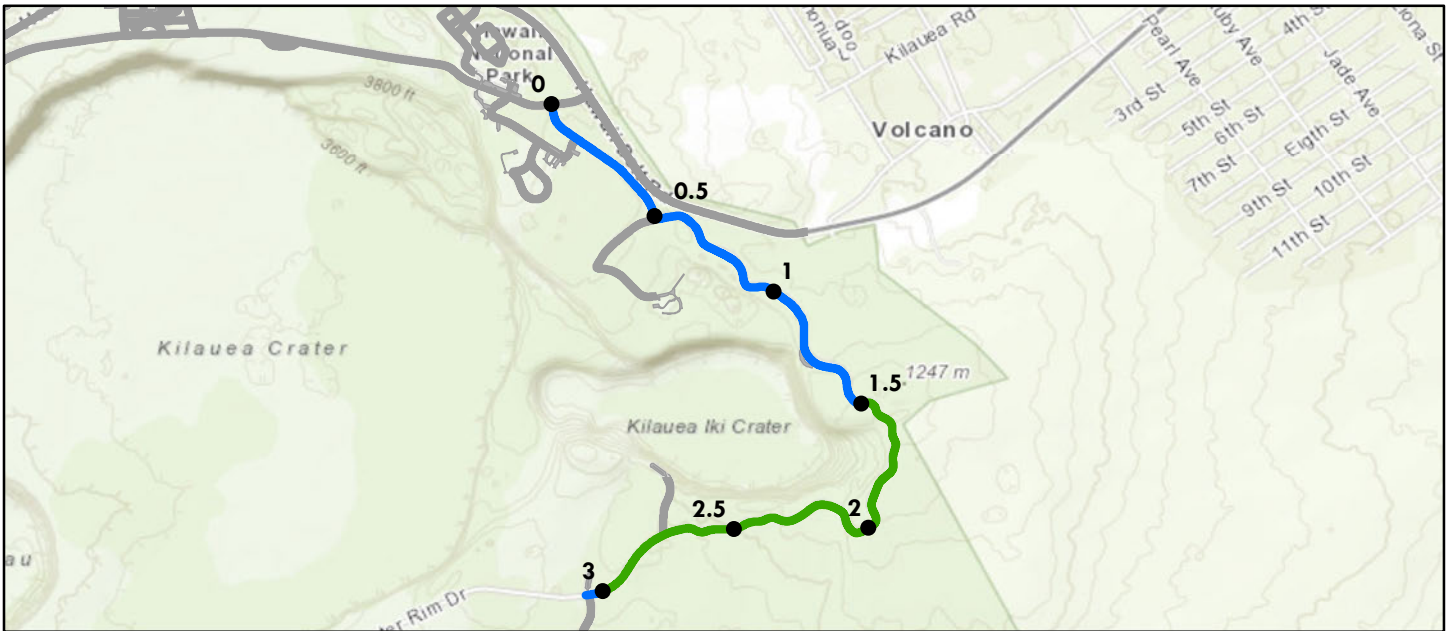
HAVO_0010AZ_2.565.jpg

Hawaii Volcanoes National Park

ROUTE 0010BZ: CRATER RIM DRIVE - EAST

Subcomponent of Route HAVO-0010ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

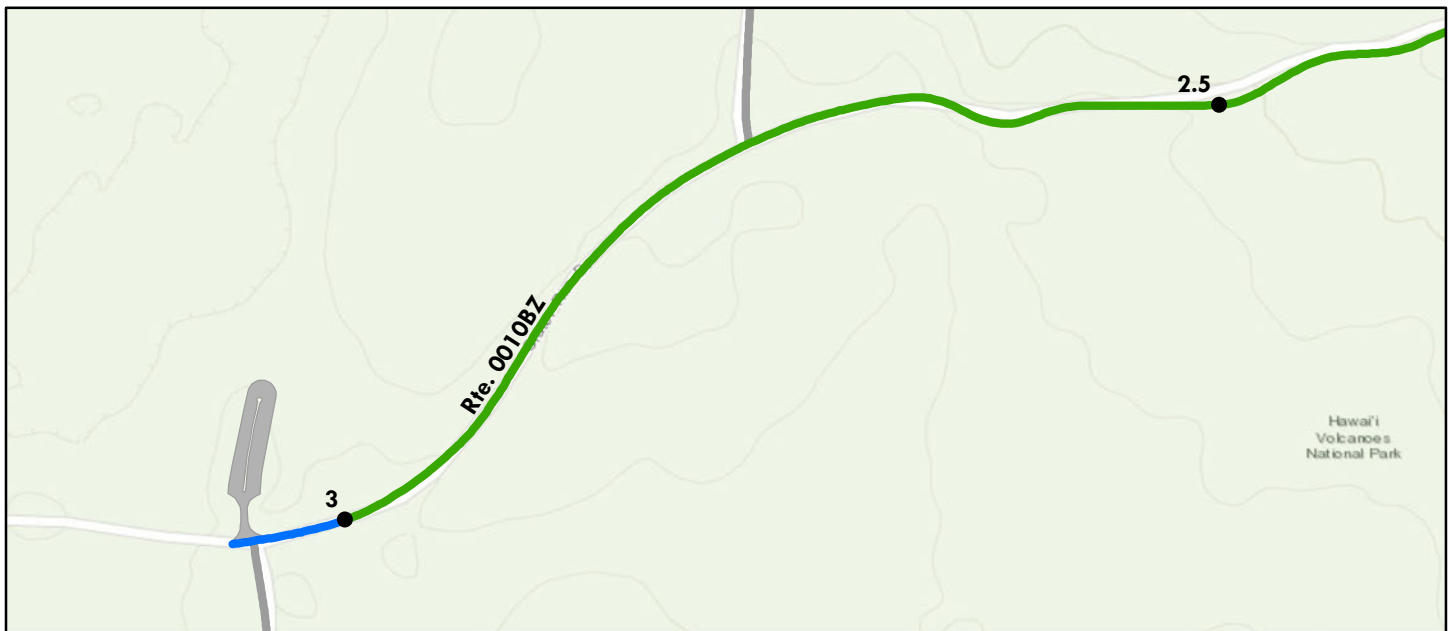
Inspection Date:	3/8/2022	Beginning Section MP	0.00	0.50	1.00	1.50	2.00
		Paved Length (Miles):	3.06	Section Length (MI)	0.50	0.50	0.50
Surface Type:	ASPHALT	Route Summary					
Roadway Condition Information							
Pavement Condition Rating (PCR)	94	97	97	97	90	90	
Surface Condition Rating (SCR)	94	97	97	97	90	90	
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A	
Distress Index Values							
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A	
Alligator Crack Index	97	97	97	97	97	97	
Longitudinal Crack Index	97	97	97	97	97	97	
Transverse Cracking Index	94	97	97	97	90	90	
Patching Index	97	97	97	97	97	97	
Rutting Index	97	97	97	97	97	97	
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A	
Lane & Width Information							
Number of Lanes	2	2	2	2	2	2	
Paved Width (ft)	22.5	25	22	22	22	22	
Lane Width (ft)	10	10	10	10	10	10	

Hawaii Volcanoes National Park

ROUTE 0010BZ: CRATER RIM DRIVE - EAST

Subcomponent of Route HAVO-0010ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

Inspection Date: 3/8/2022	Beginning Section MP	2.50	3.00			
Paved Length (Miles): 3.06	Section Length (MI)	0.50	0.06			
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	94	90	97			
Surface Condition Rating (SCR)	94	90	97			
Roughness Condition Index (RCI)	N/A	N/A	N/A			
Distress Index Values						
Structural Crack Index	N/A	N/A	N/A			
Alligator Crack Index	97	97	97			
Longitudinal Crack Index	97	97	97			
Transverse Cracking Index	94	90	97			
Patching Index	97	97	97			
Rutting Index	97	97	97			
International Roughness Index (IRI)	N/A	N/A	N/A			
Lane & Width Information						
Number of Lanes	2	2	2			
Paved Width (ft)	22.5	22	22			
Lane Width (ft)	10	10	10			

Hawaii Volcanoes National Park

ROUTE 0010BZ: CRATER RIM DRIVE - EAST

Condition Photos



HAVO_0010BZ_0.039.jpg



HAVO_0010BZ_0.493.jpg



HAVO_0010BZ_1.091.jpg



HAVO_0010BZ_2.059.jpg



HAVO_0010BZ_2.650.jpg

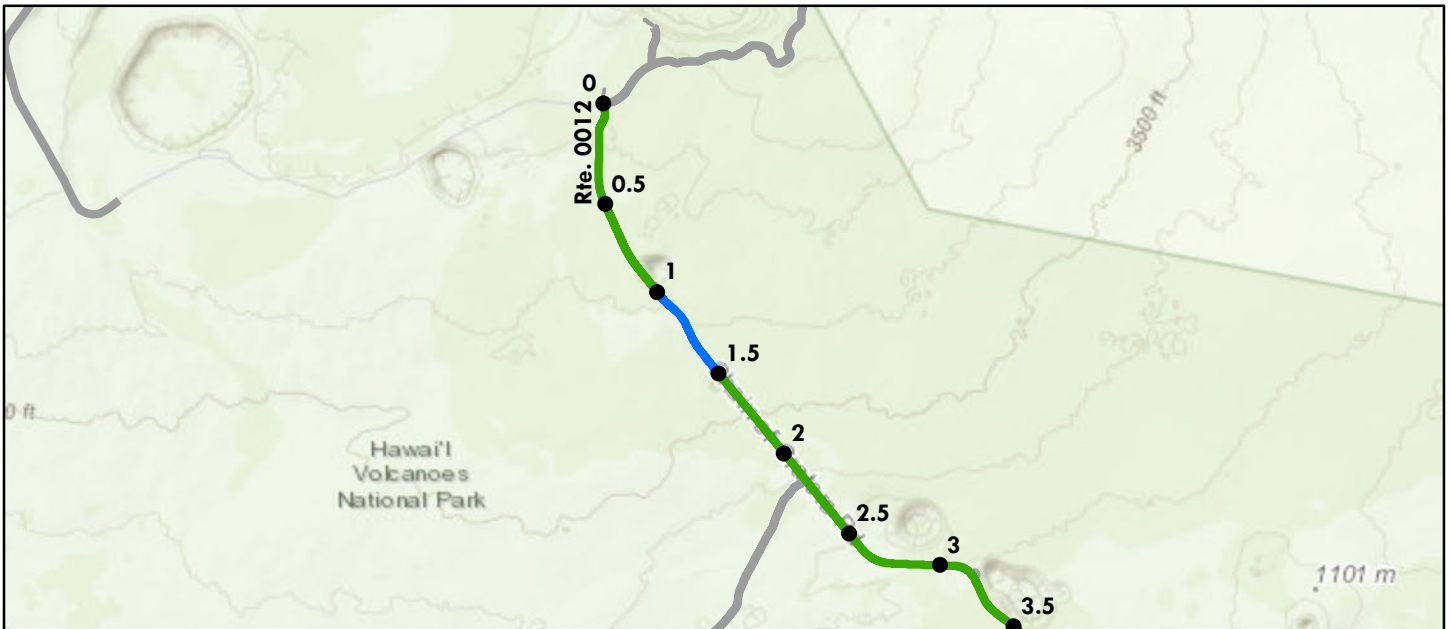


HAVO_0010BZ_3.006.jpg

Hawaii Volcanoes National Park

ROUTE 0012: CHAIN OF CRATERS ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

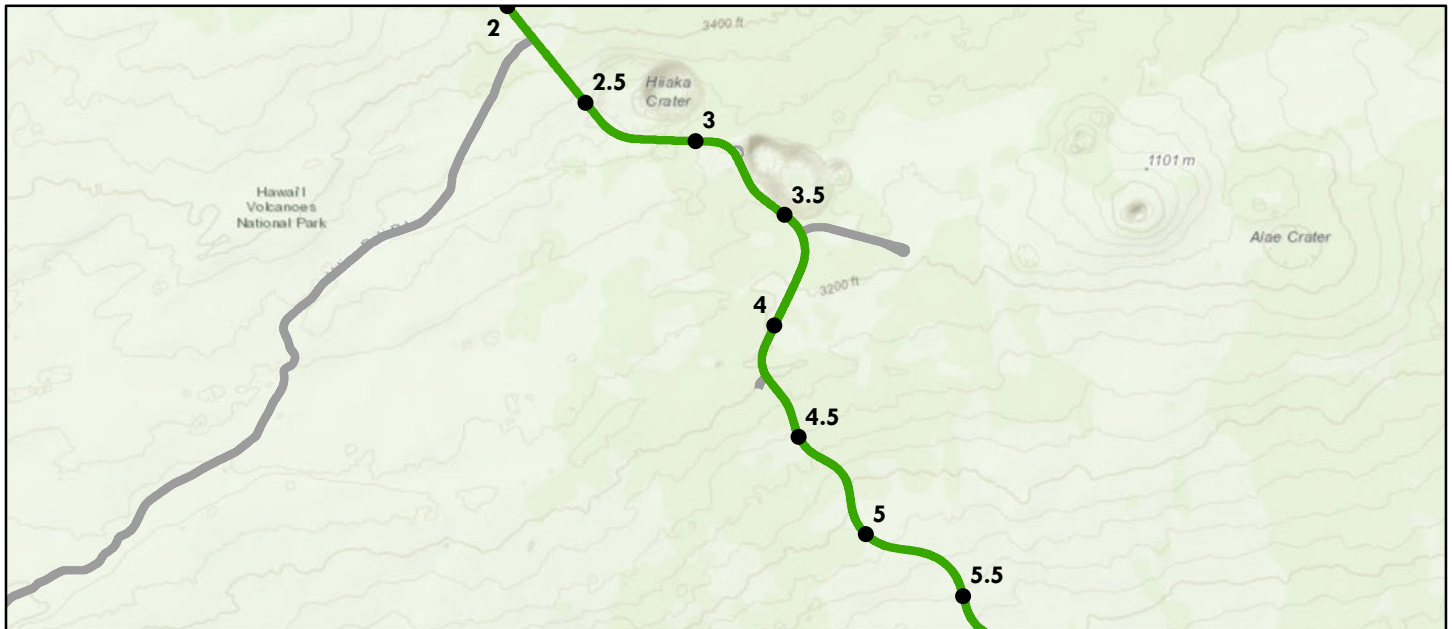
See Appendix for definitions and formulas

Inspection Date:	3/8/2022	Beginning Section MP	0.00	0.50	1.00	1.50	2.00
Paved Length (Miles):	18.56	Section Length (MI)	0.50	0.50	0.50	0.50	0.50
Surface Type:	ASPHALT	Route Summary					
Roadway Condition Information							
Pavement Condition Rating (PCR)	92	90	90	97	90	90	
Surface Condition Rating (SCR)	92	90	90	97	90	90	
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A	
Distress Index Values							
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A	
Alligator Crack Index	97	97	97	97	97	97	
Longitudinal Crack Index	96	97	97	97	97	97	
Transverse Cracking Index	92	90	90	97	90	90	
Patching Index	97	97	97	97	97	97	
Rutting Index	97	97	97	97	97	97	
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A	
Lane & Width Information							
Number of Lanes	2	2	2	2	2	2	
Paved Width (ft)	22	22	22	22	22	22	
Lane Width (ft)	10	10	10	10	10	10	

Hawaii Volcanoes National Park

ROUTE 0012: CHAIN OF CRATERS ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

		Beginning Section MP	2.50	3.00	3.50	4.00	4.50
Inspection Date:	3/8/2022	Section Length (MI)	0.50	0.50	0.50	0.50	0.50
Paved Length (Miles):	18.56	Route Summary					
Surface Type:	ASPHALT						
Roadway Condition Information							
Pavement Condition Rating (PCR)	92	90	90	90	90	90	90
Surface Condition Rating (SCR)	92	90	90	90	90	90	90
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Distress Index Values							
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alligator Crack Index	97	97	97	97	97	97	97
Longitudinal Crack Index	96	90	90	90	97	90	90
Transverse Cracking Index	92	90	90	90	90	90	90
Patching Index	97	97	97	97	97	97	97
Rutting Index	97	97	97	97	97	97	97
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lane & Width Information							
Number of Lanes	2	2	2	2	2	2	2
Paved Width (ft)	22	22	22	22	22	22	22
Lane Width (ft)	10	10	10	10	10	10	10

Hawaii Volcanoes National Park

ROUTE 0012: CHAIN OF CRATERS ROAD

Manual Rating



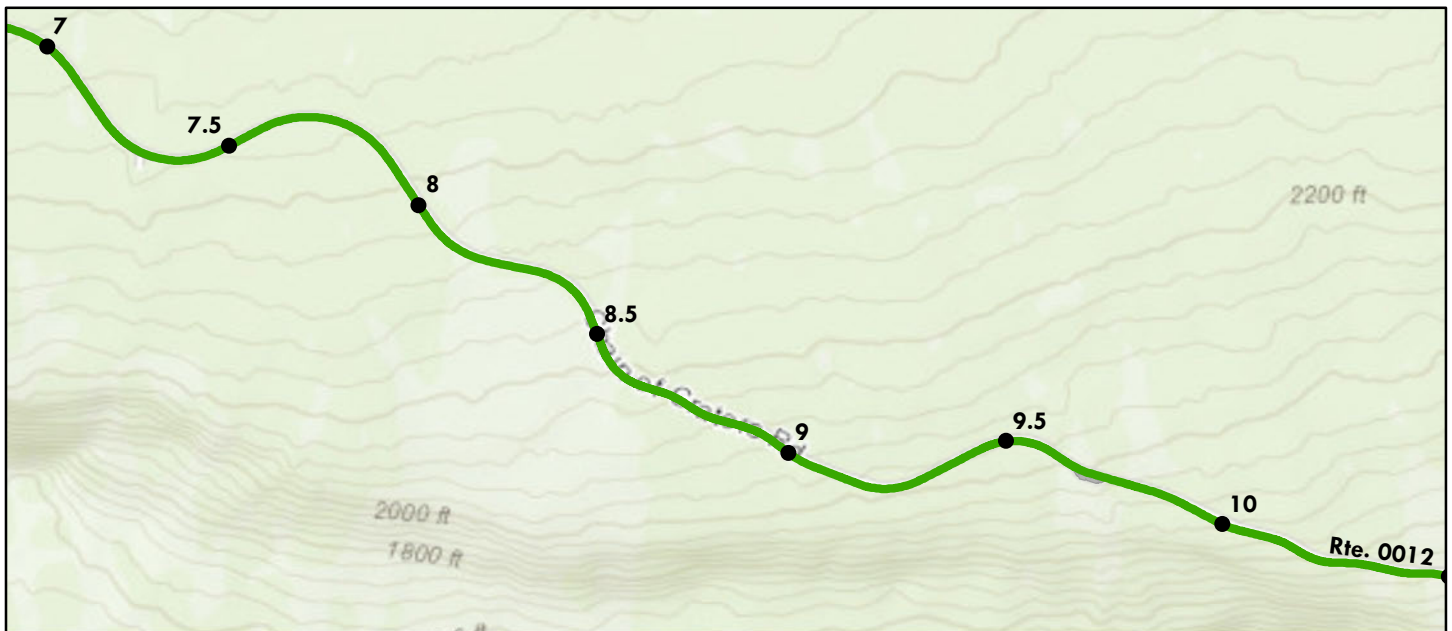
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	5.00	5.50	6.00	6.50	7.00
Paved Length (Miles): 18.56	Section Length (MI)	0.50	0.50	0.50	0.50	0.50
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	92	90	90	90	90	90
Surface Condition Rating (SCR)	92	90	90	90	90	90
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A
Distress Index Values						
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A
Alligator Crack Index	97	97	97	97	97	97
Longitudinal Crack Index	96	97	90	97	97	97
Transverse Cracking Index	92	90	90	90	90	90
Patching Index	97	97	97	97	97	97
Rutting Index	97	97	97	97	97	97
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A
Lane & Width Information						
Number of Lanes	2	2	2	2	2	2
Paved Width (ft)	22	22	22	22	22	22
Lane Width (ft)	10	10	10	10	10	10

Hawaii Volcanoes National Park

ROUTE 0012: CHAIN OF CRATERS ROAD

Manual Rating



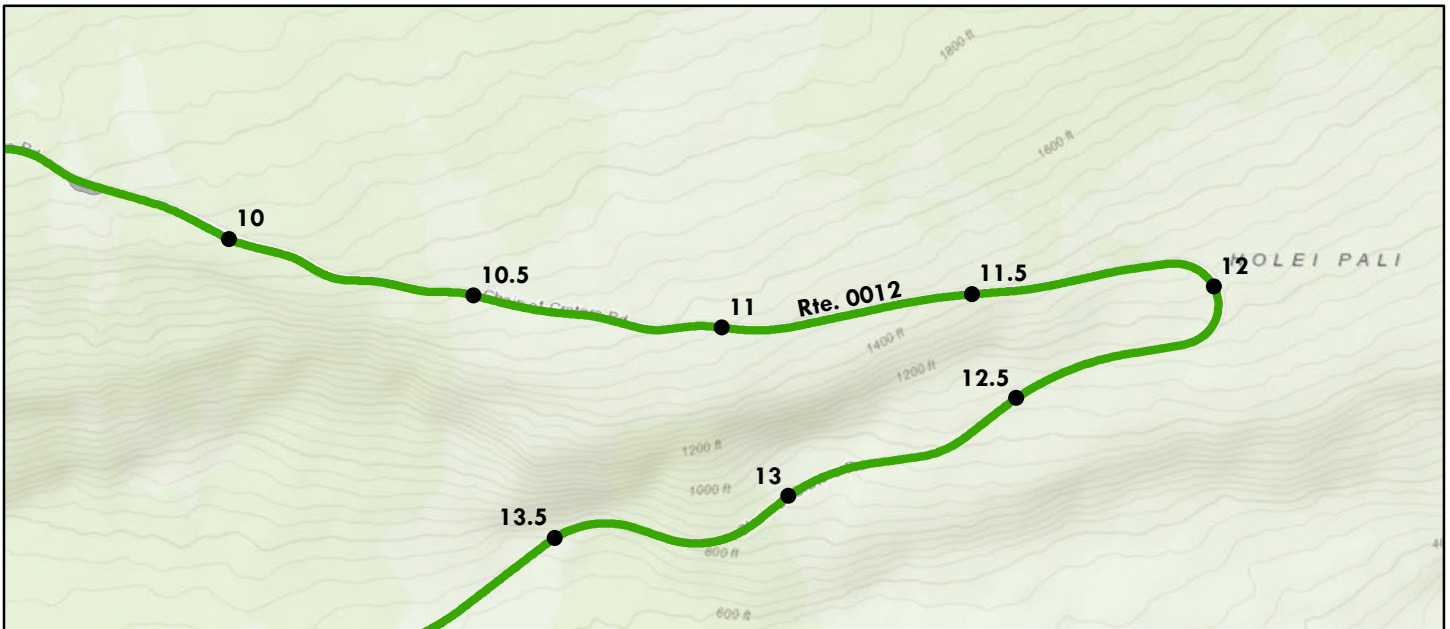
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	7.50	8.00	8.50	9.00	9.50
Paved Length (Miles): 18.56	Section Length (MI)	0.50	0.50	0.50	0.50	0.50
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	92	90	90	90	90	90
Surface Condition Rating (SCR)	92	90	90	90	90	90
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A
Distress Index Values						
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A
Alligator Crack Index	97	97	97	97	97	97
Longitudinal Crack Index	96	97	97	97	97	97
Transverse Cracking Index	92	90	90	90	90	90
Patching Index	97	97	97	97	97	97
Rutting Index	97	97	97	97	97	97
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A
Lane & Width Information						
Number of Lanes	2	2	2	2	2	2
Paved Width (ft)	22	22	22	22	22	22
Lane Width (ft)	10	10	10	10	10	10

Hawaii Volcanoes National Park

ROUTE 0012: CHAIN OF CRATERS ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

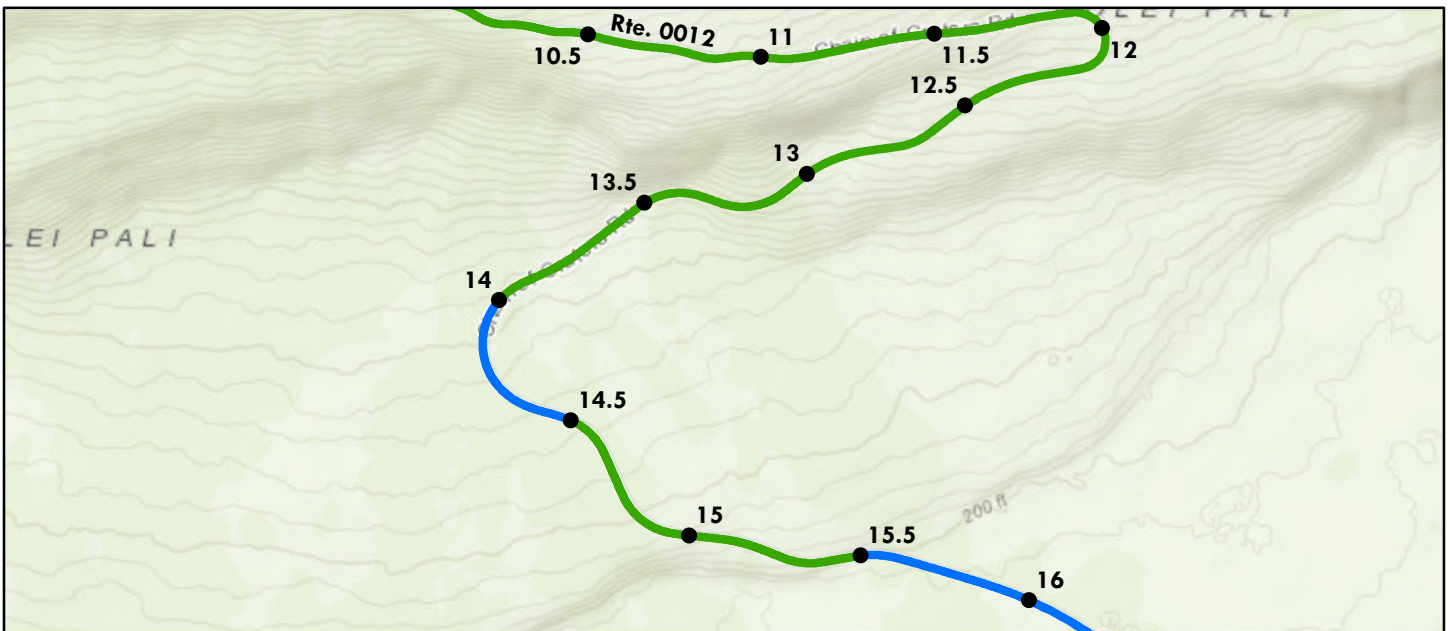
See Appendix for definitions and formulas

Inspection Date:	3/8/2022	Beginning Section MP	10.00	10.50	11.00	11.50	12.00
Paved Length (Miles):	18.56	Section Length (MI)	0.50	0.50	0.50	0.50	0.50
Surface Type:	ASPHALT	Route Summary					
Roadway Condition Information							
Pavement Condition Rating (PCR)	92	90	90	90	90	90	90
Surface Condition Rating (SCR)	92	90	90	90	90	90	90
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Distress Index Values							
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alligator Crack Index	97	97	97	97	97	97	97
Longitudinal Crack Index	96	97	97	97	97	97	97
Transverse Cracking Index	92	90	90	90	90	90	90
Patching Index	97	97	97	97	97	97	97
Rutting Index	97	97	97	97	97	97	97
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lane & Width Information							
Number of Lanes	2	2	2	2	2	2	2
Paved Width (ft)	22	22	22	22	22	22	22
Lane Width (ft)	10	10	10	10	10	10	10

Hawaii Volcanoes National Park

ROUTE 0012: CHAIN OF CRATERS ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

Inspection Date:	3/8/2022	Beginning Section MP	12.50	13.00	13.50	14.00	14.50
Paved Length (Miles):	18.56	Section Length (MI)	0.50	0.50	0.50	0.50	0.50
Surface Type:	ASPHALT	Route Summary					
Roadway Condition Information							
Pavement Condition Rating (PCR)	92	90	90	90	97	90	
Surface Condition Rating (SCR)	92	90	90	90	97	90	
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A	
Distress Index Values							
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A	
Alligator Crack Index	97	97	97	97	97	97	
Longitudinal Crack Index	96	97	97	97	97	97	
Transverse Cracking Index	92	90	90	90	97	90	
Patching Index	97	97	97	97	97	97	
Rutting Index	97	97	97	97	97	97	
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A	
Lane & Width Information							
Number of Lanes	2	2	2	2	2	2	
Paved Width (ft)	22	22	22	22	22	22	
Lane Width (ft)	10	10	10	10	10	10	

Hawaii Volcanoes National Park

ROUTE 0012: CHAIN OF CRATERS ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

Inspection Date:	3/8/2022	Beginning Section MP	15.00	15.50	16.00	16.50	17.00
Paved Length (Miles): 18.56		Section Length (MI)	0.50	0.50	0.50	0.50	0.50
Surface Type: ASPHALT		Route Summary					
Roadway Condition Information							
Pavement Condition Rating (PCR)	92	90	97	97	97	97	
Surface Condition Rating (SCR)	92	90	97	97	97	97	
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A	
Distress Index Values							
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A	
Alligator Crack Index	97	97	97	97	97	97	
Longitudinal Crack Index	96	97	97	97	97	97	
Transverse Cracking Index	92	90	97	97	97	97	
Patching Index	97	97	97	97	97	97	
Rutting Index	97	97	97	97	97	97	
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A	
Lane & Width Information							
Number of Lanes	2	2	2	2	2	2	
Paved Width (ft)	22	22	22	22	22	22	
Lane Width (ft)	10	10	10	10	10	10	

Hawaii Volcanoes National Park

ROUTE 0012: CHAIN OF CRATERS ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)									
Poor (0 - 60)		Fair (61- 84)		Good (85 - 94)		Excellent (95 - 100)		Not Rated	
See Appendix for definitions and formulas									
Inspection Date:	3/8/2022	Beginning Section MP	17.50	18.00	18.50				
Paved Length (Miles):	18.56	Section Length (MI)	0.50	0.50	0.06				
Surface Type:	ASPHALT	Route Summary							
Roadway Condition Information									
Pavement Condition Rating (PCR)		92	97	97	97				
Surface Condition Rating (SCR)		92	97	97	97				
Roughness Condition Index (RCI)		N/A	N/A	N/A	N/A				
Distress Index Values									
Structural Crack Index		N/A	N/A	N/A	N/A				
Alligator Crack Index		97	97	97	97				
Longitudinal Crack Index		96	97	97	97				
Transverse Cracking Index		92	97	97	97				
Patching Index		97	97	97	97				
Rutting Index		97	97	97	97				
International Roughness Index (IRI)		N/A	N/A	N/A	N/A				
Lane & Width Information									
Number of Lanes		2	2	2	2				
Paved Width (ft)		22	22	22	22				
Lane Width (ft)		10	10	10	10				

Hawaii Volcanoes National Park

ROUTE 0012: CHAIN OF CRATERS ROAD

Condition Photos



HAVO_0012_0.051.jpg



HAVO_0012_1.042.jpg



HAVO_0012_2.473.jpg



HAVO_0012_3.089.jpg



HAVO_0012_4.576.jpg



HAVO_0012_5.509.jpg

Hawaii Volcanoes National Park

ROUTE 0012: CHAIN OF CRATERS ROAD

Condition Photos



HAVO_0012_6.025.jpg



HAVO_0012_8.674.jpg



HAVO_0012_12.066.jpg



HAVO_0012_15.334.jpg



HAVO_0012_16.983.jpg

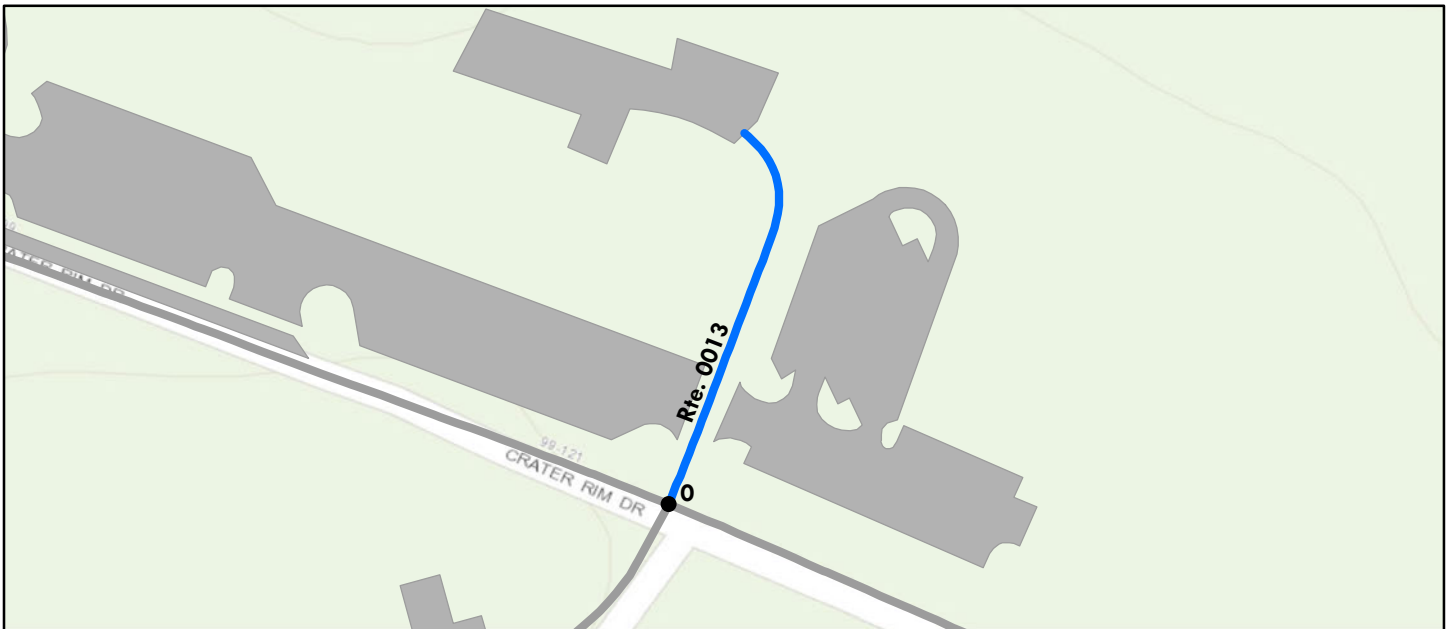


HAVO_0012_18.546.jpg

Hawaii Volcanoes National Park

ROUTE 0013: OFFICE AREA STREET

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.05	Section Length (MI)	0.05				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97	97				
Surface Condition Rating (SCR)	97	97				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	97	97				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	21	21				
Lane Width (ft)	10	10				

Hawaii Volcanoes National Park

ROUTE 0013: OFFICE AREA STREET

Condition Photos



HAVO_0013_0.009.jpg



HAVO_0013_0.020.jpg



HAVO_0013_0.033.jpg



HAVO_0013_0.046.jpg



HAVO_0013_0.049.jpg

Hawaii Volcanoes National Park

ROUTE 0100A: MAUNA LOA ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)										
Poor (0 - 60)		Fair (61- 84)		Good (85 - 94)		Excellent (95 - 100)		Not Rated		
See Appendix for definitions and formulas										
Inspection Date:	3/8/2022	Beginning Section MP	0.00	0.50	1.00					
Paved Length (Miles):	1.49	Section Length (MI)	0.50	0.50	0.49					
Surface Type:	ASPHALT	Route Summary								
Roadway Condition Information										
Pavement Condition Rating (PCR)	97	97	97	97	97					
Surface Condition Rating (SCR)	97	97	97	97	97					
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A					
Distress Index Values										
Structural Crack Index	N/A	N/A	N/A	N/A	N/A					
Alligator Crack Index	97	97	97	97	97					
Longitudinal Crack Index	97	97	97	97	97					
Transverse Cracking Index	97	97	97	97	97					
Patching Index	97	97	97	97	97					
Rutting Index	97	97	97	97	97					
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A					
Lane & Width Information										
Number of Lanes	2	2	2	2	2					
Paved Width (ft)	21	21	21	21	21					
Lane Width (ft)	10	10	10	10	10					

Hawaii Volcanoes National Park

ROUTE 0100A: MAUNA LOA ROAD

Condition Photos



HAVO_0100A_0.017.jpg



HAVO_0100A_0.329.jpg



HAVO_0100A_0.723.jpg



HAVO_0100A_0.873.jpg



HAVO_0100A_1.154.jpg



HAVO_0100A_1.470.jpg

Hawaii Volcanoes National Park

ROUTE 0100B: MAUNA LOA LOOKOUT ROAD

Manual Rating



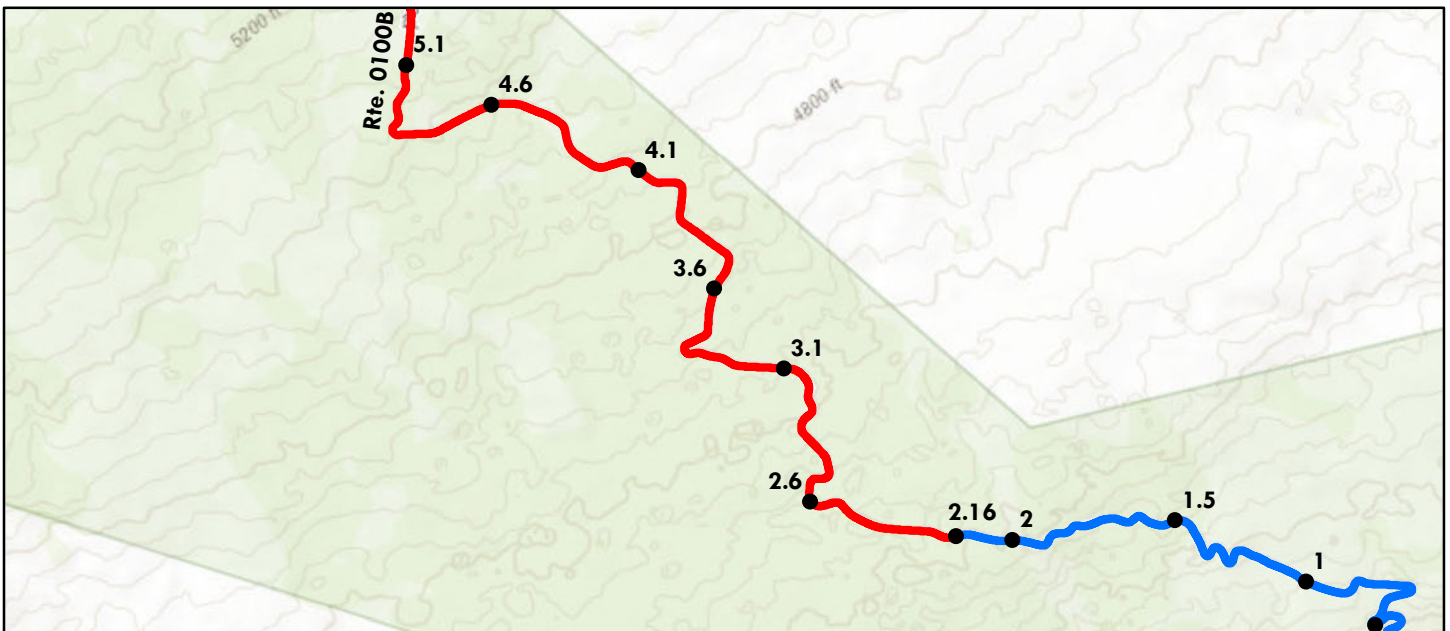
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00	0.50	1.00	1.50	2.00
Paved Length (Miles): 9.81	Section Length (MI)	0.50	0.50	0.50	0.50	0.16
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	48	97	97	97	97	97
Surface Condition Rating (SCR)	48	97	97	97	97	97
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A
Distress Index Values						
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A
Alligator Crack Index	36	97	97	97	97	97
Longitudinal Crack Index	60	97	97	97	97	97
Transverse Cracking Index	53	90	97	97	97	97
Patching Index	74	97	97	97	97	97
Rutting Index	86	97	97	97	97	97
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A
Lane & Width Information						
Number of Lanes	1	2	2	2	2	2
Paved Width (ft)	10.9	14	14	14	14	14
Lane Width (ft)	9.3	7	7	7	7	7

Hawaii Volcanoes National Park

ROUTE 0100B: MAUNA LOA LOOKOUT ROAD

Manual Rating



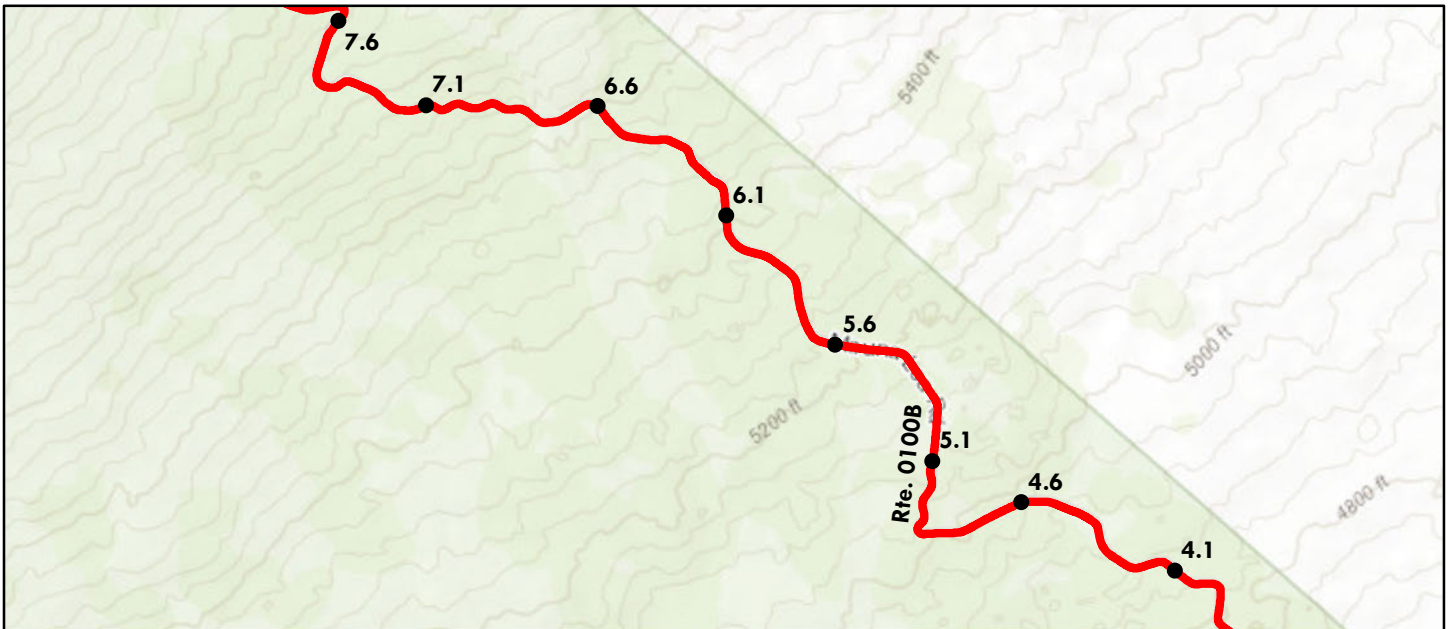
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)									
Poor (0 - 60)		Fair (61- 84)		Good (85 - 94)		Excellent (95 - 100)		Not Rated	
See Appendix for definitions and formulas									
Inspection Date:	3/8/2022	Beginning Section MP	2.16	2.60	3.10	3.60	4.10		
Paved Length (Miles):	9.81	Section Length (MI)	0.44	0.50	0.50	0.50	0.50		
Surface Type:	ASPHALT	Route Summary							
Roadway Condition Information									
Pavement Condition Rating (PCR)	48	30	30	30	30	30	53		
Surface Condition Rating (SCR)	48	30	30	30	30	30	53		
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Distress Index Values									
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Alligator Crack Index	36	30	30	30	30	30	53		
Longitudinal Crack Index	60	30	30	30	30	30	73		
Transverse Cracking Index	53	53	53	53	53	53	53		
Patching Index	74	97	73	90	90	90	90		
Rutting Index	86	97	90	90	90	90	90		
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Lane & Width Information									
Number of Lanes	1	1	1	1	1	1	1		
Paved Width (ft)	10.9	10	10	10	10	10	10		
Lane Width (ft)	9.3	10	10	10	10	10	10		

Hawaii Volcanoes National Park

ROUTE 0100B: MAUNA LOA LOOKOUT ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

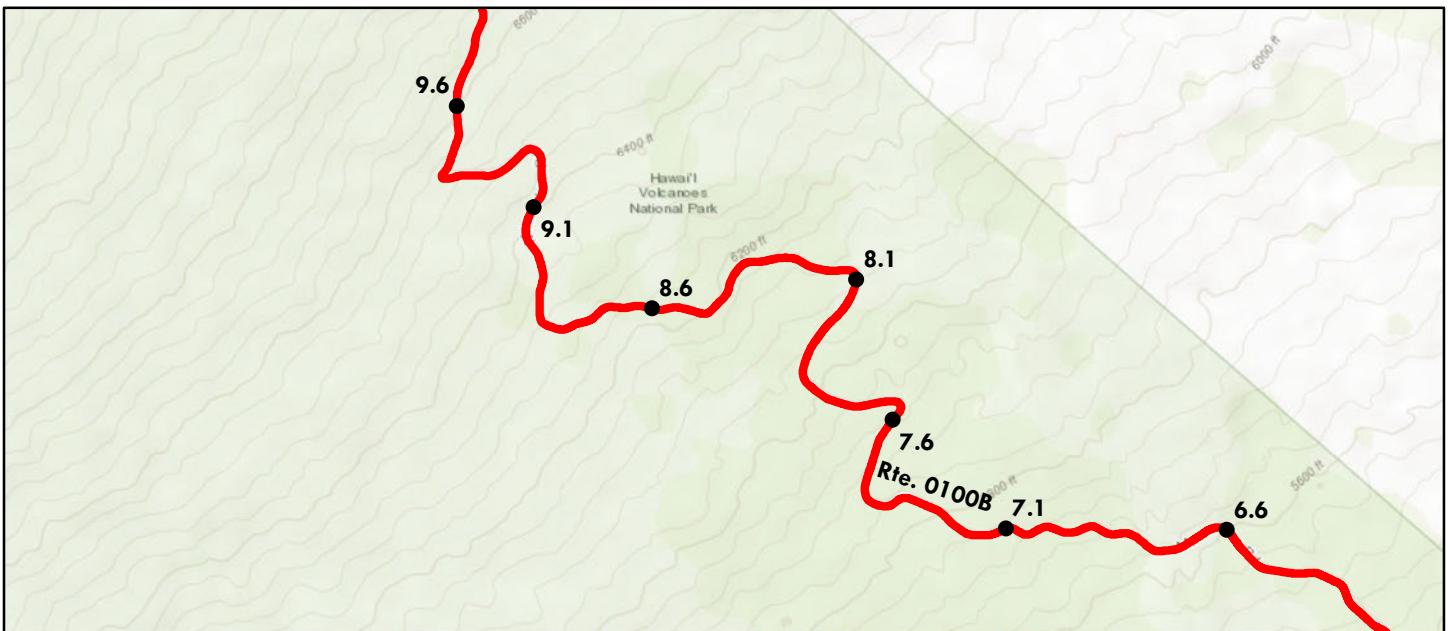
See Appendix for definitions and formulas

Inspection Date:	3/8/2022	Beginning Section MP	4.60	5.10	5.60	6.10	6.60
Paved Length (Miles):	9.81	Section Length (MI)	0.50	0.50	0.50	0.50	0.50
Surface Type:	ASPHALT	Route Summary					
Roadway Condition Information							
Pavement Condition Rating (PCR)	48	30	53	30	53	30	
Surface Condition Rating (SCR)	48	30	53	30	53	30	
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A	
Distress Index Values							
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A	
Alligator Crack Index	36	30	53	30	53	30	
Longitudinal Crack Index	60	73	73	73	73	73	
Transverse Cracking Index	53	53	53	53	53	53	
Patching Index	74	90	90	73	90	73	
Rutting Index	86	90	90	90	90	90	
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A	
Lane & Width Information							
Number of Lanes	1	1	1	1	1	1	
Paved Width (ft)	10.9	10	10	10	10	10	
Lane Width (ft)	9.3	10	10	10	10	10	

Hawaii Volcanoes National Park

ROUTE 0100B: MAUNA LOA LOOKOUT ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBSCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

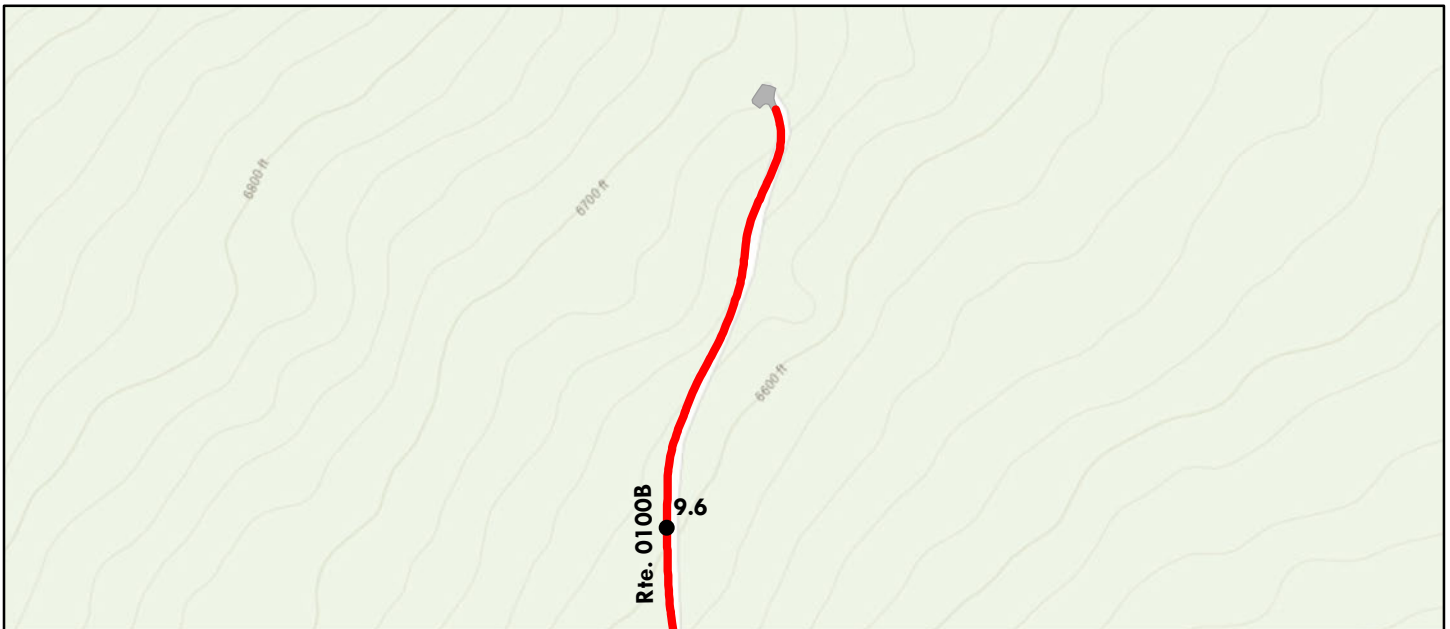
See Appendix for definitions and formulas

Inspection Date:	3/8/2022	Beginning Section MP	7.10	7.60	8.10	8.60	9.10
Paved Length (Miles):	9.81	Section Length (MI)	0.50	0.50	0.50	0.50	0.50
Surface Type:	ASPHALT	Route Summary					
Roadway Condition Information							
Pavement Condition Rating (PCR)	48	30	30	30	53	30	
Surface Condition Rating (SCR)	48	30	30	30	53	30	
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A	
Distress Index Values							
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A	
Alligator Crack Index	36	30	30	30	53	30	
Longitudinal Crack Index	60	73	30	30	90	73	
Transverse Cracking Index	53	53	53	53	53	53	
Patching Index	74	30	30	30	73	53	
Rutting Index	86	90	53	53	90	73	
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A	
Lane & Width Information							
Number of Lanes	1	1	1	1	1	1	
Paved Width (ft)	10.9	10	10	10	10	10	
Lane Width (ft)	9.3	10	10	10	10	10	

Hawaii Volcanoes National Park

ROUTE 0100B: MAUNA LOA LOOKOUT ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

Inspection Date: 3/8/2022	Beginning Section MP	9.60				
Paved Length (Miles): 9.81	Section Length (MI)	0.21				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	48	30				
Surface Condition Rating (SCR)	48	30				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	36	30				
Longitudinal Crack Index	60	73				
Transverse Cracking Index	53	53				
Patching Index	74	73				
Rutting Index	86	73				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	1	1				
Paved Width (ft)	10.9	10				
Lane Width (ft)	9.3	10				

Hawaii Volcanoes National Park

ROUTE 0100B: MAUNA LOA LOOKOUT ROAD

Condition Photos



HAVO_0100B_0.012.jpg



HAVO_0100B_0.515.jpg



HAVO_0100B_1.101.jpg



HAVO_0100B_1.980.jpg



HAVO_0100B_2.805.jpg



HAVO_0100B_4.053.jpg

Hawaii Volcanoes National Park

ROUTE 0100B: MAUNA LOA LOOKOUT ROAD

Condition Photos



HAVO_0100B_5.115.jpg



HAVO_0100B_6.273.jpg



HAVO_0100B_6.969.jpg



HAVO_0100B_8.234.jpg



HAVO_0100B_9.022.jpg



HAVO_0100B_9.576.jpg

Hawaii Volcanoes National Park

ROUTE 0101: HILINA PALI ROAD

Manual Rating



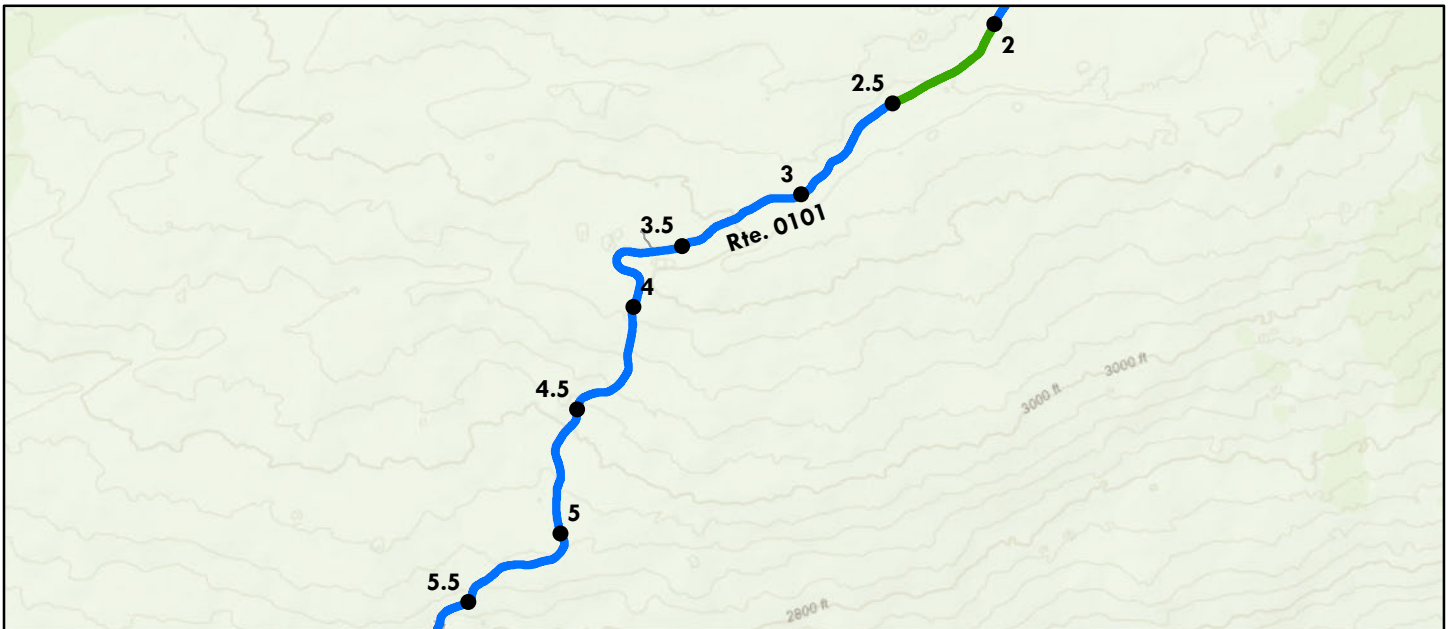
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00	0.50	1.00	1.50	2.00
Paved Length (Miles): 8.50	Section Length (MI)	0.50	0.50	0.50	0.50	0.50
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	96	90	97	90	97	90
Surface Condition Rating (SCR)	96	90	97	90	97	90
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A
Distress Index Values						
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A
Alligator Crack Index	97	97	97	97	97	97
Longitudinal Crack Index	97	97	97	97	97	97
Transverse Cracking Index	97	97	97	97	97	97
Patching Index	96	90	97	90	97	90
Rutting Index	97	97	97	97	97	97
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A
Lane & Width Information						
Number of Lanes	1	1	1	1	1	1
Paved Width (ft)	11	11	11	11	11	11
Lane Width (ft)	11	11	11	11	11	11

Hawaii Volcanoes National Park

ROUTE 0101: HILINA PALI ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

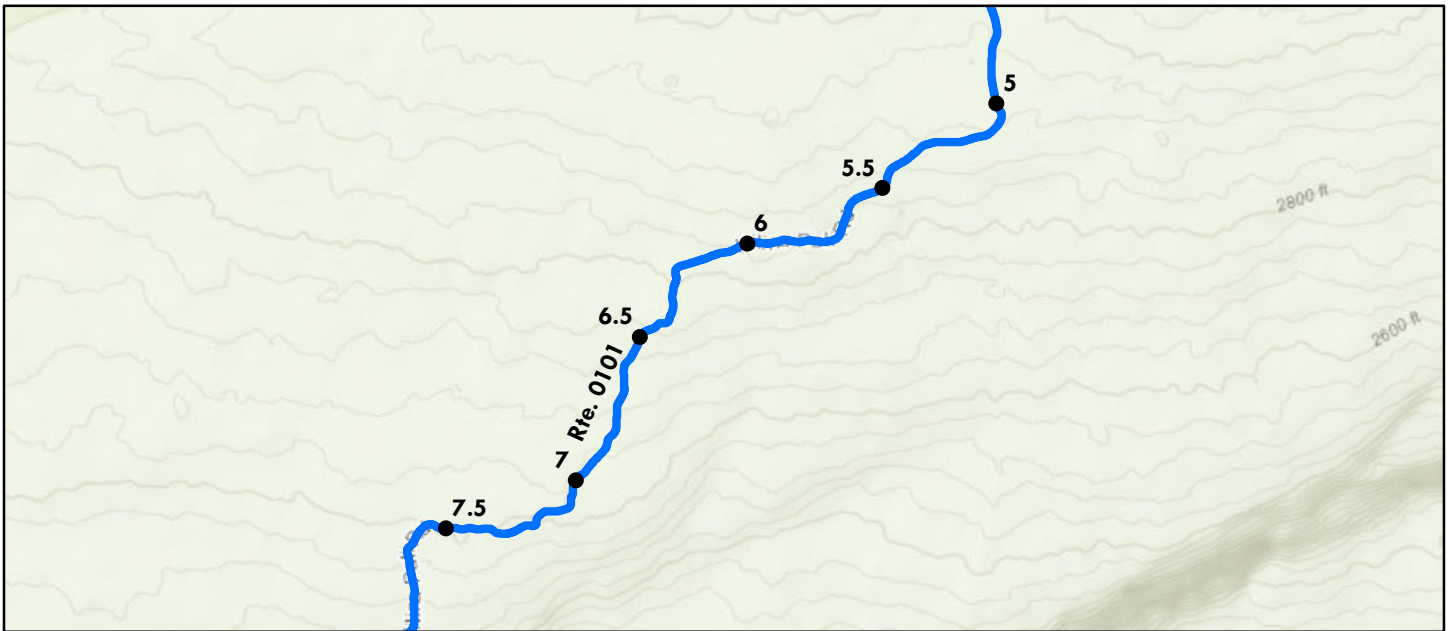
See Appendix for definitions and formulas

Inspection Date:	3/8/2022	Beginning Section MP	2.50	3.00	3.50	4.00	4.50
Paved Length (Miles):	8.50	Section Length (MI)	0.50	0.50	0.50	0.50	0.50
Surface Type:	ASPHALT	Route Summary					
Roadway Condition Information							
Pavement Condition Rating (PCR)	96	97	97	97	97	97	97
Surface Condition Rating (SCR)	96	97	97	97	97	97	97
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Distress Index Values							
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alligator Crack Index	97	97	97	97	97	97	97
Longitudinal Crack Index	97	97	97	97	97	97	97
Transverse Cracking Index	97	97	97	97	97	97	97
Patching Index	96	97	97	97	97	97	97
Rutting Index	97	97	97	97	97	97	97
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lane & Width Information							
Number of Lanes	1	1	1	1	1	1	1
Paved Width (ft)	11	11	11	11	11	11	11
Lane Width (ft)	11	11	11	11	11	11	11

Hawaii Volcanoes National Park

ROUTE 0101: HILINA PALI ROAD

Manual Rating



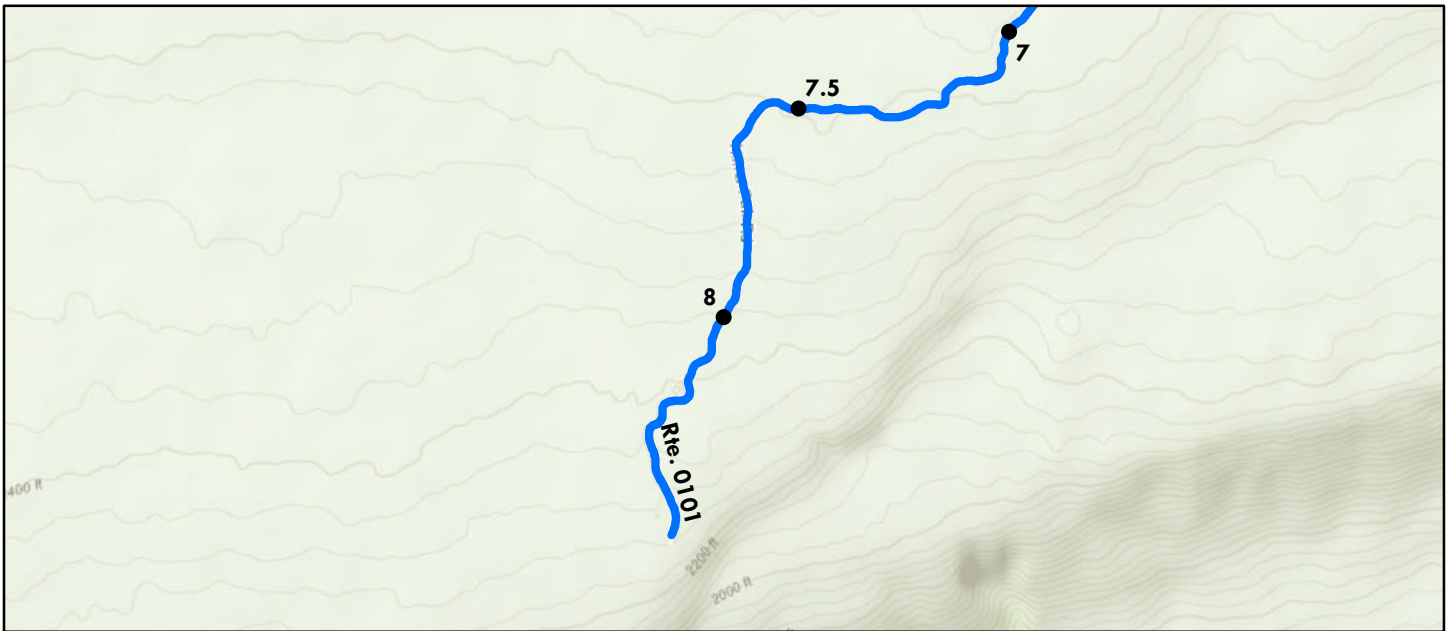
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)									
Poor (0 - 60)		Fair (61- 84)		Good (85 - 94)		Excellent (95 - 100)		Not Rated	
See Appendix for definitions and formulas									
Inspection Date:	3/8/2022	Beginning Section MP	5.00	5.50	6.00	6.50	7.00		
Paved Length (Miles):	8.50	Section Length (MI)	0.50	0.50	0.50	0.50	0.50		
Surface Type:	ASPHALT	Route Summary							
Roadway Condition Information									
Pavement Condition Rating (PCR)	96	97	97	97	97	97	97		
Surface Condition Rating (SCR)	96	97	97	97	97	97	97		
Roughness Condition Index (RCI)	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Distress Index Values									
Structural Crack Index	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Alligator Crack Index	97	97	97	97	97	97	97		
Longitudinal Crack Index	97	97	97	97	97	97	97		
Transverse Cracking Index	97	97	97	97	97	97	97		
Patching Index	96	97	97	97	97	97	97		
Rutting Index	97	97	97	97	97	97	97		
International Roughness Index (IRI)	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Lane & Width Information									
Number of Lanes	1	1	1	1	1	1	1		
Paved Width (ft)	11	11	11	11	11	11	11		
Lane Width (ft)	11	11	11	11	11	11	11		

Hawaii Volcanoes National Park

ROUTE 0101: HILINA PALI ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

Inspection Date: 3/8/2022	Beginning Section MP	7.50	8.00			
Paved Length (Miles): 8.50	Section Length (MI)	0.50	0.50			
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	96	97	97			
Surface Condition Rating (SCR)	96	97	97			
Roughness Condition Index (RCI)	N/A	N/A	N/A			
Distress Index Values						
Structural Crack Index	N/A	N/A	N/A			
Alligator Crack Index	97	97	97			
Longitudinal Crack Index	97	97	97			
Transverse Cracking Index	97	97	97			
Patching Index	96	97	97			
Rutting Index	97	97	97			
International Roughness Index (IRI)	N/A	N/A	N/A			
Lane & Width Information						
Number of Lanes	1	1	1			
Paved Width (ft)	11	11	11			
Lane Width (ft)	11	11	11			

Hawaii Volcanoes National Park

ROUTE 0101: HILINA PALI ROAD

Condition Photos



HAVO_0101_0.058.jpg



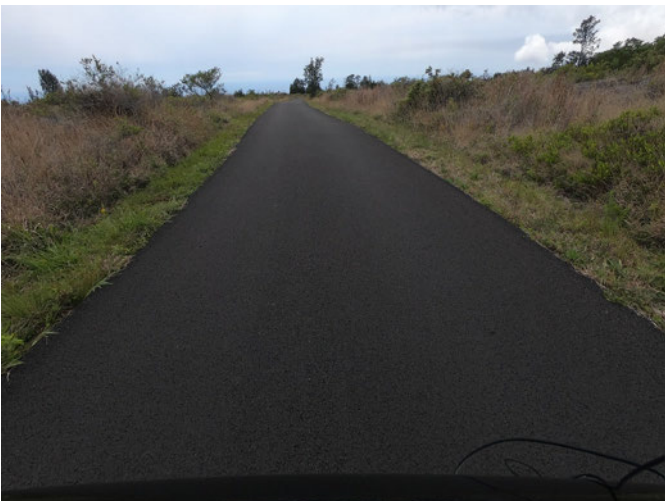
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HAVO_0101_3.439.jpg



HAVO_0101_4.810.jpg



HAVO_0101_6.625.jpg



HAVO_0101_8.239.jpg

Hawaii Volcanoes National Park

ROUTE 0201: KILAUEA OVERLOOK ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.20	Section Length (MI)	0.20				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97	97				
Surface Condition Rating (SCR)	97	97				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	97	97				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	21	21				
Lane Width (ft)	10	10				

Hawaii Volcanoes National Park

ROUTE 0201: KILAUEA OVERLOOK ROAD

Condition Photos



HAVO_0201_0.008.jpg



HAVO_0201_0.042.jpg



HAVO_0201_0.091.jpg



HAVO_0201_0.115.jpg



HAVO_0201_0.139.jpg



HAVO_0201_0.182.jpg

Hawaii Volcanoes National Park

ROUTE 0204A: NAMA KANI PAIO CAMPGROUND ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.32	Section Length (MI)	0.32				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	90	90				
Surface Condition Rating (SCR)	90	90				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	90	90				
Transverse Cracking Index	90	90				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	16	16				
Lane Width (ft)	8	8				

Hawaii Volcanoes National Park

ROUTE 0204A: NAMAKANI PAIO CAMPGROUND ROAD

Condition Photos



HAVO_0204A_0.023.jpg



HAVO_0204A_0.057.jpg



HAVO_0204A_0.112.jpg



HAVO_0204A_0.165.jpg



HAVO_0204A_0.244.jpg

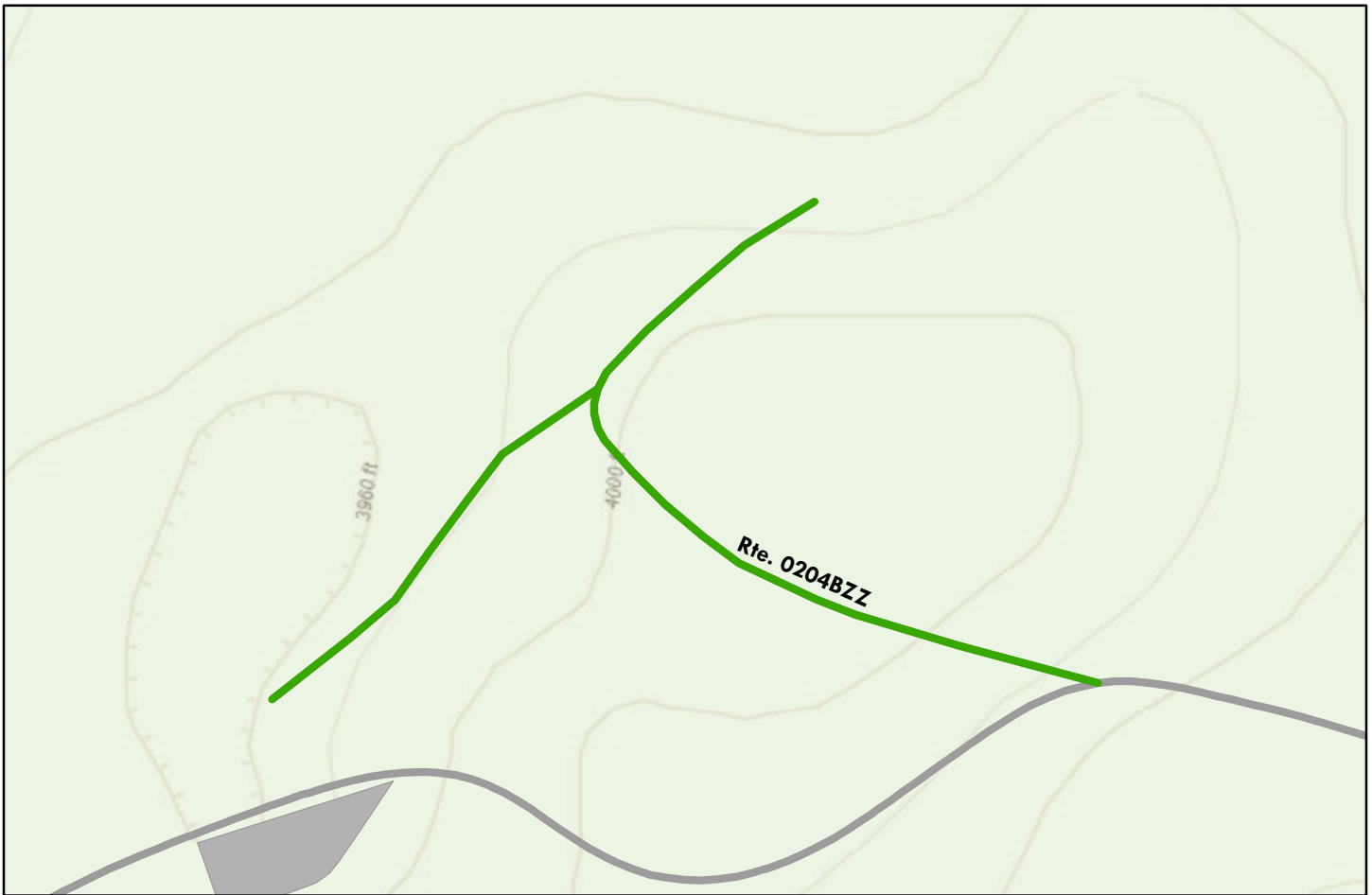


HAVO_0204A_0.304.jpg

Hawaii Volcanoes National Park

ROUTE 0204BZZ: NAMAKANI PAIO RENTAL CABIN ACCESS ROADS

Summary Route



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: The weighted average summary PCR value is calculated from only the sections of road where the PCR was collected. The overall PCR for the summary route may not reflect individual subcomponent ratings.

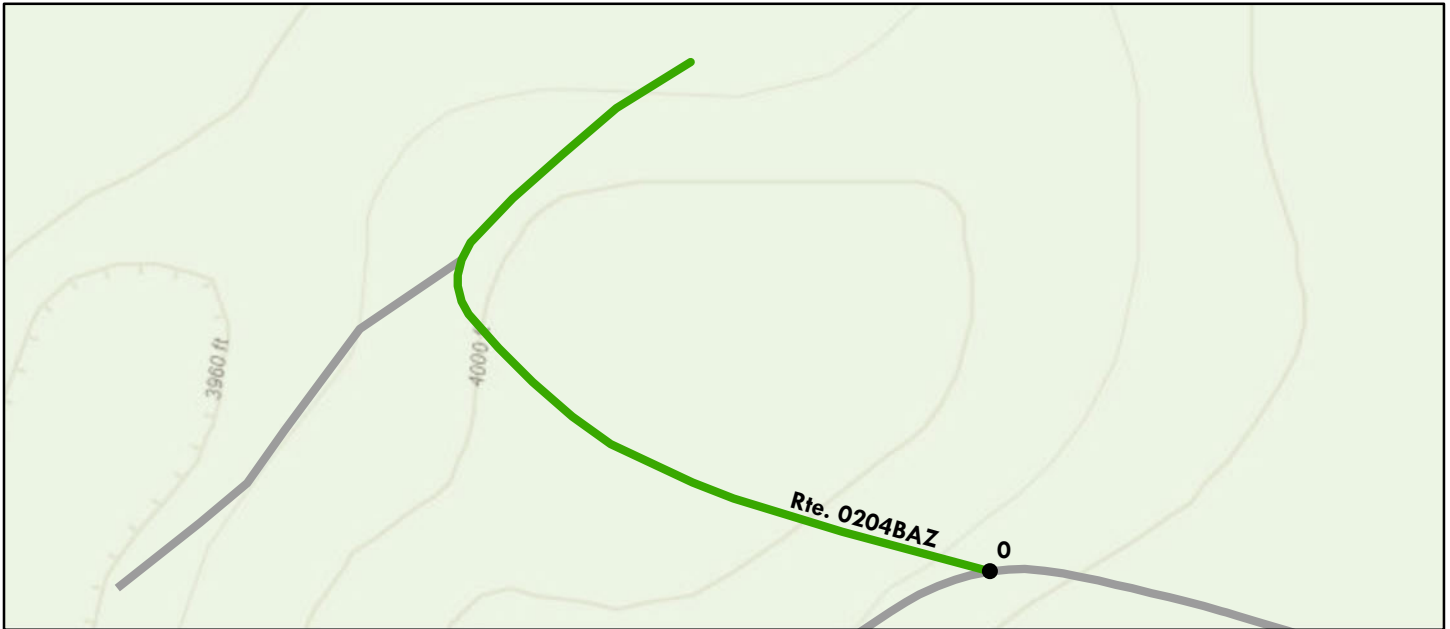
Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022						
Paved Length (Miles): 0.11						
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	90					
Lane & Width Information						
Number of Lanes	2					
Paved Width (ft)	18.7					
Lane Width (ft)	9.3					

Hawaii Volcanoes National Park

ROUTE 0204BAZ: NAMAKANI PAIO RENTAL CABIN ACCESS ROAD

Subcomponent of Route HAVO-0204BZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.08	Section Length (MI)	0.08				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	90	90				
Surface Condition Rating (SCR)	90	90				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	90	90				
Transverse Cracking Index	90	90				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	20	20				
Lane Width (ft)	10	10				

Hawaii Volcanoes National Park

ROUTE 0204BAZ: NAMAKANI PAIO RENTAL CABIN ACCESS ROAD

Condition Photos



HAVO_0204BAZ_0.019.jpg



HAVO_0204BAZ_0.032.jpg



HAVO_0204BAZ_0.044.jpg



HAVO_0204BAZ_0.048.jpg



HAVO_0204BAZ_0.058.jpg



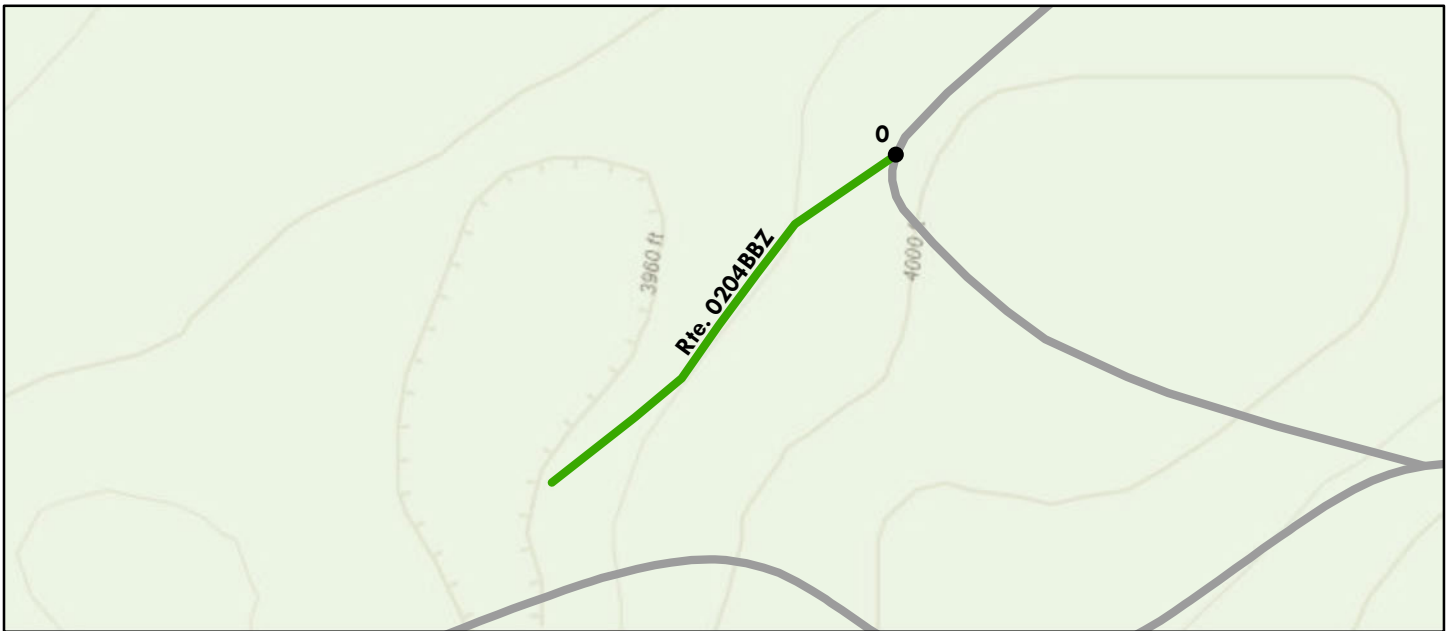
HAVO_0204BAZ_0.067.jpg

Hawaii Volcanoes National Park

ROUTE 0204BBZ: NAMAKANI PAIO RENTAL CABIN ACCESS ROAD SPUR

Subcomponent of Route HAVO-0204BZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.04	Section Length (MI)	0.04				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	90	90				
Surface Condition Rating (SCR)	90	90				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	90	90				
Transverse Cracking Index	90	90				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	16	16				
Lane Width (ft)	8	8				

Hawaii Volcanoes National Park

ROUTE 0204BBZ: NAMAKANI PAIO RENTAL CABIN ACCESS ROAD SPUR

Condition Photos



HAVO_0204BBZ_0.002.jpg



HAVO_0204BBZ_0.010.jpg



HAVO_0204BBZ_0.022.jpg



HAVO_0204BBZ_0.033.jpg

Hawaii Volcanoes National Park

ROUTE 0205: TREE MOLDS ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)									
Poor (0 - 60)		Fair (61- 84)		Good (85 - 94)		Excellent (95 - 100)		Not Rated	
See Appendix for definitions and formulas									
Inspection Date:	3/8/2022	Beginning Section MP	0.00	0.21					
Paved Length (Miles):	0.56	Section Length (MI)	0.21	0.35					
Surface Type:	ASPHALT	Route Summary							
Roadway Condition Information									
Pavement Condition Rating (PCR)		97	97	97					
Surface Condition Rating (SCR)		97	97	97					
Roughness Condition Index (RCI)		N/A	N/A	N/A					
Distress Index Values									
Structural Crack Index		N/A	N/A	N/A					
Alligator Crack Index		97	97	97					
Longitudinal Crack Index		97	97	97					
Transverse Cracking Index		97	97	97					
Patching Index		97	97	97					
Rutting Index		97	97	97					
International Roughness Index (IRI)		N/A	N/A	N/A					
Lane & Width Information									
Number of Lanes		1	1	1					
Paved Width (ft)		10.7	12	10					
Lane Width (ft)		10.7	12	10					

Hawaii Volcanoes National Park

ROUTE 0205: TREE MOLDS ROAD

Condition Photos



HAVO_0205_0.021.jpg



HAVO_0205_0.113.jpg



HAVO_0205_0.225.jpg



HAVO_0205_0.284.jpg



HAVO_0205_0.393.jpg



HAVO_0205_0.531.jpg

Hawaii Volcanoes National Park

ROUTE 0208: MAUNA ULU ACCESS ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00	0.40			
Paved Length (Miles): 0.54	Section Length (MI)	0.40	0.14			
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	92	90	97			
Surface Condition Rating (SCR)	92	90	97			
Roughness Condition Index (RCI)	N/A	N/A	N/A			
Distress Index Values						
Structural Crack Index	N/A	N/A	N/A			
Alligator Crack Index	97	97	97			
Longitudinal Crack Index	97	97	97			
Transverse Cracking Index	92	90	97			
Patching Index	97	97	97			
Rutting Index	97	97	97			
International Roughness Index (IRI)	N/A	N/A	N/A			
Lane & Width Information						
Number of Lanes	2	2	1			
Paved Width (ft)	18.7	21	12			
Lane Width (ft)	10.5	10	12			

Hawaii Volcanoes National Park

ROUTE 0208: MAUNA ULU ACCESS ROAD

Condition Photos



HAVO_0208_0.016.jpg



HAVO_0208_0.133.jpg



HAVO_0208_0.334.jpg



HAVO_0208_0.394.jpg



HAVO_0208_0.454.jpg

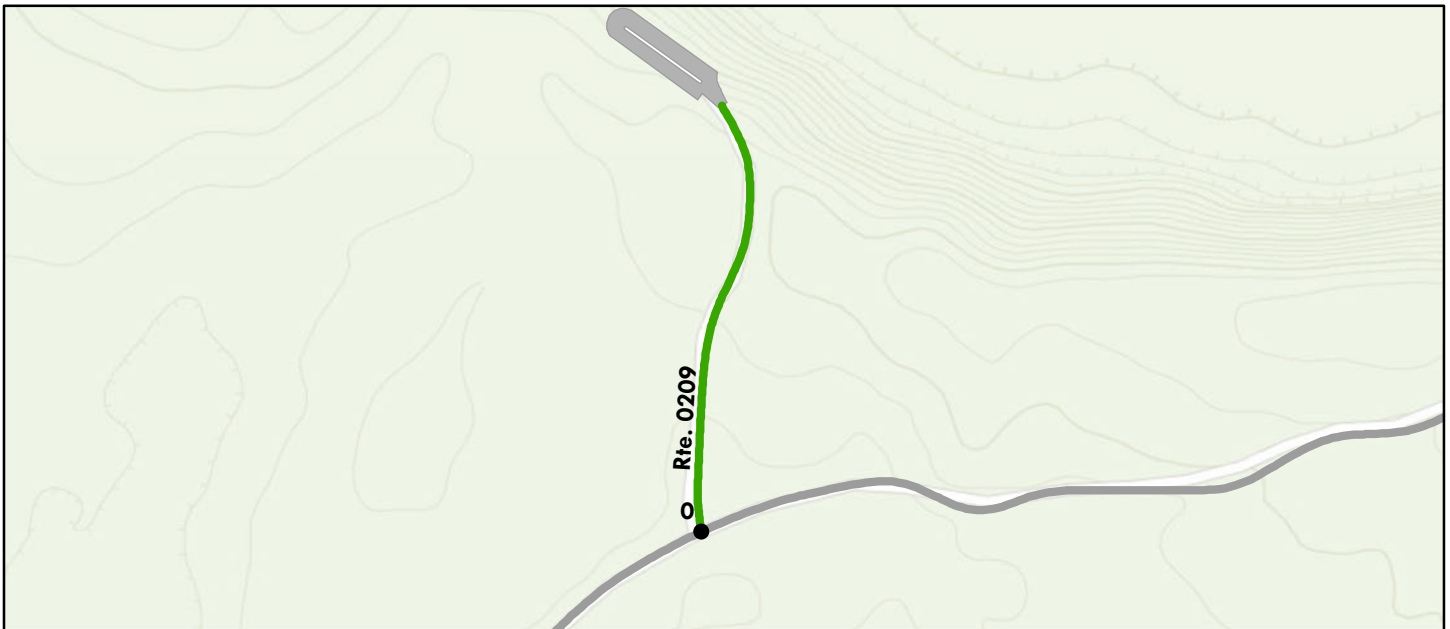


HAVO_0208_0.534.jpg

Hawaii Volcanoes National Park

ROUTE 0209: PUU PAUI OVERLOOK ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.20	Section Length (MI)	0.20				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	90	90				
Surface Condition Rating (SCR)	90	90				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	90	90				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	21	21				
Lane Width (ft)	10	10				

Hawaii Volcanoes National Park

ROUTE 0209: PUU PUI OVERLOOK ROAD

Condition Photos



HAVO_0209_0.013.jpg



HAVO_0209_0.026.jpg



HAVO_0209_0.044.jpg



HAVO_0209_0.085.jpg



HAVO_0209_0.125.jpg

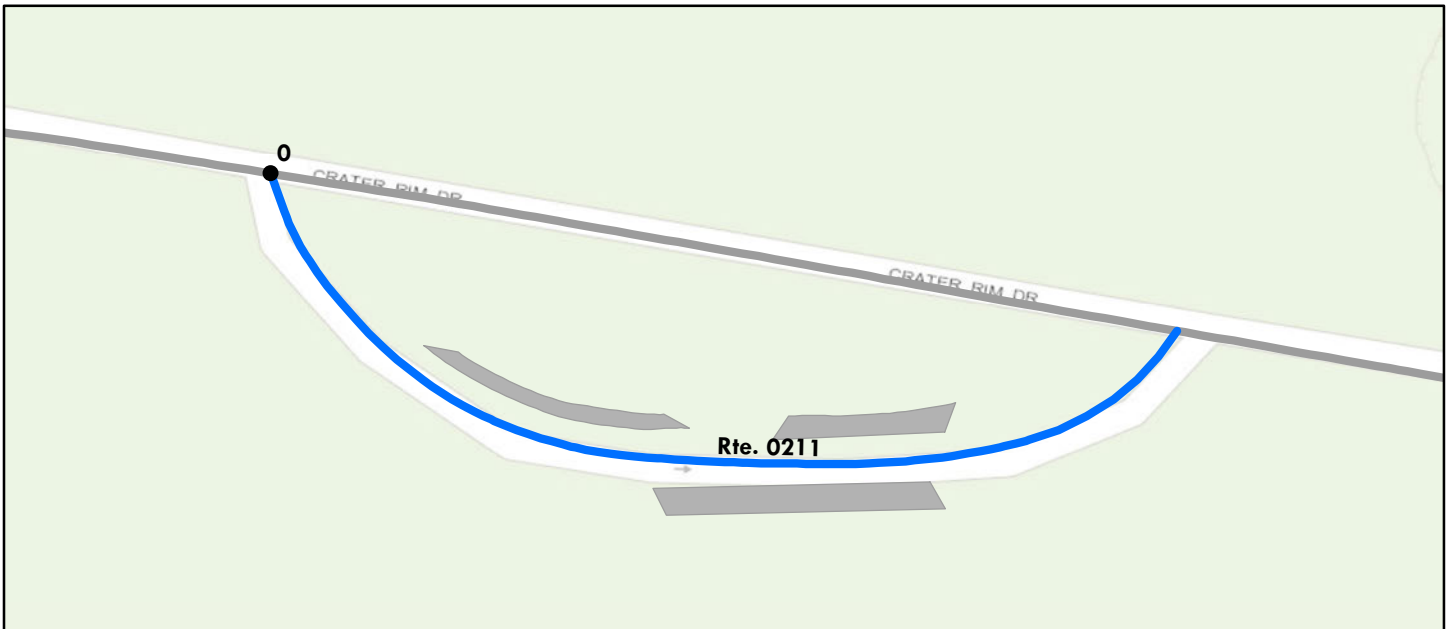


HAVO_0209_0.173.jpg

Hawaii Volcanoes National Park

ROUTE 0211: STEAM VENTS ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.12	Section Length (MI)	0.12				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97	97				
Surface Condition Rating (SCR)	97	97				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	97	97				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	1	1				
Paved Width (ft)	12	12				
Lane Width (ft)	12	12				

Hawaii Volcanoes National Park

ROUTE 0211: STEAM VENTS ROAD

Condition Photos



HAVO_0211_0.022.jpg



HAVO_0211_0.038.jpg



HAVO_0211_0.052.jpg



HAVO_0211_0.077.jpg



HAVO_0211_0.088.jpg

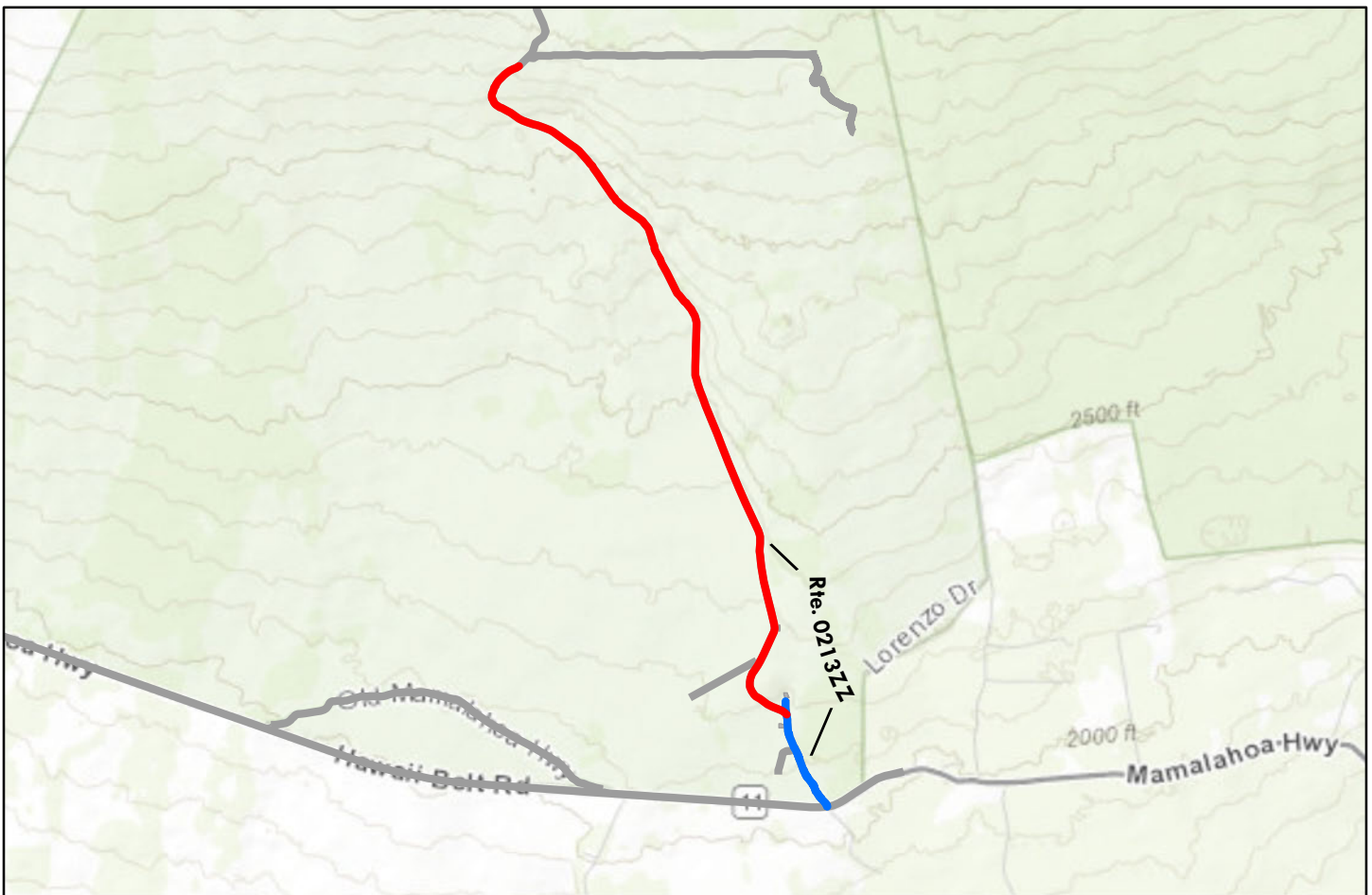


HAVO_0211_0.102.jpg

Hawaii Volcanoes National Park

ROUTE 0213ZZ: KAHUKU ENTRANCE ROAD

Summary Route



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: The weighted average summary PCR value is calculated from only the sections of road where the PCR was collected. The overall PCR for the summary route may not reflect individual subcomponent ratings.

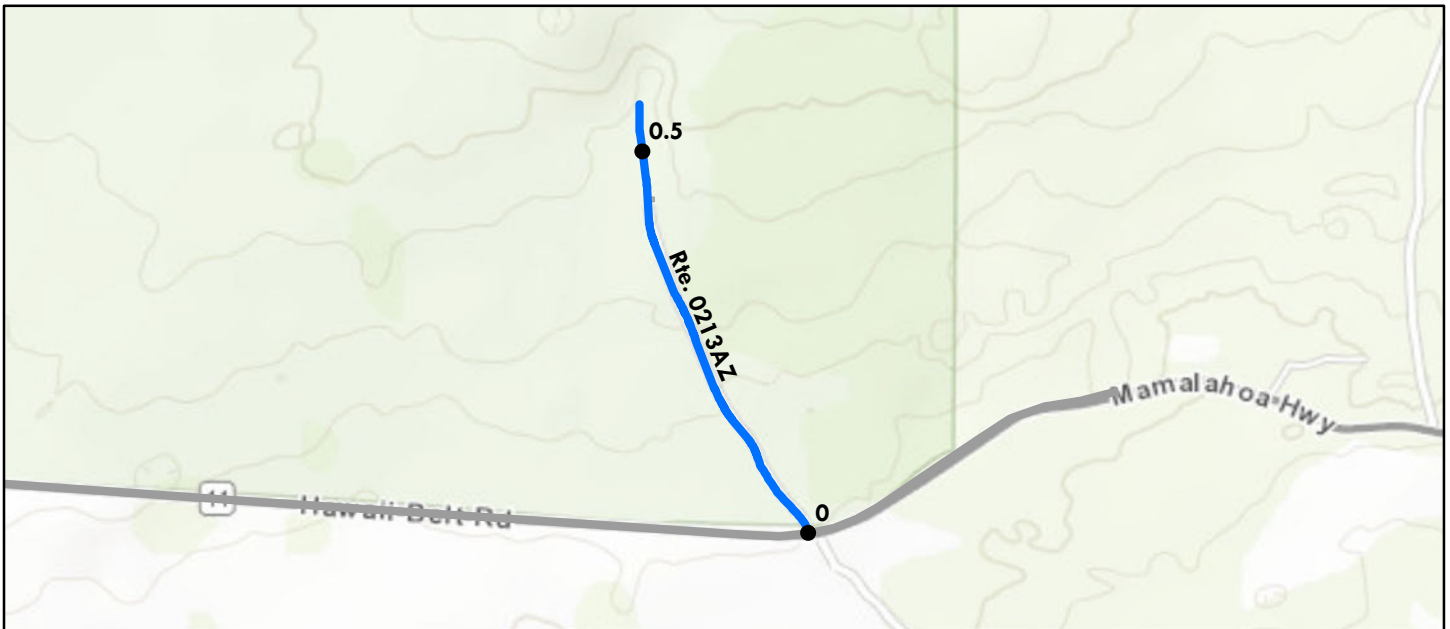
Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022						
Paved Length (Miles): 0.56						
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97					
Lane & Width Information						
Number of Lanes	2					
Paved Width (ft)	22					
Lane Width (ft)	11					

Hawaii Volcanoes National Park

ROUTE 0213AZ: KAHUKU ENTRANCE ROAD - PAVED

Subcomponent of Route HAVO-0213ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00	0.50			
Paved Length (Miles): 0.56	Section Length (MI)	0.50	0.06			
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97	97	97			
Surface Condition Rating (SCR)	97	97	97			
Roughness Condition Index (RCI)	N/A	N/A	N/A			
Distress Index Values						
Structural Crack Index	N/A	N/A	N/A			
Alligator Crack Index	97	97	97			
Longitudinal Crack Index	97	97	97			
Transverse Cracking Index	97	97	97			
Patching Index	97	97	97			
Rutting Index	97	97	97			
International Roughness Index (IRI)	N/A	N/A	N/A			
Lane & Width Information						
Number of Lanes	2	2	2			
Paved Width (ft)	22	22	22			
Lane Width (ft)	11	11	11			

Hawaii Volcanoes National Park

ROUTE 0213AZ: KAHUKU ENTRANCE ROAD - PAVED

Condition Photos



HAVO_0213AZ_0.017.jpg



HAVO_0213AZ_0.061.jpg



HAVO_0213AZ_0.174.jpg



HAVO_0213AZ_0.272.jpg



HAVO_0213AZ_0.435.jpg



HAVO_0213AZ_0.533.jpg

Hawaii Volcanoes National Park

ROUTE 0214: KILAUEA MILITARY CAMP ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.20	Section Length (MI)	0.20				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	53	53				
Surface Condition Rating (SCR)	53	53				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	73	73				
Longitudinal Crack Index	53	53				
Transverse Cracking Index	53	53				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	16	16				
Lane Width (ft)	8	8				

Hawaii Volcanoes National Park

ROUTE 0214: KILAUEA MILITARY CAMP ROAD

Condition Photos



HAVO_0214_0.008.jpg



HAVO_0214_0.033.jpg



HAVO_0214_0.084.jpg



HAVO_0214_0.120.jpg



HAVO_0214_0.150.jpg

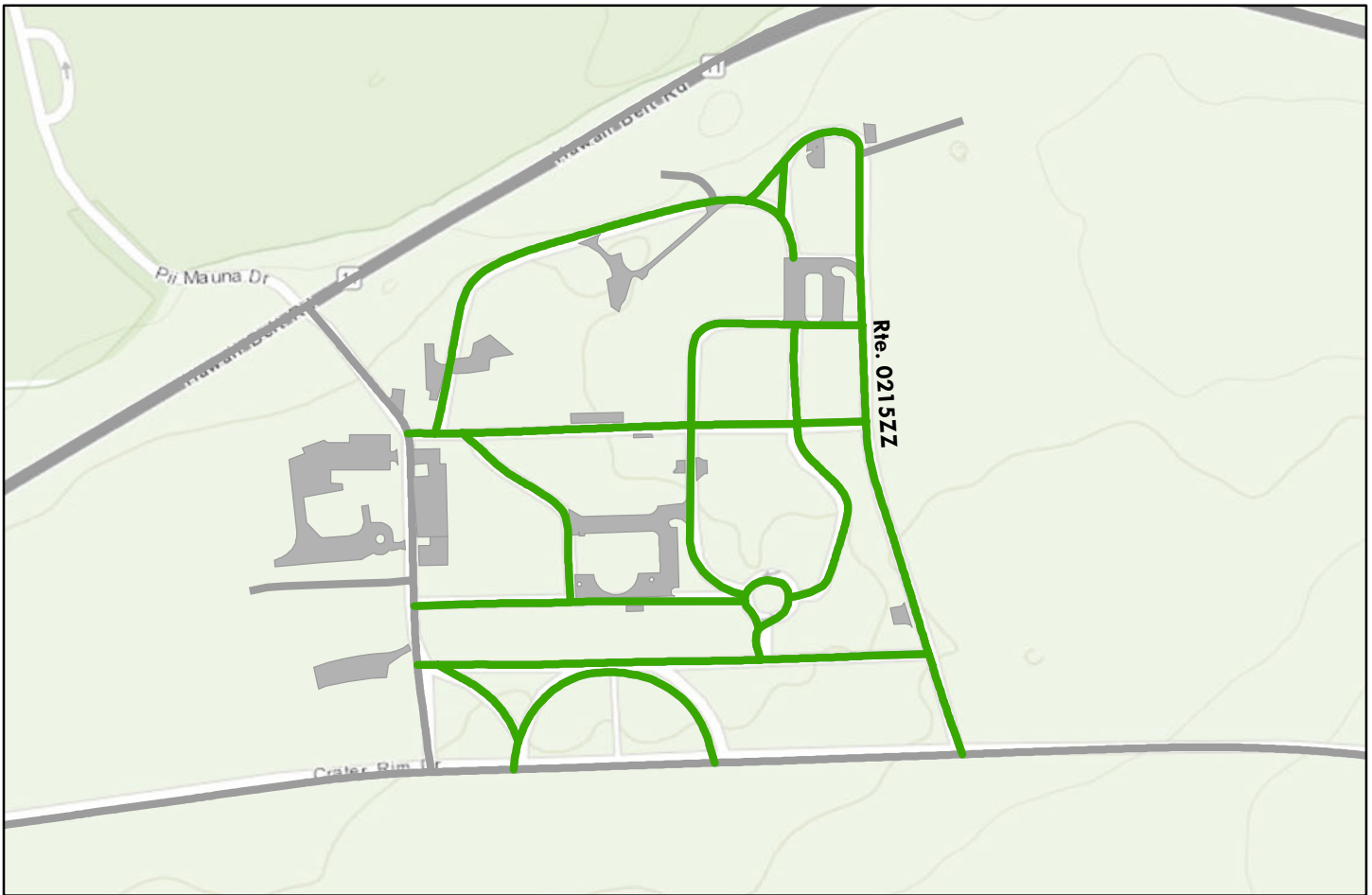


HAVO_0214_0.180.jpg

Hawaii Volcanoes National Park

ROUTE 0215ZZ: KILAUEA MILITARY CAMP ROADS

Summary Route



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: The weighted average summary PCR value is calculated from only the sections of road where the PCR was collected. The overall PCR for the summary route may not reflect individual subcomponent ratings.

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022						
Paved Length (Miles): 1.71						
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	87					
Lane & Width Information						
Number of Lanes	2					
Paved Width (ft)	18.7					
Lane Width (ft)	10					

Hawaii Volcanoes National Park

ROUTE 0215AZ: KILAUEA MILITARY CAMP ROAD A

Subcomponent of Route HAVO-0215ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.04	Section Length (MI)	0.04				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97	97				
Surface Condition Rating (SCR)	97	97				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	97	97				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	28	28				
Lane Width (ft)	12	12				

Hawaii Volcanoes National Park
ROUTE 0215AZ: KILAUEA MILITARY CAMP ROAD A

Condition Photos



HAVO_0215AZ_0.003.jpg



HAVO_0215AZ_0.005.jpg



HAVO_0215AZ_0.012.jpg



HAVO_0215AZ_0.024.jpg



HAVO_0215AZ_0.037.jpg

Hawaii Volcanoes National Park

ROUTE 0215BZ: KILAUEA MILITARY CAMP ROAD B

Subcomponent of Route HAVO-0215ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.12	Section Length (MI)	0.12				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	90	90				
Surface Condition Rating (SCR)	90	90				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	90	90				
Transverse Cracking Index	90	90				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	28	28				
Lane Width (ft)	12	12				

Hawaii Volcanoes National Park

ROUTE 0215BZ: KILAUEA MILITARY CAMP ROAD B

Condition Photos



HAVO_0215BZ_0.007.jpg



HAVO_0215BZ_0.021.jpg



HAVO_0215BZ_0.053.jpg



HAVO_0215BZ_0.067.jpg



HAVO_0215BZ_0.081.jpg



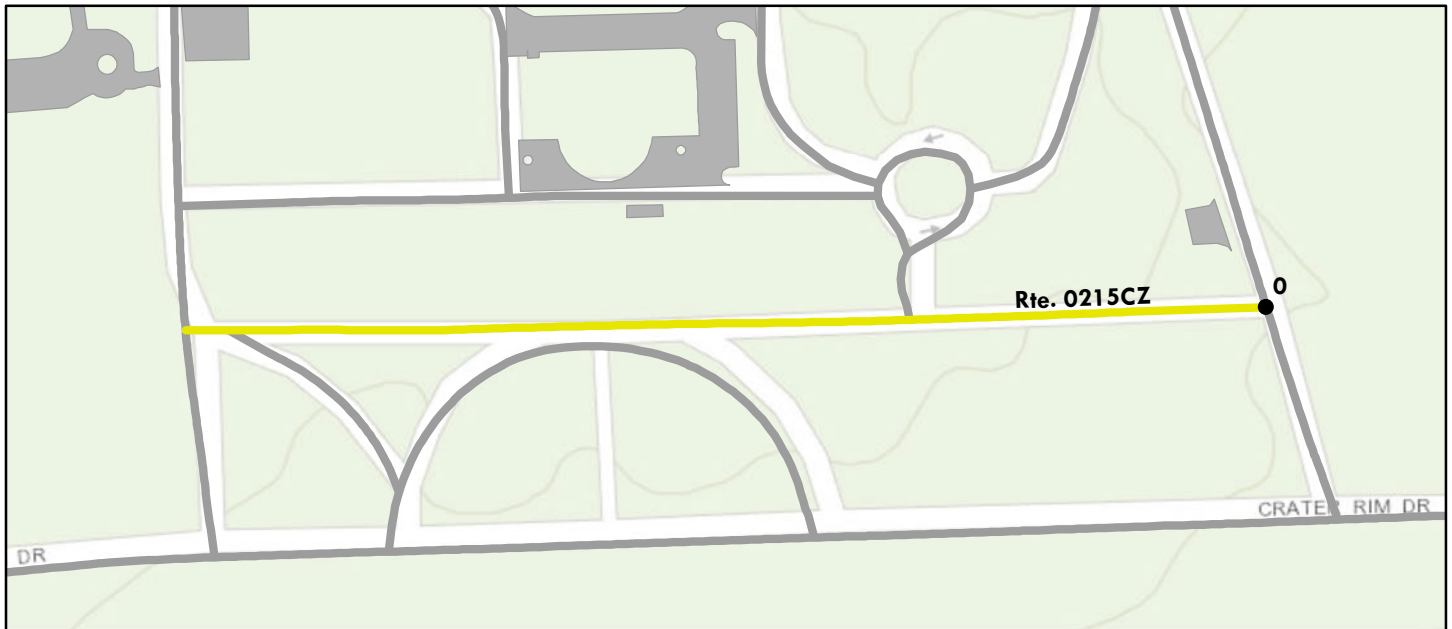
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Hawaii Volcanoes National Park

ROUTE 0215CZ: KILAUEA MILITARY CAMP ROAD C

Subcomponent of Route HAVO-0215ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.20	Section Length (MI)	0.20				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	73	73				
Surface Condition Rating (SCR)	73	73				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	73	73				
Longitudinal Crack Index	73	73				
Transverse Cracking Index	73	73				
Patching Index	90	90				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	22	22				
Lane Width (ft)	11	11				

Hawaii Volcanoes National Park

ROUTE 0215CZ: KILAUEA MILITARY CAMP ROAD C

Condition Photos



HAVO_0215CZ_0.024.jpg



HAVO_0215CZ_0.062.jpg



HAVO_0215CZ_0.096.jpg



HAVO_0215CZ_0.126.jpg



HAVO_0215CZ_0.158.jpg



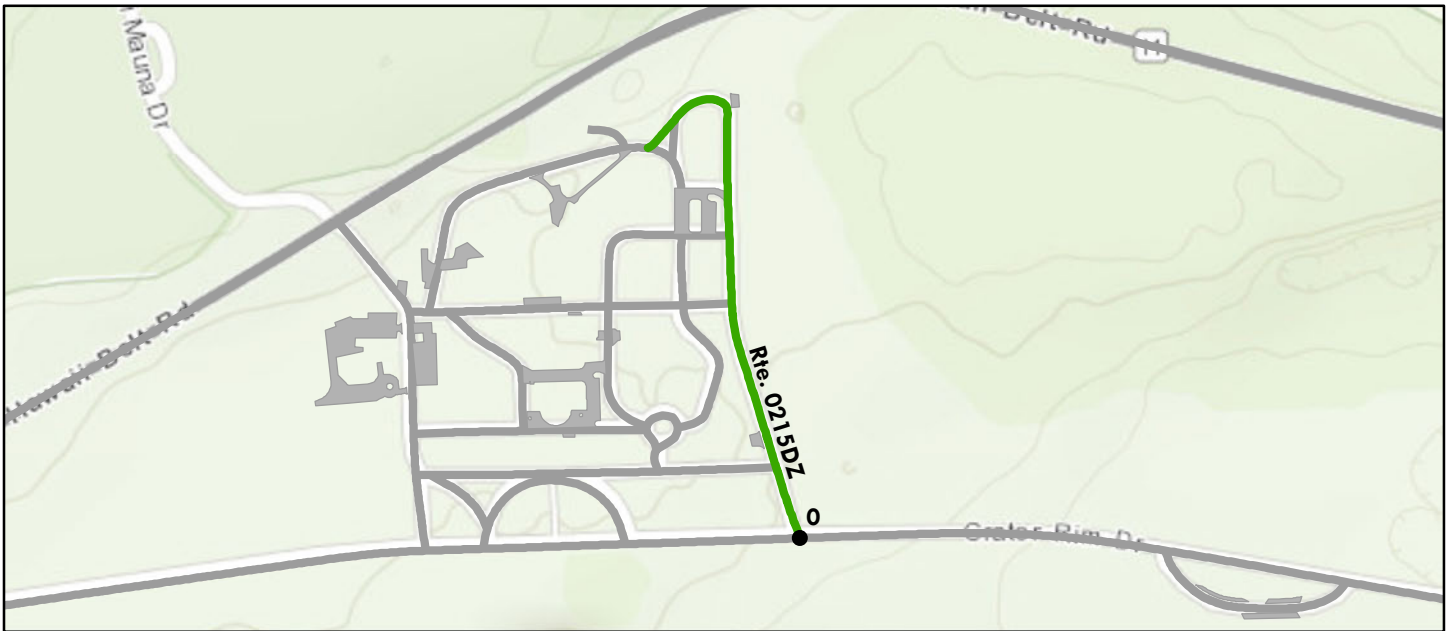
HAVO_0215CZ_0.191.jpg

Hawaii Volcanoes National Park

ROUTE 0215DZ: KILAUEA MILITARY CAMP ROAD D

Subcomponent of Route HAVO-0215ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.33	Section Length (MI)	0.33				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	90	90				
Surface Condition Rating (SCR)	90	90				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	90	90				
Transverse Cracking Index	90	90				
Patching Index	90	90				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	20	20				
Lane Width (ft)	10	10				

Hawaii Volcanoes National Park

ROUTE 0215DZ: KILAUEA MILITARY CAMP ROAD D

Condition Photos



HAVO_0215DZ_0.034.jpg



HAVO_0215DZ_0.085.jpg



HAVO_0215DZ_0.143.jpg



HAVO_0215DZ_0.184.jpg



HAVO_0215DZ_0.261.jpg



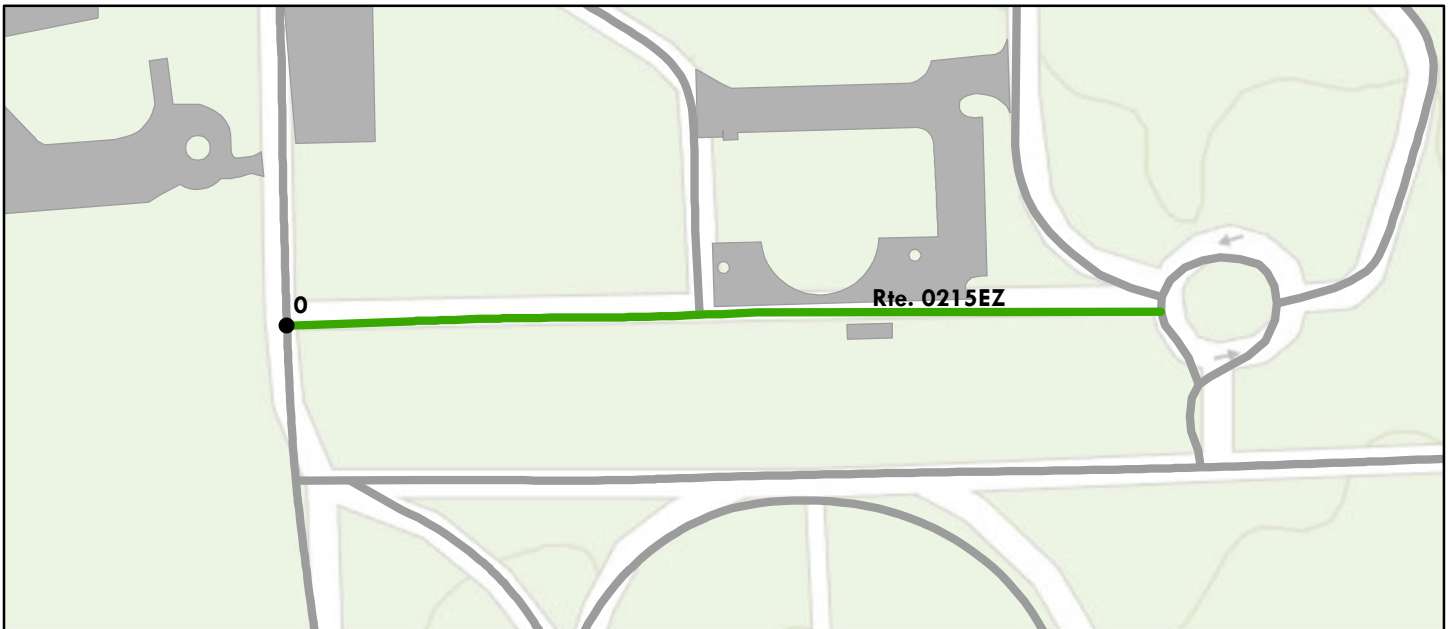
HAVO_0215DZ_0.315.jpg

Hawaii Volcanoes National Park

ROUTE 0215EZ: KILAUEA MILITARY CAMP ROAD E

Subcomponent of Route HAVO-0215ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.12	Section Length (MI)	0.12				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	90	90				
Surface Condition Rating (SCR)	90	90				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	90	90				
Transverse Cracking Index	90	90				
Patching Index	90	90				
Rutting Index	90	90				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	20	20				
Lane Width (ft)	10	10				

Hawaii Volcanoes National Park

ROUTE 0215EZ: KILAUEA MILITARY CAMP ROAD E

Condition Photos



HAVO_0215EZ_0.007.jpg



HAVO_0215EZ_0.031.jpg



HAVO_0215EZ_0.056.jpg



HAVO_0215EZ_0.075.jpg



HAVO_0215EZ_0.094.jpg



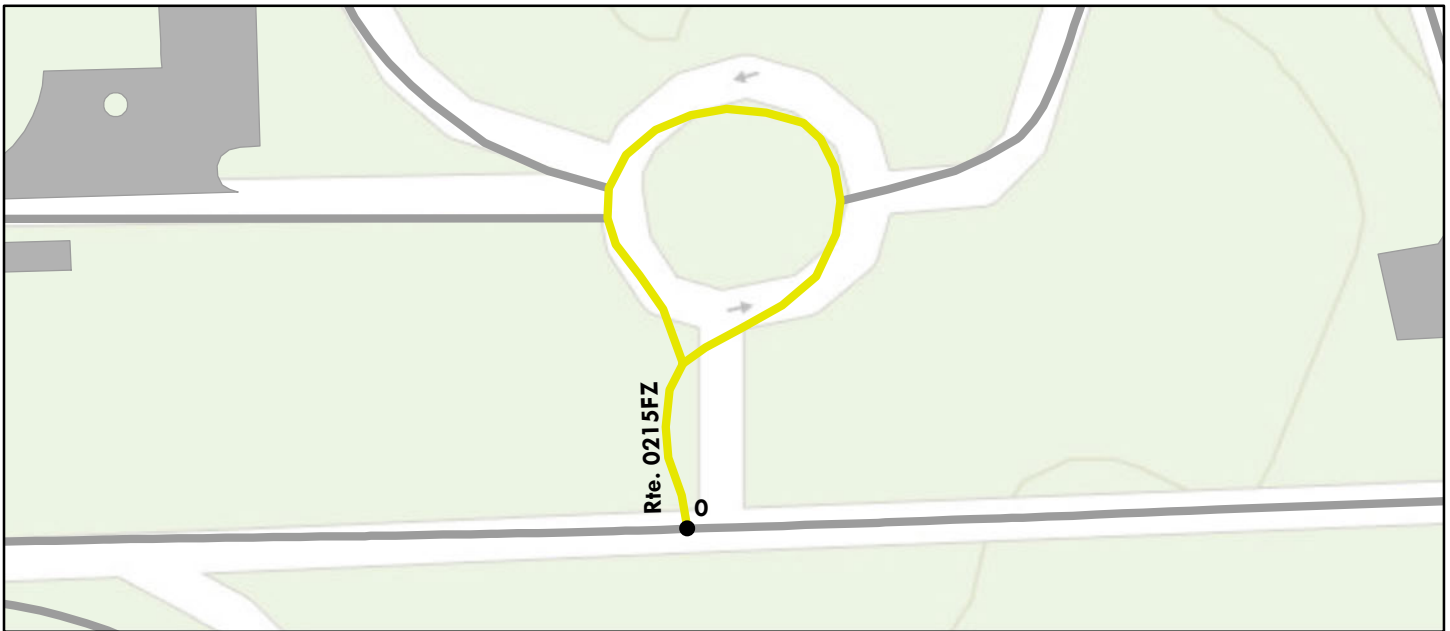
HAVO_0215EZ_0.112.jpg

Hawaii Volcanoes National Park

ROUTE 0215FZ: KILAUEA MILITARY CAMP ROAD F

Subcomponent of Route HAVO-0215ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.07	Section Length (MI)	0.07				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	73	73				
Surface Condition Rating (SCR)	73	73				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	90	90				
Longitudinal Crack Index	90	90				
Transverse Cracking Index	73	73				
Patching Index	90	90				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	16	16				
Lane Width (ft)	8	8				

Hawaii Volcanoes National Park

ROUTE 0215FZ: KILAUEA MILITARY CAMP ROAD F

Condition Photos



HAVO_0215FZ_0.005.jpg



HAVO_0215FZ_0.014.jpg



HAVO_0215FZ_0.023.jpg



HAVO_0215FZ_0.042.jpg



HAVO_0215FZ_0.050.jpg



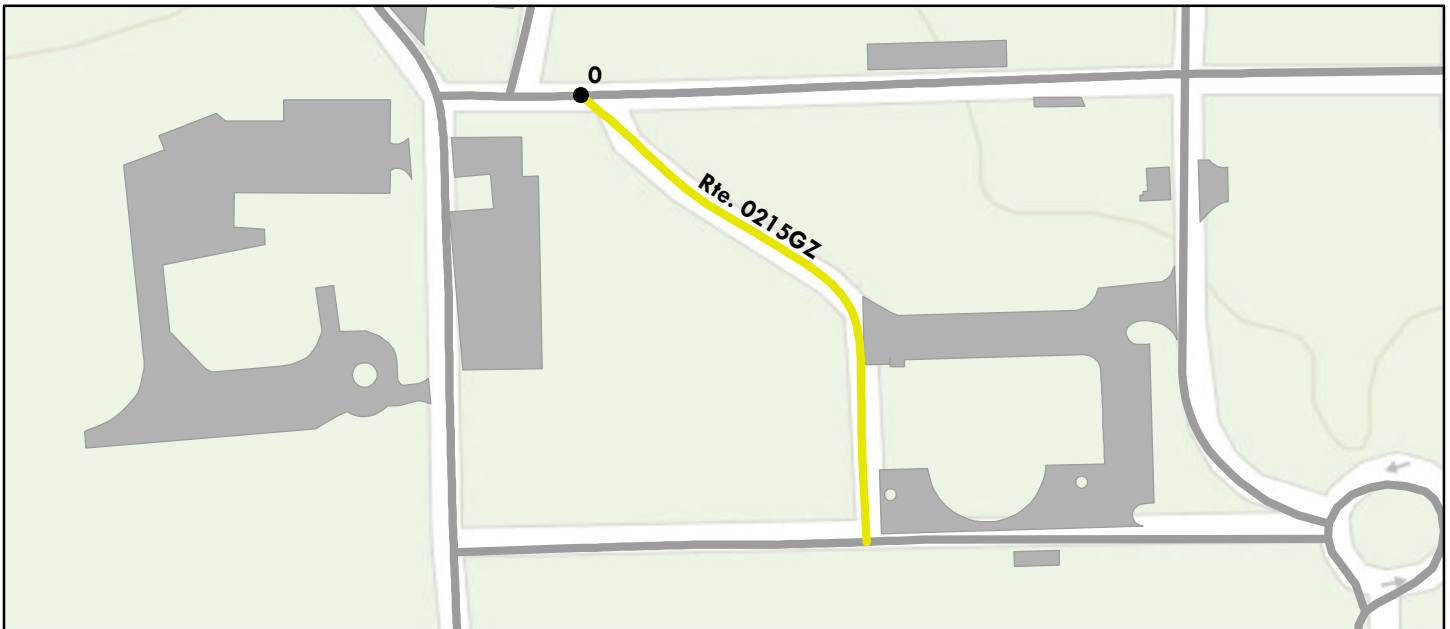
HAVO_0215FZ_0.055.jpg

Hawaii Volcanoes National Park

ROUTE 0215GZ: KILAUEA MILITARY CAMP ROAD G

Subcomponent of Route HAVO-0215ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.09	Section Length (MI)	0.09				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	73	73				
Surface Condition Rating (SCR)	73	73				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	90	90				
Longitudinal Crack Index	73	73				
Transverse Cracking Index	73	73				
Patching Index	90	90				
Rutting Index	90	90				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	16	16				
Lane Width (ft)	8	8				

Hawaii Volcanoes National Park

ROUTE 0215GZ: KILAUEA MILITARY CAMP ROAD G

Condition Photos



HAVO_0215GZ_0.008.jpg



HAVO_0215GZ_0.019.jpg



HAVO_0215GZ_0.031.jpg



HAVO_0215GZ_0.042.jpg



HAVO_0215GZ_0.063.jpg



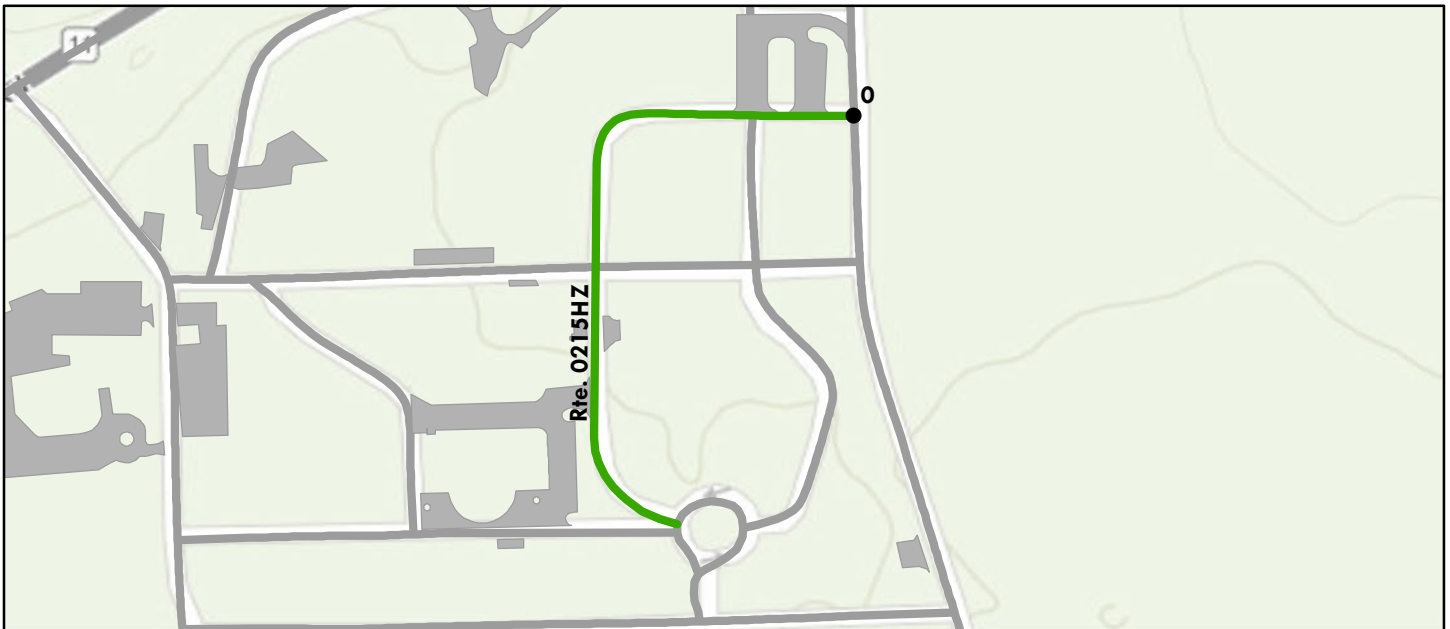
HAVO_0215GZ_0.083.jpg

Hawaii Volcanoes National Park

ROUTE 0215HZ: KILAUEA MILITARY CAMP ROAD H

Subcomponent of Route HAVO-0215ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.18	Section Length (MI)	0.18				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	90	90				
Surface Condition Rating (SCR)	90	90				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	90	90				
Transverse Cracking Index	90	90				
Patching Index	90	90				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	16	16				
Lane Width (ft)	8	8				

Hawaii Volcanoes National Park

ROUTE 0215HZ: KILAUEA MILITARY CAMP ROAD H

Condition Photos



HAVO_0215HZ_0.027.jpg



HAVO_0215HZ_0.053.jpg



HAVO_0215HZ_0.095.jpg



HAVO_0215HZ_0.129.jpg



HAVO_0215HZ_0.142.jpg



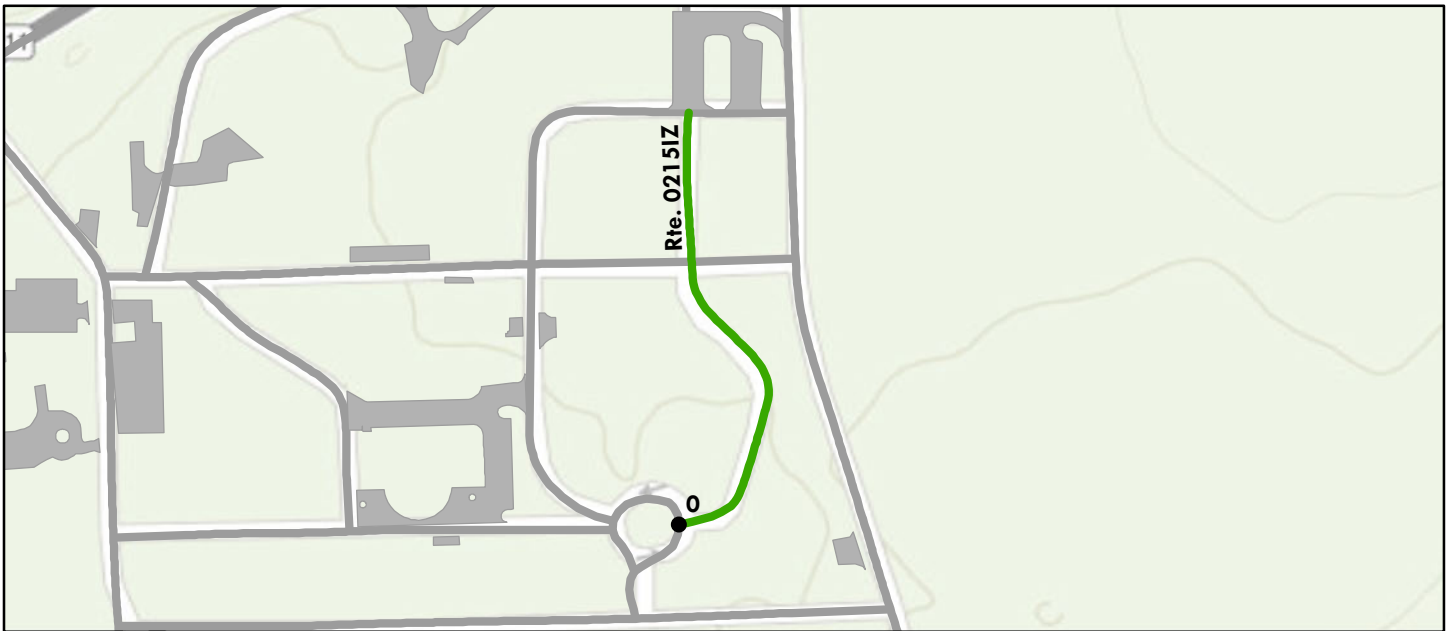
HAVO_0215HZ_0.169.jpg

Hawaii Volcanoes National Park

ROUTE 0215IZ: KILAUEA MILITARY CAMP ROAD I

Subcomponent of Route HAVO-0215ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.13	Section Length (MI)	0.13				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	90	90				
Surface Condition Rating (SCR)	90	90				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	90	90				
Patching Index	90	90				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	16	16				
Lane Width (ft)	8	8				

Hawaii Volcanoes National Park

ROUTE 0215IZ: KILAUEA MILITARY CAMP ROAD I

Condition Photos



HAVO_0215IZ_0.004.jpg



HAVO_0215IZ_0.019.jpg



HAVO_0215IZ_0.041.jpg



HAVO_0215IZ_0.069.jpg



HAVO_0215IZ_0.119.jpg



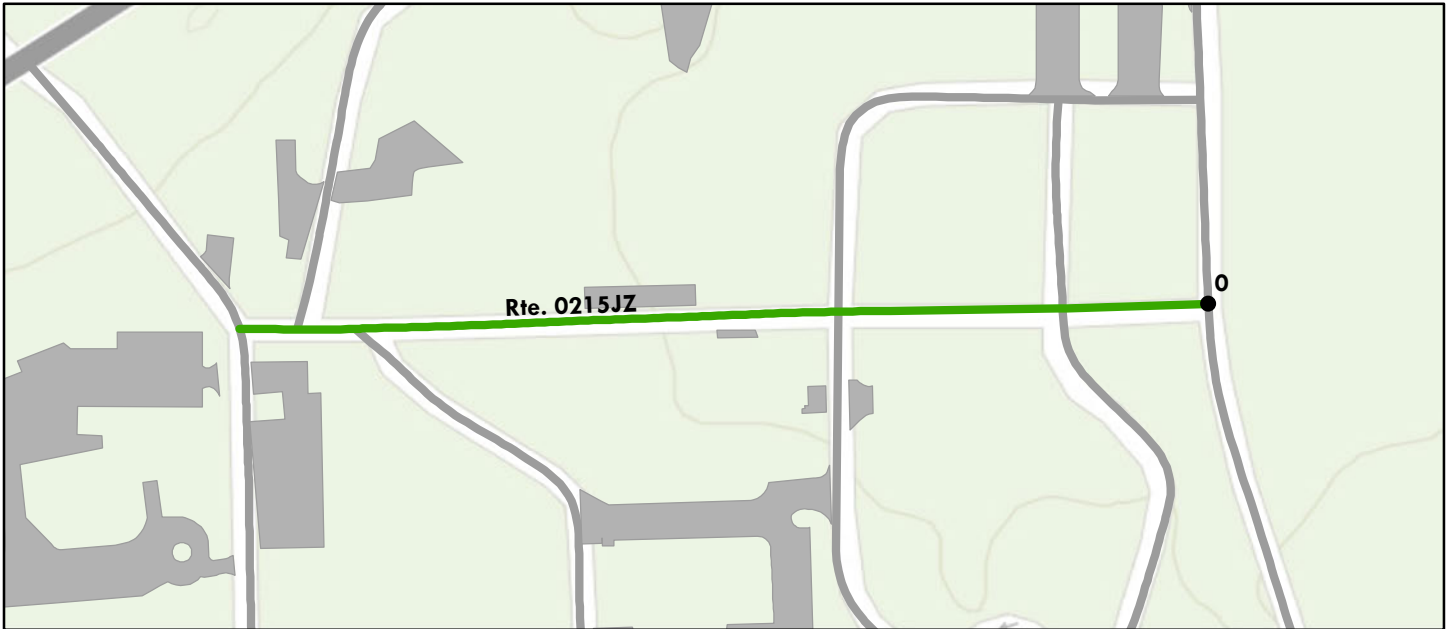
HAVO_0215IZ_0.134.jpg

Hawaii Volcanoes National Park

ROUTE 0215JZ: KILAUEA MILITARY CAMP ROAD J

Subcomponent of Route HAVO-0215ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.18	Section Length (MI)	0.18				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	90	90				
Surface Condition Rating (SCR)	90	90				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	90	90				
Transverse Cracking Index	90	90				
Patching Index	90	90				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	20	20				
Lane Width (ft)	10	10				

Hawaii Volcanoes National Park

ROUTE 0215JZ: KILAUEA MILITARY CAMP ROAD J

Condition Photos



HAVO_0215JZ_0.024.jpg



HAVO_0215JZ_0.062.jpg



HAVO_0215JZ_0.097.jpg



HAVO_0215JZ_0.115.jpg



HAVO_0215JZ_0.149.jpg



HAVO_0215JZ_0.181.jpg

Hawaii Volcanoes National Park

ROUTE 0215KZ: KILAUEA MILITARY CAMP ROAD K

Subcomponent of Route HAVO-0215ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.23	Section Length (MI)	0.23				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	90	90				
Surface Condition Rating (SCR)	90	90				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	90	90				
Patching Index	90	90				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	1	1				
Paved Width (ft)	12	12				
Lane Width (ft)	12	12				

Hawaii Volcanoes National Park

ROUTE 0215KZ: KILAUEA MILITARY CAMP ROAD K

Condition Photos



HAVO_0215KZ_0.005.jpg



HAVO_0215KZ_0.046.jpg



HAVO_0215KZ_0.079.jpg



HAVO_0215KZ_0.116.jpg



HAVO_0215KZ_0.174.jpg



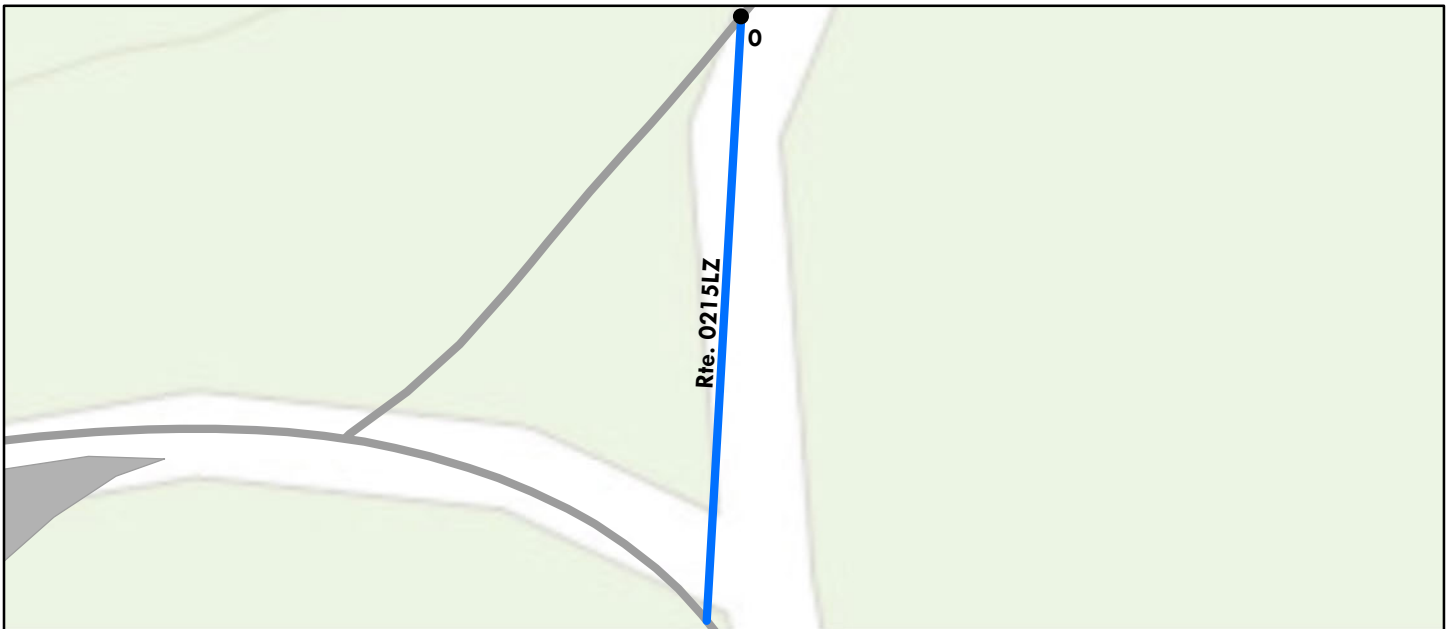
HAVO_0215KZ_0.218.jpg

Hawaii Volcanoes National Park

ROUTE 0215LZ: KILAUEA MILITARY CAMP ROAD L

Subcomponent of Route HAVO-0215ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.02	Section Length (MI)	0.02				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97	97				
Surface Condition Rating (SCR)	97	97				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	97	97				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	14	14				
Lane Width (ft)	7	7				

Hawaii Volcanoes National Park
ROUTE 0215LZ: KILAUEA MILITARY CAMP ROAD L

Condition Photos



HAVO_0215LZ_0.000.jpg



HAVO_0215LZ_0.006.jpg



HAVO_0215LZ_0.016.jpg

Hawaii Volcanoes National Park

ROUTE 0400: WATER TANK ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.34	Section Length (MI)	0.34				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97	97				
Surface Condition Rating (SCR)	97	97				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	97	97				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	1	1				
Paved Width (ft)	12	12				
Lane Width (ft)	12	12				

Hawaii Volcanoes National Park

ROUTE 0400: WATER TANK ROAD

Condition Photos



HAVO_0400_0.007.jpg



HAVO_0400_0.042.jpg



HAVO_0400_0.082.jpg



HAVO_0400_0.143.jpg



HAVO_0400_0.206.jpg

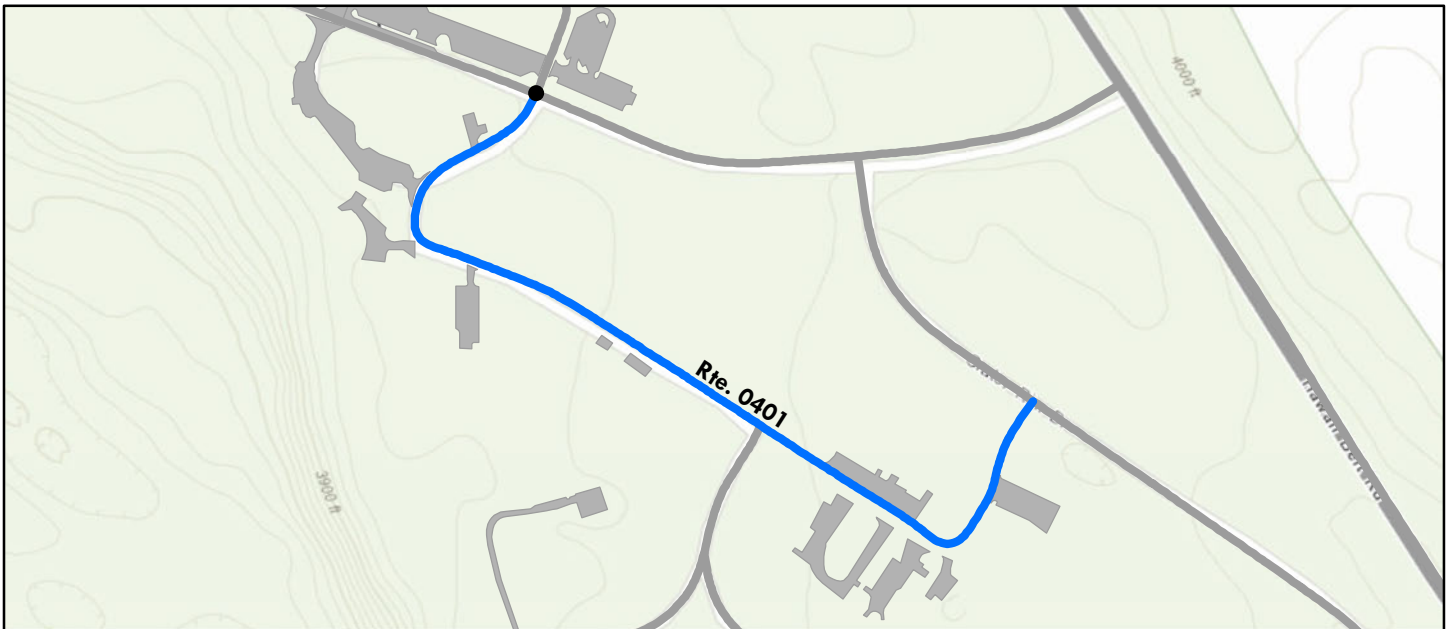


HAVO_0400_0.270.jpg

Hawaii Volcanoes National Park

ROUTE 0401: NORTH RESIDENCE ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.43	Section Length (MI)	0.43				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97	97				
Surface Condition Rating (SCR)	97	97				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	97	97				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	18	18				
Lane Width (ft)	9	9				

Hawaii Volcanoes National Park

ROUTE 0401: NORTH RESIDENCE ROAD

Condition Photos



HAVO_0401_0.026.jpg



HAVO_0401_0.078.jpg



HAVO_0401_0.129.jpg



HAVO_0401_0.173.jpg



HAVO_0401_0.246.jpg



HAVO_0401_0.297.jpg

Hawaii Volcanoes National Park

ROUTE 0403: SOUTH RESIDENCE LOOP

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas

Inspection Date: 3/8/2022	Beginning Section MP	0.00	0.14			
Paved Length (Miles): 0.42	Section Length (MI)	0.14	0.28			
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	92	97	90			
Surface Condition Rating (SCR)	92	97	90			
Roughness Condition Index (RCI)	N/A	N/A	N/A			
Distress Index Values						
Structural Crack Index	N/A	N/A	N/A			
Alligator Crack Index	97	97	97			
Longitudinal Crack Index	97	97	97			
Transverse Cracking Index	92	97	90			
Patching Index	97	97	97			
Rutting Index	97	97	97			
International Roughness Index (IRI)	N/A	N/A	N/A			
Lane & Width Information						
Number of Lanes	1	2	1			
Paved Width (ft)	14.6	20	12			
Lane Width (ft)	11.3	10	12			

Hawaii Volcanoes National Park

ROUTE 0403: SOUTH RESIDENCE LOOP

Condition Photos



HAVO_0403_0.014.jpg



HAVO_0403_0.133.jpg



HAVO_0403_0.203.jpg



HAVO_0403_0.247.jpg



HAVO_0403_0.328.jpg

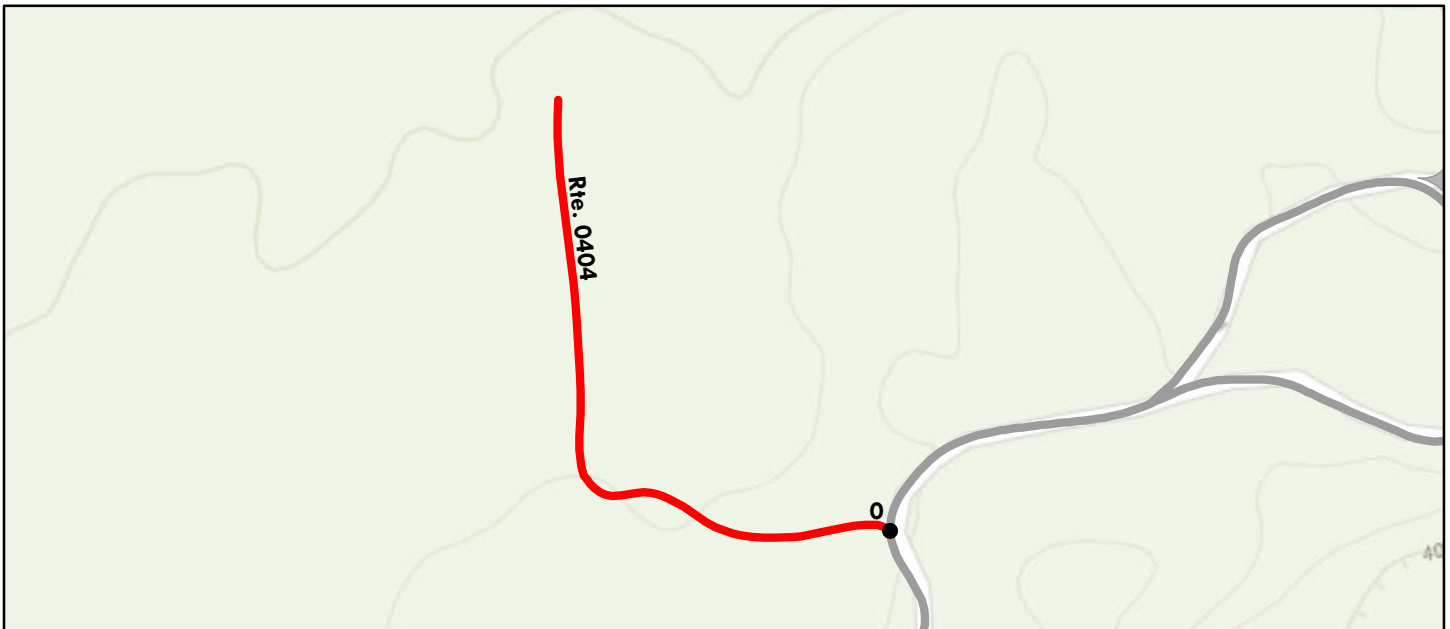


HAVO_0403_0.406.jpg

Hawaii Volcanoes National Park

ROUTE 0404: TREE MOLDS STABLE ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.23	Section Length (MI)	0.23				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	0	0				
Surface Condition Rating (SCR)	0	0				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	N/A	N/A				
Longitudinal Crack Index	N/A	N/A				
Transverse Cracking Index	N/A	N/A				
Patching Index	N/A	N/A				
Rutting Index	N/A	N/A				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	1	1				
Paved Width (ft)	10	10				
Lane Width (ft)	10	10				

Hawaii Volcanoes National Park

ROUTE 0404: TREE MOLDS STABLE ROAD

Condition Photos



HAVO_0404_0.014.jpg



HAVO_0404_0.048.jpg



HAVO_0404_0.083.jpg



HAVO_0404_0.113.jpg



HAVO_0404_0.165.jpg

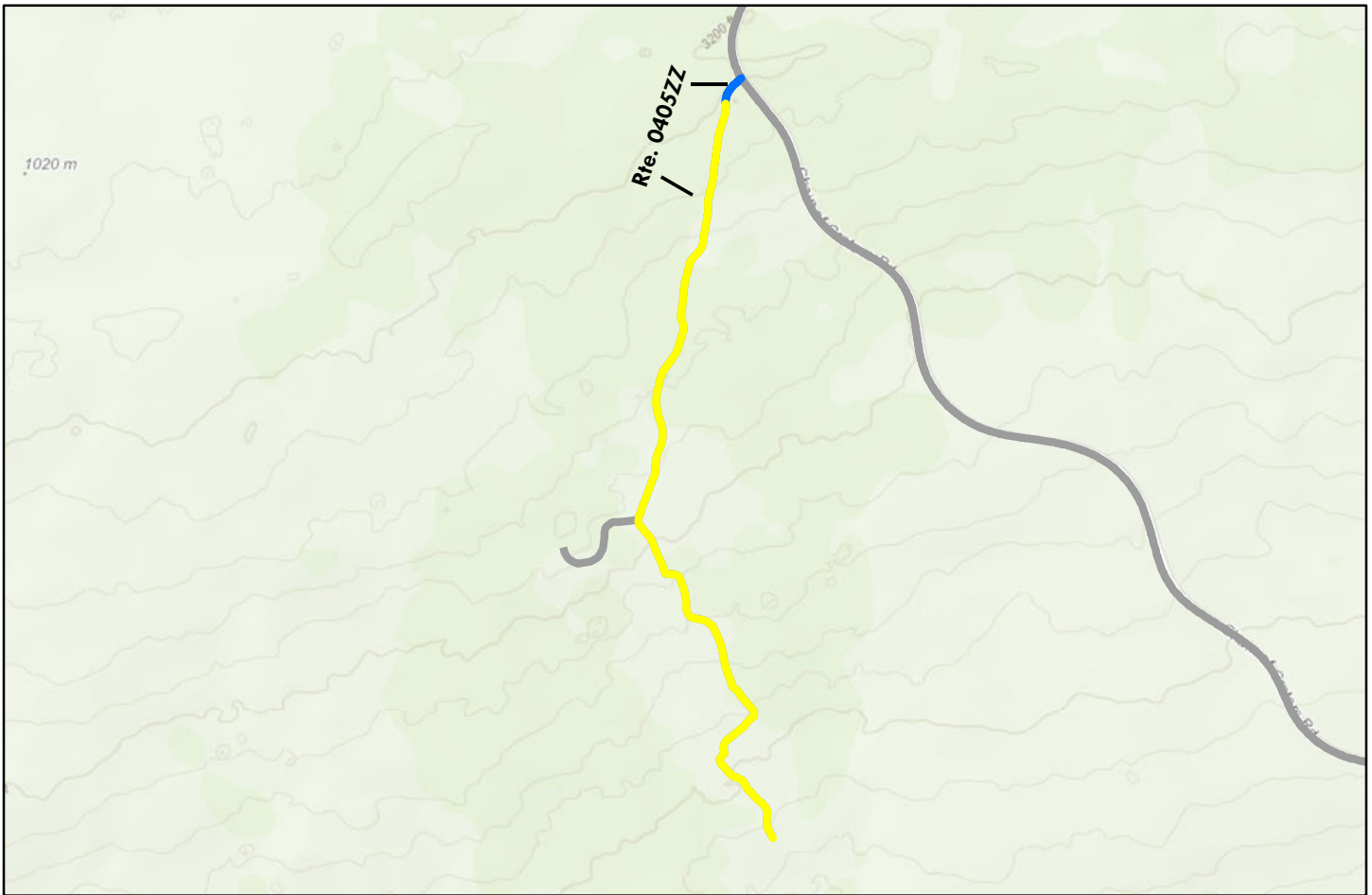


HAVO_0404_0.207.jpg

Hawaii Volcanoes National Park

ROUTE 0405ZZ: AINAHOU ROAD

Summary Route



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: The weighted average summary PCR value is calculated from only the sections of road where the PCR was collected. The overall PCR for the summary route may not reflect individual subcomponent ratings.

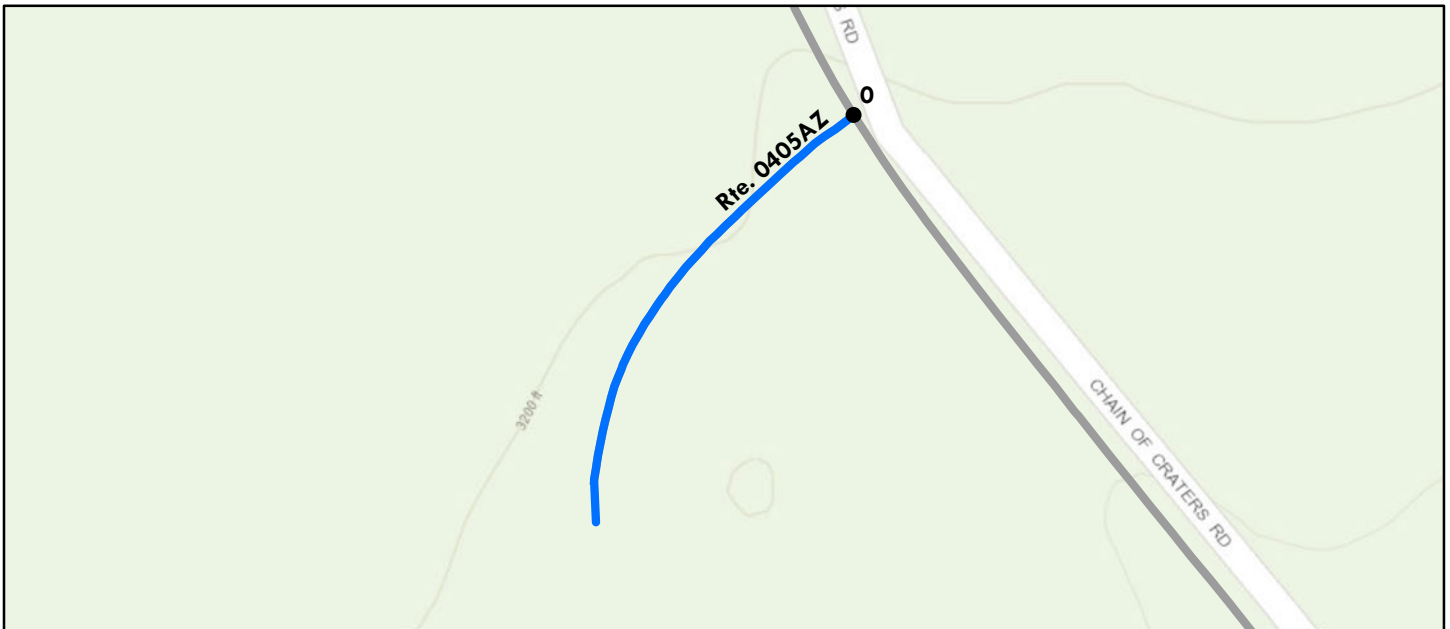
Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022						
Paved Length (Miles): 0.06						
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97					
Lane & Width Information						
Number of Lanes	2					
Paved Width (ft)	18					
Lane Width (ft)	9					

Hawaii Volcanoes National Park

ROUTE 0405AZ: AINAHOU ROAD PAVED

Subcomponent of Route HAVO-0405ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

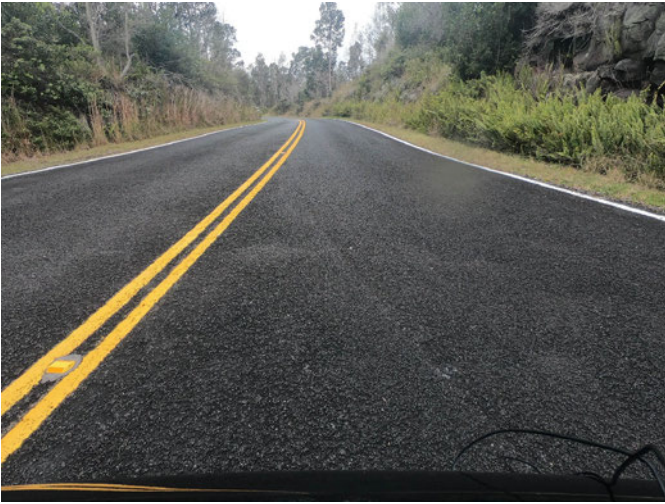
See Appendix for definitions and formulas

Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.06	Section Length (MI)	0.06				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97	97				
Surface Condition Rating (SCR)	97	97				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	97	97				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	18	18				
Lane Width (ft)	9	9				

Hawaii Volcanoes National Park

ROUTE 0405AZ: AINAHOU ROAD PAVED

Condition Photos



HAVO_0405AZ_0.000.JPG



HAVO_0405AZ_0.007.JPG



HAVO_0405AZ_0.019.JPG



HAVO_0405AZ_0.029.JPG



HAVO_0405AZ_0.039.JPG

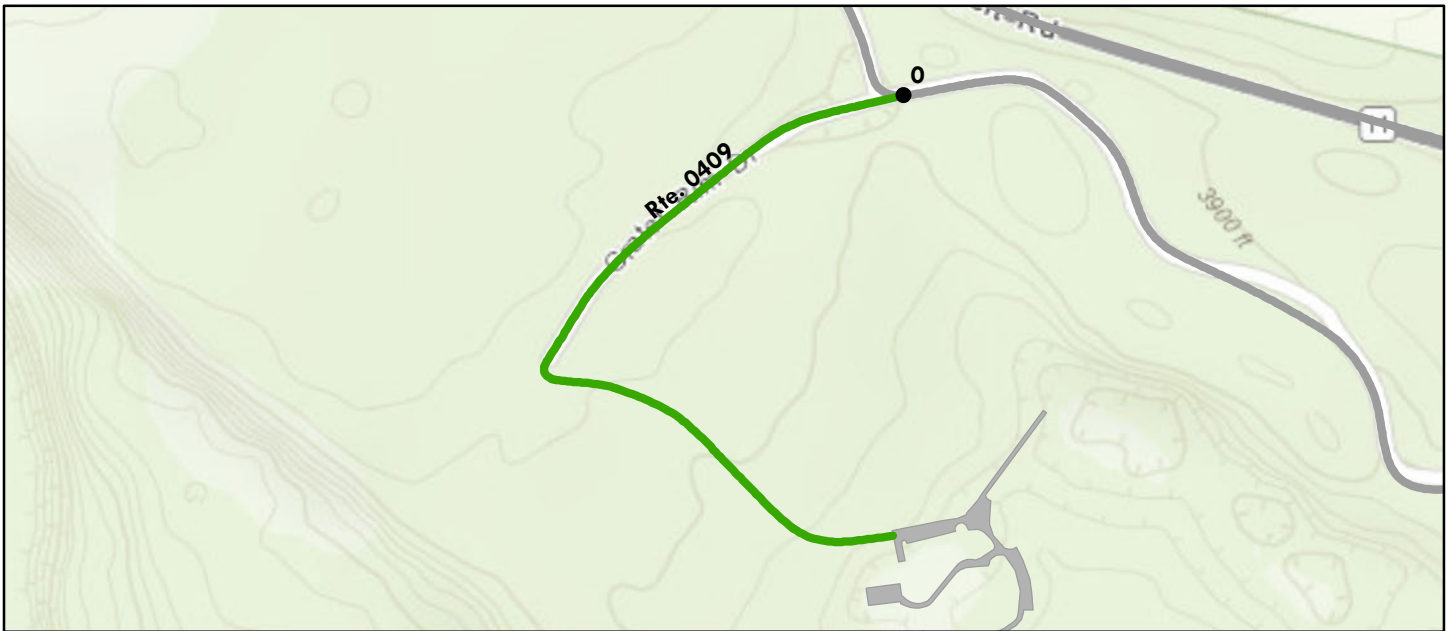


HAVO_0405AZ_0.054.JPG

Hawaii Volcanoes National Park

ROUTE 0409: RESOURCE MANAGEMENT ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.47	Section Length (MI)	0.47				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	90	90				
Surface Condition Rating (SCR)	90	90				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	90	90				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	20	20				
Lane Width (ft)	10	10				

Hawaii Volcanoes National Park

ROUTE 0409: RESOURCE MANAGEMENT ROAD

Condition Photos



HAVO_0409_0.031.jpg



HAVO_0409_0.143.jpg



HAVO_0409_0.244.jpg



HAVO_0409_0.323.jpg



HAVO_0409_0.384.jpg

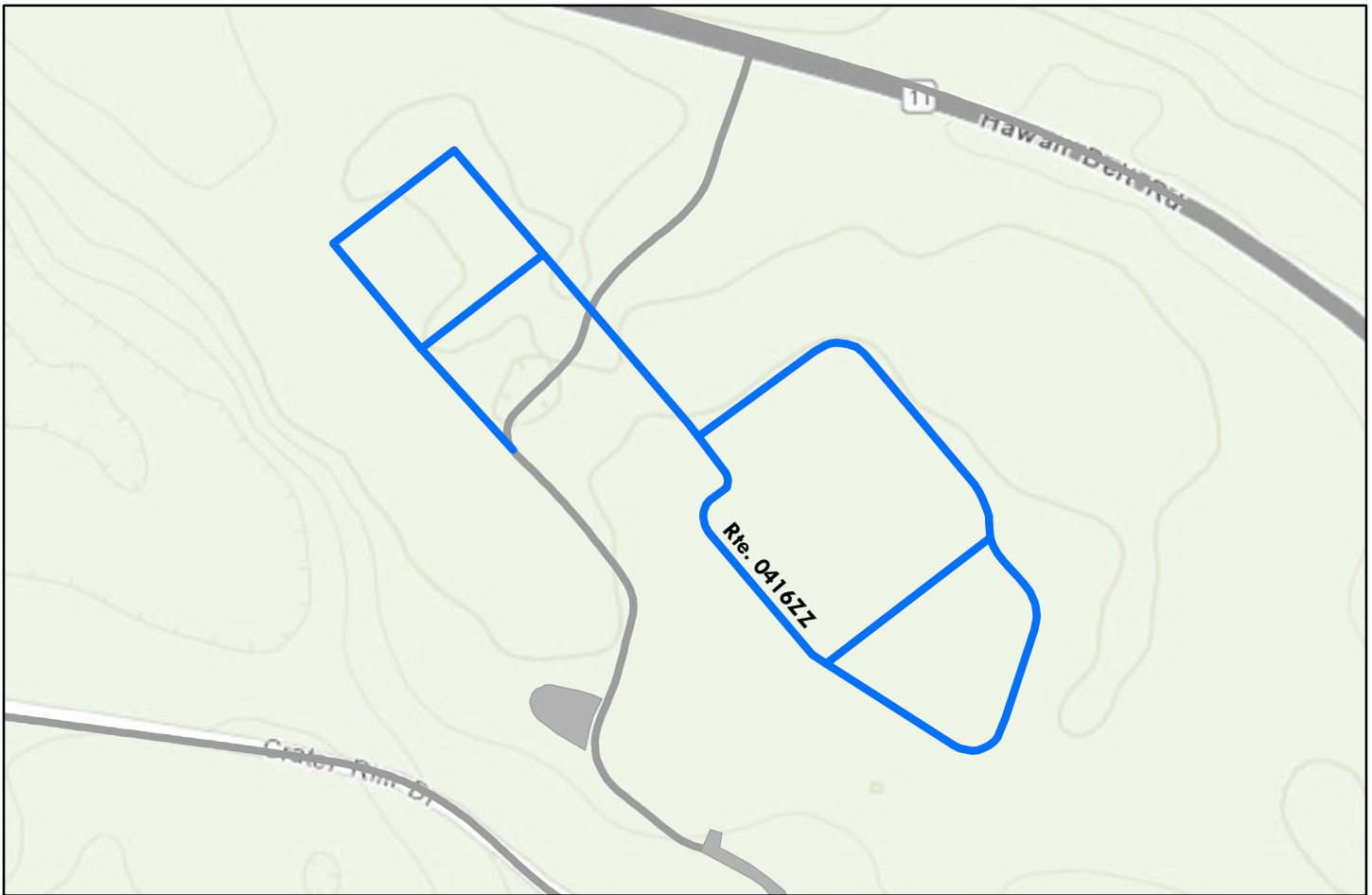


HAVO_0409_0.471.jpg

Hawaii Volcanoes National Park

ROUTE 0416ZZ: KILAUEA WATER TANKS AREA ROADS

Summary Route



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: The weighted average summary PCR value is calculated from only the sections of road where the PCR was collected. The overall PCR for the summary route may not reflect individual subcomponent ratings.

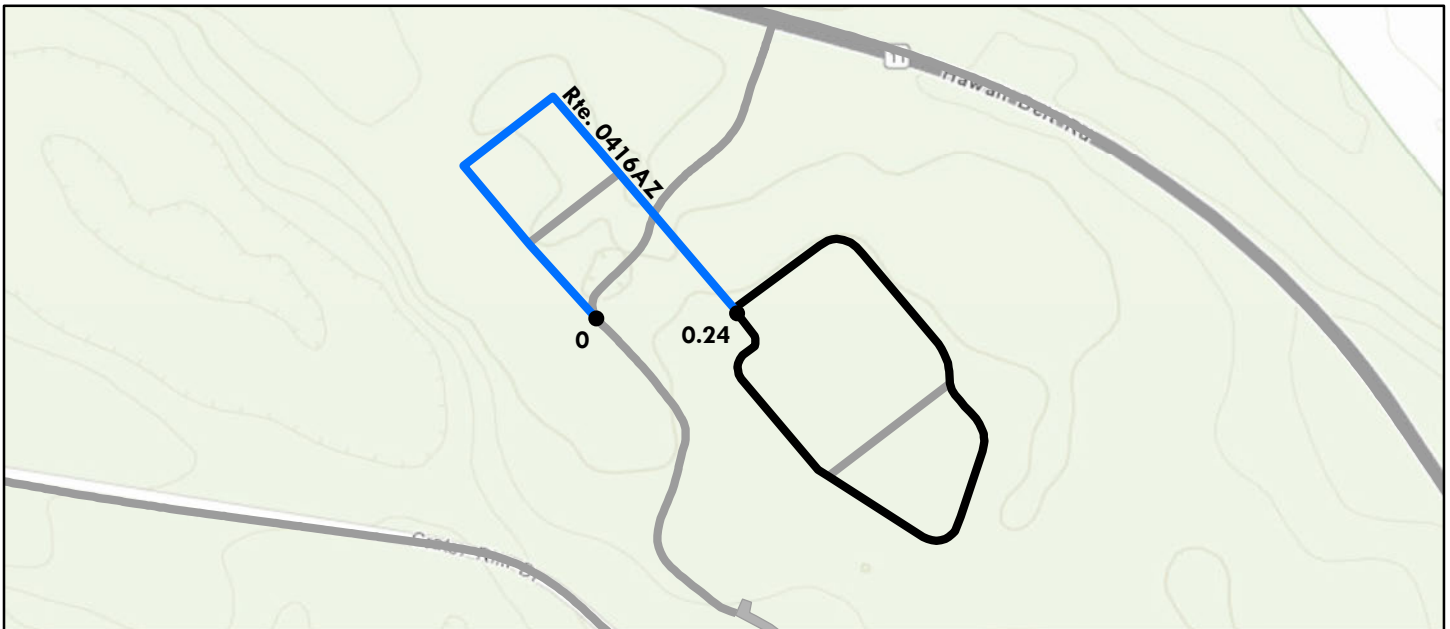
Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022						
Paved Length (Miles): 0.68						
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97					
Lane & Width Information						
Number of Lanes	1					
Paved Width (ft)	13.7					
Lane Width (ft)	10.3					

Hawaii Volcanoes National Park

ROUTE 0416AZ: KILAUEA WATER TANKS AREA ROAD A

Subcomponent of Route HAVO-0416ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00	0.24			
Paved Length (Miles): 0.58	Section Length (MI)	0.24	0.34			
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97	97	N/A			
Surface Condition Rating (SCR)	97	97	N/A			
Roughness Condition Index (RCI)	N/A	N/A	N/A			
Distress Index Values						
Structural Crack Index	N/A	N/A	N/A			
Alligator Crack Index	97	97	N/A			
Longitudinal Crack Index	97	97	N/A			
Transverse Cracking Index	97	97	N/A			
Patching Index	97	97	N/A			
Rutting Index	97	97	N/A			
International Roughness Index (IRI)	N/A	N/A	N/A			
Lane & Width Information						
Number of Lanes	1	2	1			
Paved Width (ft)	13.7	16	12			
Lane Width (ft)	10.3	8	12			

Note: Route partially collected. Collection stopped at MP 0.24 due to locked gate.

Hawaii Volcanoes National Park

ROUTE 0416AZ: KILAUEA WATER TANKS AREA ROAD A

Condition Photos



HAVO_0416AZ_0.014.jpg



HAVO_0416AZ_0.050.jpg



HAVO_0416AZ_0.085.jpg



HAVO_0416AZ_0.118.jpg



HAVO_0416AZ_0.150.jpg



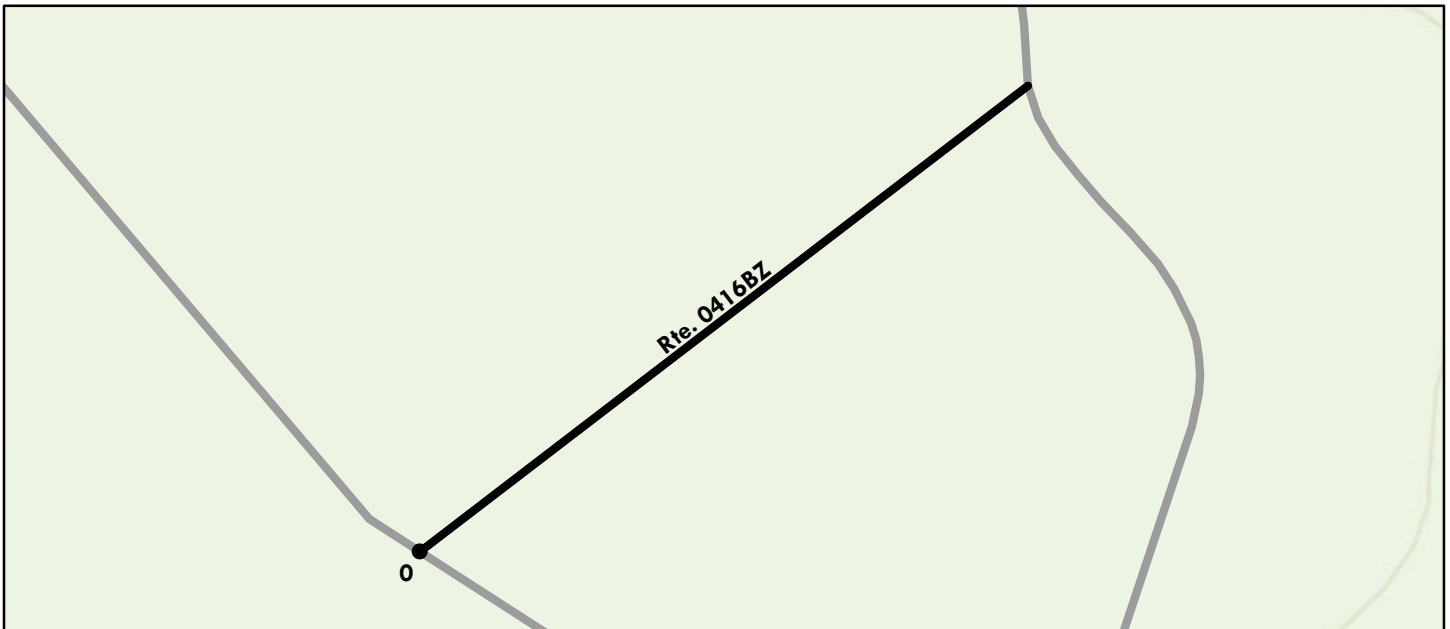
HAVO_0416AZ_0.183.jpg

Hawaii Volcanoes National Park

ROUTE 0416BZ: KILAUEA WATER TANKS AREA ROAD B

Subcomponent of Route HAVO-0416ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.06	Section Length (MI)	0.06				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	N/A	N/A				
Surface Condition Rating (SCR)	N/A	N/A				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	N/A	N/A				
Longitudinal Crack Index	N/A	N/A				
Transverse Cracking Index	N/A	N/A				
Patching Index	N/A	N/A				
Rutting Index	N/A	N/A				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	1	1				
Paved Width (ft)	12	12				
Lane Width (ft)	12	12				

Note: Route not collected due to locked gate.

Hawaii Volcanoes National Park

ROUTE 0416CZ: KILAUEA WATER TANKS AREA ROAD C

Subcomponent of Route HAVO-0416ZZ

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.05	Section Length (MI)	0.05				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97	97				
Surface Condition Rating (SCR)	97	97				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	97	97				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	16	16				
Lane Width (ft)	8	8				

Hawaii Volcanoes National Park

ROUTE 0416CZ: KILAUEA WATER TANKS AREA ROAD C

Condition Photos



HAVO_0416CZ_0.003.jpg



HAVO_0416CZ_0.008.jpg



HAVO_0416CZ_0.015.jpg



HAVO_0416CZ_0.025.jpg



HAVO_0416CZ_0.033.jpg

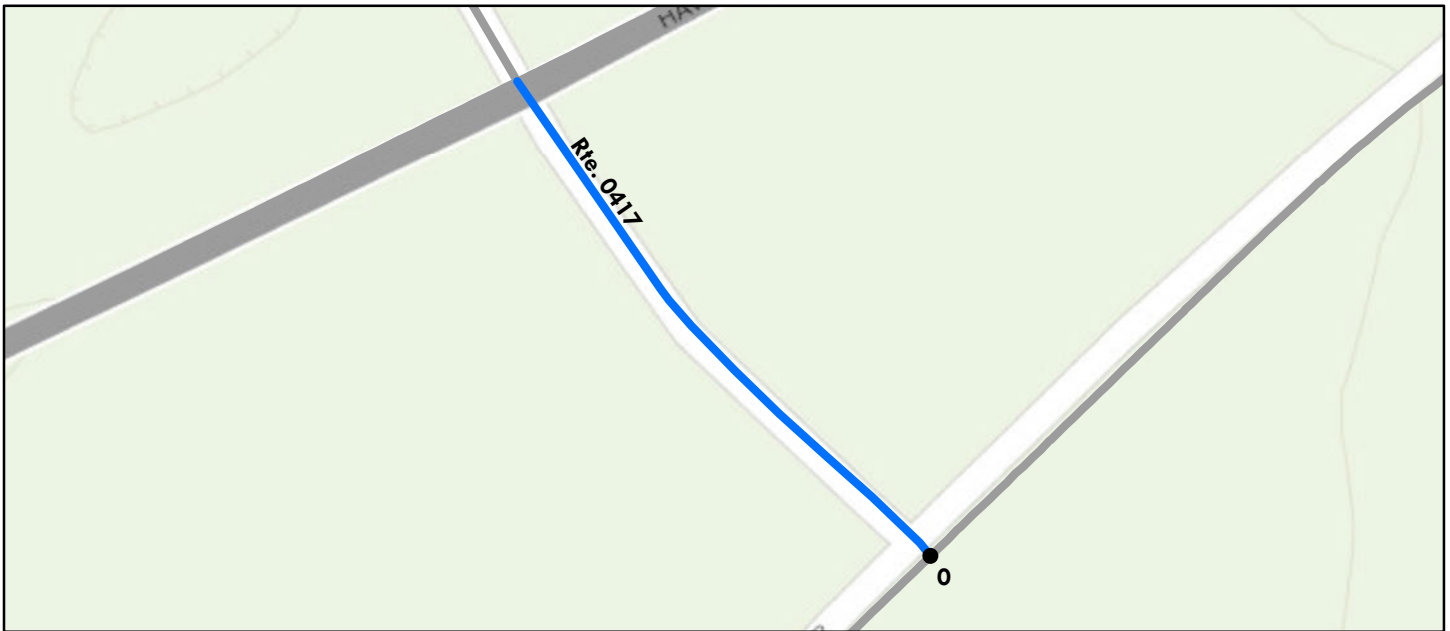


HAVO_0416CZ_0.041.jpg

Hawaii Volcanoes National Park

ROUTE 0417: MAUNA LOA EMERGENCY ACCESS ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.10	Section Length (MI)	0.10				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	97	97				
Surface Condition Rating (SCR)	97	97				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	97	97				
Longitudinal Crack Index	97	97				
Transverse Cracking Index	97	97				
Patching Index	97	97				
Rutting Index	97	97				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	21	21				
Lane Width (ft)	9	9				

Hawaii Volcanoes National Park

ROUTE 0417: MAUNA LOA EMERGENCY ACCESS ROAD

Condition Photos



HAVO_0417_0.009.jpg



HAVO_0417_0.035.jpg



HAVO_0417_0.054.jpg



HAVO_0417_0.067.jpg



HAVO_0417_0.078.jpg

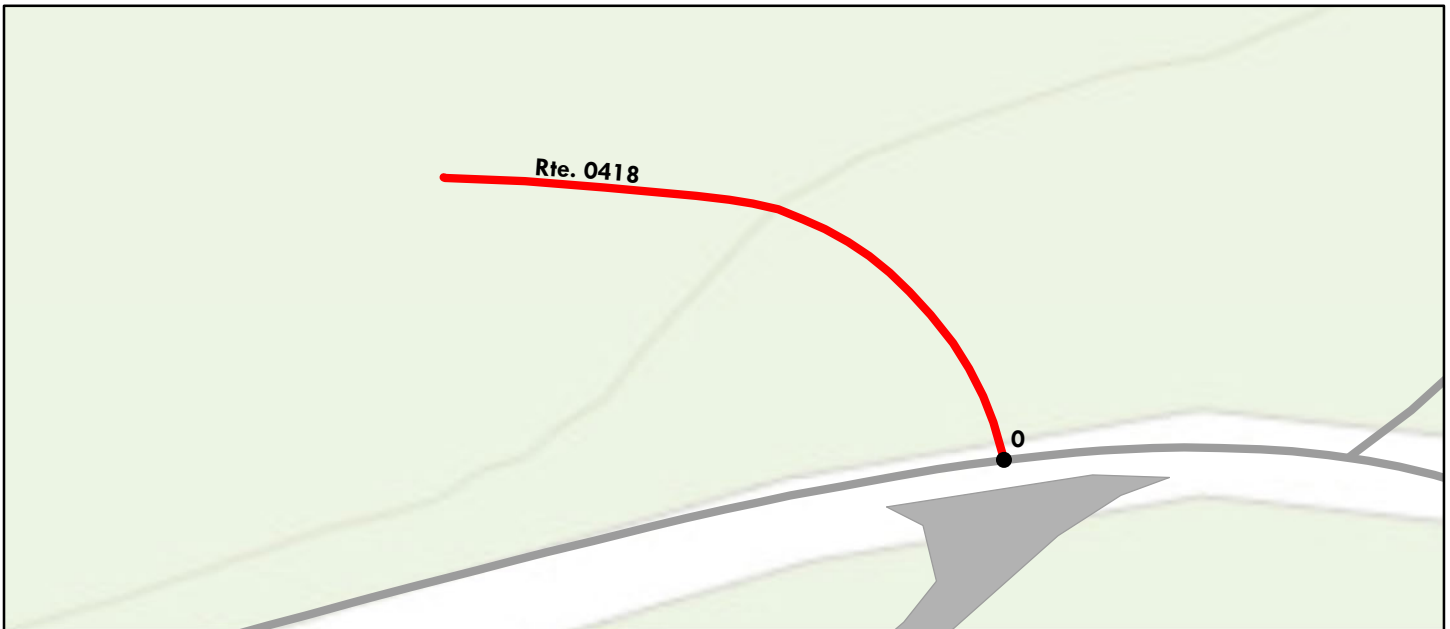


HAVO_0417_0.091.jpg

Hawaii Volcanoes National Park

ROUTE 0418: KILAUEA MILITARY CAMP WATER TANK ROAD

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 0.03	Section Length (MI)	0.03				
Surface Type: CONCRETE	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	0	0				
Surface Condition Rating (SCR)	0	0				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	N/A	N/A				
Longitudinal Crack Index	N/A	N/A				
Transverse Cracking Index	N/A	N/A				
Patching Index	N/A	N/A				
Rutting Index	N/A	N/A				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	1	1				
Paved Width (ft)	12	12				
Lane Width (ft)	12	12				

Hawaii Volcanoes National Park

ROUTE 0418: KILAUEA MILITARY CAMP WATER TANK ROAD

Condition Photos



HAVO_0418_0.004.jpg



HAVO_0418_0.012.jpg



HAVO_0418_0.014.jpg



HAVO_0418_0.016.jpg



HAVO_0418_0.021.jpg

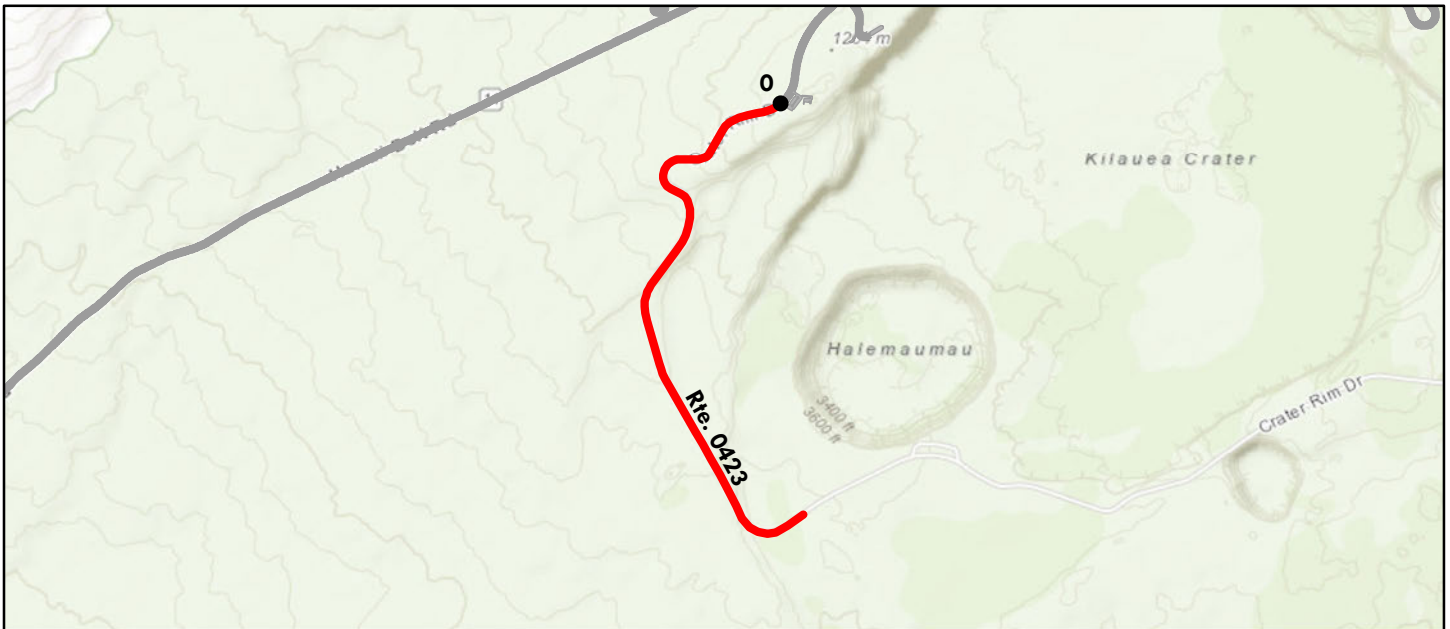


HAVO_0418_0.023.jpg

Hawaii Volcanoes National Park

ROUTE 0423: CRATER RIM DRIVE - ADMINISTRATIVE

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 2.19	Section Length (MI)	2.19				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	0	0				
Surface Condition Rating (SCR)	0	0				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	N/A	N/A				
Longitudinal Crack Index	N/A	N/A				
Transverse Cracking Index	N/A	N/A				
Patching Index	N/A	N/A				
Rutting Index	N/A	N/A				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	16	16				
Lane Width (ft)	8	8				

Note: Route heavily damaged by volcanic activity and is dangerous to drive.

Hawaii Volcanoes National Park

ROUTE 0423: CRATER RIM DRIVE - ADMINISTRATIVE

Condition Photos



HAVO_0423_0.002.jpg



HAVO_0423_0.303.jpg



HAVO_0423_0.509.jpg



HAVO_0423_0.911.jpg



HAVO_0423_1.489.jpg

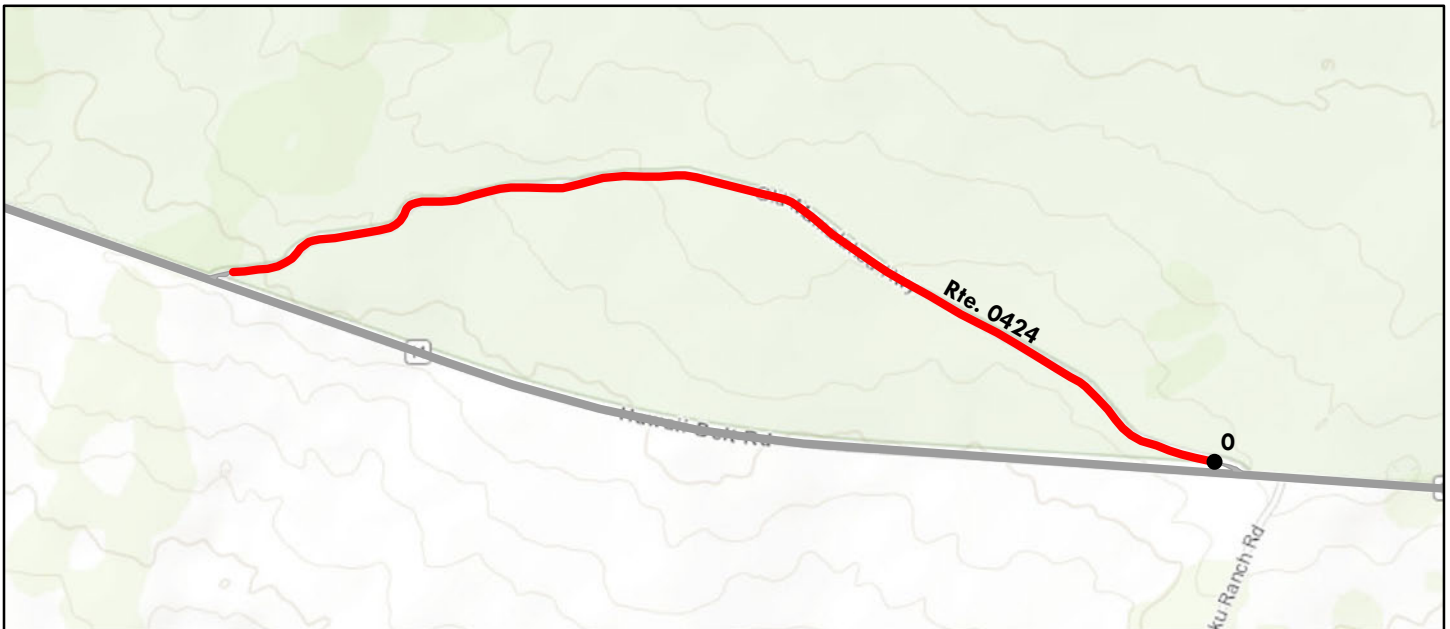


HAVO_0423_2.180.jpg

Hawaii Volcanoes National Park

ROUTE 0424: KAHUKU OLD MAMALAHOA HIGHWAY

Manual Rating



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated		
See Appendix for definitions and formulas						
Inspection Date: 3/8/2022	Beginning Section MP	0.00				
Paved Length (Miles): 1.71	Section Length (MI)	1.71				
Surface Type: ASPHALT	Route Summary					
Roadway Condition Information						
Pavement Condition Rating (PCR)	0	0				
Surface Condition Rating (SCR)	0	0				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	N/A	N/A				
Alligator Crack Index	N/A	N/A				
Longitudinal Crack Index	N/A	N/A				
Transverse Cracking Index	N/A	N/A				
Patching Index	N/A	N/A				
Rutting Index	N/A	N/A				
International Roughness Index (IRI)	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	17	17				
Lane Width (ft)	8	8				

Hawaii Volcanoes National Park

ROUTE 0424: KAHUKU OLD MAMALAHOA HIGHWAY

Condition Photos



HAVO_0424_0.007.jpg



HAVO_0424_0.409.jpg



HAVO_0424_0.818.jpg



HAVO_0424_1.099.jpg



HAVO_0424_1.401.jpg



HAVO_0424_1.705.jpg

Section 6 Paved Parking Area Condition Rating Sheets



Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program

Hawaii Volcanoes National Park

ROUTE 0900ZZ: KILAUEA VISITORS CENTER PARKING

Summary Route
Manual Rating

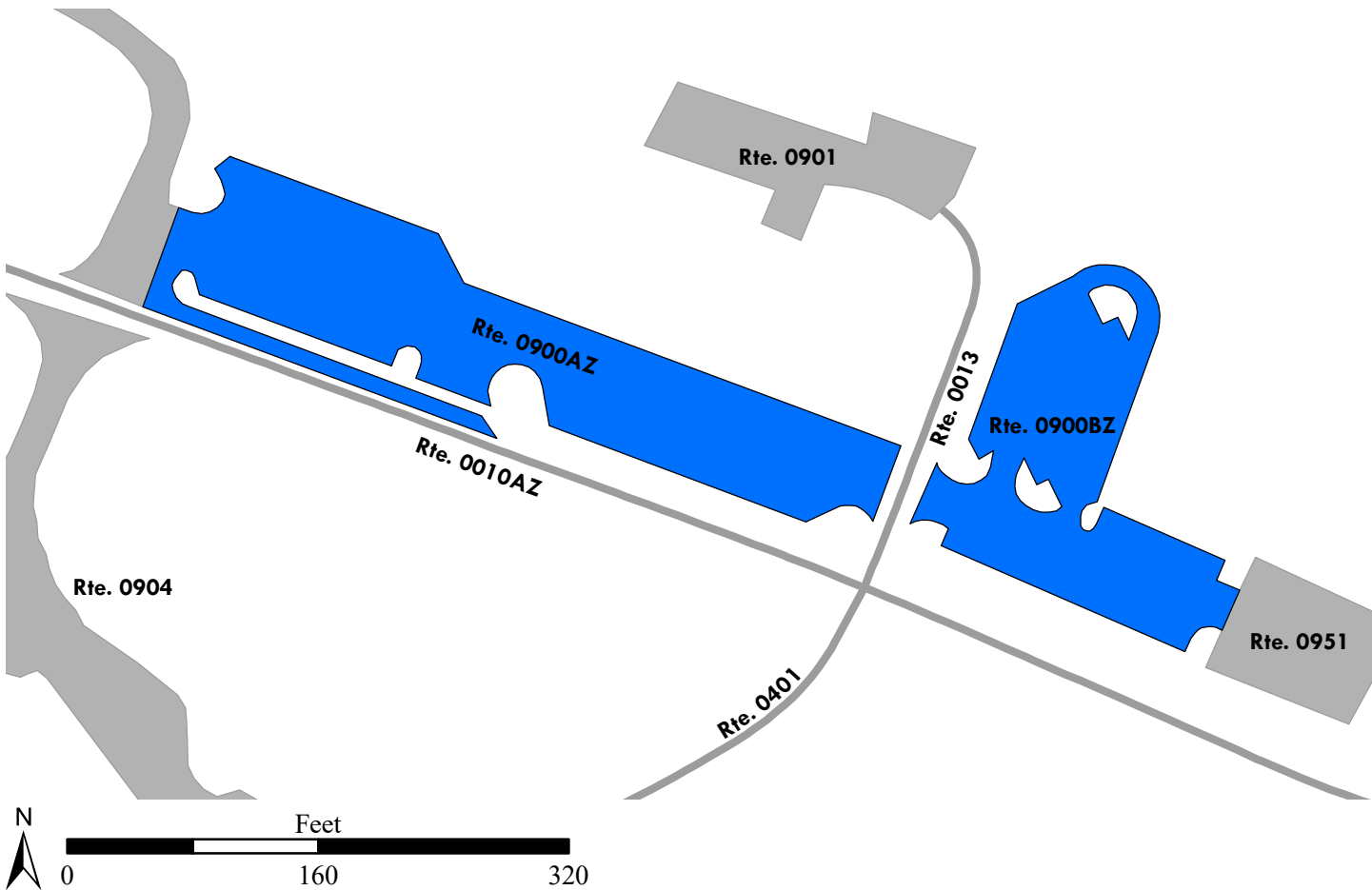
FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 (ON RIGHT AND LEFT)

TO ROUTE 0941 (VOLCANO ART CENTER PARKING)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22571	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition Rating / PCR	
55,106	0.949	SUMMARY / 97	
Route Condition Legend – Pavement Condition Rating (PCR)			
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100) Not Rated
See Appendix for definitions and formulas			

The condition shown on this page reflects the overall route condition and may not reflect individual subcomponent ratings.

Route 0900ZZ
(2 Subcomponents)



Hawaii Volcanoes National Park

ROUTE 0900AZ: KILAUEA VISITORS CENTER PARKING

Subcomponent of Route HAVO-0900ZZ
Manual Rating

FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 (ON RIGHT AND LEFT)
 TO ROUTE 0941 (VOLCANO ART CENTER PARKING)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22571	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
33,911	0.584	6	LIGHT REPAIR
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

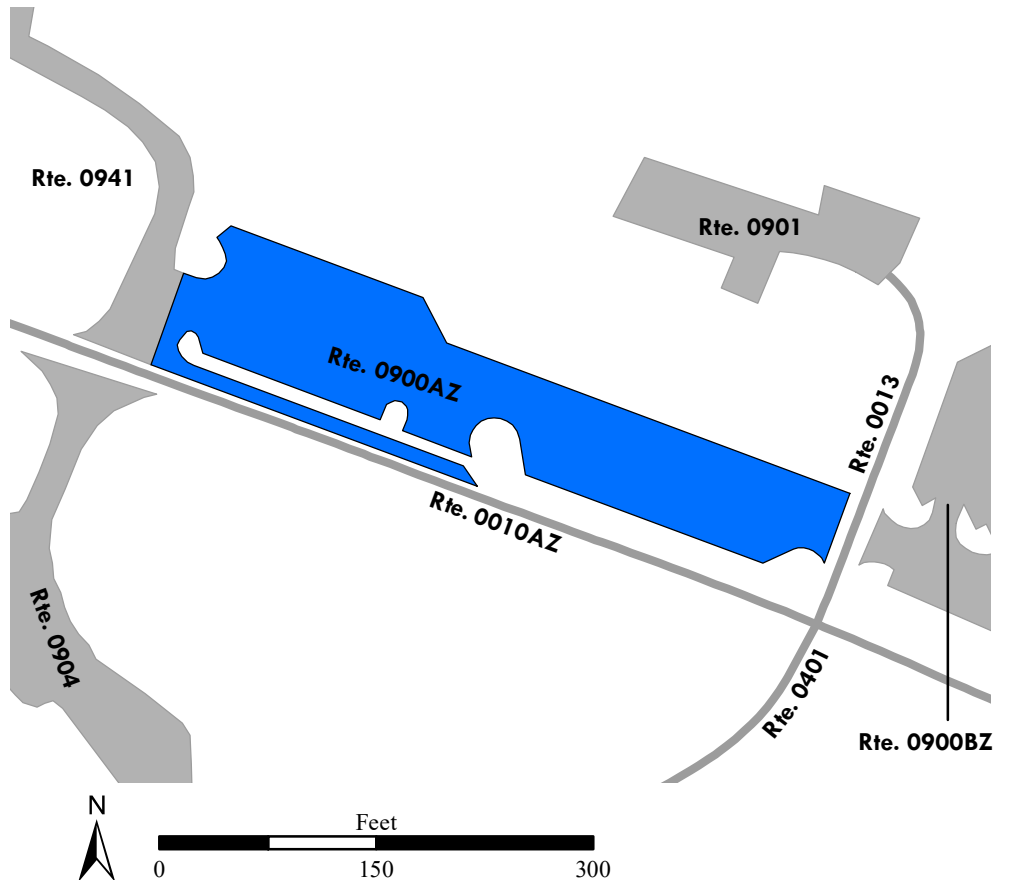
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0900BZ: KILAUEA VISITORS CENTER B PARKING

Subcomponent of Route HAVO-0900ZZ
Manual Rating

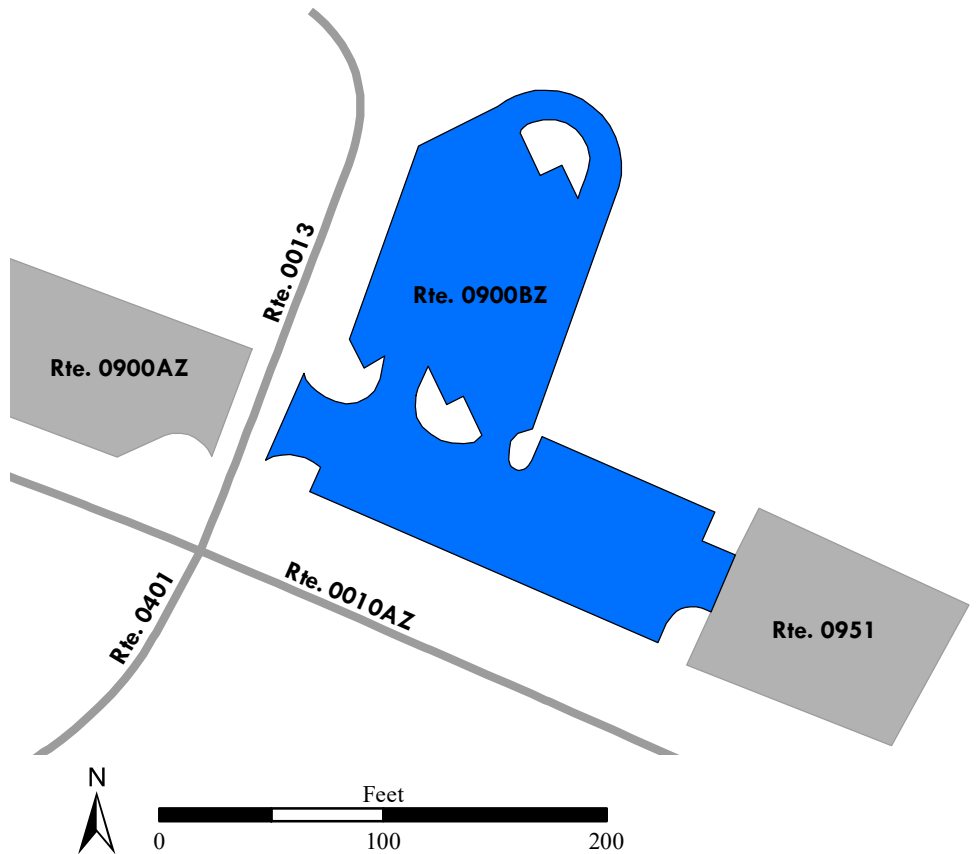
FROM ROUTE 0013 (OFFICE AREA STREET) AT MP 0.01 ON RIGHT
 TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22571	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
21,195	0.365	5	LIGHT REPAIR
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0901: KILAUEA VISITORS CENTER ADMINISTRATIVE PARKING

Manual Rating

FROM END OF ROUTE 0013 (OFFICE AREA STREET)

TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	42652	NONPUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
8,974	0.155	3	LIGHT REPAIR
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

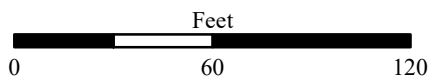
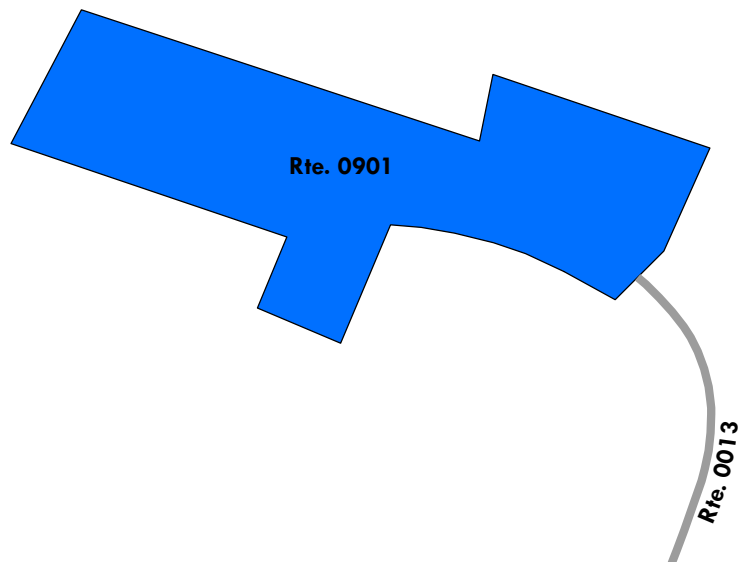
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0904: VOLCANO HOUSE PARKING

Manual Rating

FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 0.35 ON LEFT

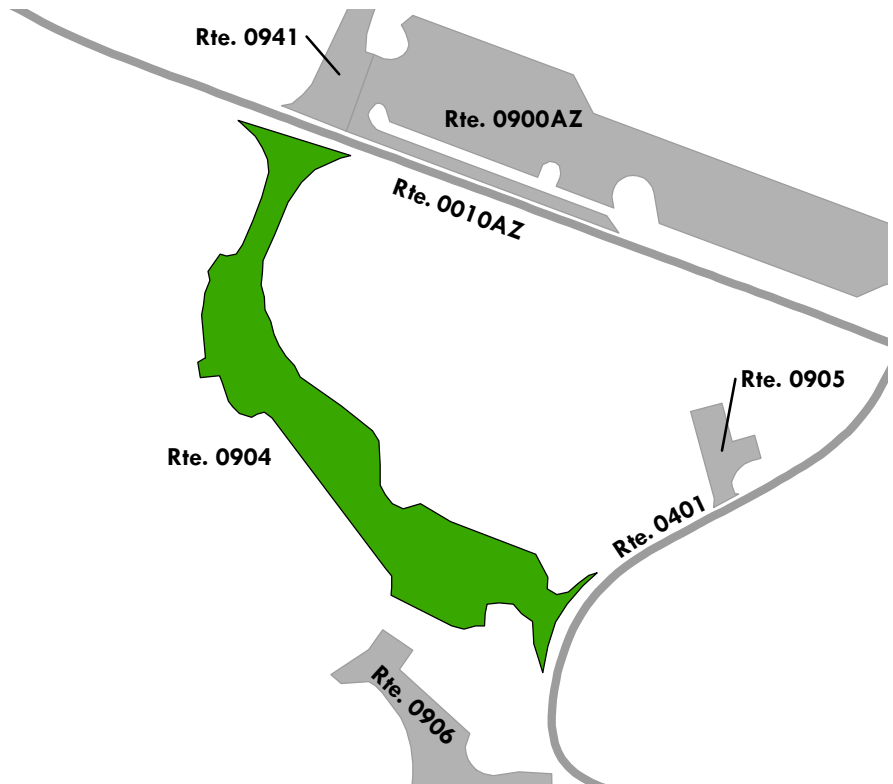
TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.06 ON RIGHT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22490	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
25,881	0.446	6	DO NOTHING
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0905: OHIA WING PARKING

Manual Rating

FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.037 ON RIGHT

TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	109031	NONPUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
2,197	0.038	6	DO NOTHING
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

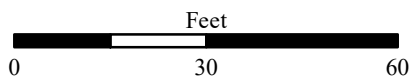
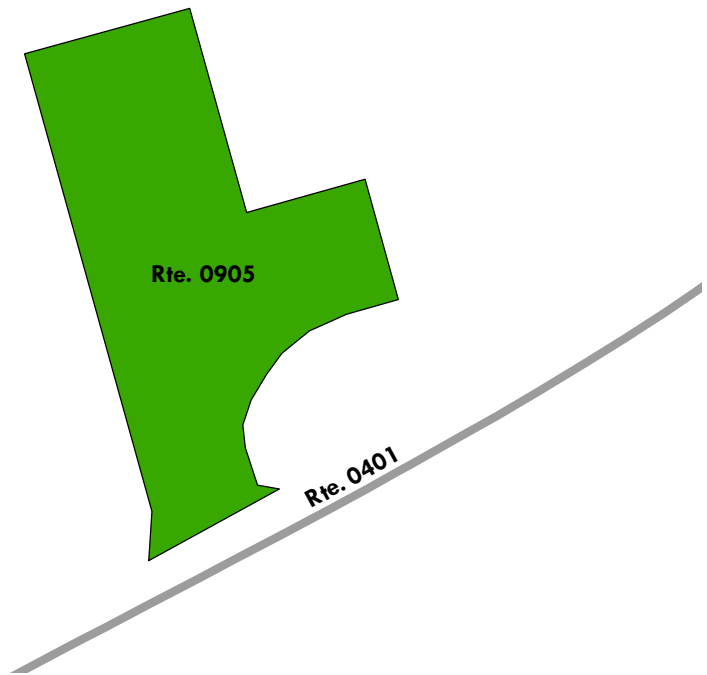
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0906: VOLCANO HOUSE HOTEL SERVICE AREA (BUILDING #B167)

Manual Rating

FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.089 ON RIGHT

TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	42657	NONPUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
8,396	0.145	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
RECONSTRUCTION		POOR / 30	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

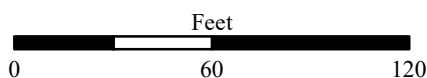
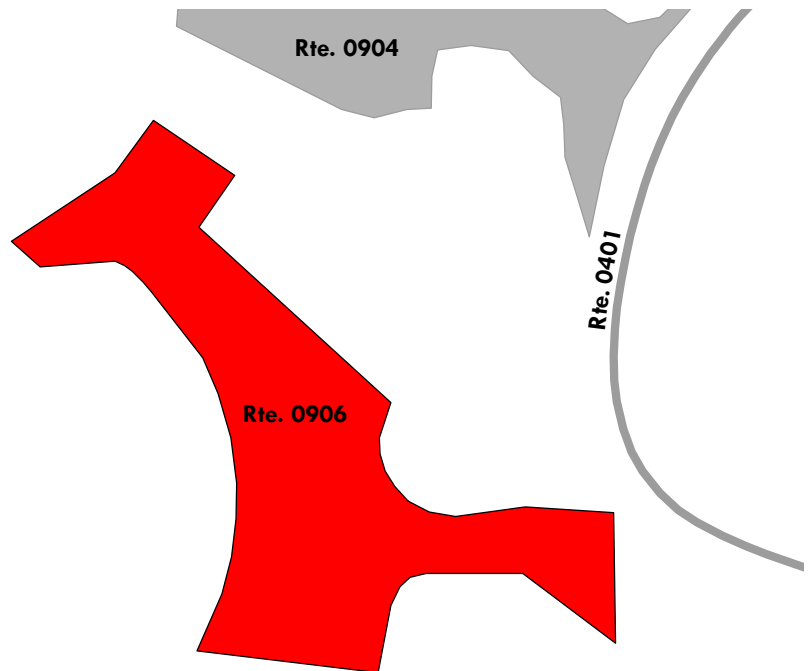
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0907: VOLCANO HOUSE DORM B2 PARKING

Manual Rating

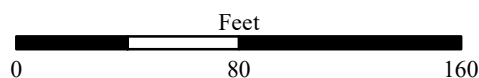
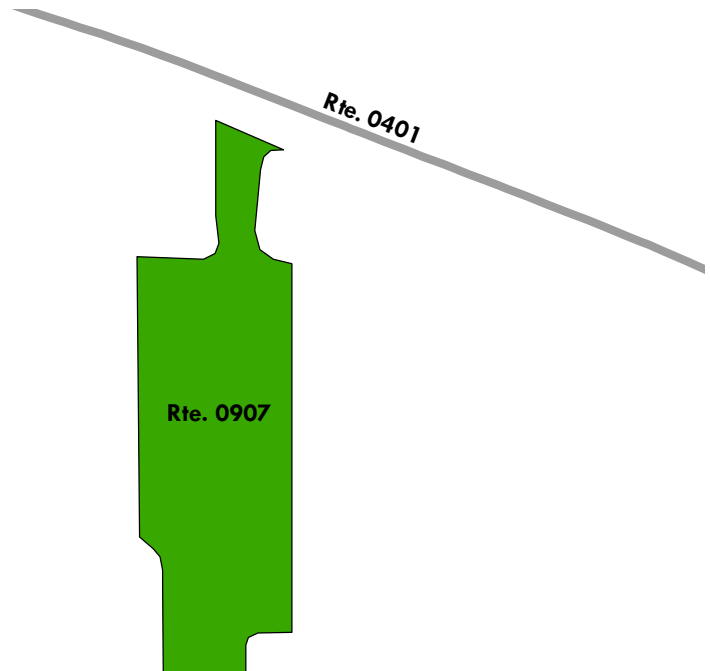
FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.112 ON RIGHT
TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	42658	NONPUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
7,848	0.135	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0908ZZ: KILAUEA MAINTENANCE YARD PARKING

Summary Route
Manual Rating

FROM ROUTE 0401 (NORTH RESIDENCE ROAD) ON LEFT AND RIGHT
TO PARKING

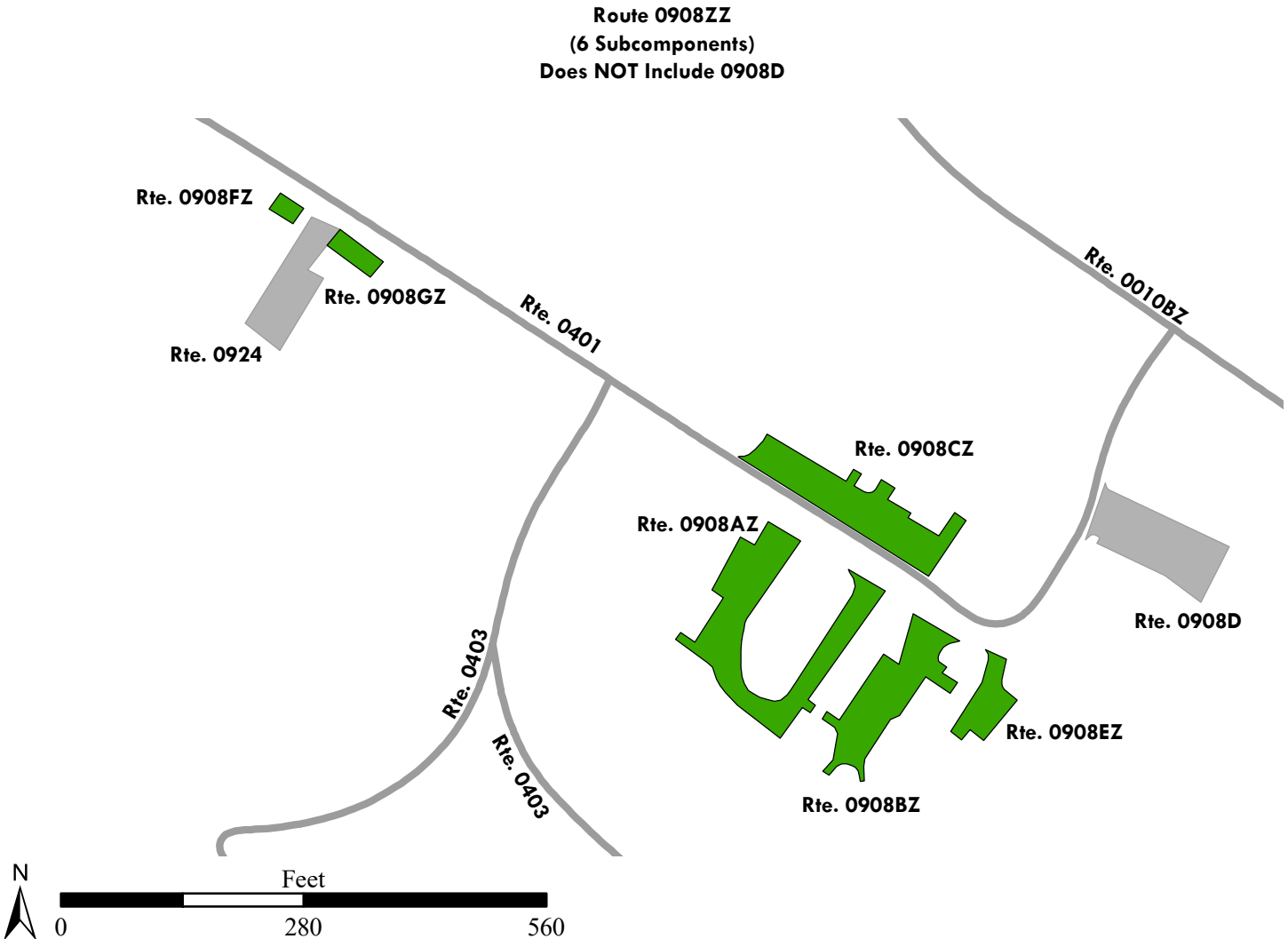
Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22831	NONPUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition Rating / PCR	
41,374	0.714	SUMMARY / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas

The condition shown on this page reflects the overall route condition and may not reflect individual subcomponent ratings.



Hawaii Volcanoes National Park

ROUTE 0908AZ: KILAUEA MAINTENANCE YARD A PARKING

Subcomponent of Route HAVO-0908ZZ
Manual Rating

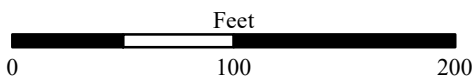
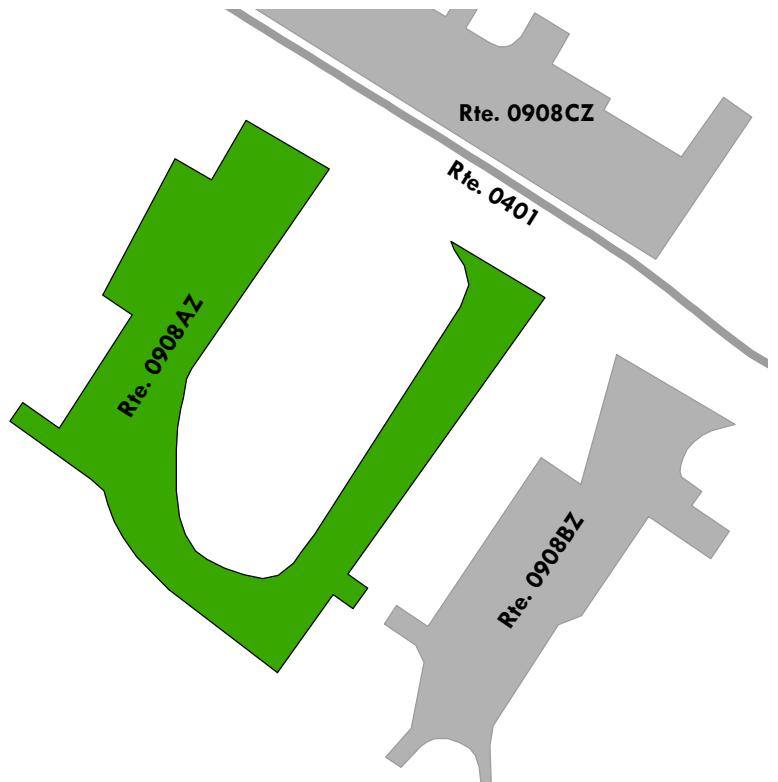
FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.303 ON RIGHT
 TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.324 ON RIGHT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22831	NONPUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
15,389	0.265	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0908BZ: KILAUEA MAINTENANCE YARD B PARKING

Subcomponent of Route HAVO-0908ZZ
Manual Rating

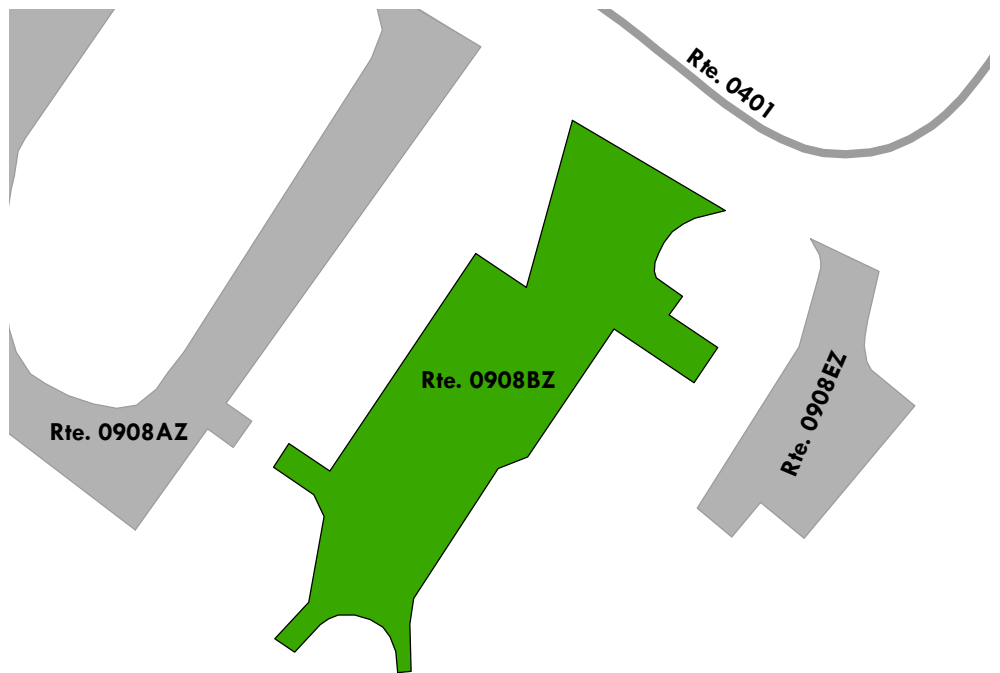
FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.341 ON RIGHT
 TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22831	NONPUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
9,444	0.163	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0908CZ: KILAUEA MAINTENANCE YARD C PARKING

Subcomponent of Route HAVO-0908ZZ
Manual Rating

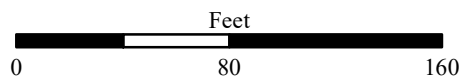
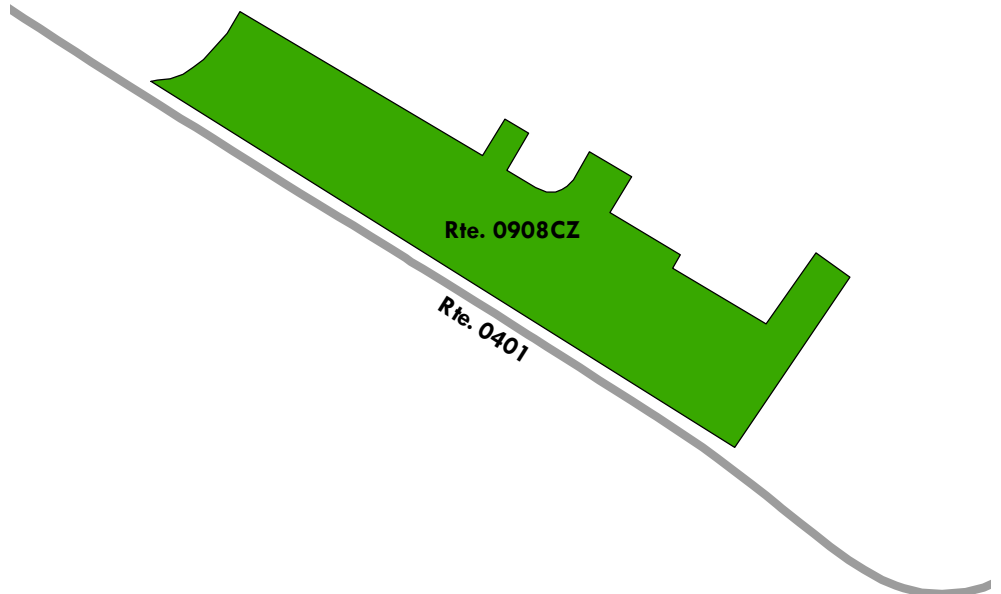
ADJACENT TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.311 ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22831	NONPUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
11,250	0.194	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0908D: VISITORS EMERGENCY OPERATIONS CENTER PARKING

Manual Rating

FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.386 ON RIGHT

TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	244097	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
9,263	0.159	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

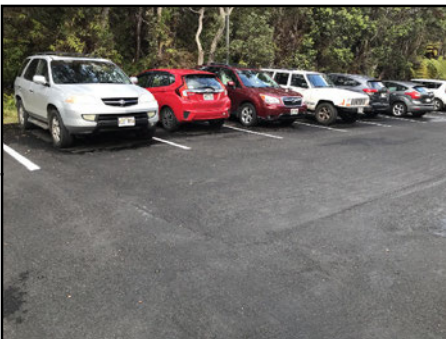
Fair (61- 84)

Good (85 - 94)

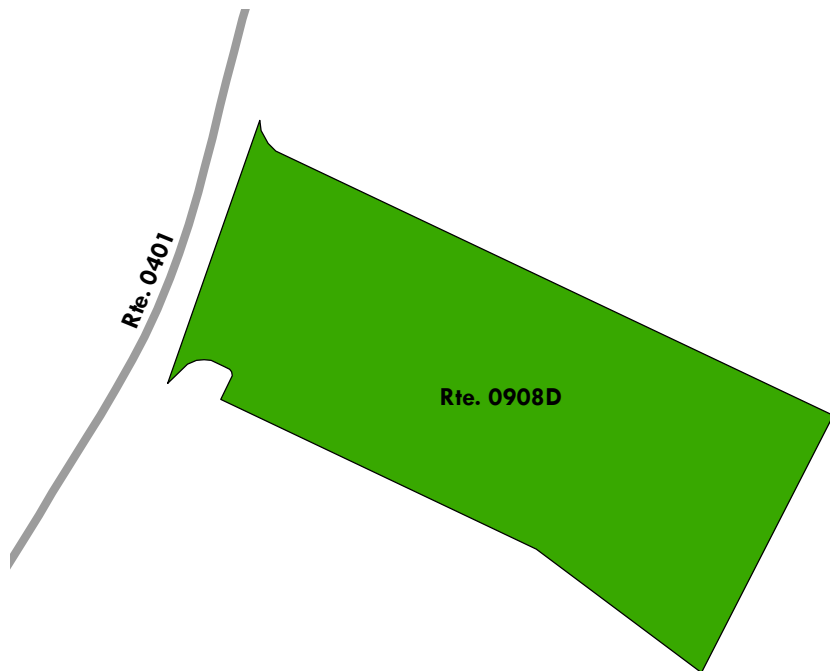
Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



NOTE: 0908D IS NOT COMBINED WITH 0908ZZ.



Hawaii Volcanoes National Park

ROUTE 0908EZ: KILAUEA MAINTENANCE YARD E PARKING

Subcomponent of Route HAVO-0908ZZ
Manual Rating

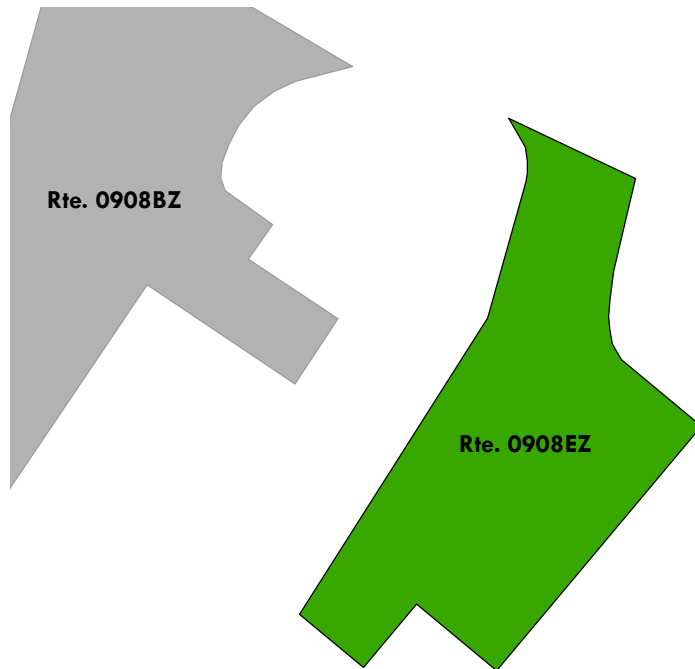
FROM ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.354 ON RIGHT
 TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22831	NONPUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
3,227	0.056	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0908FZ: RESIDENCE ROAD A PARKING

Subcomponent of Route HAVO-0908ZZ

Manual Rating

ADJACENT TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP ON 0.180 ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22831	NONPUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
673	0.012	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

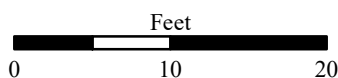
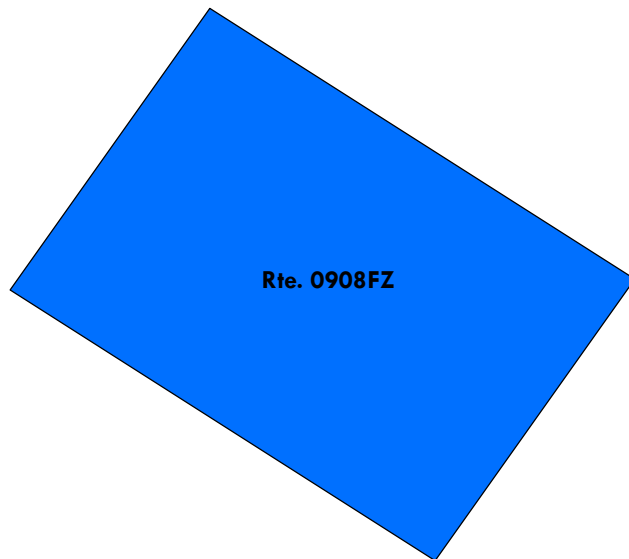
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0908GZ: RESIDENCE ROAD B PARKING

Subcomponent of Route HAVO-0908ZZ

Manual Rating

ADJACENT TO ROUTE 0401 (NORTH RESIDENCE ROAD) AT MP 0.196 ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22831	NONPUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
1,391	0.024	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

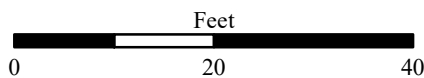
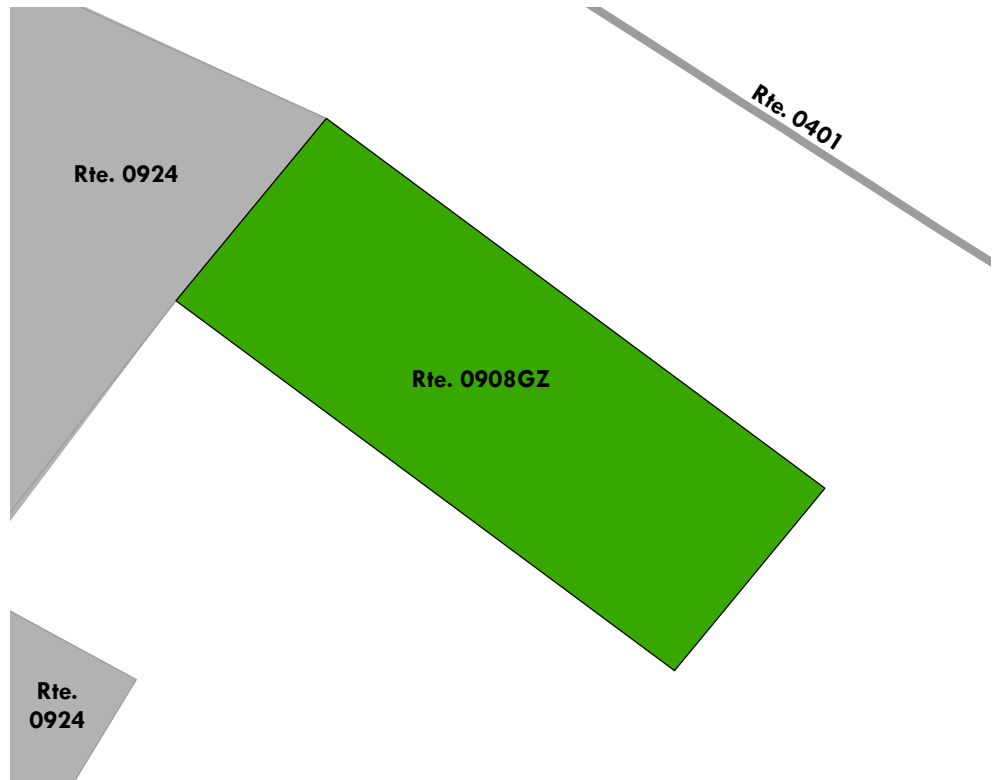
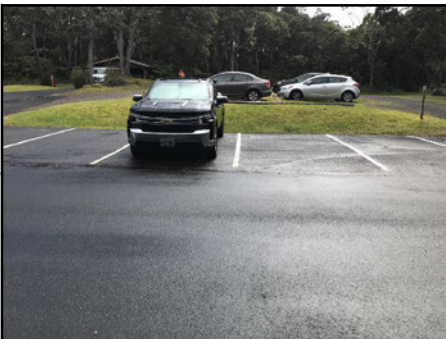
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0909ZZ: STEAM VENTS PARKING

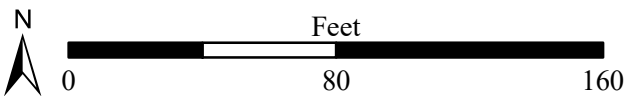
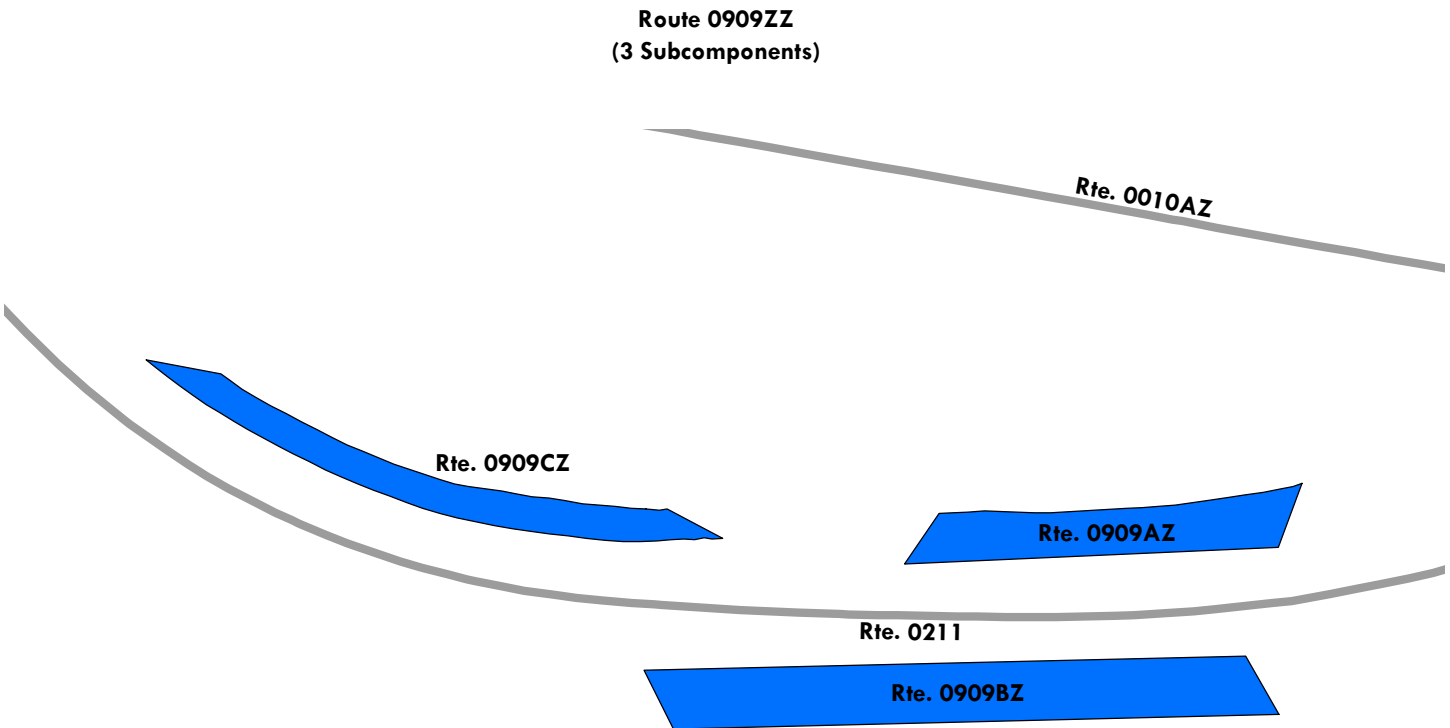
Summary Route

Manual Rating

ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) ON RIGHT AND LEFT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22292	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition Rating / PCR	
6,054	0.104	SUMMARY / 97	
Route Condition Legend – Pavement Condition Rating (PCR)			
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)
Not Rated			
See Appendix for definitions and formulas			

The condition shown on this page reflects the overall route condition and may not reflect individual subcomponent ratings.



Hawaii Volcanoes National Park

ROUTE 0909AZ: STEAM VENTS A PARKING

Subcomponent of Route HAVO-0909ZZ

Manual Rating

ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.07 ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22292	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
1,515	0.026	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

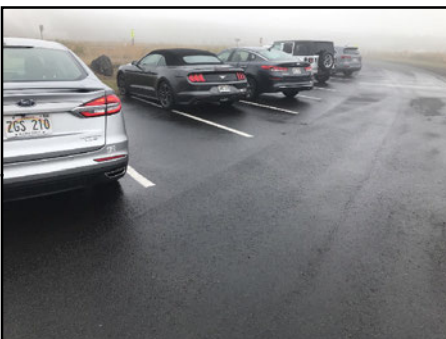
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0909BZ: STEAM VENTS B PARKING

Subcomponent of Route HAVO-0909ZZ

Manual Rating

ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.08 ON RIGHT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22292	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
3,017	0.052	5	DO NOTHING
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

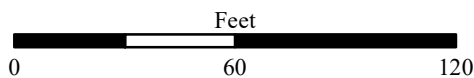
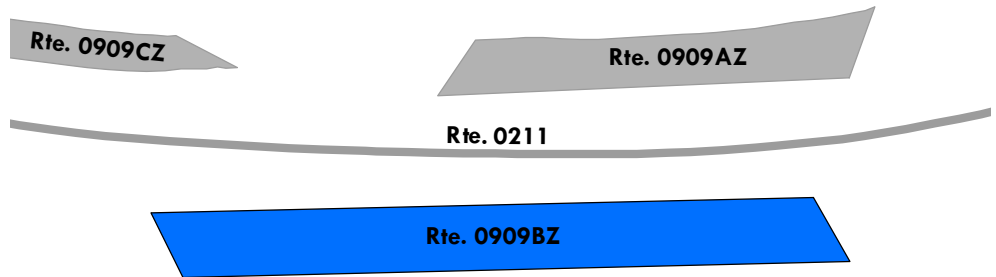
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0909CZ: STEAM VENTS C PARKING

Subcomponent of Route HAVO-0909ZZ

Manual Rating

ADJACENT TO ROUTE 0211 (STEAM VENTS ROAD) AT MP 0.04 ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22292	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
1,522	0.026	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

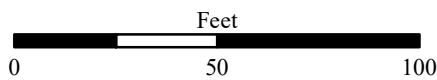
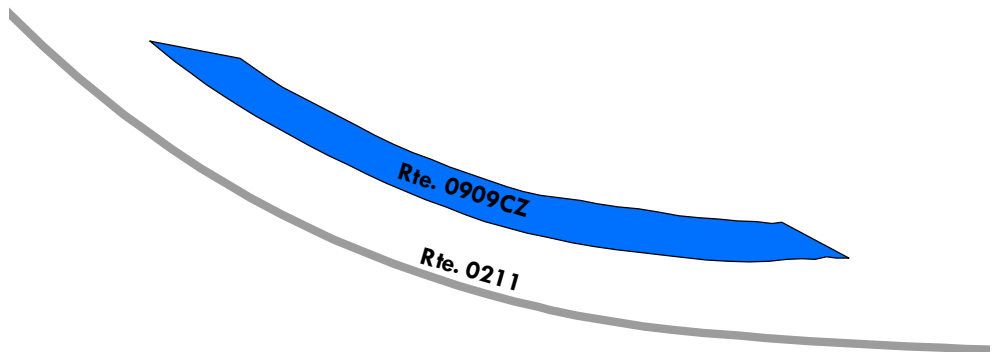
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0910ZZ: KILAUEA OVERLOOK AND PICNIC AREA PARKING

Summary Route

Manual Rating

FROM ROUTE 0201 (KILAUEA OVERLOOK ROAD)

TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22245	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition Rating / PCR	
24,623	0.424	SUMMARY / 97	

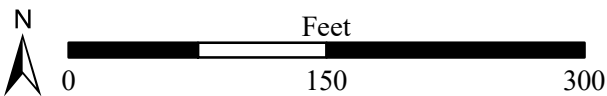
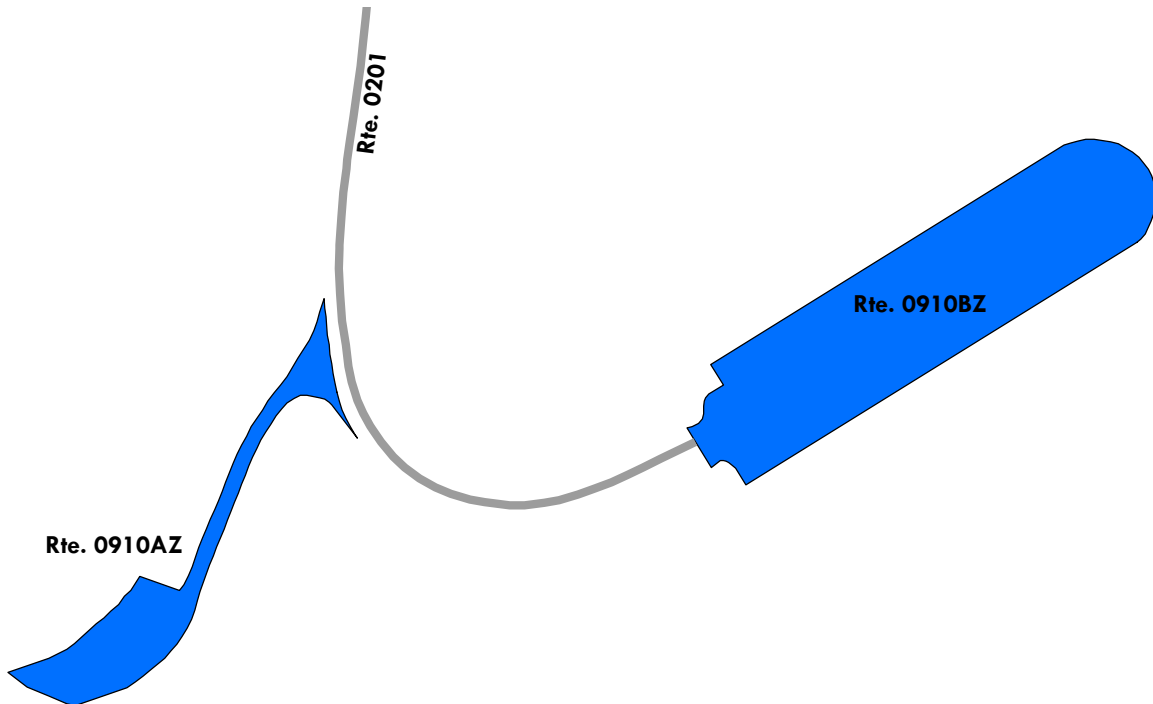
Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas

The condition shown on this page reflects the overall route condition and may not reflect individual subcomponent ratings.

Route 0910ZZ
(2 Subcomponents)



Hawaii Volcanoes National Park

ROUTE 0910AZ: KILAUEA PICNIC AREA PARKING

Subcomponent of Route HAVO-0910ZZ
Manual Rating

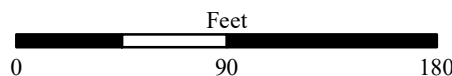
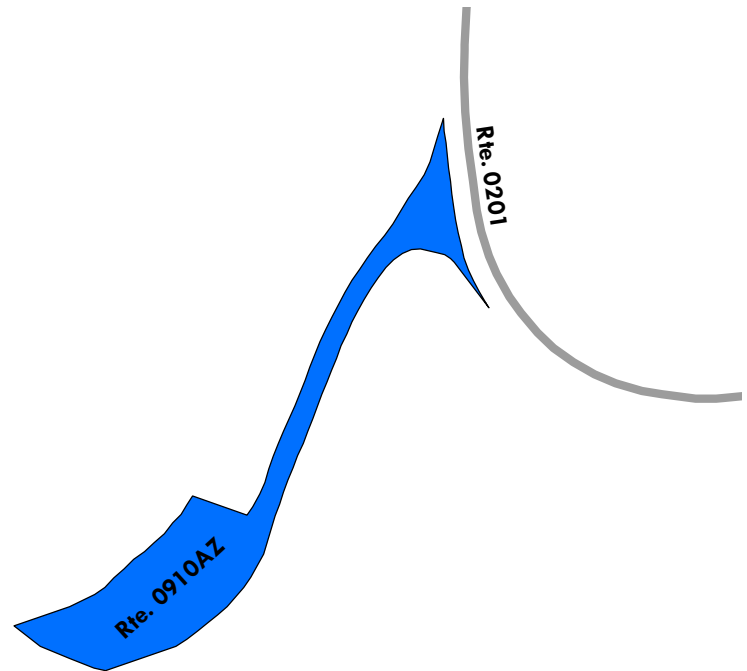
FROM ROUTE 0201 (KILAUEA OVERLOOK ROAD) AT MP 0.15 ON RIGHT
 TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22245	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
5,543	0.095	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0910BZ: KILAUEA OVERLOOK PARKING

Subcomponent of Route HAVO-0910ZZ
Manual Rating

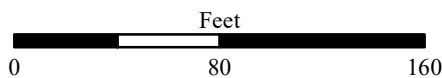
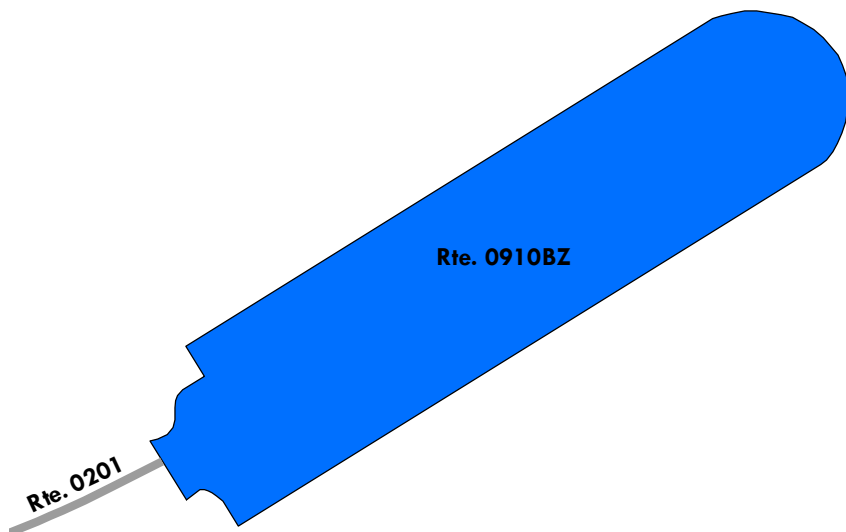
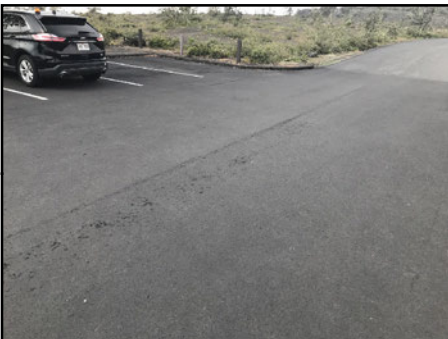
FROM END OF ROUTE 0201 (KILAUEA OVERLOOK ROAD)
 TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22245	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
19,080	0.329	6	DO NOTHING
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0911: VOLCANO OBSERVATORY PARKING

Manual Rating

FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 2.78 ON LEFT

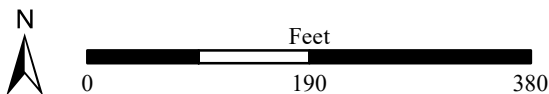
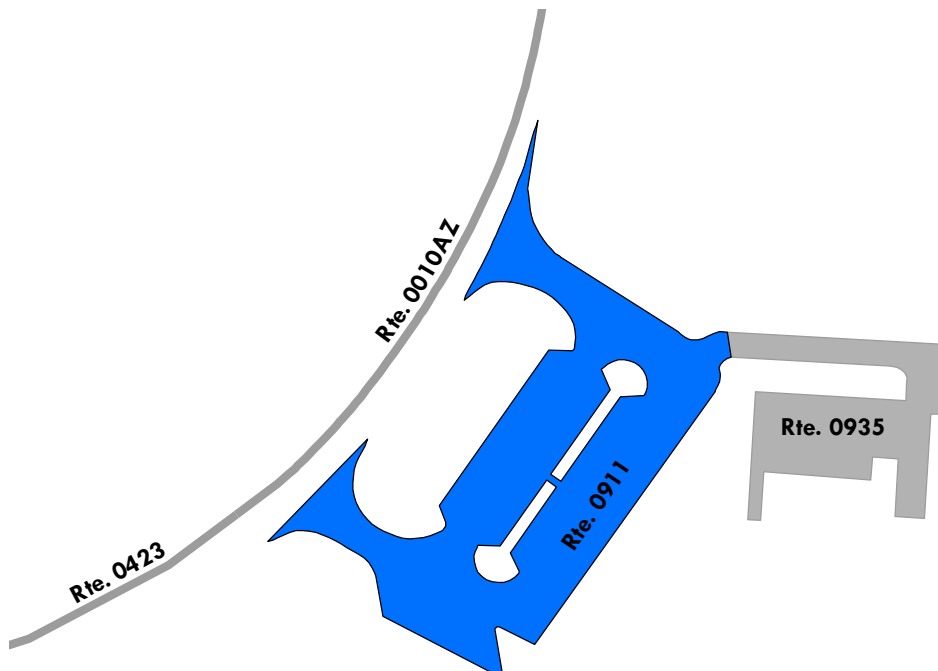
TO ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 2.83 ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22266	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
47,271	0.814	7	DO NOTHING
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0913: DEVASTATION TRAIL PARKING

Manual Rating

FROM ROUTE 0010BZ (CRATER RIM DRIVE - EAST) AT MP 3.05 ON LEFT

TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	42663	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
23,316	0.401	4	MODERATE REPAIR
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

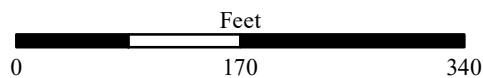
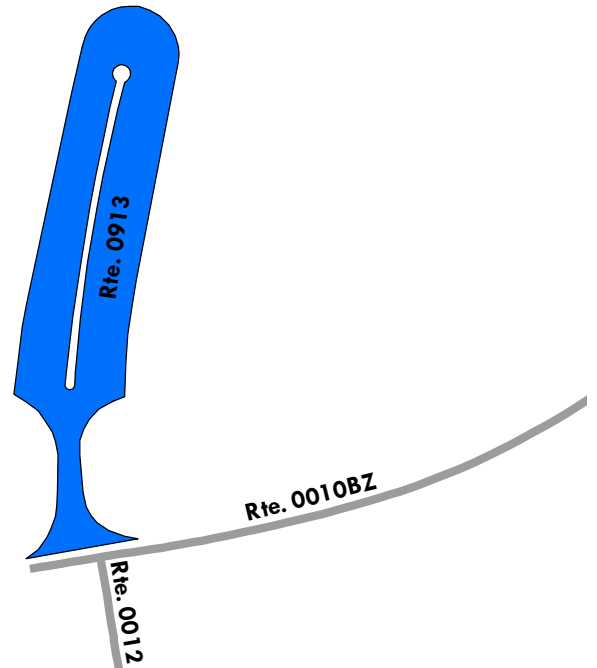
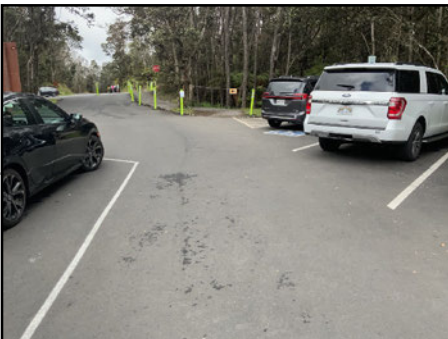
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0914: PUU PUI PUBLISHING

Manual Rating

FROM END OF ROUTE 0209 (PUU PUI OVERLOOK ROAD)

TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22302	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
21,347	0.368	6	LIGHT REPAIR
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

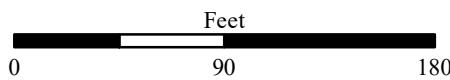
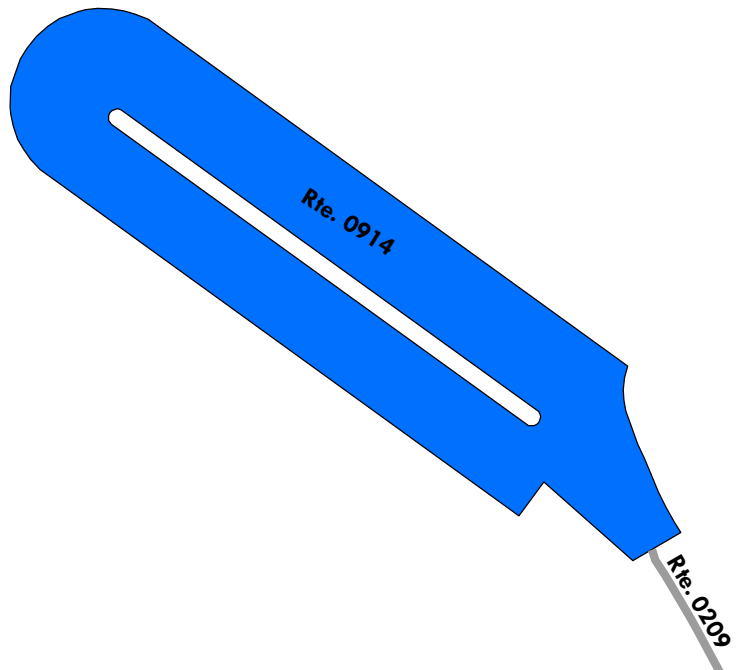
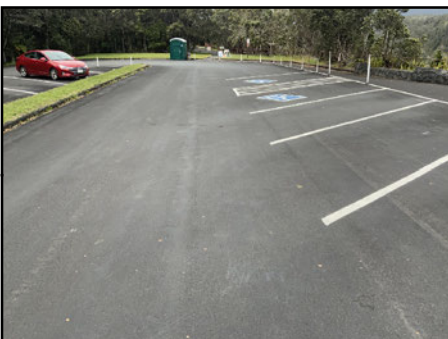
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0915ZZ: THURSTON LAVA TUBE PARKING

Summary Route
Manual Rating

ADJACENT TO ROUTE 0010BZ (CRATER RIM DRIVE - EAST) ON LEFT AND RIGHT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	42665	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition Rating / PCR	
16,588	0.286	SUMMARY / 90	

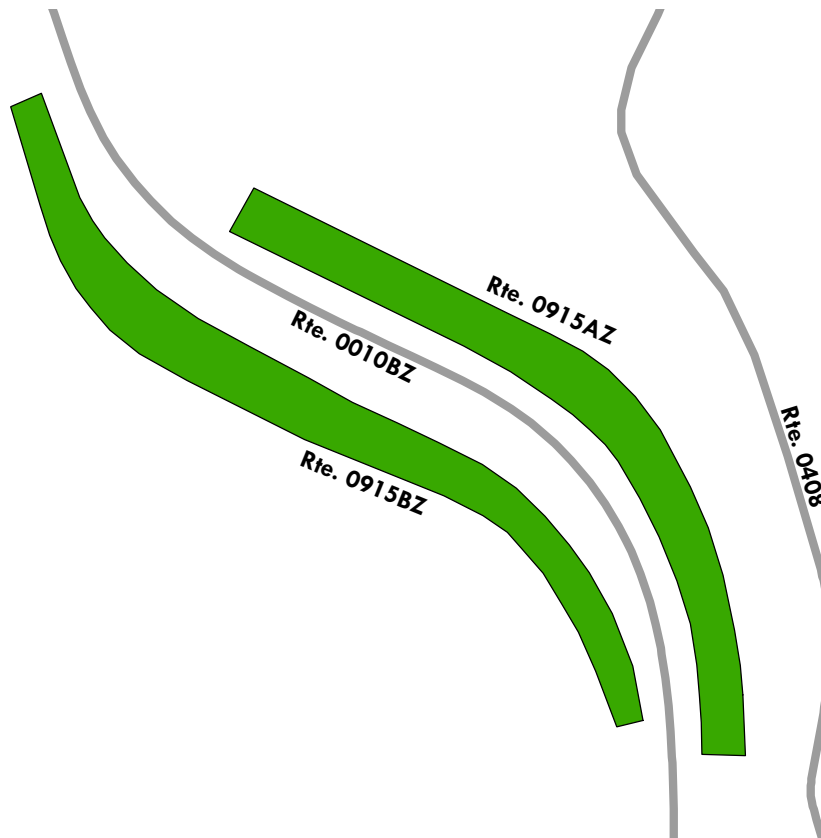
Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas

The condition shown on this page reflects the overall route condition and may not reflect individual subcomponent ratings.

Route 0915ZZ
(2 Subcomponents)



Hawaii Volcanoes National Park

ROUTE 0915AZ: THURSTON LAVA TUBE A BUS PARKING

Subcomponent of Route HAVO-0915ZZ
Manual Rating

ADJACENT TO ROUTE 0010BZ (CRATER RIM DRIVE - EAST) AT MP 1.62 ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	42665	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
7,886	0.136	5	DO NOTHING
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

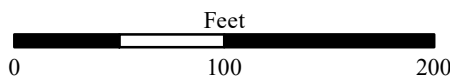
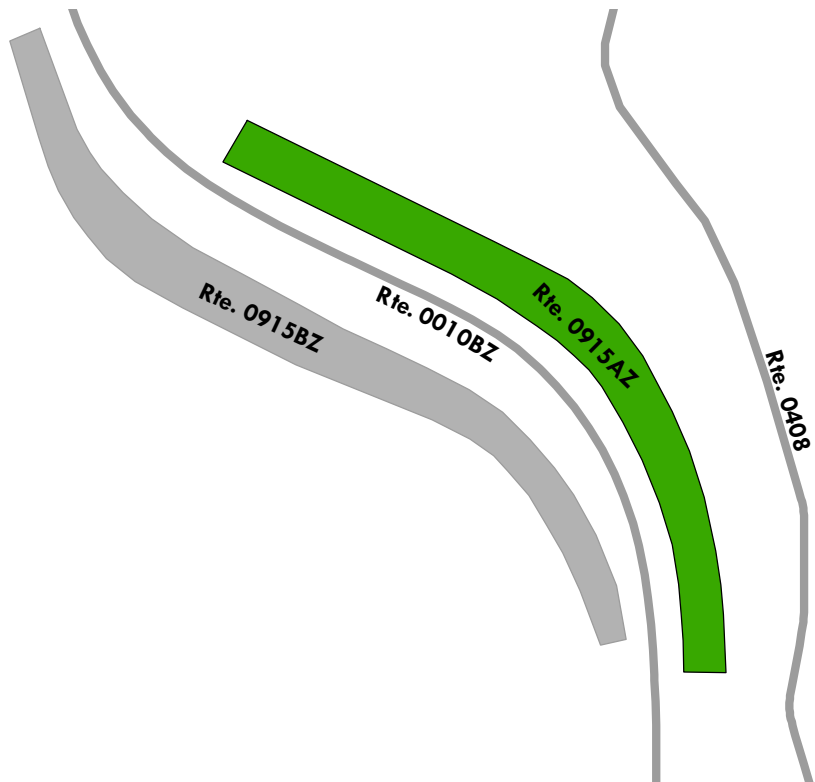
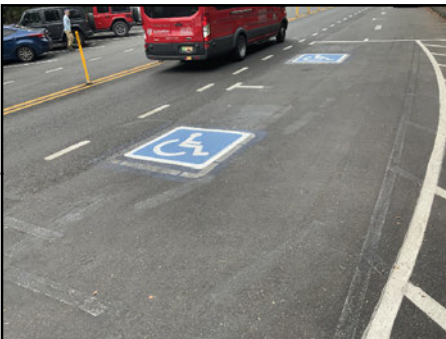
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0915BZ: THURSTON LAVA TUBE B PARKING

Subcomponent of Route HAVO-0915ZZ
Manual Rating

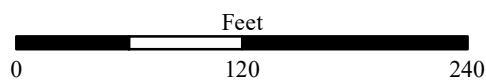
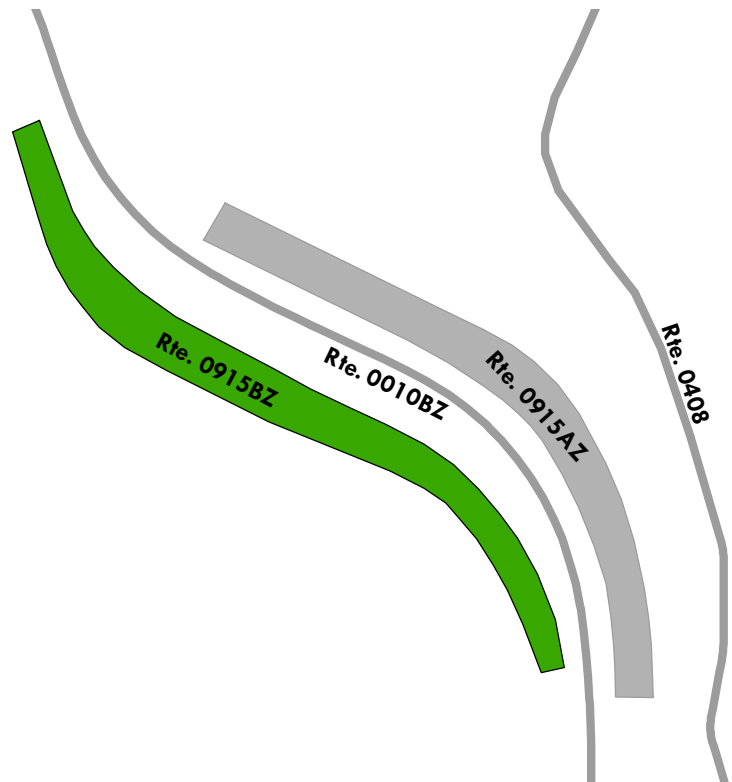
ADJACENT TO ROUTE 0010BZ (CRATER RIM DRIVE - EAST) AT MP 1.60 ON RIGHT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	42665	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
8,702	0.15	6	LIGHT REPAIR
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)
Fair (61- 84)
Good (85 - 94)
Excellent (95 - 100)
Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0916: KILAUEA IKI PARKING

Manual Rating

FROM ROUTE 0010BZ (CRATER RIM DRIVE - EAST) AT MP 1.22 ON LEFT

TO ROUTE 0010BZ (CRATER RIM DRIVE - EAST) AT MP 1.29 ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	42666	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
24,415	0.42	5	LIGHT REPAIR
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

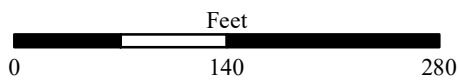
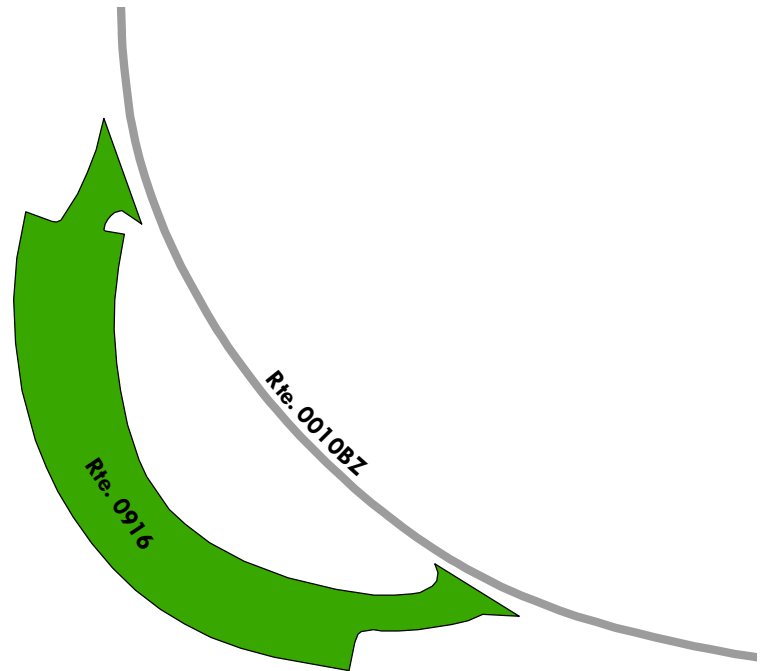
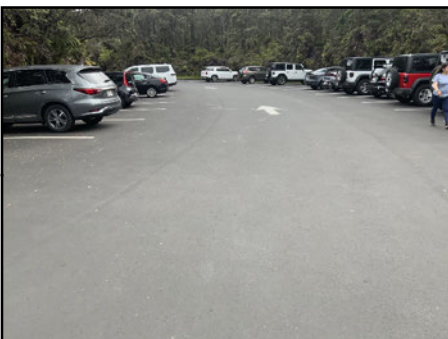
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0917: RESOURCE MANAGEMENT AREA PARKING

Manual Rating

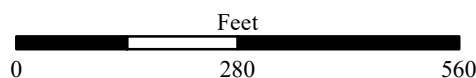
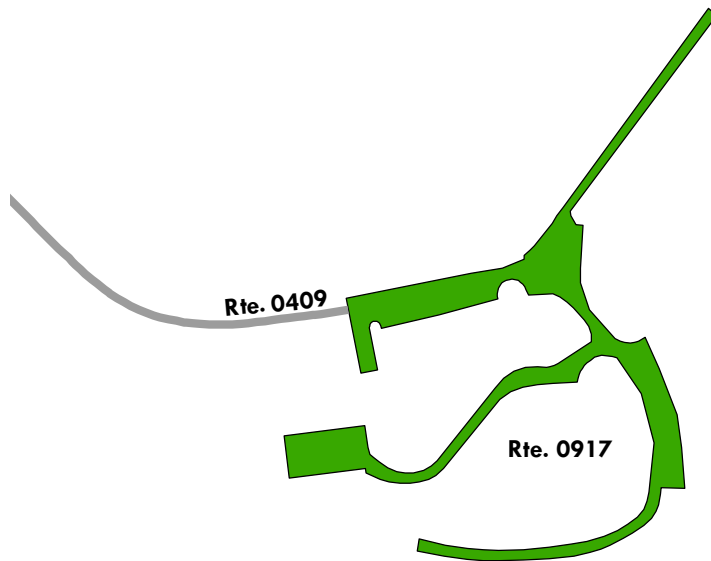
FROM END OF ROUTE 0409 (RESOURCE MANAGEMENT ROAD)
TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	42667	NONPUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
42,787	0.737	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0918: PUHIMAU CRATER PARKING

Manual Rating

FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 0.97 ON LEFT

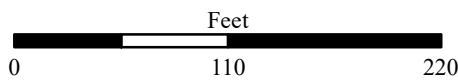
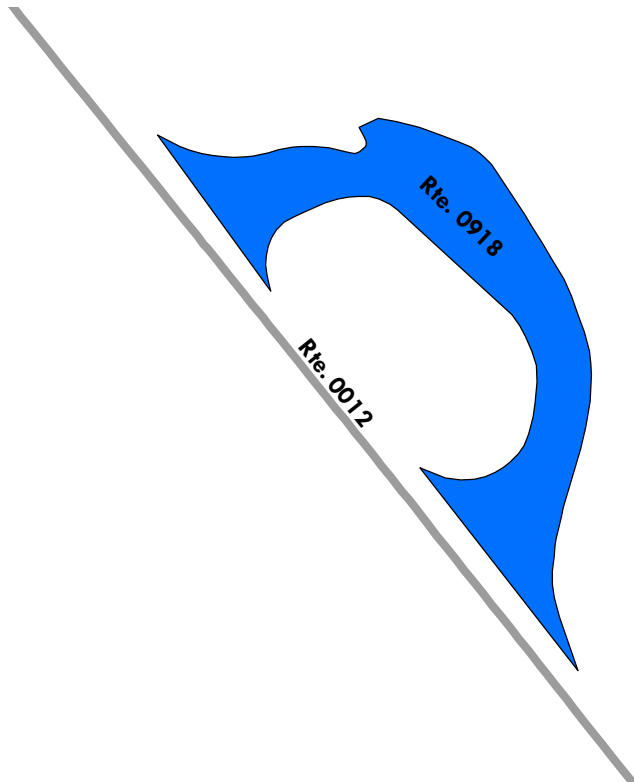
TO ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 1.01 ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	23394	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
13,447	0.232	5	LIGHT REPAIR
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0919: PAUAHI CRATER PARKING

Manual Rating

FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 3.20 ON LEFT

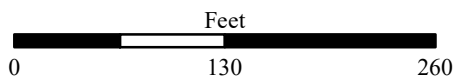
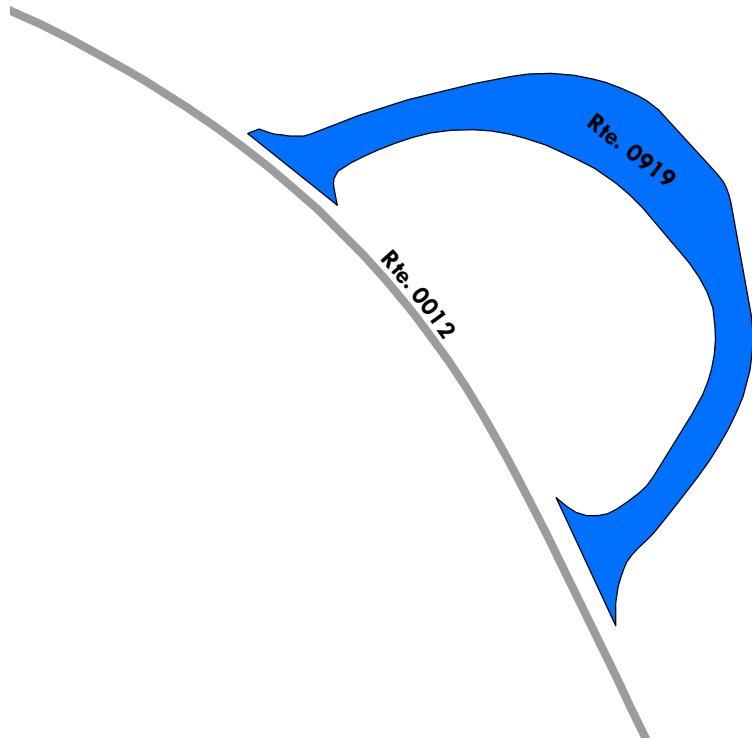
TO ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 3.25 ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	42670	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
16,886	0.291	6	DO NOTHING
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)
Fair (61- 84)
Good (85 - 94)
Excellent (95 - 100)
Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0920: MAUNA ULU LAVA SHIELD PARKING

Manual Rating

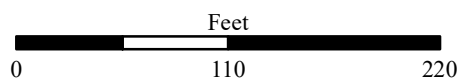
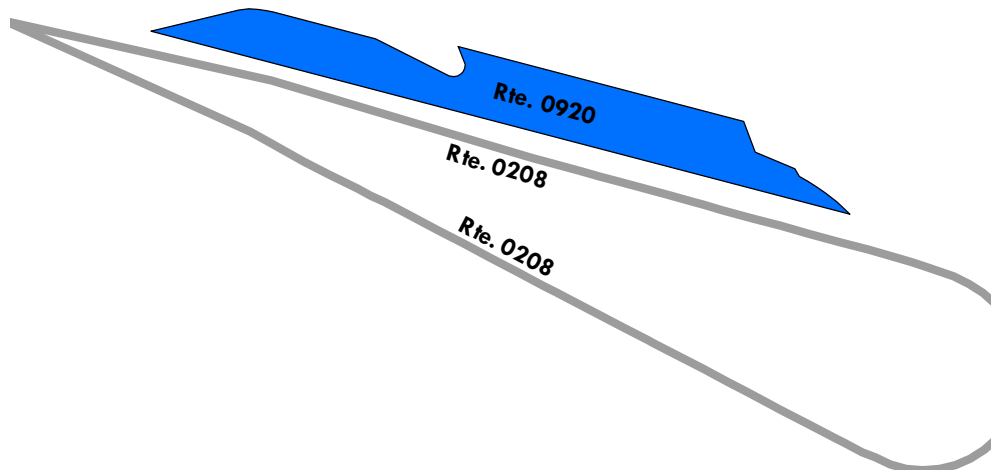
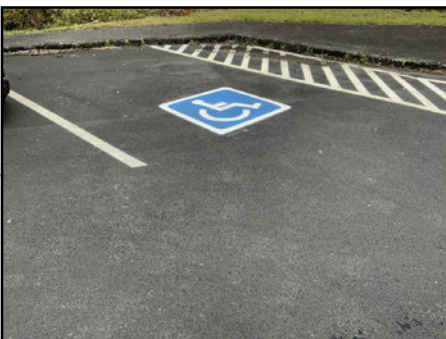
ADJACENT TO ROUTE 0208 (MAUNA ULU ACCESS ROAD) AT END

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	23422	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
8,508	0.146	7	DO NOTHING
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0921: KEALAKOMO PICNIC AREA PARKING

Manual Rating

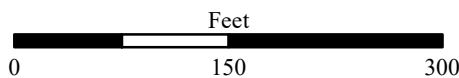
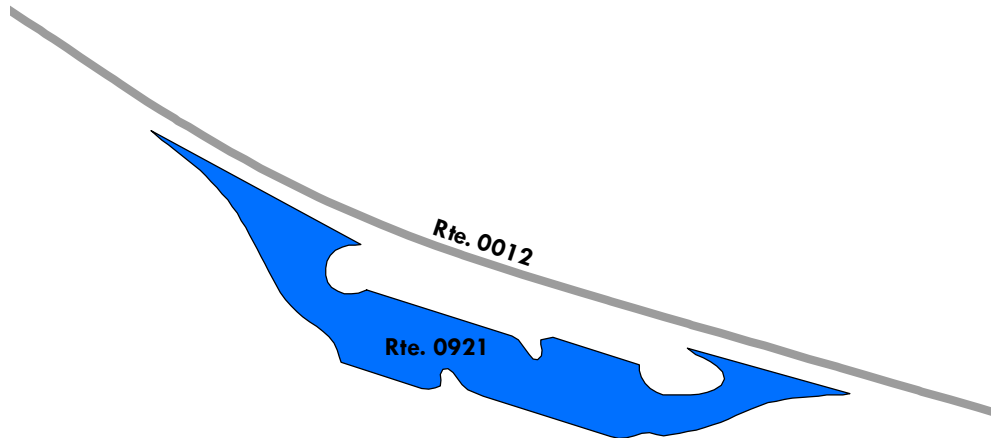
FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 9.78 ON RIGHT
TO ROUTE 0012 (CHAIN OF CRATERS ROAD) AT MP 9.85 ON RIGHT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	23446	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
17,919	0.309	7	DO NOTHING
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0923: KIPUKA PUAULU TRAILHEAD PARKING

Manual Rating

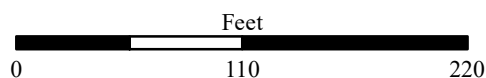
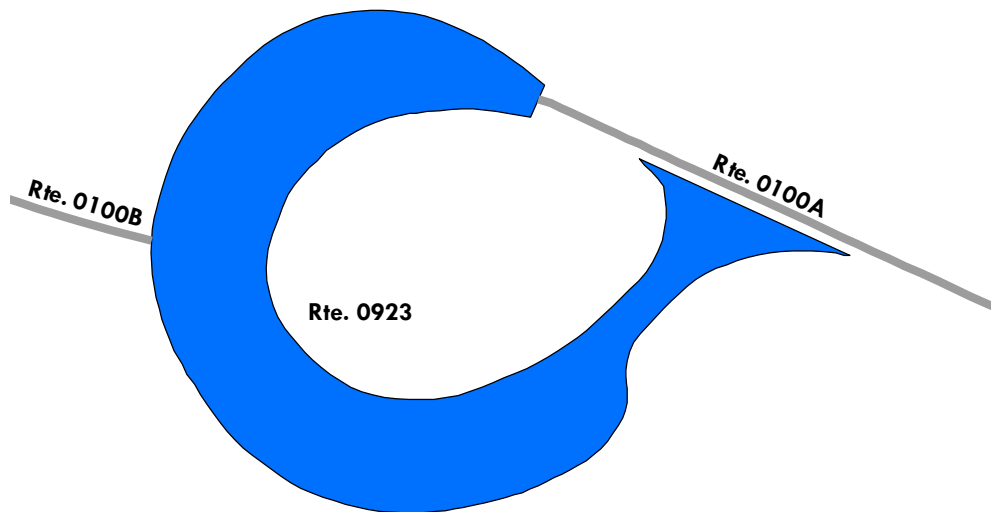
FROM END OF ROUTE 0100A (MAUNA LOA ROAD)
TO BEGINNING OF ROUTE 0100B (MAUNA LOA LOOKOUT ROAD)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	42676	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
26,506	0.456	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0925: KIPUKA PUAULU DAY USE AREA PARKING

Manual Rating

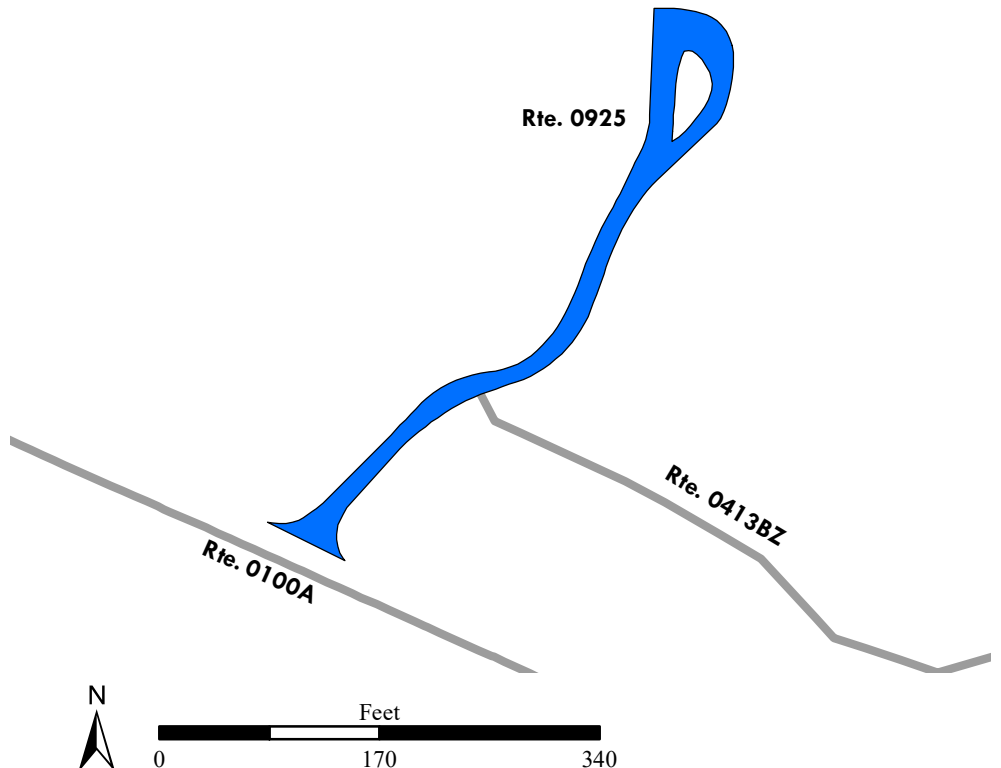
FROM ROUTE 0100A (MAUNA LOA ROAD) AT MP 1.49 ON RIGHT
TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	42671	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
11,123	0.192	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0926: ENVIRONMENTAL EDUCATION CENTER PARKING

Manual Rating

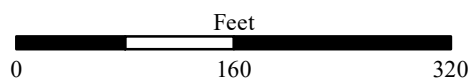
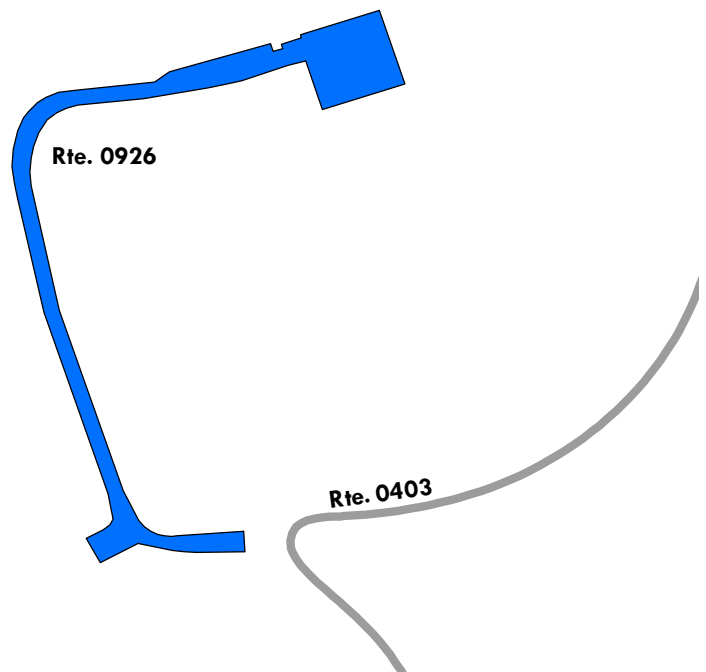
FROM ROUTE 0403 (SOUTH RESIDENCE LOOP) AT MP 0.14 ON RIGHT
TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	113876	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
11,556	0.199	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0927: ERUPTION SITE TURN-AROUND PARKING

Manual Rating

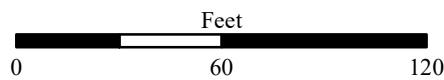
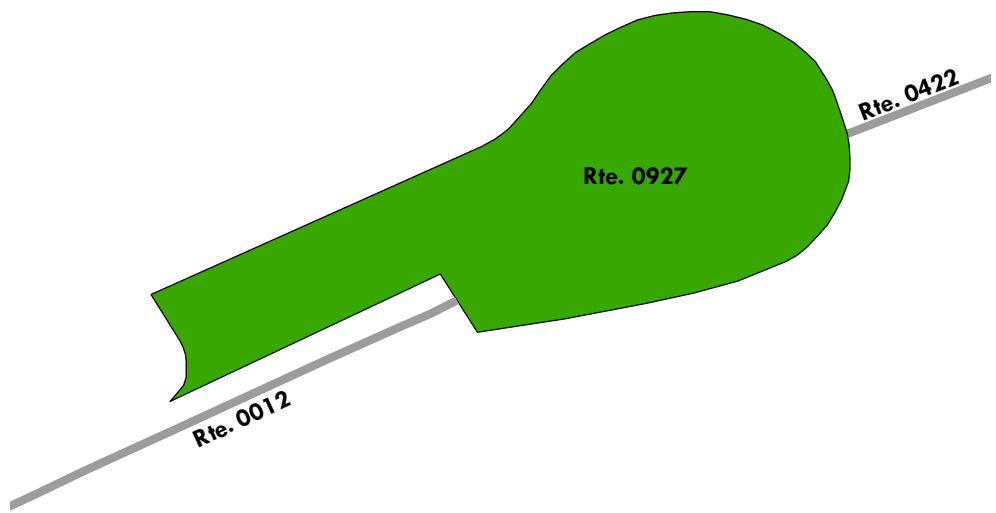
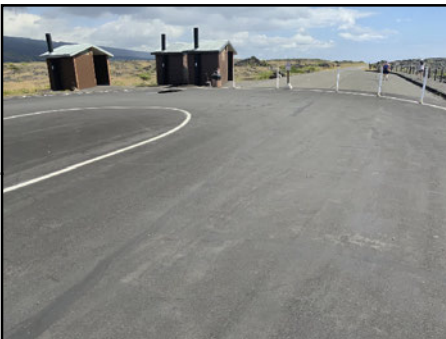
FROM ROUTE 0012 (CHAIN OF CRATERS ROAD) AT END
TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	23493	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
9,989	0.172	4	DO NOTHING
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0928: TREE MOLDS PARKING

Manual Rating

ADJACENT TO ROUTE 0205 (TREE MOLDS ROAD) AT MP 0.44 ON RIGHT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	113875	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
1,046	0.018	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

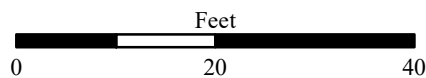
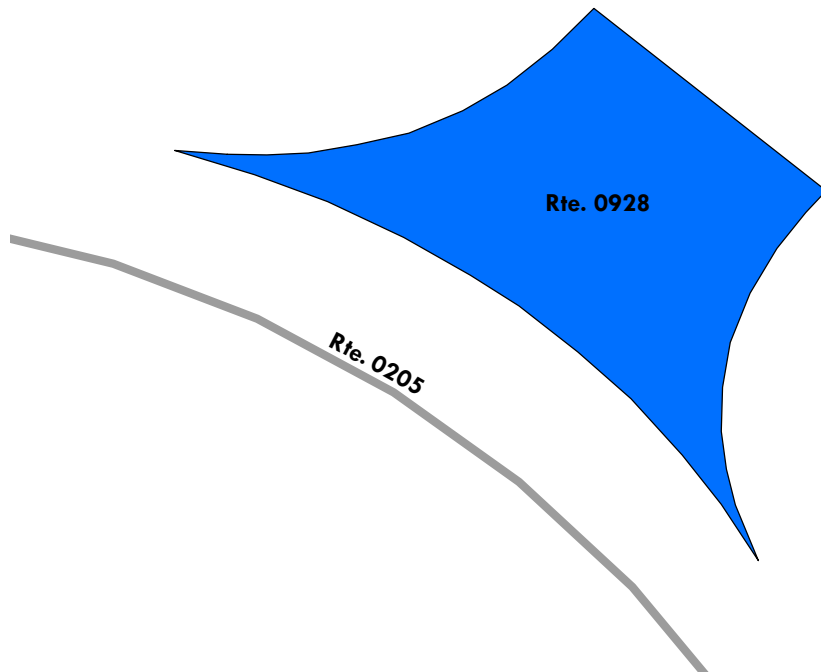
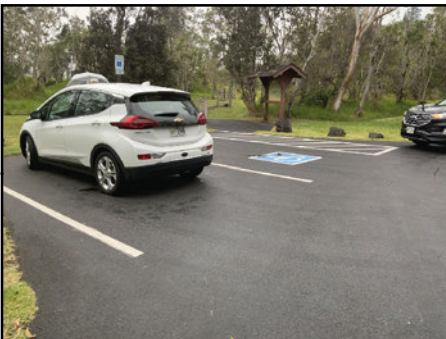
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0930: FOOTPRINTS TRAILHEAD PARKING

Manual Rating

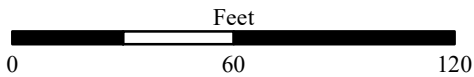
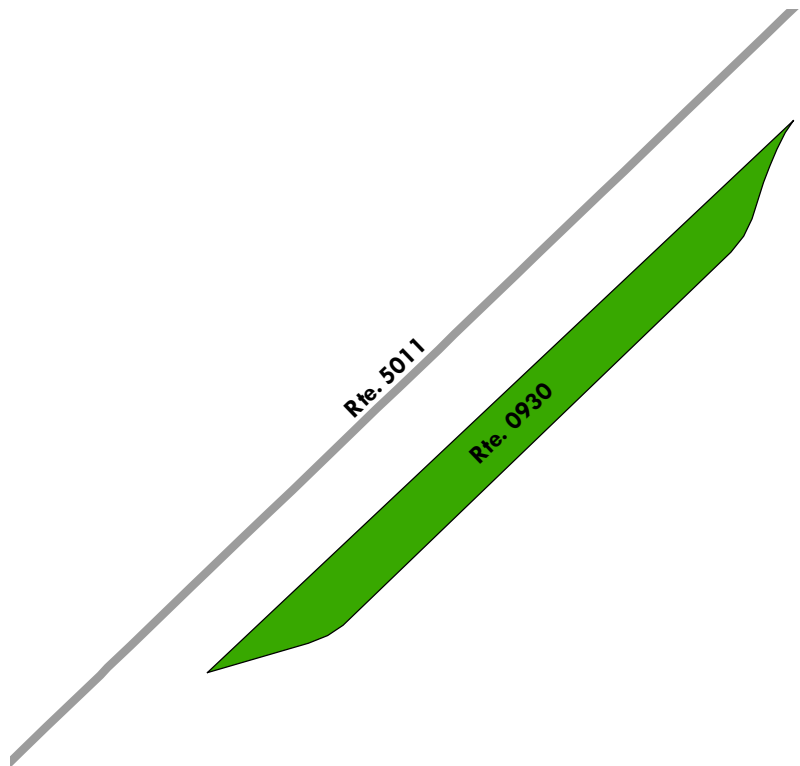
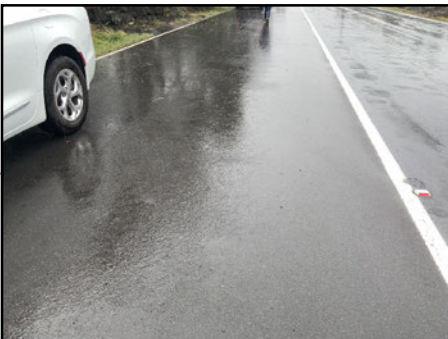
ADJACENT TO ROUTE 5011 (HAWAII STATE HIGHWAY 11)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	22876	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
2,636	0.045	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0933: KULANAOKUAIKI CAMPGROUND PARKING

Manual Rating

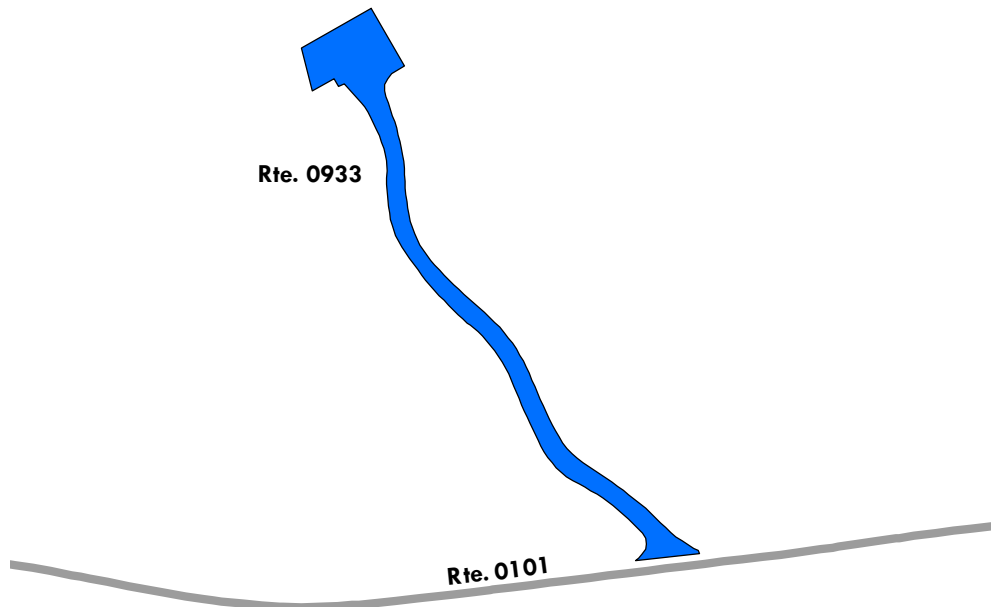
FROM ROUTE 0101 (HILINA PALI ROAD) AT MP 3.61 ON RIGHT
TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	42511	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
10,533	0.181	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0935: JAGGAR EMPLOYEE PARKING

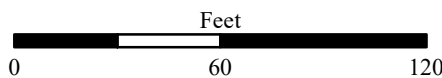
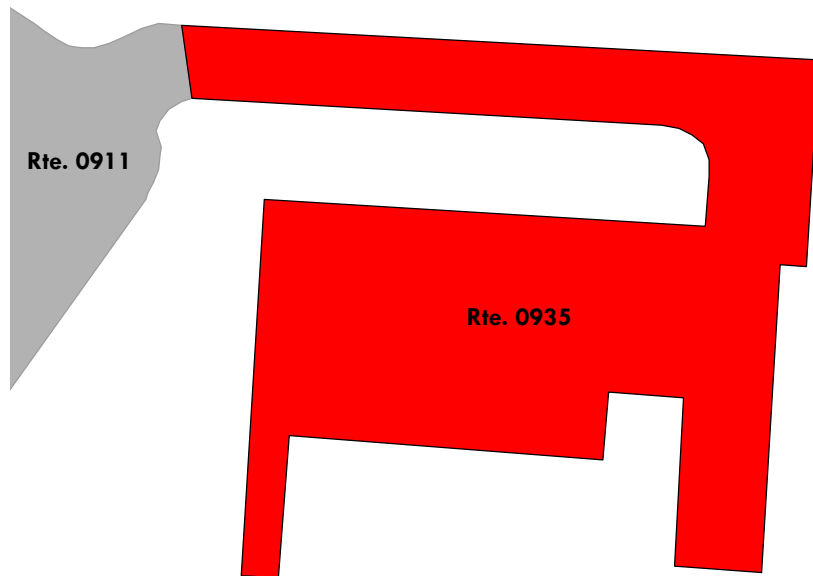
Manual Rating

FROM ROUTE 0911 (VOLCANO OBSERVATORY PARKING)

TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239122	NONPUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
15,207	0.262	6	LIGHT REPAIR
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
HEAVY 3R TREATMENTS		POOR / 53	

Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
See Appendix for definitions and formulas				



Hawaii Volcanoes National Park

ROUTE 0936: PU'U LOA PETROGLYPHS TRAIL PARKING

Manual Rating

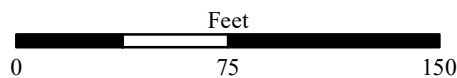
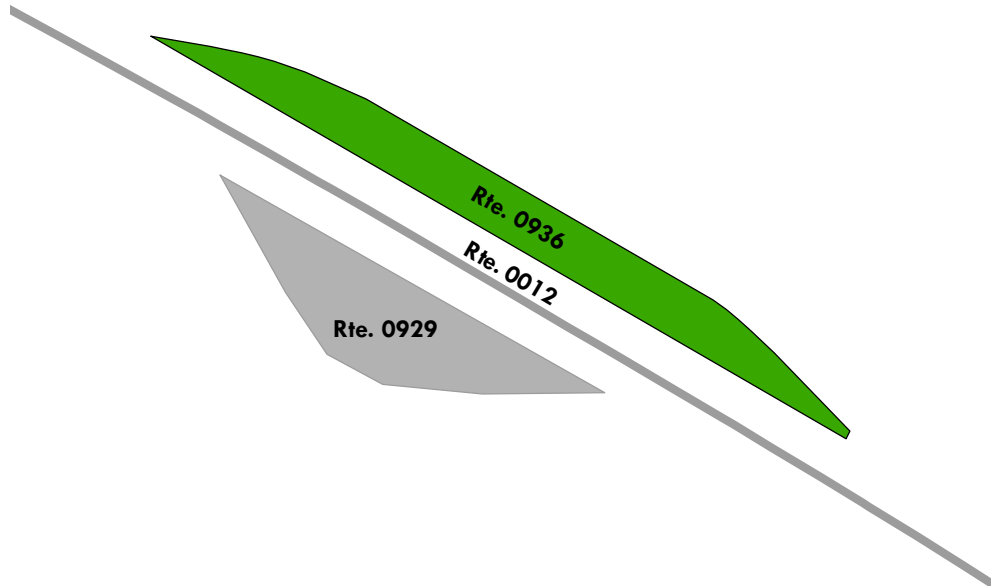
ADJACENT TO ROUTE 0012 (CHAIN OF CRATERS ROAD)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239124	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
4,129	0.071	6	DO NOTHING
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0937ZZ: KILAUEA MILITARY CAMP PARKING AREAS

Summary Route
Manual Rating

FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD) AND
ROUTE 0215ZZ (KILAUEA MILITARY CAMP ROADS)

THROUGH KILAUEA MILITARY CAMP

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition Rating / PCR	
114,055	1.963	SUMMARY / 84	

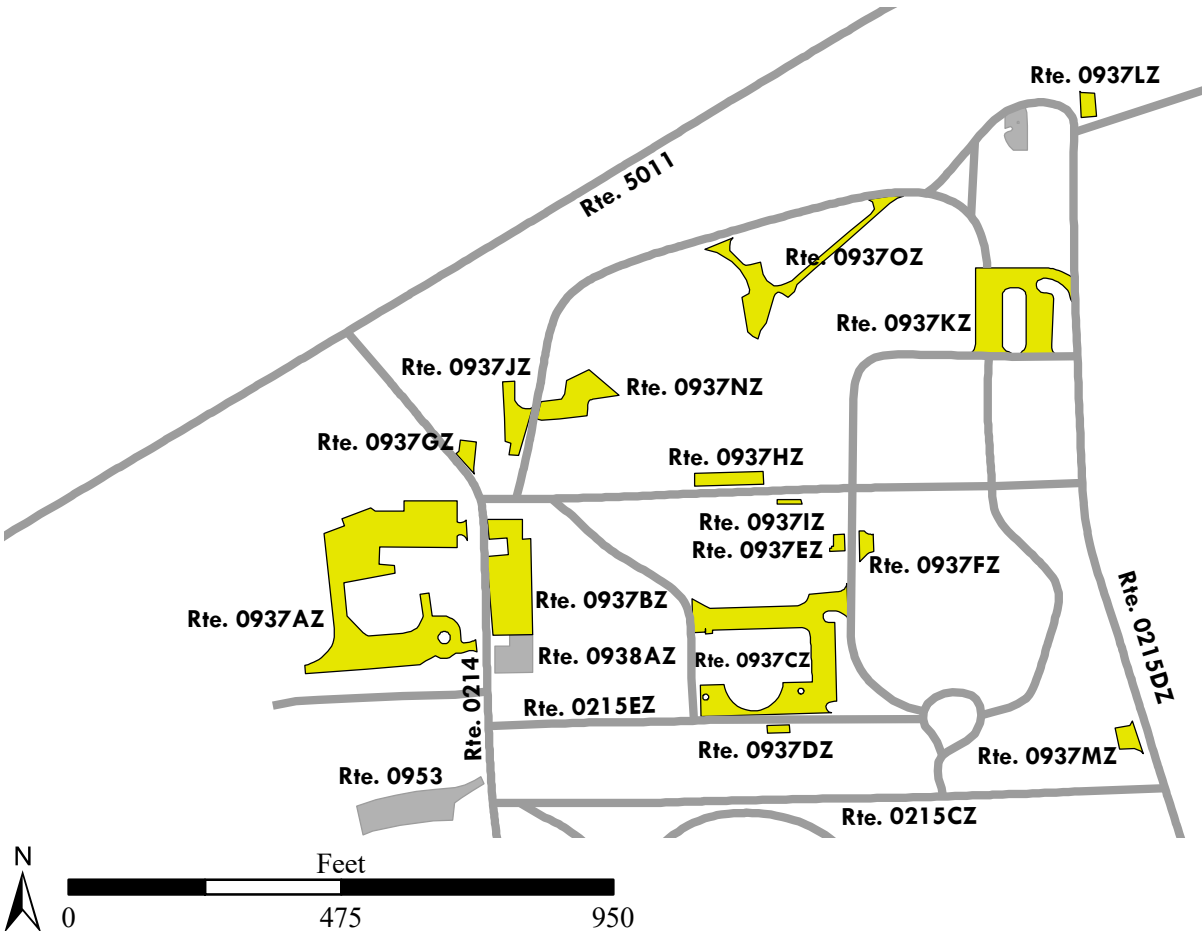
Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas

The condition shown on this page reflects the overall route condition and may not reflect individual subcomponent ratings.

Route 0937ZZ
(15 Subcomponents)



Hawaii Volcanoes National Park

ROUTE 0937AZ: KILAUEA MILITARY CAMP A PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

FROM ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)

TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
37,418	0.644	5	DO NOTHING
Curb Type		Curb & Gutter Type	
CONCRETE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

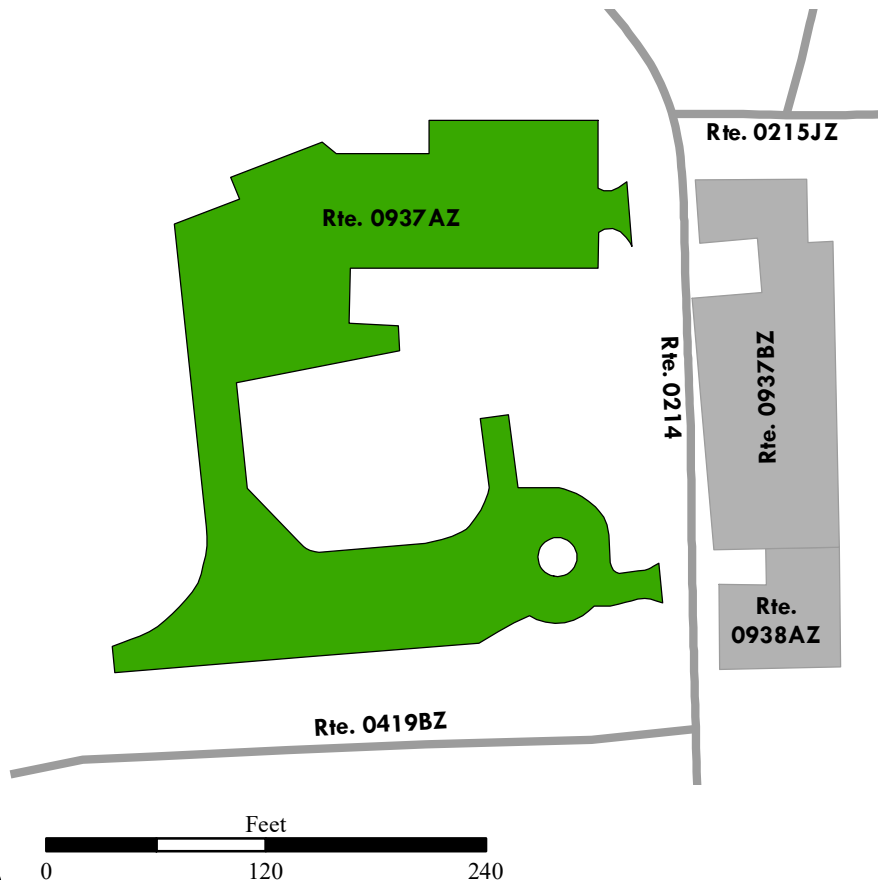
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0937BZ: KILAUEA MILITARY CAMP B PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

ADJACENT TO ROUTES 0214 (KILAUEA MILITARY CAMP ROAD) AND 0215JZ (KILAUEA MILITARY CAMP ROAD J)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
12,556	0.216	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0937CZ: KILAUEA MILITARY CAMP C PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

FROM ROUTES 0215EZ (KILAUEA MILITARY CAMP ROAD E), 0215GZ (KILAUEA MILITARY CAMP ROAD G),
 AND 0215HZ (KILAUEA MILITARY CAMP ROAD H)

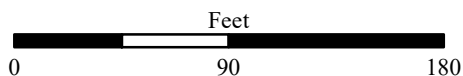
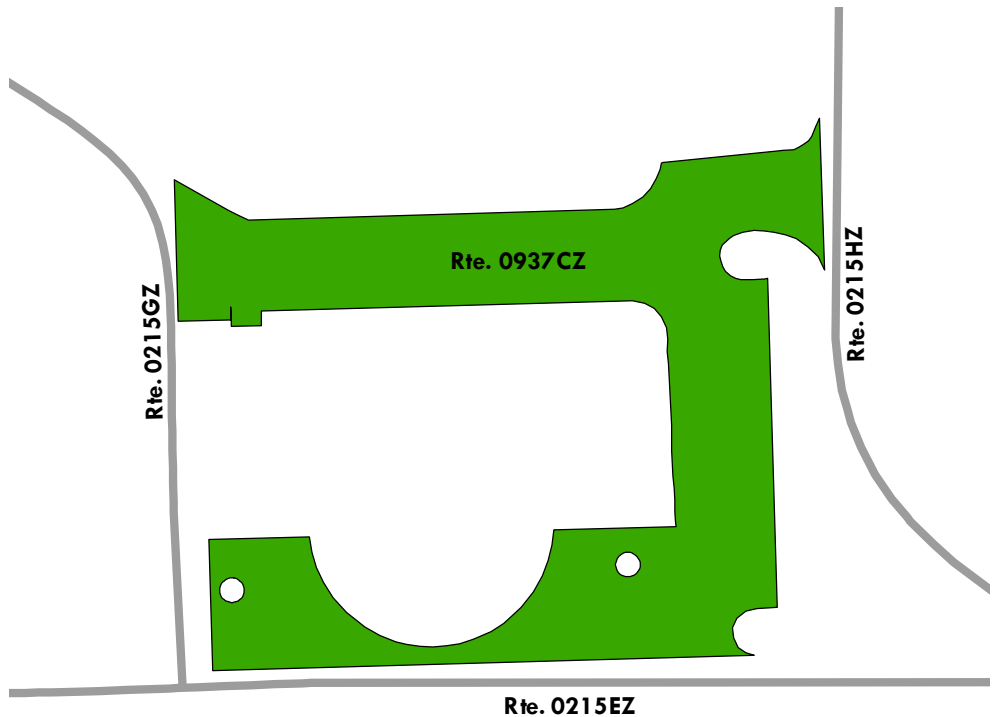
TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
23,002	0.396	6	LIGHT REPAIR
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0937DZ: KILAUEA MILITARY CAMP D PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

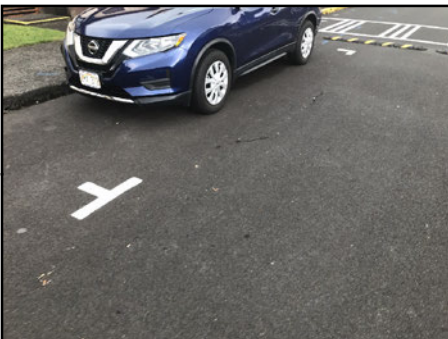
ADJACENT TO ROUTE 0215EZ (KILAUEA MILITARY CAMP ROAD E)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
476	0.008	7	LIGHT REPAIR
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

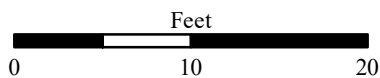
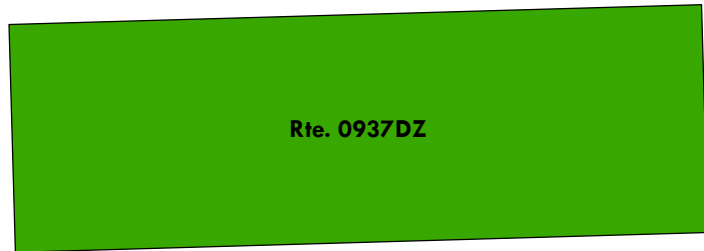
Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Rte. 0215EZ



Hawaii Volcanoes National Park

ROUTE 0937EZ: KILAUEA MILITARY CAMP E PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

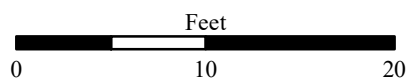
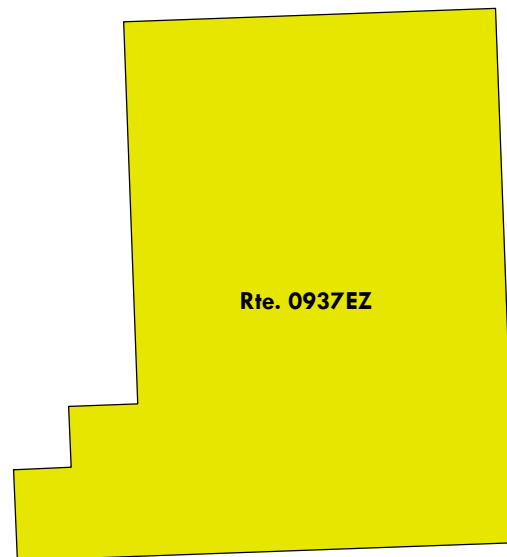
ADJACENT TO ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
566	0.01	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
LIGHT 3R TREATMENTS		FAIR / 73	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0937FZ: KILAUEA MILITARY CAMP F PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

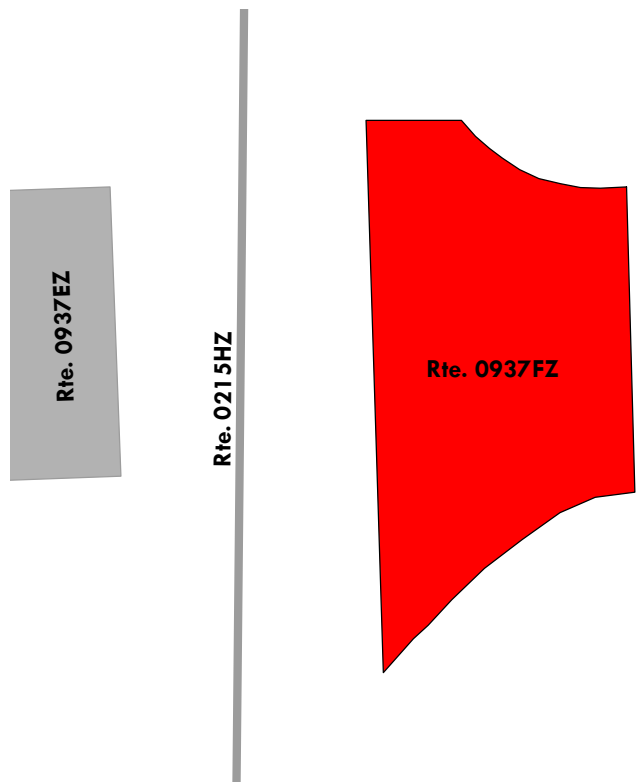
ADJACENT TO ROUTE 0215HZ (KILAUEA MILITARY CAMP ROAD H)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	CONCRETE
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
943	0.016	5	REPLACE
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
RECONSTRUCTION		POOR / 30	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0937GZ: KILAUEA MILITARY CAMP G PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

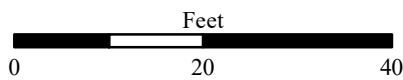
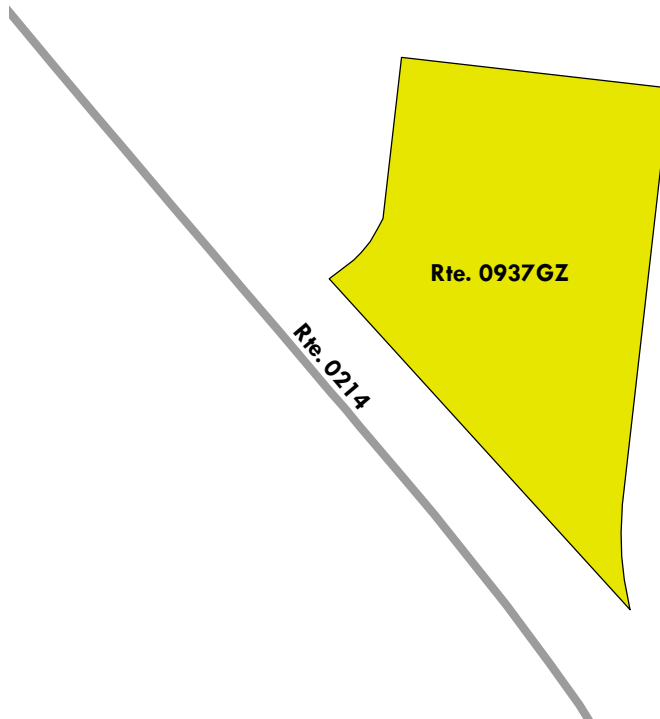
ADJACENT TO ROUTE 0214 (KILAUEA MILITARY CAMP ROAD)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
1,136	0.02	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
LIGHT 3R TREATMENTS		FAIR / 73	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0937HZ: KILAUEA MILITARY CAMP H PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

ADJACENT TO ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	CONCRETE
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
2,549	0.044	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
HEAVY 3R TREATMENTS		POOR / 53	

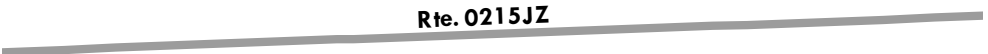
Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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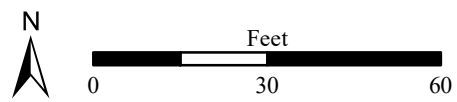
See Appendix for definitions and formulas



Rte. 0937HZ



Rte. 0215JZ



Hawaii Volcanoes National Park

ROUTE 0937IZ: KILAUEA MILITARY CAMP I PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

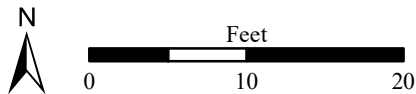
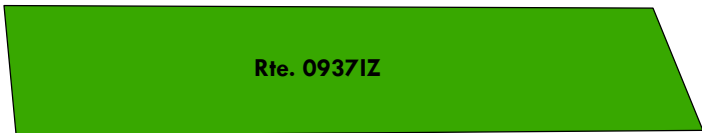
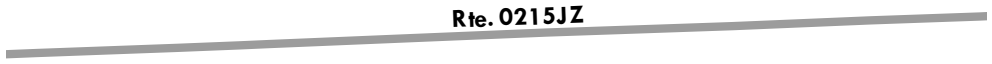
ADJACENT TO ROUTE 0215JZ (KILAUEA MILITARY CAMP ROAD J)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
322	0.006	5	LIGHT REPAIR
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0937JZ: KILAUEA MILITARY CAMP J PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

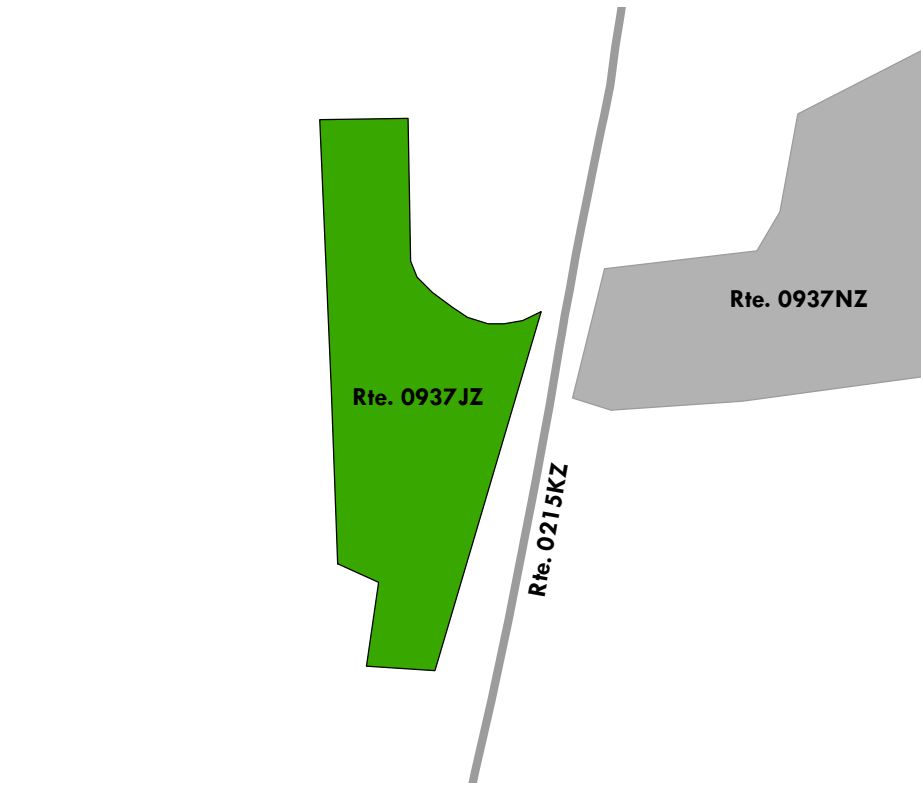
ADJACENT TO ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
3,513	0.06	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)
Fair (61- 84)
Good (85 - 94)
Excellent (95 - 100)
Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0937KZ: KILAUEA MILITARY CAMP K PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

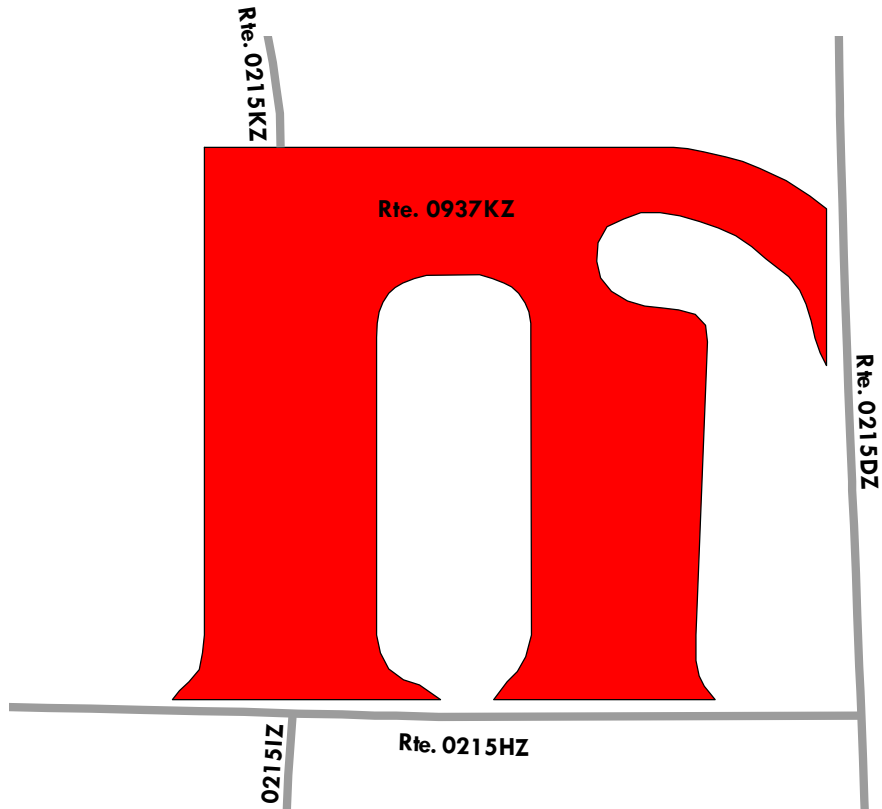
FROM ROUTES 0215DZ (KILAUEA MILITARY CAMP ROAD D), 0215HZ (KILAUEA MILITARY CAMP ROAD H), AND 0215KZ (KILAUEA MILITARY CAMP ROAD K)
 TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
14,942	0.257	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
HEAVY 3R TREATMENTS		POOR / 53	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0937LZ: KILAUEA MILITARY CAMPL PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

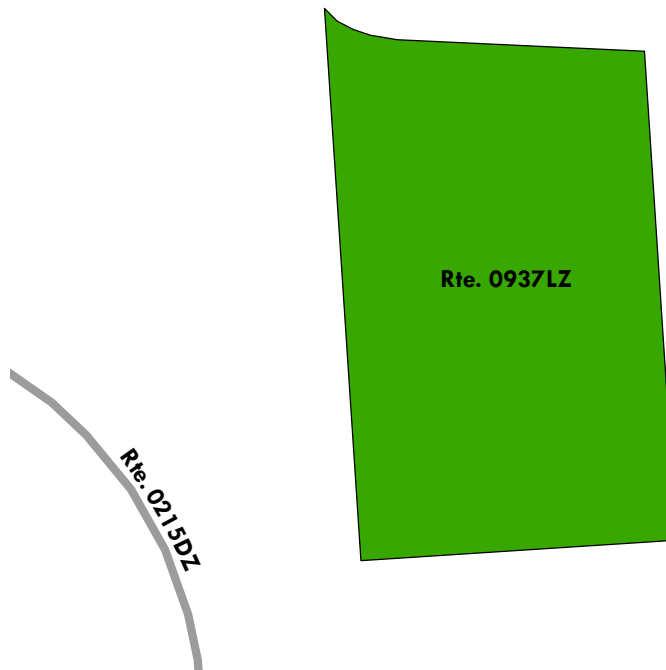
ADJACENT TO ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
1,033	0.018	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0937MZ: KILAUEA MILITARY CAMP M PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

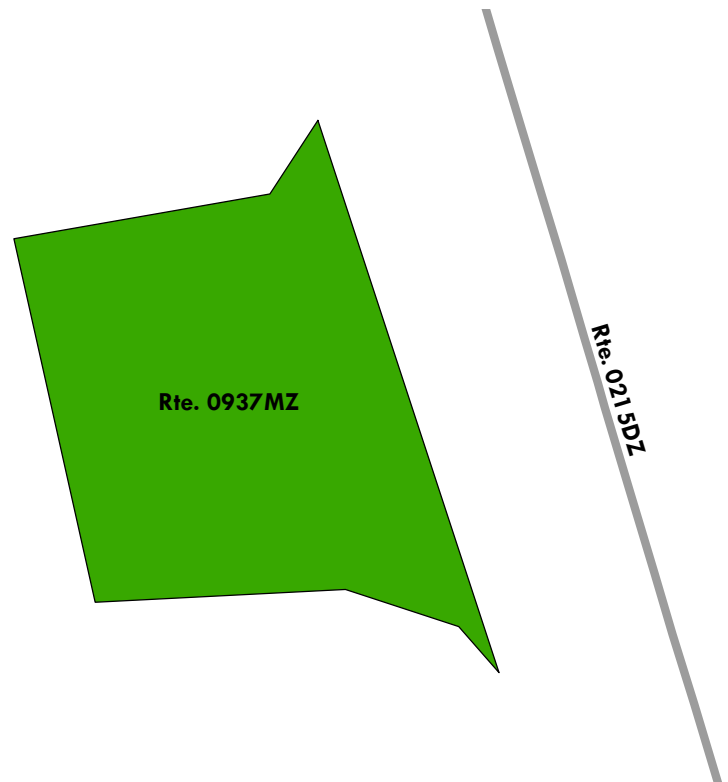
ADJACENT TO ROUTE 0215DZ (KILAUEA MILITARY CAMP ROAD D)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
1,411	0.024	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0937NZ: KILAUEA MILITARY CAMP N PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

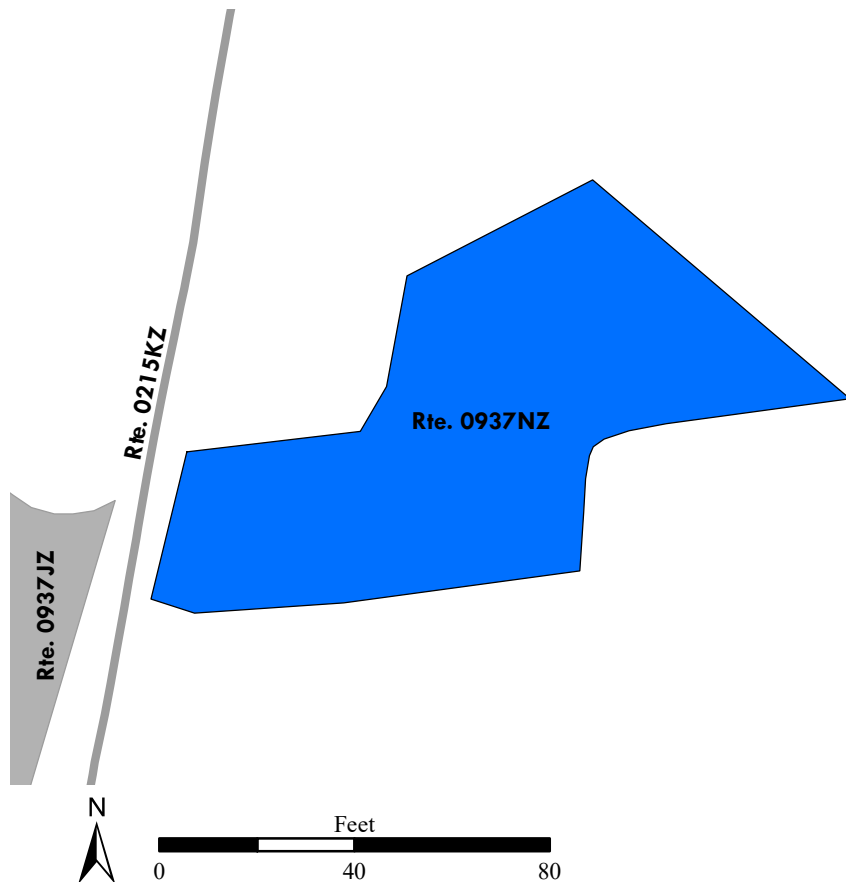
FROM ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K)
 TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
5,527	0.095	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0937OZ: KILAUEA MILITARY CAMP O PARKING

Subcomponent of Route HAVO-0937ZZ
Manual Rating

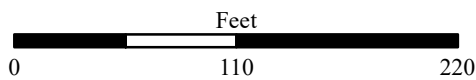
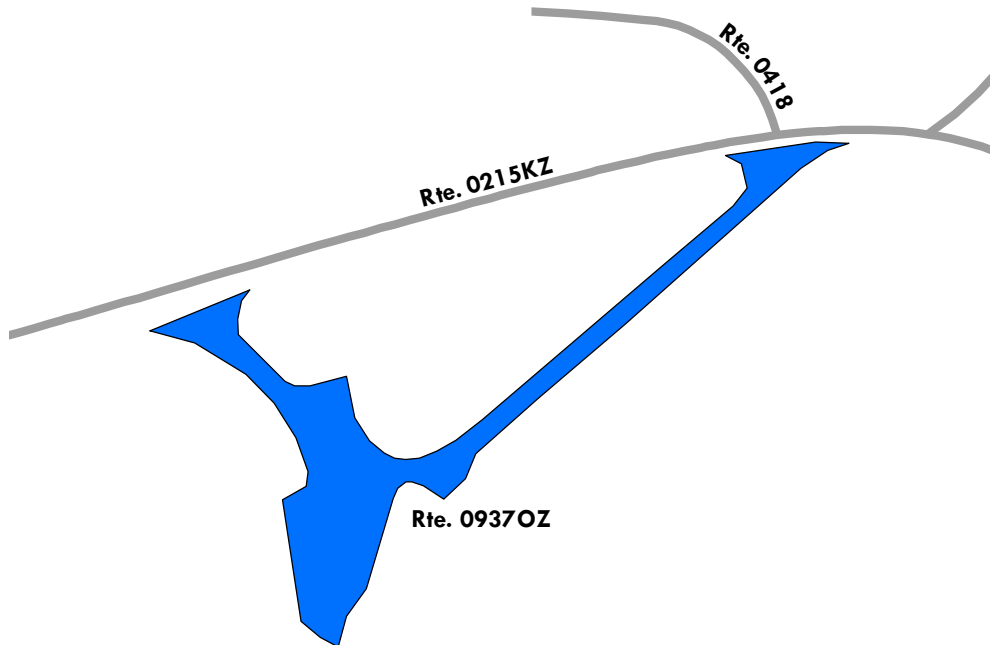
FROM ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K)
 TO ROUTE 0215KZ (KILAUEA MILITARY CAMP ROAD K)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	239125	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
8,661	0.149	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0939: MULAWAI A PELE TRAILHEAD PARKING

Manual Rating

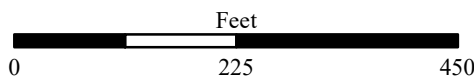
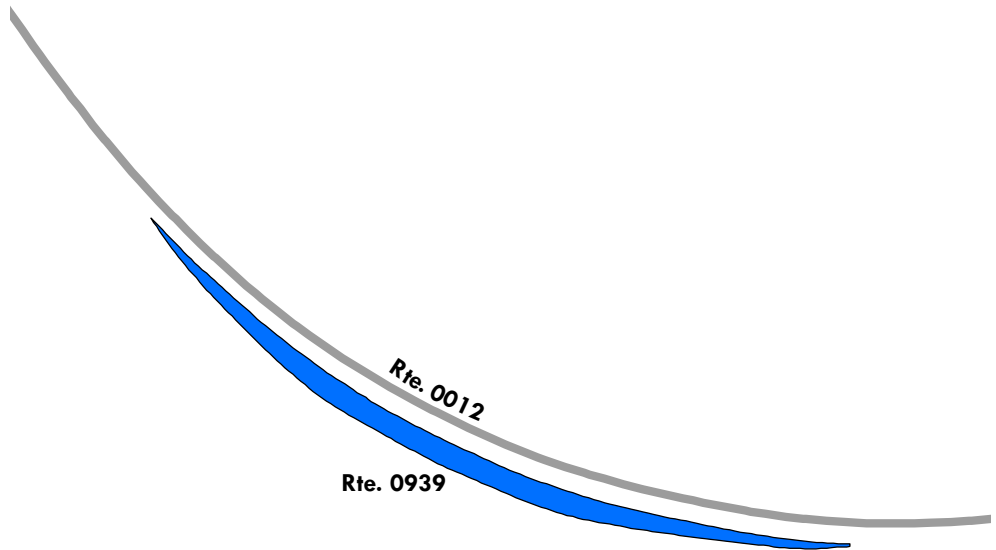
ADJACENT TO ROUTE 0012 (CHAIN OF CRATERS ROAD)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	240234	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
13,055	0.225	6	DO NOTHING
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0940: HILINA PALI HANDICAP OVERLOOK PARKING

Manual Rating

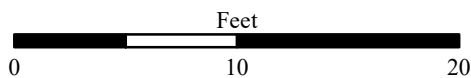
ADJACENT TO END OF ROUTE 0101 (HILINA PALI ROAD)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	240235	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
406	0.007	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0941: VOLCANO ART CENTER PARKING

Manual Rating

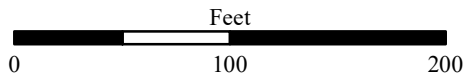
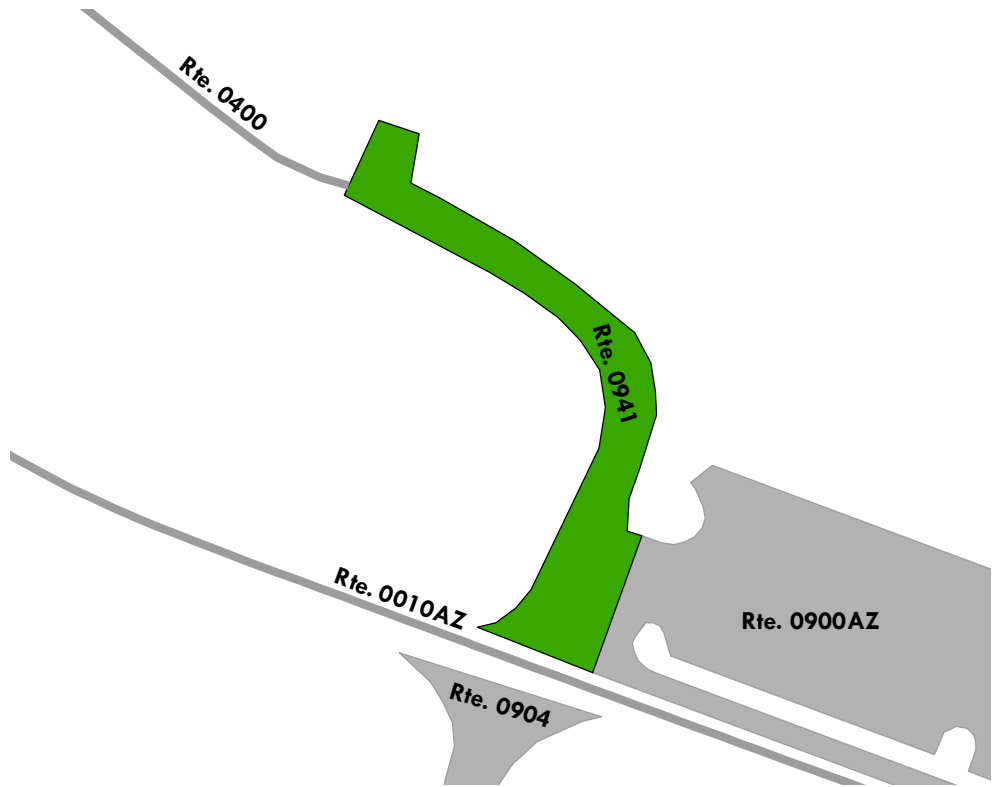
FROM ROUTE 0010AZ (CRATER RIM DRIVE - WEST) AT MP 0.36 ON RIGHT
TO ROUTE 0400 (WATER TANK ROAD)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	240236	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
7,440	0.128	5	DO NOTHING
Curb Type		Curb & Gutter Type	
STONE		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
PREVENTIVE MAINTENANCE		GOOD / 90	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)
Fair (61- 84)
Good (85 - 94)
Excellent (95 - 100)
Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0944: MAUNA LOA LOOKOUT PARKING

Manual Rating

FROM END OF ROUTE 0100B (MAUNA LOA LOOKOUT ROAD)

TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	240231	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
3,468	0.06	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

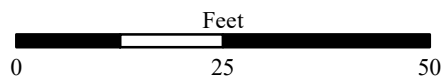
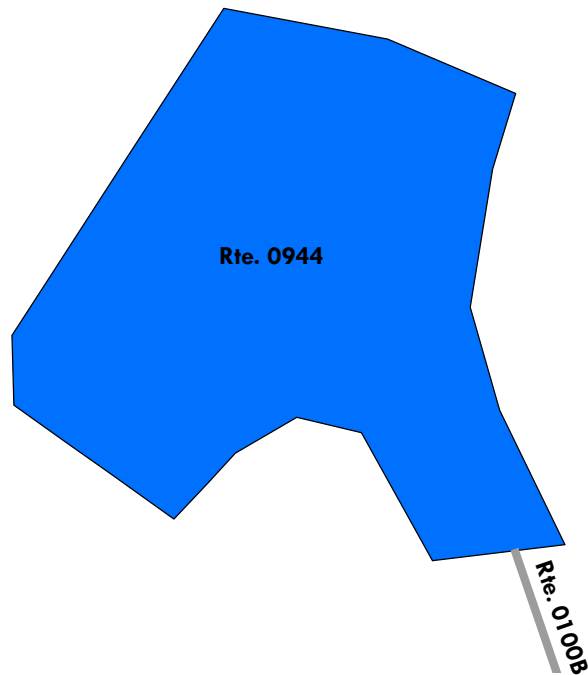
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0949ZZ: KAHUKU OLD MAMALAHOA HIGHWAY PARKING

Summary Route
Manual Rating

ADJACENT TO ROUTE 5012 (KAHUKU OLD MAMALAHOA HIGHWAY)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	256423	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition Rating / PCR	
3,162	0.054	SUMMARY / 0	

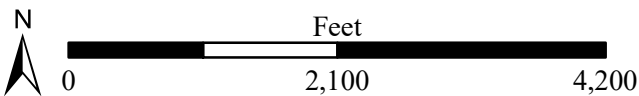
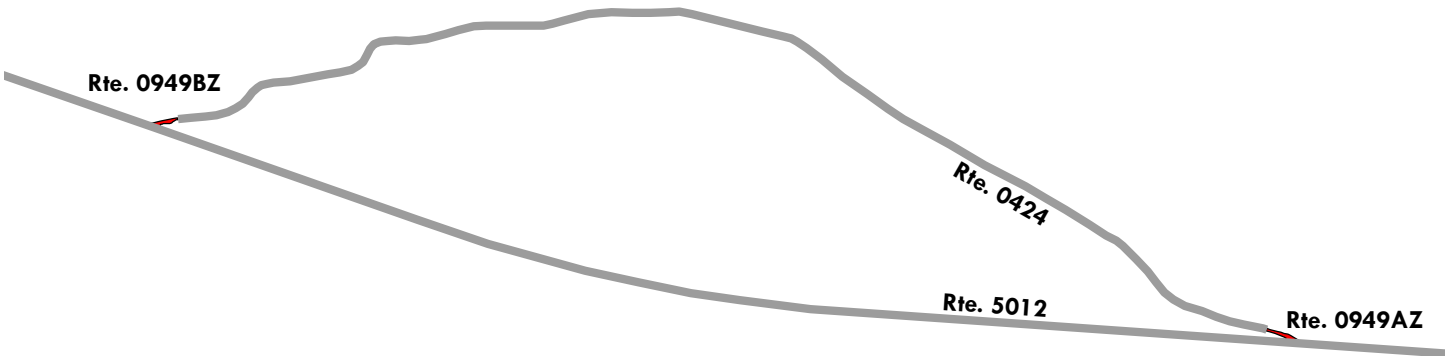
Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas

The condition shown on this page reflects the overall route condition and may not reflect individual subcomponent ratings.

Route 0949ZZ
(2 Subcomponents)



Hawaii Volcanoes National Park

ROUTE 0949AZ: KAHUKU OLD MAMALAHOA HIGHWAY PARKING SOUTH

Manual Rating

FROM ROUTE 5012 (HAWAII STATE HIGHWAY 11 - KAHUKU) AT MP 1.37 ON RIGHT

TO ROUTE 0424 (KAHUKU OLD MAMALAHOA HIGHWAY)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	256423	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
1,698	0.029	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
RECONSTRUCTION		POOR / 0	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

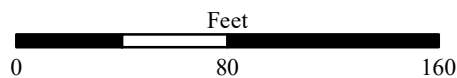
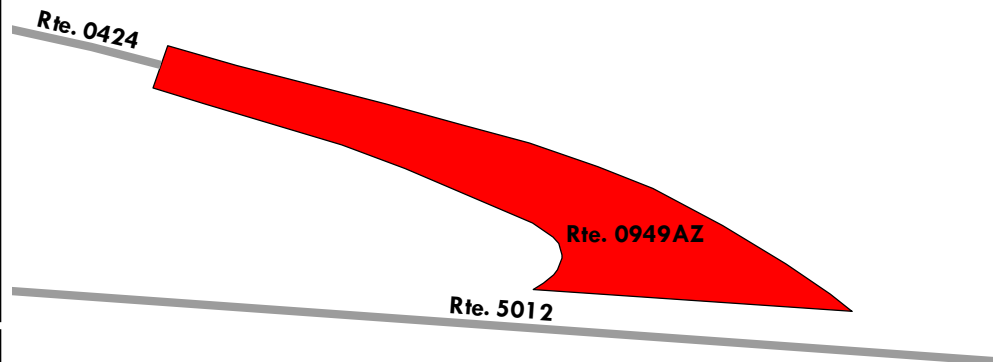
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0949BZ: KAHUKU OLD MAMALAHOA HIGHWAY PARKING NORTH

Manual Rating

FROM ROUTE 5012 (HAWAII STATE HIGHWAY 11 - KAHUKU) AT MP 3.05 ON RIGHT

TO ROUTE 0424 (KAHUKU OLD MAMALAHOA HIGHWAY)

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	256423	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
1,464	0.025	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
RECONSTRUCTION		POOR / 0	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

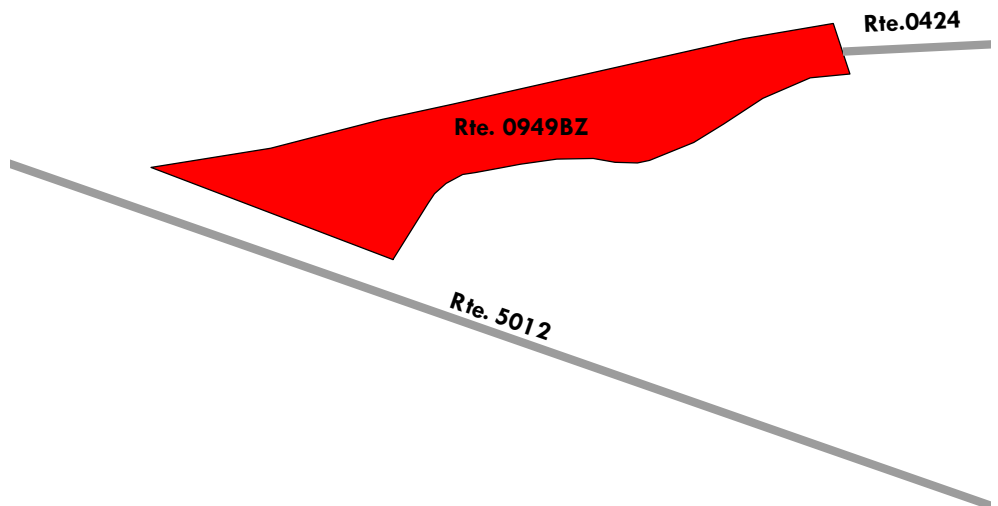
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0956ZZ: NAMAKANI PAIO CAMPGROUND PAVED PARKING

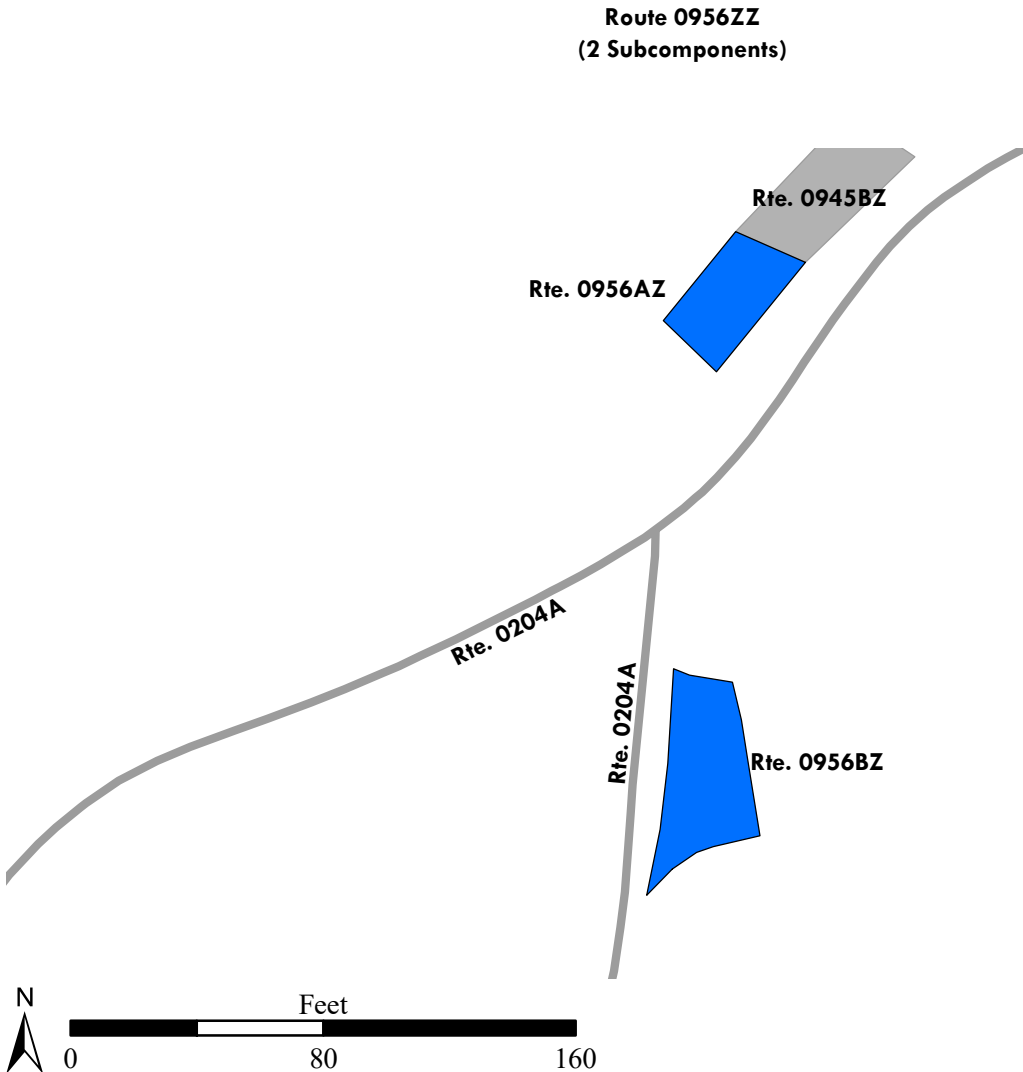
Summary Route
Manual Rating

ADJACENT TO ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) ON RIGHT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	N/A	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition Rating / PCR	
2,257	0.039	SUMMARY / 97	

Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
See Appendix for definitions and formulas				

The condition shown on this page reflects the overall route condition and may not reflect individual subcomponent ratings.



Hawaii Volcanoes National Park

ROUTE 0956AZ: NAMAKANI PAIO CAMPGROUND RESTROOM PARKING

Subcomponent of Route HAVO-0956ZZ

Manual Rating

ADJACENT TO ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) AT MP 0.174 ON RIGHT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	N/A	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
884	0.015	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

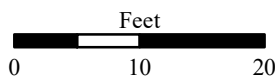
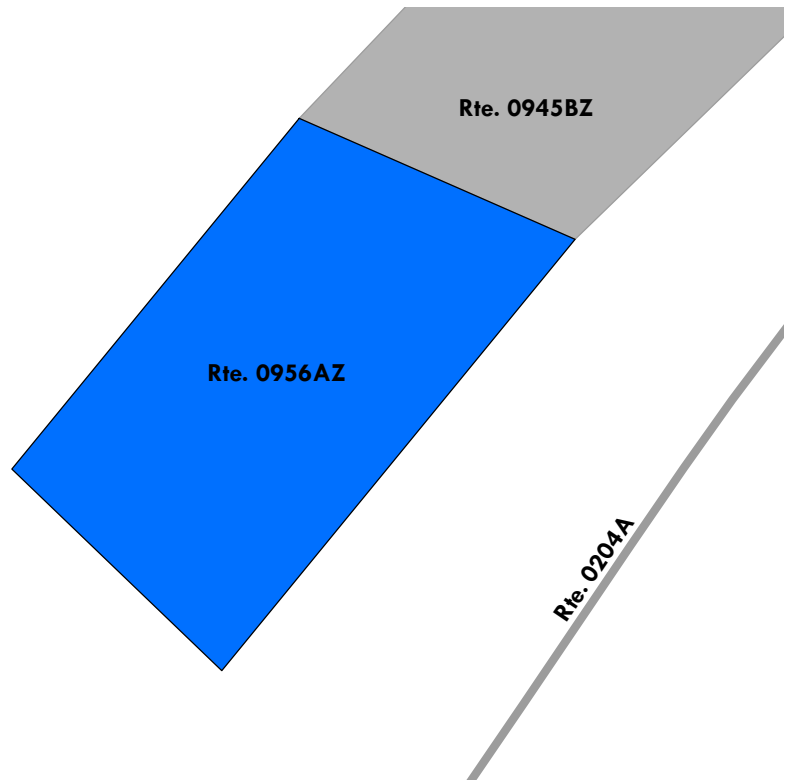
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0956BZ: NAMAKANI PAIO CAMPGROUND SHELTER PARKING

Subcomponent of Route HAVO-0956ZZ

Manual Rating

ADJACENT TO ROUTE 0204A (NAMAKANI PAIO CAMPGROUND ROAD) AT MP 0.306 ON RIGHT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	N/A	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
1,373	0.024	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)

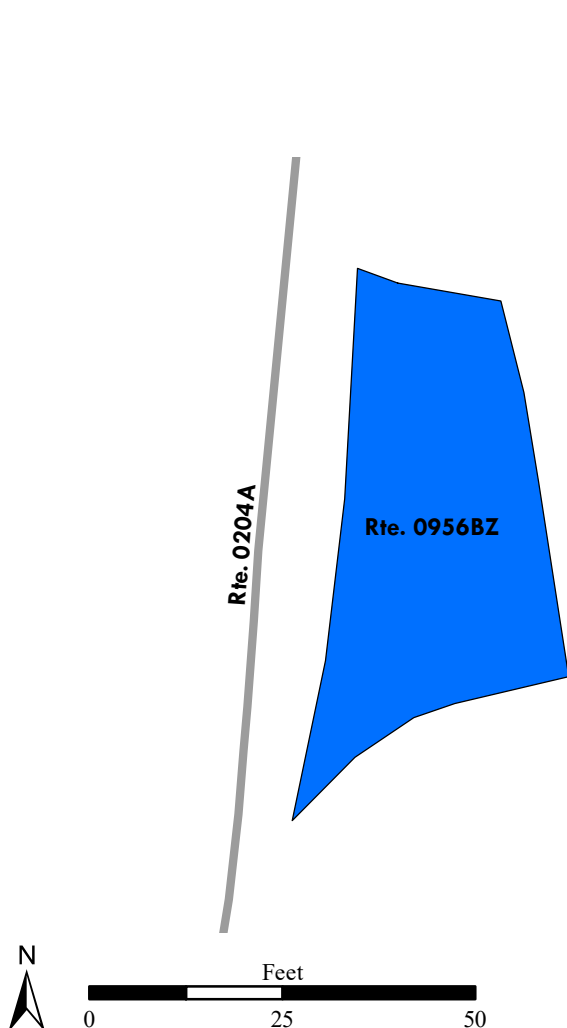
Fair (61- 84)

Good (85 - 94)

Excellent (95 - 100)

Not Rated

See Appendix for definitions and formulas



Hawaii Volcanoes National Park

ROUTE 0957: KAHUKU VISTOR CENTER HANDICAP PARKING

Manual Rating

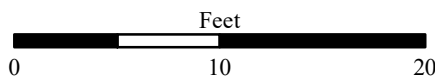
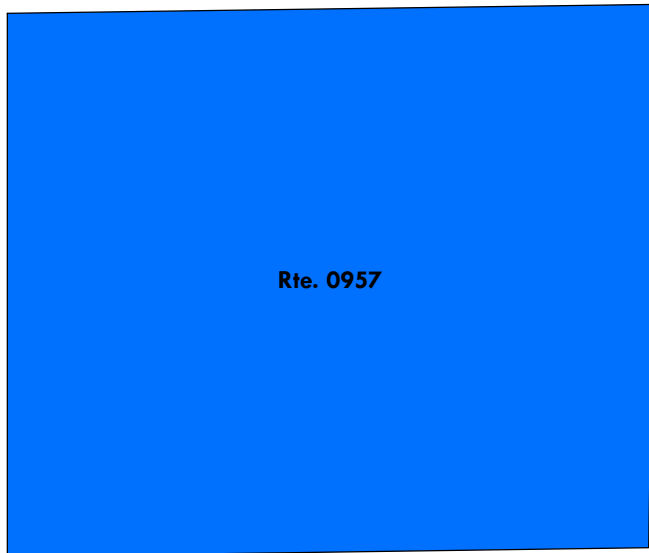
ADJACENT TO ROUTE 0213AZ (KAHUKU ENTRANCE ROAD - PAVED) AT MP 0.44 ON RIGHT

Inspection Date	FMSS Number	User Access	Surface Type
3/8/2022	N/A	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
786	0.014	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition Rating / PCR	
DO NOTHING		EXCELLENT / 97	

Route Condition Legend – Pavement Condition Rating (PCR)

Poor (0 - 60)	Fair (61- 84)	Good (85 - 94)	Excellent (95 - 100)	Not Rated
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See Appendix for definitions and formulas



Section 7

Road Milepost Information



Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program

HAVO: Road Milepost Information

Milepost information is collected with the Data Collection Vehicle (DCV) when it is used to collect pavement condition data. No DCV routes existed in this park at the time of data collection. Therefore, in Cycle 6, there is no data to report for this section.

Section 8 Appendix



Hawaii Volcanoes National Park



Federal Lands Highway
Road Inventory Program

Improvements to the RIP Index Equations and Determination of PCR

In 2005, the Federal Highway Administration (FHWA) began implementing the use of a Pavement Management System (PMS) to assist the National Park Service (NPS) in prioritizing Pavement Maintenance and Rehabilitation activities. The PMS used by FHWA is the Highway Pavement Management Application (HPMA) which has the ability to store inventory and condition data from the Road Inventory Program (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 the distresses and indexes that comprise the Pavement Condition Rating (PCR), an extensive study was completed throughout 2010 that has resulted in changes to the RIP 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.

Additionally, methodologies were updated in 2013 for Manually Rated Routes (paved routes that the collection vehicle is unable to drive) as well as Parking Areas to provide more accurate condition data to the HPMA. These updated methodologies allow for the efficient assessment of pavement conditions using a visual inspection method to denote specific distresses. These distresses are indicative of current conditions, the causes for current and future deterioration, and identify the level of targeted repair and rehabilitation practices required.

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 in early 2014 to ensure that an improvement was achieved between the relationship of PCR and the actual Maintenance and Rehabilitation needs that were represented. The changes will allow greater use of RIP and HPMA data for not simply condition data reporting, but also as a reliable tool for project identification and selection.

Description of the Rating System

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

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

With the use of quality digital photography and automated crack detection software, FHWA RIP is tasked with executing a pavement condition assessment on a network of roughly 5,700 miles of National Park Service roads and parkways. Because a subset of roads will be collected multiple times this cycle, the total collection length will be around 13,000 miles. Foremost in setting up the basis of pavement distress identification is employing the distress identification protocols used by FHWA. There is no single distress identification system that is universal among entities conducting a program of distress identification. For the purpose of the NPS RIP, FHWA employs distress identification protocols that are specific to this program.

FHWA has referenced the “*Distress Identification Manual for the Long-Term Pavement Performance Program*”, Publication No. FHWA-RD 03-031, June 2003, as the point-of-reference for distress types on NPS pavement. In truth, the FHWA RIP distress types are similar to those described in the LTPP manual with some modifications. This document, “*Distress Identification Manual for the NPS Road Inventory Program, Cycle 6, 2014-2020*” was developed using the “*Distress Identification Manual for the Long-Term Pavement Performance Program*” as a guideline. Definitions of severity levels based on crack width contained in this document adhere to the LTPP Distress ID Manual. Modifications have been made to the definition of Alligator and Longitudinal Cracking and determination of Alligator Cracking severity. This manual also addresses Rutting and Roughness and its application to RIP.

Cycle 6 has launched in the spring of 2014 and will again comprise all parks, large and small, that are served by paved roads and/or parking areas. For Cycle 6, roughly 333 large and small parks will have all paved routes and parking areas collected at least once in the cycle, some will have multiple collections depending on the size of the park and the functional class of the route.

This “*Distress Identification Manual for the NPS Road Inventory Program, Cycle 6, 2014-2020*” 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 6.

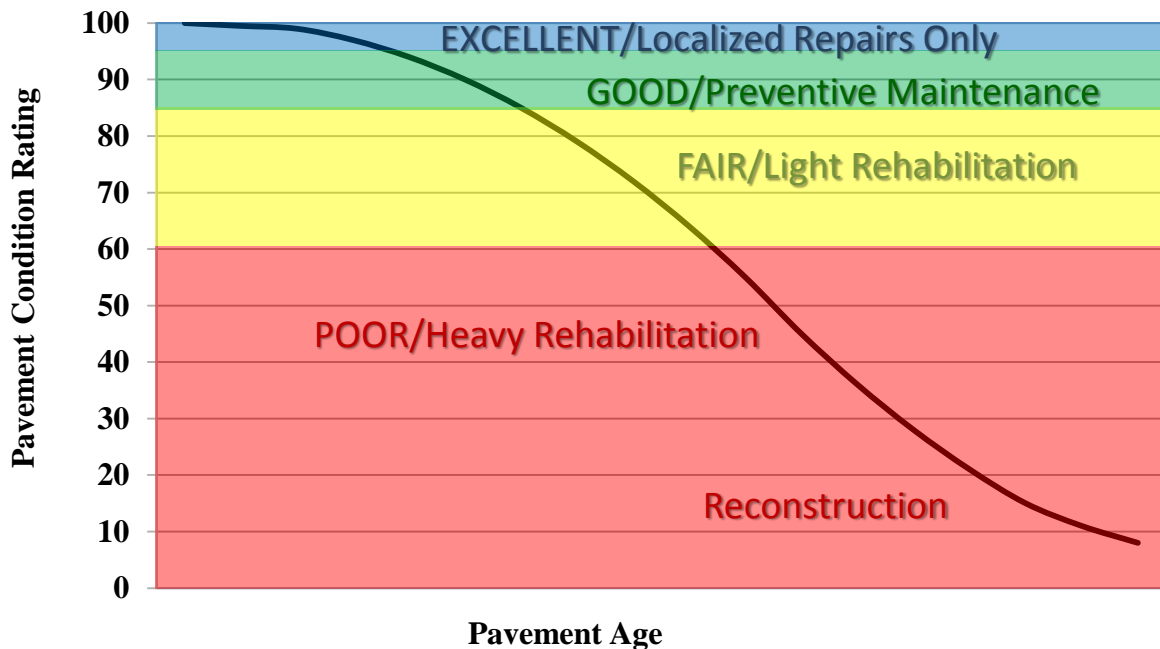
Explanation of the Condition Descriptions

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

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

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

Condition Categories and Treatments



Description of Pavement Treatment Types

1. **Preventive Maintenance** is a planned strategy of cost-effective treatments to an existing roadway system and its appurtenances that preserves the system, retards future deterioration, and maintains or improves the functional condition of the system (without significantly increasing the structural capacity). Preventive maintenance is typically applied to pavements in good condition having significant remaining service life. As a major component of pavement preservation, preventive maintenance is a strategy of extending the service life by applying cost-effective treatments to the surface or near-surface of structurally sound pavements. Examples of preventive treatments include asphalt crack sealing, chip sealing, slurry or micro-surfacing, thin and ultra-thin hot-mix asphalt overlay, concrete joint sealing, diamond grinding, dowel-bar retrofit, and isolated, partial and/or full-depth concrete repairs to restore functionality of individual slabs.
2. Pavement Rehabilitation consists of structural enhancements that extend the service life of an existing pavement and/or improve its load carrying capacity. Rehabilitation techniques include restoration treatments and structural overlays. Rehabilitation projects extend the life of existing pavement structures either by restoring existing structural capacity through the elimination of age-related, environmental cracking of embrittled pavement surface or by increasing pavement thickness to strengthen existing pavement sections to accommodate existing or projected traffic loading conditions. Two sub-categories result from these distinctions, which are directly related to the restoration or increase of structural capacity.
 - **Light Rehabilitation (L3R)** - Examples include single-lift overlays up to 2.5 inches in total thickness and milling and overlays for flexible pavements
 - **Heavy Rehabilitation (H3R)** – Requires rehabilitation with grade improvement. H3R stands for resurfacing, restoration, and rehabilitation projects. H3R projects typically involve multi-depth (overlays greater than 2.5 inches) pavement improvement work (short of full-depth replacement) and targeted safety improvements. H3R projects generally involve retention of the existing three-dimensional alignment.
3. **Reconstruction (4R)** is defined as the replacement of the entire existing pavement structure by the placement of the equivalent or increased pavement structure. Reconstruction usually requires the complete removal and replacement of the existing pavement structure. Reconstruction may utilize either new or recycled materials incorporated into the materials used for the reconstruction of the complete pavement section. Reconstruction is required when a pavement has either failed or has become functionally obsolete.

Appendix A

Methodology for Determining Condition Ratings with the Data Collection Vehicle (DCV)

Surface Distresses Identified by the Data Collection Vehicle

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 and rutting are determined from digital images that provide both the longitudinal and transverse profile. The images also provide an elevation profile of the road, creating a 3-dimensional image of the paved surface.

- Transverse Cracks
- Longitudinal Cracks
- Alligator Cracks
- Patching/Potholes
- 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 Surface Condition Rating (SCR).

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.

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 mile interval before it reaches MAE and fails.

The index formulas are based on a scale of 0 to 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 = (less than or equal to 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 less than 0 defaults to 0. Index values greater than 100 defaults 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.

ASPHALT-SURFACED PAVEMENT DISTRESS TYPES WITH RUTTING AND ROUGHNESS				
Distress Type	Units Of Measure	Converted To	Defined Severity Levels?	Measured By
Alligator Cracking	Square Feet	Percent of Lane Per 0.02 Mile	Yes	3 Dimensional pavement imaging system
Transverse Cracking	Linear feet	Number of Cracks Per 0.02 Mile	Yes	3 Dimensional pavement imaging system
Longitudinal Cracking	Linear feet	Percent of Lane Length Per 0.02 Mile	Yes	3 Dimensional pavement imaging system
Patching / Potholes	Square Feet	Percent of Lane Per 0.02 Mile	No	3 Dimensional pavement imaging system
Rutting	Inches	Rut Depth Per 0.02 Mile	Yes	3 Dimensional pavement imaging system
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*

Table 1. Distress summary

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 with little to no interconnecting cracks with no visible spalling. Cracks are less than or equal to a mean width of 0.25 in. (6mm). 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 greater than 0.25 in. (6 mm) but less than or equal to 0.75 in. (19 mm) or any crack with a mean width less than or equal to 0.75 in. (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 greater than 0.75 in. (19mm) or any crack with a mean width less than or equal to 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 as shown in Table 2.

ALLIGATOR CRACKING SEVERITY LEVELS				
	CRACK SEVERITY	CRACK PATTERN		
		LOW	MED	HIGH
CRACK WIDTH	LOW	LOW	MED	HIGH
	MED	MED	MED	HIGH
	HIGH	HIGH	HIGH	HIGH

Table 2. Alligator Crack Severity Levels

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 less than or equal to 0.25 in. (6 mm). This also includes sealed cracks with sealant in good condition and a width that cannot be determined.

MEDIUM

Cracks with a mean width greater than 0.25 in. (6 mm) but less than 0.75 in. (19 mm). Also, any crack with a mean width less than 0.75 in. (19 mm) and adjacent random low severity cracking.

HIGH

Cracks with a mean width greater than 0.75 in. (19 mm). Also, any crack with a mean width less than 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 less than or equal to 0.25 in. (6 mm). Sealed cracks with sealant in good condition and a width that cannot be determined.

MEDIUM

Cracks with a mean width greater 0.25 in. (6 mm) and less than or equal to 0.75 in. (19 mm). Also, any crack with a mean width less than 0.75 in. (19 mm) and adjacent random low severity cracking.

HIGH

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

Patching and Potholes

Description:

Patching is an area of pavement surface that has been removed and replaced with patching material or an area of pavement surface that has had additional patching material applied. Patching may encompass partial lane or full lane width. On full lane width patching; the total, contiguous length of patch may not exceed 0.100 mi. (0.161 km). (Any full-lane patch exceeding 0.100 mi. in length is considered a pavement change). Patching must have a quantifiable area.

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

Manhole covers should not be rated as patches unless there is obvious patching around the manhole.

Speed bumps should not be rated as patches

Severity Levels:

There are no stratified severities for Patching and 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 of 0.20 inches to 0.49 inches
Ruts less than 0.20 in. are not included in the distress calculations.

MEDIUM

Ruts with a measured depth of 0.50 inches to 0.99 inches

HIGH

Ruts with a measured depth greater than 1.00 inch

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.

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

Table 3. International Roughness Index

Roughness Collection Parameters

On shorter roads with a lower speed limit the usefulness in collecting and reporting IRI is negligible. Lower, inconsistent speeds can lead to a less accurate IRI value. Therefore RIP has put in place the following protocols for reporting IRI.

International Roughness Index (IRI) is not reported on routes with the following criteria:

- Posted speed limit is less than 25 mph
- Length of route is less than 0.50 miles

When a collected route has a posted speed limit of at least 25 mph and length of at least 0.50 miles, IRI will be collected except on road sections where the speed is less than 20 mph

Other situations may arise where the speed and length factors are met, but reporting IRI could lead to an inaccurate PCR. RIP will determine whether or not it is reasonable to report IRI on these routes on a case by case basis.

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 greater than or equal to 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:

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

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 longitudinal 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 greater than or equal to 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

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

Where:

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

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

Percent of total area is computed as:

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

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

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 report the percentage of the 40 measurements within that 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 wheel path based on 20 ruts.

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

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

In RUT_INDEX, the denominators 535, 205, and 40 are the Maximum Allowable Extents for each severity; Low, Medium, and High, respectively. Only the MAE for high severity rutting can fail a section, since 200% of *only* low severity ruts would yield a rut index of 85 and 200% of *only* medium severity ruts would yield a rut index of 61.

Roughness Condition Index (Asphalt)

$$\text{RCI} = 32 * [5 * (2.718282^{(-.0041 * \text{AVG IRI}))}]$$

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)

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

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 is collected by FHWA using a Pathway Services Inc. Data Collection Vehicle (DCV), called a 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 jpeg digital imagery files at a frequency of every 26.4feet.

Two forward-facing cameras are mounted above the vehicle cab, one pointed straight ahead and the other to the right shoulder providing seamless roughly 120 degree viewing. A third camera is mounted in the rear of the vehicle, recording the left shoulder.

CAMERA SPECIFICATIONS TWO FORWARD / ONE REAR FACING CAMERA	
Camera lens/type	Prosilica GT 2750 (GigE Technology)
Image format	*.jpg
Image resolution	2750 x 2200, 18 frames/second
Image pixel size	depends on distance
Zoom ratio	16mm Fixed
Iris range	Aperture Range F 1.8 – Infinity (P-Iris, Automatic)

Pavement Imaging and Rutting

High resolution rutting data and surface imaging are collected in a single data stream using a three-dimensional (3D) pavement surface transverse profile data acquisition system. The 3D camera captures a laser line as it is projected over the pavement surface and uses the location of this line to measure the height deviations of the pavement surface. These height deviations can be used to calculate rutting in both wheelpaths. These deviations also provide a grayscale image detailing the change in height throughout the surface, i.e. providing depth measurements for cracking.

THREE-DIMENSIONAL PAVEMENT SURFACE AND TRANSVERSE PROFILE DATA ACQUISITION SYSTEM	
Surface Image Specifications	
Image size	1536 pixels/scan @ 3000 Hz
Image width	4 meters (3950 mm nominal)
Laser class	3B
Power	16W (Two lasers @ 8W Ea)
Vehicle speed limitations	62 mph
Environment	Dry pavement, day or night
Sensor size (approximate)	1536 pixels x 512 pixels
Image display length	26.4 feet
Rutting Specifications	
Reported rut depth units	Inches
Vehicle speed limitations	Up to 62 mph
Sampling rate	3000 profiles/second
Transverse resolution	1536 points/profile
Transverse field-of-view	14 feet
Depth accuracy (nominal)	<1mm
Environment	Dry pavement, day or night, above 32 degrees F
Adherence to specifications	ASTM E1703M-95 (reapproved 2005)

Distance Measuring Instrument (DMI)

The DMI (Distance Measuring Instrument) obtains road length measurements that are accurate to 0.15% 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)

IRI SPECIFICATIONS	
Reported IRI units	Inches/mile
Vehicle speed limitations	12-62 mph
IRI equipment certification	Texas Transportation Institute (TTI)
Wavelengths accommodated	0.5 feet to 300 feet
IRI computed & reported	World Bank Technical Paper Number 46
Environment	Dry pavement, day or night, above 32 degrees
Adherence to specifications	ASTM E950 Class 1 & AASHTO M 328

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.

GPS & Inertial Systems

GPS is collected by an onboard system employing Omnistar real time correction and a spinning gyroscope to provide accurate positioning data in instances of satellite obstruction. All GPS coordinates are tied to an 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	± 1.75%
Grade	± 1.75%
Adherence to specifications	ASTM E1703M-95 (reapproved 2005)

*NOTE – GPS accuracy is dependent on many different factors. Satellite constellation, tree coverage, GPS receiver quality, and real-time correction availability can all affect the locational and elevation accuracies. The elevation (z coordinate) accuracy is less dependable than locational or horizontal accuracy (x/y coordinates or latitude/longitude). In areas of heavy tree coverage or poor satellite constellations, elevation data can vary by as much as +/- 100 feet.

Appendix B

**Methodology for Determining Condition Ratings
Using Manual Rating Procedures**

Description of Manual Rating Methods

In 2013, the Federal Highway Administration updated existing Manual Rating Procedures in an effort to better align pavement conditions for Manually Rated Routes and Parking with the Highway Pavement Management Application (HPMA). HPMA is the Pavement Management System used by the FHWA to store inventory and condition data from the Road Inventory Program (RIP) and forecast future performance using prediction models. HPMA uses pavement condition data (collected by the Road Inventory Program) to develop life cycles for pavements and recommend treatments to maximize useable pavement life while minimizing costs associated with maintenance and repair.

The Federal Highway Administration (FHWA) developed a set of manual rating methods for pavement that are appropriate for Federal Roadways. Two different methods were developed for linear roads and a separate method was developed for parking areas and nonlinear roads. These methods employ a 0 to 100 rating scale and improve consistency and objectivity in the manual evaluation of surface distresses. They are compatible with ratings that are collected by the automated Data Collection Vehicle (DCV).

- The first of the two manual evaluation methods for roads uses rating criteria to assign index values to each distress type based on a visual evaluation of severity and extent.
- The second manual evaluation method for roads is very time demanding and is best employed on only a select set of routes which may have the highest visitor use and require a more intensive assessment. This method will be used for the Manual Rating of Function Class 1, 2, 7, and 8 Roads. This method is based on measurements that are recorded for each instance of a surface distress. These measurements are converted into index values using conversion formulas.
- Parking areas and non-linear roads are rated similar to the first method shown above, however, there are some slight differences due to the non-linear nature.

The details and criteria used for each of these rating methods are outlined below.

Visual Inspection Method for Manually Rating Secondary Roads

The visual inspection method for manually rated roads uses condition rating criteria that have been developed by FHWA. This criteria is based on a visual evaluation of the severity and extent of distresses to determine the overall condition of the roadway. This method is used for secondary roads that are Functional Class 3, 4, 5, and 6. This constitutes the majority of manually rated roads collected by the Road Inventory Program.

Rating Section Lengths

For this method, Manually Rated Roads are rated in sections. These sections may be made based on length of changes in surface type or condition as described below. The ratings are then aggregated to give an overall rating for the Route:

- Rating sections should be no longer than 0.25 miles in order to keep the area being rated manageable.
- A new rating section may be started based on changes in condition, width, or surface type if these changes represent a significant portion of the route (are not isolated instances).
- If the road condition, width, and surface type remain constant then new sections do not need to be created unless the road exceeds 0.25 miles.

Rating Criteria

For this method, Manually Rated Roads are evaluated using a visual inspection of the six distress types listed below. Each distress is assigned one of five index values. An overall Surface Condition Rating (SCR) and Pavement Condition Rating (PCR) are calculated based on these index values.

- Alligator Cracking
 - Rating based on percentage of road surface affected
- Longitudinal Cracking
 - Rating based on severity level (crack width) and percentage of road section length of longitudinal cracks
- Transverse Cracking
 - Rating based on crack width, crack spacing, and percentage of surface affected
- Patching
 - Rating based on percentage of road surface affected
- Rutting
 - Rating based on percentage of road section length affected by visible rutting (>1 inch depth) that requires remediation
- Roughness
 - Manual assessments of roughness are not made due to the subjectivity of the measurement. Therefore, roughness is not incorporated into the PCR calculation of manually rated roads.

Concrete Routes also receive a PCR rating based on visual evaluation of the following six distress types.

- Slab Faulting at Joints
- Slab Cracking and breakup
- Surface Delamination and Pop-outs
- Joint Distresses
- Patching

Distress Measurement Method for Manually Rating Primary Roads

A more intensive and time demanding assessment than our standard method was developed for Primary roads that are functional class 1, 2, 7, or 8. These high visitation roads are usually accessible by the automated Data Collection Vehicle but in rare instances may need to be manually rated. The method developed is based on measuring each instance of a distress. These measurements are totaled over each section length being measured and are then converted into index values between 0 and 100 (100 being a road with no distress) using index formula equations outlined below. The goal of this method is to produce measured index values which are directly comparable to the automated DCV.

Rating Section Lengths

For the distress measurement method roads are broken into sections in order to rate. Distress measurements are totaled for each section separately in order to determine the index value for that particular section. The section length to be rated is determined based on the following rules:

- Rating sections are between 0.25 and 0.50 miles long
- A new rating section is created if there is a significant change in condition or pavement width
- If there are no significant changes in condition or pavement width, rating sections are broken at equal intervals, typically 0.50 miles

Manual Distress Measurements

Alligator Cracking

- Alligator cracking is measured by area (square feet). Instances of Alligator cracking are measured along the length and multiplied by the average width of the distressed area.
- The index for alligator cracking takes the total area of cracking compared to the interval length and converts it to a percentage. That percentage is then input into an index formula that yields a value between 0 and 100 (0 being the most distressed).
- Severity levels are not defined for manually measured Alligator cracks. The Alligator Crack Index formula is calculated based on an assumption of medium severity.

Longitudinal Cracking

- Longitudinal cracking (cracking in the direction parallel to the roadway) is measured by length (ft.).
- The index for longitudinal cracking takes the total length of cracking compared to the interval length and converts it to a percentage broken down by severity. That percentage is then input into a formula that yields a value between 0 and 100 (0 being the most distressed).
- Two severity levels are defined for manually measured Longitudinal Cracks. Lower severity cracks are those with a mean width of less than 0.25 inches. Sealed cracks with sealant in good condition are also considered lower severity. Higher severity cracks are those with a mean width of greater than 0.25 inches.

Transverse Cracking

- Transverse cracking (cracking in the direction perpendicular to the roadway) is measured by length (ft).
- The index for transverse cracking takes the total number of cracks (1 crack would encompass the full lane) broken down by severity. The total numbers of each severity are then put into a formula that yields a value between 0 and 100 (0 being the most distressed).
- Two severity levels are defined for manually measured Transverse Cracks. Lower severity cracks are those with a mean width of less than or equal to 0.25 inches. Sealed cracks with sealant in

good condition are also considered lower severity. Higher severity cracks are those with a mean width of greater than 0.25 inches.

Patching and Potholes

- Patching and Potholes are measured by area (square feet). Instances of Patching are measured along the length and multiplied by the average width of the patch.
- Instances of full lane width patching cannot be longer than 0.100 miles, otherwise it should be considered a pavement change rather than a distress.
- There are no stratified severities for Patching. It is either present or it is not.

Rutting

- Visible rutting is measured by length (ft.) in each wheel path. Only visible ruts are rated, which are ruts greater than 1 inch deep.
- All rutting recorded in a manual rating is considered to be high severity (> 1 inch). Lesser severities are generally not distinguishable in a visual inspection.

Roughness

- Manual assessments of roughness are not made due to the subjectivity of the measurement. Therefore, roughness is not incorporated into the PCR calculation of manually rated roads.

Index Formulas for Distress Measurement Method:

The method used to convert distress measurements into index values is shown below. The Surface Condition Rating and Pavement Condition Rating are calculated based on these index values.

Alligator Crack Index for Manual Rating:

$$AC_INDEX = 100 - 40 * (\%ALLIGATOR / 15)$$

Where:

%ALLIGATOR = Percent of total area of section being rated that contains Alligator cracking.

Longitudinal Crack Index for Manual Rating:

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

Where:

%LOW = Percent length of longitudinal cracks where crack width less than or equal to 0.25 inches

%HIGH = Percent length of longitudinal cracks where crack width greater than 0.25 inches

Transverse Crack Index for Manual Rating:

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

Where:

LOW = Count of the total number of transverse cracks within the section length where one transverse crack is equal to the lane width and the crack width \leq 0.25 inches

HIGH = Count of the total number of transverse cracks within the section length where one transverse crack is equal to the lane width and the crack width $>$ 0.25 inches

Number of cracks is computed as:
Total length of transverse cracks/Lane width

Patching Index for Manual Rating:

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

Where:

%PATCHING = Percentage of pavement section that contains patching/potholes.

Rutting Index for Manual Rating:

$$\text{RUT_INDEX} = 100 - 40 * (\% \text{RUTTING} / 40)$$

Where:

%RUTTING = Percentage length of high severity rutting within the section being measured.

Method for Manually Rating Paved Parking Areas and Non-Linear Roads

Parking areas are evaluated based on a visual inspection using condition rating criteria that has been developed by FHWA. This criteria is based on a visual evaluation of the severity and extent of distresses to determine the overall condition of the parking area. This overall condition rating is linked to the level of repair and rehabilitation practices required.

A distress index is determined for each of the distresses listed below for Asphalt and Concrete Parking areas. The overall Pavement Condition Rating (PCR) of the parking lot is driven by the most severe distress present.

Rating Criteria:

Asphalt Parking Distress Types

- Alligator Cracking
 - Rating based on percentage of road surface affected
- Longitudinal, Transverse and Block cracking
 - Rating based on crack width, crack spacing, and percentage of surface affected
- Rutting and Distortions
 - Rating based on percentage of road surface affected
- Hot Mix Asphalt Patches
 - Rating based on overall percentage of HMA patches
- Potholes and Cold Patches
 - Rating based on percentage of road surface affected
- Surface Raveling and Bleeding
 - Rating based on percentage of road surface affected

Concrete Parking Distress Types

- Slab Faulting at Joints
 - Rating based on height differential between adjacent slabs or pieces of broken slabs
- Slab Cracking and breakup
 - Rating based on quantity of cracks and if slab is acting to able distribute load as designed
- Surface Delamination and Pop-outs
 - Rating based on percentage of road surface affected to include pop-outs, spalls and surface delamination
- Joint Distresses
 - Rating based on sealant condition and concrete distresses at/or adjacent to joints
- Patching
 - Rating based on percentage of road surface affected

Curb Inspection and Treatments

During inspections of manually rated parking lots and routes, the curb reveal and overall curb condition are evaluated. The curb condition is used to determine a recommendation.

Curb Reveal

The vertical distance on the curb face from the gutter flow line or pavement surface to the top of curb. When resurfacing adjacent to curb, the resulting curb reveal should be no less than 4 inches. Additionally, when resurfacing adjacent to a gutter, the resulting pavement surface should be flush with the gutter pan. In cases where a resurfacing would violate either of these parameters, the surface may need to be milled or removed to adjust to these field conditions.

Curb Recommendations

The following treatment categories are based on the overall percentage of distresses along the entire curb structure for a specific pavement structure. Distresses include spalling, cracking, loss of material and any other damage which prevents the curb from conveying storm runoff or failing to perform in its intended function.

- Overall curb damage ranging 0%-5%:
 - DO NOTHING
- Overall curb damage ranging 5%-20%
 - LIGHT REPAIR
- Overall curb damage ranging 20%-50%
 - MODERATE REPAIR
- Overall curb damage greater than 50%:
 - REPLACE

GPS for Manually Rated Roads and Parking

GPS information for Manually Collected Cycle 6 Routes will be recorded using the latest hardware and software by TRIMBLE 6000 Series GeoXT. Cycle 6 GPS collection units will allow access to GPS and GLONASS, improving overall GPS reliability, accuracy and precision to submeter accuracy.

Additionally, the new GPS units have an enhanced ability to collect accurate signals underneath tree cover or adjacent to buildings or natural terrain with extreme vertical gradations that typically reduce GPS accuracy. Trees and buildings create “satellite shadows”, limiting the areas where you can reliably collect high-accuracy GPS data. The updated GPS receiver will deliver improved usable data under tree canopy or in natural or urban canyons. Routes that were previously collected accurately will not be recollected in Cycle 6.

TRIMBLE 6000 SERIES GeoXT GPS SPECIFICATIONS	
Receiver	Trimble Maxwell™ 6 GNSS chipset
Channels	220 channels
Systems	GPS / GLONASS / WAAS
Accuracy	Sub-meter
Operation Temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Cellular and Wireless	UMTS / HSDPA / GPRS / EDGE / Wi-Fi / Bluetooth
Internal Still Camera w/ GEOTAG ability	Autofocus 5 MP (JPG) and WMV w/ Audio

Appendix C
Description of Cycle 6 Deliverables

Final Report Delivery

The Final Report will contain all data collected by Manual Inspection and the Data Collection Vehicle. All information provided in the Interim Report will be included in the Final report. Manually collected information reported in the Interim Report may be updated in the Final Report if pavement conditions have substantially changed between the Manual Inspection and Data Collection Vehicle Inspection or other unforeseen circumstances.

The final report will be released approximately 8 months after the Data Collection Vehicle completes its collection of that specific park.

Data included in the Final Report package consists of the following:

- **Condition Photos:** All photos taken during Cycle 6.
- **Data Video:** Data and video of each route collected by the DCV will be viewable through PATHVIEW software. PATHVIEW Software and training will be provided to NPS personnel by Eastern Federal Lands.
- **GPS on All Rated Routes:** All GPS data collected from the DCV will be provided. 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 units.
 - GPS will be provided as Shapefiles and KMLs
 - All GPS data related to road collection will be linear referenced to the collected length
- **Geodatabase – Background and Metadata:** In addition to this park report, a geodatabase containing both tabular and spatial data specific to this park has been provided.
 - All data disseminated in the preceding report has been obtained from the tables and fields within said geodatabase. The geodatabase can be referenced for tabular data via Microsoft Access or for both tabular and spatial data via ESRI's ArcGIS Suite of software which consists of; ArcMap, ArcCatalog and ArcExplorer.
 - Consolidating the RIP data into one database creates a seamless relationship of tables and geographic data. It allows RIP to facilitate easier updates and enhancements in the future. A geodatabase can be thought of as simply a database containing spatial data. 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.
- **Report (RIP Report and Route ID):** A PDF report will be provided that includes a list of all routes and key data. Condition reports for each route will be included. All changes, additions and deletions to any route will be included in the report. Features along routes will not be collected in Cycle 6.

Partial DCV Collections

Additional Partial DCV Collections may be done on specific parks depending on their size and overall mileage of routes within its boundaries during Cycle 6. Parks with greater than 10 miles of paved roadways will receive at least one additional Partial DCV collection during Cycle 6. Data collected during these Partial DCV Collections will not result in the delivery of an additional report to the park.

Data collected by the DCV during Partial DCV Collection will be used to improve HPMA modeling by providing additional “snapshots in time” of park pavement conditions. This improved HMPA modeling will assist in the programming and budgeting of future projects which will help maximize the life of pavement infrastructures.

Instead of receiving a report of conditions collected during the Partial DCV collection, the park will receive a formal letter from the Road Inventory Program requesting coordination for the additional Partial DCV collection, identifying the dates of the Partial DCV Collection and will reinforce the purpose and importance of the Partial DCV Collection.

Appendix D
Glossary of Terms and Abbreviations

Glossary of Terms and Abbreviations

TERM OR ABBREVIATION	DESCRIPTION OR DEFINITION
AC	Alligator Cracking
CRS	Condition Rating Sheets (Section 5)
Curb Recommendation	Curb remediation based on overall percentage of curb distress
Curb Reveal	Height of curb exposed from gutter flow line to top of curb
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
HPMA	Highway Pavement Management Application
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