# FOMR Cycle 6

# **Final Report**

# Road Inventory and Condition Assessment of Paved Routes Fort Monroe National Monument







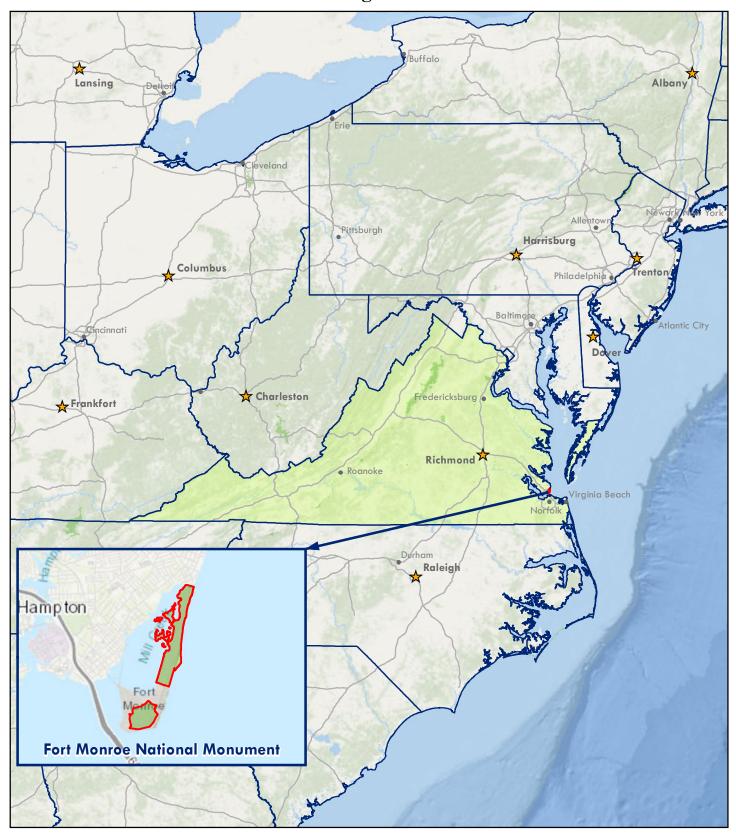
Federal Lands Highway
Road Inventory Program

#### Prepared By:

Federal Highway Administration Eastern Federal Lands Highway Division Road Inventory Program (RIP)

**Report Date: September 2021** 

# Fort Monroe National Monument in Virginia





# **Table of Contents**

SEC	TION	PAGE NO
1.	INTRODUCTION	1 - 1
2.	PARK ROUTE INVENTORY	
	Route ID Report, Subcomponent Report, and Changes Report (As Applicable)	2 - 1
3.	PARK SUMMARY INFORMATION	
	Parkwide Paved Route Condition Summary	3 - 1
	Explanation of Condition Descriptions	3 - 2
	Route-Level Condition Summary Reports for Data Collection Vehicle, Manually Rated, and Parking Area Routes (As Applicable)	3 - 3
4.	PARK ROUTE LOCATION MAPS	
	Route Location Key Map	4 - 1
	Route Location Area Map(s)	4 - 2
	Route Condition Key Map – PCR Mile by Mile Route Condition Area Map(s) – PCR Mile by Mile	4 - 6 4 - 7
5.	PAVED ROAD CONDITION RATING SHEETS	
	Paved Road Pages	5 - 1
6.	PAVED PARKING AREA CONDITION RATING SHEETS	
	Paved Parking Area Pages	6 - 1
7.	ROAD MILEPOST INFORMATION	
	Road Milepost Information and Logs	7 - 1
8.	APPENDIX	
	Improvements to the RIP Index Equations and Determination of PCR	8 - 1
	Description of the Rating System	8 - 2
	Explanation of the Condition Descriptions	8 - 3
	Description of Pavement Treatment Types	8 - 4
	Appendix A: Methodology for Determining Condition Ratings with the Data Collection Vehicle (DCV)	8 - 5
	Appendix B: Methodology for Determining Condition Ratings Using Manual Rating Procedures	8 - 20
	Appendix C: Description of Cycle 6 Deliverables	8 - 29
	Appendix D: Glossary of Terms and Abbreviations	8 - 32

# **Section 1 Introduction**





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

Note: Large Parks have  $\geq 10$  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

FHWA/Eastern Federal Lands 22001 Loudoun County Parkway Building E-2, Suite 200 Ashburn, VA 20147 (571) 434-1574 FHWA/Central Federal Lands 12300 West Dakota Ave Lakewood, CO 80228 (720) 963-3556

# Section 2 Park Route Inventory





#### Page 1 of 7

# Cycle 6 NPS / RIP Route ID Report

(Numerical By Summary Route and Subcomponent #)



Shading Color Key

Report Date: 09/28/2021

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

**FOMR** 

				Ę		ROAD INVENTORY (	1100 SERIES FMSS	LOCATION	S)				<u> </u>			
Route No.	Cycle Collected	lteration Collected	FMSS Number	Concession	Route Name	Route Des	cription To	Maintenance District	FLTP	Paved Miles	Unpaved Miles	Total Mileage	Function Class	Area (SQ FT)	Surf. Type	Area Map
0010ZZ	6	1	248824		FENWICK ROADS	FROM ROUTE 0010ZZ (FENWICK ROADS)	TO END		YES	1.75	0	1.75	1		AS	2,3,4
0103ZZ	6	1			MILL CREEK OVERLOOK ROADS	FROM INTERSECTION OF ROUTE 0010ZZ (FENWICK ROADS) AND ROUTE 0204ZZ (GULLICK DRIVE SOUTH AND NORTH SECTION)	TO ROUTE 0919ZZ (MILL CREEK OVERLOOK PARKING AREAS)		YES	0.10	0.03	0.13	2		AS	3
0105ZZ	6	1			INCENERATOR LANES	FROM ROUTE 0010ZZ (FENWICK ROADS)	TO ROUTE 0919ZZ (MILL CREEK OVERLOOK PARKING AREAS)		YES	0.14	0	0.14	2		AS	3
0200ZZ	6	1			WALKER AIRFIELD TAXIWAY	FROM ROUTE 0010ZZ (FENWICK ROADS) ON LEFT	THROUGH WALKER AIRFIELD ROADS		YES	0.73	0	0.73	3		AS	2
0201ZZ	6	1			BUILDING 247 ROADS	FROM ROUTE 0010ZZ (FENWICK ROADS) ON LEFT	TO ROUTE 0200ZZ (WALKER AIRFIELD TAXIWAY)		YES	0.14	0	0.14	3		AS	2
0202	6	1			FULLER LANE	FROM ROUTE 0010ZZ (FENWICK ROADS) ON LEFT	TO END OF LOOP		YES	0.31	0	0.31	3		AS	3
0203	6	1	248825		NORTH END WALKER AIRFIELD ROAD	FROM ROUTE 0010ZZ (FENWICK ROADS) ON LEFT	TO ROUTE 0207 (WALKER AIRFIELD RUNWAY ROAD)		YES	0.06	0.01	0.07	3		AS	2
0204ZZ	6	1			GULLICK DRIVE SOUTH AND NORTH SECTION	FROM ROUTE 0913AZ (PARADISE OCEAN CLUB PARKING) AT FENCE LINE	TO INTERSECTION OF ROUTE 0010ZZ (FENWICK ROADS) AND ROUTE 0103ZZ (MILL CREEK OVERLOOK ROADS) AT SOUTH PARK BOUNDARY		YES	0.91	0	0.91	3		AS	2,3
0207	6	1			WALKER AIRFIELD RUNWAY ROAD	FROM NORTH END OF RUNWAY	TO SOUTH END OF RUNWAY		YES	0.52	0	0.52	3		AS	2

#### Page 2 of 7

# Cycle 6 NPS / RIP Route ID Report

(Numerical By Summary Route and Subcomponent #)



Shading Color Key

Report Date: 09/28/2021

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

# **FOMR**

	NON-NPS ROADS INVENTORY														
Route No.	Cycle Collected	Iteration Collected	FMSS Number	Concessio	Route Name	Route Des	cription To	Maintenance District	FLTP	Paved Miles	Unpaved Miles	Mileage T S S S S S S S S S S S S S S S S S S	Area (SQ FT)	Surf. Type	Area Map
5000	5	1			EAST MERCY BOULEVARD / INGALLS ROAD	FROM NORTH WILLARD AVENUE	TO ROUTE 5006 (FENWICK ROAD (NON NPS))		NO	1.24	0	1.24		AS	1,KEY
5001	5	1			EAST MELLEN STREET / MCNAIR ROAD	FROM SOUTH WILLARD AVENUE	TO BEGINNING OF ROUTE 5006 (FENWICK ROAD (NON NPS))		NO	1.06	0	1.06		AS	1,KEY
5002	5	1			PATCH ROAD	FROM ROUTE 5000 (EAST MERCY BOULEVARD / INGALLS ROAD)	TO ROUTE 5006 (FENWICK ROAD (NON NPS))		NO	0.62	0	0.62		AS	1
5003	5	1			GRIFFITH STREET	FROM ROUTE 5002 (PATCH ROAD)	TO ROUTE 5006 (FENWICK ROAD (NON NPS))		NO	0.17	0	0.17		AS	1
5004	5	1			NORTH GATE	FROM ROUTE 5002 (PATCH ROAD)	TO ROUTE 5008 (BERNARD ROAD)		NO	0.06	0	0.06		СО	1
5005A	5	1			MAIN GATE	FROM ROUTE 5000 (EAST MERCY BOULEVARD / INGALLS ROAD)	TO ROUTE 5008 (BERNARD ROAD)		NO	0.12	0	0.12		AS	1
5005B	5	1			MAIN GATE SPUR / INGALLS ROAD	FROM ROUTE 5005A (MAIN GATE)	TO ROUTE 5000 (EAST MERCY BOULEVARD / INGALLS ROAD)		NO	0.08	0	0.08		AS	1
5006	5	1			FENWICK ROAD (NON NPS)	FROM END OF ROUTE 5001 (EAST MELLEN STREET / MCNAIR ROAD)	TO BEGINNING OF ROUTE 0010ZZ (FENWICK ROADS)		NO	1.19	0	1.19		AS	1,2
5007	5	1			EAST GATE	FROM ROUTE 5006 (FENWICK ROAD (NON NPS))	TO ROUTE 5008 (BERNARD ROAD)		NO	0.07	0	0.07		AS	1
5008	5	1			BERNARD ROAD	FROM ROUTE 5010 (RUCKMAN ROAD)	TO END OF THE LOOP		NO	0.75	0	0.75		AS	1
5009A	5	1			PARADE GROUND PARKING WEST ACCESS ROAD	FROM ROUTE 5008 (BERNARD ROAD)	TO ROUTE 0900ZZ (PARADE OVERFLOW PARKING AREAS)		NO	0.04	0	0.04		AS	1
5009В	5	1			PARADE GROUND PARKING EAST ACCESS ROAD	FROM ROUTE 0900ZZ (PARADE OVERFLOW PARKING AREAS)	TO ROUTE 5008 (BERNARD ROAD)		NO	0.04	0	0.04		AS	1

#### Page 3 of 7

# Cycle 6 NPS / RIP Route ID Report

(Numerical By Summary Route and Subcomponent #)



Shading Color Key

Report Date: 09/28/2021

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

# **FOMR**

			<b>c</b>	NON-NPS	ROADS INVENTOR	RY							
Route No.	Cycle Collected teration Collected	FMSS Number	Route Name	Route Des	cription To	Maintenance District	FLTP	Paved Miles	Unpaved Miles	Total Samuel Sam	Area (SQ FT)	Surf. Type	Area Map
5010	5 1		RUCKMAN ROAD	FROM ROUTE 5008 (BERNARD ROAD) ON LEFT	TO ROUTE 5008 (BERNARD ROAD) ON LEFT		NO	0.15	0	0.15		AS	1
5011	5 1		MATHEWS LANE	FROM ROUTE 5008 (BERNARD ROAD) ON LEFT	TO ROUTE 5008 (BERNARD ROAD) ON LEFT		NO	0.07	0	0.07		AS	1
5012	5 1		BOMFORD LANE	FROM ROUTE 5006 (FENWICK ROAD (NON NPS))	TO ROUTE 5003 (GRIFFITH STREET)		NO	0.16	0	0.16		AS	1
5013	5 1		STILLWELL ROAD	FROM ROUTE 5000 (EAST MERCY BOULEVARD / INGALLS ROAD)	TO ROUTE 5006 (FENWICK ROAD (NON NPS))		NO	0.76	0	0.76		AS	1,KEY
5014	5 1		EUSTIS ROAD	FROM ROUTE 5000 (EAST MERCY BOULEVARD / INGALLS ROAD)	TO ROUTE 5013 (STILLWELL ROAD (NON NPS))		NO	0.10	0	0.10		AS	1

				_	PAR	KING AREA INVENTORY (	1300 SERIES FMSS LOCAT	ONS)					
Route No.	Cycle Collected	lteration Collected	FMSS Number	Concession	Route Name	Route De	Route Description		FE	Access Level	Area (SQ FT)	Surf. Type	Area Map
0900ZZ	6	1	248829		PARADE OVERFLOW PARKING AREAS	FROM ROUTE 5009A (PARADE GROUND PARKING WEST ACCESS ROAD) AND ROUTE 5010 (RUCKMAN ROAD)	TO ROUTE 5009B (PARADE GROUND PARKING EAST ACCESS ROAD)		YES	PUBLIC	56,633	AS	1
0901A	6	1			QUARTERS 1 PARKING	FROM ROUTE 5008 (BERNARD ROAD) ON LEFT	TO ROUTE 5008 (BERNARD ROAD) ON LEFT		YES	PUBLIC	4,414	BR	1
0905ZZ	6	1	248461		DERUSSY FIELD PARKING AREAS	FROM ROUTE 0010ZZ (FENWICK ROADS)	TO PARKING		YES	PUBLIC	8,675	AS	2
0907ZZ	6	1	248828		FENWICK ROAD PARKING AREAS	ADJACENT TO ROUTE 0010ZZ (FENWICK ROADS) ON LEFT			YES	PUBLIC	1 <i>5</i> ,01 <i>7</i>	AS	2
0908	6	1	248460		BATTERY DERUSSY PARKING	FROM ROUTE 0010ZZ (FENWICK ROADS)	TO ROUTE 0010ZZ (FENWICK ROADS)		YES	PUBLIC	35,594	AS	2
0909ZZ	6	1	248818		WALKER AIRFIELD PARKING AREAS	ADJACENT TO ROUTE 0200ZZ (WALKER AIRFIELD TAXIWAY)			YES	PUBLIC	14,813	со	2

#### Page 4 of 7

# Cycle 6 NPS / RIP Route ID Report

(Numerical By Summary Route and Subcomponent #)



Shading Color Key

Report Date: 09/28/2021

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

# **FOMR**

	PARKING AREA INVENTORY (1300 SERIES FMSS LOCATIONS)												
Route	Cycle Collected	ation lected	FMSS	icession		Route De	scription	Maintenance	FI	Access	Area	Surf.	Area
No.	٥٥	- S	Number	ខំ	Route Name	From	То	District	2	Level	(SQ FT)	Туре	Map
0910ZZ	6	1	24881 <i>7</i>		BUILDING 247 PARKING AREAS	ADJACENT TO ROUTE 0201ZZ (BUILDING 247 ROADS)			YES	PUBLIC	3,543	AS	2
0911	6	1	248459		BUILDING 211 AND BATTERY CHURCH PARKING	FROM ROUTE 0010ZZ (FENWICK ROADS) ON LEFT	TO PARKING		YES	PUBLIC	6,250	AS	2
0912ZZ	6	1	248823		FENWICK TENNIS COURT PARKING AREAS	ADJACENT TO ROUTE 0010ZZ (FENWICK ROADS)			YES	PUBLIC	7,285	AS	2
0913ZZ	6	1	248822		PARADISE OCEAN CLUB PARKING AREAS	FROM ROUTE 0010ZZ (FENWICK ROADS) ON LEFT	TO PARKING		YES	PUBLIC	90,509	AS	2
0915	NC				FULLER LANE PARKING	ADJACENT TO ROUTE 0202 (FULLER LANE) ON RIGHT			NO	PUBLIC	6,635	GR	3
0916	6	1	248560		FULLER LANE DUMP STATION PARKING	ADJACENT TO ROUTE 0202 (FULLER LANE) ON LEFT			YES	PUBLIC	<i>7,</i> 431	AS	3
091 <i>7</i>	6	1	248462		SHELTER #5 PARKING	FROM ROUTE 0010ZZ (FENWICK ROADS)	TO ROUTE 0204ZZ (GULLICK DRIVE SOUTH AND NORTH SECTION)		YES	PUBLIC	12 <b>,</b> 517	AS	3
0918	6	1	248559		CAMPGROUND CAMPSTORE PARKING	FROM ROUTE 0010ZZ (FENWICK ROADS) ON LEFT	TO ROUTE 0010ZZ (FENWICK ROADS) ON LEFT		YES	PUBLIC	13,469	AS	3
0919ZZ	6	1			MILL CREEK OVERLOOK PARKING AREAS	FROM ROUTE 0010ZZ (FENWICK ROADS) AND ROUTE 0103ZZ (MILL CREEK OVERLOOK ROADS)	TO PARKING		YES	PUBLIC	26,444	AS	3
0921	NC				NORTH END WALKER AIRFIELD ACCESS PARKING	ADJACENT TO ROUTE 0203 (NORTH END WALKER AIRFIELD ROAD)			NO	PUBLIC	3,018	GR	2
0922	NC				BUILDING 38 UNPAVED PARKING	ADJACENT TO ROUTE 0105ZZ (INCENERATOR LANES)			NO	PUBLIC	10,096	GR	3
0923ZZ	NC				DOG BEACH FIELD PARKING AREAS	ADJACENT TO ROUTE 0010ZZ (FENWICK ROADS) ON LEFT			YES	PUBLIC	22,598	NV	4
0924	6	1			NORTH BEACH FIELD PARKING	FROM ROUTE 0010ZZ (FENWICK ROADS)	TO ROUTE 0010ZZ (FENWICK ROADS)		YES	PUBLIC	1 <i>7</i> ,037	со	3

#### Page 5 of 7

# Cycle 6 NPS / RIP Route ID Report

(Numerical By Summary Route and Subcomponent #)



Shading Color Key

Report Date: 09/28/2021

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

**FOMR** 

			_	_	PAR	KING AREA INVENTORY (	1300 SERIES FMSS LOCAT	IONS)					
Route	cle Ilected	ration	FMSS	ncessio		Route De	Route Description				Area	Surf.	Area
No.	ပဲ ပိ	≗ گ	Number	ပိ	Route Name	From	То	District	FLT	Level	(SQ FT)	Туре	Мар
0926	6	1	248830		PARADE GROUND PARKING	FROM ROUTE 0900ZZ (PARADE OVERFLOW PARKING AREAS)	TO ROUTE 5010 (RUCKMAN ROAD)		NO	PUBLIC	26,506	BR	1
0927ZZ	NC				PARADISE OCEAN CLUB OVERFLOW PARKING AREAS	FROM ROUTE 0010AZ (FENWICK ROAD)	TO PARKING		YES	PUBLIC	225,422	NV	2
0928	NC				SHELTER # 5 OVERFLOW PARKING	ADJACENT TO ROUTE 0917 (SHELTER #5 PARKING)			YES	PUBLIC	30,428	NV	3

#### Page 6 of 7

# Cycle 6 NPS / RIP Route ID Report

(Numerical By Summary Route and Subcomponent #)



Shading Color Key

Report Date: 09/28/2021

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

## Cycle 6 Summary Totals for Fort Monroe National Monument

#### Cycle 6 Route Totals

	NPS Maintained	Concessionaire Maintained	Park Totals
Paved Roads, Data Collection Vehicle Rated (Miles)	3.65	0	3.65
Paved Roads, Manually Rated Length (Miles)	1.01	0	1.01
Paved Roads, Manually Rated Area (Sq. Ft.)	0	0	0
Unpaved Roads (Miles)	0.04	0	0.04
Paved Parking (Sq. Ft.)	346,137	0	346,137
Unpaved Parking (Sq. Ft.)	298,197	0	298,197

#### Cycle 6 Lane Miles and Overall Pavement Condition

	Lanes Miles*	Pavement Condition Rating**
Data Collection Vehicle Routes	9.28	44
Manually Rated Roads	1.97	56
Parking Areas	5.96	61

<sup>\*</sup> Equivalent Lane Miles are calculated by route using the following equations:

- DCV and MRLs =  $(PAVE\_WIDTH \times PAVED\_MI) / 11$  foot lane

- MRPs and PKGs =  $SQ_FEET / 5280 / 11$  foot lane

-Excellent = 97

-Good = 90

-Fair = 73

-Poor = 53, 30, or 0

-Construction / Not Rated = -1

<sup>\*\*</sup>Parking and Manually Rated Routes are assigned the following PCR values based on the type of observed distresses:

#### Page 7 of 7

## Cycle 6 NPS / RIP Route ID Report

(Numerical By Summary Route and Subcomponent #)



Shading Color Key

Report Date: 09/28/2021

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

General Park Road Functional Classification (FC) Table

FC	Туре	User Access	Description	Route Numbers
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
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
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
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
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
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

Surface
Types
AS - Asphaltic Concrete Pavement
R - Brick or Pavers Road Bed
CB - Cobble Stone Road Bed
CO - Portland Cement Concrete Pavement
GR - Gravel Road Bed
NV - Native or Dirt Material Road Bed

OT - Other Materials Road Bed

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.

#### Page 1 of 10

Report Date: 09/28/2021

# NPS / RIP Subcomponent Details for FOMR

(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

# **FOMR**

				_	SUMMARY ROUTE IN	IVENTORY FOR ROADS (110	O SERIES FMSS LOCATION	IS)				_	
Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concessio	Route Name	Route Des	cription To	FLTP	Paved Miles	Unpaved Miles	Total Mileage	Function	Area (SQ FT)
0010ZZ	248824	6	1		FENWICK ROADS	FROM ROUTE 0010ZZ (FENWICK ROADS)	TO END	YES	1.75	0.00	1.75	1	,
0103ZZ		6	1		MILL CREEK OVERLOOK ROADS	FROM INTERSECTION OF ROUTE 0010ZZ (FENWICK ROADS) AND ROUTE 0204ZZ (GULLICK DRIVE SOUTH AND NORTH SECTION)	TO ROUTE 0919ZZ (MILL CREEK OVERLOOK PARKING AREAS)	YES	0.10	0.03	0.13	2	
0105ZZ		6	1		INCENERATOR LANES	FROM ROUTE 0010ZZ (FENWICK ROADS)	TO ROUTE 0919ZZ (MILL CREEK OVERLOOK PARKING AREAS)	YES	0.14	0.00	0.14	2	
0200ZZ		6	1		WALKER AIRFIELD TAXIWAY	FROM ROUTE 0010ZZ (FENWICK ROADS) ON LEFT	THROUGH WALKER AIRFIELD ROADS	YES	0.73	0.00	0.73	3	1
0201ZZ		6	1		BUILDING 247 ROADS	FROM ROUTE 0010ZZ (FENWICK ROADS) ON LEFT	TO ROUTE 0200ZZ (WALKER AIRFIELD TAXIWAY)	YES	0.14	0.00	0.14	3	
0204ZZ		6	1		GULLICK DRIVE SOUTH AND NORTH SECTION	FROM ROUTE 0913AZ (PARADISE OCEAN CLUB PARKING) AT FENCE LINE	TO INTERSECTION OF ROUTE 0010ZZ (FENWICK ROADS) AND ROUTE 0103ZZ (MILL CREEK OVERLOOK ROADS) AT SOUTH PARK BOUNDARY	YES	0.91	0.00	0.91	3	

#### Page 2 of 10

Report Date: 09/28/2021

# NPS / RIP Subcomponent Details for FOMR

(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

# **FOMR**

				Ę	SUMMARY ROUTE INVEN	ITORY FOR PARKING AREAS (1300	SERIES FMSS LOCATIONS)			
Route	FMSS Number	cle Ilected	ation lected	ncessio		Route Desc	ription		User	Area (SQ FT)
Number	Number	ပ်ပိ	<u>₹</u> °	ပိ	Route Name	From	То	듄	Access	(3Q FI)
0900ZZ	248829	6	1		PARADE OVERFLOW PARKING AREAS	FROM ROUTE 5009A (PARADE GROUND PARKING WEST ACCESS ROAD) AND ROUTE 5010 (RUCKMAN ROAD)	TO ROUTE 5009B (PARADE GROUND PARKING EAST ACCESS ROAD)	YES	PUBLIC	56,633
0905ZZ	248461	6	1		DERUSSY FIELD PARKING AREAS	FROM ROUTE 0010ZZ (FENWICK ROADS) RIGHT	TO PARKING	YES	PUBLIC	8,675
0907ZZ	248828	6	1		FENWICK ROAD PARKING AREAS	ADJACENT TO ROUTE 0010ZZ (FENWICK ROADS) ON LEFT		YES	PUBLIC	15,017
0909ZZ	248818	6	1		WALKER AIRFIELD PARKING AREAS	ADJACENT TO ROUTE 0200ZZ (WALKER AIRFIELD TAXIWAY)		YES	PUBLIC	14,813
0910ZZ	248817	6	1		BUILDING 247 PARKING AREAS	ADJACENT TO ROUTE 0201ZZ (BUILDING 247 ROADS)		YES	PUBLIC	3,543
0912ZZ	248823	6	1		FENWICK TENNIS COURT PARKING AREAS	ADJACENT TO ROUTE 0010ZZ (FENWICK ROADS)		YES	PUBLIC	7,285
0913ZZ	248822	6	1		PARADISE OCEAN CLUB PARKING AREAS	FROM ROUTE 0010ZZ (FENWICK ROADS) ON LEFT	TO PARKING	YES	PUBLIC	90,509
0919ZZ		6	1		MILL CREEK OVERLOOK PARKING AREAS	FROM ROUTE 0010ZZ (FENWICK ROADS) AND ROUTE 0103ZZ (MILL CREEK OVERLOOK ROADS)	TO PARKING	YES	PUBLIC	26,444
0923ZZ		NC			DOG BEACH FIELD PARKING AREAS	ADJACENT TO ROUTE 0010ZZ (FENWICK ROADS) ON LEFT		YES	PUBLIC	22,598
0927ZZ		NC			PARADISE OCEAN CLUB OVERFLOW PARKING AREAS	FROM ROUTE 0010AZ (FENWICK ROAD)	TO PARKING	YES	PUBLIC	225,422

#### Page 3 of 10

# NPS / RIP Subcomponent Details for FOMR

(Numerical By Summary Route and Subcomponent #) Report Date: 09/28/2021



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

# **FOMR**

FOMR-	0010Z	Z Su	bco	omi	oonent Breakdown							<del>-</del>	
Route Number	FMSS	ile lected	ation lected	ıcessio		Route Des	cription	_ e_		Unpaved	Total	nction ISS	Area
Number	Number	٥٥	를 S	Ö	Route Name	From	То	5	Miles	Miles	Mileage	⊉ີ ວັ	(SQ FT)
0010AZ	248824	6	1		fenwick road	FROM END OF ROUTE 5006 (FENWICK ROAD (NON NPS)) AT SOUTH PARK BOUNDARY	TO END OF LOOP	YES	1.13	0.00	1.13	1	
0010BZ	248824	6	1		FENWICK ROAD (GATED)	FROM ROUTE 0010AZ (FENWICK ROAD)	TO END OF LOOP	YES	0.59	0.00	0.59	1	
0010CZ	248824	6	1		BATTERY ANDERSON-RUGGLES TURNAROUND	FROM ROUTE 0010AZ (FENWICK ROAD)	TO ROUTE 0010AZ (FENWICK ROAD)	YES	0.02	0.00	0.02	1	

FOMR-	0103Z	Z Sı	ubco	omi	oonent Breakdown							=	
Route	FMSS Number	cle Ilected	ration llected	ncessio		Route Des	cription	- ⊵	Paved		Total Mileage	nction ass	Area (SQ FT)
Number	Number	ბა	≗ ပိ	ა	Route Name	From	То	교	Miles	Miles	Mileage	교	(50(11)
0103AZ		6	1		MILL CREEK OVERLOOK ROAD A	FROM INTERSECTION OF ROUTE 0010AZ (FENWICK ROAD) AND ROUTE 0204BZ (GULLICK DRIVE NORTH SECTION)	TO BEGINNING OF ROUTE 0103BZ (MILL CREEK OVERLOOK ROAD B)	YES	0.05	0.00	0.05	2	
0103BZ		6	1		MILL CREEK OVERLOOK ROAD B	FROM END OF ROUTE 0103AZ (MILL CREEK OVERLOOK ROAD A)	TO BEGINNING OF ROUTE 0103CZ (MILL CREEK OVERLOOK ROAD C)	YES	0.06	0.00	0.06	2	
0103CZ		6	1		MILL CREEK OVERLOOK ROAD C	FROM END OF ROUTE 0103BZ (MILL CREEK OVERLOOK ROAD B)	TO ROUTE 0919AZ (MILL CREEK OVERLOOK LOWER PARKING)	YES	0.00	0.03	0.03	2	

#### Page 4 of 10

# NPS / RIP Subcomponent Details for FOMR

Report Date: 09/28/2021 (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

 $\mathsf{MRP} = \mathsf{Manually} \; \mathsf{Rated} \; \mathsf{Polygon}$ 

PKG = Parking Areas
NC = Not Collected

# **FOMR**

FOMR-	-0105Z	Z Su	bco	mp	oonent Breakdown							<del>-</del>	
Route	FMSS	Cycle Collected	ation lected	cessio		Route Des	cription	_	Paved	Unpaved			Area
Number	Number	٥٥	Soll of	°	Route Name	From	То	듄	Miles	Miles	Mileage	<u>∓</u> 5	(SQ FT)
0105AZ		6	1		INCENERATOR LANE LOWER	FROM ROUTE 0010AZ (FENWICK ROAD)	TO BEGINNING OF ROUTE 0105BZ (INCENERATOR LANE UPPER)	YES	0.07	0.00	0.07	2	
0105BZ		6	1		INCENERATOR LANE UPPER	FROM END OF ROUTE 0105AZ (INCENERATOR LANE LOWER)	TO ROUTE 0919BZ (MILL CREEK OVERLOOK UPPER PARKING)	YES	0.07	0.00	0.07	2	

#### Page 5 of 10

Report Date: 09/28/2021

# NPS / RIP Subcomponent Details for FOMR

(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

 $\mathsf{MRP} = \mathsf{Manually} \; \mathsf{Rated} \; \mathsf{Polygon}$ 

PKG = Parking Areas NC = Not Collected

# **FOMR**

Route	FMSS Number	e ected	tion	cessio		Route De	scription		Paved	Unpaved	Total	ction Ss	Area
Number	Number	S S	ltera Colk	Con	Route Name	From	То	FLTP	Miles	Unpaved Miles	Mileage	F S	(SQ FT)
0200AZ		6	1		SOUTH END WALKER AIRFIELD ACCESS ROAD	FROM ROUTE 0010AZ (FENWICK ROAD) ON LEFT	TO ROUTE 0207 (WALKER AIRFIELD RUNWAY ROAD)	YES	0.13	0.00	0.13	3	
0200BZ		6	1		WALKER AIRFIELD TAXIWAY EAST	FROM ROUTE 0200EZ (WALKER AIRFIELD TAXIWAY CUT-THRU 1)	TO ROUTE 0200AZ (SOUTH END WALKER AIRFIELD ACCESS ROAD)	YES	0.15	0.00	0.15	3	
0200CZ		6	1		WALKER AIRFIELD TAXIWAY WEST	FROM ROUTE 0200EZ (WALKER AIRFIELD TAXIWAY CUT-THRU 1)	TO ROUTE 0200AZ (SOUTH END WALKER AIRFIELD ACCESS ROAD)	YES	0.17	0.00	0.1 <i>7</i>	3	
0200EZ		6	1		WALKER AIRFIELD TAXIWAY CUT-THRU 1	FROM ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)	TO ROUTE 0207 (WALKER AIRFIELD RUNWAY ROAD)	YES	0.03	0.00	0.03	3	
0200FZ		6	1		WALKER AIRFIELD TAXIWAY CUT-THRU 2	FROM ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)	TO ROUTE 0207 (WALKER AIRFIELD RUNWAY ROAD)	YES	0.03	0.00	0.03	3	
0200GZ		6	1		WALKER AIRFIELD TAXIWAY CUT-THRU 3	FROM ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)	TO ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)	YES	0.02	0.00	0.02	3	
0200HZ		6	1		WALKER AIRFIELD TAXIWAY CUT-THRU 4	FROM ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)	TO ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)	YES	0.02	0.00	0.02	3	
0200IZ		6	1		WALKER AIRFIELD TAXIWAY CUT-THRU 5	FROM ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)	TO ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)	YES	0.02	0.00	0.02	3	
0200JZ		6	1		WALKER AIRFIELD TAXIWAY CUT-THRU 6	FROM ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)	TO ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)	YES	0.02	0.00	0.02	3	
0200KZ		6	1		WALKER AIRFIELD TAXIWAY CUT-THRU 7	FROM ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)	TO ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)	YES	0.02	0.00	0.02	3	
0200LZ		6	1		WALKER AIRFIELD TAXIWAY CUT-THRU 8	FROM ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)	TO ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)	YES	0.02	0.00	0.02	3	
0200MZ		6	1		WALKER AIRFIELD TAXIWAY CUT-THRU 9	FROM ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)	TO ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)	YES	0.02	0.00	0.02	3	
0200NZ		6	1		WALKER AIRFIELD TAXIWAY CUT-THRU 10	FROM ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)	TO ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)	YES	0.02	0.00	0.02	3	
0200OZ		6	1		WALKER AIRFIELD TAXIWAY CUT-THRU 11	FROM ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)	TO ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)	YES	0.02	0.00	0.02	3	

#### Page 6 of 10

Report Date: 09/28/2021

# NPS / RIP Subcomponent Details for FOMR

(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

# **FOMR**

FON	\R-02	200Z	Z Su	bco	mp	onent Breakdown							<del>-</del>	
Rou	e I	FMSS lumber	cle lected	ation lected	ncessio		Route Des	cription	_ ہـ		Unpaved			Area
Numl	er N	lumber	٥٥	₹ 2	Ö	Route Name	From	То	E .	Miles	Miles	Mileage	Ēΰ	(SQ FT)
0200	PZ		6	1		WALKER AIRFIELD TAXIWAY CUT-THRU 12	FROM ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)	TO ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)	YES	0.02	0.00	0.02	3	
0200	QΖ		6	1		WALKER AIRFIELD TAXIWAY CUT-THRU 13	FROM ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)	TO ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)	YES	0.02	0.00	0.02	3	

FOMR-	0201Z	Z Su	bco	م	ponent Breakdown							<del>-</del>	
Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concessio	Route Name	Route De	Scription To	- ఓ	Paved Miles	Unpaved Miles	Total Mileage	Function Class	Area (SQ FT)
0201AZ		6	1		BUILDING 247 ROAD A	FROM ROUTE 0010AZ (FENWICK ROAD) ON LEFT	TO END OF LOOP	YES	0.12	0.00	0.12	3	
0201BZ		6	1		BUILDING 247 ROAD B	FROM ROUTE 0201AZ (BUILDING 247 ROAD A)	TO INTERSECTION OF ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST) AND ROUTE 0200FZ (WALKER AIRFIELD TAXIWAY CUT-THRU 2)	YES	0.02	0.00	0.02	3	

#### Page 7 of 10

Report Date: 09/28/2021

# NPS / RIP Subcomponent Details for FOMR

(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

MRP = Manually Rated Polygon

PKG = Parking Areas NC = Not Collected

# **FOMR**

FOMR-	-0204Z	Z Sı	ubc	omٍا	ponent Breakdown							=	
Route Number	FMSS Number	Cycle Collected	Iteration Collected	Concessio	Route Name	Route Des	cription To	FLTP -	Paved Miles	•	Total Mileage		Area (SQ FT)
0204AZ		6	1		GULLICK DRIVE SOUTH SECTION	FROM ROUTE 0913AZ (PARADISE OCEAN CLUB PARKING)	TO SOUTH PARK BOUNDARY	YES	0.49	0.00	0.49	3	
0204BZ		6	1		GULLICK DRIVE NORTH SECTION	FROM PARK BOUNDARY AT FENCE LINE	TO INTERSECTION OF ROUTE 0010AZ (FENWICK ROAD) AND ROUTE 0103AZ (MILL CREEK OVERLOOK ROAD A) AT SOUTH PARK BOUNDARY	YES	0.43	0.00	0.43	3	

I	FOMR-	0900Z	Z Su	bco	mponent Breakdown						
	Route	FMSS	le lected	ation lected	icessio		Route Desc	ription	- 0	User	Area
	Number	FMSS Number	٥٥	S F	ਨੂੰ Route Name	From		То	臣	Access	(SQ FT)
	0900AZ	248829	6	1	PARADE OVERFLOW PARKING A	FROM ROUTE 0900BZ (PARADE OVERFL	OW PARKING B)	TO ROUTE 0900BZ (PARADE OVERFLOW PARKING B)	YES	PUBLIC	22,964
I	0900BZ	248829	6	1	PARADE OVERFLOW PARKING B	FROM END OF ROUTE 5009A (PARADE PARKING WEST ACCESS ROAD)	GROUND	TO BEGINNING OF ROUTE 5009B (PARADE GROUND PARKING EAST ACCESS ROAD)	YES	PUBLIC	33,669

FOMR-	0905Z	Z Su	bcc	mp	oonent Breakdown					
Route	FMSS	le ected	rtion ected	cession		Route Desc	ription	_	User	Area
Number	Number	∑ <u>≅</u>	5 E	S	Route Name	From	То	Ē	Access	(SQ FT)
0905AZ	248461	6	1			ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) AND ROUTE 0905BZ (DERUSSY FIELD PARKING B)		YES	PUBLIC	2,365
0905BZ	248461	6	1		DERUSSY FIELD PARKING B	FROM ROUTE 0010AZ (FENWICK ROAD) RIGHT	TO PARKING	YES	PUBLIC	6,310

#### Page 8 of 10

Report Date: 09/28/2021

# NPS / RIP Subcomponent Details for FOMR

(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

# **FOMR**

FOMR-	0907Z	Z Su	bco	omk	oonent Breakdown					
Route Number	FMSS	/cle ollected	ration	oncessio	Route Name	Route Desc	•	. ≞	User Access	Area (SQ FT)
Number	Number	σσ	≗ŭ	ŭ	Koure Name	From	То	균	710000	(0 4 1 1)
0907AZ	248828	6	1		FENWICK ROAD PARKING A	ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) ON LEFT		YES	PUBLIC	2,332
0907BZ	248828	6	1		FENWICK ROAD PARKING B	ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) ON LEFT		YES	PUBLIC	3,900
0907CZ	248828	6	1		FENWICK ROAD PARKING C	ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) ON LEFT		YES	PUBLIC	6,283
0907DZ	248828	6	1		FENWICK ROAD PARKING D	ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) ON LEFT		YES	PUBLIC	2,502

FOMR-	0909Z	Z Sı	ubco	օար	oonent Breakdown					
Route Number	FMSS	tle lected	ation lected	rcessio		Route Des	cription	- 🕰	User	Area
Number	Number	٥٥	S ie	Ō	Route Name	From	То	표	Access	(SQ FT)
0909AZ	248818	6	1		WALKER AIRFIELD PARKING A	ADJACENT TO ROUTE 0200AZ (SOUTH END WALKER AIRFIELD ACCESS ROAD) ON RIGHT		YES	PUBLIC	3,068
0909BZ	248818	6	1		WALKER AIRFIELD PARKING B	ADJACENT TO ROUTE 0200AZ (SOUTH END WALKER AIRFIELD ACCESS ROAD) ON LEFT		YES	PUBLIC	3,897
0909CZ	248818	6	1		WALKER AIRFIELD PARKING C	FROM ROUTE 0200AZ (SOUTH END WALKER AIRFIELD ACCESS ROAD) ON RIGHT	TO PARKING	YES	PUBLIC	5,594
0909DZ	248818	6	1		WALKER AIRFIELD PARKING D	ADJACENT TO ROUTE 0200EZ (WALKER AIRFIELD TAXIWAY CUT-THRU 1)		YES	PUBLIC	2,254

#### Page 9 of 10

# NPS / RIP Subcomponent Details for FOMR

(Numerical By Summary Route and Subcomponent #) Report Date: 09/28/2021



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

# **FOMR**

FOMR	OMR-0910ZZ Subcomponent Breakdown									
Route	FMSS	le lected	ation lected	cessio		Route Desc	ription		User	Area
Number	FMSS Number	٥٥	0 <u>F</u>	ទំ	Route Name	From	То	Ē	Access	(SQ FT)
0910AZ	248817	6	1		BUILDING 247 PARKING A	ADJACENT TO ROUTE 0201AZ (BUILDING 247 ROAD A)		YES	PUBLIC	2,328
0910BZ	248817	6	1		BUILDING 247 PARKING B	ADJACENT TO ROUTE 0201AZ (BUILDING 247 ROAD A)		YES	PUBLIC	1,215

F	OMR-	OMR-0912ZZ Subcomponent Breakdown									
	Route	FMSS	Cycle Collected	ation lected	cessio		Route Des	cription	. a	User	Area
١	Number	Number	٥٥	S Fe	ů	Route Name	From	То	Ξ	Access	(SQ FT)
(	0912AZ	248823	6	1		FENWICK TENNIS COURT PARKING A	ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) ON RIGHT		YES	PUBLIC	4,633
	0912BZ	248823	6	1		FENWICK TENNIS COURT PARKING B	ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) ON RIGHT		YES	PUBLIC	2,652

FOMR-	0913Z	Z Su	bco	mp	oonent Breakdown					
Route Number	FMSS	le ected	rtion ected	cession		Route Desc	ription		User	Area
Number	Number	Ş.	S E	S	Route Name	From	То	. FI	Access	(SQ FT)
0913AZ	248822	6	1		PARADISE OCEAN CLUB PARKING	from Route 0010az (fenwick road) on left	TO ROUTE 0010AZ (FENWICK ROAD) ON LEFT	YES	PUBLIC	71,506
0913BZ	248822	6	1		PARADISE OCEAN CLUB OVERFLOW PARKING	FROM ROUTE 0913AZ (PARADISE OCEAN CLUB PARKING)	TO PARKING	YES	PUBLIC	19,003

#### Page 10 of 10

Report Date: 09/28/2021

# NPS / RIP Subcomponent Details for FOMR

(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

# **FOMR**

FOMR-	FOMR-0919ZZ Subcomponent Breakdown									
Route	Sonces Signation Concession Solected S			Route Description			User Access	Area (SQ FT)		
Number	Number	ပ်ပိ	ٷ≅	ပိ	Route Name	From	То	5	Access	(3Q FI)
0919AZ		6	1		MILL CREEK OVERLOOK LOWER PARKING	FROM ROUTE 0010AZ (FENWICK ROAD) ON LEFT	TO ROUTE 0103CZ (MILL CREEK OVERLOOK ROAD C)	YES	PUBLIC	16,541
0919BZ		6	1		MILL CREEK OVERLOOK UPPER PARKING	FROM ROUTE 0103AZ (MILL CREEK OVERLOOK ROAD A)	TO END OF ROUTE 0105BZ (INCENERATOR LANE UPPER)	YES	PUBLIC	4,938
0919CZ		6	1		MILL CREEK OVERLOOK TRAILSIDE PARKING	ADJACENT TO ROUTE 0103AZ (MILL CREEK OVERLOOK ROAD A)		YES	PUBLIC	4,965

FOMR-	0923Z	Z Su	bcoı	nponent Breakdown					
Route Number	FMSS	le ected	ation ected	Cessio	Route Description		User	Area	
Number	Number	ی ق	S E	် Route Name	From	То	FLTE	Access	(SQ FT)
0923AZ		NC		DOG BEACH FIELD PARKING 1	ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) ON LEFT	l e	YES	PUBLIC	10,605
0923BZ		NC		DOG BEACH FIELD PARKING 2	ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) ON	l e	YES	PUBLIC	11,993

FOMR-	FOMR-0927ZZ Subcomponent Breakdown									
Route Number	FMSS	le ected	ation	cessio		Route Des	cription		User	Area
Number	Number	ۍ ق	Coll	S	Route Name	From	То	Ē	Access	(SQ FT)
0927AZ		NC			PARADISE OCEAN CLUB OVERFLOW WEST PARKING	FROM ROUTE 0010AZ (FENWICK ROAD)	TO PARKING	YES	PUBLIC	111,374
0927BZ		NC			PARADISE OCEAN CLUB OVERFLOW EAST PARKING	FROM ROUTE 0010AZ (FENWICK ROAD)	TO PARKING	YES	PUBLIC	114,048

# Route Identification Changes to Routes from Previous Cycle Fort Monroe National Monument

	ROUTES REMOVED FROM PREVIOUS INVENTORY:									
Route No.	Route Name	Type of Change	Comments							
0901B	BUILDING 1 PARKING	OTHER	RECORD REMOVED IN CYCLE 6 BECAUSE IT IS OUT OF THE NPS BOUNDARIES.							
0902	CASEMATE MUSEUM PARKING	OTHER	RECORD REMOVED IN CYCLE 6 BECAUSE IT IS OUT OF THE NPS BOUNDARIES.							
0903	QUARTER 17 STAFF PARKING	OTHER	RECORD REMOVED IN CYCLE 6 BECAUSE IT IS OUT OF THE NPS BOUNDARIES.							
0904	QUARTER 50 PARKING	OTHER	RECORD REMOVED IN CYCLE 6 BECAUSE IT IS OUT OF THE NPS BOUNDARIES.							

	ROUTES ADDED FROM PREVIOUS INVENTORY:									
Route No.	Route Name	Type of Change	Comments							
0927ZZ	PARADISE OCEAN CLUB OVERFLOW PARKING AREAS	OTHER	NEW UNPAVED PARKING AREA ADDED IN CYCLE 6.							
0928	SHELTER # 5 OVERFLOW PARKING	OTHER	NEW UNPAVED PARKING AREA ADDED IN CYCLE 6.							

	ROUTES MODIFIED FROM PREVIOUS INVENTORY:									
Route No.	Route Name	Type of Change	Comments							
0010ZZ	FENWICK ROADS	OTHER	FORMER ROUTE 0010AZ SPLIT (0010AZ AND 0010BZ) AND COMBINED WITH OTHER ROUTES (0920AZ, 0920BZ) IN CYCLE 6.							
0103ZZ	MILL CREEK OVERLOOK ROADS	OTHER	TRANSFER TO THE NPS HAS NOT BEEN COMPLETED YET, FMSS # WILL BE PROVIDED LATER.							
0105ZZ	INCENERATOR LANES	ROUTE NAME	ROUTE NAME CHANGED FROM "DOG BEACH / BUILDING 38 ROADS" IN CYCLE 6.							
0201ZZ	BUILDING 247 ROADS	ROUTE NAME	BUILDING NUMBER CHANGED FROM "248" TO "247" IN THE ROUTE NAME IN CYCLE 6.							
0202	FULLER LANE	ROUTE NAME	ROUTE NAME CHANGED FROM "THE COLONIES TRAVEL RESORT ROAD" IN CYCLE 6.							
0203	NORTH END WALKER AIRFIELD ROAD	OTHER	ROUTE NAME CHANGED FROM "NORTH AIRFIELD UNPAVED ACCESS ROAD" IN ORDER TO ALIGN WITH FMSS. SURFACE TYPE CHANGED FROM GRAVEL TO ASPHALT.							

# Route Identification Changes to Routes from Previous Cycle Fort Monroe National Monument

	ROUTES MODIFIED FROM PREVIOUS INVENTORY:									
Route No.	Route Name	Type of Change	Comments							
0204ZZ	GULLICK DRIVE SOUTH AND NORTH SECTION	ROUTES COMBINED	ROUTE 0204 AND 0205 COMBINED UNDER ROUTE 0204ZZ IN CYCLE 6.							
0207	WALKER AIRFIELD RUNWAY ROAD	ROUTE SPLIT	ROUTE 0200DZ SPLIT FROM 0200ZZ AND CHANGED TO ROUTE 0207 IN CYCLE 6.							
0900ZZ	PARADE OVERFLOW PARKING AREAS	ROUTE NAME	ROUTE NAME CHANGED FROM "PARADE GROUND PARKING A".							
0901A	QUARTERS 1 PARKING	ROUTE NAME	ROUTE NAME CHANGED FROM "BUILDING 1 OVERFLOW PARKING" IN CYCLE 6.							
0905ZZ	DERUSSY FIELD PARKING AREAS	OTHER	ROUTE 0905 AND ROUTE 0906 COMBINED IN CYCLE 6. ROUTE NAME CHANGED FROM 'WALKER BALLFIELD PARKING".							
0908	BATTERY DERUSSY PARKING	OTHER	COMBINED WITH ROUTE 0100 IN CYCLE 6. IMPROVED GPS AND SQUARE FOOTAGE COLLECTED IN CYCLE 6.							
0910ZZ	BUILDING 247 PARKING AREAS	ROUTE NAME	BUILDING NUMBER CHANGED FROM 248 TO 247 IN THE ROUTE NAME.							
0911	BUILDING 211 AND BATTERY CHURCH PARKING	ROUTE NAME	ROUTE NAME CHANGED FROM "BATTERY CHURCH PARKING" IN CYCLE 6.							
0912ZZ	FENWICK TENNIS COURT PARKING AREAS	ROUTE NAME	ROUTE NAME CHANGED FROM "TENNIS COURT PARKING AREAS" IN CYCLE 6.							
0913ZZ	PARADISE OCEAN CLUB PARKING AREAS	ROUTES COMBINED	ROUTE 0913 (0913AZ) AND 0914 (0913BZ) COMBINED IN CYCLE 6 UNDER 0913ZZ. IMPROVED GPS AND SQUARE FOOTAGE COLLECTED IN CYCLE 6.							
0915	FULLER LANE PARKING	ROUTE NAME	ROUTE NAME CHANGED FROM "THE COLONIES TRAVEL RESORT PARKING" IN CYCLE 6.							
0916	FULLER LANE DUMP STATION PARKING	ROUTE NAME	ROUTE NAME CHANGED FROM "THE COLONIES TRAVEL RESORT DUMPSITE PARKING" IN CYCLE 6.							
0917	SHELTER #5 PARKING	ROUTES COMBINED	COMBINED WITH ROUTE 0206 IN CYCLE 6. IMPROVED GPS AND SQUARE FOOTAGE COLLECTED IN CYCLE 6.							
0918	CAMPGROUND CAMPSTORE PARKING	OTHER	ROUTE NAME FROM "COUNTRY STORE PARKING" IN CYCLE 6. IMPROVED GPS AND SQUARE FOOTAGE COLLECTED IN CYCLE 6.							

# Route Identification Changes to Routes from Previous Cycle Fort Monroe National Monument

	ROUTES MODIFIED FROM PREVIOUS INVENTORY:								
Route No.	Route Name	Type of Change	Comments						
0919ZZ	MILL CREEK OVERLOOK PARKING AREAS	OTHER	TRANSFER TO THE NPS HAS NOT BEEN COMPLETED YET. FMSS # WILL BE PROVIDED LATER.						
0923ZZ	DOG BEACH FIELD PARKING AREAS	OTHER	TRANSFER TO THE NPS HAS NOT BEEN COMPLETED YET. FMSS # WILL BE PROVIDED LATER. ROUTE NAME CHANGED FROM "NORTH BEACH UNPAVED PARKING AREAS".						
0924	NORTH BEACH FIELD PARKING	OTHER	FORMER ROUTE 0010CZ COMBINED WITH ROUTE 0924. ROUTE NAME CHANGED FROM "NORTH FIELD PARKING AREA" IN CYCLE 6. IMPROVED GPS AND SQUARE FOOTAGE COLLECTED IN CYCLE 6.						
0926	PARADE GROUND PARKING	ROUTE SPLIT	ROUTE 0900CZ SPLIT FROM 0900ZZ INTO NEW PARKING AREA 0926 BECAUSE IT IS UNPAVED.						

# **Section 3 Park Summary Information**





## Parkwide Paved Route Condition Summary Fort Monroe National Monument

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

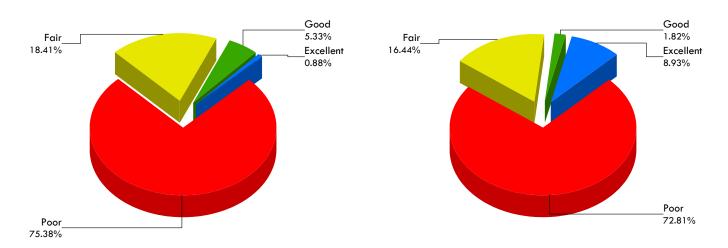
#### Breakdown of Pavement Condition Rating (PCR) Based on Access Level

	POOR	FAIR	GOOD	EXCELLENT	
	(PCR of 0 - 60)	(PCR of 61 - 84)	(PCR of 85 - 94)	(PCR of 95 -100)	
		PAVED	ROADS		
Functional Class	Length (miles)	Length (miles)	Length (miles)	Length (miles)	Total Mileage by FC
1	1.55	0.20			1.75
2	0.11				0.11
3	1.76	0.64	0.24	0.04	2.68
4					
5					
6					
7					
8					
Total Mileage by PCR	3.42	0.84	0.24	0.04	4.54
		PAVED P	ARKING		
Access Level	Area (sq. ft.)	Area (sq. ft.)	Area (sq. ft.)	Area (sq. ft.)	Total Area
PUBLIC	251,998	56,909	6,310	30,920	346,137
NONPUBLIC					
Total Area by PCR	251,998	56,909	6,310	30,920	346,137

#### 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**



#### **Road Condition Percentages**

**Parking Area 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
  - o Pavements in this range will require only spot repairs
- Good: PCR of 85-94
  - o 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
  - o 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
  - o Pavements in this range will likely be candidates of Heavy Rehabilitation or Reconstruction (H3R or 4R). Examples include Pulverization, Multiple Lift Overlays, and Reconstruction.

# CONDITION CATEGORIES AND TREATMENTS EXCELLENT / Localized Repairs Only GOOD / Preventive Maintenance FAIR / Light Rehabilitation POOR / Heavy Rehabilitation Reconstruction Pavement Age

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.



Road Condition Summary Report for Data Collection Vehicle (DCV) Rated Roads

#### Fort Monroe National Monument

Condition (Rating / Index) Legend

**EXCELLENT (95 - 100)** 

GOOD (85 - 94) FAIR (61 - 84)

**POOR (0 - 60)** 

NR = NOT RATED

#### Notes:

- This condition summary report contains only the roads rated with the Data Collection Vehicle (DCV).
- Condition on roads that were manually rated and parking areas are shown in separate reports.
- Route-level scores shown on this page may not represent scores at smaller intervals (due to rollup calculations).
- 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 No.	Route-	Level Condition for Roads Rated with the Data Collection Vehic  Route Name	le (DCV)  Functions Class	ıl Surf. Type	Paved Length (Miles)	Pavement Condition Rating (PCR)	- ਵ	اعْ ق	Structural Crack Index	Alligator Crack Index	Longitudinal Cracking Index	Transverse Cracking Index	Patch / Pothole Index	Rutting Index
FOMR-0010AZ	248824	FENWICK ROAD	1	AS	1.13	45	NR	42	58	96	62	42	99	96
FOMR-0010CZ	248824	BATTERY ANDERSON-RUGGLES TURNAROUND	1	AS	0.02	31	NR	31	78	100	78	31	97	96
FOMR-0103AZ		MILL CREEK OVERLOOK ROAD A	2	AS	0.05	0	NR	0	0	72	0	0	98	91
FOMR-0200AZ		SOUTH END WALKER AIRFIELD ACCESS ROAD	3	AS	0.13	36	NR	36	37	100	37	36	99	94
FOMR-0200BZ		WALKER AIRFIELD TAXIWAY EAST	3	AS	0.15	35	NR	35	63	99	64	35	100	99
FOMR-0200CZ		WALKER AIRFIELD TAXIWAY WEST	3	AS	0.17	63	NR	63	89	100	89	63	100	98
FOMR-0200EZ		WALKER AIRFIELD TAXIWAY CUT-THRU 1	3	CO	0.03	73	NR	NR	NR	NR	NR	NR	NR	NR
FOMR-0200FZ		WALKER AIRFIELD TAXIWAY CUT-THRU 2	3	AS	0.03	3	NR	3	44	88	56	3	100	98
FOMR-0201AZ		BUILDING 247 ROAD A	3	AS	0.12	32	NR	32	90	99	91	32	97	95
FOMR-0201BZ		BUILDING 247 ROAD B	3	AS	0.02	0	NR	0	60	100	60	0	100	97
FOMR-0202		FULLER LANE	3	AS	0.31	64	NR	64	85	98	87	64	99	95
FOMR-0203	248825	NORTH END WALKER AIRFIELD ROAD	3	AS	0.06	30	NR	NR	NR	NR	NR	NR	NR	NR
FOMR-0204AZ		GULLICK DRIVE SOUTH SECTION	3	AS	0.49	20	NR	20	57	100	57	20	100	99
FOMR-0204BZ		GULLICK DRIVE NORTH SECTION	3	AS	0.43	0	NR	0	0	98	0	0	88	92
FOMR-0207	_	WALKER AIRFIELD RUNWAY ROAD	3	AS	0.52	74	NR	74	91	100	91	74	100	99

Data Collection Date: 12/2020



Road Condition Summary Report for Manually Rated Roads

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

Condition (Rating / Index) Legend

#### **Fort Monroe National Monument**

#### Notes:

- This condition summary report contains only the roads that were manually rated.
  - o MRL: Manually Rated Line (a linear road)
  - o 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 No.	FMSS No.	Route-Level Condition for Manually Rated Line (MRL) Roads  Route Name	Functiona Class	l 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
FOMR-0010BZ	248824	FENWICK ROAD (GATED)	1	AS	0.59	53	NR	53	NR	53	73	53	73	73
FOMR-0103BZ		MILL CREEK OVERLOOK ROAD B	2	AS	0.06	NR	NR	NR	NR	NR	NR	NR	NR	NR
FOMR-0105AZ		INCENERATOR LANE LOWER	2	AS	0.07	30	NR	30	NR	73	30	53	73	73
FOMR-0105BZ		INCENERATOR LANE UPPER	2	AS	0.07	NR	NR	NR	NR	NR	NR	NR	NR	NR
FOMR-0200GZ		WALKER AIRFIELD TAXIWAY CUT-THRU 3	3	AS	0.02	73	NR	73	NR	90	73	73	97	90
FOMR-0200HZ		WALKER AIRFIELD TAXIWAY CUT-THRU 4	3	AS	0.02	73	NR	73	NR	90	90	73	97	90
FOMR-0200IZ		WALKER AIRFIELD TAXIWAY CUT-THRU 5	3	AS	0.02	73	NR	73	NR	90	90	73	97	90
FOMR-0200JZ		WALKER AIRFIELD TAXIWAY CUT-THRU 6	3	AS	0.02	73	NR	73	NR	90	90	73	97	90
FOMR-0200KZ		WALKER AIRFIELD TAXIWAY CUT-THRU 7	3	AS	0.02	30	NR	30	NR	97	30	73	97	90
FOMR-0200LZ		WALKER AIRFIELD TAXIWAY CUT-THRU 8	3	AS	0.02	73	NR	73	NR	97	90	73	97	90
FOMR-0200MZ		WALKER AIRFIELD TAXIWAY CUT-THRU 9	3	AS	0.02	90	NR	90	NR	97	97	90	97	97
FOMR-0200NZ		WALKER AIRFIELD TAXIWAY CUT-THRU 10	3	AS	0.02	90	NR	90	NR	97	90	90	97	97
FOMR-0200OZ		WALKER AIRFIELD TAXIWAY CUT-THRU 11	3	AS	0.02	73	NR	73	NR	97	97	73	97	97
FOMR-0200PZ		WALKER AIRFIELD TAXIWAY CUT-THRU 12	3	AS	0.02	90	NR	90	NR	97	97	90	97	97
FOMR-0200QZ		WALKER AIRFIELD TAXIWAY CUT-THRU 13	3	AS	0.02	73	NR	73	NR	90	73	73	97	97

Data Collection Date: 07/2019



**Parking Area Condition Summary Report** 

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

Condition (Rating / Index) Legend

## **Fort Monroe National Monument**

#### 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.

							4	<u>Asphalt Surface Distresses</u>						Concrete Surface Distress					
Route No.	FMSS No.	Condition Rating Details for Paved Parking Areas  Route Name	User Access	Surf. Type	Area (Sq. Ft.)	Pavement Condition Rating (PCR)	Alligator Cracking	Longitudinal / Tranverse Cracking	Rutting / Distortions	Potholes / Patching	HMA Patching	Surface Raveling / Bleeding	Joint Faulting	Slab Cracking	Joint Distresses	Delamination / Pop-Outs Potholes / Patching			
FOMR-0900AZ	248829	PARADE OVERFLOW PARKING A	PUBLIC	AS	22,964	53	73	53	90	90	97	73							
FOMR-0900BZ	248829	PARADE OVERFLOW PARKING B	PUBLIC	AS	33,669	53	73	53	90	90	97	73							
FOMR-0901A		QUARTERS 1 PARKING	PUBLIC	BR	4,414	97													
FOMR-0905AZ	248461	DERUSSY FIELD PARKING A	PUBLIC	AS	2,365	53	97	53	90	97	90	73							
FOMR-0905BZ	248461	DERUSSY FIELD PARKING B	PUBLIC	AS	6,310	90	97	97	97	97	97	90							
FOMR-0907AZ	248828	FENWICK ROAD PARKING A	PUBLIC	AS	2,332	73	97	90	97	97	97	73							
FOMR-0907BZ	248828	FENWICK ROAD PARKING B	PUBLIC	AS	3,900	73	97	90	90	97	73	73							
FOMR-0907CZ	248828	FENWICK ROAD PARKING C	PUBLIC	AS	6,283	73	90	90	90	97	97	73							
FOMR-0907DZ	248828	FENWICK ROAD PARKING D	PUBLIC	AS	2,502	73	97	90	90	97	97	73							
FOMR-0908	248460	BATTERY DERUSSY PARKING	PUBLIC	AS	35,594	53	90	53	90	97	97	73							
FOMR-0909AZ	248818	WALKER AIRFIELD PARKING A	PUBLIC	AS	3,068	53	90	53	73	97	97	73							
FOMR-0909BZ	248818	WALKER AIRFIELD PARKING B	PUBLIC	AS	3,897	73	90	90	90	97	97	73							
FOMR-0909CZ	248818	WALKER AIRFIELD PARKING C	PUBLIC	CO	5,594	53							53	73	73	73 97			
FOMR-0909DZ	248818	WALKER AIRFIELD PARKING D	PUBLIC	CO	2,254	73							90	90	73	90 97			
FOMR-0910AZ	248817	BUILDING 247 PARKING A	PUBLIC	AS	2,328	73	97	90	73	97	97	73							
FOMR-0910BZ	248817	BUILDING 247 PARKING B	PUBLIC	AS	1,215	73	97	90	90	97	97	73							
FOMR-0911	248459	BUILDING 211 AND BATTERY CHURCH PARKING	PUBLIC	AS	6,250	53	90	53	90	97	90	73							
FOMR-0912AZ	248823	FENWICK TENNIS COURT PARKING A	PUBLIC	AS	4,633	73	90	90	90	97	97	73							
FOMR-0912BZ	248823	FENWICK TENNIS COURT PARKING B	PUBLIC	AS	2,652	73	97	90	97	97	97	73							
FOMR-0913AZ	248822	PARADISE OCEAN CLUB PARKING	PUBLIC	AS	<i>7</i> 1,506	53	90	53	90	90	97	73							
FOMR-0913BZ	248822	PARADISE OCEAN CLUB OVERFLOW PARKING	PUBLIC	AS	19,003	53	97	53	90	97	97	73							
FOMR-0916	248560	FULLER LANE DUMP STATION PARKING	PUBLIC	AS	<i>7</i> ,431	73	97	90	90	97	97	73							
FOMR-0917	248462	SHELTER #5 PARKING	PUBLIC	AS	12 <b>,</b> 517	73	90	90	97	97	97	73							
FOMR-0918	248559	CAMPGROUND CAMPSTORE PARKING	PUBLIC	AS	13,469	53	90	90	53	73	90	73							
FOMR-0919AZ		MILL CREEK OVERLOOK LOWER PARKING	PUBLIC	AS	16,541	53	90	53	73	90	73	73							
FOMR-0919BZ		MILL CREEK OVERLOOK UPPER PARKING	PUBLIC	CO	4,938	53							73	53	73	90 97			

Data Collection Date: 07/2019



**Parking Area Condition Summary Report** 

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

Condition (Rating / Index) Legend

### **Fort Monroe National Monument**

#### Notes:

FOMR-0919CZ FOMR-0924 FOMR-0926

- 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.

							<u>A</u>	sphalt	Surfa	ıce Dis	stresse	<u>es</u>	Conc	rete Sı	urface	Distre	esses_
		Condition Rating Details for Paved Parking Areas	User	Surf.	Area	vement Condition ting (PCR)	lligator Cracking	ngitudinal / anverse Cracking	utting / Distortions	tholes / Patching	A Patchi	face Raveling / eding	int Faulting	ıb Cracking	int Distresses	lamination / p-Outs	tholes / Patching
	FMSS No.	Route Name	Access	Type	(Sq. Ft.)	Pa Ra	Ψ	ᅙᅚ	Ru	Po	H	Sul Ble	Joi	Slab	Joint	Del Por	Po
Z		MILL CREEK OVERLOOK TRAILSIDE PARKING	PUBLIC	CO	4,965	73							90	73	90	97	97
		NORTH BEACH FIELD PARKING	PUBLIC	CO	17,037	53							53	73	73	73	97
	248830	PARADE GROUND PARKING	PUBLIC	BR	26,506	97											

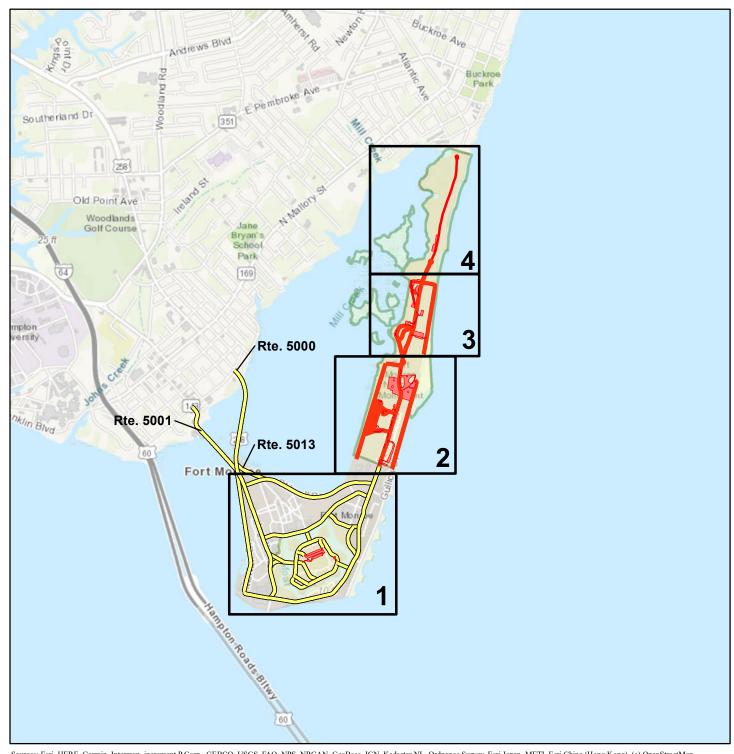
# Section 4 Park Route Location Maps





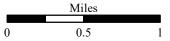
# **Fort Monroe National Monument**

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

NPS Collected Routes \_\_\_\_\_\_ Non-NPS Collected Routes



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

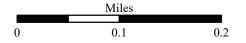
Miles				
0	0.25	0.5		

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



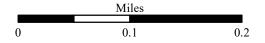


ROUTE LOCATION MAP Area Map 3



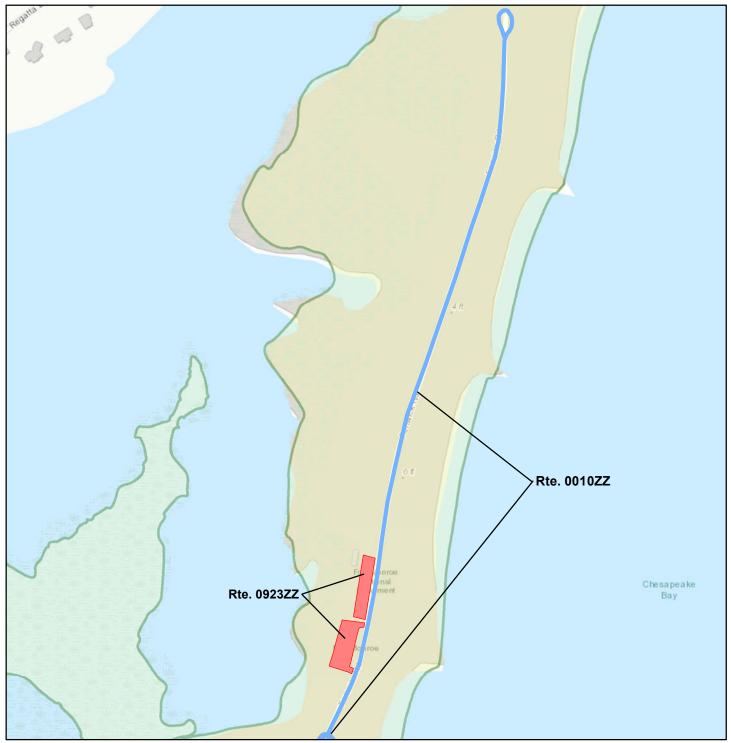
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Note: Unique colors are used to differentiate roads





ROUTE LOCATION MAP Area Map 4



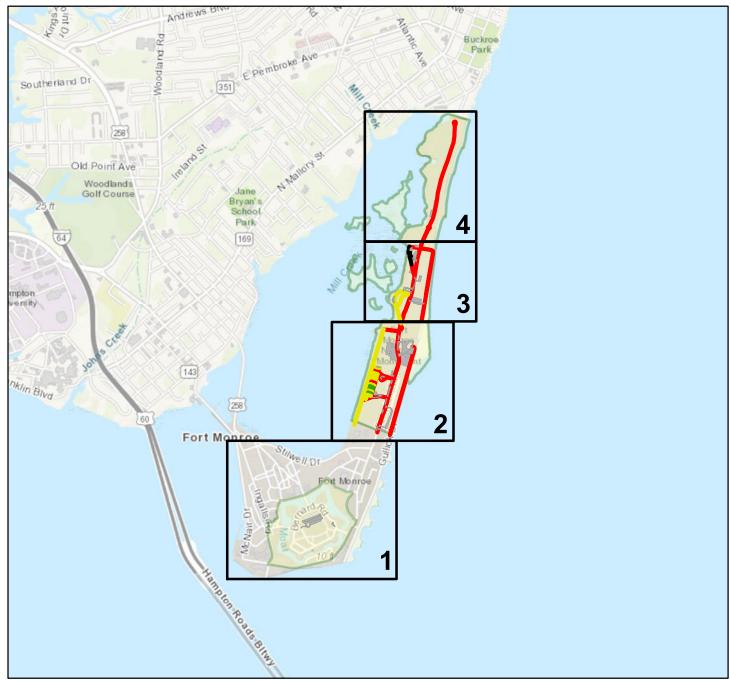
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

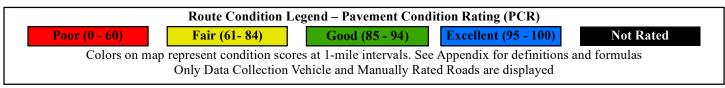
Note: Unique colors are used to differentiate roads

Miles					
0	0.1	0.2			



ROUTE CONDITION MAP PCR - MILE BY MILE Key Map

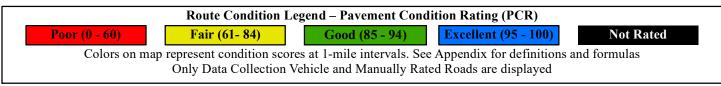




Miles					
0	0.5	1			

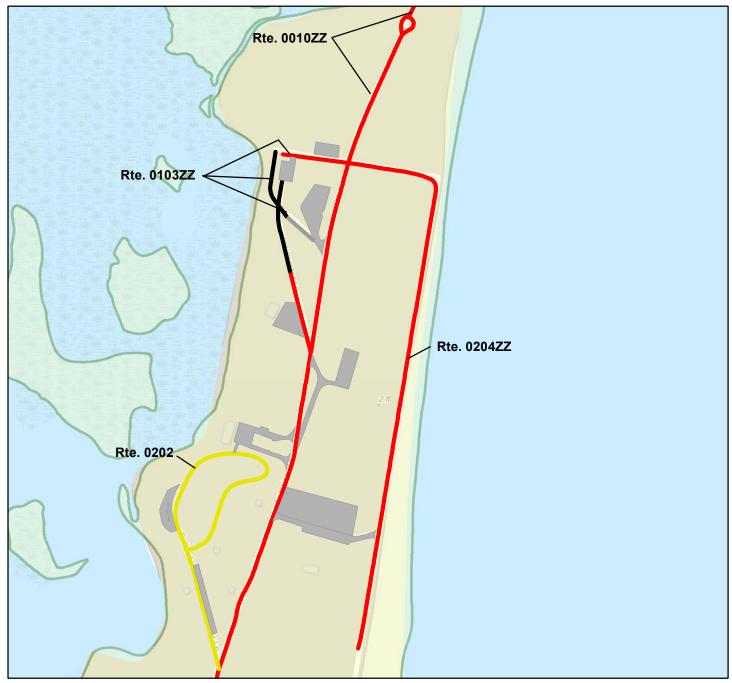
ROUTE CONDITION MAP PCR - MILE BY MILE Area Map 2

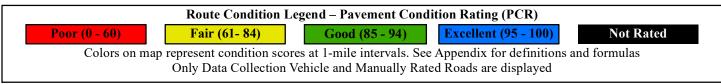




Miles					
0	0.1	0.2			

ROUTE CONDITION MAP PCR - MILE BY MILE Area Map 3



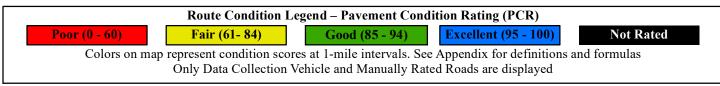


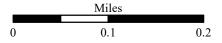
Miles					
0	0.1	0.2			

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





# Section 5 Paved Road Condition Rating Sheets



**Fort Monroe National Monument** 



**ROUTE 0010ZZ: FENWICK 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.

summary route may not rei	summary route may not reflect individual subcomponent ratings.							
	Route Condition Legend – Pavement Condition Rating (PCR)							
Poor (0 - 60)	Fair (61	1- 84)	Good (	(85 - 94)	<b>Excellent (95 - 100)</b>		Not Ra	ted
	,	See Append	dix for def	initions and f	ormulas			
Inspection Date:	12/11/2020							
Paved Length (Miles):	: 1.75		·					
Surface Type:	ASPHALT	Route Summ	ary					
Roadway Condition In	nformation							
Pavement Condition F	Rating (PCR)	48						
Lane & Width Inform	ation							
Number of Lanes		1						
Paved Width (ft)		24.7						
Lane Width (ft)		11.9						

**ROUTE 0010AZ: FENWICK ROAD** 

Subcomponent of Route FOMR-0010ZZ

Data Collection Vehicle (DCV) 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

Ro	ute Condition Legend – Pav	ement Condi	ition Rating (PCR)	
Poor (0 - 60) Fa	ir (61- 84) Good	- 84) Good (85 - 94)		Not Rated
Colors on map represent	condition scores at 0.10-mile	e intervals. Se	e Appendix for defini	tions and formulas.
<b>Inspection Date:</b> 12/11/2020	Beginning Section MP	0	1	
Paved Length (Miles): 1.13	Section Length (MI)	1	0.13	
Surface Type: ASPHALT	Route Summary		•	
Roadway Condition Information				
Pavement Condition Rating (PCR)	45	44	53	
Surface Condition Rating (SCR)	42	31	N/A	
Roughness Condition Index (RCI)	N/A	N/A	N/A	
Distress Index Values				
Structural Crack Index	58	57	N/A	
Alligator Crack Index	96	96	N/A	
Longitudinal Crack Index	62	61	N/A	
Transverse Cracking Index	42	31	N/A	
Patching Index	99	99	N/A	
Rutting Index	96	96	N/A	
International Roughness Index (IRI)	N/A	N/A	N/A	
Lane & Width Information				
Number of Lanes	2	2	2	1 1
Paved Width (ft)	24.9	25.6	20.1	1 1
Lane Width (ft)	11.6	11.8	10.2	

END OF ROUTE MANUALLY RATED DUE TO JERSEY BARRIER

ROUTE 0010BZ: FENWICK ROAD (GATED)

Subcomponent of Route FOMR-0010ZZ

Manual Rating



	Route Co	ondition Legend – Pa	vement Condi	ition Rating (	PCR)		
Poor (0 - 60)	Fair (61		(85 - 94)	Excellent (		Not Ra	ted
3 3 3 3 (3 3 3 )	- 1122 (0.2	See Appendix for de	· /	`			
Inspection Date: 12/11/2	2020	Beginning Section MI					
Paved Length (Miles): 0.59	<b>-</b>	Section Length (MI)	0.59				
Surface Type: ASPHA	L	Route Summary		!			
Roadway Condition Information	tion						
Pavement Condition Rating (	PCR)	53	53				
Surface Condition Rating (SCR	(1)	53	53				
Roughness Condition Index (Ro	CI)	N/A	N/A				
Distress Index Values							
Structural Crack Index		N/A	N/A				
Alligator Crack Index		53	53				
Longitudinal Crack Index		73	73				
Transverse Cracking Index		53	53				
Patching Index		73	73				
Rutting Index		73	73				
International Roughness Index (IRI)		N/A	N/A				
Lane & Width Information							
Number of Lanes		2	2				
Paved Width (ft)		24.9	24.9				
Lane Width (ft)		12.5	12.5				

ROUTE 0010BZ: FENWICK ROAD (GATED)

#### **Condition Photos**

Condition photos are shown only for manually rated roads. Use the PathView program to see images of DCV rated roads.



FOMR\_0010BZ\_1.jpg



FOMR\_0010BZ\_11.jpg



FOMR\_0010BZ\_3.jpg



FOMR\_0010BZ\_10.jpg



FOMR\_0010BZ\_2.jpg

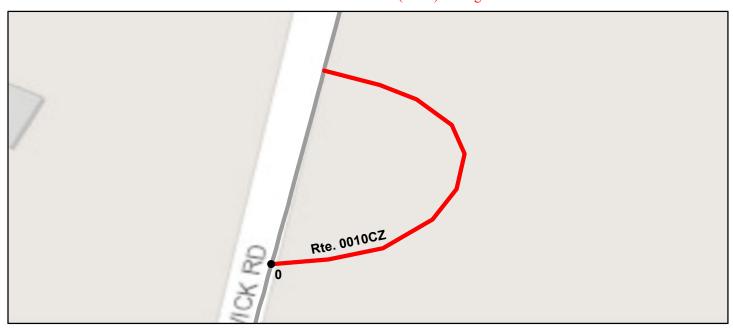


FOMR\_0010BZ\_4.jpg

### ROUTE 0010CZ: BATTERY ANDERSON-RUGGLES TURNAROUND

Subcomponent of Route FOMR-0010ZZ

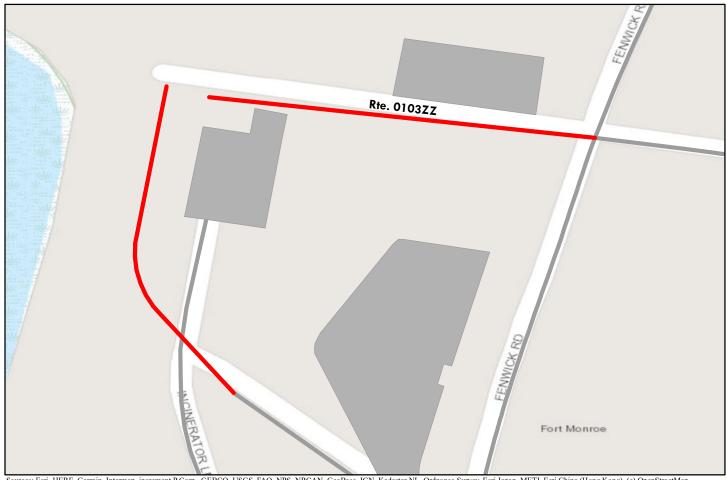
Data Collection Vehicle (DCV) Rating



	Route (	Condition Legend – Pav	ement Condi	ition Rating (	PCR)		
Poor (0 - 60)	_		(85 - 94)	Excellent (		Not Ra	ted
	•	dition scores at 0.10-mile	× /	`			
Inspection Date:	12/11/2020	Beginning Section MP					
Paved Length (Miles	a): 0.02	Section Length (MI)	0.02				
Surface Type:	ASPHALT	Route Summary					
Roadway Condition	Information						
Pavement Condition	Rating (PCR)	31	31				
Surface Condition Ra	ting (SCR)	31	31				
Roughness Condition	Index (RCI)	N/A	N/A				
Distress Index Value	s						
Structural Crack Ind	ex	78	78				
Alligator Crack Inde	ex	100	100				
Longitudinal Crack	Index	78	78				
Transverse Cracking	g Index	31	31				
Patching Index		97	97				
Rutting Index		96	96				
International Roughness Index (IRI)		N/A	N/A				
Lane & Width Inform	mation						
Number of Lanes		1	1				
Paved Width (ft)		13	13				
Lane Width (ft)		13	13				

### ROUTE 0103ZZ: MILL CREEK OVERLOOK ROADS

**Summary Route** 



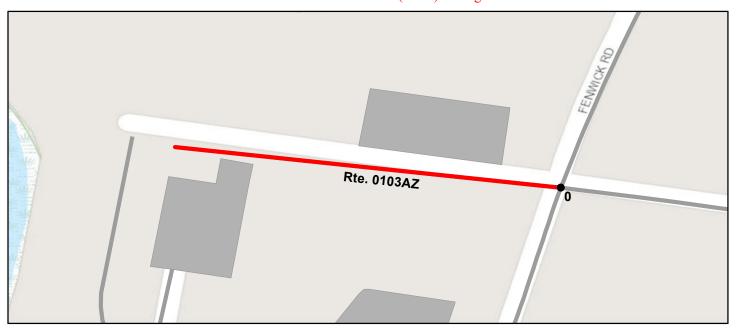
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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.

summary route may not reflect individual subcomponent ratings.								
	Route Condition Legend – Pavement Condition Rating (PCR)							
Poor (0 - 60)	Fair (6	1- 84)	Good	(85 - 94)	<b>Excellent (95 - 100)</b>		Not Rated	
	,	See Appe	ndix for def	initions and f	ormulas			
Inspection Date:	12/11/2020							
Paved Length (Miles)	<b>):</b> 0.1							
Surface Type:	ASPHALT	Route Sum	mary					
Roadway Condition	Information							
Pavement Condition	Rating (PCR)	0	)					
Lane & Width Inform	nation							
Number of Lanes		1						
Paved Width (ft)		1	7					
Lane Width (ft)		11	.1					

### ROUTE 0103AZ: MILL CREEK OVERLOOK ROAD A

Subcomponent of Route FOMR-0103ZZ Data Collection Vehicle (DCV) Rating

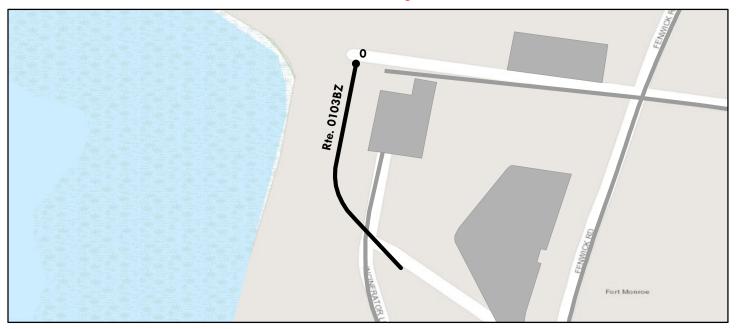


	Route (	Condition Legend – Pav	ement Condi	tion Rating (	PCR)		
Poor (0 - 6	_		(85 - 94)	Excellent (		Not Ra	ted
Colors	on map represent con-	dition scores at 0.10-mile	intervals. Se	e Appendix fo	or definitions	and formulas.	
Inspection Date:	12/11/2020	<b>Beginning Section MP</b>	0				
Paved Length (Mil	es): 0.04	Section Length (MI)	0.04				
Surface Type:	ASPHALT	Route Summary		•		•	
Roadway Conditio	n Information						
Pavement Condition	on Rating (PCR)	0	0				
Surface Condition I	Rating (SCR)	0	0				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	ies						
Structural Crack In	ndex	0	0				
Alligator Crack In	dex	72	72				
Longitudinal Crack	k Index	0	0				
Transverse Cracking	ng Index	0	0				
Patching Index		98	98				
Rutting Index		91	91				
International Roug	ghness Index (IRI)	N/A	N/A				
Lane & Width Info	ormation						
Number of Lanes		2	2				
Paved Width (ft)		26	26				
Lane Width (ft)		13	13				

### ROUTE 0103BZ: MILL CREEK OVERLOOK ROAD B

Subcomponent of Route FOMR-0103ZZ

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 (6	1- 84) Good (	(85 - 94)	<b>Excellent (95 - 100)</b>	Not Rated				
	See Appendix for def	initions and f	ormulas					
<b>Inspection Date:</b> 7/19/2019	<b>Beginning Section MP</b>	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)	9.6	9.6						
Lane Width (ft)	9.6	9.6						

NOT RATED DUE TO OVERGROWN CONDITIONS.

### ROUTE 0103BZ: MILL CREEK OVERLOOK ROAD B

#### **Condition Photos**

Condition photos are shown only for manually rated roads. Use the PathView program to see images of DCV rated roads.



FOMR\_0103BZ\_2485.JPG

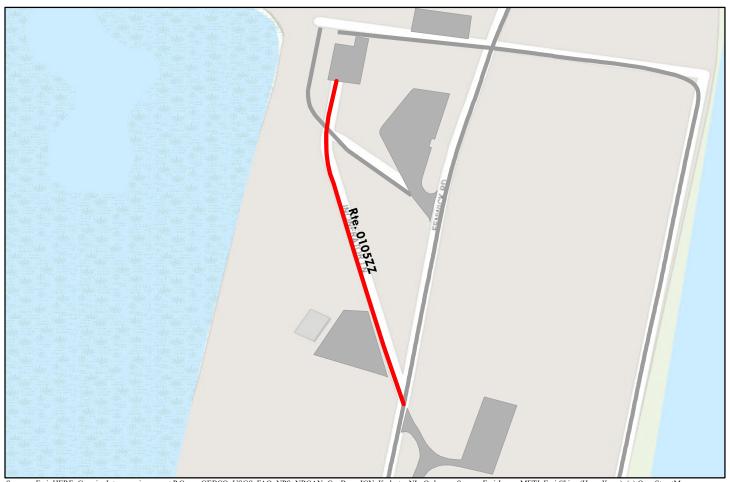




FOMR\_0103BZ\_2487.JPG

**ROUTE 0105ZZ: INCENERATOR LANES** 

**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

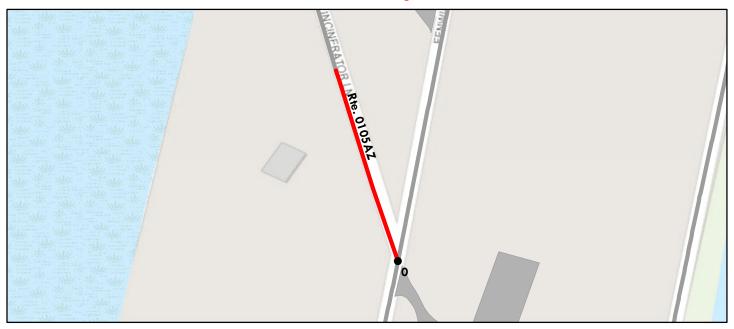
Note: The weighted average summary PCR value is calculated from only the sections of road where the PCR was collected. The overall PCR for the summary route may not reflect individual subcomponent ratings.

summary route may not re	enect muividual subcom	ponent ratings.								
	Route C	Condition Leg	gend – Pav	ement Cond	ition Rating (	PCR)				
Poor (0 - 60)	Fair (6	1- 84)	Good	(85 - 94)	Excellent (	95 - 100)	Not Ra	ted		
		See Apper	ndix for def	finitions and f	ormulas					
Inspection Date:	12/11/2020									
Paved Length (Miles)	aved Length (Miles): 0.14									
Surface Type:										
Roadway Condition	Information									
Pavement Condition	Rating (PCR)	30	)							
Lane & Width Inform	mation									
Number of Lanes		2								
Paved Width (ft)		14.	.5							
Lane Width (ft)		7.3	3							

### **ROUTE 0105AZ: INCENERATOR LANE LOWER**

Subcomponent of Route FOMR-0105ZZ

Manual Rating



	Route (	Condition Legend – Pav	ement Condi	ition Rating (	PCR)		
Poor (0 - 60			(85 - 94)	Excellent (		Not Ra	ted
		See Appendix for def	finitions and f	ormulas			
Inspection Date:	12/11/2020	<b>Beginning Section MP</b>	0.00				
Paved Length (Mile	<b>es):</b> 0.07	Section Length (MI)	0.07				
Surface Type:	ASPHALT	Route Summary				•	
Roadway Condition	n Information						
Pavement Condition	on Rating (PCR)	30	30				
Surface Condition R	Rating (SCR)	30	30				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	ies						
Structural Crack In	ndex	N/A	N/A				
Alligator Crack Inc	dex	73	73				
Longitudinal Crack	k Index	30	30				
Transverse Crackir	ng Index	53	53				
Patching Index		73	73				
Rutting Index		73	73				
International Roug	hness Index (IRI)	N/A	N/A				
Lane & Width Info	rmation						
Number of Lanes		2	2				
Paved Width (ft)		14.5	14.5				
Lane Width (ft)		7.3	7.3				

### **ROUTE 0105AZ: INCENERATOR LANE LOWER**

#### **Condition Photos**

Condition photos are shown only for manually rated roads. Use the PathView program to see images of DCV rated roads.



FOMR\_0105AZ\_1.jpg



FOMR\_0105AZ\_3.jpg



FOMR\_0105AZ\_2.jpg

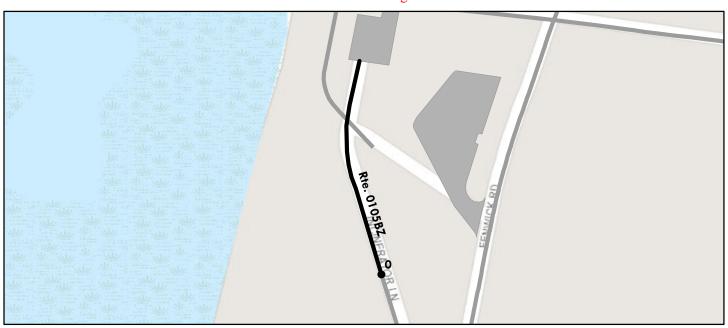


FOMR\_0105AZ\_4.jpg

**ROUTE 0105BZ: INCENERATOR LANE UPPER** 

Subcomponent of Route FOMR-0105ZZ

Manual Rating



	Route	Condition Legend – Pav	ement Cond	ition Rating (	PCR)		
Poor (0 - 60			(85 - 94)	Excellent (9		Not Ra	ted
		See Appendix for def	finitions and f	ormulas			
Inspection Date:	7/19/2019	<b>Beginning Section MP</b>	0.00				
Paved Length (Mile	es): 0.07	Section Length (MI)	0.07				
Surface Type:	ASPHALT	Route Summary		!			
Roadway Condition	n Information						
Pavement Condition	on Rating (PCR)	N/A	N/A				
Surface Condition R	Rating (SCR)	N/A	N/A				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	ies						
Structural Crack In	ıdex	N/A	N/A				
Alligator Crack Inc	dex	N/A	N/A				
Longitudinal Crack	k Index	N/A	N/A				
Transverse Crackin	ng Index	N/A	N/A				
Patching Index		N/A	N/A				
Rutting Index		N/A	N/A				
International Roug	hness Index (IRI)	N/A	N/A				
Lane & Width Info	rmation						
Number of Lanes		2	2				
Paved Width (ft)		14.5	14.5				
Lane Width (ft)		7.3	7.3				

### **ROUTE 0105BZ: INCENERATOR LANE UPPER**

#### **Condition Photos**

Condition photos are shown only for manually rated roads. Use the PathView program to see images of DCV rated roads.





FOMR\_0105BZ\_2488.JPG



FOMR\_0105BZ\_2484.JPG



FOMR\_0105BZ\_2489.JPG

ROUTE 0200ZZ: WALKER AIRFIELD TAXIWAY

**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

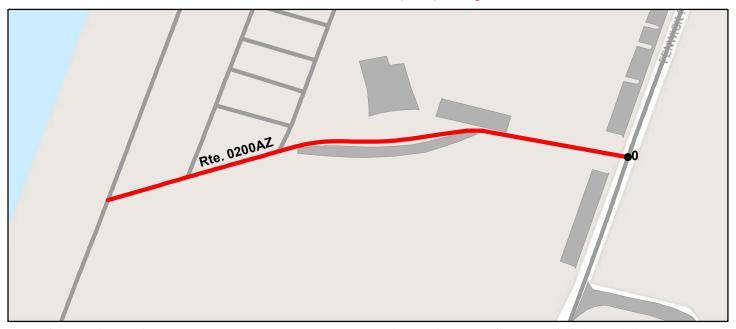
Note: The weighted average summary PCR value is calculated from only the sections of road where the PCR was collected. The overall PCR for the summary route may not reflect individual subcomponent ratings.

summary route may not re	cricci murviduai subcom	ponent ratings.								
	Route C	Condition Leg	gend – Pav	ement Condi	ition Rating (	PCR)				
Poor (0 - 60)	Fair (6	1- 84)	Good	(85 - 94)	Excellent (	95 - 100)	Not Ra	ted		
	,	See Apper	ndix for def	initions and f	ormulas					
Inspection Date:	12/11/2020									
Paved Length (Miles)	aved Length (Miles): 0.73									
Surface Type:	ASPHALT	Route Sumn	nary		•					
Roadway Condition	Information									
Pavement Condition	Rating (PCR)	52	2							
Lane & Width Inform	mation									
Number of Lanes		2								
Paved Width (ft)		25.	1							
Lane Width (ft)		12.	6							

### ROUTE 0200AZ: SOUTH END WALKER AIRFIELD ACCESS ROAD

Subcomponent of Route FOMR-0200ZZ

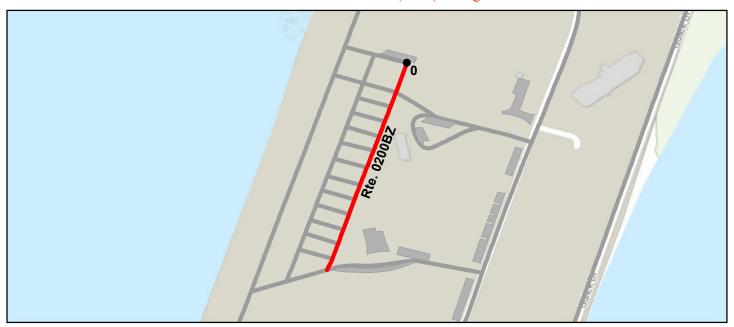
Data Collection Vehicle (DCV) Rating



	Route (	Condition Legend – Pav	ement Condi	ition Rating (	PCR)		
Poor (0 - 6	_		(85 - 94)	Excellent (		Not Ra	ted
Colors	on map represent con-	dition scores at 0.10-mile	intervals. Se	e Appendix fo	or definitions	and formulas.	
Inspection Date:	12/11/2020	<b>Beginning Section MP</b>	0				
Paved Length (Mil	es): 0.13	Section Length (MI)	0.13				
Surface Type:	ASPHALT	Route Summary		!	ļ.	!	
Roadway Conditio	n Information						
Pavement Condition	on Rating (PCR)	36	36				
Surface Condition I	Rating (SCR)	36	36				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	ies						
Structural Crack In	ndex	37	37				
Alligator Crack In	dex	100	100				
Longitudinal Crac	k Index	37	37				
Transverse Cracki	ng Index	36	36				
Patching Index		99	99				
Rutting Index		94	94				
International Roug	ghness Index (IRI)	N/A	N/A				
Lane & Width Info	ormation						
Number of Lanes		2	2				
Paved Width (ft)		21.7	21.7				
Lane Width (ft)		10.8	10.8				

### ROUTE 0200BZ: WALKER AIRFIELD TAXIWAY EAST

Subcomponent of Route FOMR-0200ZZ Data Collection Vehicle (DCV) Rating

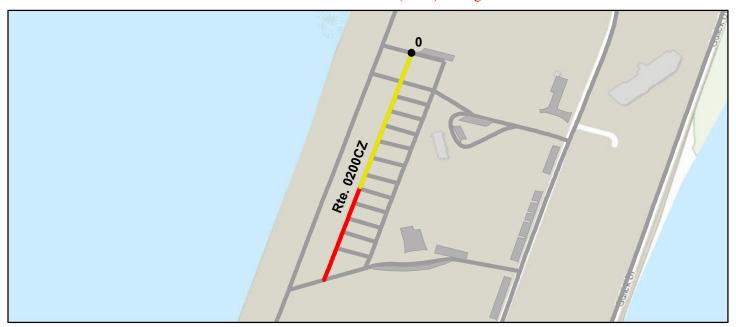


	Route C	Condition Legend – Pav	ement Condi	ition Rating (	PCR)			
Poor (0 - 60	_		(85 - 94)	Excellent (		Not Ra	ted	
Colors on map represent condition scores at 0.10-mile intervals. See Appendix for definitions and formulas.								
Inspection Date:	12/11/2020	<b>Beginning Section MP</b>	0					
Paved Length (Mile	es): 0.15	Section Length (MI)	0.15					
Surface Type:	ASPHALT	Route Summary		•		•		
Roadway Condition	n Information							
Pavement Conditio	on Rating (PCR)	35	35					
Surface Condition R	Rating (SCR)	35	35					
Roughness Conditio	on Index (RCI)	N/A	N/A					
Distress Index Valu	es							
Structural Crack In	ıdex	63	63					
Alligator Crack Inc	dex	99	99					
Longitudinal Crack	r Index	64	64					
Transverse Crackin	ng Index	35	35					
Patching Index		100	100					
Rutting Index		99	99					
International Roug	hness Index (IRI)	N/A	N/A					
Lane & Width Info	rmation							
Number of Lanes		2	2					
Paved Width (ft)		27.6	27.6					
Lane Width (ft)		13.8	13.8					

### ROUTE 0200CZ: WALKER AIRFIELD TAXIWAY WEST

Subcomponent of Route FOMR-0200ZZ

Data Collection Vehicle (DCV) Rating

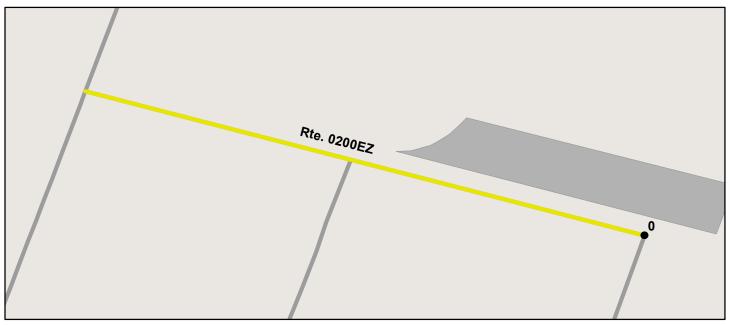


	Route C	Condition Legend – P	avement Condi	ition Rating (	PCR)		
Poor (0 - 60)	Fair (61		d (85 - 94)	Excellent (		Not Ra	ted
Colors on map represent condition scores at 0.10-mile intervals. See Appendix for definitions and formulas.							
Inspection Date: 12/11/2		Beginning Section M					
Paved Length (Miles): 0.17		Section Length (MI)					
Surface Type: ASPH.		Route Summary					
Roadway Condition Informa	tion						
Pavement Condition Rating (	PCR)	63	63				
Surface Condition Rating (SCR	(3)	63	63				
Roughness Condition Index (R	CI)	N/A	N/A				
Distress Index Values							
Structural Crack Index		89	89				
Alligator Crack Index		100	100				
Longitudinal Crack Index		89	89				
Transverse Cracking Index		63	63				
Patching Index		100	100				
Rutting Index		98	98				
International Roughness Inde	x (IRI)	N/A	N/A				
Lane & Width Information							
Number of Lanes		2	2				
Paved Width (ft)		30.6	30.6				
Lane Width (ft)		15.3	15.3				

### ROUTE 0200EZ: WALKER AIRFIELD TAXIWAY CUT-THRU 1

Subcomponent of Route FOMR-0200ZZ

Data Collection Vehicle (DCV) 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

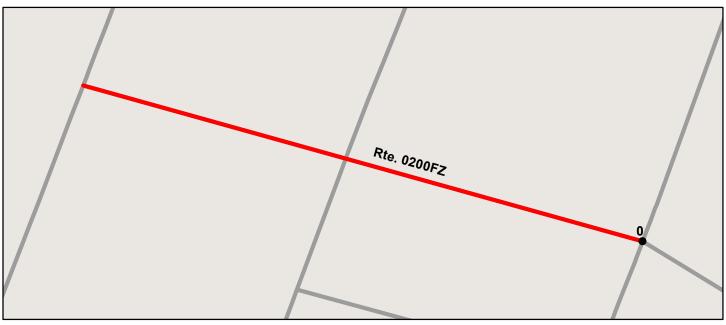
	Route (	Condition Legend – Pav	ement Condi	ition Rating (P	PCR)		
Poor (0 - 60	_		(85 - 94)	Excellent (9:		Not Ra	ted
Colors	on map represent con	dition scores at 0.10-mile	intervals. Se	e Appendix for	definitions	and formulas.	
Inspection Date:	12/11/2020	<b>Beginning Section MP</b>	0				
Paved Length (Mile	es): 0.03	Section Length (MI)	0.03				
Surface Type:	CONCRETE	Route Summary				•	
Roadway Condition	n Information						
Pavement Condition	on Rating (PCR)	73	73				
Surface Condition R	Rating (SCR)	N/A	N/A				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	es						
Structural Crack In	ıdex	N/A	N/A				
Alligator Crack Inc	dex	N/A	N/A				
Longitudinal Crack	x Index	N/A	N/A				
Transverse Crackir	ng Index	N/A	N/A				
Patching Index		N/A	N/A				
Rutting Index		N/A	N/A				
International Roug	hness Index (IRI)	N/A	N/A				
Lane & Width Info	rmation						
Number of Lanes		2	2				
Paved Width (ft)		29.3	29.3				
Lane Width (ft)		14.6	14.6				

MANUALLY RATED CONCRETE SECTION

### ROUTE 0200FZ: WALKER AIRFIELD TAXIWAY CUT-THRU 2

Subcomponent of Route FOMR-0200ZZ

Data Collection Vehicle (DCV) Rating

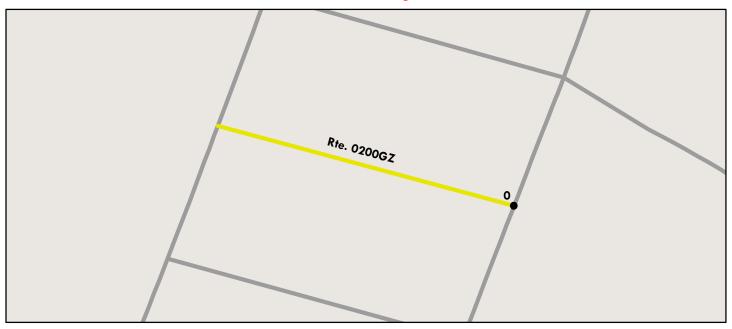


	Route (	Condition Legend – Pav	ement Condi	tion Rating (	PCR)		
Poor (0 - 6			(85 - 94)	Excellent (		Not Ra	ted
Colors	on map represent con	dition scores at 0.10-mile	intervals. Se	e Appendix fo	or definitions	and formulas.	
Inspection Date:	12/11/2020	<b>Beginning Section MP</b>	0				
Paved Length (Mil	es): 0.03	Section Length (MI)	0.03				
Surface Type:	ASPHALT	Route Summary				•	
Roadway Conditio	n Information						
Pavement Condition	on Rating (PCR)	3	3				
Surface Condition I	Rating (SCR)	3	3				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	ies						
Structural Crack In	ndex	44	44				
Alligator Crack In	dex	88	88				
Longitudinal Crack	k Index	56	56				
Transverse Cracking	ng Index	3	3				
Patching Index		100	100				
Rutting Index		98	98				
International Roug	ghness Index (IRI)	N/A	N/A				
Lane & Width Info	ormation						
Number of Lanes		2	2				
Paved Width (ft)		34	34				
Lane Width (ft)		17	17				

### ROUTE 0200GZ: WALKER AIRFIELD TAXIWAY CUT-THRU 3

Subcomponent of Route FOMR-0200ZZ

Manual Rating



	Route (	Condition Legend – Pav	ement Condi	tion Rating (	PCR)		
Poor (0 - 60			(85 - 94)	Excellent (		Not Ra	ted
		See Appendix for def	initions and f	ormulas			
Inspection Date:	7/19/2019	<b>Beginning Section MP</b>	0.00				
Paved Length (Mile	es): 0.02	Section Length (MI)	0.02				
Surface Type:	ASPHALT	Route Summary					
Roadway Condition	n Information						
Pavement Condition	on Rating (PCR)	73	73				
Surface Condition R	Rating (SCR)	73	73				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	ies						
Structural Crack In	ndex	N/A	N/A				
Alligator Crack Inc	dex	90	90				
Longitudinal Crack	k Index	73	73				
Transverse Crackin	ng Index	73	73				
Patching Index		97	97				
Rutting Index		90	90				
International Roug	hness Index (IRI)	N/A	N/A				
Lane & Width Info	rmation						
Number of Lanes		2	2				
Paved Width (ft)		19.5	19.5				
Lane Width (ft)		9.8	9.8				

### ROUTE 0200GZ: WALKER AIRFIELD TAXIWAY CUT-THRU 3

#### **Condition Photos**

Condition photos are shown only for manually rated roads. Use the PathView program to see images of DCV rated roads.



FOMR\_0200GZ\_2416.JPG





FOMR\_0200GZ\_2418.JPG



FOMR\_0200GZ\_2419.JPG



FOMR\_0200GZ\_2420.JPG

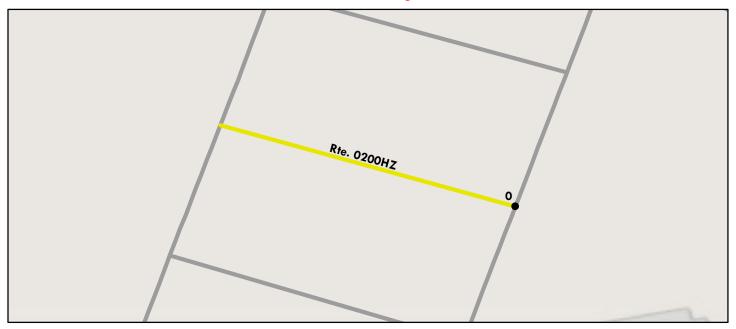


FOMR\_0200GZ\_2421.JPG

### ROUTE 0200HZ: WALKER AIRFIELD TAXIWAY CUT-THRU 4

Subcomponent of Route FOMR-0200ZZ

Manual Rating



	Route (	Condition Legend – Pav	ement Condi	ition Rating (	PCR)		
Poor (0 - 60			(85 - 94)	Excellent (		Not Ra	ted
		See Appendix for det	finitions and f	ormulas			
Inspection Date:	7/19/2019	<b>Beginning Section MP</b>	0.00				
Paved Length (Mile	es): 0.02	Section Length (MI)	0.02				
Surface Type:	ASPHALT	Route Summary				•	
Roadway Condition	n Information						
Pavement Condition	on Rating (PCR)	73	73				
Surface Condition R	Rating (SCR)	73	73				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	ies						
Structural Crack In	ndex	N/A	N/A				
Alligator Crack Inc	dex	90	90				
Longitudinal Crack	k Index	90	90				
Transverse Crackin	ng Index	73	73				
Patching Index		97	97				
Rutting Index		90	90				
International Roug	hness Index (IRI)	N/A	N/A				
Lane & Width Info	rmation						
Number of Lanes		2	2				
Paved Width (ft)		19.5	19.5				
Lane Width (ft)		9.8	9.8				

### ROUTE 0200HZ: WALKER AIRFIELD TAXIWAY CUT-THRU 4

#### **Condition Photos**

Condition photos are shown only for manually rated roads. Use the PathView program to see images of DCV rated roads.



FOMR\_0200HZ\_2422.JPG



FOMR\_0200HZ\_2424.JPG



FOMR\_0200HZ\_2426.JPG



FOMR\_0200HZ\_2423.JPG



FOMR\_0200HZ\_2425.JPG

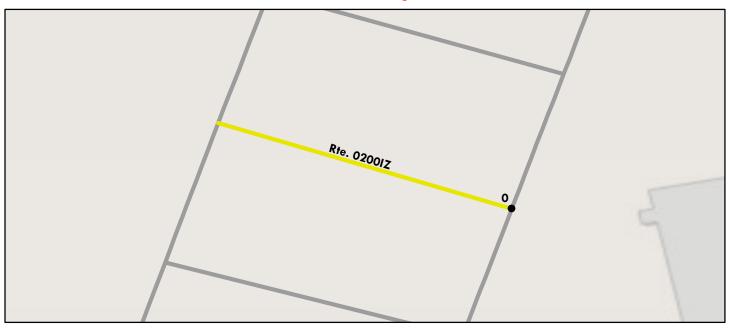


FOMR\_0200HZ\_2427.JPG

### ROUTE 0200IZ: WALKER AIRFIELD TAXIWAY CUT-THRU 5

Subcomponent of Route FOMR-0200ZZ

Manual Rating



	Route (	Condition Legend – Pav	ement Condi	ition Rating (	PCR)		
Poor (0 - 60			(85 - 94)	Excellent (		Not Ra	ted
		See Appendix for det	finitions and f	ormulas			
Inspection Date:	7/19/2019	<b>Beginning Section MP</b>	0.00				
Paved Length (Mile	es): 0.02	Section Length (MI)	0.02				
Surface Type:	ASPHALT	Route Summary				•	
Roadway Condition	n Information						
Pavement Condition	on Rating (PCR)	73	73				
Surface Condition R	Rating (SCR)	73	73				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	ies						
Structural Crack In	ndex	N/A	N/A				
Alligator Crack Inc	dex	90	90				
Longitudinal Crack	k Index	90	90				
Transverse Crackin	ng Index	73	73				
Patching Index		97	97				
Rutting Index		90	90				
International Roug	hness Index (IRI)	N/A	N/A				
Lane & Width Info	rmation						
Number of Lanes		2	2				
Paved Width (ft)		19.5	19.5				
Lane Width (ft)		9.8	9.8				

### ROUTE 0200IZ: WALKER AIRFIELD TAXIWAY CUT-THRU 5

#### **Condition Photos**

Condition photos are shown only for manually rated roads. Use the PathView program to see images of DCV rated roads.



FOMR\_0200IZ\_2428.JPG



FOMR\_0200IZ\_2430.JPG



FOMR\_0200IZ\_2432.JPG



FOMR\_0200IZ\_2429.JPG



FOMR\_0200IZ\_2431.JPG

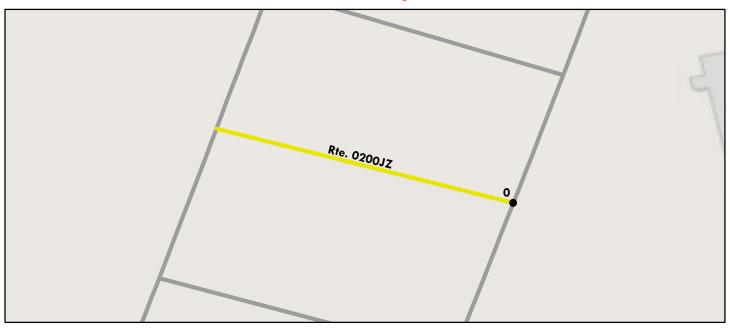


FOMR\_0200IZ\_2433.JPG

### ROUTE 0200JZ: WALKER AIRFIELD TAXIWAY CUT-THRU 6

Subcomponent of Route FOMR-0200ZZ

Manual Rating



Route Condition Legend – Pavement Condition Rating (PCR)							
Poor (0 - 60) Fair (61				Excellent (95 - 100)		Not Rated	
		See Appendix for def	V		/		
Inspection Date:	7/19/2019	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)		73	73				
Surface Condition Rating (SCR)		73	73				
Roughness Condition Index (RCI)		N/A	N/A				
Distress Index Valu	es						
Structural Crack Index		N/A	N/A				
Alligator Crack Index		90	90				
Longitudinal Crack Index		90	90				
Transverse Cracking Index		73	73				
Patching Index		97	97				
Rutting Index		90	90				
International Roughness Index (IRI)		N/A	N/A				
Lane & Width Info	rmation						
Number of Lanes		2	2				
Paved Width (ft)		19.5	19.5				
Lane Width (ft)		9.8	9.8				

#### ROUTE 0200JZ: WALKER AIRFIELD TAXIWAY CUT-THRU 6

#### **Condition Photos**



FOMR\_0200JZ\_2434.JPG



FOMR\_0200JZ\_2435.JPG



FOMR\_0200JZ\_2436.JPG



FOMR\_0200JZ\_2437.JPG



FOMR\_0200JZ\_2438.JPG

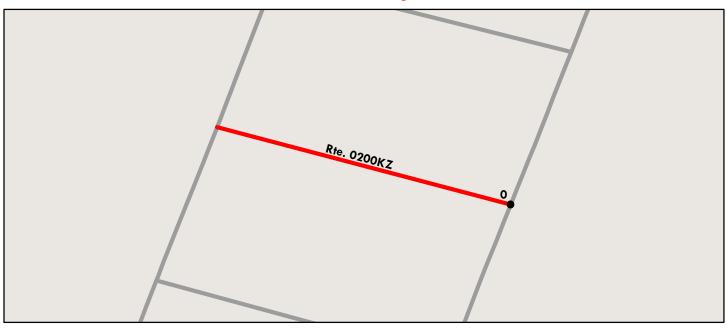


FOMR\_0200JZ\_2439.JPG

#### ROUTE 0200KZ: WALKER AIRFIELD TAXIWAY CUT-THRU 7

Subcomponent of Route FOMR-0200ZZ

Manual Rating



	Route (	Condition Legend – Pav	ement Condi	tion Rating (	PCR)		
Poor (0 - 60	_		(85 - 94)	Excellent (		Not Ra	ted
		See Appendix for det	initions and f	ormulas			
Inspection Date:	7/19/2019	<b>Beginning Section MP</b>	0.00				
Paved Length (Mile	es): 0.02	Section Length (MI)	0.02				
Surface Type:	ASPHALT	Route Summary				•	
Roadway Condition	n Information						
Pavement Condition	on Rating (PCR)	30	30				
Surface Condition R	Rating (SCR)	30	30				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	es						
Structural Crack In	ıdex	N/A	N/A				
Alligator Crack Inc	dex	97	97				
Longitudinal Crack	r Index	30	30				
Transverse Crackin	ng Index	73	73				
Patching Index		97	97				
Rutting Index		90	90				
International Roug	hness Index (IRI)	N/A	N/A				
Lane & Width Info	rmation						
Number of Lanes		2	2				
Paved Width (ft)		19.5	19.5				
Lane Width (ft)		9.8	9.8				

#### ROUTE 0200KZ: WALKER AIRFIELD TAXIWAY CUT-THRU 7

#### **Condition Photos**



FOMR\_0200KZ\_2440.JPG





FOMR\_0200KZ\_2442.JPG



FOMR\_0200KZ\_2443.JPG



FOMR\_0200KZ\_2444.JPG

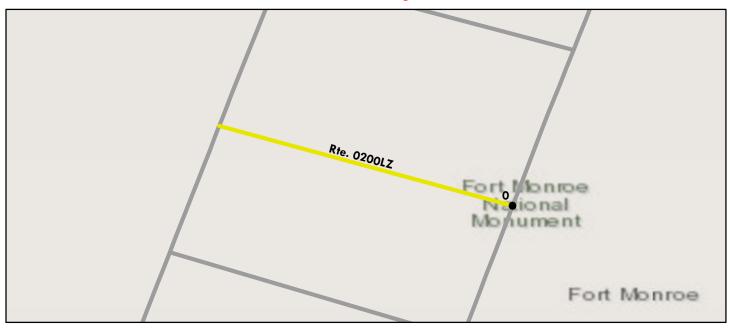


FOMR\_0200KZ\_2445.JPG

#### ROUTE 0200LZ: WALKER AIRFIELD TAXIWAY CUT-THRU 8

Subcomponent of Route FOMR-0200ZZ

Manual Rating



	Route (	Condition Legend – Pav	ement Condi	ition Rating (	PCR)		
Poor (0 - 60	_		(85 - 94)	Excellent (		Not Ra	ted
		See Appendix for def	S. Carlotte				
Inspection Date:	7/19/2019	Beginning Section MP	0.00				
Paved Length (Mile	es): 0.02	Section Length (MI)	0.02				
Surface Type:	ASPHALT	Route Summary		!		!	
Roadway Condition	n Information						
Pavement Condition	on Rating (PCR)	73	73				
Surface Condition R	Lating (SCR)	73	73				
Roughness Condition	n Index (RCI)	N/A	N/A				
Distress Index Valu	es						
Structural Crack In	dex	N/A	N/A				
Alligator Crack Inc	lex	97	97				
Longitudinal Crack	Index	90	90				
Transverse Crackin	ng Index	73	73				
Patching Index		97	97				
Rutting Index		90	90				
International Roug	hness Index (IRI)	N/A	N/A				
Lane & Width Info	rmation						
Number of Lanes		2	2				
Paved Width (ft)		19.5	19.5				
Lane Width (ft)		9.8	9.8				

#### ROUTE 0200LZ: WALKER AIRFIELD TAXIWAY CUT-THRU 8

#### **Condition Photos**



FOMR\_0200LZ\_2446.JPG





FOMR\_0200LZ\_2448.JPG



FOMR\_0200LZ\_2449.JPG



FOMR\_0200LZ\_2450.JPG

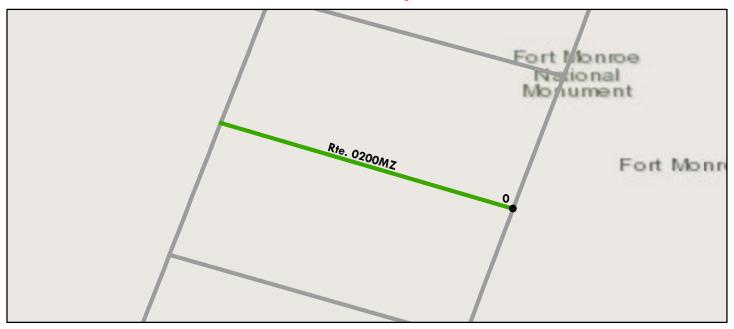


FOMR\_0200LZ\_2451.JPG

#### ROUTE 0200MZ: WALKER AIRFIELD TAXIWAY CUT-THRU 9

Subcomponent of Route FOMR-0200ZZ

Manual Rating



	Route	Condition Legend – Pav	ement Cond	ition Rating (	PCR)		
Poor (0 - 6			(85 - 94)	Excellent (		Not Ra	ted
		See Appendix for det	finitions and t	formulas			
Inspection Date:	7/19/2019	<b>Beginning Section MP</b>	0.00				
Paved Length (Mil	es): 0.02	Section Length (MI)	0.02				
Surface Type:	ASPHALT	Route Summary		!		!	
Roadway Conditio	n Information						
Pavement Condition	on Rating (PCR)	90	90				
Surface Condition I	Rating (SCR)	90	90				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	ies						
Structural Crack In	ndex	N/A	N/A				
Alligator Crack In	dex	97	97				
Longitudinal Crack	k Index	97	97				
Transverse Cracking	ng Index	90	90				
Patching Index		97	97				
Rutting Index		97	97				
International Roug	hness Index (IRI)	N/A	N/A				
Lane & Width Info	ormation						
Number of Lanes		2	2				
Paved Width (ft)		19.5	19.5				
Lane Width (ft)		9.8	9.8				

#### ROUTE 0200MZ: WALKER AIRFIELD TAXIWAY CUT-THRU 9

#### **Condition Photos**



FOMR\_0200MZ\_2452.JPG



FOMR\_0200MZ\_2453.JPG



FOMR\_0200MZ\_2454.JPG



FOMR\_0200MZ\_2455.JPG



FOMR\_0200MZ\_2456.JPG

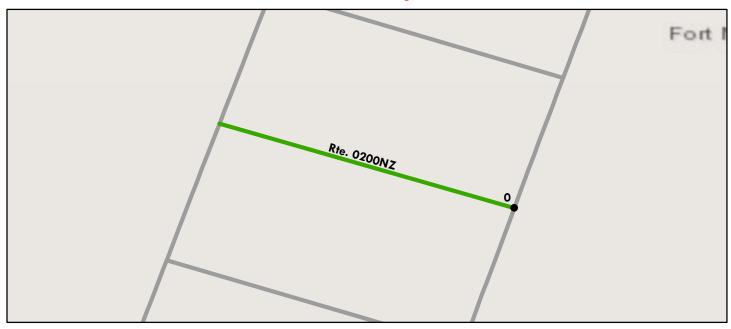


FOMR\_0200MZ\_2457.JPG

## ROUTE 0200NZ: WALKER AIRFIELD TAXIWAY CUT-THRU 10

Subcomponent of Route FOMR-0200ZZ

Manual Rating



	Route (	Condition Legend – Pav	ement Condi	ition Rating (	PCR)		
Poor (0 - 60	_		(85 - 94)	Excellent (		Not Ra	ted
		See Appendix for def	S. Carlotte		/		
Inspection Date:	7/19/2019	Beginning Section MP	0.00				
Paved Length (Mile	es): 0.02	Section Length (MI)	0.02				
Surface Type:	ASPHALT	Route Summary		!			
Roadway Condition	n Information						
Pavement Conditio	on Rating (PCR)	90	90				
Surface Condition R	Lating (SCR)	90	90				
Roughness Conditio	n Index (RCI)	N/A	N/A				
Distress Index Valu	es						
Structural Crack In	dex	N/A	N/A				
Alligator Crack Ind	lex	97	97				
Longitudinal Crack	Index	90	90				
Transverse Crackin	ng Index	90	90				
Patching Index		97	97				
Rutting Index		97	97				
International Rough	hness Index (IRI)	N/A	N/A				
Lane & Width Info	rmation						
Number of Lanes		2	2				
Paved Width (ft)		19.5	19.5				
Lane Width (ft)		9.8	9.8				

#### ROUTE 0200NZ: WALKER AIRFIELD TAXIWAY CUT-THRU 10

#### **Condition Photos**





FOMR\_0200NZ\_2460.JPG



FOMR\_0200NZ\_2462.JPG



FOMR\_0200NZ\_2459.JPG



FOMR\_0200NZ\_2461.JPG

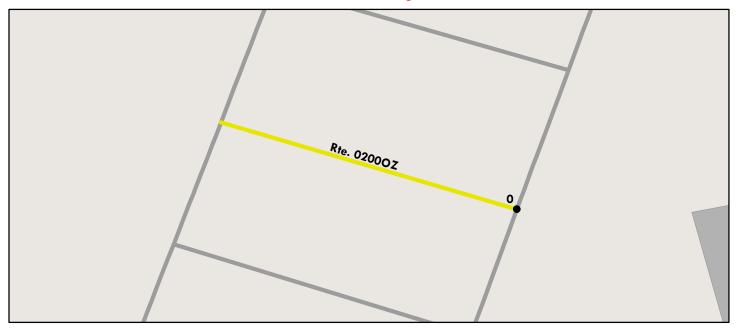


FOMR\_0200NZ\_2463.JPG

## ROUTE 0200OZ: WALKER AIRFIELD TAXIWAY CUT-THRU 11

Subcomponent of Route FOMR-0200ZZ

Manual Rating



	Route	Condition Legend – Pav	ement Cond	ition Rating (	PCR)		
Poor (0 - 6	_		(85 - 94)	Excellent (9		Not Ra	ted
		See Appendix for det	finitions and	formulas			
Inspection Date:	7/19/2019	<b>Beginning Section MP</b>	0.00				
Paved Length (Mil	es): 0.02	Section Length (MI)	0.02				
Surface Type:	ASPHALT	Route Summary		•			
Roadway Conditio	n Information						
Pavement Condition	on Rating (PCR)	73	73				
Surface Condition I	Rating (SCR)	73	73				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	ies						
Structural Crack In	ndex	N/A	N/A				
Alligator Crack In	dex	97	97				
Longitudinal Crac	k Index	97	97				
Transverse Cracki	ng Index	73	73				
Patching Index		97	97				
Rutting Index		97	97				
International Roug	ghness Index (IRI)	N/A	N/A				
Lane & Width Info	ormation						
Number of Lanes		2	2				
Paved Width (ft)		19.5	19.5				
Lane Width (ft)		9.8	9.8				

#### ROUTE 0200OZ: WALKER AIRFIELD TAXIWAY CUT-THRU 11

#### **Condition Photos**



FOMR\_0200OZ\_2464.JPG



FOMR\_0200OZ\_2466.JPG



FOMR\_0200OZ\_2468.JPG



FOMR\_0200OZ\_2465.JPG



FOMR\_0200OZ\_2467.JPG

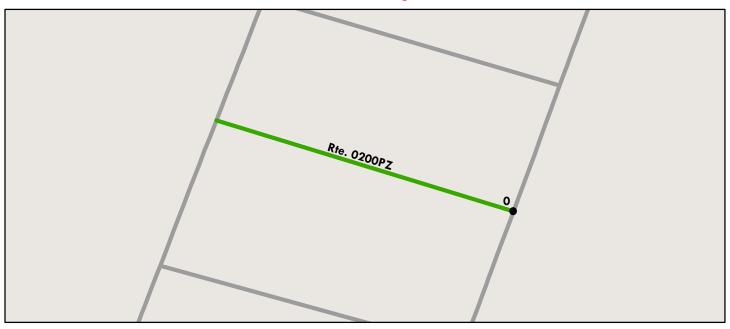


FOMR\_0200OZ\_2469.JPG

## ROUTE 0200PZ: WALKER AIRFIELD TAXIWAY CUT-THRU 12

Subcomponent of Route FOMR-0200ZZ

Manual Rating



	Route (	Condition Legend – Pav	ement Condi	ition Rating (	PCR)		
Poor (0 - 60			(85 - 94)	Excellent (		Not Ra	ted
		See Appendix for det	finitions and f	ormulas			
Inspection Date:	7/19/2019	<b>Beginning Section MP</b>	0.00				
Paved Length (Mile	es): 0.02	Section Length (MI)	0.02				
Surface Type:	ASPHALT	Route Summary				•	
Roadway Condition	n Information						
Pavement Condition	on Rating (PCR)	90	90				
Surface Condition R	Rating (SCR)	90	90				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	ies						
Structural Crack In	ıdex	N/A	N/A				
Alligator Crack Inc	dex	97	97				
Longitudinal Crack	k Index	97	97				
Transverse Crackir	ng Index	90	90				
Patching Index		97	97				
Rutting Index		97	97				
International Roug	hness Index (IRI)	N/A	N/A				
Lane & Width Info	rmation						
Number of Lanes		2	2				
Paved Width (ft)		19.5	19.5				
Lane Width (ft)		9.8	9.8				

#### ROUTE 0200PZ: WALKER AIRFIELD TAXIWAY CUT-THRU 12

#### **Condition Photos**



FOMR\_0200PZ\_2470.JPG



FOMR\_0200PZ\_2472.JPG



FOMR\_0200PZ\_2474.JPG



FOMR\_0200PZ\_2471.JPG



FOMR\_0200PZ\_2473.JPG

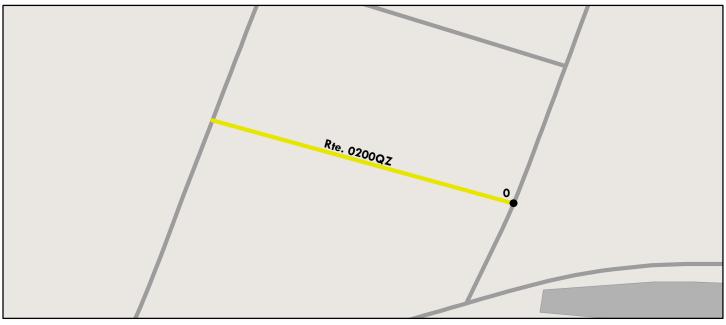


FOMR\_0200PZ\_2475.JPG

## ROUTE 0200QZ: WALKER AIRFIELD TAXIWAY CUT-THRU 13

Subcomponent of Route FOMR-0200ZZ

Manual Rating



	Route (	Condition Legend – Pav	ement Condi	ition Rating (	PCR)		
Poor (0 - 6			(85 - 94)	Excellent (		Not Ra	ted
		See Appendix for det	finitions and f	ormulas			
Inspection Date:	7/19/2019	<b>Beginning Section MP</b>	0.00				
Paved Length (Mile	es): 0.02	Section Length (MI)	0.02				
Surface Type:	ASPHALT	Route Summary		•		•	
Roadway Condition	n Information						
Pavement Condition	on Rating (PCR)	73	73				
Surface Condition F	Rating (SCR)	73	73				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	ies						
Structural Crack Ir	ndex	N/A	N/A				
Alligator Crack Inc	dex	90	90				
Longitudinal Cracl	k Index	73	73				
Transverse Crackin	ng Index	73	73				
Patching Index		97	97				
Rutting Index		97	97				
International Roug	hness Index (IRI)	N/A	N/A				
Lane & Width Info	ormation						
Number of Lanes		2	2				
Paved Width (ft)		19.5	19.5				
Lane Width (ft)		9.8	9.8				

## ROUTE 0200QZ: WALKER AIRFIELD TAXIWAY CUT-THRU 13

#### **Condition Photos**



FOMR\_0200QZ\_2477.JPG



FOMR\_0200QZ\_2478.JPG



FOMR\_0200QZ\_2479.JPG



FOMR\_0200QZ\_2480.JPG



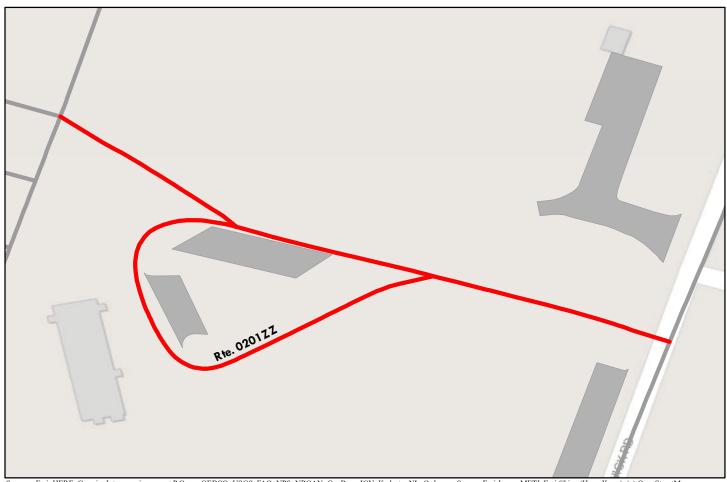
FOMR\_0200QZ\_2481.JPG



FOMR\_0200QZ\_2482.JPG

**ROUTE 0201ZZ: BUILDING 247 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

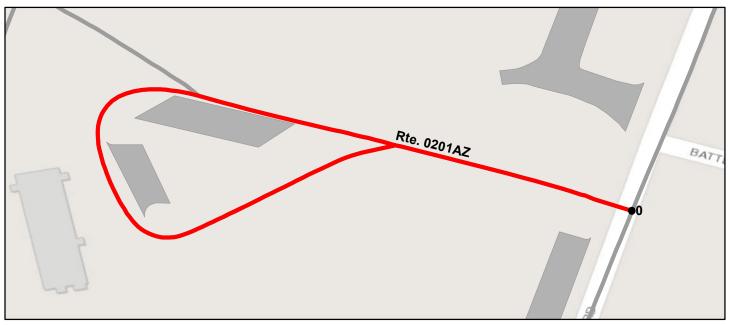
Note: The weighted average summary PCR value is calculated from only the sections of road where the PCR was collected. The overall PCR for the summary route may not reflect individual subcomponent ratings.

summary route may not re	enect marvidual subcom	ponent ratings.								
	Route C	Condition Leg	end – Pav	ement Cond	ition Rating (	PCR)				
Poor (0 - 60)	Fair (6	1- 84)	Good	(85 - 94)	Excellent (	95 - 100)	Not Ra	ted		
	See Appendix for definitions and formulas									
Inspection Date:	12/11/2020									
Paved Length (Miles): 0.14										
Surface Type:	ASPHALT	Route Summ	ary			-				
Roadway Condition I	Information									
Pavement Condition	Rating (PCR)	28								
Lane & Width Inform	nation									
Number of Lanes		2								
Paved Width (ft)		11.9								
Lane Width (ft)		11.9								

**ROUTE 0201AZ: BUILDING 247 ROAD A** 

Subcomponent of Route FOMR-0201ZZ

Data Collection Vehicle (DCV) Rating

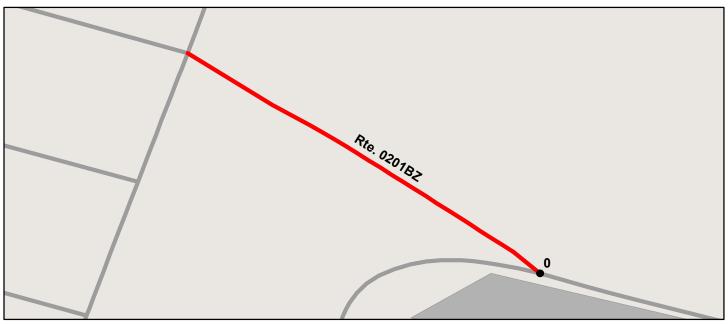


	<b>Route Condition</b>	Legend – Pay	ement Condi	ition Rating (	PCR)		
Poor (0 - 60)	Fair (61- 84)		(85 - 94)	Excellent (		Not Ra	ted
Colors on map repre	` '		× /	`			
Inspection Date: 12/11/202		g Section MP					
Paved Length (Miles): 0.12	Section I	ength (MI)	0.12				
Surface Type: ASPHAL	T Route Su	mmary					
Roadway Condition Informatio	n						
Pavement Condition Rating (PC	R)	32	32				
Surface Condition Rating (SCR)		32	32				
Roughness Condition Index (RCI)	)	N/A	N/A				
Distress Index Values							
Structural Crack Index		90	90				
Alligator Crack Index		99	99				
Longitudinal Crack Index		91	91				
Transverse Cracking Index		32	32				
Patching Index		97	97				
Rutting Index		95	95				
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				

**ROUTE 0201BZ: BUILDING 247 ROAD B** 

Subcomponent of Route FOMR-0201ZZ

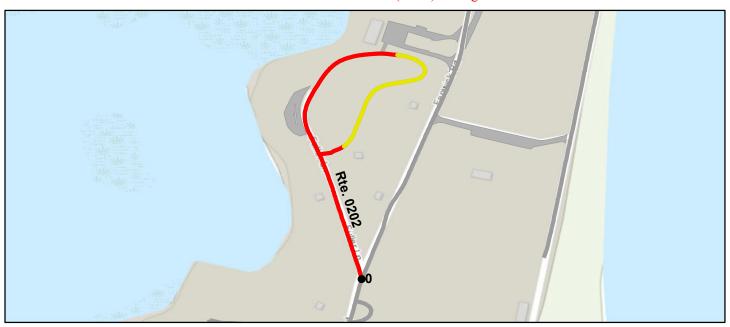
Data Collection Vehicle (DCV) Rating



	Route (	Condition Legend – Pav	ement Condi	ition Rating (	PCR)		
Poor (0 - 60	_		(85 - 94)	Excellent (		Not Ra	ted
Colors	on map represent con-	dition scores at 0.10-mile	intervals. Se	e Appendix fo	or definitions	and formulas.	
Inspection Date:	12/11/2020	<b>Beginning Section MP</b>	0				
Paved Length (Mile	es): 0.02	Section Length (MI)	0.02				
Surface Type:	ASPHALT	Route Summary					
Roadway Condition	n Information						
Pavement Conditio	on Rating (PCR)	0	0				
Surface Condition R	Rating (SCR)	0	0				
Roughness Conditio	on Index (RCI)	N/A	N/A				
Distress Index Valu	es						
Structural Crack In	ıdex	60	60				
Alligator Crack Inc	dex	100	100				
Longitudinal Crack	x Index	60	60				
Transverse Crackin	ng Index	0	0				
Patching Index		100	100				
Rutting Index		97	97				
International Rougi	hness Index (IRI)	N/A	N/A				
Lane & Width Info	rmation						
Number of Lanes		1	1				
Paved Width (ft)		11.1	11.1				
Lane Width (ft)		11.1	11.1				

**ROUTE 0202: FULLER LANE** 

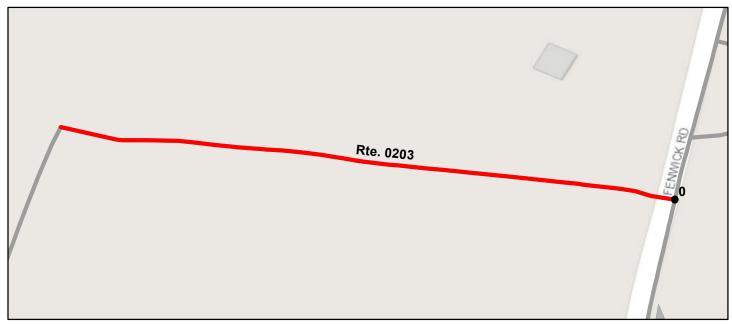
#### Data Collection Vehicle (DCV) Rating



	Route (	Condition Legend – Pav	ement Condi	ition Rating (	PCR)		
Poor (0 - 6			(85 - 94)	Excellent (		Not Ra	ted
Colors	on map represent con	dition scores at 0.10-mile	intervals. Se	e Appendix fo	or definitions	and formulas.	
Inspection Date:	12/11/2020	<b>Beginning Section MP</b>	0				
Paved Length (Mil	les): 0.31	Section Length (MI)	0.31				
Surface Type:	ASPHALT	Route Summary		!	!	Į.	
Roadway Conditio	n Information						
Pavement Condition	on Rating (PCR)	64	64				
Surface Condition I	Rating (SCR)	64	64				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	ies						
Structural Crack In	ndex	85	85				
Alligator Crack In	dex	98	98				
Longitudinal Crac	k Index	87	87				
Transverse Cracki	ng Index	64	64				
Patching Index		99	99				
Rutting Index		95	95				
International Roug	ghness Index (IRI)	N/A	N/A				
Lane & Width Info	ormation						
Number of Lanes		1	1				
Paved Width (ft)		15.3	15.3				
Lane Width (ft)		15.3	15.3				

#### ROUTE 0203: NORTH END WALKER AIRFIELD ROAD

## Data Collection Vehicle (DCV) 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 – Pav	ement Cond	ition Rating (	PCR)		
Poor (0 - 6			(85 - 94)	Excellent (9		Not Ra	ted
Colors	on map represent con	dition scores at 0.10-mile	intervals. Se	e Appendix fo	r definitions	and formulas.	
Inspection Date:	12/11/2020	<b>Beginning Section MP</b>	0				
Paved Length (Mil	les): 0.06	Section Length (MI)	0.07				
Surface Type:	ASPHALT	Route Summary		•		•	
Roadway Conditio	n Information						
Pavement Condition	on Rating (PCR)	30	30				
Surface Condition I	Rating (SCR)	N/A	N/A				
Roughness Condition	on Index (RCI)	N/A	N/A				
Distress Index Valu	ues						
Structural Crack In	ndex	N/A	N/A				
Alligator Crack In	dex	N/A	N/A				
Longitudinal Crac	k Index	N/A	N/A				
Transverse Cracki	ng Index	N/A	N/A				
Patching Index		N/A	N/A				
Rutting Index		N/A	N/A				
International Roug	ghness Index (IRI)	N/A	N/A				
Lane & Width Info	ormation						
Number of Lanes		1	1				
Paved Width (ft)		10.8	10.8				
Lane Width (ft)		10.8	10.8				

MANUALLY RATED DUE TO BADLY DEGRADED ASPHALT

## ROUTE 0204ZZ: GULLICK DRIVE SOUTH AND NORTH SECTION

**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.

summary route may not re	Ticct muividuai subcom	ponent ratings.						
Route Condition Legend – Pavement Condition Rating (PCR)								
Poor (0 - 60)	Fair (61	<b>1-84</b> )	Good (	(85 - 94)	Excellent (	95 - 100)	Not Ra	ted
		See Appen	dix for def	initions and f	ormulas			
Inspection Date:	12/11/2020							
Paved Length (Miles)	<b>):</b> 0.91							
Surface Type:	ASPHALT	Route Summ	ary			•		
Roadway Condition I	Information							
Pavement Condition	Rating (PCR)	10						
Lane & Width Information								
Number of Lanes		1						
Paved Width (ft)		27.8						
Lane Width (ft)		13.9						

## ROUTE 0204AZ: GULLICK DRIVE SOUTH SECTION

Subcomponent of Route FOMR-0204ZZ

Data Collection Vehicle (DCV) Rating



Б	Route Condition Legend – Pavement Condition Rating (PCR)					
		ood (85 - 94)	Excellent (95 - 100)	Not Rated		
` /	ent condition scores at 0.10-	· · · · · · · · · · · · · · · · · · ·				
<b>Inspection Date:</b> 12/11/2020	Beginning Section	<b>MP</b> 0				
Paved Length (Miles): 0.49	Section Length (M	<b>II)</b> 0.48				
Surface Type: ASPHALT	Route Summary		!			
Roadway Condition Information						
Pavement Condition Rating (PCR	) 20	20				
Surface Condition Rating (SCR)	20	20				
Roughness Condition Index (RCI)	N/A	N/A				
Distress Index Values						
Structural Crack Index	57	57				
Alligator Crack Index	100	100				
Longitudinal Crack Index	57	57				
Transverse Cracking Index	20	20				
Patching Index	100	100				
Rutting Index	99	99				
International Roughness Index (II	N/A	N/A				
Lane & Width Information						
Number of Lanes	2	2				
Paved Width (ft)	27	27				
Lane Width (ft)	13.5	13.5				

## ROUTE 0204BZ: GULLICK DRIVE NORTH SECTION

Subcomponent of Route FOMR-0204ZZ

Data Collection Vehicle (DCV) Rating



	Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (6		(85 - 94)	Excellent (		Not Ra	ted
Colors on	map represent con-	dition scores at 0.10-mile	e intervals. Se	`	5	and formulas.	
Inspection Date:	12/11/2020	<b>Beginning Section MP</b>	0				
Paved Length (Miles):	0.43	Section Length (MI)	0.43				
Surface Type:	ASPHALT	Route Summary		•			
Roadway Condition In	nformation						
Pavement Condition F	Rating (PCR)	0	0				
Surface Condition Rati	ng (SCR)	0	0				
Roughness Condition I	ndex (RCI)	N/A	N/A				
Distress Index Values							
Structural Crack Index	X	0	0				
Alligator Crack Index		98	98				
Longitudinal Crack In	ıdex	0	0				
Transverse Cracking I	ndex	0	0				
Patching Index		88	88				
Rutting Index		92	92				
International Roughne	ess Index (IRI)	N/A	N/A				
Lane & Width Inform	ation						
Number of Lanes		2	2				
Paved Width (ft)		28.6	28.6				
Lane Width (ft)		14.3	14.3				

ROUTE 0207: WALKER AIRFIELD RUNWAY ROAD

## Data Collection Vehicle (DCV) Rating



	Route Condition Legend – Pavement Condition Rating (PCR)						
Poor (0 - 60)	Fair (6		(85 - 94)	Excellent (		Not Ra	ted
,	`	dition scores at 0.10-mile	× /	`			
Inspection Date:	12/11/2020	Beginning Section MP					
Paved Length (Miles):	0.52	Section Length (MI)	0.52				
Surface Type:	ASPHALT	Route Summary					
Roadway Condition In	ıformation						
Pavement Condition R	Rating (PCR)	74	74				
Surface Condition Ratio	ng (SCR)	74	74				
Roughness Condition In	ndex (RCI)	N/A	N/A				
Distress Index Values							
Structural Crack Index	ζ	91	91				
Alligator Crack Index		100	100				
Longitudinal Crack In	dex	91	91				
Transverse Cracking I	ndex	74	74				
Patching Index		100	100				
Rutting Index		99	99				
International Roughness Index (IRI)		N/A	N/A				
Lane & Width Inform	ation						
Number of Lanes		2	2				
Paved Width (ft)		50.1	50.1				
Lane Width (ft)		25	25				

# Section 6 Paved Parking Area Condition Rating Sheets



**Fort Monroe National Monument** 



ROUTE 0900ZZ: PARADE OVERFLOW PARKING AREAS

Summary Route Manual Rating

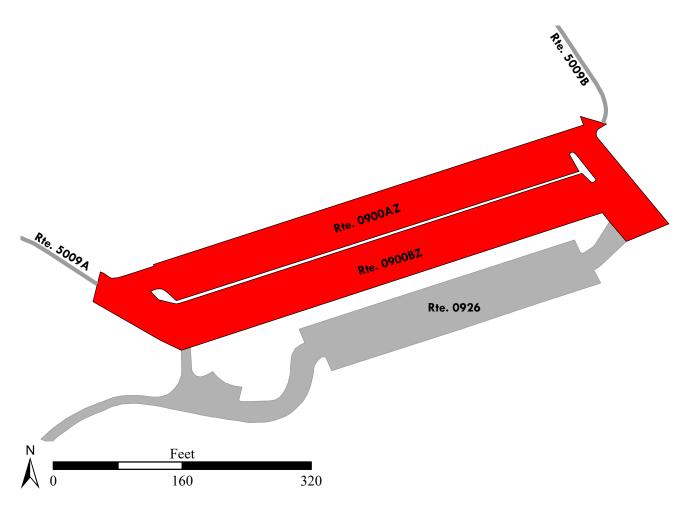
FROM ROUTE 5009A (PARADE GROUND PARKING WEST ACCESS ROAD) AND ROUTE 5010 (RUCKMAN ROAD)

TO ROUTE 5009B (PARADE GROUND PARKING EAST ACCESS ROAD)

<b>Inspection Date</b>	FMSS Number	User Access	Surface Type			
7/19/2019	248829	PUBLIC	ASPHALT			
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition R	ating / PCR			
56,633	0.975	SUMMARY	53			
	Route Condition Legend – Pavement Condition Rating (PCR)					
Poor (0 - 60)	Fair (61- 84) Good (	(85 - 94) <b>Excellent (95 - 10</b>	0) 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.

Rte. 0900ZZ (2 Subcomponents)



ROUTE 0900AZ: PARADE OVERFLOW PARKING A

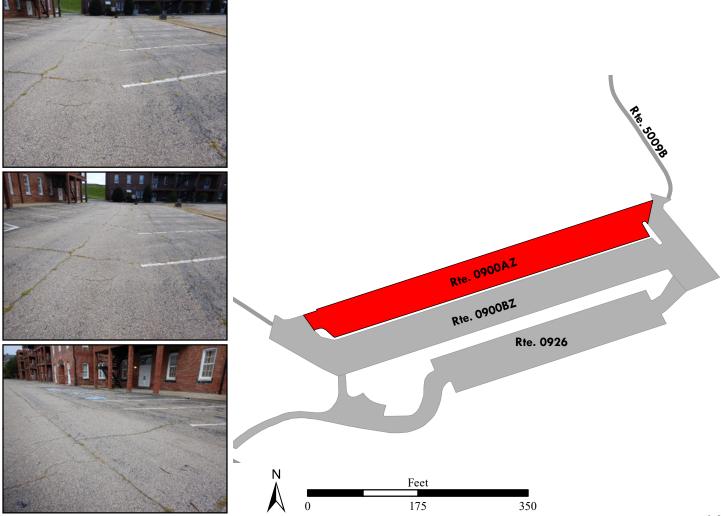
Subcomponent of Route FOMR-0900ZZ **Manual Rating** 

FROM ROUTE 0900BZ (PARADE OVERFLOW PARKING B)

TO ROUTE 0900BZ (PARADE OVERFLOW PARKING B)

Inspection Date	FMSS Number	User Access	Surface Type		
7/19/2019	248829	PUBLIC	ASPHALT		
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation		
22,964	0.395	3	MODERATE REPAIR		
Curb Type		Curb & Gutter Type			
CONC	CRETE	NO CURB AND GUTTER			
Pavement Rec	commendation	Condition R	ating / PCR		
HEAVY 3R T	REATMENTS	POOR / 53			
	Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	Fair (61- 84) Good (	(85 - 94) <b>Excellent (95 - 10</b>	0) Not Rated		

See Appendix for definitions and formulas



ROUTE 0900BZ: PARADE OVERFLOW PARKING B

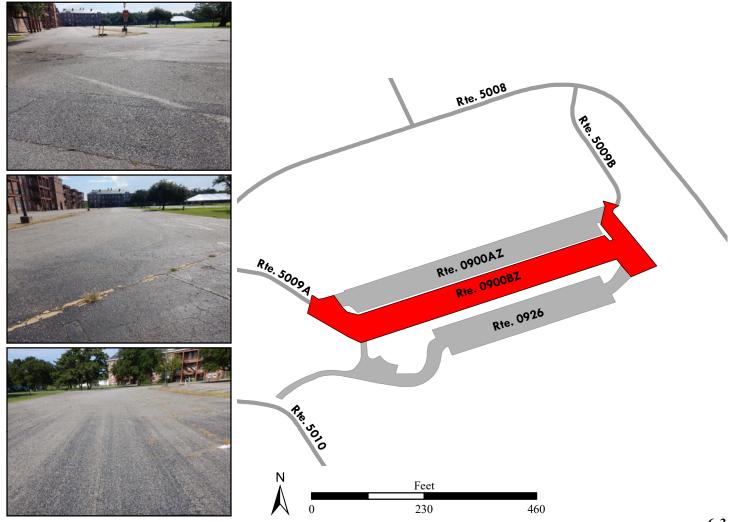
Subcomponent of Route FOMR-0900ZZ

Manual Rating

FROM END OF ROUTE 5009A (PARADE GROUND PARKING WEST ACCESS ROAD)

TO BEGINNING OF ROUTE 5009B (PARADE GROUND PARKING EAST ACCESS ROAD)

<b>Inspection Date</b>	FMSS Number	User Access	Surface Type		
7/19/2019	248829	PUBLIC	ASPHALT		
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation		
33,669	0.58	3	MODERATE REPAIR		
Curb	Туре	Curb & Gutter Type			
CONCRETE	AND WOOD	NO CURB AND GUTTER			
Pavement Rec	commendation	Condition Rating / PCR			
HEAVY 3R T	REATMENTS	POOR / 53			
Route Condition Legend – Pavement Condition Rating (PCR)					
Poor (0 - 60)	Fair (61- 84) Good (	(85 - 94) <b>Excellent</b> (95 - 10	0) Not Rated		
	See Appendix for definitions and formulas				



**ROUTE 0901A: QUARTERS 1 PARKING** 

#### Manual Rating

#### FROM ROUTE 5008 (BERNARD ROAD) ON LEFT

#### TO ROUTE 5008 (BERNARD ROAD) ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type	
7/19/2019		PUBLIC	BRICK PAVERS	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation	
4,414	0.076	NOT APPLICABLE	DO NOTHING	
Curk	Curb Type		utter Type	
NO (	CURB	CONCRETE		
Pavement Re	Pavement Recommendation		ating / PCR	
DO NO	OTHING	EXCELLENT / 97		
	D . C 11.1 T 1 D	C HI D I (DCD)		

Route Condition Legend - Pavement Condition Rating (PCR)

Poor (0 - 60)

Fair (61- 84)

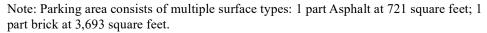
Good (85 - 94)

**Excellent (95 - 100)** 

Not Rated

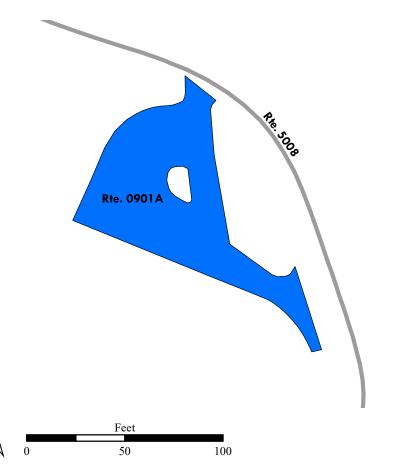
See Appendix for definitions and formulas











ROUTE 0905ZZ: DERUSSY FIELD PARKING AREAS

Summary Route Manual Rating

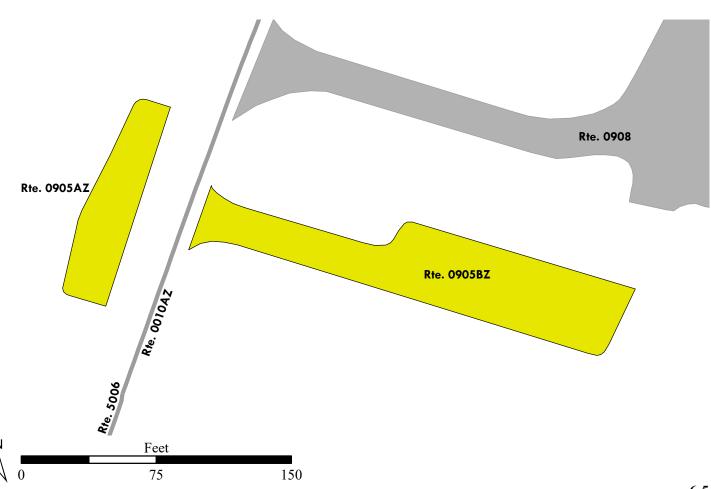
#### FROM ROUTE 0010ZZ (FENWICK ROADS) RIGHT

#### TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type			
7/19/2019	248461	PUBLIC	ASPHALT			
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition R	ating / PCR			
8,675	0.15	SUMMARY	7 / 80			
	Route Condition Legend – Pavement Condition Rating (PCR)					
Poor (0 - 60)	Fair (61- 84) Good (	(85 - 94) <b>Excellent (95 - 10</b>	0) 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.

Rte. 0905ZZ (2 Subcomponents)



ROUTE 0905AZ: DERUSSY FIELD PARKING A

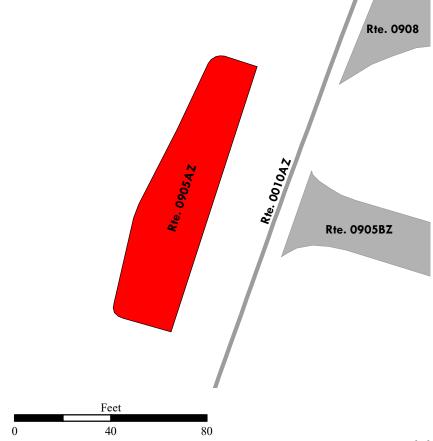
Subcomponent of Route FOMR-0905ZZ

Manual Rating

ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) AND ROUTE 0905BZ (DERUSSY FIELD PARKING B)

Inspection Date	FMSS Number	User Access	Surface Type		
7/19/2019	248461	PUBLIC	ASPHALT		
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation		
2,365	0.041	NOT APPLICABLE	NOT APPLICABLE		
Curb	Туре	Curb & Gutter Type			
NO (	CURB	NO CURB AND GUTTER			
Pavement Re	commendation	Condition Rating / PCR			
HEAVY 3R T	REATMENTS	MENTS POOR / 53			
	Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	Fair (61- 84) Good (	(85 - 94) <b>Excellent (95 - 10</b>	0) Not Rated		
	See Appendix for definitions and formulas				





ROUTE 0905BZ: DERUSSY FIELD PARKING B

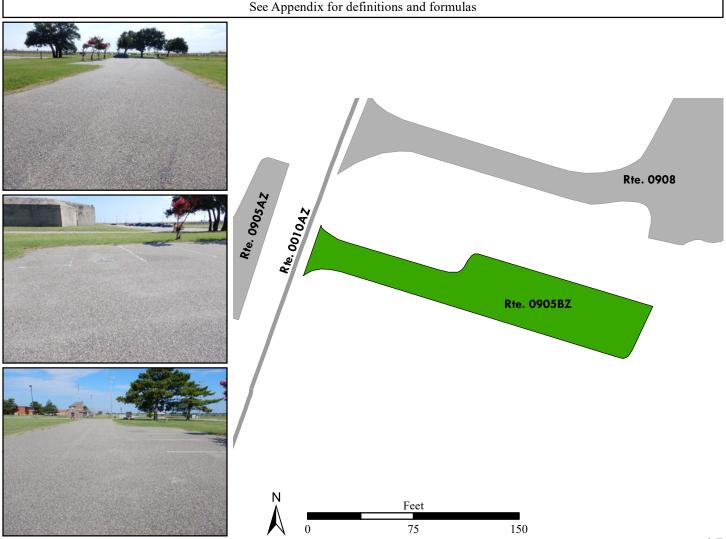
Subcomponent of Route FOMR-0905ZZ

Manual Rating

## FROM ROUTE 0010AZ (FENWICK ROAD) RIGHT

#### TO PARKING

<b>Inspection Date</b>	FMSS Number	User Access	Surface Type	
7/19/2019	248461	PUBLIC	ASPHALT	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation	
6,310	0.109	NOT APPLICABLE	NOT APPLICABLE	
Curb	Туре	Curb & Gutter Type		
NO C	CURB	NO CURB AND GUTTER		
Pavement Rec	commendation	Condition Rating / PCR		
PREVENTIVE N	MAINTENANCE	GOOD / 90		
Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	, ,	(85 - 94) Excellent (95 - 10	0) Not Rated	



ROUTE 0907ZZ: FENWICK ROAD PARKING AREAS

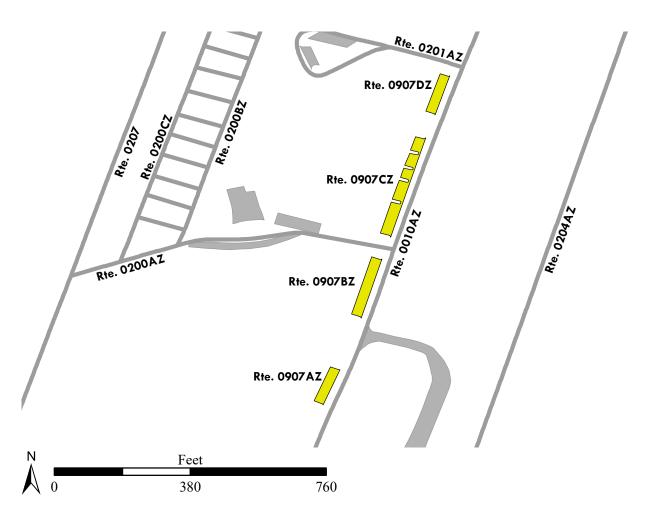
Summary Route Manual Rating

ADJACENT TO ROUTE 0010ZZ (FENWICK ROADS) ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type	
7/19/2019	248828	PUBLIC	ASPHALT	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition R	ating / PCR	
15,017	0.258	SUMMARY	7 / 73	
	Route Condition Legend – Pav	ement Condition Rating (PCR)		
Poor (0 - 60)	Fair (61- 84) Good	(85 - 94) <b>Excellent (95 - 10</b>	0) 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 0907AZ: FENWICK ROAD PARKING A

Subcomponent of Route FOMR-0907ZZ

Manual Rating

ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type	
7/19/2019	248828	PUBLIC	ASPHALT	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation	
2,332	0.04	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)

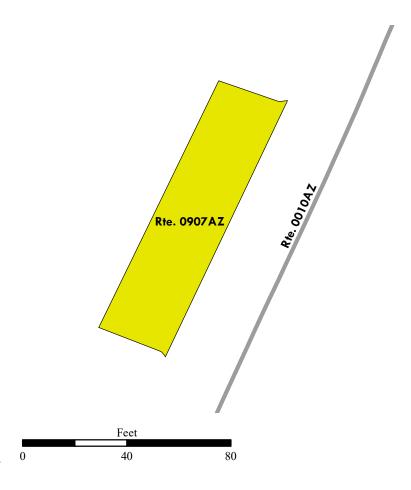
**Excellent (95 - 100)** 

**Not Rated** 

See Appendix for definitions and formulas







ROUTE 0907BZ: FENWICK ROAD PARKING B

Subcomponent of Route FOMR-0907ZZ

Manual Rating

ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type		
7/19/2019	248828	PUBLIC	ASPHALT		
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation		
3,900	0.067	NOT APPLICABLE	DO NOTHING		
Curb Type		Curb & Gutter Type			
NO CURB		CONCRETE			
Pavement Recommendation		Condition Rating / PCR			
LIGHT 3R TREATMENTS		FAIR / 73			
Douts Condition Logard Devement Condition Dating (DCD)					

**Route Condition Legend – Pavement Condition Rating (PCR)** 

Poor (0 - 60)

Fair (61- 84)

Good (85 - 94)

**Excellent (95 - 100)** 

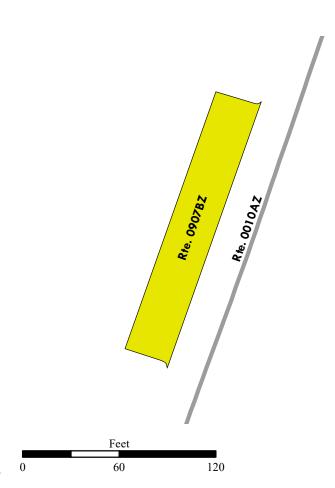
Not Rated

See Appendix for definitions and formulas









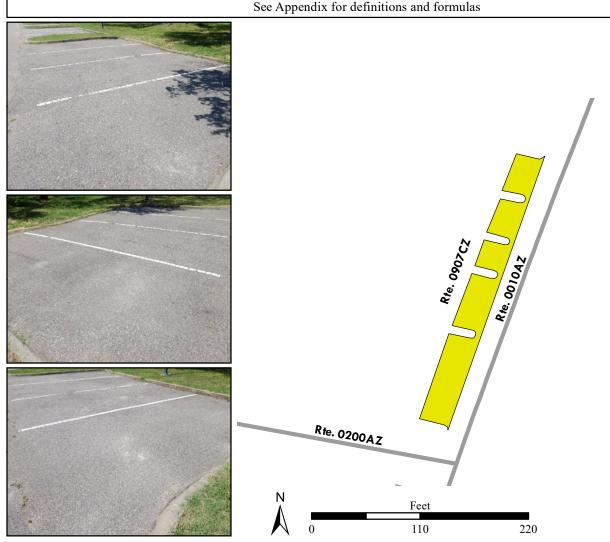
ROUTE 0907CZ: FENWICK ROAD PARKING C

Subcomponent of Route FOMR-0907ZZ

Manual Rating

ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) ON LEFT

<b>Inspection Date</b>	FMSS Number	User Access	Surface Type		
7/19/2019	248828	PUBLIC	ASPHALT		
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation		
6,283	0.108	6	DO NOTHING		
Curb Type		Curb & Gutter Type			
CONCRETE		CONCRETE			
Pavement Recommendation		Condition Rating / PCR			
LIGHT 3R TREATMENTS		FAIR / 73			
Route Condition Legend – Pavement Condition Rating (PCR)					
Poor (0 - 60)	, ,	(85 - 94) Excellent (95 - 10	0) Not Rated		



ROUTE 0907DZ: FENWICK ROAD PARKING D

Subcomponent of Route FOMR-0907ZZ

Manual Rating

ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type
7/19/2019	248828	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
2,502	0.043	NOT APPLICABLE	DO NOTHING
Curb Type		Curb & Gutter Type	
NO CURB		CONCRETE	
Pavement Recommendation		Condition Rating / PCR	
LIGHT 3R TREATMENTS		FAIR / 73	
Route Condition Legend – Pavement Condition Rating (PCR)			
Page (0. (0. (1. 94) Co. 1 (95. 94) Free Heat (95. 100)			

Poor (0 - 60)

Fair (61- 84)

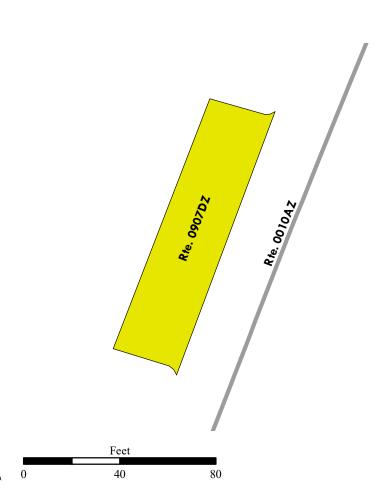
Good (85 - 94)

**Excellent (95 - 100)** 

Not Rated

See Appendix for definitions and formulas





**ROUTE 0908: BATTERY DERUSSY PARKING** 

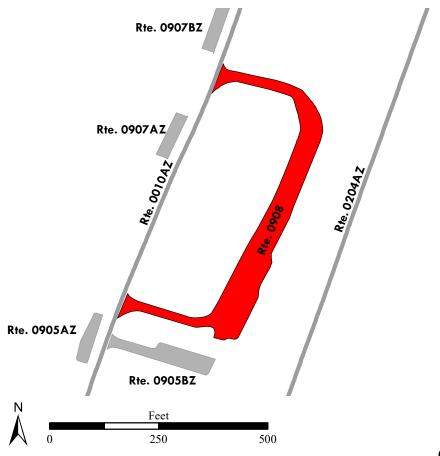
#### **Manual Rating**

## FROM ROUTE 0010ZZ (FENWICK ROADS)

#### TO ROUTE 0010ZZ (FENWICK ROADS)

<b>Inspection Date</b>	FMSS Number	User Access	Surface Type	
7/19/2019	248460	PUBLIC	ASPHALT	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation	
35,594	0.613	3	DO NOTHING	
Curb Type		Curb & Gutter Type		
CONCRETE		NO CURB AND GUTTER		
Pavement Recommendation		Condition Rating / PCR		
HEAVY 3R T	HEAVY 3R TREATMENTS		2 / 53	
Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	Fair (61- 84) Good (	(85 - 94) <b>Excellent (95 - 10</b>	0) Not Rated	
See Appendix for definitions and formulas				





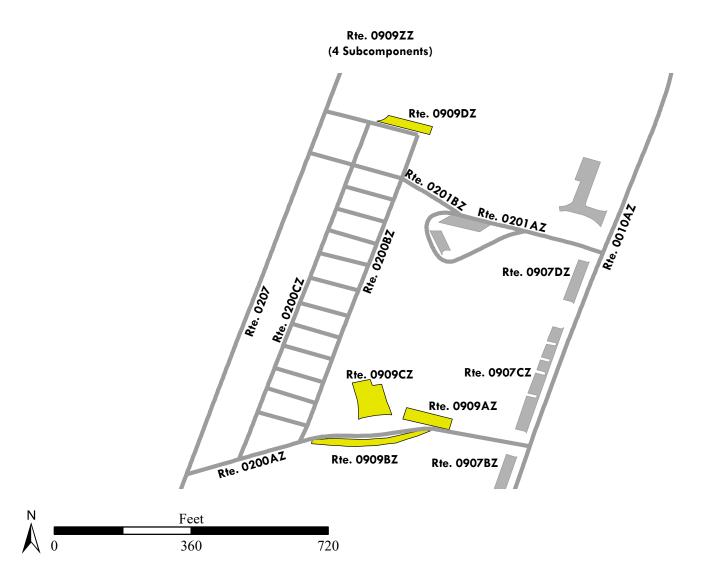
ROUTE 0909ZZ: WALKER AIRFIELD PARKING AREAS

Summary Route Manual Rating

ADJACENT TO ROUTE 0200ZZ (WALKER AIRFIELD TAXIWAY)

Inspection Date	FMSS Number	User Access	Surface Type	
7/19/2019	248818	PUBLIC	CONCRETE	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition R	ating / PCR	
14,813	0.255	SUMMARY	61	
Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	Fair (61- 84) Good	(85 - 94) Excellent (95 - 10	0) Not Rated	
	See Appendix for def	initions and formulas		

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

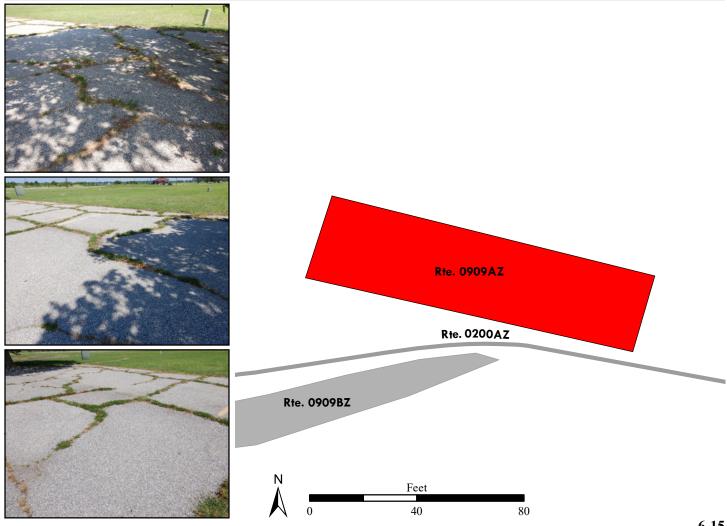


ROUTE 0909AZ: WALKER AIRFIELD PARKING A

Subcomponent of Route FOMR-0909ZZ **Manual Rating** 

## ADJACENT TO ROUTE 0200AZ (SOUTH END WALKER AIRFIELD ACCESS ROAD) ON RIGHT

<b>Inspection Date</b>	FMSS Number	User Access	Surface Type		
7/19/2019	248818	PUBLIC	ASPHALT		
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation		
3,068	0.053	NOT APPLICABLE	NOT APPLICABLE		
Curb	Curb Type		utter 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 Rate		0) Not Rated		
See Appendix for definitions and formulas					



ROUTE 0909BZ: WALKER AIRFIELD PARKING B

Subcomponent of Route FOMR-0909ZZ

Manual Rating

ADJACENT TO ROUTE 0200AZ (SOUTH END WALKER AIRFIELD ACCESS ROAD) ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type
7/19/2019	248818	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
3,897	0.067	NOT APPLICABLE	NOT APPLICABLE
	b Type	Curb & G	utter Type
NO	CURB	NO CURB A	ND GUTTER
Pavement Ro	ecommendation	Condition R	Rating / PCR
LIGHT 3R	TREATMENTS	FAIR	. / 73
		ement Condition Rating (PCR)	<u> </u>
Poor (0 - 60)		(85 - 94) <b>Excellent (95 - 10</b>	0) Not Rated
	See Appendix for def	initions and formulas	
	Rte. 0200PZ	Rte. 0909CZ  Rte. 0200AZ  Rte. 0909BZ	Rte. 0909AZ
	N o	Feet 100 200	

ROUTE 0909CZ: WALKER AIRFIELD PARKING C

Subcomponent of Route FOMR-0909ZZ

Manual Rating

## FROM ROUTE 0200AZ (SOUTH END WALKER AIRFIELD ACCESS ROAD) ON RIGHT

#### TO PARKING

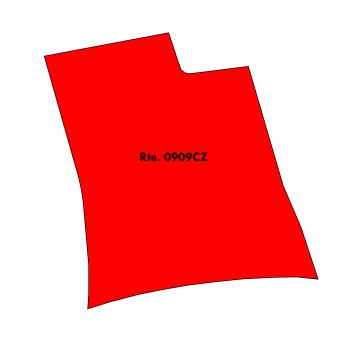
<b>Inspection Date</b>	FMSS Numb	oer	User Access		Surface Type
7/19/2019	248818		PUBLIC		CONCRETE
Area (Sq. Ft.)	Lane Miles (11' V	Widths)	Curb Reveal (Inches)	C	urb Recommendation
5,594	0.096		NOT APPLICABLE		NOT APPLICABLE
Curb Type			Curb & Gutter Type		
NO (	NO CURB AND GUTTER		UTTER		
Pavement Re	Pavement Recommendation		Condition Rating / PCR		
HEAVY 3R TREATMENTS		P	OOR / 53		
Route Condition Legend – Pavo			t Condition Rating (Po	CR)	
Poor (0 - 60)	Fair (61- 84)	Good (85 - 9	94) Excellent (95	<b>- 100</b> )	Not Rated

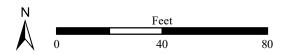
See Appendix for definitions and formulas











ROUTE 0909DZ: WALKER AIRFIELD PARKING D

Subcomponent of Route FOMR-0909ZZ

Manual Rating

ADJACENT TO ROUTE 0200EZ (WALKER AIRFIELD TAXIWAY CUT-THRU 1)

Inspection Date	FMSS Number	User Access	Surface Type	
7/19/2019	248818	PUBLIC	CONCRETE	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation	
2,254	0.039	NOT APPLICABLE	NOT APPLICABLE	
Cur	b Type	Curb & G	Gutter Type	
NO	NO CURB		NO CURB AND GUTTER	
Pavement Ro	ecommendation	nmendation Condition Rating / PCI		
LIGHT 3R	TREATMENTS	FAIR / 73		
	Route Condition Legend – Pav	ement Condition Rating (PCR)		
Poor (0 - 60)	Fair (61- 84) Good	(85 - 94) <b>Excellent</b> (95 - 10	Not Rated	
See Appendix for definitions and formulas				
Janes				



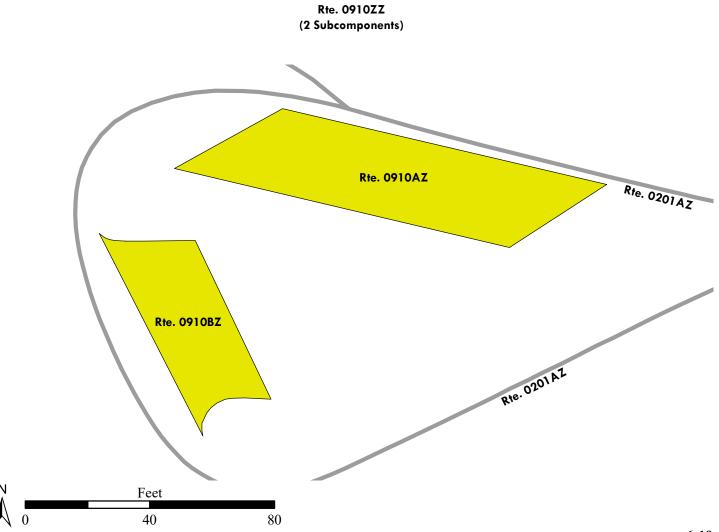
ROUTE 0910ZZ: BUILDING 247 PARKING AREAS

Summary Route Manual Rating

ADJACENT TO ROUTE 0201ZZ (BUILDING 247 ROADS)

Inspection Date	FMSS Number	User Access	Surface Type		
7/19/2019	248817	PUBLIC	ASPHALT		
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition R	ating / PCR		
3,543	0.061	SUMMARY	7 / 73		
	Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	Fair (61- 84) Good (	(85 - 94) Excellent (95 - 10	0) Not Rated		
	See Appendix for def	initions and formulas			

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



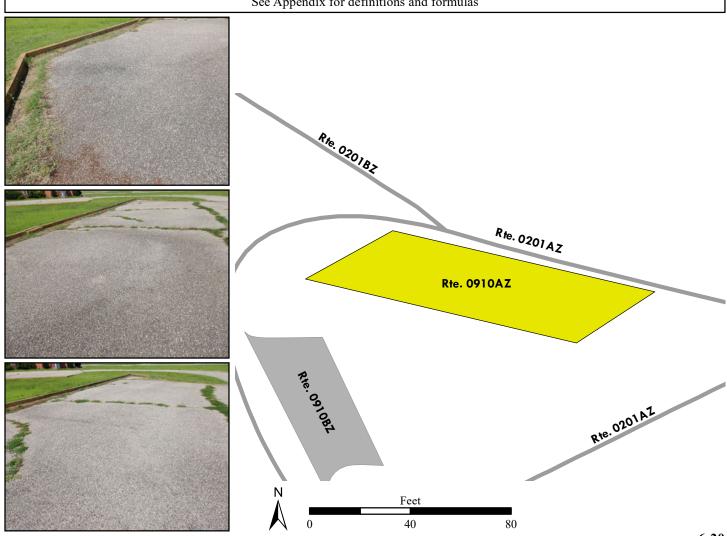
**ROUTE 0910AZ: BUILDING 247 PARKING A** 

Subcomponent of Route FOMR-0910ZZ

Manual Rating

ADJACENT TO ROUTE 0201AZ (BUILDING 247 ROAD A)

<b>Inspection Date</b>	FMSS Number	User Access	Surface Type
7/19/2019	248817	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
2,328	0.04	NOT APPLICABLE	LIGHT REPAIR
Curb Type		Curb & Gutter Type	
NO CURB		CONCRETE	
Pavement Recommendation		Condition Rating / PCR	
LIGHT 3R TI	REATMENTS	FAIR	/ 73
	Route Condition Legend - Pav	ement Condition Rating (PCR)	
Poor (0 - 60)	Fair (61- 84) Good (	(85 - 94) <b>Excellent (95 - 10</b>	0) Not Rated
See Appendix for definitions and formulas			



**ROUTE 0910BZ: BUILDING 247 PARKING B** 

Subcomponent of Route FOMR-0910ZZ

Manual Rating

ADJACENT TO ROUTE 0201AZ (BUILDING 247 ROAD A)

Inspection Date	FMSS Number	User Access	Surface Type		
7/19/2019	248817	PUBLIC	ASPHALT		
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation		
1,215	0.021	NOT APPLICABLE	DO NOTHING		
Curb	Curb Type		Curb & Gutter Type		
NO C	NO CURB		CONCRETE		
Pavement Recommendation		Condition Rating / PCR			
LIGHT 3R TI	REATMENTS	TS FAIR / 73			
	Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	, ,	(85 - 94) <b>Excellent</b> (95 - 10	0) Not Rated		
See Appendix for definitions and formulas					





## ROUTE 0911: BUILDING 211 AND BATTERY CHURCH PARKING

## **Manual Rating**

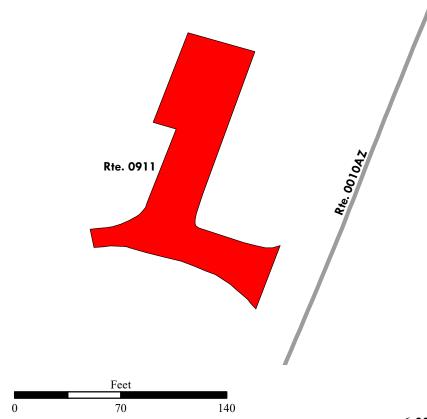
## FROM ROUTE 0010ZZ (FENWICK ROADS) ON LEFT

#### TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type	
7/19/2019	248459	PUBLIC	ASPHALT	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation	
6,250	0.108	NOT APPLICABLE	NOT APPLICABLE	
Curb Type		Curb & Gutter Type		
NO CURB		NO CURB AND GUTTER		
Pavement Recommendation		Condition R	ating / PCR	
HEAVY 3R TREATMENTS		POOR / 53		
Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	, ,	(85 - 94) <b>Excellent (95 - 10</b>	0) Not Rated	
See Appendix for definitions and formulas				







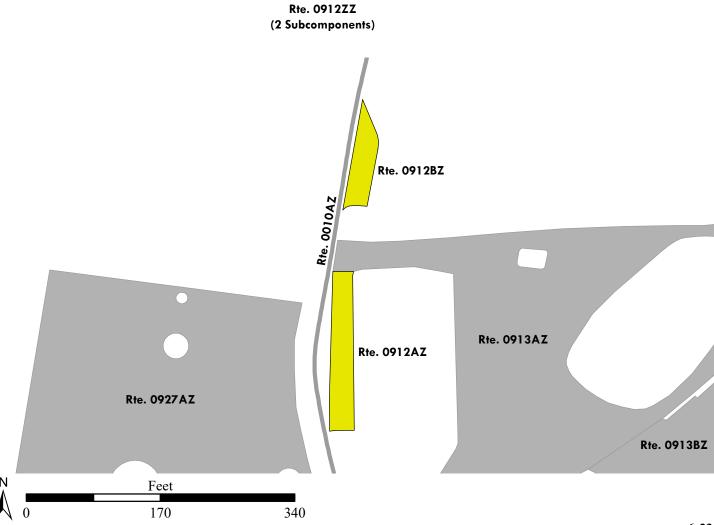
#### ROUTE 0912ZZ: FENWICK TENNIS COURT PARKING AREAS

Summary Route Manual Rating

ADJACENT TO ROUTE 0010ZZ (FENWICK ROADS)

Inspection Date	FMSS Number	User Access	Surface Type	
7/19/2019	248823	PUBLIC	ASPHALT	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition R	ating / PCR	
7,285	0.126	SUMMARY	7 / 73	
Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	Fair (61- 84) Good (	(85 - 94) Excellent (95 - 10	0) Not Rated	
	See Appendix for def	initions and formulas		

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



#### ROUTE 0912AZ: FENWICK TENNIS COURT PARKING A

Subcomponent of Route FOMR-0912ZZ

Manual Rating

ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) ON RIGHT

Inspection Date	FMSS Number	User Access	Surface Type	
7/19/2019	248823	PUBLIC	ASPHALT	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation	
4,633	0.08	NOT APPLICABLE	LIGHT REPAIR	
Cur	Curb Type		Curb & Gutter Type	
NO	CURB	CONCRETE		
Pavement Recommendation Condition Rating / PCR		ating / PCR		
LIGHT 3R TREATMENTS		FAIR / 73		
Route Condition Legend – Pavement Condition Rating (PCR)				

Poor (0 - 60)

Fair (61- 84)

See Appendix for definitions and formulas

Route Condition Legend – Pavement Condition Rating (PCR)

Excellent (95 - 100)

Not Rated

Rte. 0913AZ

Rte. 0927AZ

Rte. 0912AZ

#### ROUTE 0912BZ: FENWICK TENNIS COURT PARKING B

Subcomponent of Route FOMR-0912ZZ

Manual Rating

#### ADJACENT TO ROUTE 0010AZ (FENWICK ROAD) ON RIGHT

Inspection Date	FMSS Number	User Access	Surface Type
7/19/2019	248823	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
2,652	0.046	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)** 

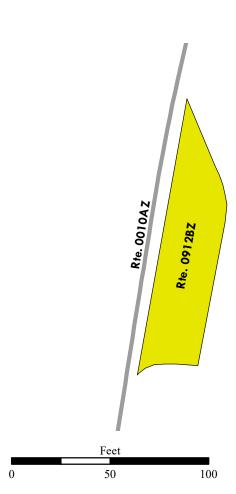
Not Rated

See Appendix for definitions and formulas









#### ROUTE 0913ZZ: PARADISE OCEAN CLUB PARKING AREAS

Summary Route Manual Rating

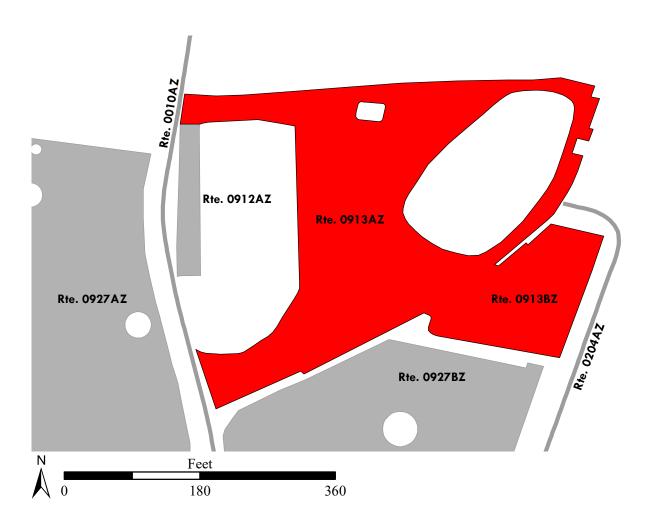
#### FROM ROUTE 0010ZZ (FENWICK ROADS) ON LEFT

#### TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type	
7/19/2019	248822	PUBLIC	ASPHALT	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition R	ating / PCR	
90,509	1.558	SUMMARY	53	
Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	Fair (61- 84) Good	(85 - 94) Excellent (95 - 10	0) 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.

Rte. 0913ZZ (2 Subcomponents)



ROUTE 0913AZ: PARADISE OCEAN CLUB PARKING

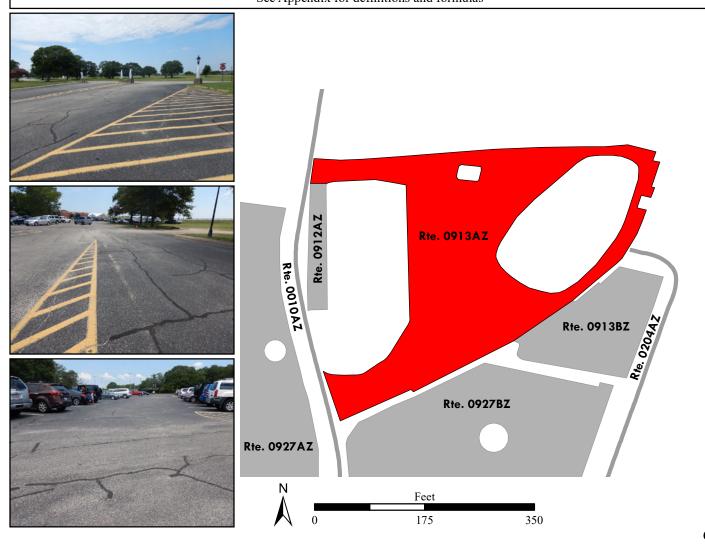
Subcomponent of Route FOMR-0913ZZ

Manual Rating

FROM ROUTE 0010AZ (FENWICK ROAD) ON LEFT

TO ROUTE 0010AZ (FENWICK ROAD) ON LEFT

<b>Inspection Date</b>	FMSS Number	User Access	Surface Type		
7/19/2019	248822	PUBLIC	ASPHALT		
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation		
71,506	1.231	4	DO NOTHING		
Curb Type		Curb & Gutter Type			
CONCRETE		CONCRETE			
Pavement Recommendation Condition Rating / PCR		ating / PCR			
HEAVY 3R TREATMENTS POOR / 53		2 / 53			
	Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	Fair (61- 84) Good (	(85 - 94) <b>Excellent (95 - 10</b>	0) Not Rated		
See Appendix for definitions and formulas					



## ROUTE 0913BZ: PARADISE OCEAN CLUB OVERFLOW PARKING

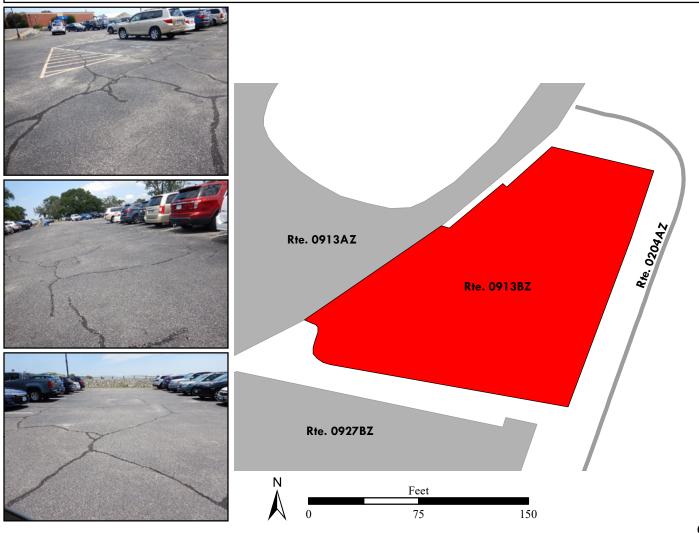
Subcomponent of Route FOMR-0913ZZ

Manual Rating

## FROM ROUTE 0913AZ (PARADISE OCEAN CLUB PARKING)

#### TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type	
7/19/2019	248822	PUBLIC	ASPHALT	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation	
19,003	0.327	NOT APPLICABLE	NOT APPLICABLE	
Curb Type		Curb & Gutter Type		
NO CURB		NO CURB AND GUTTER		
Pavement Rec	Pavement Recommendation Condition Rating / PCR		Rating / PCR	
HEAVY 3R T	HEAVY 3R TREATMENTS		POOR / 53	
Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	Fair (61- 84) Good (	(85 - 94) <b>Excellent</b> (95 - 10	0) Not Rated	
See Appendix for definitions and formulas				



## ROUTE 0916: FULLER LANE DUMP STATION PARKING

## Manual Rating

## ADJACENT TO ROUTE 0202 (FULLER LANE) ON LEFT

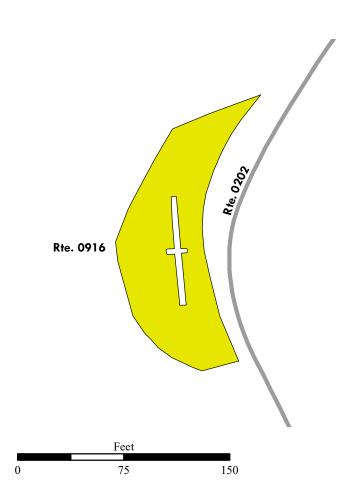
<b>Inspection Date</b>	FMSS Number	User Access	Surface Type
7/19/2019	248560	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
7,431	0.128	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB AND GU		ND GUTTER	
Pavement Recommendation Condition Rating / PCR		ating / 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			0) Not Rated

See Appendix for definitions and formulas









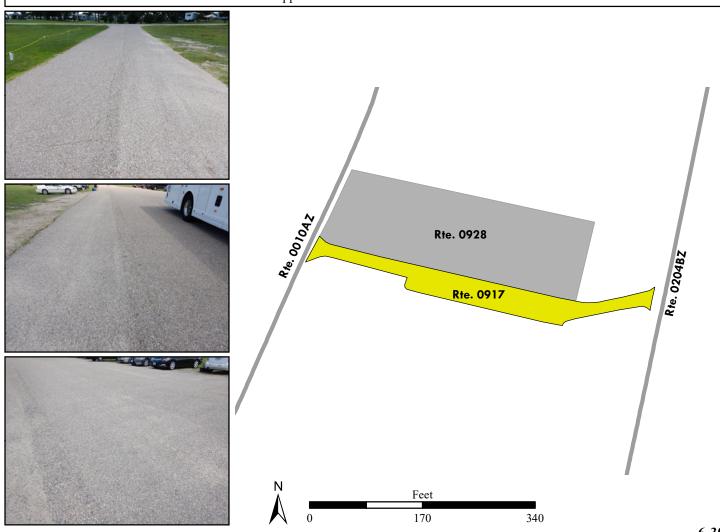
**ROUTE 0917: SHELTER #5 PARKING** 

## **Manual Rating**

## FROM ROUTE 0010ZZ (FENWICK ROADS)

#### TO ROUTE 0204ZZ (GULLICK DRIVE SOUTH AND NORTH SECTION)

<b>Inspection Date</b>	FMSS Number	User Access	Surface Type
7/19/2019	248462	PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
12,517	0.216	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO CURB		NO CURB AND GUTTER	
Pavement Recommendation		Condition R	ating / PCR
LIGHT 3R TI	REATMENTS	FAIR	/ 73
	Route Condition Legend - Pav	ement Condition Rating (PCR)	
Poor (0 - 60)	Fair (61- 84) Good (85 - 94) Excellent (95 - 100) Not Rated		
See Appendix for definitions and formulas			



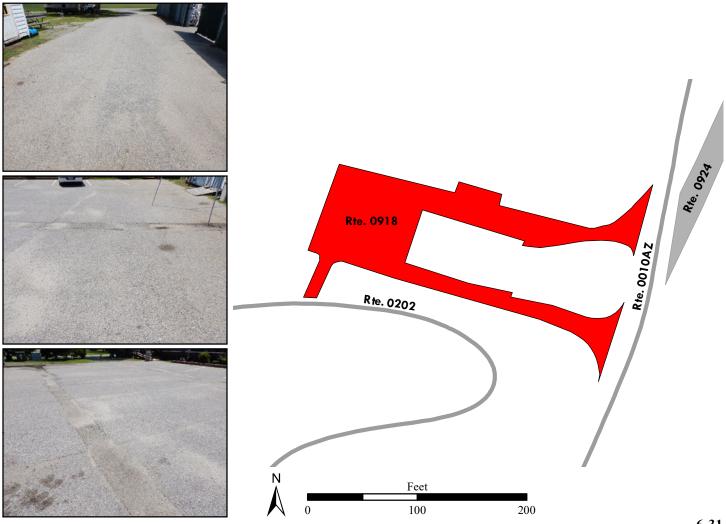
## ROUTE 0918: CAMPGROUND CAMPSTORE PARKING

## **Manual Rating**

## FROM ROUTE 0010ZZ (FENWICK ROADS) ON LEFT

#### TO ROUTE 0010ZZ (FENWICK ROADS) ON LEFT

Inspection Date	FMSS Number	User Access	Surface Type	
7/19/2019	248559	PUBLIC	ASPHALT	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation	
13,469	0.232	NOT APPLICABLE	NOT APPLICABLE	
Curb	Curb Type		Curb & Gutter Type	
NO (	NO CURB		NO CURB AND GUTTER	
Pavement Recommendation Condition Rating / PC		ating / PCR		
HEAVY 3R T	HEAVY 3R TREATMENTS		POOR / 53	
Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	Fair (61- 84) Good (	(85 - 94) <b>Excellent (95 - 10</b>	0) Not Rated	
See Appendix for definitions and formulas				



#### ROUTE 0919ZZ: MILL CREEK OVERLOOK PARKING AREAS

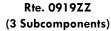
**Summary Route** Manual Rating

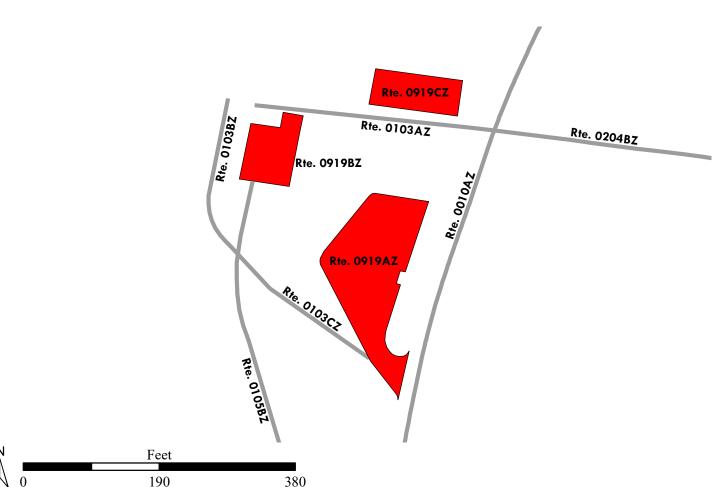
FROM ROUTE 0010ZZ (FENWICK ROADS) AND ROUTE 0103ZZ (MILL CREEK OVERLOOK ROADS)

#### TO PARKING

Inspection Date	FMSS Number	User Access	Surface Type	
7/19/2019		PUBLIC	ASPHALT	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Condition R	ating / PCR	
26,444	0.455	SUMMARY	57	
Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	Fair (61- 84) Good	(85 - 94) Excellent (95 - 10	0) 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 0919AZ: MILL CREEK OVERLOOK LOWER PARKING

Subcomponent of Route FOMR-0919ZZ Manual Rating

FROM ROUTE 0010AZ (FENWICK ROAD) ON LEFT

TO ROUTE 0103CZ (MILL CREEK OVERLOOK ROAD C)

<b>Inspection Date</b>	FMSS Number	User Access	Surface Type
7/19/2019		PUBLIC	ASPHALT
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation
16,541	0.285	NOT APPLICABLE	NOT APPLICABLE
Curb Type		Curb & Gutter Type	
NO (	NO CURB AND GUTTER		ND GUTTER
Pavement Recommendation		Condition Rating / PCR	
HEAVY 3R T	R TREATMENTS POOR / 53		2 / 53
Route Condition Legend – Pavement Condition Rating (PCR)			

Poor (0 - 60)

Fair (61-84)

Good (85 - 94)

**Excellent (95 - 100)** 

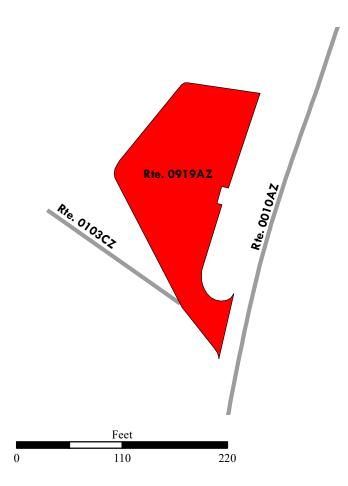
**Not Rated** 

See Appendix for definitions and formulas









#### ROUTE 0919BZ: MILL CREEK OVERLOOK UPPER PARKING

Subcomponent of Route FOMR-0919ZZ

Manual Rating

FROM ROUTE 0103AZ (MILL CREEK OVERLOOK ROAD A)

TO END OF ROUTE 0105BZ (INCENERATOR LANE UPPER)

<b>Inspection Date</b>	FMSS Number	User Access	Surface Type		
7/19/2019		PUBLIC	CONCRETE		
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation		
4,938	0.085	NOT APPLICABLE	NOT APPLICABLE		
Curb Type		Curb & Gutter Type			
NO CURB		NO CURB AND GUTTER			
Pavement Recommendation		Condition R	Rating / PCR		
HEAVY 3R T	HEAVY 3R TREATMENTS POOR / 53		2 / 53		
	Route Condition Legend – Pavement Condition Rating (PCR)				
Fair (61-84)  Good (85 - 94)  Excellent (95 - 100)  Not Rated  See Appendix for definitions and formulas					



## ROUTE 0919CZ: MILL CREEK OVERLOOK TRAILSIDE PARKING

Subcomponent of Route FOMR-0919ZZ

Manual Rating

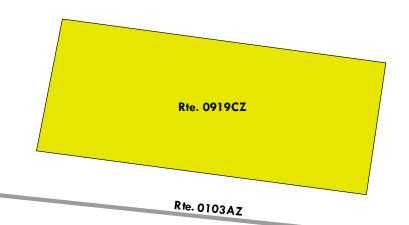
ADJACENT TO ROUTE 0103AZ (MILL CREEK OVERLOOK ROAD A)

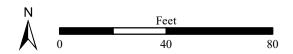
Inspection Date	FMSS Number	User Access	Surface Type		
7/19/2019		PUBLIC	CONCRETE		
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation		
4,965	0.085	NOT APPLICABLE	NOT APPLICABLE		
Curb Type		Curb & Gutter Type			
NO C	NO CURB		NO CURB AND GUTTER		
Pavement Recommendation Condition Rating / PCR		eating / PCR			
LIGHT 3R TI	REATMENTS	FAIR	/ 73		
	Route Condition Legend – Pavement Condition Rating (PCR)				
Poor (0 - 60)	Fair (61- 84) Good (	(85 - 94) <b>Excellent (95 - 10</b>	0) Not Rated		
See Appendix for definitions and formulas					











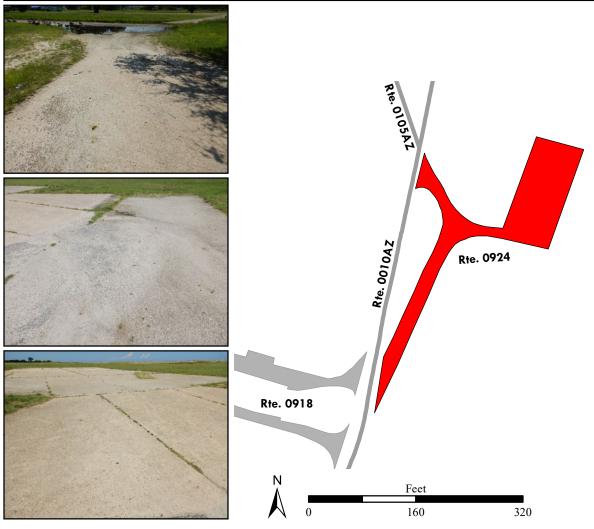
ROUTE 0924: NORTH BEACH FIELD PARKING

## **Manual Rating**

## FROM ROUTE 0010ZZ (FENWICK ROADS)

#### TO ROUTE 0010ZZ (FENWICK ROADS)

<b>Inspection Date</b>	FMSS Number	User Access	Surface Type					
7/19/2019		PUBLIC	CONCRETE					
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation					
17,037	0.293	NOT APPLICABLE	NOT APPLICABLE					
Curb	Туре	Curb & Gutter Type						
NO C	CURB	NO CURB AND GUTTER						
Pavement Rec	commendation	Condition Rating / PCR						
HEAVY 3R T	REATMENTS	POOR	2 / 53					
Route Condition Legend – Pavement Condition Rating (PCR)								
Poor (0 - 60)		(85 - 94) Excellent (95 - 10	0) Not Rated					
	See Appendix for definitions and formulas							



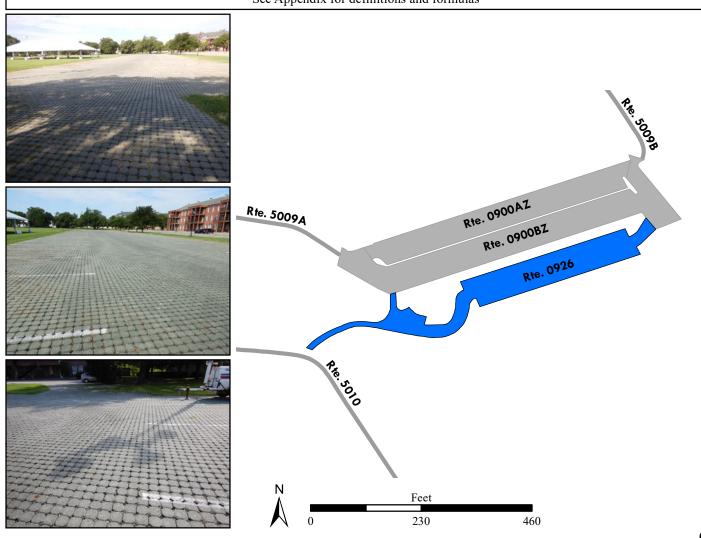
**ROUTE 0926: PARADE GROUND PARKING** 

## **Manual Rating**

## FROM ROUTE 0900ZZ (PARADE OVERFLOW PARKING AREAS)

#### TO ROUTE 5010 (RUCKMAN ROAD)

Inspection Date	FMSS Number	User Access	Surface Type	
7/19/2019	248830	PUBLIC	BRICK PAVERS	
Area (Sq. Ft.)	Lane Miles (11' Widths)	Curb Reveal (Inches)	Curb Recommendation	
26,506	0.456	NOT APPLICABLE	NOT APPLICABLE	
Curl	Туре	Curb & Gutter Type		
NO (	CURB	NO CURB AND GUTTER		
Pavement Re	commendation	Condition R	Rating / PCR	
DO NO	OTHING	EXCELLENT / 97		
	Route Condition Legend - Pav	ement Condition Rating (PCR)		
Poor (0 - 60)	Fair (61- 84) Good	(85 - 94) <b>Excellent</b> (95 - 10	0) Not Rated	
	See Appendix for det	finitions and formulas		



# Section 7 Road Milepost Information



**Fort Monroe National Monument** 



## **Road Milepost Information**

This report section contains road milepost information for all paved roads in the park that were collected with the Data Collection Vehicle (DCV). The milepost data is obtained from the DCV by using a distance measuring instrument (DMI) that is calibrated to record mileage to the nearest thousandth of a mile. Park roads that were manually rated did not have milepost data collected, and thus are not included in this report section.

For Cycle 6, the information presented in this section differs from previous RIP cycles in that it does not contain the roadside features inventories for the paved park roads. Some examples of the features previously collected are signs, culverts/drop inlets, guardrails, curbing, pullouts, etc. If the park was collected in a previous RIP cycle, then the latest features data can be obtained by referencing the following:

#### Where to find the latest Features Inventories for NPS Parks:

- For Small Parks (parks with less than 10 miles of paved roads):
  - o Refer to Cycle 5 data (collected 2010 2014)
    - Features were reported in Section 9 of the *Cycle 5* RIP report
    - Video of features can be viewed using the *PathViewVO* program and *Cycle 5* data
- For Large Parks (parks with more than 10 miles of paved roads):
  - o Refer to Cycle 4 data (collected 2006 2009)
    - Features were reported in Section 9 of the *Cycle 4* RIP report
    - Video of features can be viewed using the *VisiData* program and *Cycle 4* data
  - O Note: Features inventories were updated in Large Parks in *Cycle 5* only on a route by route basis if the route was new or modified in *Cycle 5*. If this is the case for a particular route, then features for the route can be obtained using the *PathViewVO* program and *Cycle 5* data (same as above for Small parks).

#### Milepost Events Verified in Cycle 6

In Cycle 6, the following events were collected and reported in Section 7 of this report:

- Intersections with roads and parking areas
- All bridges and culverts with BIP Numbers (bridge inspection program numbers)
- Mile Marker Signs
- One-Way travel directions
- Overpasses
- Tunnels
- Low Water Crossings (LWCR)
- Surface type changes
- Construction areas where no pavement condition data was obtained

#### **GPS Mileage Matching**

A consistent survey milepost and constant route length as recorded by the Data Collection Vehicle (DCV) is a challenge to maintain from one collection cycle to the next. The challenge is due to many factors such as driver characteristics, DMI calibration, tire pressure etc. After Cycle 4 (~2010), a decision was made to hold constant the length of roads so long as there was no physical change from reconstruction projects or realignments that would result in a change to the length of a road. Consequently, the "GPS Mileage Match" was implemented to specify which cycle the route length is being matched. Route mileages and GPS are matched to a previous collection whenever there is no physical change to a route alignment. The route mileage and GPS is not matched to previous cycles whenever it is determined that a road length and GPS needs to be updated. When this happens the GPS and length is updated to the cycle that displays the change, and that collection cycle is used as the matching cycle in subsequent collections of the road. Thus, the Cycle 6 GIS could be either the survey length collected in Cycle 4, Cycle 5, or Cycle 6 and therefore, may not match the survey milepost displayed in the latest Cycle 6 DCV video which is viewable in *PathView VO*.

The features inventories and road logs collected on NPS routes contain mileposts that are determined from the corresponding cycle that the GPS is matched to. Therefore, the mileposts contained in the Cycle 4 or 5 features inventories or the Cycle 6 road logs may not exactly match the survey milepost collected in the latest Cycle 6 video of the road.

#### **Locating Mile Marker Signs**

For routes that have mile marker signs along them, the milepost reported by RIP will most likely not line up exactly with the sign located in the field. This could be happening for many reasons, most likely due to either the error falling within the acceptable calibration range of the vehicle, or the level of accuracy that the mile marker signs were placed in the field.

Because mile marker signs are important features in many project plans and location descriptions, RIP is reporting locations of mile marker signs in three ways in Cycle 6:

- 1. Mileposts from Cycle 6 GIS: the official RIP milepost taken from the features inventories and the matching GPS/mileage cycle as described above. This is the milepost that should be used on project plans and when finding locations in the field
- 2. Mileposts from Cycle 6 Video: milepost shown to help locate the mile marker sign in the latest *PathView VO* video.
- 3. Latitude / Longitude: a constant way of locating a mile marker sign so long as the park has not moved the sign

The mileposts from Cycle 6 Video and GIS should be nearly the same, but on longer roads it has been observed that the Video milepost deviates more from the official GIS milepost that comes from the matching cycle.

## **ROUTE 0010AZ: FENWICK ROAD**

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.00	0.00	PARK BOUNDARY	N/A	N/A
0.00	0.00	INTERSECTION	N/A	ROUTE 5006 (FENWICK ROAD (NON NPS))
0.02	0.02	INTERSECTION	L	ROUTE 0905AZ (DERUSSY FIELD PARKING A)
0.02	0.02	INTERSECTION	R	ROUTE 0905BZ (DERUSSY FIELD PARKING B)
0.04	0.04	INTERSECTION	R	ROUTE 0908 (BATTERY DERUSSY PARKING)
0.05	0.05	CULVERT	N/A	N/A
0.11	0.11	INTERSECTION	L	ROUTE 0907AZ (FENWICK ROAD PARKING A)
0.14	0.14	INTERSECTION	R	ROUTE 0908 (BATTERY DERUSSY PARKING)
0.16	0.16	INTERSECTION	L	ROUTE 0907BZ (FENWICK ROAD PARKING B)
0.19	0.19	INTERSECTION	L	ROUTE 0200AZ (SOUTH END WALKER AIRFIELD ACCESS ROAD)
0.23	0.23	INTERSECTION	L	ROUTE 0907CZ (FENWICK ROAD PARKING C)
0.27	0.27	INTERSECTION	L	ROUTE 0907DZ (FENWICK ROAD PARKING D)
0.29	0.29	INTERSECTION	L	ROUTE 0201AZ (BUILDING 247 ROAD A)
0.30	0.30	INTERSECTION	L	ROUTE 0911 (BUILDING 211 AND BATTERY CHURCH PARKING)
0.40	0.40	INTERSECTION	R	ROUTE 0927BZ (PARADISE OCEAN CLUB OVERFLOW EAST PARKING)
0.41	0.41	INTERSECTION	L	ROUTE 0927AZ (PARADISE OCEAN CLUB OVERFLOW WEST PARKING)
0.42	0.42	INTERSECTION	R	ROUTE 0913AZ (PARADISE OCEAN CLUB PARKING)
0.46	0.46	INTERSECTION	R	ROUTE 0912AZ (FENWICK TENNIS COURT PARKING A)
0.48	0.48	INTERSECTION	R	ROUTE 0913AZ (PARADISE OCEAN CLUB PARKING)
0.51	0.51	INTERSECTION	R	ROUTE 0912BZ (FENWICK TENNIS COURT PARKING B)
0.54	0.54	INTERSECTION	L	ROUTE 0203 (NORTH END WALKER AIRFIELD ROAD)
0.55	0.55	INTERSECTION	R	ROUTE 0010CZ (BATTERY ANDERSON-RUGGLES TURNAROUND)
0.57	0.57	INTERSECTION	R	ROUTE 0010CZ (BATTERY ANDERSON-RUGGLES TURNAROUND)
0.59	0.59	INTERSECTION	L	ROUTE 0202 (FULLER LANE)
0.71	0.71	INTERSECTION	R	ROUTE 0917 (SHELTER #5 PARKING)
0.75	0.75	INTERSECTION	L	ROUTE 0918 (CAMPGROUND CAMPSTORE PARKING)

## **ROUTE 0010AZ: FENWICK ROAD**

Road logs are verified in Cycle 6 and mileposts for this route are matched to GPS collected in Cycle 6.

0.77INTERSECTIONLROUTE 0918 (CAMPGROUND CAMPSTORE PARKING)0.770.77INTERSECTIONRROUTE 0924 (NORTH BEACH FIELD PARKING)0.840.84INTERSECTIONRROUTE 0924 (NORTH BEACH FIELD PARKING)0.840.84INTERSECTIONLROUTE 0105AZ (INCENERATOR LANE LOWER)0.920.92INTERSECTIONLROUTE 0919AZ (MILL CREEK OVERLOOK LOWER)	FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.840.84INTERSECTIONRROUTE 0924 (NORTH BEACH FIELD PARKING)0.840.84INTERSECTIONLROUTE 0105AZ (INCENERATOR LANE LOWER)	0.77	0.77	INTERSECTION	L	ROUTE 0918 (CAMPGROUND CAMPSTORE PARKING)
0.84 0.84 INTERSECTION L ROUTE 0105AZ (INCENERATOR LANE LOWER)	0.77	0.77	INTERSECTION	R	ROUTE 0924 (NORTH BEACH FIELD PARKING)
	0.84	0.84	INTERSECTION	R	ROUTE 0924 (NORTH BEACH FIELD PARKING)
0.92 0.92 INTERSECTION L ROUTE 0919AZ (MILL CREEK OVERLOOK LOWER	0.84	0.84	INTERSECTION	L	ROUTE 0105AZ (INCENERATOR LANE LOWER)
PARKING)	0.92	0.92	INTERSECTION	L	
0.99 0.99 INTERSECTION R ROUTE 0204BZ (GULLICK DRIVE NORTH SECTION)	0.99	0.99	INTERSECTION	R	ROUTE 0204BZ (GULLICK DRIVE NORTH SECTION)
0.99 0.99 INTERSECTION L ROUTE 0103AZ (MILL CREEK OVERLOOK ROAD A)	0.99	0.99	INTERSECTION	L	ROUTE 0103AZ (MILL CREEK OVERLOOK ROAD A)
1.09 1.09 INTERSECTION L ROUTE 0010AZ (FENWICK ROAD)	1.09	1.09	INTERSECTION	L	ROUTE 0010AZ (FENWICK ROAD)
1.13 1.13 INTERSECTION L ROUTE 0010AZ (FENWICK ROAD)	1.13	1.13	INTERSECTION	L	ROUTE 0010AZ (FENWICK ROAD)
1.13 1.13 INTERSECTION R ROUTE 0010AZ (FENWICK ROAD)	1.13	1.13	INTERSECTION	R	ROUTE 0010AZ (FENWICK ROAD)

## **ROUTE 0010BZ: FENWICK ROAD (GATED)**

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.00	0.00	INTERSECTION	N/A	ROUTE 0010AZ (FENWICK ROAD)
0.06	0.06	INTERSECTION	L	ROUTE 0923AZ (DOG BEACH FIELD PARKING 1)
0.11	0.11	INTERSECTION	L	ROUTE 0923AZ (DOG BEACH FIELD PARKING 1)
0.15	0.15	INTERSECTION	L	ROUTE 0923BZ (DOG BEACH FIELD PARKING 2)
0.59	0.59	INTERSECTION	L	ROUTE 0010BZ (FENWICK ROAD (GATED))
0.59	0.59	INTERSECTION	L	ROUTE 0010BZ (FENWICK ROAD (GATED))
0.59	0.59	INTERSECTION	N/A	ROUTE 0923BZ (DOG BEACH FIELD PARKING 2)

#### ROUTE 0010CZ: BATTERY ANDERSON-RUGGLES TURNAROUND

Road logs are verified in Cycle 6 and mileposts for this route are matched to GPS collected in Cycle 6.

FROM MILEP	TO OST MILEPOST	r FEATURE	SIDE	COMMENT
MILE	OST MILLIOSI		SIDE	
0.00	0.00	INTERSECTION	L	ROUTE 0010AZ (FENWICK ROAD)
0.00	0.00	INTERSECTION	R	ROUTE 0010AZ (FENWICK ROAD)
0.02	0.02	INTERSECTION	L	ROUTE 0010AZ (FENWICK ROAD)
0.02	0.02	INTERSECTION	R	ROUTE 0010AZ (FENWICK ROAD)

#### ROUTE 0103AZ: MILL CREEK OVERLOOK ROAD A

Road logs are verified in Cycle 6 and mileposts for this route are matched to GPS collected in Cycle 5.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.00	0.00	INTERSECTION	R	ROUTE 0010AZ (FENWICK ROAD)
0.00	0.00	INTERSECTION	N/A	ROUTE 0204BZ (GULLICK DRIVE NORTH SECTION)
0.00	0.00	INTERSECTION	L	ROUTE 0010AZ (FENWICK ROAD)
0.02	0.02	INTERSECTION	R	ROUTE 0919CZ (MILL CREEK OVERLOOK TRAILSIDE PARKING)
0.03	0.03	INTERSECTION	L	ROUTE 0919BZ (MILL CREEK OVERLOOK UPPER PARKING)
0.05	0.05	INTERSECTION	N/A	ROUTE 0103BZ (MILL CREEK OVERLOOK ROAD B)

#### ROUTE 0200AZ: SOUTH END WALKER AIRFIELD ACCESS ROAD

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.00	0.00	INTERSECTION	L	ROUTE 0010AZ (FENWICK ROAD)
0.00	0.00	INTERSECTION	R	ROUTE 0010AZ (FENWICK ROAD)
0.04	0.04	INTERSECTION	R	ROUTE 0900AZ (PARADE OVERFLOW PARKING A)
0.06	0.06	INTERSECTION	L	ROUTE 0900BZ (PARADE OVERFLOW PARKING B)
0.06	0.06	INTERSECTION	R	ROUTE 0909CZ (WALKER AIRFIELD PARKING C)
0.09	0.09	INTERSECTION	R	ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)
0.11	0.11	INTERSECTION	R	ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)
0.13	0.13	INTERSECTION	L	ROUTE 0207 (WALKER AIRFIELD RUNWAY ROAD)
0.13	0.13	INTERSECTION	R	ROUTE 0207 (WALKER AIRFIELD RUNWAY ROAD)
•				·

## ROUTE 0200BZ: WALKER AIRFIELD TAXIWAY EAST

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.00	0.00	INTERSECTION	N/A	ROUTE 0909DZ (WALKER AIRFIELD PARKING D)
0.00	0.00	INTERSECTION	R	ROUTE 0200EZ (WALKER AIRFIELD TAXIWAY CUT-THRU 1)
0.02	0.02	INTERSECTION	L	ROUTE 0201BZ (BUILDING 247 ROAD B)
0.02	0.02	INTERSECTION	R	ROUTE 0200FZ (WALKER AIRFIELD TAXIWAY CUT-THRU 2)
0.03	0.03	INTERSECTION	R	ROUTE 0200GZ (WALKER AIRFIELD TAXIWAY CUT-THRU 3)
0.04	0.04	INTERSECTION	R	ROUTE 0200HZ (WALKER AIRFIELD TAXIWAY CUT-THRU 4)
0.05	0.05	INTERSECTION	R	ROUTE 0200IZ (WALKER AIRFIELD TAXIWAY CUT-THRU 5)
0.06	0.06	INTERSECTION	R	ROUTE 0200JZ (WALKER AIRFIELD TAXIWAY CUT-THRU 6)
0.08	0.08	INTERSECTION	R	ROUTE 0200KZ (WALKER AIRFIELD TAXIWAY CUT-THRU 7)
0.09	0.09	INTERSECTION	R	ROUTE 0200LZ (WALKER AIRFIELD TAXIWAY CUT-THRU 8)
0.10	0.10	INTERSECTION	R	ROUTE 0200MZ (WALKER AIRFIELD TAXIWAY CUT-THRU 9)
0.11	0.11	INTERSECTION	R	ROUTE 0200NZ (WALKER AIRFIELD TAXIWAY CUT-THRU 10)
0.12	0.12	INTERSECTION	R	ROUTE 0200OZ (WALKER AIRFIELD TAXIWAY CUT-THRU 11)
0.14	0.14	INTERSECTION	R	ROUTE 0200PZ (WALKER AIRFIELD TAXIWAY CUT-THRU 12)
0.15	0.15	INTERSECTION	R	ROUTE 0200QZ (WALKER AIRFIELD TAXIWAY CUT-THRU 13)
0.15	0.15	INTERSECTION	R	ROUTE 0200AZ (SOUTH END WALKER AIRFIELD ACCESS ROAD)
0.15	0.15	INTERSECTION	L	ROUTE 0200AZ (SOUTH END WALKER AIRFIELD ACCESS ROAD)

## ROUTE 0200CZ: WALKER AIRFIELD TAXIWAY WEST

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.00	0.00	INTERSECTION	R	ROUTE 0200EZ (WALKER AIRFIELD TAXIWAY CUT-THRU 1)
0.00	0.00	INTERSECTION	L	ROUTE 0200EZ (WALKER AIRFIELD TAXIWAY CUT-THRU 1)
0.02	0.02	INTERSECTION	R	ROUTE 0200FZ (WALKER AIRFIELD TAXIWAY CUT-THRU 2)
0.02	0.02	INTERSECTION	L	ROUTE 0200FZ (WALKER AIRFIELD TAXIWAY CUT-THRU 2)
0.03	0.03	INTERSECTION	L	ROUTE 0200GZ (WALKER AIRFIELD TAXIWAY CUT-THRU 3)
0.04	0.04	INTERSECTION	L	ROUTE 0200HZ (WALKER AIRFIELD TAXIWAY CUT-THRU 4)
0.05	0.05	INTERSECTION	L	ROUTE 0200IZ (WALKER AIRFIELD TAXIWAY CUT-THRU 5)
0.06	0.06	INTERSECTION	L	ROUTE 0200JZ (WALKER AIRFIELD TAXIWAY CUT-THRU 6)
0.08	0.08	INTERSECTION	L	ROUTE 0200KZ (WALKER AIRFIELD TAXIWAY CUT-THRU 7)
0.09	0.09	INTERSECTION	L	ROUTE 0200LZ (WALKER AIRFIELD TAXIWAY CUT-THRU 8)
0.10	0.10	INTERSECTION	L	ROUTE 0200MZ (WALKER AIRFIELD TAXIWAY CUT-THRU 9)
0.11	0.11	INTERSECTION	L	ROUTE 0200NZ (WALKER AIRFIELD TAXIWAY CUT-THRU 10)
0.12	0.12	INTERSECTION	L	ROUTE 0200OZ (WALKER AIRFIELD TAXIWAY CUT-THRU 11)
0.14	0.14	INTERSECTION	L	ROUTE 0200PZ (WALKER AIRFIELD TAXIWAY CUT-THRU 12)
0.15	0.15	INTERSECTION	L	ROUTE 0200QZ (WALKER AIRFIELD TAXIWAY CUT-THRU 13)
0.17	0.17	INTERSECTION	R	ROUTE 0200AZ (SOUTH END WALKER AIRFIELD ACCESS ROAD)
0.17	0.17	INTERSECTION	L	ROUTE 0200AZ (SOUTH END WALKER AIRFIELD ACCESS ROAD)

## **ROUTE 0200EZ: WALKER AIRFIELD TAXIWAY CUT-THRU 1**

Road logs are verified in Cycle 6 and mileposts for this route are matched to GPS collected in Cycle 5.

FROM	TO		CIDE	COMMENT
MILEPOST	MILEPOST	FEATURE	SIDE	COMMENT
0.00	0.00	INTERSECTION	L	ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)
0.01	0.01	INTERSECTION	R	ROUTE 0909DZ (WALKER AIRFIELD PARKING D)
0.02	0.02	INTERSECTION	L	ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)
0.03	0.03	INTERSECTION	L	ROUTE 0207 (WALKER AIRFIELD RUNWAY ROAD)
0.03	0.03	INTERSECTION	R	ROUTE 0207 (WALKER AIRFIELD RUNWAY ROAD)

#### ROUTE 0200FZ: WALKER AIRFIELD TAXIWAY CUT-THRU 2

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.00	0.00	INTERSECTION	N/A	ROUTE 0201BZ (BUILDING 247 ROAD B)
0.00	0.00	INTERSECTION	R	ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)
0.00	0.00	INTERSECTION	L	ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)
0.02	0.02	INTERSECTION	R	ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)
0.02	0.02	INTERSECTION	L	ROUTE 0200CZ (WALKER AIRFIELD TAXIWAY WEST)
0.03	0.03	INTERSECTION	L	ROUTE 0207 (WALKER AIRFIELD RUNWAY ROAD)
0.03	0.03	INTERSECTION	R	ROUTE 0207 (WALKER AIRFIELD RUNWAY ROAD)

## **ROUTE 0201AZ: BUILDING 247 ROAD A**

Road logs are verified in Cycle 6 and mileposts for this route are matched to GPS collected in Cycle 5.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.00	0.00	INTERSECTION	R	ROUTE 0010AZ (FENWICK ROAD)
0.00	0.00	INTERSECTION	L	ROUTE 0010AZ (FENWICK ROAD)
0.03	0.03	INTERSECTION	L	ROUTE 0201AZ (BUILDING 247 ROAD A)
0.05	0.05	INTERSECTION	L	ROUTE 0910AZ (BUILDING 247 PARKING A)
0.06	0.06	INTERSECTION	R	ROUTE 0201BZ (BUILDING 247 ROAD B)
0.08	0.08	INTERSECTION	L	ROUTE 0910BZ (BUILDING 247 PARKING B)
0.10	0.10	CULVERT	N/A	N/A
0.12	0.12	INTERSECTION	N/A	ROUTE 0201AZ (BUILDING 247 ROAD A)
0.12	0.12	INTERSECTION	L	ROUTE 0201AZ (BUILDING 247 ROAD A)

#### **ROUTE 0201BZ: BUILDING 247 ROAD B**

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.00	0.00	INTERSECTION	L	ROUTE 0201AZ (BUILDING 247 ROAD A)
0.00	0.00	INTERSECTION	N/A	ROUTE 0910AZ (BUILDING 247 PARKING A)
0.00	0.00	INTERSECTION	R	ROUTE 0201AZ (BUILDING 247 ROAD A)
0.02	0.02	INTERSECTION	L	ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)
0.02	0.02	INTERSECTION	R	ROUTE 0200BZ (WALKER AIRFIELD TAXIWAY EAST)
0.02	0.02	INTERSECTION	N/A	ROUTE 0200FZ (WALKER AIRFIELD TAXIWAY CUT-THRU 2)

# **FOMR: Route Milepost Log**

# **ROUTE 0202: FULLER LANE**

Road logs are verified in Cycle 6 and mileposts for this route are matched to GPS collected in Cycle 5.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.00	0.00	INTERSECTION	R	ROUTE 0010AZ (FENWICK ROAD)
0.00	0.00	INTERSECTION	L	ROUTE 0010AZ (FENWICK ROAD)
0.05	0.05	INTERSECTION	R	ROUTE 0915 (FULLER LANE PARKING)
0.09	0.09	INTERSECTION	R	ROUTE 0202 (FULLER LANE)
0.10	0.10	ONE-WAY START	N/A	N/A
0.12	0.12	INTERSECTION	L	ROUTE 0916 (FULLER LANE DUMP STATION PARKING)
0.19	0.19	INTERSECTION	L	ROUTE 0918 (CAMPGROUND CAMPSTORE PARKING)
0.31	0.31	INTERSECTION	R	ROUTE 0202 (FULLER LANE)
0.31	0.31	ONE-WAY END	N/A	N/A
0.31	0.31	INTERSECTION	L	ROUTE 0202 (FULLER LANE)

# **ROUTE 0203: NORTH END WALKER AIRFIELD ROAD**

Road logs are verified in Cycle 6 and mileposts for this route are matched to GPS collected in Cycle 6.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.00	0.00	INTERSECTION	R	ROUTE 0010AZ (FENWICK ROAD)
0.00	0.00	INTERSECTION	L	ROUTE 0010AZ (FENWICK ROAD)
0.02	0.02	INTERSECTION	R	ROUTE 0921 (NORTH END WALKER AIRFIELD ACCESS PARKING)
0.07	0.07	INTERSECTION	L	ROUTE 0207 (WALKER AIRFIELD RUNWAY ROAD)

# **FOMR: Route Milepost Log**

# **ROUTE 0204AZ: GULLICK DRIVE SOUTH SECTION**

Road logs are verified in Cycle 6 and mileposts for this route are matched to GPS collected in Cycle 5.

FROM	TO		G	
MILEPOST	MILEPOST	FEATURE	SIDE	COMMENT
0.00	0.00	INTERSECTION	N/A	ROUTE 0913AZ (PARADISE OCEAN CLUB PARKING)
0.03	0.03	INTERSECTION	R	ROUTE 0913BZ (PARADISE OCEAN CLUB OVERFLOW PARKING)
0.49	0.49	INTERSECTION	N/A	PAVED ROUTE (GULLICK DRIVE / NON NPS)
0.49	0.49	PARK BOUNDARY	N/A	N/A

# **ROUTE 0204BZ: GULLICK DRIVE NORTH SECTION**

Road logs are verified in Cycle 6 and mileposts for this route are matched to GPS collected in Cycle 5.

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.00	0.00	INTERSECTION	N/A	FROM FENCE LINE
0.00	0.00	PARK BOUNDARY	N/A	N/A
0.09	0.09	INTERSECTION	L	ROUTE 0917 (SHELTER #5 PARKING)
0.43	0.43	INTERSECTION	L	ROUTE 0010AZ (FENWICK ROAD)
0.43	0.43	INTERSECTION	N/A	ROUTE 0103AZ (MILL CREEK OVERLOOK ROAD A)
0.43	0.43	INTERSECTION	R	ROUTE 0010AZ (FENWICK ROAD)
0.43	0.43	PARK BOUNDARY	N/A	N/A

# **ROUTE 0207: WALKER AIRFIELD RUNWAY ROAD**

Road logs are verified in Cycle 6 and mileposts for this route are matched to GPS collected in Cycle 5.

FRO MIL		TO MILEPOST	FEATURE	SIDE	COMMENT
0.00	)	0.00	INTERSECTION	L	ROUTE 0203 (NORTH END WALKER AIRFIELD ROAD)
0.20	)	0.20	INTERSECTION	L	ROUTE 0200EZ (WALKER AIRFIELD TAXIWAY CUT-THRU 1)
0.22	2	0.22	INTERSECTION	L	ROUTE 0200FZ (WALKER AIRFIELD TAXIWAY CUT-THRU 2)
0.38	3	0.38	INTERSECTION	L	ROUTE 0200AZ (SOUTH END WALKER AIRFIELD ACCESS ROAD)
0.52	2	0.52	INTERSECTION	N/A	TO DEAD END AT BASKETBALL COURT

# Section 8 Appendix



**Fort Monroe National Monument** 



# 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 ultrathin 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:

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

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

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

<sup>\*</sup>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	CRACK PATTERN			
	SEVERITY	LOW	MED	HIGH	
CD A CIZ	LOW	LOW	MED	HIGH	
CRACK WIDTH	MED	MED	MED	HIGH	
WIDIII	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:

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

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

# **Longitudinal Crack Index**

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

#### Where:

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

length of respective longitudinal cracking (0.02 mile)\*(105.6 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:

Total length of transverse cracks
Lane width

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

## **Patching Index**

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

#### Where:

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

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

Percent of total area is computed as:

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

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

There are no severity levels for patching. It either exists or does not. In PATCH\_INDEX, the denominator 80 is the Maximum Allowable Extent (MAE) for each severity. In other words, we will allow up to 80% patching for a 0.02 interval before failure. As you can see, if patching/potholes reaches MAE the resulting index value is 60, or failure.

# **Rutting Index**

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

#### Where:

20 rut depth measurements are taken per 0.02 interval for each of 2 wheel paths (left and right), resulting in a total of 40 measurements taken for both wheel paths. Each wheelpath is analyzed independently for rut severities. The values %LOW, %MED and %HI 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:

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

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)**

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

#### Where:

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

Average IRI is computed as:

There is no applicable threshold for failure for this index.

# **Roughness Condition Index (Concrete)**

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

For concrete, PCR = RCI

# **Surface Condition Rating Index**

**SCR** = Lowest Index Value Of: [SC\_INDEX, TC\_INDEX, PATCH\_INDEX, RUT\_INDEX]

**Note:** The modified SCR equation above combines AC\_INDEX and LC\_INDEX, and considers that a single AC/LC index value of the Structural Crack Index (SC\_INDEX). The lowest of the four computed index values (SC\_INDEX, TC\_INDEX, PATCH\_INDEX, or RUT\_INDEX) becomes the SCR.

#### Where:

See above for determinations of SC\_INDEX, TC\_INDEX, PATCH\_INDEX and RUT\_INDEX.

The threshold for failure for this index is SCR = 60.Data Collection Vehicle Subsystems

Data on paved roads 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	
Aperture Range F 1.8 – Infinity (P-Iris		
Iris range	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		
<b>Surface Image Specifications</b>		
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	
<b>Rutting Specifications</b>		
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
  - o Rating based on percentage of road surface affected
- Longitudinal Cracking
  - o Rating based on severity level (crack width) and percentage of road section length of longitudinal cracks
- Transverse Cracking
  - o Rating based on crack width, crack spacing, and percentage of surface affected
- Patching
  - o Rating based on percentage of road surface affected
- Rutting
  - o Rating based on percentage of road section length affected by visible rutting (>1 inch depth) that requires remediation
- Roughness
  - o 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 is 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  $\geq 0.25$  inches

Number of cracks is computed as:

Total length of transverse cracks/Lane width

# **Patching Index for Manual Rating:**

Where:

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

# **Rutting Index for Manual Rating:**

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

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

# **Concrete Parking Distress Types**

- Slab Faulting at Joints
  - o Rating based on height differential between adjacent slabs or pieces of broken slabs
- Slab Cracking and breakup
  - o Rating based on quantity of cracks and if slab is acting to able distribute load as designed
- Surface Delamination and Pop-outs
  - o Rating based on percentage of road surface affected to include pop-outs, spalls and surface delamination
- Joint Distresses
  - o Rating based on sealant condition and concrete distresses at/or adjacent to joints
- Patching
  - o 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%:
  - o DO NOTHING
- Overall curb damage ranging 5%-20%
  - o LIGHT REPAIR
- Overall curb damage ranging 20%-50%
  - o MODERATE REPAIR
- Overall curb damage greater than 50%:
  - o 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 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.
  - o GPS will be provided as Shapefiles and KMLs
  - o All GPS data related to road collection with 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.
  - o 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.
  - o 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 programing 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