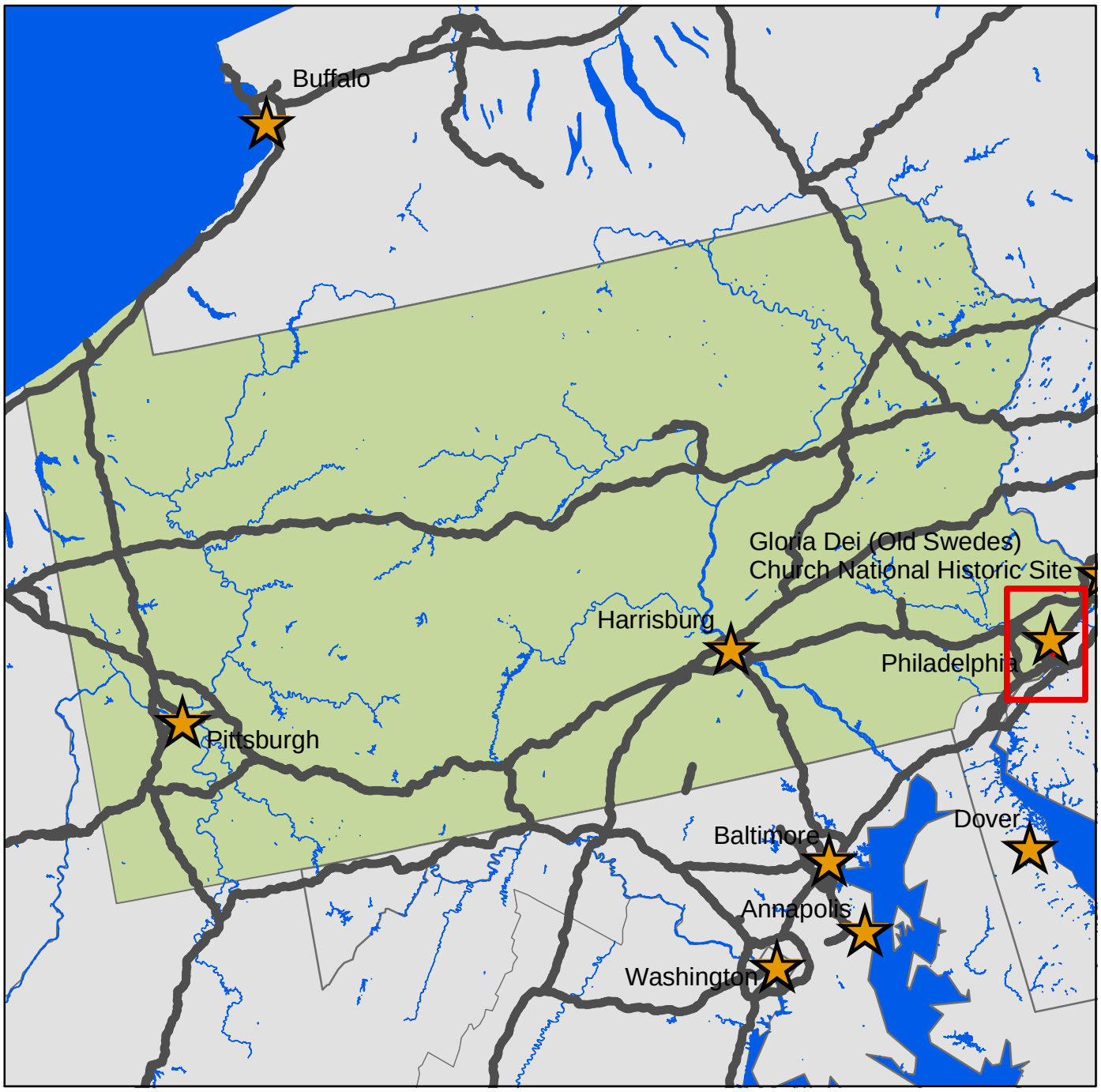
# The Road Inventory
# of
# Gloria Dei (Old Swedes) Church
# National Historic Site
# GLDE - 4469

national park service

Road Inventory Program

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

# Gloria Dei (Old Swedes) Church National Historic Site in Pennsylvania



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# INTRODUCTION

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

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

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

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

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

In 1998, the Transportation Equity Act for the 21st Century (TEA-21) amended Title 23 U.S.C., and inserted Section 204(a)(6) which requires the Federal Highway Administration and the National Park Service, to develop, by rule, a Pavement Management System (PMS) for the park roads and parkways serving the National Park System. As a result of the requirements in TEA-21, the NPS and the FHWA are in the process of developing a PMS. The PMS will assist the decision-makers in effectively spending limited PRP Program funds. The PMS will provide information for planning and programming road maintenance, rehabilitation, and reconstruction activities. RIP data will provide the basic information for this system.

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

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

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

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

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

FHWA RIP Coordinator:

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# Gloria Dei (Old Swedes) Church National Historical Site Summaries

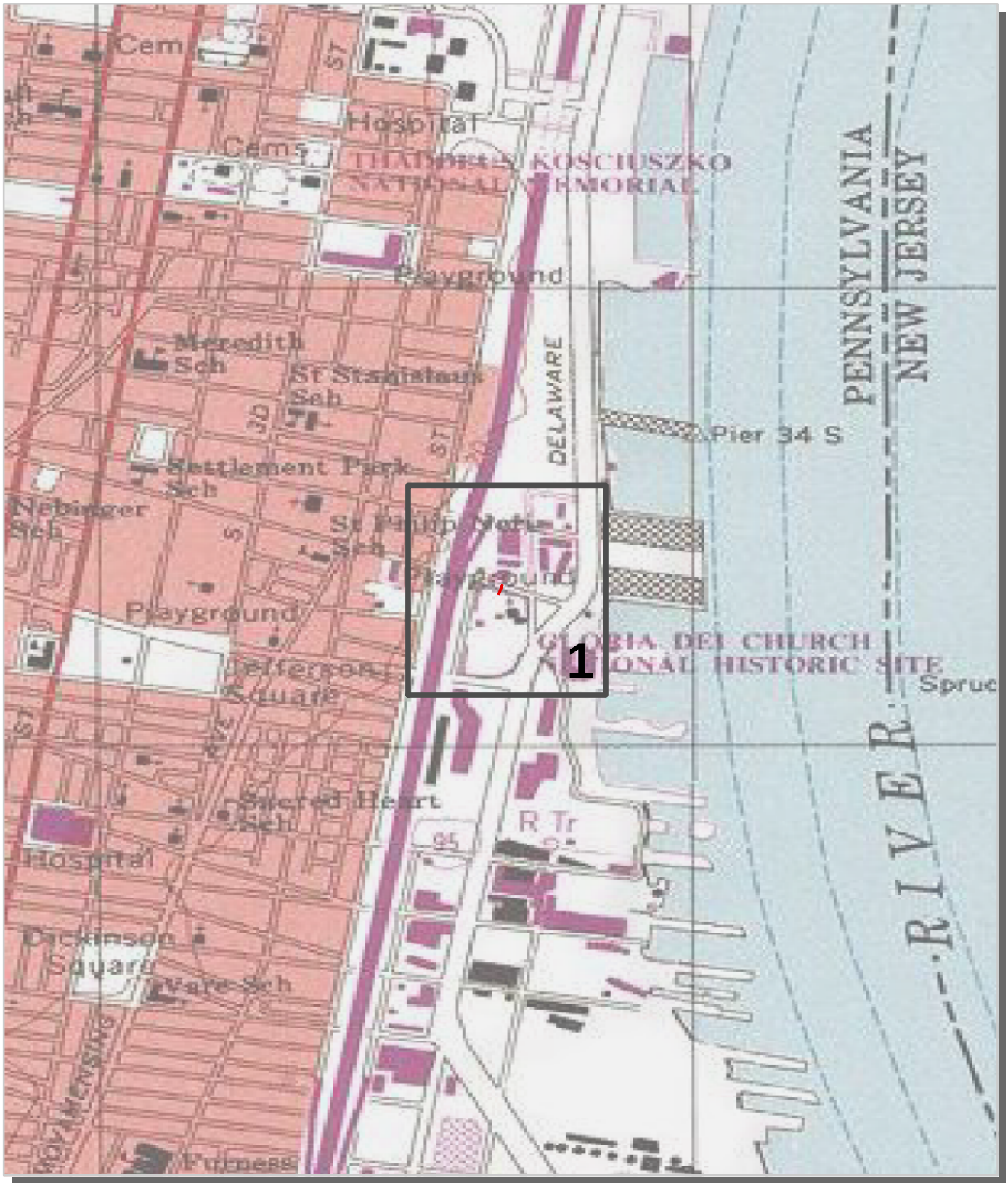
## Overall Park Mileage Summary

| PARK TOTAL SUMMARY ITEMS | TOTAL | DATE |
|---|---|---|
| Paved ARAN Driven Route Miles | 0.00 | |
| Unpaved Estimated Route Miles | 0.00 | |
| Paved ARAN and Unpaved Route Miles | 0.00 | |
| Paved ARAN Driven Lane Miles | 0.00 | |
| Paved MRR Lane Miles | 0.00 | |
| Parking Lot Lane Miles | 0.01 | 7/6/2004 |
| Total Paved Lane Miles | 0.01 | |

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

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

# Gloria Dei (Old Swedes) Church National Historic Site
## Route Location
## Key Map

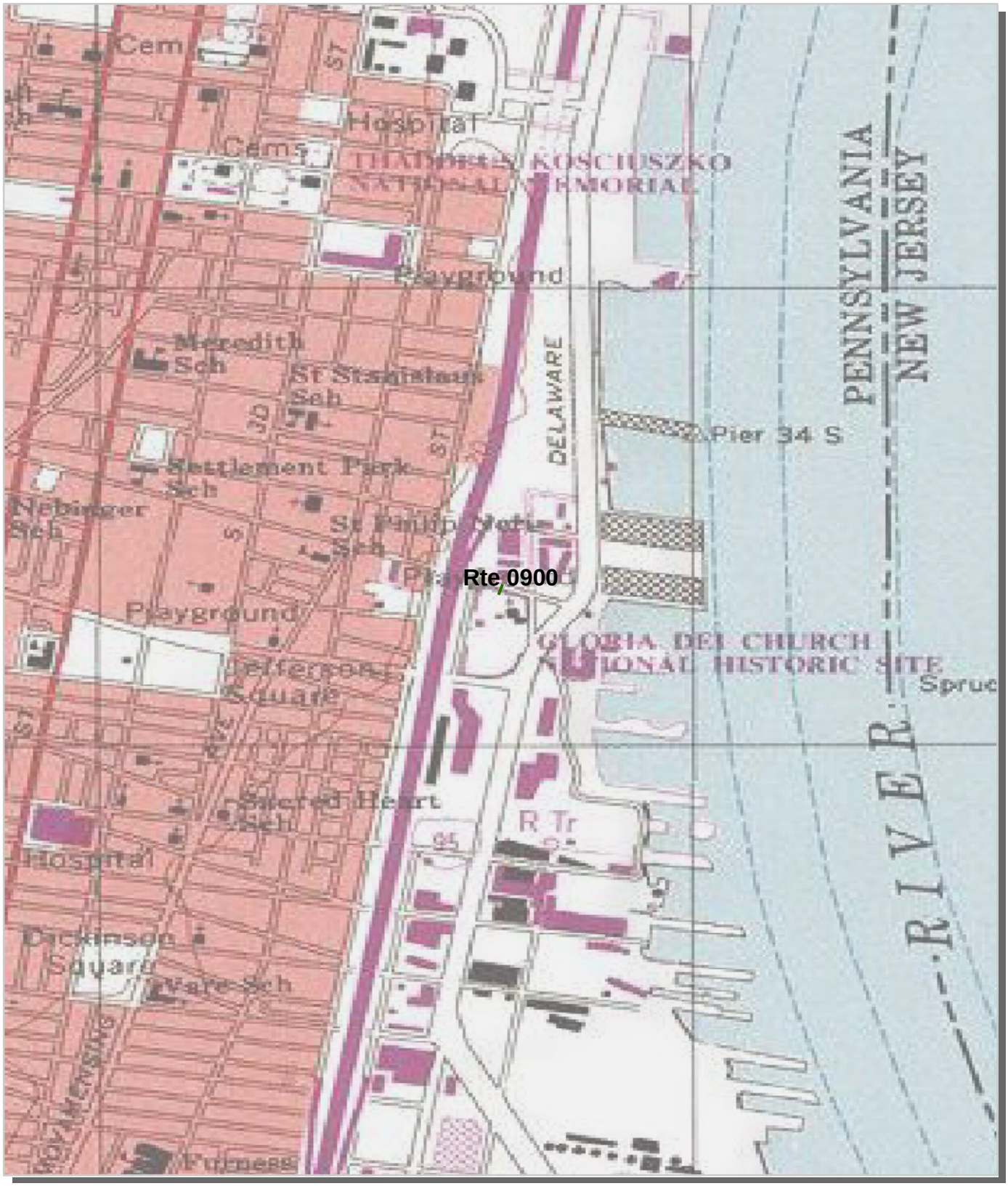



Park Owned Routes

0.25 0.125 0 0.25
Miles

N

# Gloria Dei (Old Swedes) Church National Historic Site
# Route Location
# Area Map 1

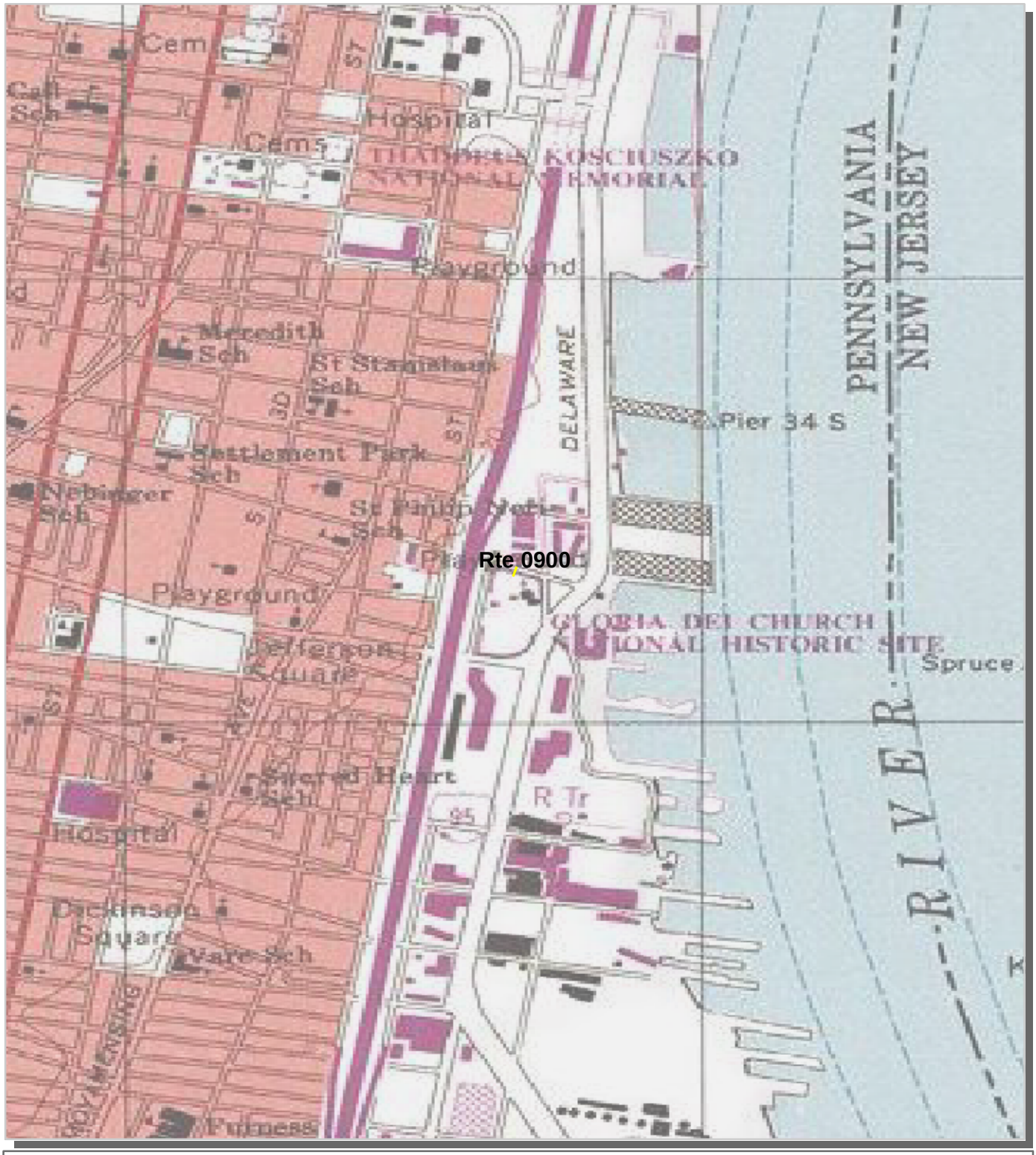



Unique colors used to differentiate routes

0.25 0.125 0 0.25
Miles

N

# Gloria Dei (Old Swedes) Church National Historic Site
# Route Condition Key Map
# PCR - Mile by Mile




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

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

0.25 0.125 0 0.25 Miles

N

# NPS/RIP Route ID Report

**(Numerical By Route #)**



Shading Color Key:
Red text denotes approx. mileage

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

## GLDE

***Gloria Dei (Old Swedes) Church National Historical Site***

| Rte. # | FMSS Asset # | Route Name | Route Description From | To | Paved Miles | Un-Paved Miles | Rte. Lgth | Func. Class | Rte. Lanes | Manual Rated SQ/FT | Surf. Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0900 | | Church Parking Access | From Christian Street | To Church Parking Lot | 0.00 | 0.00 | 0.00 | 9 | | 719 | AS |
| | | | | **Totals:** | 0.00 | 0.00 | **0.00** | | | 719 | |

### General Park Road Functional Classification Table

Class 1 Principal Park Road/Rural Parkway (Public Roads) Roads which constitute the main access route, circulatory tour, or thoroughfare for park visitors. Route Numbers 1 - 99. Note: Rural parkways (e.g. Natchez Trace) are numbered 1 - 9. State Routes Invetoried for Park. Route Numbers 5000-5999

Class 2 Connector Park Road (Public Roads) - Roads which provide access within a park to areas of scenic, scientific, recreational or cultural interest, such as overlooks, campgrounds, etc. Route Numbers 100-199.

Class 3 Special Purpose Park Road (Public Roads) - Roads which provide circulation within public areas, such as campgrounds, picnic areas, visitor center complexes, concessionaire facilities, etc. These roads generally serve low-speed traffic and are often designed for one-way circulation. Route Numbers 200-299.

Class 4 Primitive Park Roads (Public Roads) - Roads which provide circulation through remote areas and/or access to primitive campgrounds and undeveloped areas. These roads frequently have no minimum design standards and their use may be limited to specially equipped vehicles. Route Numbers 200-299.
Note: Functional Classes 3 and 4 have the same route numbers because, historically, they were numbered similarly.

Class 5 Administrative Access Road (Administrative Roads) - All public roads intended for access to administrative developments or structures such as park offices, employee quarters, or utility areas. Route Numbers 400-499.

Class 6 Restricted Road (Administrative Roads) - All roads normally closed to the public, including patrol roads, truck trails, and other similar roads. Route Numbers 400-499.
Note: Functional Classes 5 and 6 have the same route numbers because historically they were numbered similarly and often there is little distinction between these routes. For example, because utility areas and employee housing are often closed to the public, this restriction would result in classification of FC 6 rather than FC 5.

Class 7 Urban Parkway (Urban Parkways and City Streets) - These facilities serve high volumes of park and non-park related traffic and are restricted, limited-access facilities in an urban area. This category of roads primarily encompasses the major parkways which serve as gateways to our nation's capital. Other major park roads or portions thereof, however, may be included in this category. Route Numbers 1-9.

Class 8 City Streets (Urban Parkways and City Streets) - City streets are usually extensions of the adjoining street system that are owned and maintained by the National Park Service. The construction and/or reconstruction should conform with accepted local engineering practice and local conditions. Route Numbers 600-699.

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

**********

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

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

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

### Surface Type Abbreviations:

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

## Paved Route Condition Rating Sheets

No roads were driven with the ARAN vehicle in Cycle 3

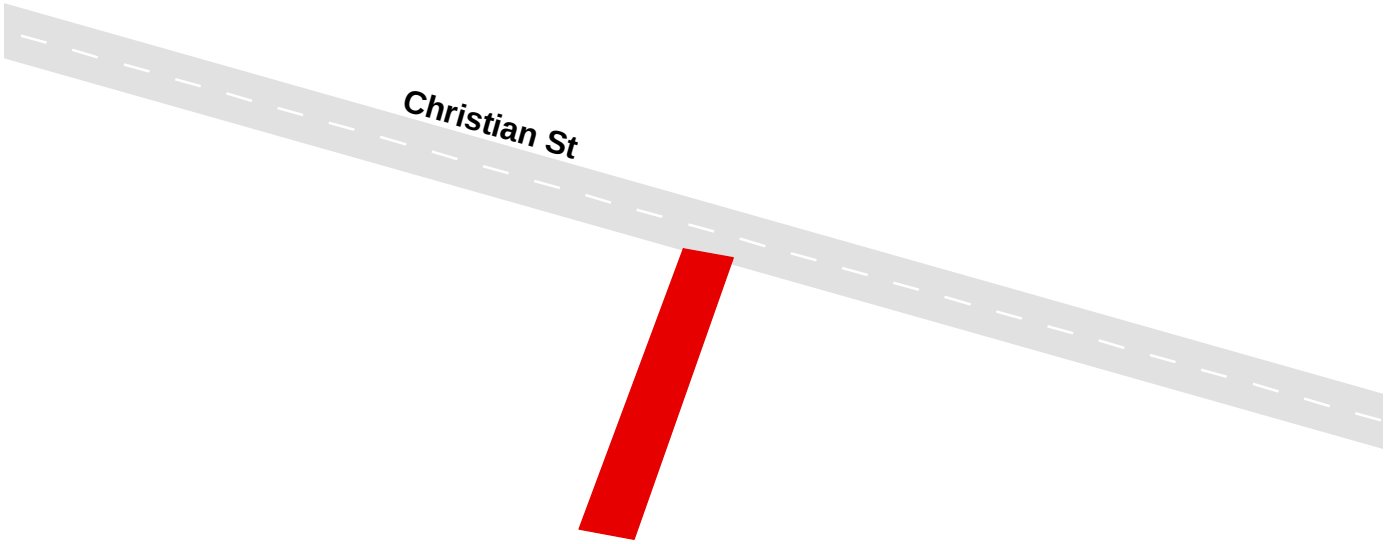
## GLDE: Manually Rated Paved Route Condition Rating Sheets

No data available for this section

# Gloria Dei (Old Swedes) Church National Historical Site
## Route 0900
Church Parking Access
From Christian Street

| Route | Public / NonPublic | Date Visited | Area (sq ft) | Lane Miles * | Surface Type | Condition / PCR |
|---|---|---|---|---|---|---|
| 0900 | Public | 7/6/2004 | 719 | 0.01 | AS | FAIR / 73 |

* Lane miles are based on 11' lane widths




50 25 0 50
Feet

N

## Parkwide / Route Maintenance Features Summary

No roads were driven with the ARAN vehicle in Cycle 3, therefore no maintenance features were collected

## Park Route Maintenance Features Road Log

No roads were driven with the ARAN vehicle in Cycle 3, therefore no maintenance features were collected

## APPENDIX A: GLOSSARY OF TERMS AND ABBREVIATIONS

| TERM OR ABBREVIATION | DESCRIPTION OR DEFINITION |
|---|---|
| 4469 | Numeric Code for Gloria Dei (Old Swedes) Church National Historic Site |
| AADT | Annually Adjusted Daily Traffic. Average daily traffic adjusted for the term period comprising 80% of annual visitation |
| CRS | Condition Rating Sheets. (Section 5) |
| Drainage Condition Rating | A visual rating (Good, Poor) of the drainage condition. (see Section 10) |
| Excellent | Excellent rating with an index value of 95 or greater |
| Fair | Fair rating with an index value between 61 and 84 |
| Func. Class | Functional Classification (see Route ID, Section 4) |
| GLDE | Alpha Code for Gloria Dei (Old Swedes) Church National Historic Site |
| Good | Good rating with an index value between 85 and 94 |
| IRI | International Roughness Index |
| Lane Width | Distance from road centerline to fogline, or from centerline to edge-of-pavement when no fogline exists |
| MRR | Manually Rated Route |
| NA | Not Applicable |
| NC | Not Collected |
| Paved Width | Distance from edge-of-pavement to edge-of-pavement |
| PCR | Pavement Condition Rating (see Section 10) |

| | |
|---|---|
| Poor | Poor Rating with an index value of 60 or less |
| RCI | Roughness Condition Index |
| SADT | Seasonal Annual Daily Traffic. Average daily traffic for the total defined "season" |
| SCR | Surface Condition Rating (see Section 10) |
| Shoulder Condition Rating | Visual rating (Good, Poor) of the condition of shoulder. (see Section 10) |
| Shoulder Width | Distance from fogline to hinge point, or if no fogline, from edge-of-pavement to hinge point |

## APPENDIX B: DESCRIPTION OF RATING SYSTEM

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

Data is collected on the following distresses and conditions:

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

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

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

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

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

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

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

**Rating Index Formulas**

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

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

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

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

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

## Parking Lot and Manually Rated Road Condition Rating

**Surface Condition Distresses- Chip Seal:**

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

**Ratings - Chip Seal:**

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

**Surface Condition - Asphalt:**

Cracking of any type
Rutting
Potholes/Patching

**Ratings - Asphalt:**

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

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

| | |
|---|---|
| Excellent | 97 |
| Good | 90 |
| Fair | 73 |
| Poor | 45 |

## Drainage Condition Rating Definitions

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

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

## Drainage Condition Rating Criteria

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

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

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

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

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

## Shoulder Condition Rating Definitions

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

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

## Shoulder Rating Criteria

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

**Good Shoulders**

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

**Poor Shoulder**

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

## APPENDIX C: DIGITAL IMAGE INFORMATION

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

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

## APPENDIX D: METADATA

## ARAN ROUTE GPS DATA

Background information of route spatial data.

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

**Data Collection Device:**

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

**Accuracy:** Expected ground accuracy is 1 meter *

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

**Geographic Datum:** WGS 1984

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

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

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

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

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

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

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

### Specific Caveats

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

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

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

**Key to Notes in Tables**

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

## Access Database Metadata

### Master Table Metadata:

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

**PMS_Feature Table Metadata**:

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

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

**PMS_20, PMS_Mile & PMS_Visidata Tables Metadata**:

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

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

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

## Cycle 3 Shapefile Metadata

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

All shapefiles have the following spatial characteristics:

*Geographic_Coordinate_Units:* Decimal degrees
*Spheroid:* WGS 1984

# glde_nonnps

Metadata also available as

## Metadata:


- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information


---

*Identification_Information:*
*Citation:*
*Citation_Information:*
*Originator:* The TSR Group
*Publication_Date:* 2005
*Title:* glde_nonnps
*Geospatial_Data_Presentation_Form:* vector digital data
*Online_Linkage:* Not Available
*Description:*
*Abstract:* non-NPS roads
*Purpose:* Road Inventory Program
*Supplemental_Information:*
Data created by The TSR Group from heads-up digitizing of roads representing non-NPS roads for graphic purposes
*Time_Period_of_Content:*
*Time_Period_Information:*
*Single_Date/Time:*
*Calendar_Date:* 2005
*Currentness_Reference:* ground condition
*Status:*
*Progress:* Complete
*Maintenance_and_Update_Frequency:* As per RIP cycle
*Spatial_Domain:*
*Bounding_Coordinates:*
*West_Bounding_Coordinate:* -75.144393
*East_Bounding_Coordinate:* -75.142687
*North_Bounding_Coordinate:* 39.935220
*South_Bounding_Coordinate:* 39.934737
*Keywords:*
*Theme:*
*Theme_Keyword_Thesaurus:* GLDE
*Theme_Keyword:* GLDE
*Access_Constraints:* None

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

---

*Data_Quality_Information:*
*Attribute_Accuracy:*
*Attribute_Accuracy_Report:* Good
*Completeness_Report:* Complete for non-NPS roads
*Lineage:*
*Source_Information:*
*Type_of_Source_Media:* Heads-up digitized

---

*Spatial_Data_Organization_Information:*
*Direct_Spatial_Reference_Method:* Vector
*Point_and_Vector_Object_Information:*
*SDTS_Terms_Description:*
*SDTS_Point_and_Vector_Object_Type:* String
*Point_and_Vector_Object_Count:* 1

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

*Denominator_of_Flattening_Ratio:* 294.978698

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*Entity_and_Attribute_Information:*
*Detailed_Description:*
*Entity_Type:*
*Entity_Type_Label:* glde_nonnps
*Attribute:*
*Attribute_Label:* FID
*Attribute_Definition:* Internal feature number.
*Attribute_Definition_Source:* ESRI
*Attribute_Domain_Values:*
*Unrepresentable_Domain:*
Sequential unique whole numbers that are automatically generated.
*Attribute:*
*Attribute_Label:* Shape
*Attribute_Definition:* Feature geometry.
*Attribute_Definition_Source:* ESRI
*Attribute_Domain_Values:*
*Unrepresentable_Domain:* Coordinates defining the features.
*Attribute:*
*Attribute_Label:* Id
*Attribute_Definition:* Name of road if available
*Attribute:*
*Attribute_Label:* Name

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*Distribution_Information:*
*Resource_Description:* Downloadable Data
*Standard_Order_Process:*
*Digital_Form:*
*Digital_Transfer_Information:*
*Transfer_Size:* 0.008

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*Metadata_Reference_Information:*
*Metadata_Date:* 20051011
*Metadata_Contact:*
*Contact_Information:*
*Contact_Organization_Primary:*
*Contact_Organization:* EFLHD Sterling
*Contact_Person:* Dan VanGilder
*Contact_Position:* GIS Coordinator
*Contact_Address:*
*Address_Type:* mailing and physical address
*Address:* 21400 Ridgetop Circle
*City:* Sterling
*State_or_Province:* Virginia

*Postal_Code:* 20166
*Country:* United States
*Contact_Voice_Telephone:* 703-404-6361
*Contact_Electronic_Mail_Address:* dvangilder@fhwa.dot.gov
*Metadata_Standard_Name:* FGDC Content Standards for Digital Geospatial Metadata
*Metadata_Standard_Version:* FGDC-STD-001-1998
*Metadata_Time_Convention:* local time
*Metadata_Extensions:*
*Online_Linkage:* <http://www.esri.com/metadata/esriprof80.html>
*Profile_Name:* ESRI Metadata Profile

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Generated by mp version 2.7.33 on Tue Oct 11 08:23:05 2005

# glde_pkg_03_map

Metadata also available as

## Metadata:


- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information


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*Identification_Information:*
*Citation:*
*Citation_Information:*
*Originator:* Eastern Federal Lands Highway Division
*Publication_Date:* Unknown
*Title:* glde_pkg_03_map
*Geospatial_Data_Presentation_Form:* vector digital data
*Online_Linkage:* Not Available
*Description:*
*Abstract:* Copy of Parking Areas
*Purpose:* Road Inventory Program
*Supplemental_Information:*
This shapefile is a copy of the source parking shapefile. The features are edited as needed for graphic purposes.
*Time_Period_of_Content:*
*Time_Period_Information:*
*Single_Date/Time:*
*Calendar_Date:* 7/6/2004
*Currentness_Reference:* ground condition
*Status:*
*Progress:* Complete
*Maintenance_and_Update_Frequency:* As per RIP cycle
*Spatial_Domain:*
*Bounding_Coordinates:*
*West_Bounding_Coordinate:* -75.143973
*East_Bounding_Coordinate:* -75.143869
*North_Bounding_Coordinate:* 39.935064
*South_Bounding_Coordinate:* 39.934870
*Keywords:*
*Theme:*
*Theme_Keyword_Thesaurus:* GLDE
*Theme_Keyword:* GLDE
*Access_Constraints:* None

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

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

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

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

*Denominator_of_Flattening_Ratio:* 294.978698

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*Entity_and_Attribute_Information:*
*Detailed_Description:*
*Entity_Type:*
*Entity_Type_Label:* glde_pkg_03_map
*Attribute:*
*Attribute_Label:* FID
*Attribute_Definition:* Internal feature number.
*Attribute_Definition_Source:* ESRI
*Attribute_Domain_Values:*
*Unrepresentable_Domain:*
Sequential unique whole numbers that are automatically generated.
*Attribute:*
*Attribute_Label:* Shape
*Attribute_Definition:* Feature geometry.
*Attribute_Definition_Source:* ESRI
*Attribute_Domain_Values:*
*Unrepresentable_Domain:* Coordinates defining the features.
*Attribute:*
*Attribute_Label:* PARK_ALPHA
*Attribute_Definition:* Park alpha code
*Attribute_Definition_Source:* Route ID Meeting
*Attribute:*
*Attribute_Label:* RTE_NO
*Attribute_Definition:* Route number
*Attribute_Definition_Source:* Route ID Meeting
*Attribute:*
*Attribute_Label:* RTE_NAME
*Attribute_Definition:* Route name
*Attribute_Definition_Source:* Route ID Meeting
*Attribute:*
*Attribute_Label:* FEATURE
*Attribute:*
*Attribute_Label:* SURF_TYPE
*Attribute_Definition:* Surface type of route
*Attribute_Domain_Values:*
*Attribute:*
*Attribute_Label:* CONDITION
*Attribute_Definition:* Condition rating for route
*Attribute:*
*Attribute_Label:* PHOTOS
*Attribute_Definition:* Photo filename associated with feature
*Attribute:*
*Attribute_Label:* COMMENT
*Attribute_Definition:* Field comment
*Attribute:*
*Attribute_Label:* GPS_DATE
*Attribute_Definition:* Date of GPS collection

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

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

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*Metadata_Reference_Information:*
*Metadata_Date:* 20051011
*Metadata_Contact:*
*Contact_Information:*
*Contact_Organization_Primary:*
*Contact_Organization:* EFLHD Sterling
*Contact_Person:* Dan VanGilder
*Contact_Position:* GIS Coordinator
*Contact_Address:*
*Address_Type:* mailing and physical address
*Address:* 21400 Ridgetop Circle
*City:* Sterling
*State_or_Province:* Virginia
*Postal_Code:* 20166
*Country:* United States
*Contact_Voice_Telephone:* 703-404-6361
*Contact_Electronic_Mail_Address:* dvangilder@fhwa.dot.gov
*Metadata_Standard_Name:* FGDC Content Standards for Digital Geospatial Metadata
*Metadata_Standard_Version:* FGDC-STD-001-1998
*Metadata_Time_Convention:* local time
*Metadata_Extensions:*
*Online_Linkage:* <http://www.esri.com/metadata/esriprof80.html>
*Profile_Name:* ESRI Metadata Profile

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# glde_pkg_03

Metadata also available as

## Metadata:


- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information


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*Identification_Information:*
*Citation:*
*Citation_Information:*
*Originator:* Eastern Federal Lands Highway Division
*Publication_Date:* Unknown
*Title:* glde_pkg_03
*Geospatial_Data_Presentation_Form:* vector digital data
*Online_Linkage:* Not Available
*Description:*
*Abstract:* Parking Areas
*Purpose:* Road Inventory Program
*Time_Period_of_Content:*
*Time_Period_Information:*
*Single_Date/Time:*
*Calendar_Date:* 7/6/2004
*Currentness_Reference:* ground condition
*Status:*
*Progress:* Complete
*Maintenance_and_Update_Frequency:* As per RIP cycle
*Spatial_Domain:*
*Bounding_Coordinates:*
*West_Bounding_Coordinate:* -75.143962
*East_Bounding_Coordinate:* -75.143859
*North_Bounding_Coordinate:* 39.935098
*South_Bounding_Coordinate:* 39.934904
*Keywords:*
*Theme:*
*Theme_Keyword_Thesaurus:* GLDE
*Theme_Keyword:* GLDE
*Access_Constraints:* None
*Use_Constraints:* Redistribution needs permission from EFLHD/NPS
*Point_of_Contact:*
*Contact_Information:*

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

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*Data_Quality_Information:*
*Attribute_Accuracy:*
*Attribute_Accuracy_Report:* Good
*Completeness_Report:* Complete for parking areas
*Lineage:*
*Source_Information:*
*Type_of_Source_Media:* GPS
*Process_Step:*
*Process_Description:* Metadata imported.
*Source_Used_Citation_Abbreviation:*
J:\FHWA_RoadInvProg\Data\Park_TSR_source\Template_Folders\Section_10\template_pkg_03.xml

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

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*Spatial_Reference_Information:*
*Horizontal_Coordinate_System_Definition:*
*Geographic:*
*Latitude_Resolution:* 0.000000
*Longitude_Resolution:* 0.000000
*Geographic_Coordinate_Units:* Decimal degrees
*Geodetic_Model:*
*Horizontal_Datum_Name:* North American Datum of 1927

*Ellipsoid_Name:* Clarke 1866
*Semi-major_Axis:* 6378206.400000
*Denominator_of_Flattening_Ratio:* 294.978698

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*Entity_and_Attribute_Information:*
*Detailed_Description:*
*Entity_Type:*
*Entity_Type_Label:* glde_pkg_03
*Attribute:*
*Attribute_Label:* FID
*Attribute_Definition:* Internal feature number.
*Attribute_Definition_Source:* ESRI
*Attribute_Domain_Values:*
*Unrepresentable_Domain:*
Sequential unique whole numbers that are automatically generated.
*Attribute:*
*Attribute_Label:* Shape
*Attribute_Definition:* Feature geometry.
*Attribute_Definition_Source:* ESRI
*Attribute_Domain_Values:*
*Unrepresentable_Domain:* Coordinates defining the features.
*Attribute:*
*Attribute_Label:* PARK_ALPHA
*Attribute_Definition:* Park alpha code
*Attribute_Definition_Source:* Route ID Meeting
*Attribute:*
*Attribute_Label:* RTE_NO
*Attribute_Definition:* Route number
*Attribute_Definition_Source:* Route ID Meeting
*Attribute:*
*Attribute_Label:* RTE_NAME
*Attribute_Definition:* Route name
*Attribute_Definition_Source:* Route ID Meeting
*Attribute:*
*Attribute_Label:* FEATURE
*Attribute:*
*Attribute_Label:* SURF_TYPE
*Attribute_Definition:* Surface type of route
*Attribute_Domain_Values:*
*Attribute:*
*Attribute_Label:* CONDITION
*Attribute_Definition:* Condition rating for route
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*Attribute_Definition:* Field comment
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*Attribute_Definition:* Feature area in square feet

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

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*Metadata_Reference_Information:*
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*Country:* United States
*Contact_Voice_Telephone:* 703-404-6361
*Contact_Electronic_Mail_Address:* dvangilder@fhwa.dot.gov
*Metadata_Standard_Name:* FGDC Content Standards for Digital Geospatial Metadata
*Metadata_Standard_Version:* FGDC-STD-001-1998
*Metadata_Time_Convention:* local time
*Metadata_Extensions:*
*Online_Linkage:* <http://www.esri.com/metadata/esriprof80.html>
*Profile_Name:* ESRI Metadata Profile

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