



116/D-16B

The Road Inventory of Zion National Park



national park service



Road Inventory Program

Prepared By:
Federal Highway Administration
Eastern Federal Lands Highway Division
April 2000

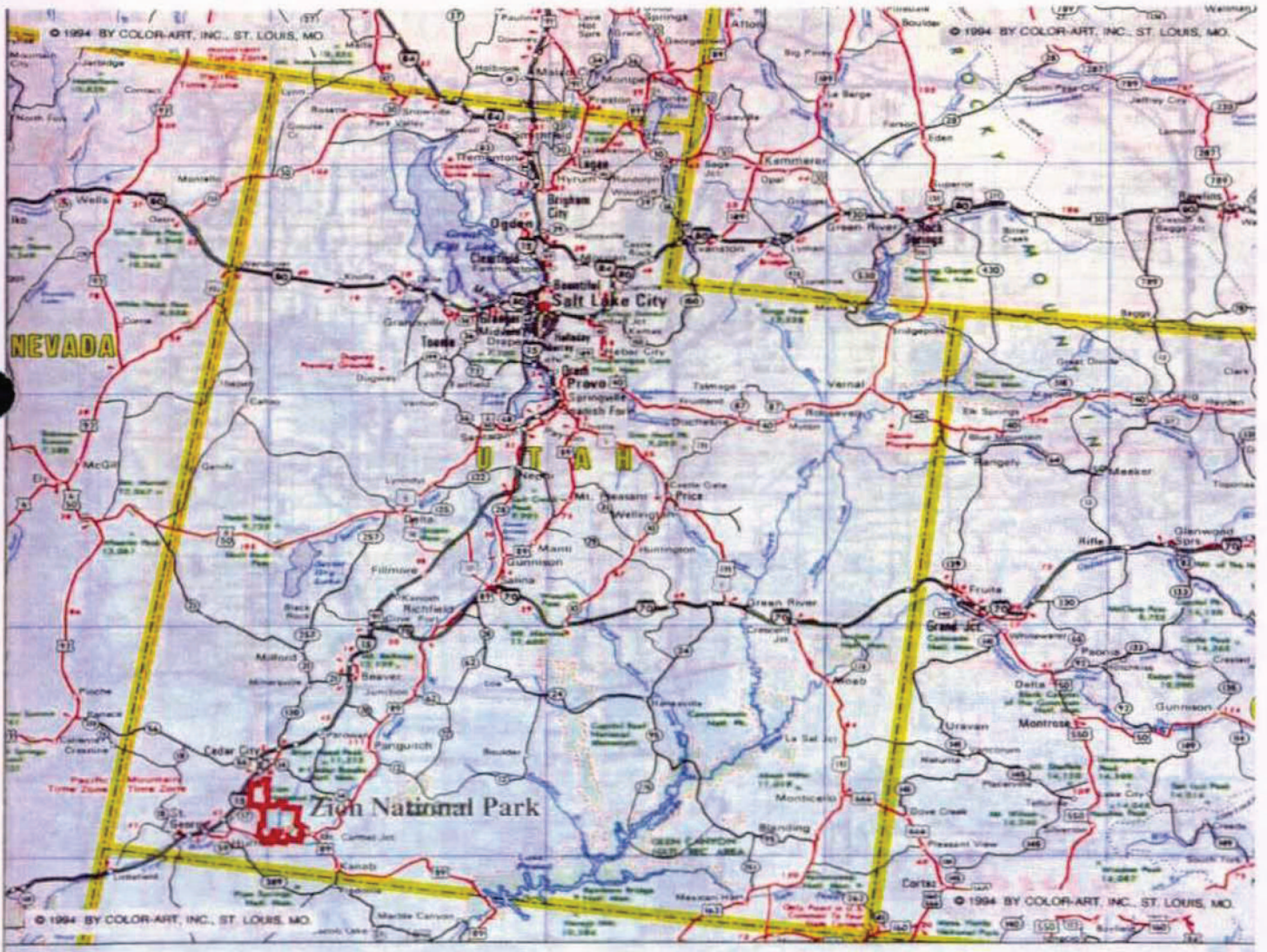
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Zion National Park in Utah





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INTRODUCTION

Background: In July 1976, amended December 1980, The National Park Service (NPS) and the Federal Highway Administration (FHWA) entered into a Memorandum of Agreement (MOA), establishing the Road Inventory Program (RIP). The purpose of RIP, per the 1980 MOA, was to develop long range and short range costs and programs to bring NPS roads up to, or to maintain, designated standards; as well as provide a database so the NPS can revise their Maintenance Management System, if necessary.

Since 1984 the funding has been derived from the NPS FLHP (Title 23) planning funds and coordinated by the National Park Service Park Facility Management Division. The need for a total road information data base was mandated by the requirements for continuing, comprehensive, and coordinated (3-C) planning process and Maintenance Management System.

The Federal Lands Highway (FLH) was assigned the task to inventory maintenance items (pavement type and quantities; location of culverts, signs, guardrail, etc.), identify pavement distresses and evaluate the condition of existing park roads, summarize the data and findings in a report, and provide a videolog of the NPS roads system.

Objective: The objective of the RIP report is to provide NPS personnel at all levels with the basic information needed for effective road and road system planning, management, operations, and maintenance. This information will be documented in a Blue Book for each park, which will replace the old Brown Books.

The Blue Book reports will be in a standard format and content with comprehensive data analysis for each park. The data presented in each report will vary greatly from park to park, but the presentation of the report will be uniform in format. Therefore, the Blue Book will become a seamless document throughout the park system displaying site specific data for each park.

Scope: The Road Inventory Program is a national program coordinated by the FHWA for the NPS. The FHWA goal for the paved park roads is stated as "the quality, standard and condition of the paved portion of park roads and parkways that serves the resource goals of the National Park System does not deteriorate further over the next five years".

In an effort to track the condition of the park roads, per the FHWA goal, a cyclic data collection and reporting process was implemented for all parks and regions. Monitoring the condition and system performance of the paved roads over time using a percent good, fair, and poor condition rating provided a realistic means of assessing the funding needs for road improvements. The pavement condition rating system is described in Section IX of this report. This pavement condition performance assessment will determine the level of paved park road deterioration throughout the park road system as identified in the FHWA goal.

The report will include a Park Summary, a Park Summary Map, a Park Route Inventory, a Maintenance Features Summary, a Paved Route Condition Rating and a Features

Inventory. Also included is a listing of all unpaved routes in each park and various Appendices.

The FHWA highway engineers and technicians inspect, rate, inventory the roads, and prepare the final reports for distribution to the National Park Service. All the field work is coordinated with the site specific park and the regional offices to ensure customer satisfaction. The FHWA Washington office coordinates policy and prepares national reports and needs assessment studies to congress.

The FHWA is responsible for all the data presented in this report. Anyone having questions or comments regarding the contents of this report are encouraged to contact the FHWA RIP Coordinator or the NPS RIP Coordinator in your Cluster Support Office.

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Zion National Park Summaries

Overall Park Mileage Summary

PARK TOTAL SUMMARY ITEMS	TOTAL	DATE
PAVED ROUTE MILES	42.72	11/99
UNPAVED ROUTE ESTIMATED MILES	8.15	11/99
PAVED AND UNPAVED ROUTE MILES	50.87	11/99
PARKING LOT LANE MILES	10.60	11/99
PAVED LANE MILES	90.16	11/99
DEFICIENT LANE MILES	8.04	11/99

Note: Paved and Deficient Lane Miles includes parking lot areas which have been converted to lane miles using an 11-foot lane width.

Estimated Unpaved Mileage Summary By Functional Class

F. C.	MILEAGE	PERCENTAGE
I	0	0%
II	6.3	77%
III	1.85	23%
IV	0	0%
V	0	0%
VI	0	0%
VII	0	0%
VIII	0	0%

Zion National Park Summaries

Cost to Improve to "Excellent" Condition

Based on Historic and Estimated Data

AWARD DATE	SOURCE	WORK PERFORMED	LENGTH (MILES)	COST	COST PER MILE	INITIAL CONDITION
1995-97	FHWA Projects	3-R (Resurfacing)	52.07	\$3,776,479	\$72,527	Good
1995-97	FHWA Projects	3-R (Resurfacing, Restoration, and Rehabilitation) Projects	12.80	\$3,252,902	\$254,133	Fair
1998	FHWA Current Projects	4-R (Resurfacing, Restoration, Rehabilitation, and Reconstruction) Projects	9.18	\$5,185,644	\$564,885	Poor

89

Based on the above table, the cost to improve existing condition miles to "Excellent" PCR are:

Existing Condition	Existing Miles	Estimated Cost to Improve
Excellent	0.00	\$0
Good	1.26	\$91,384
Fair	37.40	\$9,504,574
Poor	4.02	\$2,270,838
Totals	42.68	\$11,866,796

Zion National Park Summaries

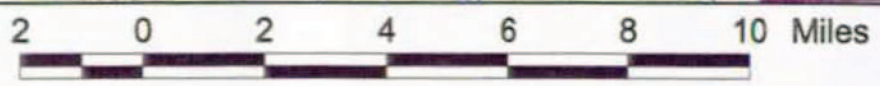
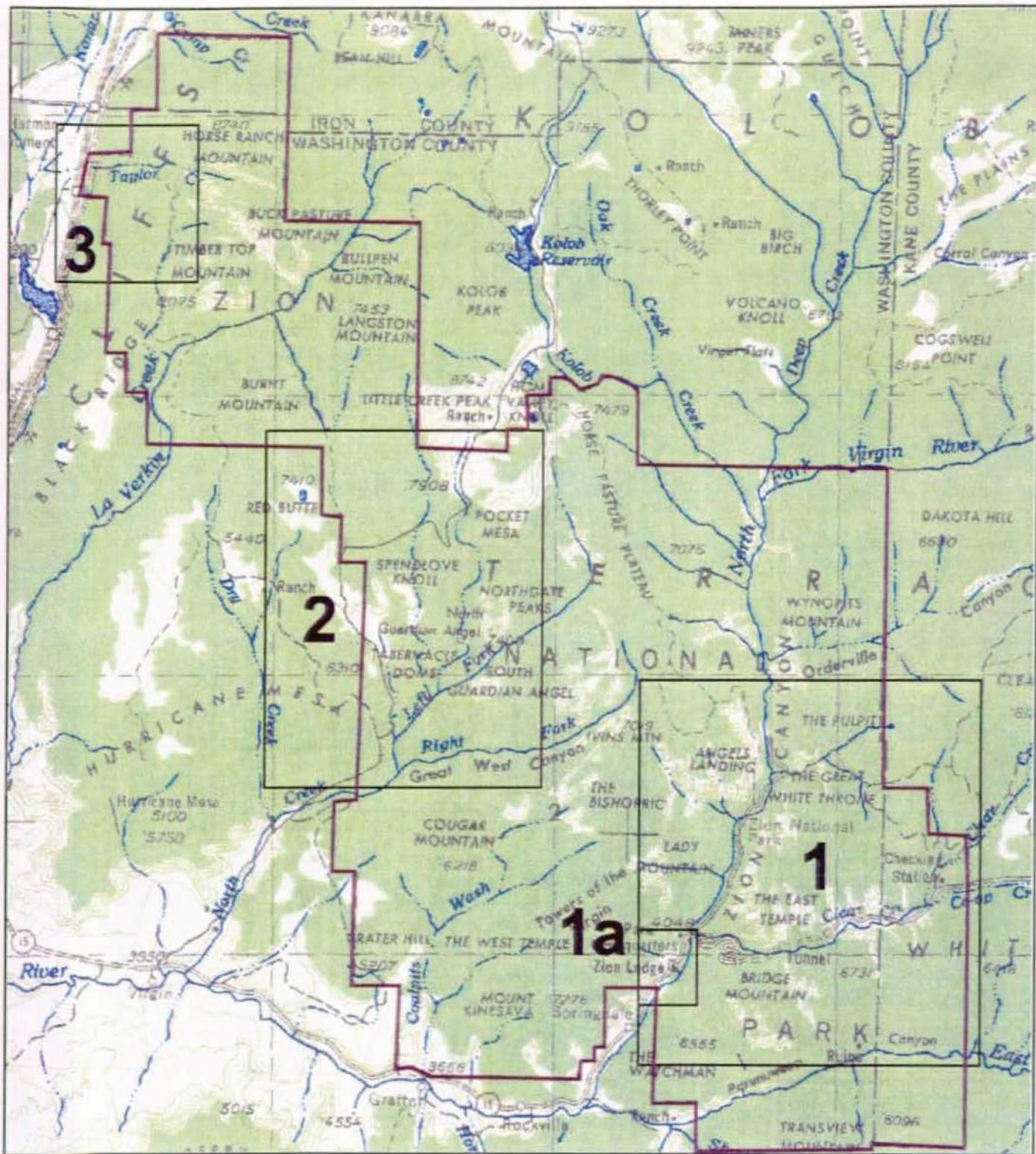
Paved Route Miles and Percentages by Functional Class and PCR

F. C.	Pavement Condition Rating (PCR)								TOTAL MILES	
	Excellent (95-100)		Good (85-94)		Fair (61-84)		Poor (<=60)			
	MILES	%	MILES	%	MILES	%	MILES	%		
I	0	0	1.08	3.23%	28.84	86.24%	3.52	10.53%	33.44	
II	0	0	0	0	0	0	0	0	0	
III	0	88.82	0.06	1.12%	5.27	98.14%	0.04	0.74%	5.37	
IV	0	0	0	0	0	0	0	0	0	
V	0	0	0.12	5.22%	1.72	74.78%	0.46	20.00%	2.3	
VI	0	0	0	0	1.57	100.00%	0	0	1.57	
VII	0	0	0	0	0	0	0	0	0	
VIII	0	0	0	0	0	0	0	0	0	
Totals	0.00	0.00%	1.26	2.95%	37.40	87.63%	4.02	9.42%	42.68	
Includes paved roads visually rated that were not driven with the ARAN.									No Data	0.04
									Total	42.72

Paved Lane Miles (Parking Areas)

F. C.	Visual Condition Rating								TOTAL LANE MILES
	Excellent		Good		Fair		Poor		
	LANE MILES	%	LANE MILES	%	LANE MILES	%	LANE MILES	%	
-		0	4.01	37.83%	6.59	62.17%		0	10.6

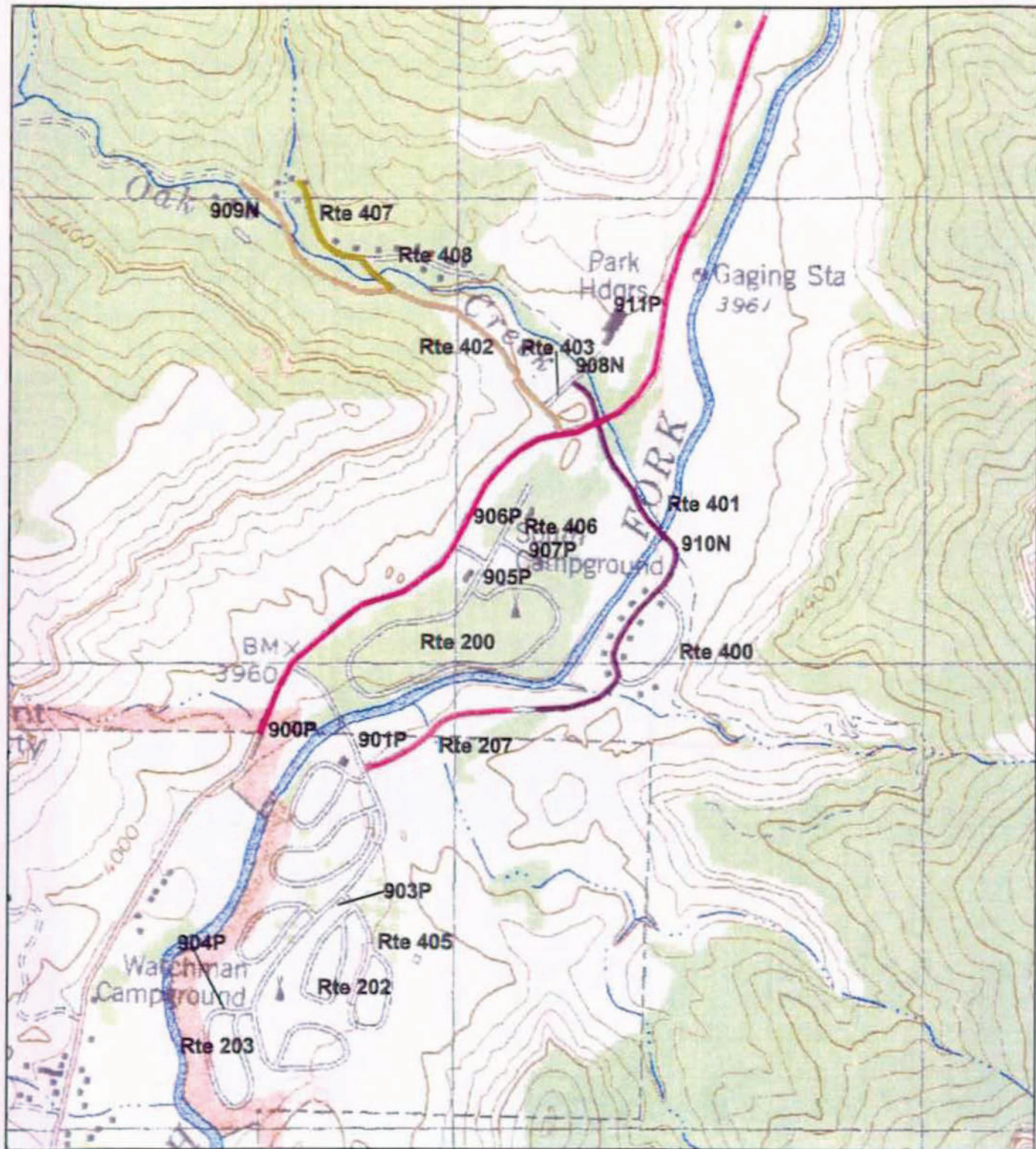
ZION NATIONAL PARK ROUTE LOCATION KEY MAP



ZION NATIONAL PARK ROUTE LOCATION AREA MAP 1



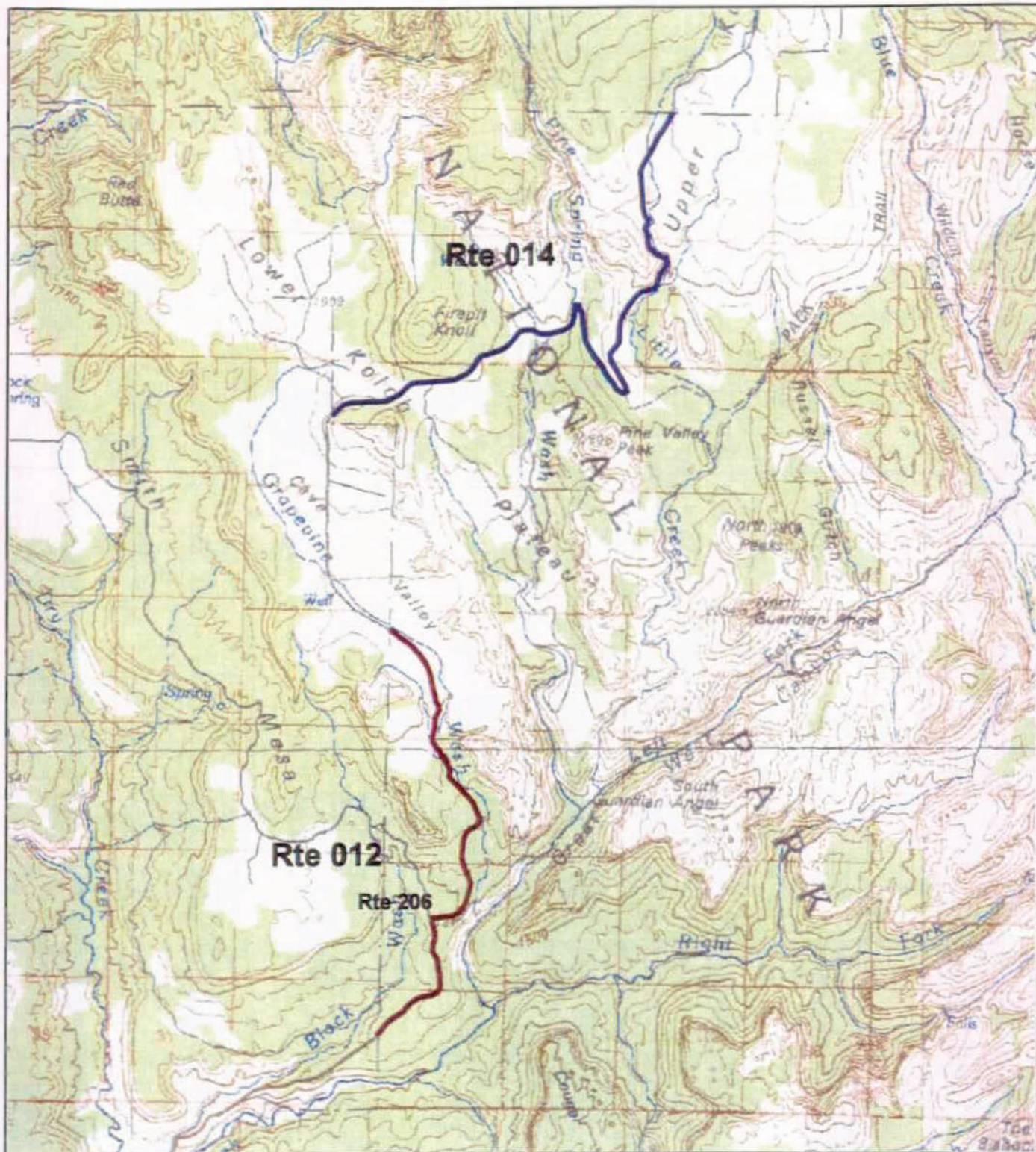
ZION NATIONAL PARK ROUTE LOCATION AREA MAP 1a



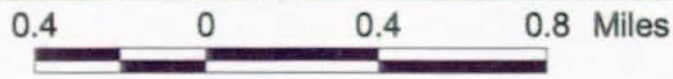
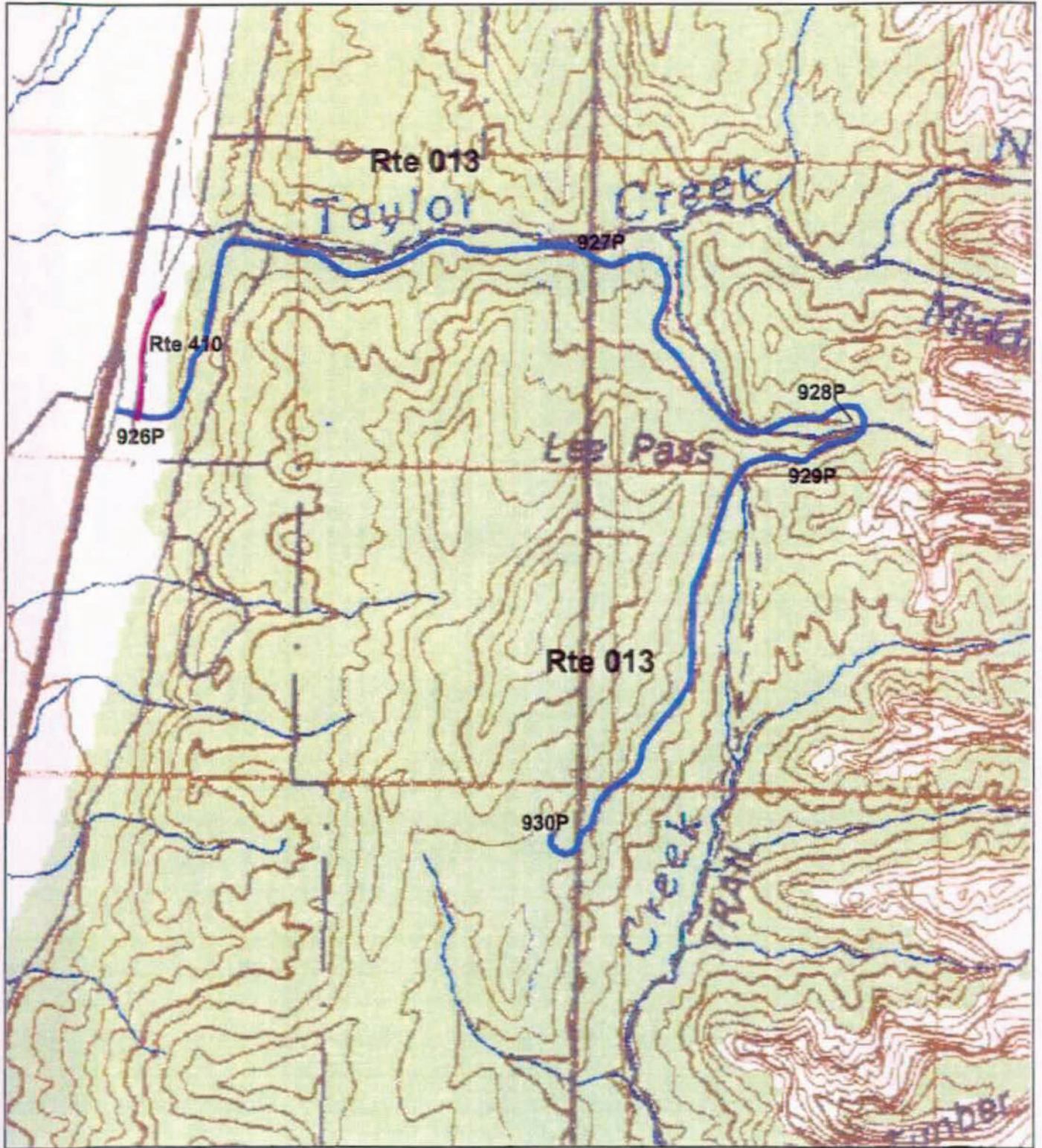
0.2 0 0.2 0.4 Miles



ZION NATIONAL PARK ROUTE LOCATION AREA MAP 2

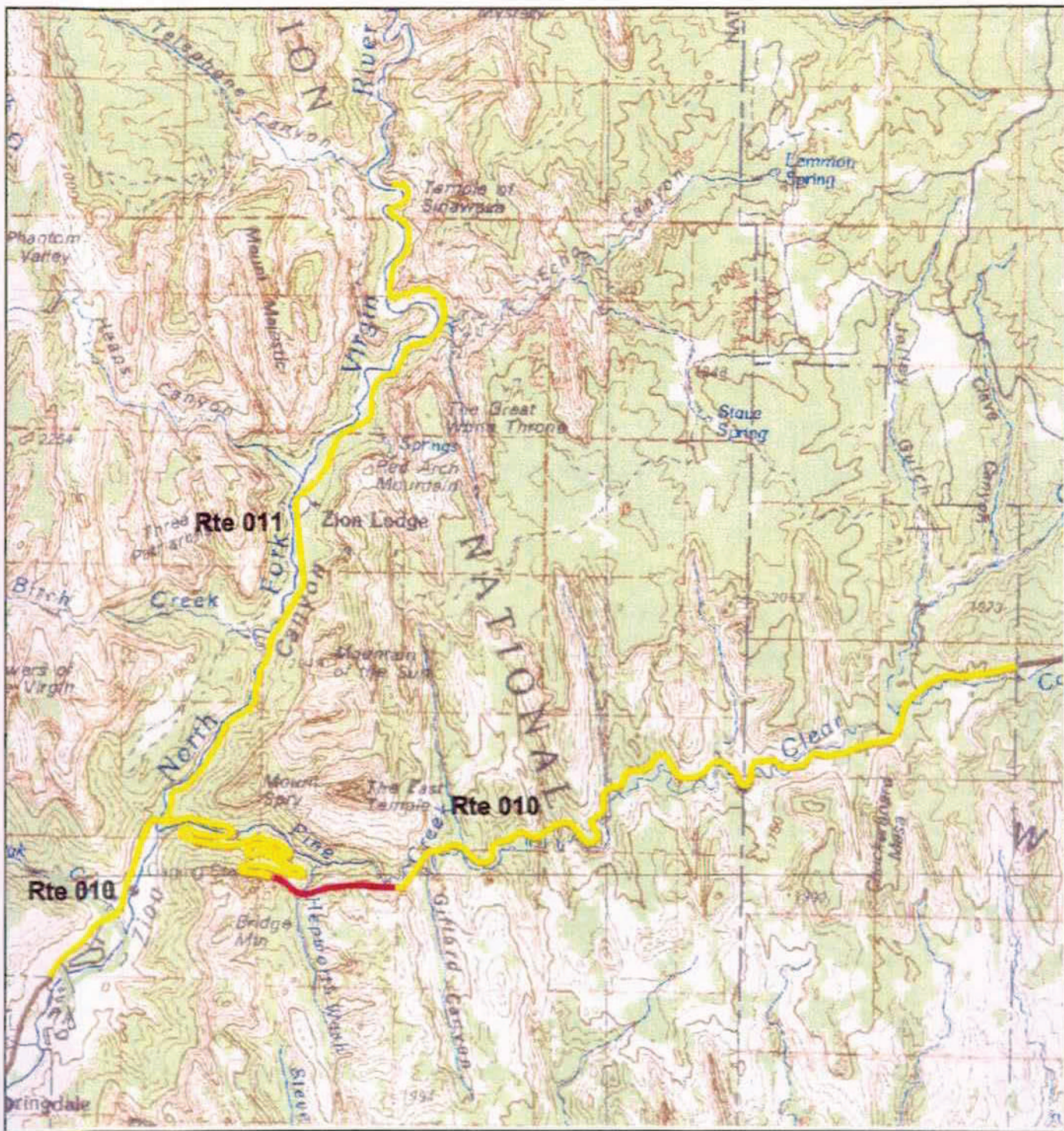


ZION NATIONAL PARK
ROUTE LOCATION
AREA MAP 3



ZION NATIONAL PARK ROUTE CONDITION KEY MAP PCR/DCR - Mile by Mile

FUNCTIONAL CLASSIFICATION I, II, VII, VIII ROADS

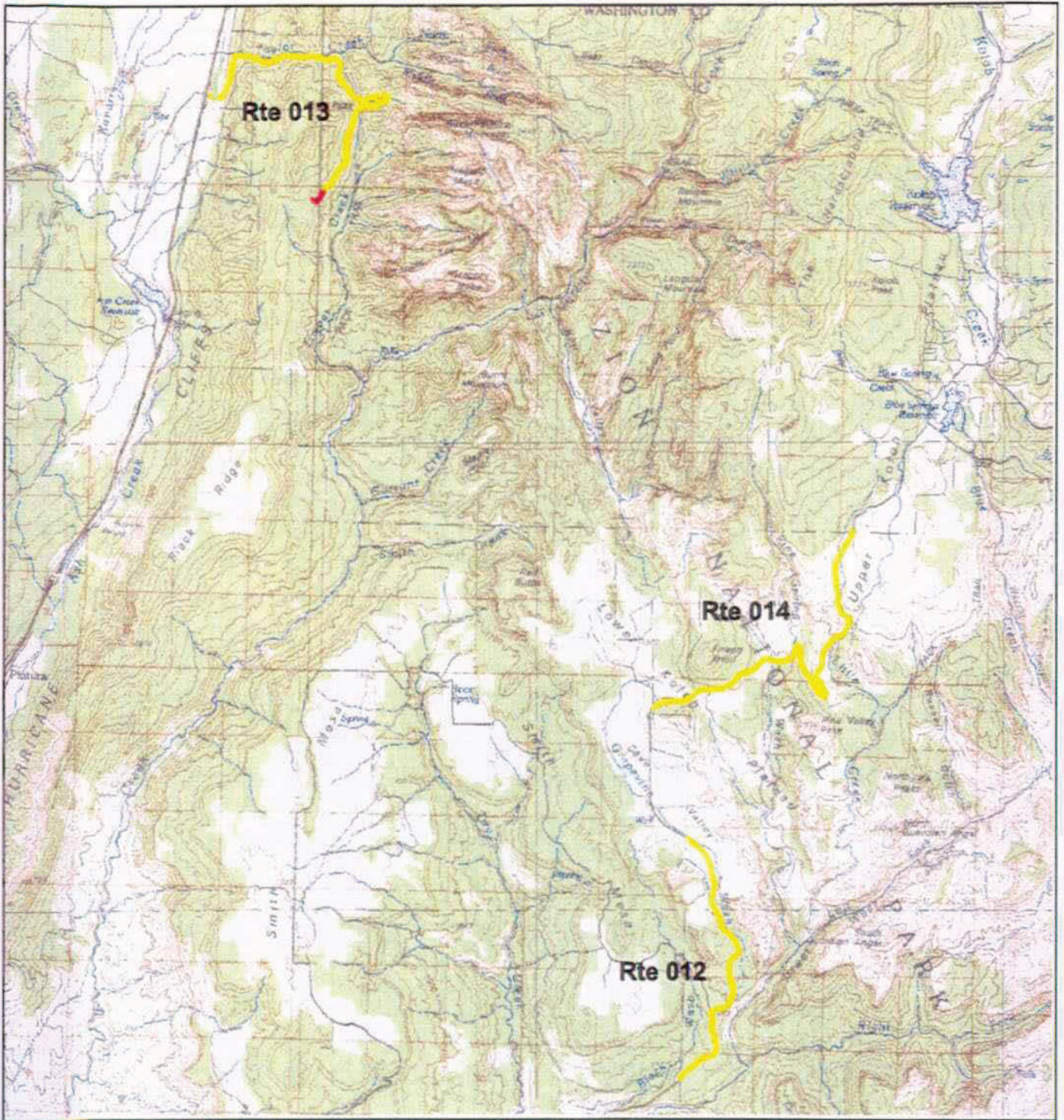


PCR Excellent		Good		Fair		Poor		DCR Poor	
* If the PCR rating is not available for a section, the SCR rating will be displayed									



ZION NATIONAL PARK ROUTE CONDITION KEY MAP PCR/DCR - Mile by Mile

FUNCTIONAL CLASSIFICATION I, II, VII, VIII ROADS



PCR Excellent		Good		Fair		Poor		DCR Poor	
• If the PCR rating is not available for a section, the SCR rating will be displayed									



ZION NATIONAL PARK - ZION - 1590
ROUTE IDENTIFICATION LIST (NUMERIC)

Shading Color Key:	White = Paved Routes, ARAN Driven	Blue = All Paved Parking Areas
	Grey = Paved Routes, ARAN not Driven	Green = All Unpaved Parking Areas
	Yellow = Unpaved Routes, ARAN not Driven	

Red Denotes Approximate Mileage

RTE #	ROUTE NAME	RTE MI	ROUTE DESCRIPTION	PAVED MILES	UN-PAVED MILES	LANES	FUNC. CLASS
010	Zion-Mt Carmel Highway	12.14	South Park Boundary to East Park Boundary	12.14		2	1
011	Valley Floor Highway	6.14	From Rte 010 to Rte 923	6.14		2	1
012	Kolob Terrace Road South	4.06	From West Park Boundary to West Park Boundary	4.06		2	1
013	Kolob Canyon Road	5.28	From West Park Boundary To End	5.28		2	1
014	Kolob Terrace Road North	5.84	From WestPark Boundary to North Park Boundary	5.84		2	1
200	South Campground Road	2.27	From Rte 010 to end of South Campground Loop	2.27		1	3
202	Watchman Campground Road	0.70	From Rte 010 to Loop D	0.70		2	3
203	Watchman Campground Spur Road	2.18	From Rte 202 to end of Loop E	2.18		1	3
204	MIA Camp Road	6.30	From Rte 205 to end		6.30	2	2
205	Lava Point Road	0.85	From West Park Boundary to end		0.85	1	3
206	Smith Mesa Road	1.00	From Rte 012 to West Park Boundary		1.00	2	3
207	Watchman Trail Road	0.22	From Rte 202 to end of Rte 401	0.22		2	3
400	Watchman Cutoff Road	0.17	From Rte 401 to Rte 401	0.17		2	5
401	Watchman Residence Road	0.60	From Rte 403 to Rte 207	0.60		2	5
402	Oak Creek Road	0.56	From Rte 010 to gate	0.56		2	5
403	Oak Creek Headquarters Road	0.08	From Rte 402 to Headquarters parking	0.08		2	5
404	Visitor Center Residential Road	0.13	From Rte 010 to end	0.13		1	5
405	Watchman Maintenance Road	0.06	From Rte 202 to end	0.06		1	6
406	Zion Nature Center Service Road	0.13	From South Amphitheater Parking to end	0.13		1	5
407	Oak Creek Residence Road	0.22	From Rte 402 to end	0.22		2	5
408	Oak Creek Residence Spur Road	0.19	From Rte 407 to end	0.19		2	6
409	Horse Corral Road	0.42	From Rte 011 to horse corral	0.42		1	5
410	Kolob Service Road	0.44	From Rte 013 to end of loop	0.44		2	6
411	Kolob Residence Road	0.07	From Rte 013 to Rte 013	0.07		1	6
412	Concessionaire / Dorm Access Road	0.81	From Rte 011 to end of loop	0.81		1	6
900	South Entrance Parking	-	From Rte 010	-	-	-	-
901	Watchman Campground Dump Station	-	From Rte 202	-	-	-	-
902	Watchman Visitor Center (Under Construction)	-	From Rte 202	-	-	-	-
903	Watchman Amphitheater Dump Station	-	From Rte 203	-	-	-	-
904	Watchman Amphitheater Loop B Parking	-	From Rte 203	-	-	-	-
905	South Campground Dump Station	-	From Rte 200	-	-	-	-

ROUTE IDENTIFICATION LIST (NUMERIC)

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Red Denotes Approximate Mileage

RTE #	ROUTE NAME	RTE MI	ROUTE DESCRIPTION	PAVED MILES	UN-PAVED MILES	LANES	FUNC. CLASS
906	Zion Nature Center Parking	-	From Rte 200	-	-	-	-
907	South Amphitheater Parking	-	From Rte 200	-	-	-	-
908	Oak Creek Headquarters Parking	-	From end of Rte 403	-	-	-	-
909	Oak Creek Maintenance Area	-	From Rte 402	-	-	-	-
910	Helicopter Landing Pad	-	From Rte 401	-	-	-	-
911	Oak Creek Visitor Center Parking	-	From Rte 010	-	-	-	-
912	North Tunnel Entrance Parking	-	From Rte 010	-	-	-	-
913	Checkerboard Mesa Viewpoint Parking	-	From Rte 010	-	-	-	-
914	East Rim Trail Parking	-	From Rte 010	-	-	-	-
915	Court of the Patriarchs Parking	-	From Rte 011	-	-	-	-
916	Mt Maroni Turnout	-	From Rte 011	-	-	-	-
917	Zion Lodge Cabin Parking	-	From Rte 011	-	-	-	-
918	West Rim Trailhead Parking	-	From Rte 011	-	-	-	-
919	Grotto Picnic Parking	-	From Rte 011	-	-	-	-
920	Weeping Rock Parking	-	From Rte 011	-	-	-	-
921	The Great White Throne Parking	-	From Rte 011	-	-	-	-
922	Bus and Trailer Parking	-	From Rte 011	-	-	-	-
923	Temple of Sinawava Parking	-	From end of Rte 011	-	-	-	-
924	Emerald Pools Horse Corral	-	From Rte 011	-	-	-	-
925	Zion Lodge Parking	-	From Rte 011	-	-	-	-
926	Kolob Visitors Center Parking	-	From Rte 013	-	-	-	-
927	Taylor Creek Trailhead Parking	-	From Rte 013	-	-	-	-
928	Parking at MP 3.20	-	From Rte 013	-	-	-	-
929	Lee Pass Trailhead Parking	-	From Rte 013	-	-	-	-
930	Timper Creek Overlook Parking	-	From end of Rte 013	-	-	-	-

ZION NATIONAL PARK - ZION - 1590
ROUTE IDENTIFICATION LIST (ALPHABETIC)

Shading Color Key:	White = Paved Routes, ARAN Driven	Blue = All Paved Parking Areas
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	Yellow = Unpaved Routes, ARAN not Driven	

Red Denotes Approximate Mileage

RTE #	ROUTE NAME	RTE MI	ROUTE DESCRIPTION	PAVED MILES	UN-PAVED MILES	LANES	FUNC. CLASS
922	Bus and Trailer Parking	-	From Rte 011	-	-	-	-
913	Checkerboard Mesa Viewpoint Parking	-	From Rte 010	-	-	-	-
412	Concessionaire / Dorm Access Road	0.81	From Rte 011 to end of loop	0.81		1	6
915	Court of the Patriarchs Parking	-	From Rte 011	-	-	-	-
914	East Rim Trail Parking	-	From Rte 010	-	-	-	-
924	Emerald Pools Horse Corral	-	From Rte 011	-	-	-	-
919	Grotto Picnic Parking	-	From Rte 011	-	-	-	-
910	Helicopter Landing Pad	-	From Rte 401	-	-	-	-
409	Horse Corral Road	0.42	From Rte 011 to horse corral	0.42		1	5
013	Kolob Canyon Road	5.28	From West Park Boundary To End	5.28		2	1
411	Kolob Residence Road	0.07	From Rte 013 to Rte 013	0.07		1	6
410	Kolob Service Road	0.44	From Rte 013 to end of loop	0.44		2	5
014	Kolob Terrace Road North	5.84	From WestPark Boundary to North Park Boundary	5.84		2	1
012	Kolob Terrace Road South	4.06	From West Park Boundary to West Park Boundary	4.06		2	1
926	Kolob Visitors Center Parking	-	From Rte 013	-	-	-	-
205	Lava Point Road	0.85	From West Park Boundary to end		0.85	1	3
929	Lee Pass Trailhead Parking	-	From Rte 013	-	-	-	-
204	MIA Camp Road	6.30	From Rte 205 to end		6.30	2	2
916	Mt Maroni Turnout	-	From Rte 011	-	-	-	-
912	North Tunnel Entrance Parking	-	From Rte 010	-	-	-	-
908	Oak Creek Headquarters Parking	-	From end of Rte 403	-	-	-	-
403	Oak Creek Headquarters Road	0.08	From Rte 402 to Headquarters parking	0.08		2	5
909	Oak Creek Maintenance Area	-	From Rte 402	-	-	-	-
407	Oak Creek Residence Road	0.22	From Rte 402 to end	0.22		2	5
408	Oak Creek Residence Spur Road	0.19	From Rte 407 to end	0.19		2	6
402	Oak Creek Road	0.56	From Rte 010 to gate	0.56		2	5
911	Oak Creek Visitor Center Parking	-	From Rte 010	-	-	-	-
928	Parking at MP 3.20	-	From Rte 013	-	-	-	-
206	Smith Mesa Road	1.00	From Rte 012 to West Park Boundary		1.00	2	3
907	South Amphitheater Parking	-	From Rte 200	-	-	-	-
905	South Campground Dump Station	-	From Rte 200	-	-	-	-
200	South Campground Road	2.27	From Rte 010 to end of South Campground Loop	2.27		1	3
900	South Entrance Parking	-	From Rte 010	-	-	-	-

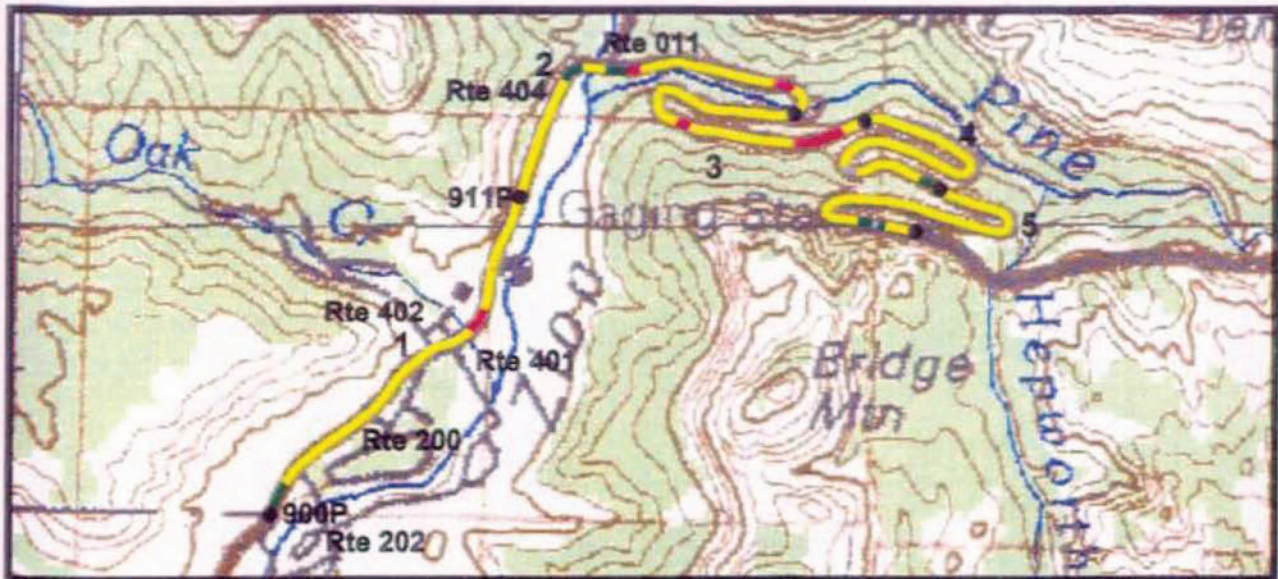
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Red Denotes Approximate Mileage

RTE #	ROUTE NAME	RTE MI	ROUTE DESCRIPTION	PAVED MILES	UN-PAVED MILES	LANES	FUNC. CLASS
927	Taylor Creek Trailhead Parking	-	From Rte 013	-	-	-	-
923	Temple of Sinawava Parking	-	From end of Rte 011	-	-	-	-
921	The Great White Throne Parking	-	From Rte 011	-	-	-	-
930	Timper Creek Overlook Parking	-	From end of Rte 013	-	-	-	-
011	Valley Floor Highway	6.14	From Rte 010 to Rte 923	6.14		2	1
404	Visitor Center Residential Road	0.13	From Rte 010 to end	0.13		1	5
903	Watchman Amphitheater Dump Station	-	From Rte 203	-	-	-	-
904	Watchman Amphitheater Loop B Parking	-	From Rte 203	-	-	-	-
901	Watchman Campground Dump Station	-	From Rte 202	-	-	-	-
202	Watchman Campground Road	0.70	From Rte 010 to Loop D	0.70		2	3
203	Watchman Campground Spur Road	2.18	From Rte 202 to end of Loop E	2.18		1	3
400	Watchman Cutoff Road	0.17	From Rte 401 to Rte 401	0.17		2	5
405	Watchman Maintenance Road	0.06	From Rte 202 to end	0.06		1	6
401	Watchman Residence Road	0.60	From Rte 403 to Rte 207	0.60		2	5
207	Watchman Trail Road	0.22	From Rte 202 to end of Rte 401	0.22		2	3
902	Watchman Visitor Center (Under Construction)	-	From Rte 202	-	-	-	-
920	Weeping Rock Parking	-	From Rte 011	-	-	-	-
918	West Rim Trailhead Parking	-	From Rte 011	-	-	-	-
917	Zion Lodge Cabin Parking	-	From Rte 011	-	-	-	-
925	Zion Lodge Parking	-	From Rte 011	-	-	-	-
906	Zion Nature Center Parking	-	From Rte 200	-	-	-	-
406	Zion Nature Center Service Road	0.13	From South Amphitheater Parking to end	0.13		1	5
010	Zion-Mt Carmel Highway	12.14	South Park Boundary to East Park Boundary	12.14		2	1



PCR Excellent Good Fair Poor DCR Poor
 * If the PCR rating is not available for a section, the SCR rating will be displayed

IMR: Intermountain Region
 ZION: Zion NP

ROUTE: 010 ZION - MOUNT CARMEL HIGHWAY

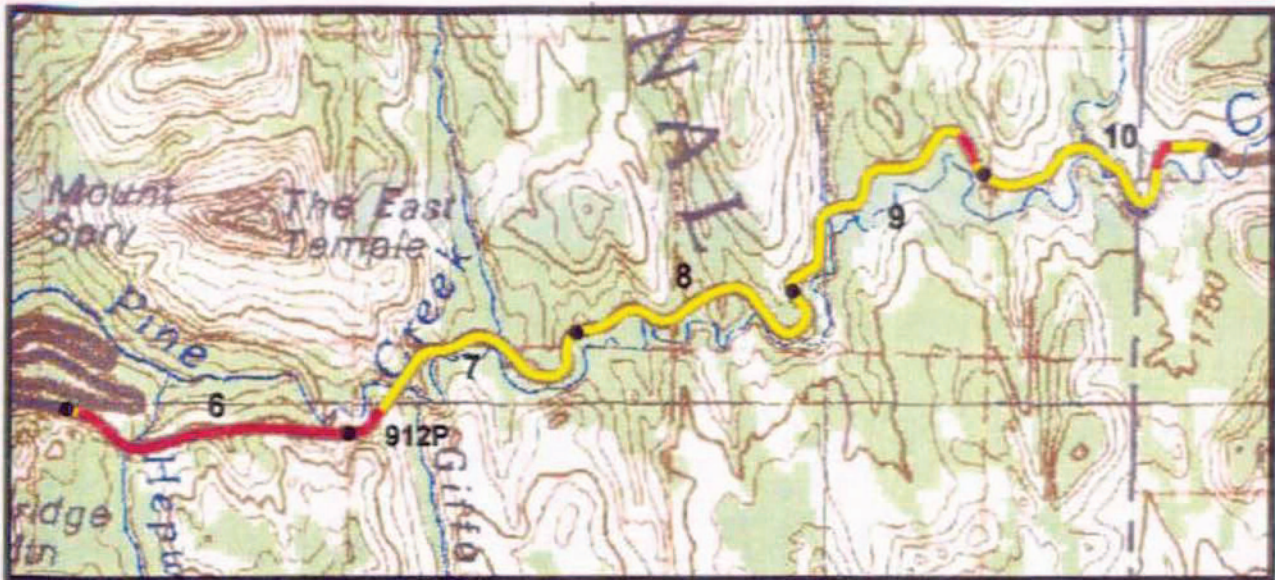
TOTAL LENGTH: 12.14 Miles

Section Number	1	2	3	4	5
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
AADT	2943	2972	1696	1696	1696
SADT	4411	4287	2447	2447	2447
ADT Date	1994	1994	1994	1994	1994
Cross Section Information					
Number of Lanes	3	2	2	2	2
Paved Width (ft)	35	35	24	26	26
Lane Width (ft)	14	14	11	10	10
Shoulder Width (ft)	4	4	2	1	1
Roadway Condition Information					
PCR (Pavement Condition Rating)	70	74	67	NA	69
Roughness Index	55	62	47	NA	47
SCR (Surface Condition Rating)	81	81	80	80	84
Alligator Cracking	100	100	100	100	100
Rutting Index	78	79	75	73	80
Patching Index	100	100	100	100	100
Transverse Cracking	94	94	94	94	97
Longitudinal Cracking	98	97	97	98	98
Shoulder Condition Rating	GOOD	GOOD	GOOD	GOOD	GOOD
Drainage Condition Rating	GOOD	GOOD	GOOD	GOOD	GOOD

COMMENTS:

- MP 0.00 Begin at South Boundary - Pic #14 - Typical Pavement Section
- MP 0.01 Intersection right (900)
- MP 0.12 Pic #15 - Typical pavement Section
- MP 0.15 Intersection right (202)
- MP 0.43 Intersection right (200)
- MP 0.68 Intersection left (402)
- MP 0.89 Pic #16 - Typical Pavement Section
- MP 0.93 Intersection left (911)
- MP 1.32 Intersection left (404)
- MP 1.58 Intersection left (011)
- MP 2.10 Pic #17 - Sealed Cracks
- MP 3.30 Pic #18 - Shoulder Cracking
- MP 4.70 Pic #19 - Typical Retaining Wall
- MP 4.90 Pic #20 - Tunnel Entrance

ROUTE: 010 ZION - MOUNT CARMEL HIGHWAY



PCR Excellent
 Good
 Fair
 Poor
 DCR Poor

* If the PCR rating is not available for a section, the SCR rating will be displayed

IMR: Intermountain Region
 ZION: Zion NP

ROUTE: 010 ZION - MOUNT CARMEL HIGHWAY

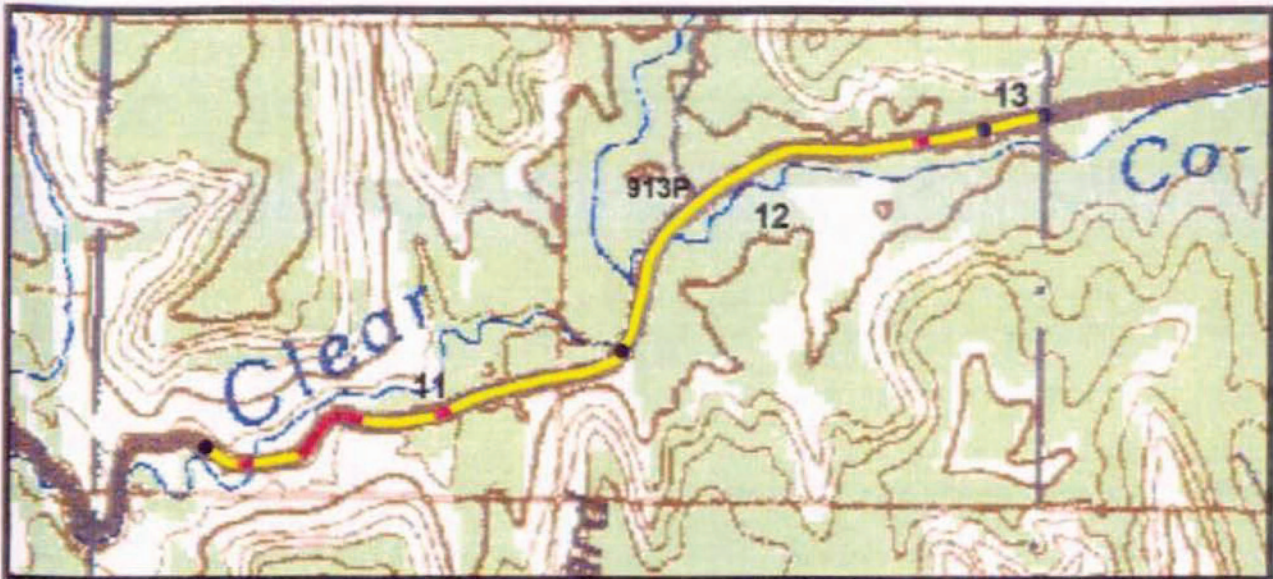
TOTAL LENGTH: 12.14 Miles

Section Number	6	7	8	9	10
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
AADT	1696	1696	1547	1547	1547
SADT	2447	2447	2304	2304	2304
ADT Date	1994	1994	1994	1994	1994
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	22	25	25	25	25
Lane Width (ft)	11	11	11	11	11
Shoulder Width (ft)	0	1	0	0	1
Roadway Condition Information					
PCR (Pavement Condition Rating)	37	67	72	72	66
Roughness Index	37	55	58	58	50
SCR (Surface Condition Rating)	39	75	82	81	77
Alligator Cracking	100	100	100	100	100
Rutting Index	83	80	82	79	80
Patching Index	100	100	100	100	100
Transverse Cracking	80	91	96	93	93
Longitudinal Cracking	67	94	97	98	93
Shoulder Condition Rating	GOOD	GOOD	GOOD	GOOD	GOOD
Drainage Condition Rating	GOOD	GOOD	GOOD	GOOD	GOOD

COMMENTS:

- MP 6.10 Pic #21 - East end of Tunnel, looking back.
- MP 6.13 Intersection right (912)
- MP 7.55 Pic #22 - Tunnel Entrance
- MP 8.60 Pic #23 - Pavement Change

ROUTE: 010 ZION - MOUNT CARMEL HIGHWAY



PCR Excellent ■ Good ■ Fair ■ Poor ■ DCR Poor
 * If the PCR rating is not available for a section, the SCR rating will be displayed

IMR: Intermountain Region
 ZION: Zion NP

ROUTE: 010 ZION - MOUNT CARMEL HIGHWAY

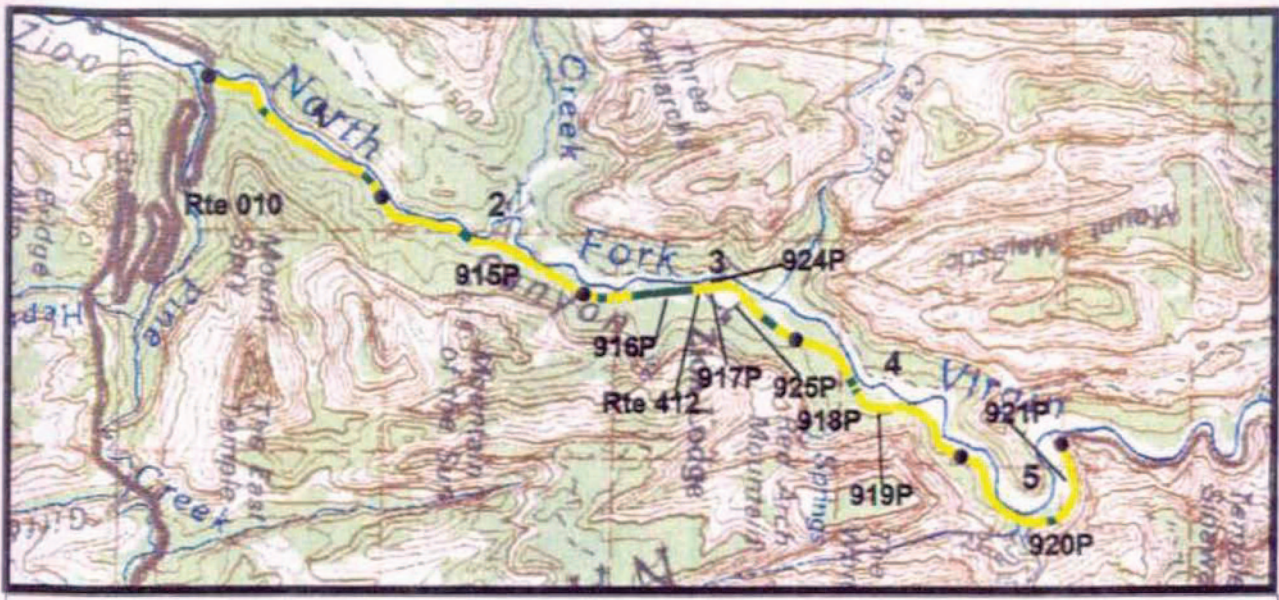
TOTAL LENGTH: 12.14 Miles

Section Number	11	12	13		
Section Length (mi)	1.00	1.00	0.14		
AADT	1547	1547	1547		
SADT	2304	2304	2304		
ADT Date	1994	1994	1994		
Cross Section Information					
Number of Lanes	2	2	2		
Paved Width (ft)	25	25	24		
Lane Width (ft)	11	11	11		
Shoulder Width (ft)	1	1	2		
Roadway Condition Information					
PCR (Pavement Condition Rating)	65	67	64		
Roughness Index	51	46	43		
SCR (Surface Condition Rating)	74	81	79		
Alligator Cracking	100	100	100		
Rutting Index	84	81	80		
Patching Index	100	100	100		
Transverse Cracking	88	93	91		
Longitudinal Cracking	96	98	97		
Shoulder Condition Rating	GOOD	GOOD	FAIR		
Drainage Condition Rating	GOOD	GOOD	FAIR		

COMMENTS:

- MP 11.40 Intersection left (913)
- MP 11.55 Pic #24- Typical Pavement Section, looking back.
- MP 12.14 End at East park Boundary - Pic #25 - Entrance, looking back.

ROUTE: 010 ZION - MOUNT CARMEL HIGHWAY



PCR Excellent Good Fair Poor DCR Poor

* If the PCR rating is not available for a section, the SCR rating will be displayed



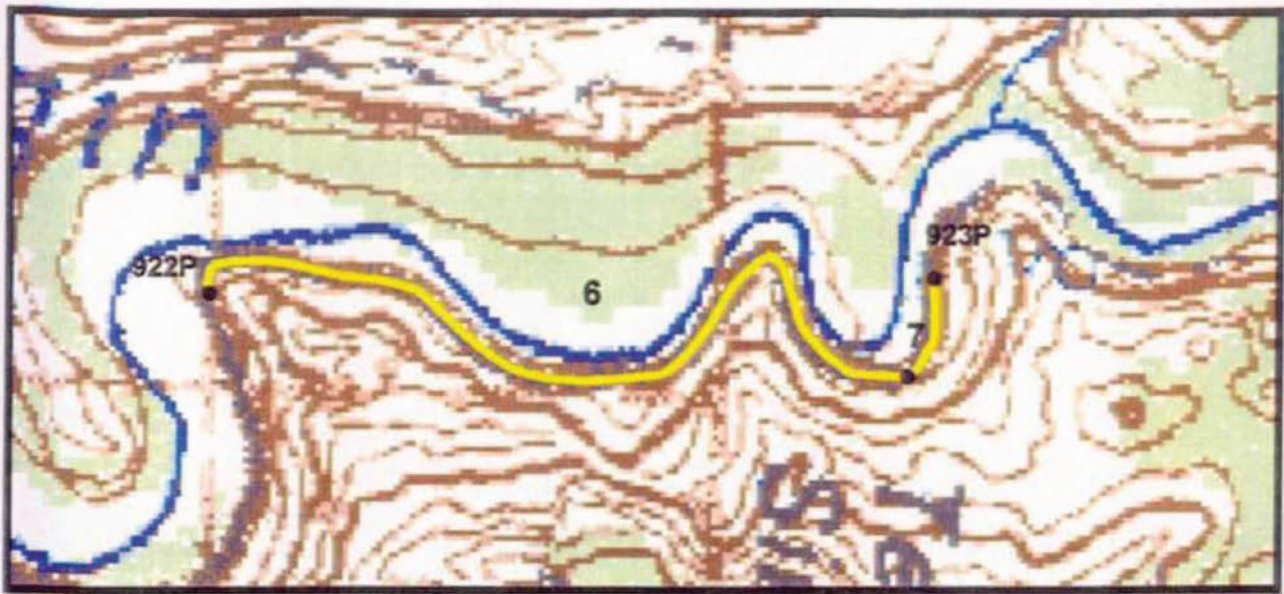
IMR: Intermountain Region
 ZION: Zion NP

ROUTE: 011 VALLEY FLOOR HIGHWAY TOTAL LENGTH: 6.14 Miles

Section Number	1	2	3	4	5
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
AADT	2518	2518	2518	1968	1968
SADT	3660	3660	3660	2950	2950
ADT Date	1994	1994	1994	1994	1994
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	27	27	26	26	26
Lane Width (ft)	11	11	12	12	12
Shoulder Width (ft)	4	4	3	3	3
Roadway Condition Information					
PCR (Pavement Condition Rating)	79	77	80	72	71
Roughness Index	63	63	68	49	52
SCR (Surface Condition Rating)	89	87	88	87	85
Alligator Cracking	100	100	100	100	100
Rutting Index	98	89	82	82	80
Patching Index	100	100	100	100	100
Transverse Cracking	98	97	98	97	96
Longitudinal Cracking	99	98	99	99	99
Shoulder Condition Rating	GOOD	GOOD	GOOD	GOOD	GOOD
Drainage Condition Rating	GOOD	GOOD	GOOD	GOOD	GOOD

COMMENTS: MP 0.00 Begin at Rte 010 - Pic #30 - Typical Pavement Section
 MP 0.04 Pic #31 - Typical Pavement Section
 MP 1.62 Intersection left (409)
 MP 1.63 Intersection right (915)
 MP 2.30 Intersection right (916)
 MP 2.35 Pic #32 - Typical Pavement Section
 MP 2.45 Intersection right (412)
 MP 2.63 Intesection right (917)
 MP 2.63 Intersection left (924)
 MP 2.79 Intersection right (925)
 MP 3.32 Intersection right (918)
 MP 3.36 Intersection right (919)
 MP 4.54 Intersection right (920)
 MP 4.58 Pic #33 - Typical Pavement Section
 MP 4.83 Intersection left (921)

ROUTE: 011 VALLEY FLOOR HIGHWAY



PCR Excellent Good Fair Poor DCR Poor

* If the PCR rating is not available for a section, the SCR rating will be displayed



IMR: Intermountain Region
 ZION: Zion NP

ROUTE: 011 VALLEY FLOOR HIGHWAY

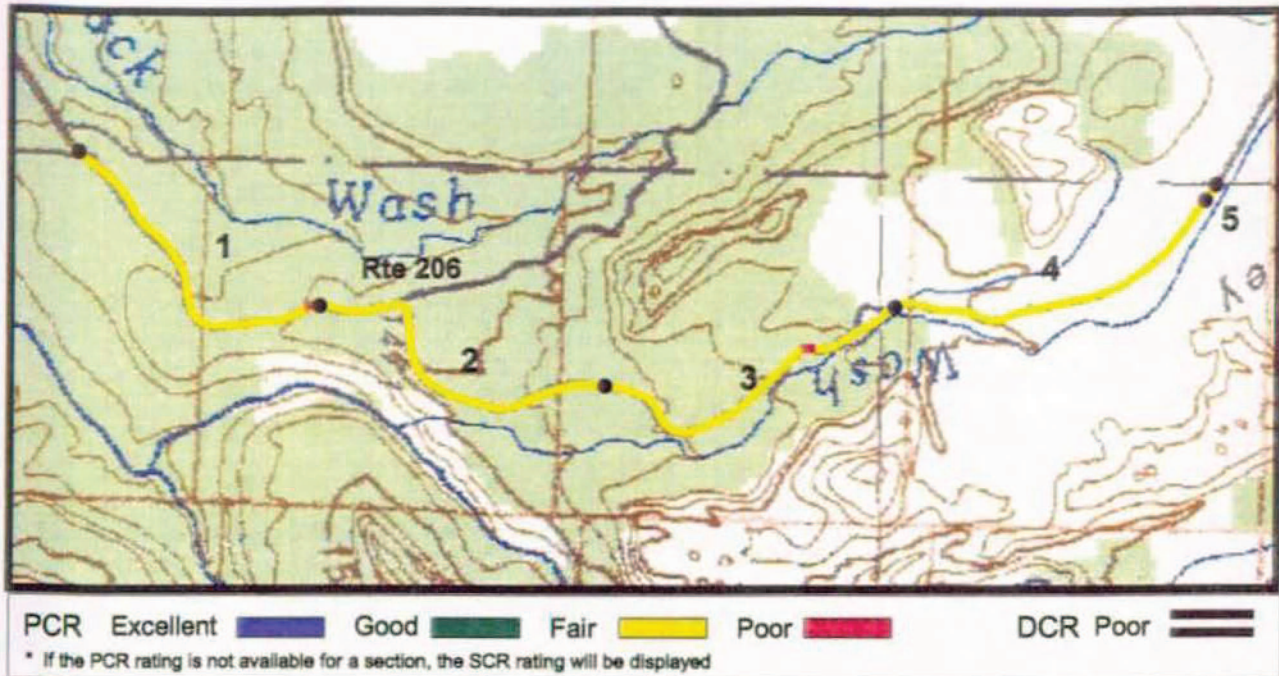
TOTAL LENGTH: 6.14 Miles

Section Number	6	7			
Section Length (mi)	1.00	0.14			
AADT	1968	1968			
SADT	2950	2950			
ADT Date	1994	1994			
Cross Section Information					
Number of Lanes	2	2			
Paved Width (ft)	26	26			
Lane Width (ft)	12	12			
Shoulder Width (ft)	3	3			
Roadway Condition Information					
PCR (Pavement Condition Rating)	73	70			
Roughness Index	54	48			
SCR (Surface Condition Rating)	86	84			
Alligator Cracking	100	100			
Rutting Index	79	72			
Patching Index	100	100			
Transverse Cracking	97	98			
Longitudinal Cracking	99	100			
Shoulder Condition Rating	GOOD	GOOD			
Drainage Condition Rating	GOOD	GOOD			

COMMENTS:

MP 5.05 Intersection left (922)
 MP 6.14 End at Rte 923

ROUTE: 011 VALLEY FLOOR HIGHWAY



IMR: Intermountain Region
 ZION: Zion NP

ROUTE: 012 KOLOB TERRACE ROAD (SOUTH)

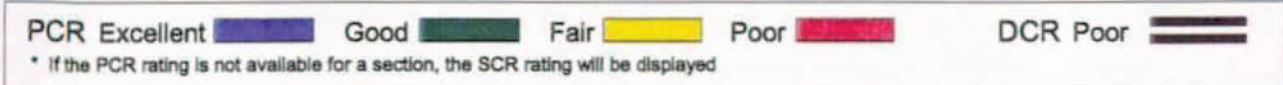
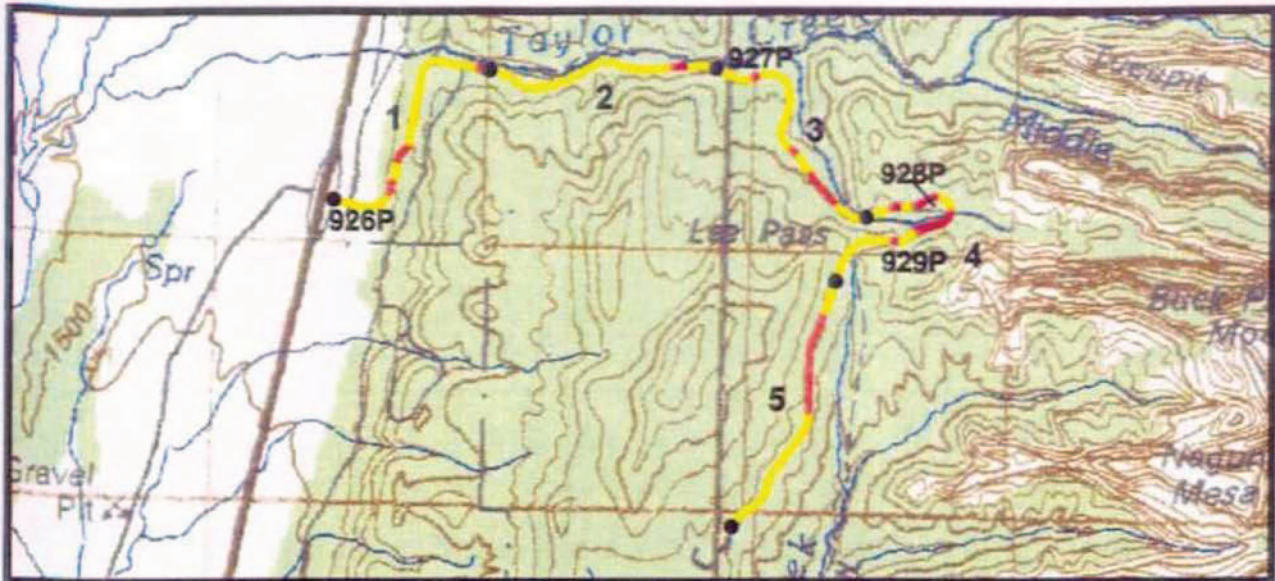
TOTAL LENGTH: 4.06 Miles

Section Number	1	2	3	4	5
Section Length (mi)	1.00	1.00	1.00	1.00	0.06
AADT	193	193	193	193	193
SADT	290	290	290	290	290
ADT Date	1994	1994	1994	1994	1994
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	22	22	22	22	22
Lane Width (ft)	11	11	11	11	11
Shoulder Width (ft)	0	0	0	0	0
Roadway Condition Information					
PCR (Pavement Condition Rating)	69	68	69	77	79
Roughness Index	40	36	40	60	61
SCR (Surface Condition Rating)	89	89	89	89	92
Alligator Cracking	100	100	100	100	100
Rutting Index	94	94	95	94	98
Patching Index	100	100	100	100	100
Transverse Cracking	100	100	100	100	100
Longitudinal Cracking	100	100	100	100	100
Shoulder Condition Rating	FAIR	FAIR	FAIR	FAIR	FAIR
Drainage Condition Rating	FAIR	FAIR	FAIR	FAIR	FAIR

COMMENTS:

MP 0.00 Begin at Boundary - Pic #399 - Typical Pavement Section
 MP 1.21 Intersection left (206)
 MP 4.06 End at Boundary

ROUTE: 012 KOLOB TERRACE ROAD (SOUTH)



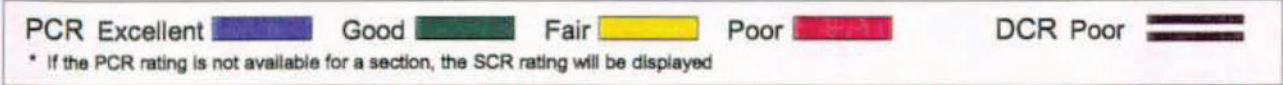
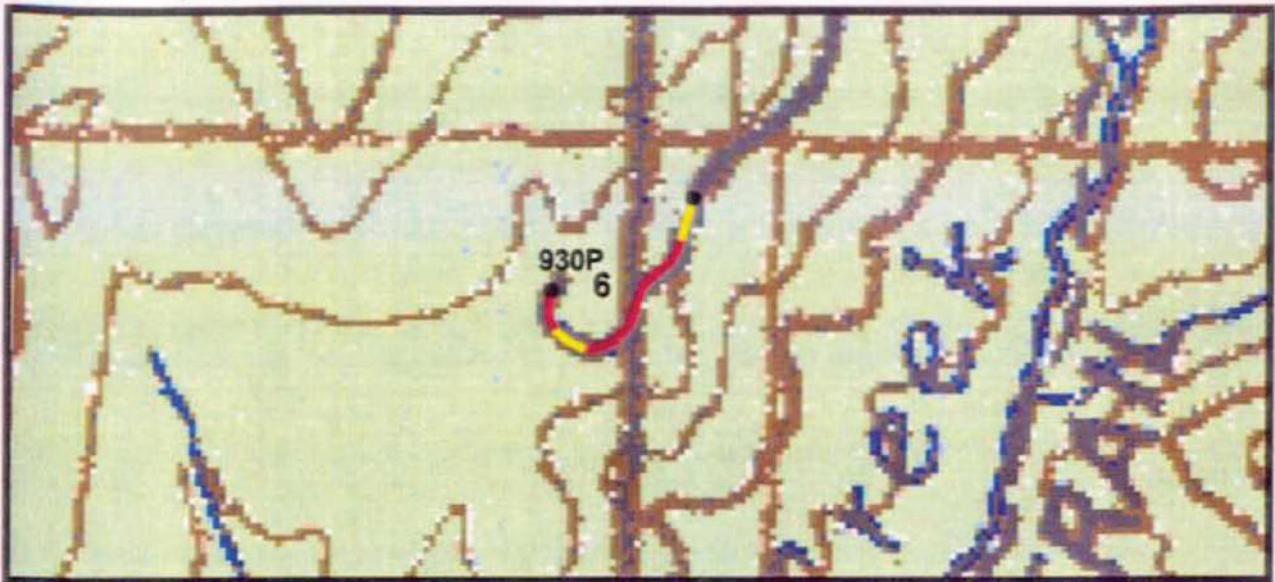
IMR: Intermountain Region
 ZION: Zion NP

ROUTE: 013 KOLOB CANYON ROAD TOTAL LENGTH: 5.28 Miles

Section Number	1	2	3	4	5
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
AADT	210	210	210	210	210
SADT	314	314	314	314	314
ADT Date	1994	1994	1994	1994	1994
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	26	26	26	26	26
Lane Width (ft)	13	13	13	13	13
Shoulder Width (ft)	0	0	0	0	0
Roadway Condition Information					
PCR (Pavement Condition Rating)	67	69	67	65	64
Roughness Index	43	47	39	38	43
SCR (Surface Condition Rating)	83	84	85	83	79
Alligator Cracking	100	100	100	100	100
Rutting Index	97	98	95	96	96
Patching Index	100	100	100	100	100
Transverse Cracking	93	94	96	94	90
Longitudinal Cracking	99	99	99	99	98
Shoulder Condition Rating	FAIR	FAIR	FAIR	FAIR	FAIR
Drainage Condition Rating	FAIR	FAIR	FAIR	FAIR	FAIR

COMMENTS:
 MP 0.00 Begin at Rte at Boundary - Pic #401 - Typical Pavement Section
 MP 0.04 Intersection right (926)
 MP 0.09 Intersection left (410)
 MP 2.02 Intersection left (927)
 MP 3.20 Intersection left (928)
 MP 3.89 Intersection left (929)

ROUTE: 013 KOLOB CANYON ROAD



IMR: Intermountain Region
 ZION: Zion NP

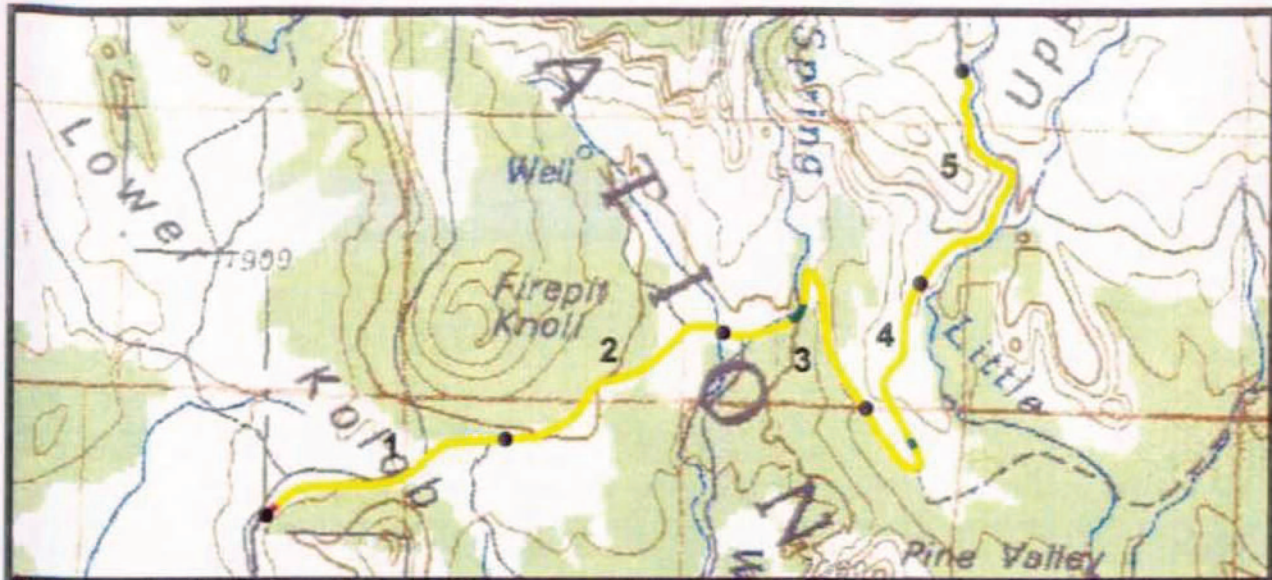
ROUTE: 013 KOLOB CANYON ROAD

TOTAL LENGTH: 5.28 Miles

Section Number	6				
Section Length (mi)	0.28				
AADT	210				
SADT	314				
ADT Date	1994				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	26				
Lane Width (ft)	13				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	55				
Roughness Index	32				
SCR (Surface Condition Rating)	68				
Alligator Cracking	100				
Rutting Index	94				
Patching Index	100				
Transverse Cracking	84				
Longitudinal Cracking	95				
Shoulder Condition Rating	FAIR				
Drainage Condition Rating	FAIR				

COMMENTS:
 MP 5.28 End at Rte 930

ROUTE: 013 KOLOB CANYON ROAD



PCR Excellent Good Fair Poor DCR Poor
 * If the PCR rating is not available for a section, the SCR rating will be displayed

IMR: Intermountain Region
 ZION: Zion NP

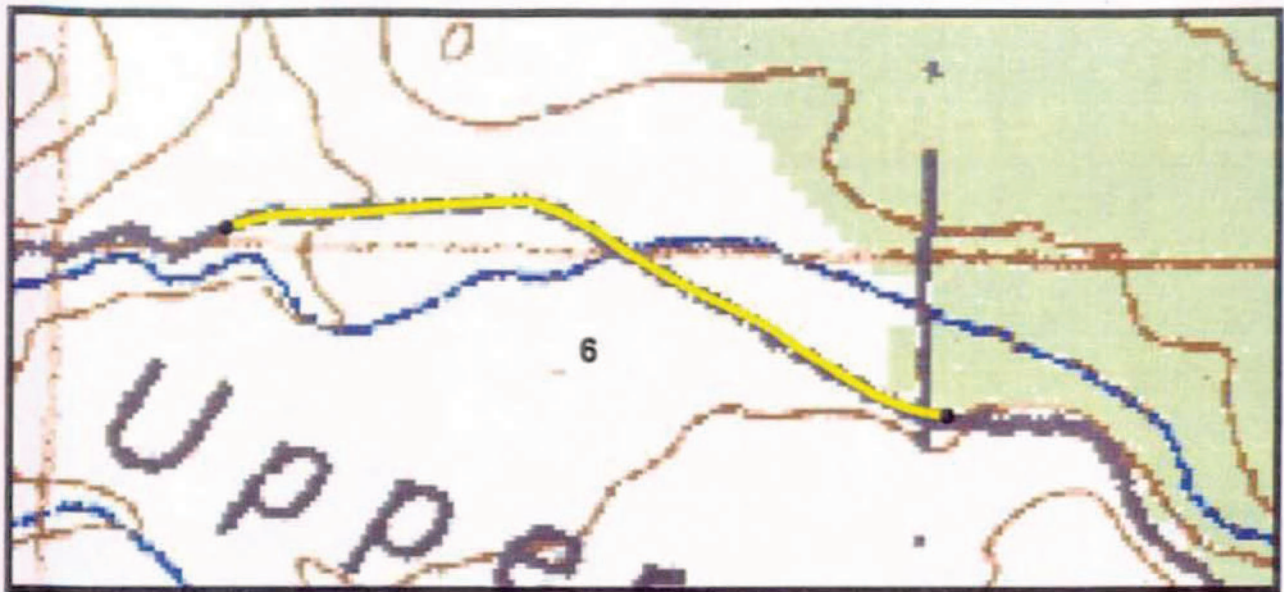
ROUTE: 014 KOLOB TERRACE ROAD (NORTH)

TOTAL LENGTH: 5.84 Miles

Section Number	1	2	3	4	5
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
AADT	193	193	193	193	193
SADT	290	290	290	290	290
ADT Date	1994	1994	1994	1994	1994
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	20	20	20	20	20
Lane Width (ft)	10	10	10	10	10
Shoulder Width (ft)	0	0	0	0	0
Roadway Condition Information					
PCR (Pavement Condition Rating)	78	79	77	77	77
Roughness Index	61	63	61	61	59
SCR (Surface Condition Rating)	89	89	89	88	89
Alligator Cracking	100	100	100	100	100
Rutting Index	94	94	93	92	93
Patching Index	100	100	100	100	100
Transverse Cracking	100	100	100	100	100
Longitudinal Cracking	100	100	100	100	100
Shoulder Condition Rating	FAIR	FAIR	FAIR	FAIR	FAIR
Drainage Condition Rating	FAIR	FAIR	FAIR	FAIR	FAIR

COMMENTS:
 MP 0.00 Begin at Park Boundary - Pic #400 - Typical Pavement Section

ROUTE: 014 KOLOB TERRACE ROAD (NORTH)



PCR Excellent ■ Good ■ Fair ■ Poor ■ DCR Poor

* If the PCR rating is not available for a section, the SCR rating will be displayed



IMR: Intermountain Region
 ZION: Zion NP

ROUTE: 014 KOLOB TERRACE ROAD (NORTH)

TOTAL LENGTH: 5.84 Miles

Section Number	6				
Section Length (mi)	0.84				
AADT	193				
SADT	290				
ADT Date	1994				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	20				
Lane Width (ft)	10				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	76				
Roughness Index	59				
SCR (Surface Condition Rating)	87				
Alligator Cracking	100				
Rutting Index	90				
Patching Index	100				
Transverse Cracking	100				
Longitudinal Cracking	100				
Shoulder Condition Rating	FAIR				
Drainage Condition Rating	FAIR				

COMMENTS:
 MP 5.84 End at North Boundary

ROUTE: 014 KOLOB TERRACE ROAD (NORTH)



PCR Excellent ■ Good ■ Fair ■ Poor ■ DCR Poor
 * If the PCR rating is not available for a section, the SCR rating will be displayed

IMR: Intermountain Region
 ZION: Zion NP

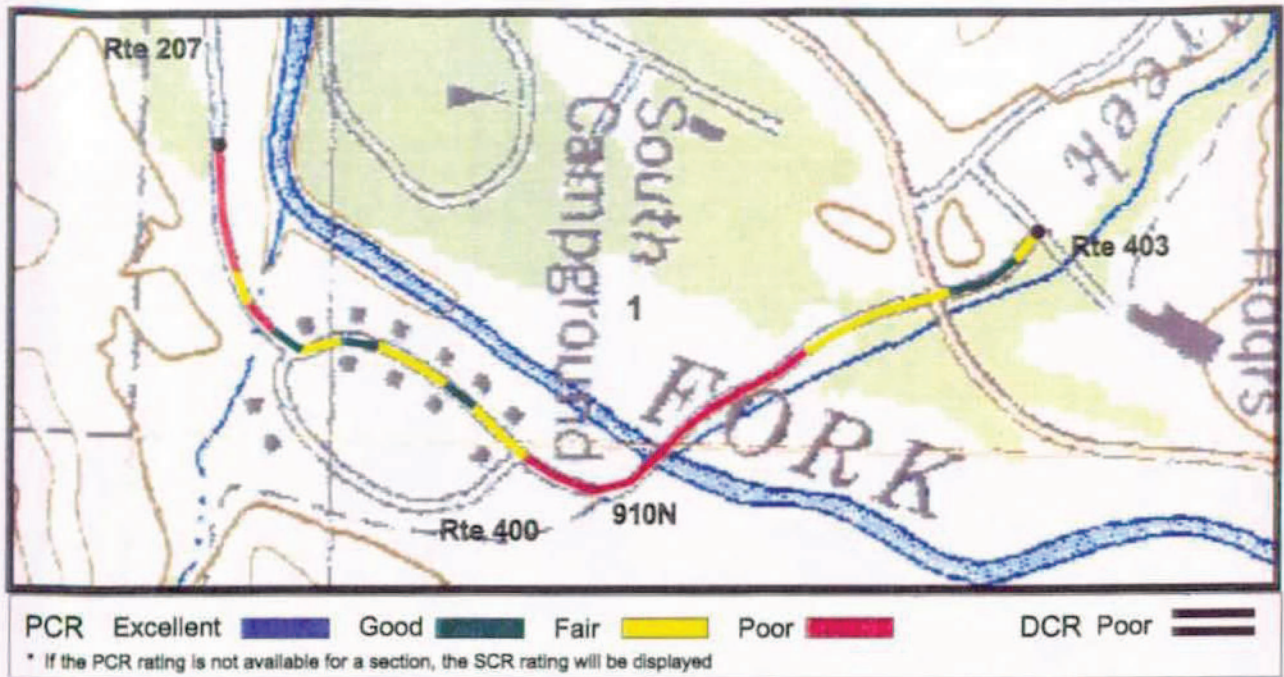
ROUTE: 207 WATCHMAN TRAIL ROAD

TOTAL LENGTH: 0.22 Miles

Section Number	1				
Section Length (mi)	0.22				
AADT	NA				
SADT	NA				
ADT Date	NA				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	17				
Lane Width (ft)	17				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	NA				
Roughness Index	NA				
SCR (Surface Condition Rating)	85				
Alligator Cracking	100				
Rutting Index	96				
Patching Index	100				
Transverse Cracking	97				
Longitudinal Cracking	98				
Shoulder Condition Rating	GOOD				
Drainage Condition Rating	GOOD				

COMMENTS:
 MP 0.00 Begin at Rte 202 - Pic #36 - Typical Pavement Section
 MP 0.22 End at Rte 401

ROUTE: 207 WATCHMAN TRAIL ROAD



IMR: Intermountain Region
 ZION: Zion NP

ROUTE: 401 WATCHMAN RESIDENCE ROAD

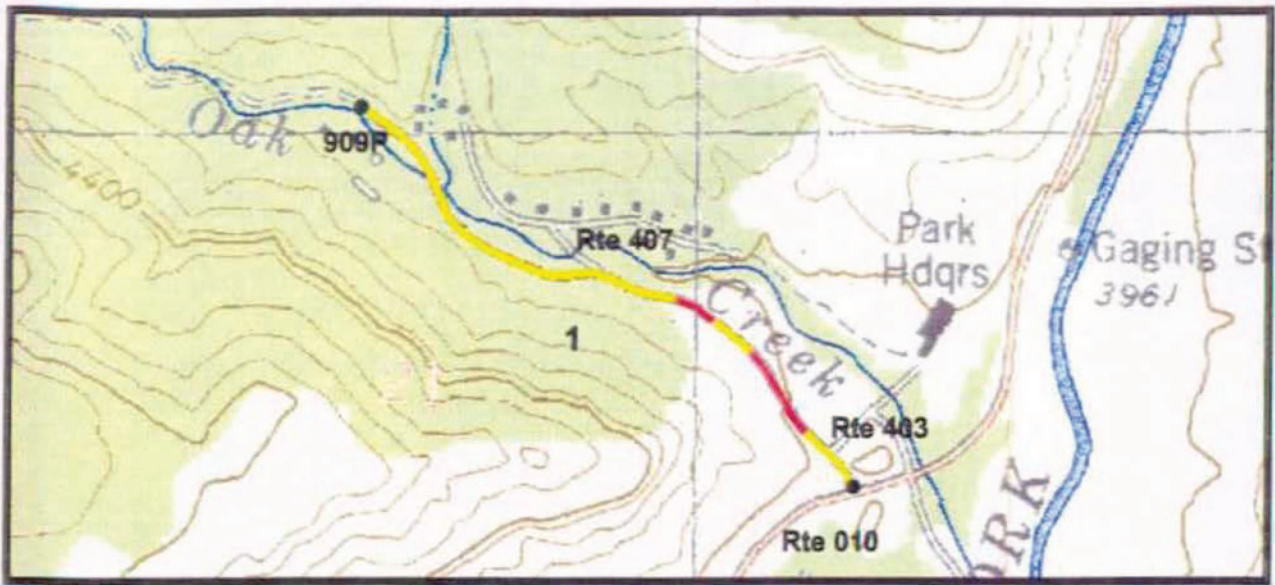
TOTAL LENGTH: 0.60 Miles

Section Number	1				
Section Length (mi)	0.60				
AADT	NA				
SADT	NA				
ADT Date	NA				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	20				
Lane Width (ft)	10				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	NA				
Roughness Index	NA				
SCR (Surface Condition Rating)	77				
Alligator Cracking	100				
Rutting Index	91				
Patching Index	100				
Transverse Cracking	92				
Longitudinal Cracking	97				
Shoulder Condition Rating	GOOD				
Drainage Condition Rating	GOOD				

COMMENTS:

- MP 0.00 Begin at Rte 403 - Pic #53 - Typical Pavement Section
- MP 0.29 Intersection left (910)
- MP 0.32 Intersection left (400)
- MP 0.49 Intersection left (400)
- MP 0.60 End at Rte 207

ROUTE: 401 WATCHMAN RESIDENCE ROAD



PCR Excellent
 Good
 Fair
 Poor
 DCR Poor

* If the PCR rating is not available for a section, the SCR rating will be displayed

IMR: Intermountain Region
 ZION: Zion NP

ROUTE: 402 OAK CREEK ROAD

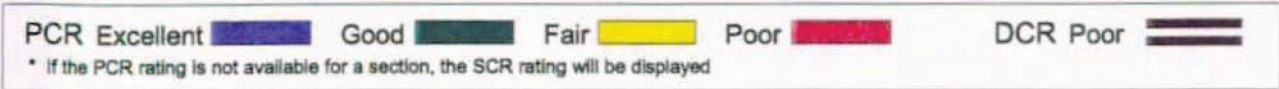
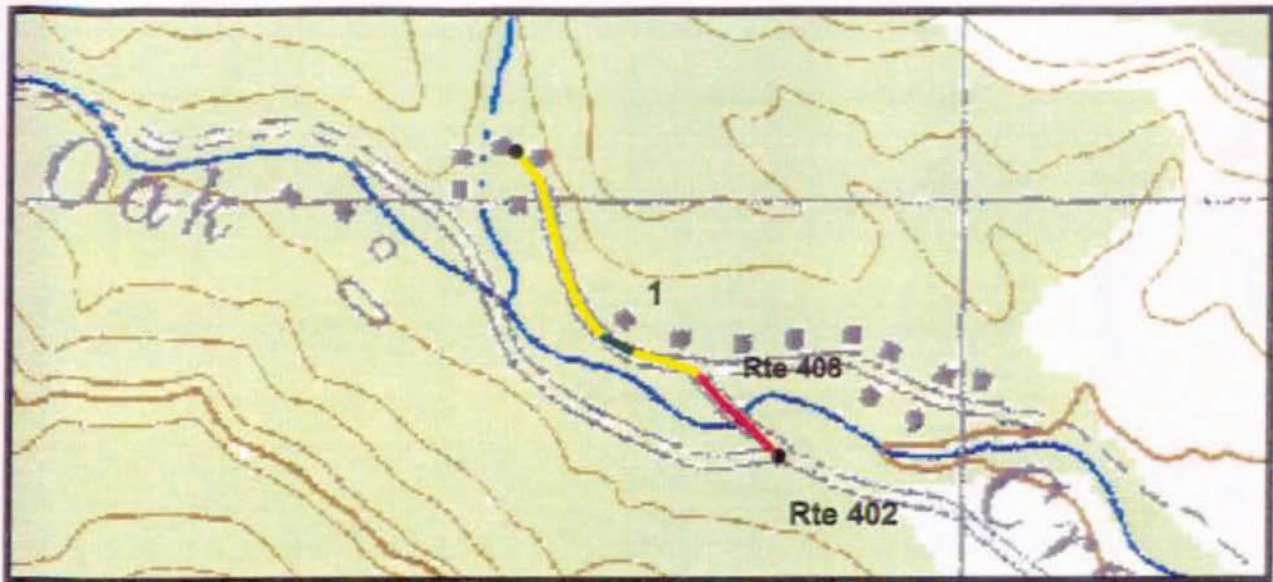
TOTAL LENGTH: 0.56 Miles

Section Number	1				
Section Length (mi)	0.56				
AADT	NA				
SADT	NA				
ADT Date	NA				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	20				
Lane Width (ft)	10				
Shoulder Width (ft)	4				
Roadway Condition Information					
PCR (Pavement Condition Rating)	64				
Roughness Index	50				
SCR (Surface Condition Rating)	73				
Alligator Cracking	100				
Rutting Index	96				
Patching Index	100				
Transverse Cracking	87				
Longitudinal Cracking	96				
Shoulder Condition Rating	GOOD				
Drainage Condition Rating	GOOD				

COMMENTS:

MP 0.00 Begin at Rte 010
 MP 0.05 Pic #50 - Typical Pavement Section
 MP 0.08 Intersection right (403)
 MP 0.30 Intersection right (407)
 MP 0.54 Intersection left (909)
 MP 0.56 End at Gate

ROUTE: 402 OAK CREEK ROAD



IMR: Intermountain Region
 ZION: Zion NP

ROUTE: 407 OAK CREEK RESIDENCE ROAD

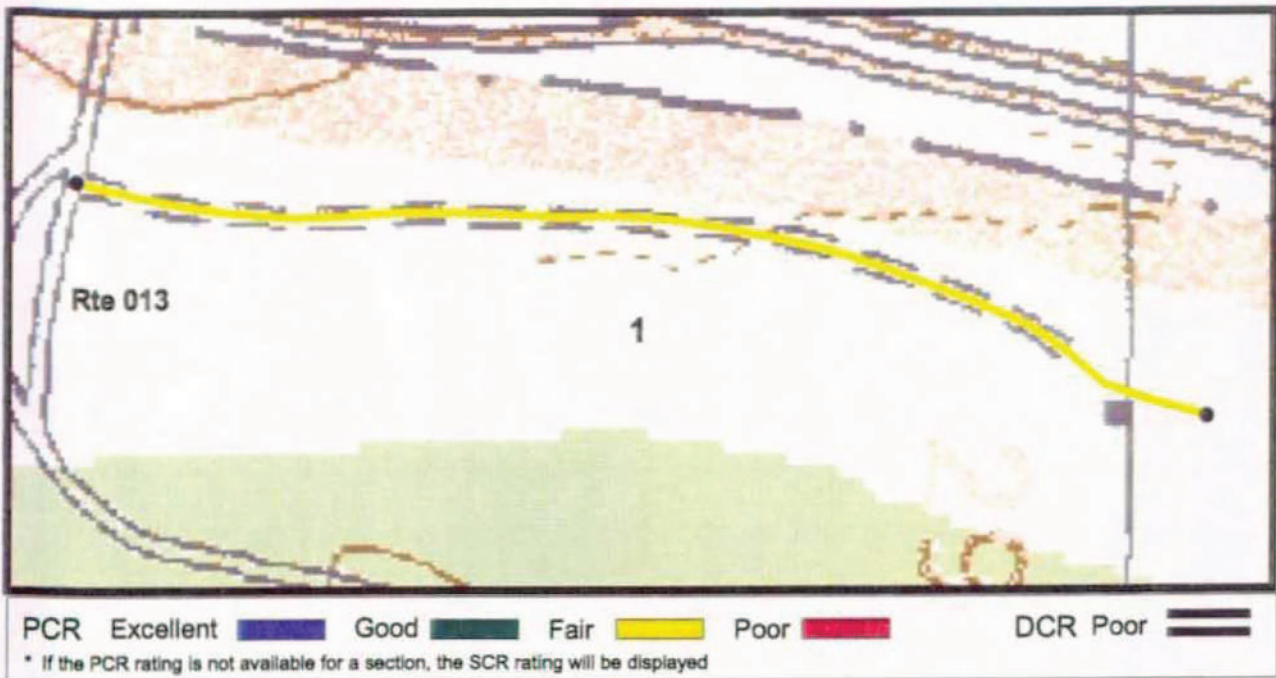
TOTAL LENGTH: 0.22 Miles

Section Number	1				
Section Length (mi)	0.22				
AADT	NA				
SADT	NA				
ADT Date	NA				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	20				
Lane Width (ft)	10				
Shoulder Width (ft)	3				
Roadway Condition Information					
PCR (Pavement Condition Rating)	NA				
Roughness Index	NA				
SCR (Surface Condition Rating)	83				
Alligator Cracking	100				
Rutting Index	94				
Patching Index	100				
Transverse Cracking	95				
Longitudinal Cracking	99				
Shoulder Condition Rating	FAIR				
Drainage Condition Rating	GOOD				

COMMENTS:

MP 0.00 Begin at Rte 402 - Pic #52 - Typical Pavement Section
 MP 0.08 Intersection right (408)
 MP 0.22 End at End

ROUTE: 407 OAK CREEK RESIDENCE ROAD



IMR: Intermountain Region
 ZION: Zion NP

ROUTE: 410 KOLOB SERVICE ROAD

TOTAL LENGTH: 0.44 Miles

Section Number	1				
Section Length (mi)	0.44				
AADT	NA				
SADT	NA				
ADT Date	NA				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	14				
Lane Width (ft)	7				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	67				
Roughness Index	40				
SCR (Surface Condition Rating)	86				
Alligator Cracking	100				
Rutting Index	97				
Patching Index	100				
Transverse Cracking	96				
Longitudinal Cracking	99				
Shoulder Condition Rating	FAIR				
Drainage Condition Rating	FAIR				

COMMENTS:
 MP 0.00 Begin at Rte 013 - Pic #408 - Typical Pavement Section
 MP 0.42 Intersection right (411)
 MP 0.44 End at end loop

ROUTE: 410 KOLOB SERVICE ROAD

VI. MANUALLY RATED PAVED ROUTE CONDITION RATING SHEETS.

The following section contains routes that the ARAN cannot be driven on safely and accurately. Typically these are campground roads, which include aspects of both main routes and parking lot features. Also, these routes are designated for low-speed traffic, which does not allow the ARAN to effectively rate them.

In order to report the condition of these routes most accurately, they have been collected with both the ARAN and GPS data collection procedures. The entire route is collected using GPS, providing lane miles. Then, if possible, a sample section is collected using the ARAN, to get an objective rating of its condition. The portion is usually main thoroughfares or entrance roads.

Thus, SCR, RI, and PCR are reported, along with lane miles and a condition derived from the ARAN rating. Below the ratings will be the entire route mapped, with the sample section shown as a line in its corresponding condition color. If the ARAN could not be driven on the route, the ratings will be reported as 'NA', and the condition will be from subjective visual observation only.

Zion National Park

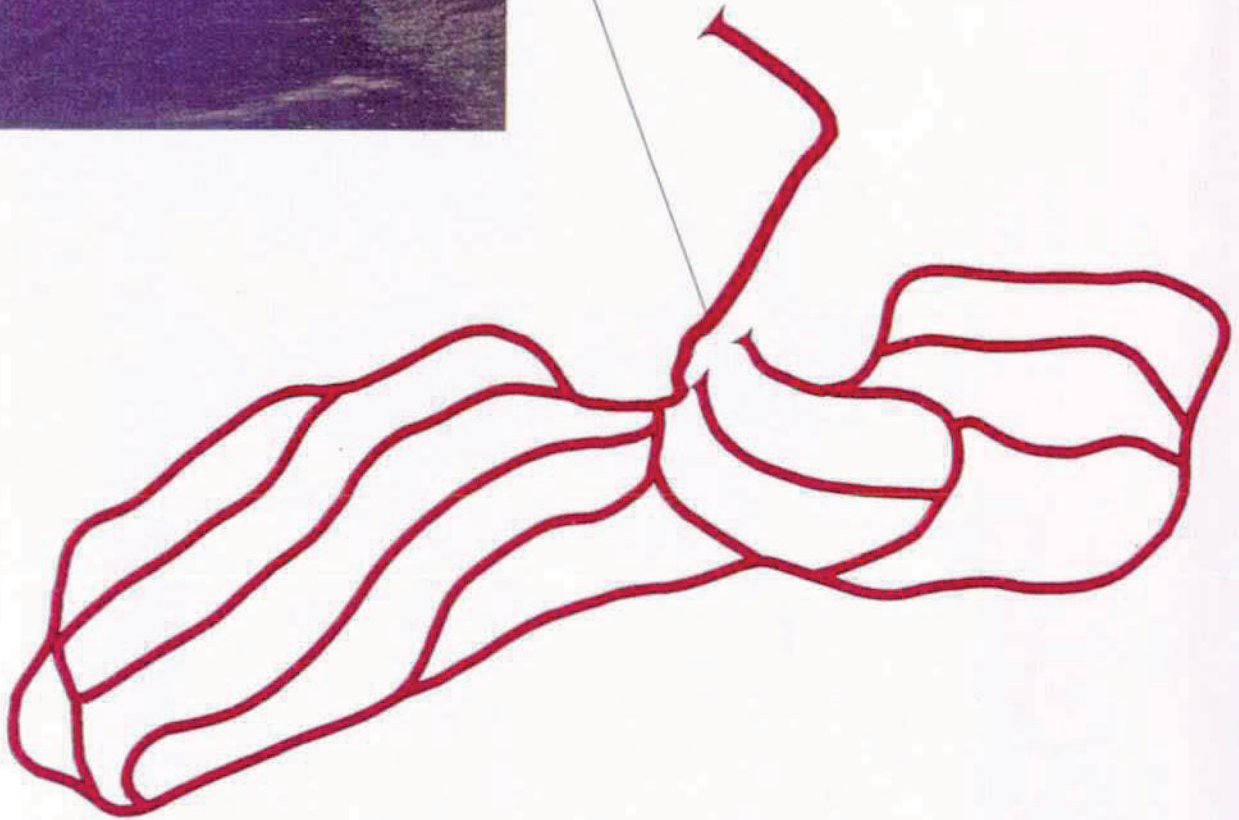
Route 200

South Campground Road

From Rte 010 to end of South Campground Loop

Route	Area (sq ft)	Lane Miles	Sample Section (mi)	Width (ft)	SCR	RI	PCR	Condition
200	132,281	2.27						FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



400 0 400 800 Feet

A horizontal scale bar with markings at 400, 0, 400, and 800 feet.

Zion National Park

Route 202

Watchman Campground Road
From Rte 010 to Loop D

Route	Area (sq ft)	Lane Miles	Sample Section (mi)	Width (ft)	SCR	RI	PCR	Condition
202	81,783	1.4	.42		85	41	69	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



PCR Excellent		Good		Fair		Poor		DCR Poor	
* If the PCR rating is not available for a section, the SCR rating will be displayed									



Zion National Park

Route 203

Watchman Campground Spur Road

From Rte 202 to end of Loop E

Route	Area (sq ft)	Lane Miles	Sample Section (mi)	Width (ft)	SCR	RI	PCR	Condition
203	126,859	2.18						FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



Zion National Park

Route 400

Watchman Cutoff Road
From Rte 401 to Rte 401

Route	Area (sq ft)	Lane Miles	Sample Section (mi)	Width (ft)	SCR	RI	PCR	Condition
400	19,394	0.33						FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



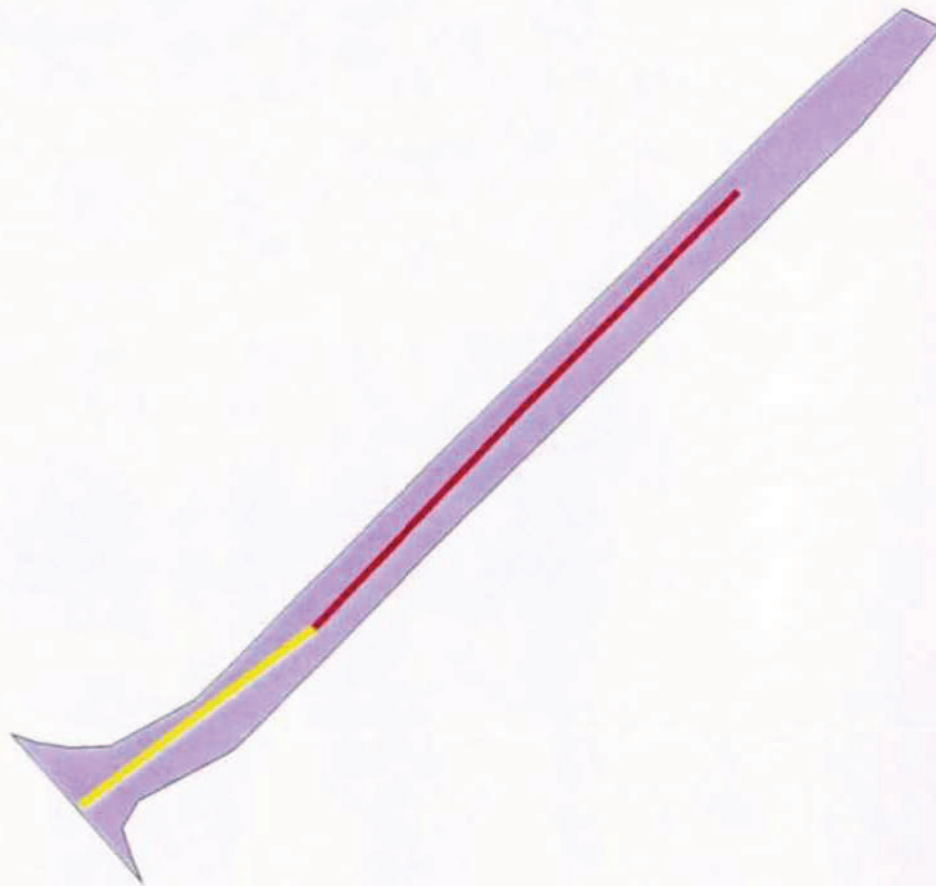
Zion National Park

Route 403

Oak Creek Headquarters Road
From Rte 402 to Headquarters parking

Route	Area (sq ft)	Lane Miles	Sample Section (mi)	Width (ft)	SCR	RI	PCR	Condition
403	9,232	0.15	.06		62	NA	NA	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



PCR Excellent
 Good
 Fair
 Poor
 DCR Poor

* If the PCR rating is not available for a section, the SCR rating will be displayed

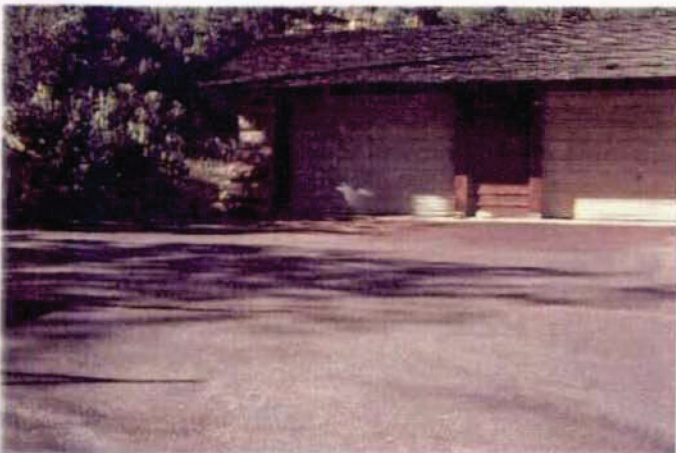
Zion National Park

Route 404

Visitor Center Residential Road
From Rte 010 to end

Route	Area (sq ft)	Lane Miles	Sample Section (mi)	Width (ft)	SCR	RI	PCR	Condition
404	7,985	0.13						FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



100 0 100 200 Feet



Zion National Park

Route 405

Watchman Maintenance Road
From Rte 202 to end

Route	Area (sq ft)	Lane Miles	Sample Section (mi)	Width (ft)	SCR	RI	PCR	Condition
405	3,822	0.06						FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



Zion National Park

Route 406

Zion Nature Center Service Road
From South Amphitheater Parking to end

Route	Area (sq ft)	Lane Miles	Sample Section (mi)	Width (ft)	SCR	RI	PCR	Condition
406	8,062	0.13						FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



40 0 40 80 Feet



Zion National Park

Route 408

Oak Creek Residence Spur Road
From Rte 407 to end

Route	Area (sq ft)	Lane Miles	Sample Section (mi)	Width (ft)	SCR	RI	PCR	Condition
408	21,960	0.37						FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



Zion National Park

Route 409

Horse Corral Road
From Rte 011 to horse corral

Route	Area (sq ft)	Lane Miles	Sample Section (mi)	Width (ft)	SCR	RI	PCR	Condition
409	24,794	0.42						FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



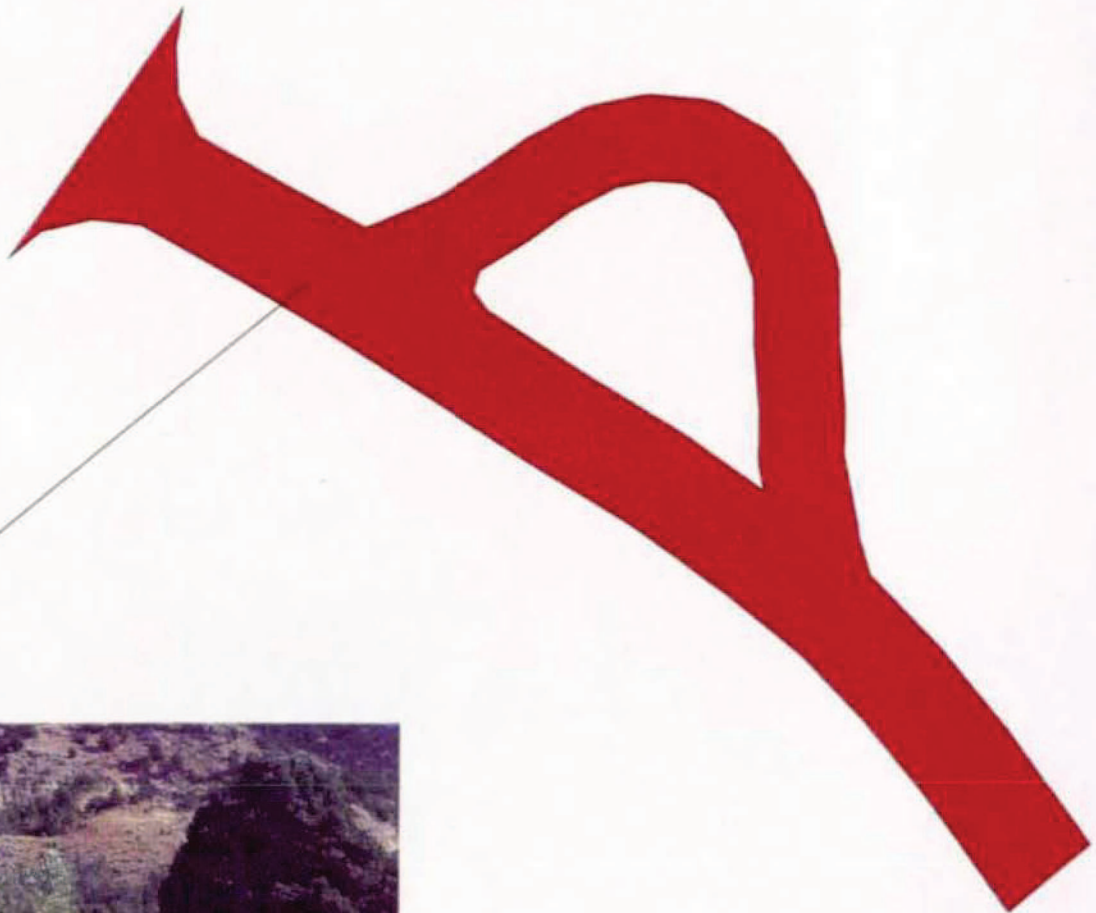
Zion National Park

Route 411

Kolob Residence Road
From Rte 013 to Rte 013

Route	Area (sq ft)	Lane Miles	Sample Section (mi)	Width (ft)	SCR	RI	PCR	Condition
411	4,612	0.07						FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



Zion National Park

Route 412

Concessionaire / Dorm Access Road
From Rte 011 to end of loop

Route	Area (sq ft)	Lane Miles	Sample Section (mi)	Width (ft)	SCR	RI	PCR	Condition
412	47,475	0.81						FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



Zion National Park

Route 900P

South Entrance Parking
From Rte 010

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
900P	UT	991102			12,496	0.21	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



40 0 40 80 Feet

A horizontal scale bar with alternating black and white segments. The markings are labeled 40, 0, 40, and 80 Feet.

Zion National Park

Route 901P

Watchman Campground Dump Station
From Rte 202

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
901P	UT	991102			5,541	0.09	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



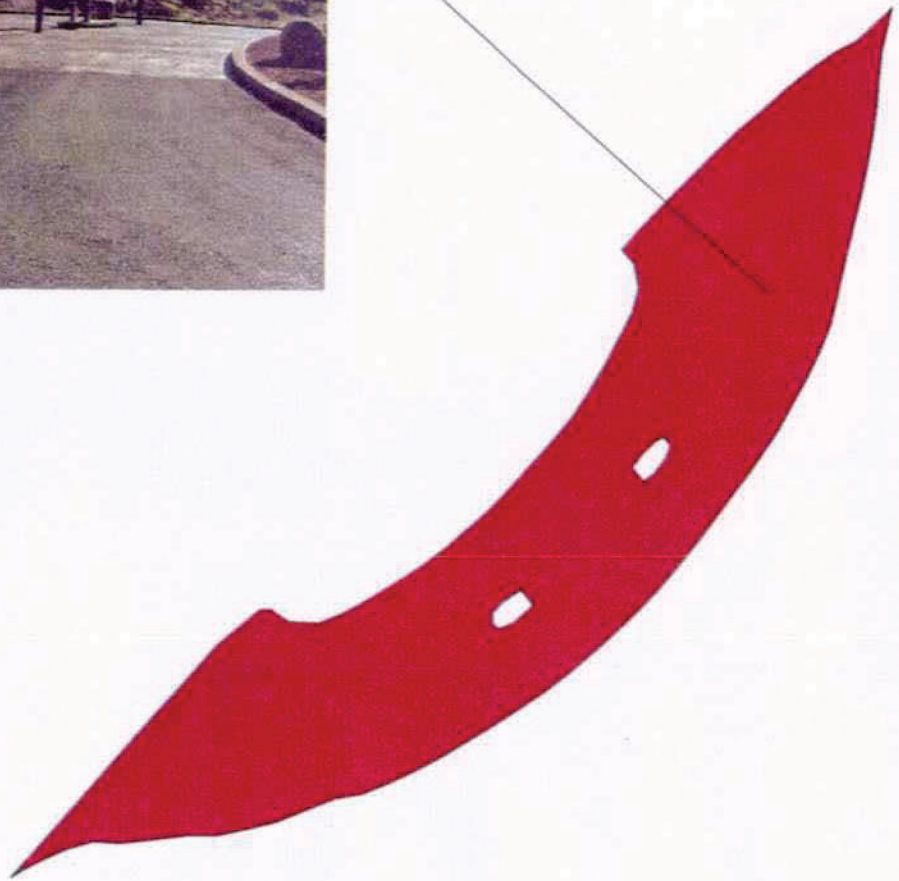
Zion National Park

Route 903P

Watchman Amphitheater Dump Station
From Rte 203

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
903P	UT	991102			6,139	0.1	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



Zion National Park

Route 904P

Watchman Amphitheater Loop B Parking
From Rte 203

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
904P	UT	991102			3,496	0.06	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



Zion National Park

Route 905P

South Campground Dump Station


From Rte 200

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
905P	UT	991102			11,978	0.2	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



50 0 50 100 Feet



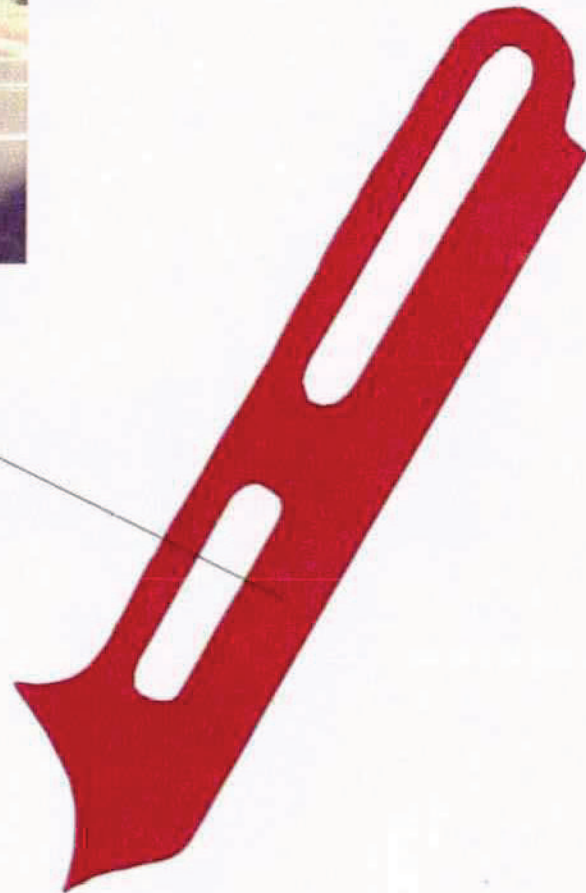
Zion National Park

Route 906P

Zion Nature Center Parking
From Rte 200

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
906P	UT	991102			29,660	0.51	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



60 0 60 120 Feet



Zion National Park

Route 907P

South Amphitheater Parking

From Rte 200

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
907P	UT	991102			23,563	0.4	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



80 0 80 160 Feet



Zion National Park

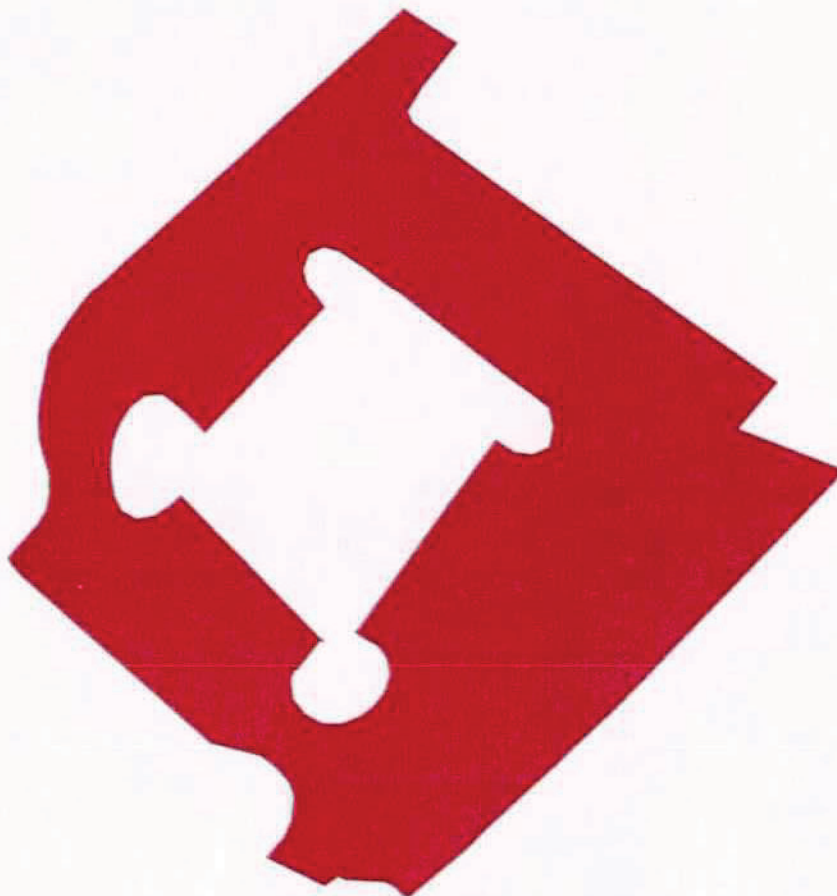
Route 908N

Oak Creek Headquarters Parking

From end of Rte 403

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
908N	UT	991103			21,053	0.36	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



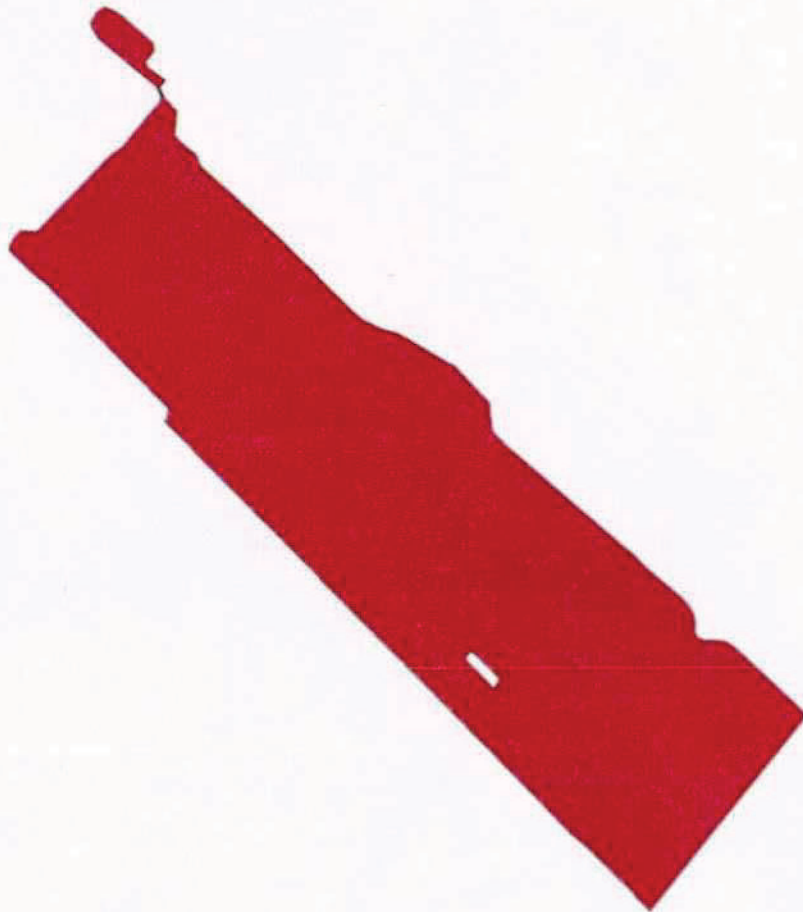
Zion National Park

Route 909N

Oak Creek Maintenance Area
From Rte 402

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
909N	UT	991103			35,971	0.61	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



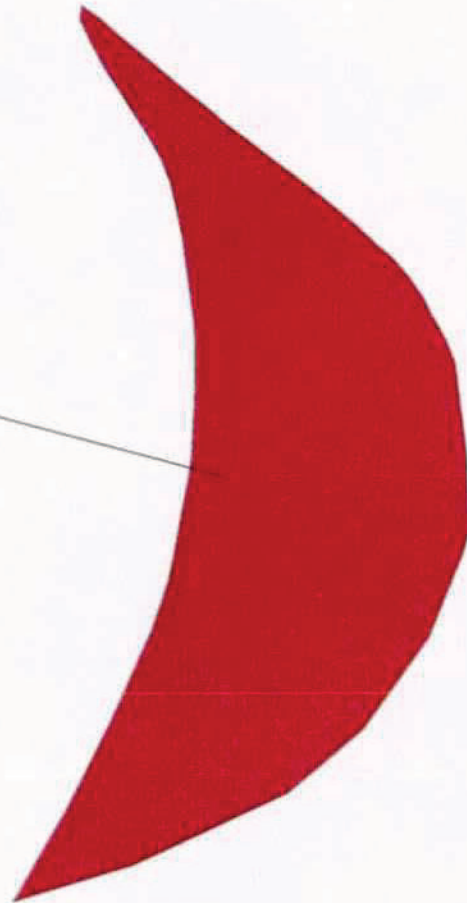
Zion National Park

Route 910N


Helicopter Landing Pad
From Rte 401

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
910N	UT	991102			8,242	0.14	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



20 0 20 40 Feet



Zion National Park

Route 911P

Oak Creek Visitor Center Parking
From Rte 010

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
911P	UT	991102			50,071	0.86	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



NO PHOTO
AVAILABLE



Zion National Park

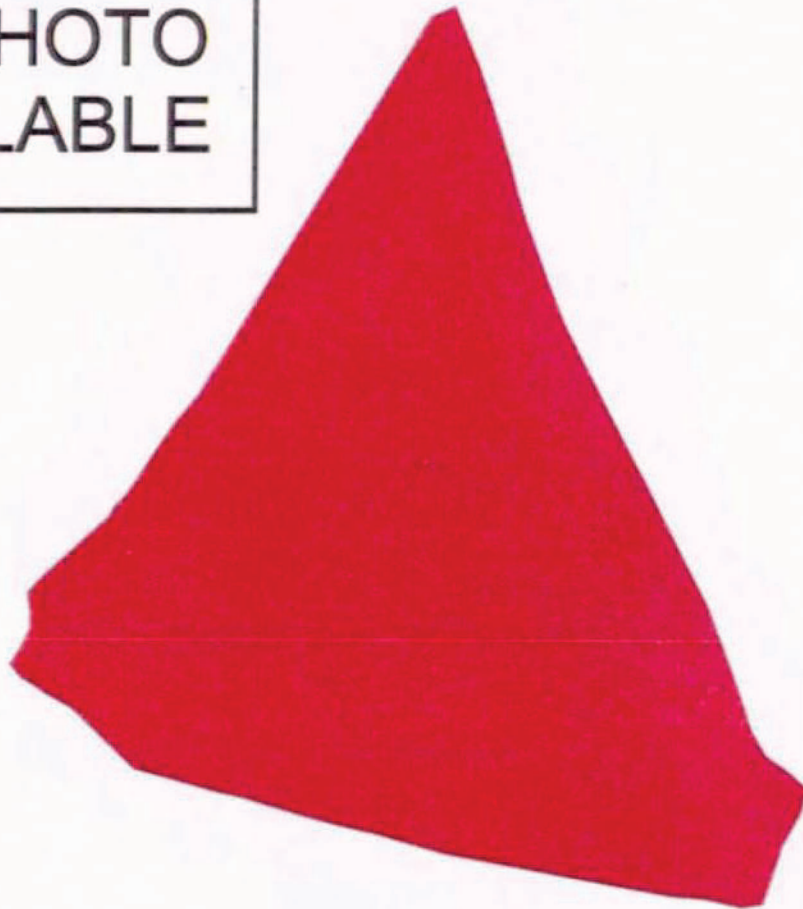
Route 912P

North Tunnel Entrance Parking
From Rte 010

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
912P	UT	991103			5,278	0.09	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths

NO PHOTO
AVAILABLE



30 0 30 60 Feet



Zion National Park

Route 913P

Checkerboard Mesa Viewpoint Parking
From Rte 010

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
913P	UT	991103			9,463	0.16	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths

NO PHOTO
AVAILABLE



Zion National Park

Route 914P

East Rim Trail Parking
From Rte 010

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
914P	UT	991103			5,894	0.1	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



NO PHOTO
AVAILABLE



Zion National Park

Route 915P

Court of the Patriarchs Parking

From Rte 011

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
915P	UT	991103			7,222	0.12	GOOD

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



30 0 30 60 Feet

A scale bar with markings at 30, 0, 30, and 60 feet.

Zion National Park

Route 916P

Mt Maroni Turnout

From Rte 011

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
916P	UT	991103			6,617	0.11	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



20 0 20 40 Feet



Zion National Park

Route 917P

Zion Lodge Cabin Parking

From Rte 011

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
917P	UT	991103			91,691	1.57	GOOD

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



80 0 80 160 Feet



Zion National Park

Route 918P

West Rim Trailhead Parking

From Rte 011

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
918P	UT	991103			4,098	0.07	GOOD

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



30 0 30 60 Feet



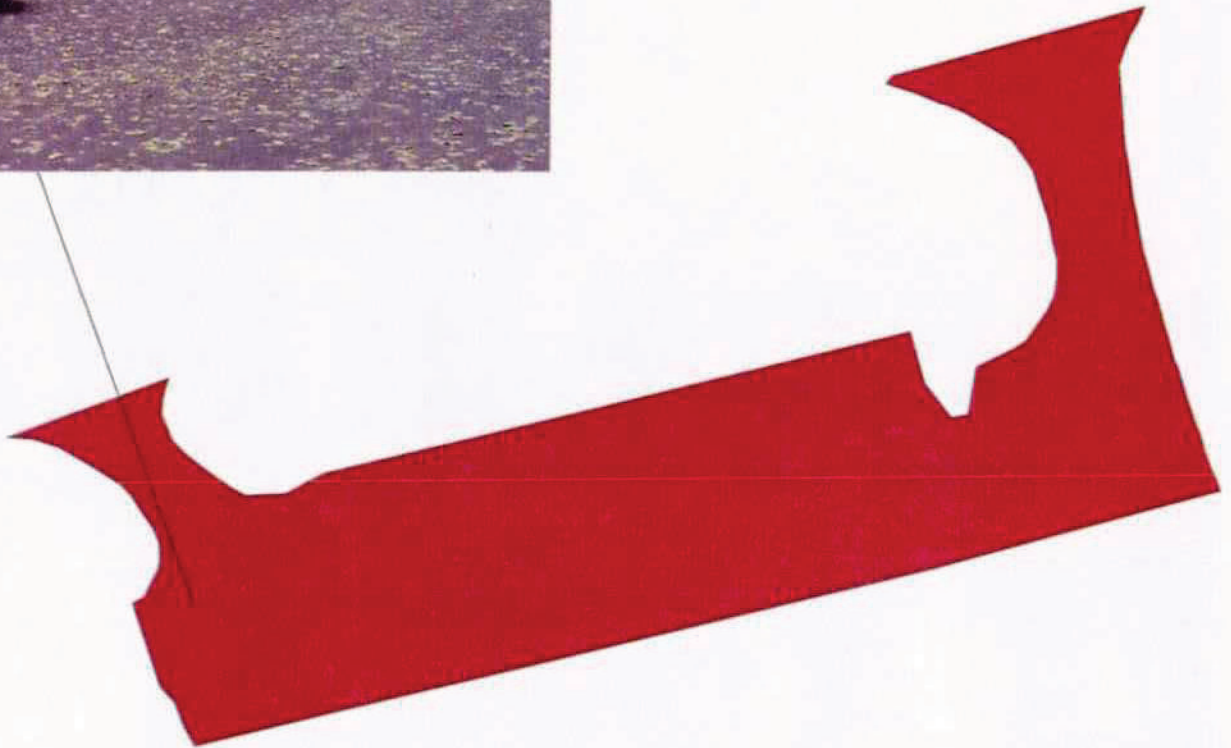
Zion National Park

Route 919P

Grotto Picnic Parking
From Rte 011

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
919P	UT	991103			19,950	0.34	GOOD

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



Zion National Park

Route 920P

Weeping Rock Parking

From Rte 011

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
920P	UT	991103			18,000	0.3	GOOD

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



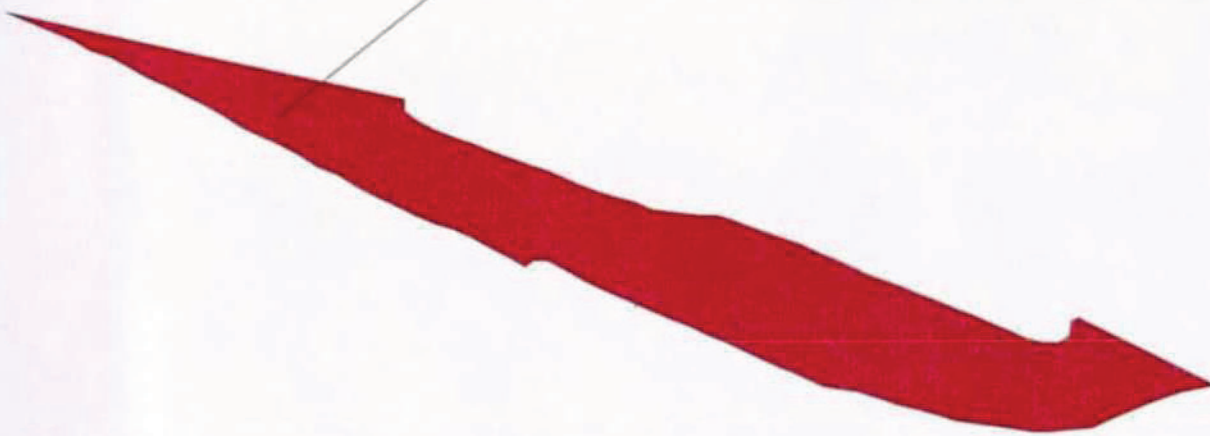
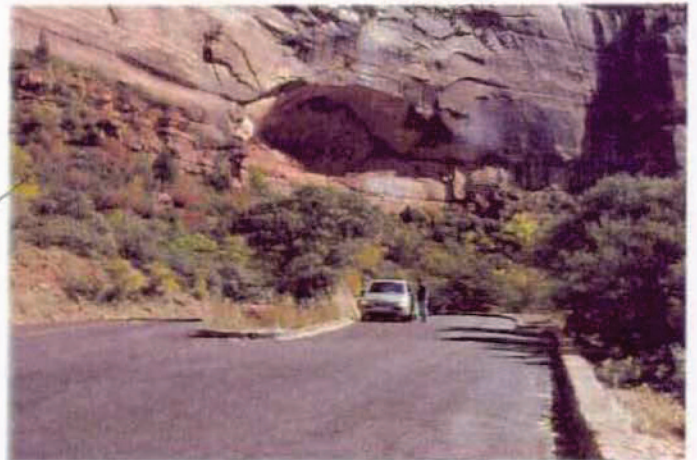
Zion National Park

Route 921P

The Great White Throne Parking
From Rte 011

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
921P	UT	991103			5,695	0.09	GOOD

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



70 0 70 140 Feet



Zion National Park

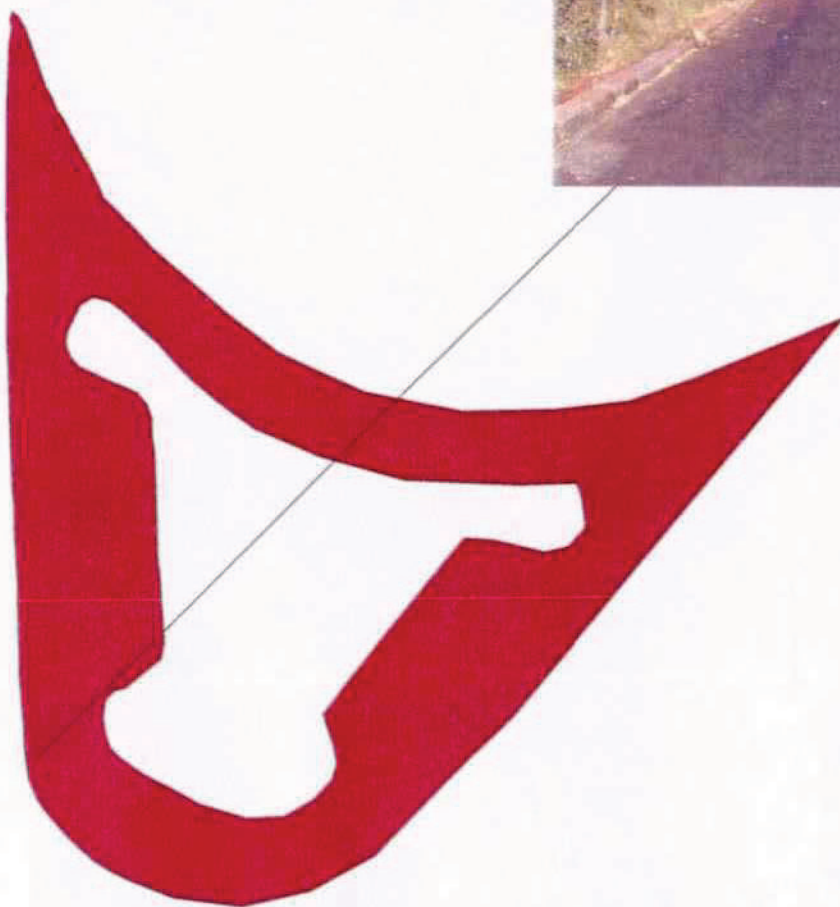
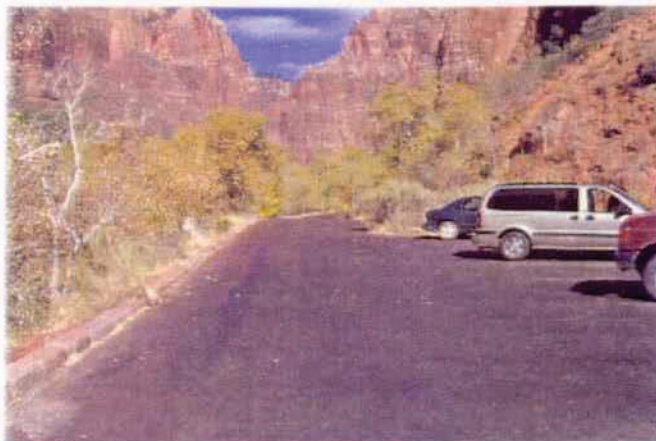
Route 922P

Bus and Trailer Parking


From Rte 011

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
922P	UT	991103			16,125	0.27	GOOD

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



50 0 50 100 Feet



Zion National Park

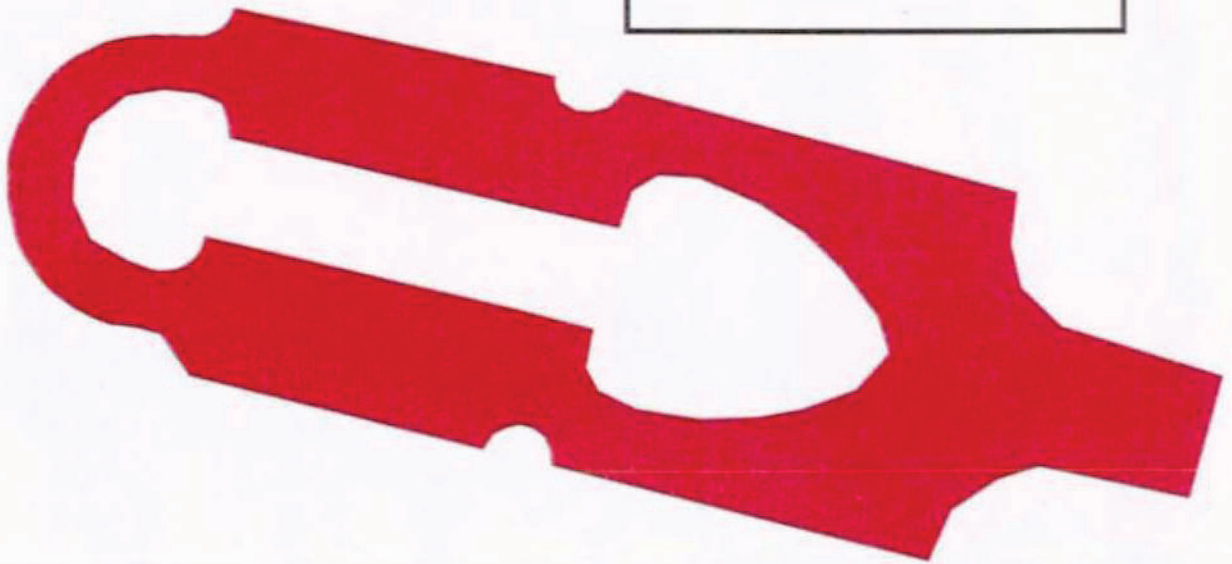
Route 923P

Temple of Sinawava Parking
From end of Rte 011

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
923P	UT	991103			55,858	0.96	GOOD

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths

NO PHOTO
AVAILABLE



Zion National Park

Route 924P

Emerald Pools Horse Corral

From Rte 011

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
924P	UT	991103			17,014	0.29	GOOD

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



40 0 40 80 Feet



Zion National Park

Route 925P

Zion Lodge Parking

From Rte 011

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
925P	UT	991103			44,147	0.76	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



100 0 100 200 Feet



Zion National Park

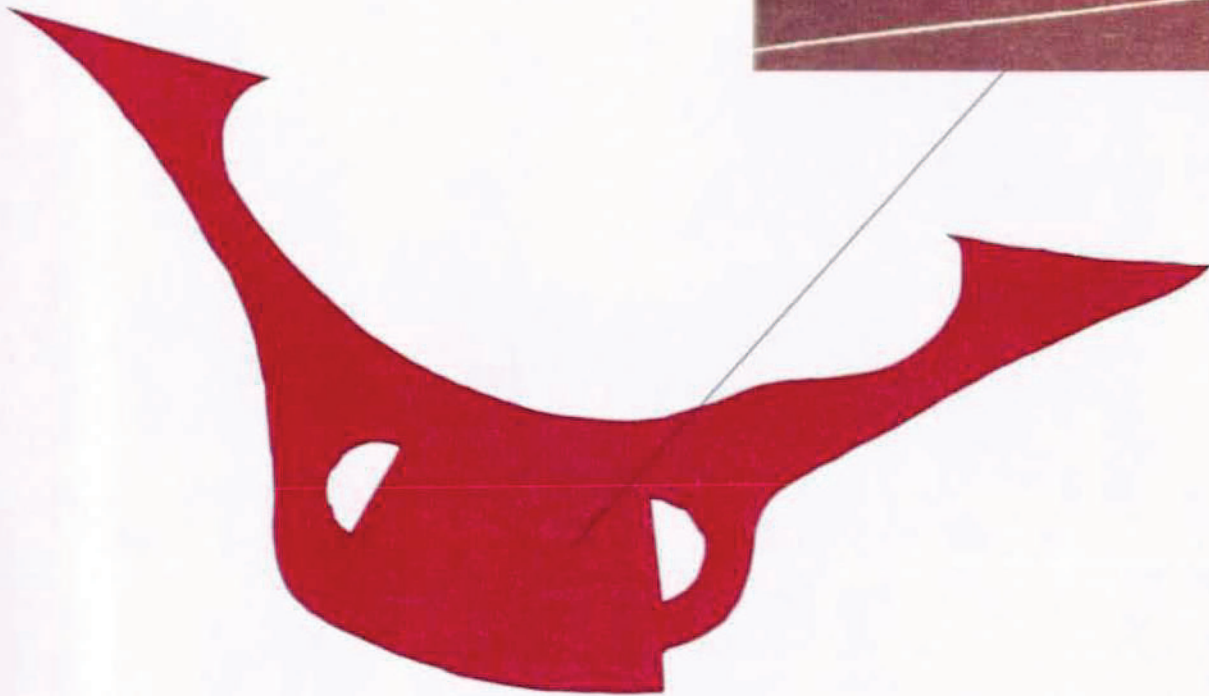
Route 926P

Kolob Visitors Center Parking

From Rte 013

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
926P	UT	991102			40,723	0.7	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



100 0 100 200 Feet



Zion National Park

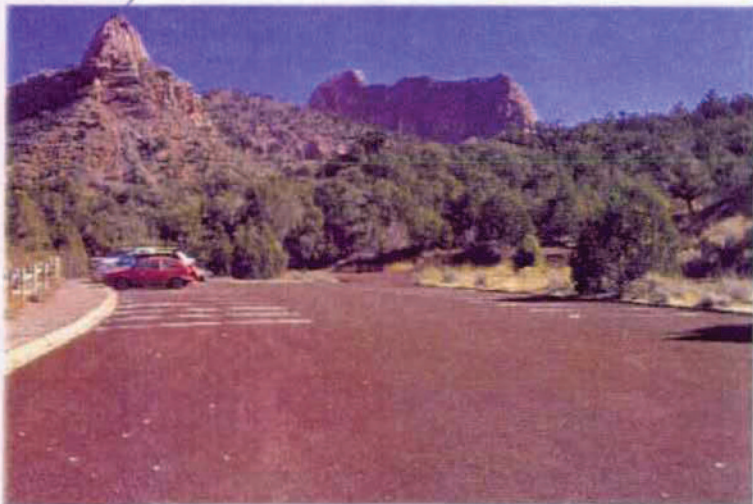
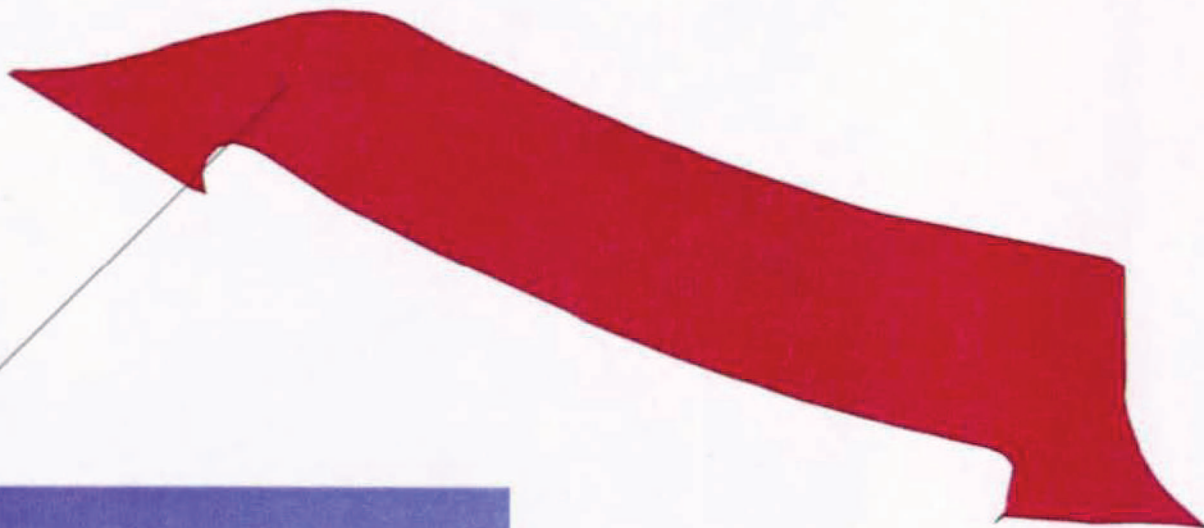
Route 927P

Taylor Creek Trailhead Parking

From Rte 013

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
927P	UT	991102			15,757	0.27	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



Zion National Park

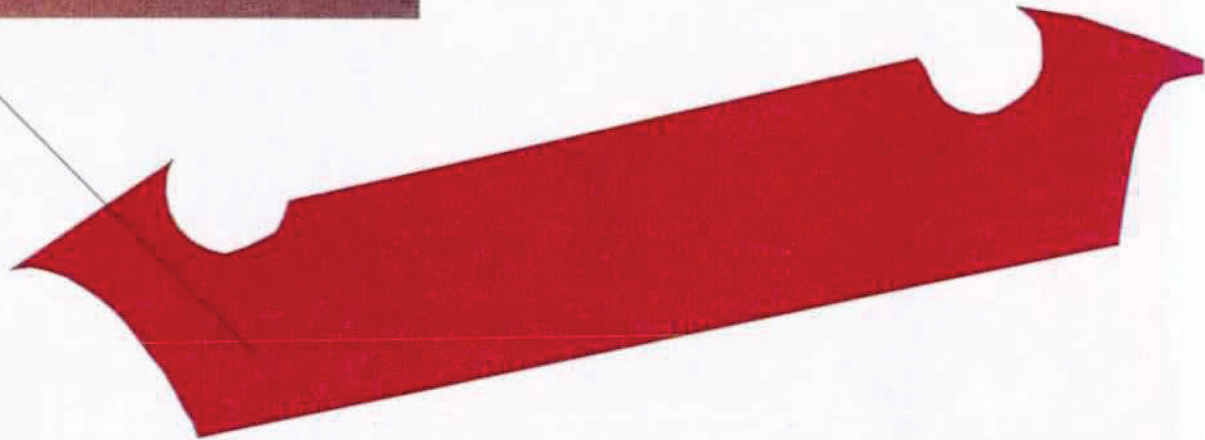
Route 928P

Parking at MP 3.20

From Rte 013

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
928P	UT	991102			15,740	0.27	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



80 0 80 160 Feet



Zion National Park

Route 929P

Lee Pass Trailhead Parking
From Rte 013

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
929P	UT	991102			4,879	0.08	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



20 0 20 40 Feet



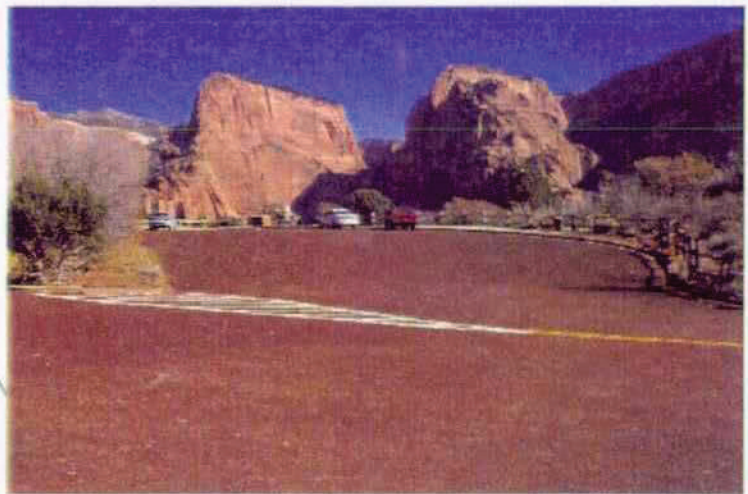
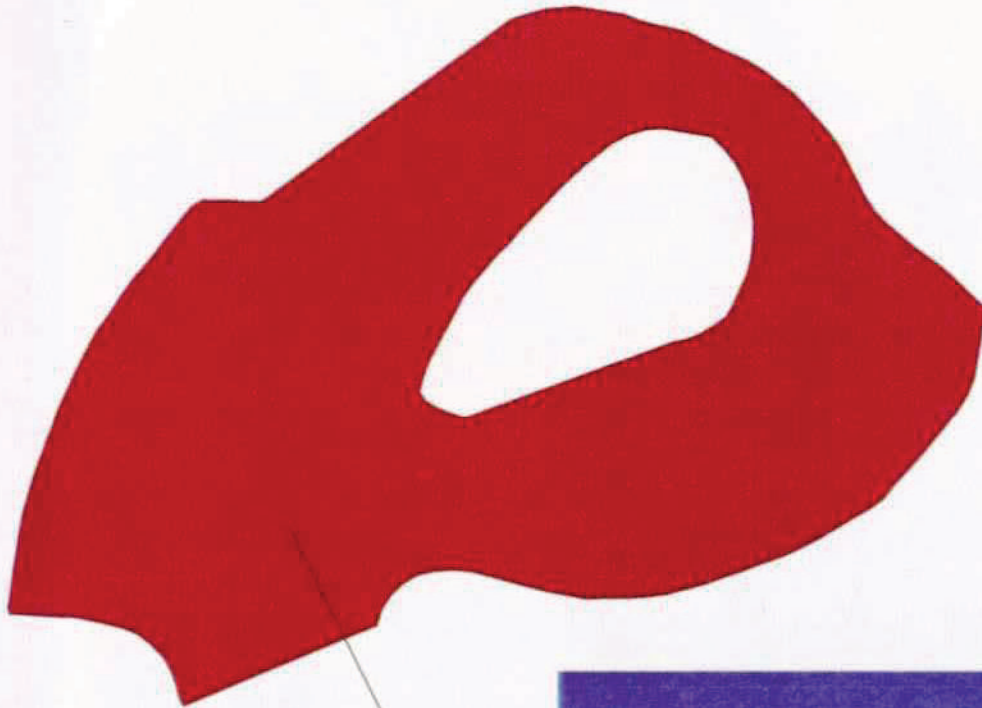
Zion National Park

Route 930P

Timper Creek Overlook Parking
From end of Rte 013

Route	State	Date Visited	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles	Condition
930P	UT	991102			30,183	0.51	FAIR

- Length and width will be used when applicable
- Lane miles are based on 11' lane widths



80 0 80 160 Feet



PARKWIDE MAINTENANCE FEATURES SUMMARY

Rocky Mountain Region : ZION : 1590

ICAP CODE	FEATURE	PARK TOTAL	UNIT
1152	PULLOUT (PAVED)	96	EACH
1153	INTERSECTION	64	EACH
1190	TURNOUT (PASSING LANE)	0	LINEAR FEET
1320	PAVED DITCH	24306	LINEAR FEET
1331	CULVERT OPENING	112	EACH
1333	DROP INLET	68	EACH
1340	CURB	15388	LINEAR FEET
1530	TRAFFIC LIGHT	0	EACH
1540	GUARDRAIL	977	LINEAR FEET
1542	GUARD WALL	9318	LINEAR FEET
1545	CATTLE GUARD	0	EACH
1720	BRIDGE	8	EACH
1740	TUNNEL	2	EACH
3361	RETAINING WALL	0	EACH
5833	LIGHT POLE	0	EACH
8390	OVERHEAD SIGN	0	EACH
8400	RAILROAD CROSSING	0	EACH
	PARK BOUNDARY	6	EACH

ROUTE MAINTENANCE FEATURES SUMMARY

Rocky Mountain Region : ZION : 1590

ROUTE:010 : ZION - MOUNT CARMEL HIGHWAY

ICAP CODE	FEATURE	PARK TOTAL	UNIT
1152	PULLOUT (PAVED)	50	EACH
1153	INTERSECTION	12	EACH
1190	TURNOUT (PASSING LANE)	0	LINEAR FEET
1320	PAVED DITCH	834	LINEAR FEET
1331	CULVERT OPENING	31	EACH
1333	DROP INLET	17	EACH
1340	CURB	1474	LINEAR FEET
1530	TRAFFIC LIGHT	0	EACH
1540	GUARDRAIL	0	LINEAR FEET
1542	GUARD WALL	8478	LINEAR FEET
1545	CATTLE GUARD	0	EACH
1720	BRIDGE	5	EACH
1740	TUNNEL	2	EACH
3361	RETAINING WALL	0	EACH
5833	LIGHT POLE	0	EACH
8390	OVERHEAD SIGN	0	EACH
8400	RAILROAD CROSSING	0	EACH
	PARK BOUNDARY	1	EACH

ROUTE MAINTENANCE FEATURES SUMMARY

Rocky Mountain Region : ZION : 1590

ROUTE:011 : VALLEY FLOOR HIGHWAY

ICAP CODE	FEATURE	PARK TOTAL	UNIT
1152	PULLOUT (PAVED)	17	EACH
1153	INTERSECTION	19	EACH
1190	TURNOUT (PASSING LANE)	0	LINEAR FEET
1320	PAVED DITCH	3692	LINEAR FEET
1331	CULVERT OPENING	44	EACH
1333	DROP INLET	15	EACH
1340	CURB	1796	LINEAR FEET
1530	TRAFFIC LIGHT	0	EACH
1540	GUARDRAIL	0	LINEAR FEET
1542	GUARD WALL	808	LINEAR FEET
1545	CATTLE GUARD	0	EACH
1720	BRIDGE	1	EACH
1740	TUNNEL	0	EACH
3361	RETAINING WALL	0	EACH
5833	LIGHT POLE	0	EACH
8390	OVERHEAD SIGN	0	EACH
8400	RAILROAD CROSSING	0	EACH
	PARK BOUNDARY	0	EACH

ROUTE MAINTENANCE FEATURES SUMMARY

Rocky Mountain Region : ZION : 1590

ROUTE:012 : KOLOB TERRACE ROAD (SOUTH)

ICAP CODE	FEATURE	PARK TOTAL	UNIT
1152	PULLOUT (PAVED)	0	EACH
1153	INTERSECTION	7	EACH
1190	TURNOUT (PASSING LANE)	0	LINEAR FEET
1320	PAVED DITCH	0	LINEAR FEET
1331	CULVERT OPENING	10	EACH
1333	DROP INLET	0	EACH
1340	CURB	0	LINEAR FEET
1530	TRAFFIC LIGHT	0	EACH
1540	GUARDRAIL	0	LINEAR FEET
1542	GUARD WALL	0	LINEAR FEET
1545	CATTLE GUARD	0	EACH
1720	BRIDGE	0	EACH
1740	TUNNEL	0	EACH
3361	RETAINING WALL	0	EACH
5833	LIGHT POLE	0	EACH
8390	OVERHEAD SIGN	0	EACH
8400	RAILROAD CROSSING	0	EACH
	PARK BOUNDARY	2	EACH

ROUTE MAINTENANCE FEATURES SUMMARY

Rocky Mountain Region : ZION : 1590

ROUTE:013 : KOLOB CANYON ROAD

ICAP CODE	FEATURE	PARK TOTAL	UNIT
1152	PULLOUT (PAVED)	22	EACH
1153	INTERSECTION	7	EACH
1190	TURNOUT (PASSING LANE)	0	LINEAR FEET
1320	PAVED DITCH	19780	LINEAR FEET
1331	CULVERT OPENING	16	EACH
1333	DROP INLET	34	EACH
1340	CURB	11812	LINEAR FEET
1530	TRAFFIC LIGHT	0	EACH
1540	GUARDRAIL	977	LINEAR FEET
1542	GUARD WALL	32	LINEAR FEET
1545	CATTLE GUARD	0	EACH
1720	BRIDGE	0	EACH
1740	TUNNEL	0	EACH
3361	RETAINING WALL	0	EACH
5833	LIGHT POLE	0	EACH
8390	OVERHEAD SIGN	0	EACH
8400	RAILROAD CROSSING	0	EACH
	PARK BOUNDARY	1	EACH

ROUTE MAINTENANCE FEATURES SUMMARY

Rocky Mountain Region : ZION : 1590

ROUTE:014 : KOLOB TERRACE ROAD (NORTH)

ICAP CODE	FEATURE	PARK TOTAL	UNIT
1152	PULLOUT (PAVED)	1	EACH
1153	INTERSECTION	11	EACH
1190	TURNOUT (PASSING LANE)	0	LINEAR FEET
1320	PAVED DITCH	0	LINEAR FEET
1331	CULVERT OPENING	6	EACH
1333	DROP INLET	0	EACH
1340	CURB	0	LINEAR FEET
1530	TRAFFIC LIGHT	0	EACH
1540	GUARDRAIL	0	LINEAR FEET
1542	GUARD WALL	0	LINEAR FEET
1545	CATTLE GUARD	0	EACH
1720	BRIDGE	0	EACH
1740	TUNNEL	0	EACH
3361	RETAINING WALL	0	EACH
5833	LIGHT POLE	0	EACH
8390	OVERHEAD SIGN	0	EACH
8400	RAILROAD CROSSING	0	EACH
	PARK BOUNDARY	2	EACH

ROUTE MAINTENANCE FEATURES SUMMARY

Rocky Mountain Region : ZION : 1590

ROUTE:202 : WATCHMAN CAMPGROUND ROAD

ICAP CODE	FEATURE	PARK TOTAL	UNIT
1152	PULLOUT (PAVED)	1	EACH
1153	INTERSECTION	3	EACH
1190	TURNOUT (PASSING LANE)	0	LINEAR FEET
1320	PAVED DITCH	0	LINEAR FEET
1331	CULVERT OPENING	0	EACH
1333	DROP INLET	1	EACH
1340	CURB	306	LINEAR FEET
1530	TRAFFIC LIGHT	0	EACH
1540	GUARDRAIL	0	LINEAR FEET
1542	GUARD WALL	0	LINEAR FEET
1545	CATTLE GUARD	0	EACH
1720	BRIDGE	1	EACH
1740	TUNNEL	0	EACH
3361	RETAINING WALL	0	EACH
5833	LIGHT POLE	0	EACH
8390	OVERHEAD SIGN	0	EACH
8400	RAILROAD CROSSING	0	EACH
	PARK BOUNDARY	0	EACH

ROUTE MAINTENANCE FEATURES SUMMARY

Rocky Mountain Region : ZION : 1590

ROUTE:207 : WATCHMAN TRAIL ROAD

ICAP CODE	FEATURE	PARK TOTAL	UNIT
1152	PULLOUT (PAVED)	0	EACH
1153	INTERSECTION	1	EACH
1190	TURNOUT (PASSING LANE)	0	LINEAR FEET
1320	PAVED DITCH	0	LINEAR FEET
1331	CULVERT OPENING	0	EACH
1333	DROP INLET	0	EACH
1340	CURB	0	LINEAR FEET
1530	TRAFFIC LIGHT	0	EACH
1540	GUARDRAIL	0	LINEAR FEET
1542	GUARD WALL	0	LINEAR FEET
1545	CATTLE GUARD	0	EACH
1720	BRIDGE	0	EACH
1740	TUNNEL	0	EACH
3361	RETAINING WALL	0	EACH
5833	LIGHT POLE	0	EACH
8390	OVERHEAD SIGN	0	EACH
8400	RAILROAD CROSSING	0	EACH
	PARK BOUNDARY	0	EACH

ROUTE MAINTENANCE FEATURES SUMMARY

Rocky Mountain Region : ZION : 1590

ROUTE:401 : WATCHMAN RESIDENCE ROAD

ICAP CODE	FEATURE	PARK TOTAL	UNIT
1152	PULLOUT (PAVED)	0	EACH
1153	INTERSECTION	0	EACH
1190	TURNOUT (PASSING LANE)	0	LINEAR FEET
1320	PAVED DITCH	0	LINEAR FEET
1331	CULVERT OPENING	1	EACH
1333	DROP INLET	0	EACH
1340	CURB	0	LINEAR FEET
1530	TRAFFIC LIGHT	0	EACH
1540	GUARDRAIL	0	LINEAR FEET
1542	GUARD WALL	0	LINEAR FEET
1545	CATTLE GUARD	0	EACH
1720	BRIDGE	1	EACH
1740	TUNNEL	0	EACH
3361	RETAINING WALL	0	EACH
5833	LIGHT POLE	0	EACH
8390	OVERHEAD SIGN	0	EACH
8400	RAILROAD CROSSING	0	EACH
	PARK BOUNDARY	0	EACH

ROUTE MAINTENANCE FEATURES SUMMARY

Rocky Mountain Region : ZION : 1590

ROUTE:402 : OAK CREEK ROAD

ICAP CODE	FEATURE	PARK TOTAL	UNIT
1152	PULLOUT (PAVED)	1	EACH
1153	INTERSECTION	3	EACH
1190	TURNOUT (PASSING LANE)	0	LINEAR FEET
1320	PAVED DITCH	0	LINEAR FEET
1331	CULVERT OPENING	2	EACH
1333	DROP INLET	0	EACH
1340	CURB	0	LINEAR FEET
1530	TRAFFIC LIGHT	0	EACH
1540	GUARDRAIL	0	LINEAR FEET
1542	GUARD WALL	0	LINEAR FEET
1545	CATTLE GUARD	0	EACH
1720	BRIDGE	0	EACH
1740	TUNNEL	0	EACH
3361	RETAINING WALL	0	EACH
5833	LIGHT POLE	0	EACH
8390	OVERHEAD SIGN	0	EACH
8400	RAILROAD CROSSING	0	EACH
	PARK BOUNDARY	0	EACH

ROUTE MAINTENANCE FEATURES SUMMARY

Rocky Mountain Region : ZION : 1590

ROUTE:407 : OAK CREEK RESIDENCE ROAD

ICAP CODE	FEATURE	PARK TOTAL	UNIT
1152	PULLOUT (PAVED)	0	EACH
1153	INTERSECTION	0	EACH
1190	TURNOUT (PASSING LANE)	0	LINEAR FEET
1320	PAVED DITCH	0	LINEAR FEET
1331	CULVERT OPENING	1	EACH
1333	DROP INLET	0	EACH
1340	CURB	0	LINEAR FEET
1530	TRAFFIC LIGHT	0	EACH
1540	GUARDRAIL	0	LINEAR FEET
1542	GUARD WALL	0	LINEAR FEET
1545	CATTLE GUARD	0	EACH
1720	BRIDGE	0	EACH
1740	TUNNEL	0	EACH
3361	RETAINING WALL	0	EACH
5833	LIGHT POLE	0	EACH
8390	OVERHEAD SIGN	0	EACH
8400	RAILROAD CROSSING	0	EACH
	PARK BOUNDARY	0	EACH

ROUTE MAINTENANCE FEATURES SUMMARY

Rocky Mountain Region : ZION : 1590

ROUTE:410 : KOLOB SERVICE ROAD

ICAP CODE	FEATURE	PARK TOTAL	UNIT
1152	PULLOUT (PAVED)	4	EACH
1153	INTERSECTION	1	EACH
1190	TURNOUT (PASSING LANE)	0	LINEAR FEET
1320	PAVED DITCH	0	LINEAR FEET
1331	CULVERT OPENING	1	EACH
1333	DROP INLET	1	EACH
1340	CURB	0	LINEAR FEET
1530	TRAFFIC LIGHT	0	EACH
1540	GUARDRAIL	0	LINEAR FEET
1542	GUARD WALL	0	LINEAR FEET
1545	CATTLE GUARD	0	EACH
1720	BRIDGE	0	EACH
1740	TUNNEL	0	EACH
3361	RETAINING WALL	0	EACH
5833	LIGHT POLE	0	EACH
8390	OVERHEAD SIGN	0	EACH
8400	RAILROAD CROSSING	0	EACH
	PARK BOUNDARY	0	EACH

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 010

Zion - Mount Carmel Highway

MILE POST BEGIN END	FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
0.000 0.000			Begin at Park Boundary
0.014 0.000		Intersection	Rte 900
0.029 0.049		Curb	
0.053 0.000		Intersection	
0.153 0.000		Intersection	Rte 202
0.425 0.000		Intersection	Rte 200
0.473 0.000	Culvert		
0.504 0.000		Pullout	
0.589 0.000		Culvert	
0.679 0.000	Intersection		Rte 402
0.683 0.712		Bridge	
0.931 0.000	Intersection		Rte 911
1.006 0.000	Pullout		
1.323 0.000	Intersection		Rte 404
1.483 1.522		Bridge	
1.508 0.000	Intersection		
1.575 0.000	Intersection		Rte 011
1.588 0.000		Pullout	
1.603 0.000	Intersection		
1.647 0.000		Pullout	
1.677 0.000		Pullout	
1.916 0.000		Culvert	
1.987 0.000		Pullout	
2.047 0.000		Pullout	
2.063 2.092		Bridge	
2.069 0.000		Drop Inlet	
2.087 0.000	Pullout		
2.096 2.132	Guardwall		
2.276 2.305		Guardwall	
2.330 0.000		Culvert	
2.350 0.000		Culvert	
2.415 2.468		Guardwall	
2.461 2.507	Guardwall		
2.554 0.000	Pullout		
2.557 0.000		Culvert	
2.616 0.000		Culvert	
2.639 2.660	Guardwall		
2.681 2.713	Guardwall		
2.727 2.761	Guardwall		
2.772 2.790	Guardwall		
2.801 2.830	Guardwall		
2.802 0.000		Culvert	
2.834 0.000		Culvert	
2.850 2.887	Guardwall		
2.858 0.000		Culvert	

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 010

Zion - Mount Carmel Highway

MILE POST BEGIN	MILE POST END	FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
2.882	0.000		Culvert	
2.901	2.912	Guardwall		
2.904	0.000		Pullout	
2.925	2.966	Guardwall		
2.977	2.985	Guardwall		
2.993	0.000	Pullout		
3.001	3.048	Guardwall		
3.053	0.000	Pullout		
3.056	3.193	Guardwall		
3.093	0.000		Culvert	
3.283	0.000	Drop Inlet		
3.305	0.000		Pullout	
3.317	3.365	Guardwall		
3.403	3.413		Guardwall	
3.428	3.436		Guardwall	
3.452	3.462		Guardwall	
3.477	3.486		Guardwall	
3.502	3.509		Guardwall	
3.528	3.568		Guardwall	
3.566	0.000		Culvert	
3.629	3.702		Guardwall	
3.676	0.000		Pullout	
3.829	3.865	Guardwall		
3.839	0.000		Culvert	
3.848	3.974		Ditch	
3.932	0.000		Culvert	
3.945	3.968	Guardwall		
3.984	0.000		Pullout	
3.996	0.000		Culvert	
4.019	0.000	Pullout		
4.098	0.000		Culvert	
4.112	0.000		Pullout	
4.161	0.000		Culvert	
4.180	4.230	Guardwall		
4.235	0.000	Pullout		
4.240	0.000		Pullout	
4.463	4.482		Guardwall	
4.475	0.000		Culvert	
4.493	4.509		Guardwall	
4.530	4.661		Guardwall	
4.604	4.622	Guardwall		
4.629	0.000		Culvert	
4.761	4.803	Guardwall		
4.802	4.834		Ditch	
4.806	0.000	Drop Inlet		

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 010

Zion - Mount Carmel Highway

MILE POST BEGIN END	FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
4.851 4.893	Guardwall		
4.905 0.000	Pullout		
4.975 5.033	Guardwall		
5.013 6.085		Tunnel	
6.092 6.121		Guardwall	
6.095 0.000		Drop Inlet	
6.122 0.000	Pullout		
6.128 0.000		Intersection	Rte 912
6.202 0.000		Pullout	
6.260 0.000	Pullout		
6.285 0.000		Pullout	
6.323 0.000		Pullout	
6.501 0.000		Drop Inlet	
6.524 0.000	Pullout		
6.655 0.000	Pullout		
6.824 6.843		Guardwall	
7.392 7.518	Curb		
7.405 0.000		Pullout	
7.414 7.513		Tunnel	
7.421 0.000	Pullout		
7.687 0.000		Drop Inlet	
7.832 0.000	Pullout		
7.931 0.000	Drop Inlet		
7.934 0.000		Pullout	
7.976 0.000		Drop Inlet	
8.003 0.000		Culvert	
8.376 0.000		Pullout	
8.478 0.000		Culvert	
8.548 0.000		Culvert	
8.650 0.000		Pullout	
8.813 0.000		Drop Inlet	
8.890 0.000		Pullout	
9.092 0.000		Culvert	
9.125 0.000		Culvert	
9.257 0.000		Pullout	
9.369 0.000		Pullout	
9.475 0.000		Pullout	
9.557 0.000		Drop Inlet	
9.583 9.657		Curb	
9.643 0.000	Drop Inlet		
9.663 0.000	Pullout		
9.691 9.736		Guardwall	
9.725 0.000	Drop Inlet		
9.812 0.000	Drop Inlet		
9.841 0.000		Pullout	

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 010

Zion - Mount Carmel Highway

MILE POST		FEATURE	FEATURE	REMARKS
BEGIN	END	DESCRIPTION LEFT	DESCRIPTION RIGHT	
9.891	9.908		Guardwall	
9.899	0.000		Drop Inlet	
9.989	10.068		Guardwall	
9.997	0.000	Culvert		
10.012	0.000		Drop Inlet	
10.073	0.000		Pullout	
10.124	0.000	Culvert		
10.135	10.199		Guardwall	
10.144	0.000	Pullout		
10.167	10.217	Guardwall		
10.168	10.194		Bridge	
10.526	0.000	Pullout		
10.594	0.000		Culvert	
10.698	0.000		Culvert	
10.726	0.000	Pullout		
11.009	0.000		Culvert	
11.154	0.000	Drop Inlet		
11.175	11.259	Guardwall		
11.205	0.000	Pullout		
11.211	11.241		Bridge	
11.251	11.310		Curb	
11.258	0.000		Drop Inlet	
11.295	0.000		Pullout	
11.405	0.000	Intersection		Rte 913
11.448	0.000	Pullout		
11.465	0.000		Pullout	
11.493	0.000	Pullout		
12.084	0.000		Pullout	
12.109	0.000	Culvert		
12.120	0.000	Pullout		
12.140	0.000	Boundary		
12.140	0.000			End at Park Boundary

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 011

Valley Floor Highway

MILE POST BEGIN	MILE POST END	FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
0.000	0.000			Begin at Rte 010
0.034	0.000		Culvert	
0.047	0.185	Curb		
0.073	0.000	Pullout		
0.127	0.000	Pullout		
0.171	0.000		Culvert	
0.246	0.000		Culvert	
0.340	0.000		Culvert	
0.366	0.000		Culvert	
0.457	0.000		Culvert	
0.556	0.000		Culvert	
0.603	0.000		Culvert	
0.654	0.000		Culvert	
0.713	0.000		Pullout	
0.749	0.000		Culvert	
0.823	0.000		Culvert	
0.828	0.971	Guardwall		
0.976	0.000		Culvert	
0.995	0.000	Pullout		
1.006	0.000		Culvert	
1.042	0.000		Culvert	
1.112	1.122	Guardwall		
1.115	0.000		Culvert	
1.202	0.000		Culvert	
1.306	0.000		Culvert	
1.390	1.592		Curb	
1.452	0.000	Pullout		
1.496	0.000		Culvert	
1.590	0.000		Culvert	
1.623	0.000	Intersection		Rte 409
1.627	0.000		Intersection	Rte 915
1.647	0.000	Intersection		Rte 409
1.661	0.000		Intersection	Rte 915
1.785	0.000		Culvert	
1.891	0.000		Culvert	
1.937	0.000	Pullout		
2.258	0.000		Culvert	
2.296	0.000		Intersection	Rte 916
2.342	0.000		Intersection	Rte 916
2.454	0.000		Intersection	Rte 412
2.627	0.000		Intersection	Rte 917
2.633	0.000	Intersection		Rte 924
2.789	0.000		Intersection	Rte 925
2.883	0.000	Pullout		
2.975	3.014	Ditch		

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 011

Valley Floor Highway

MILE POST BEGIN END	FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
3.098 0.000		Drop Inlet	
3.142 3.226		Ditch	
3.321 0.000		Intersection	Rte 918
3.360 0.000		Intersection	Rte 919
3.363 0.000	Pullout		
3.408 0.000		Intersection	
3.574 3.701	Ditch		
3.702 0.000		Culvert	
3.763 0.000	Pullout		
3.788 3.835		Ditch	
3.848 3.939		Ditch	
3.859 0.000	Pullout		
3.862 0.000		Culvert	
3.935 0.000		Drop Inlet	
3.965 4.022	Ditch		
3.978 0.000		Pullout	
3.998 0.000		Culvert	
4.056 0.000		Drop Inlet	
4.114 0.000		Pullout	
4.155 0.000		Culvert	
4.167 4.306		Ditch	
4.288 0.000		Culvert	
4.319 0.000		Drop Inlet	
4.372 0.000		Culvert	
4.428 4.484		Ditch	
4.487 4.504		Bridge	
4.549 0.000		Intersection	Rte 920
4.564 0.000		Intersection	
4.572 0.000		Drop Inlet	
4.599 0.000		Drop Inlet	
4.632 0.000		Drop Inlet	
4.660 0.000		Culvert	
4.679 0.000		Pullout	
4.700 0.000		Drop Inlet	
4.726 0.000		Culvert	
4.772 0.000	Drop Inlet		
4.777 0.000		Drop Inlet	
4.786 0.000	Intersection		
4.790 0.000	Drop Inlet		
4.824 0.000		Drop Inlet	
4.833 0.000	Intersection		Rte 921
4.869 0.000		Drop Inlet	
4.915 0.000		Drop Inlet	
5.052 0.000	Intersection		Rte 922
5.095 0.000	Intersection		

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 011

Valley Floor Highway

MILE POST		FEATURE	FEATURE	REMARKS
BEGIN	END	DESCRIPTION LEFT	DESCRIPTION RIGHT	
5.108	0.000		Drop Inlet	
5.141	0.000		Pullout	
5.190	0.000		Culvert	
5.243	0.000		Culvert	
5.379	0.000		Culvert	
5.399	0.000		Culvert	
5.431	0.000		Culvert	
5.494	0.000		Culvert	
5.578	0.000	Pullout		
5.591	0.000		Culvert	
5.620	0.000		Culvert	
5.684	0.000	Pullout		
5.706	0.000		Culvert	
5.779	0.000		Culvert	
5.822	5.881		Ditch	
5.857	0.000	Pullout		
5.924	0.000		Culvert	
5.982	0.000		Culvert	
6.021	0.000		Culvert	
6.073	0.000		Culvert	
6.140	0.000			End at Rte 923

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 012

Kolob Terrace Road South

MILE POST		FEATURE	FEATURE	REMARKS
BEGIN	END	DESCRIPTION LEFT	DESCRIPTION RIGHT	
0.000	0.000			BEGIN SOUTH SECTION
0.005	0.000		Boundary	
0.094	0.000		Culvert	
0.438	0.000		Intersection	
0.513	0.000		Culvert	
0.733	0.000		Culvert	
0.790	0.000		Intersection	
0.908	0.000		Culvert	
1.043	0.000		Culvert	
1.136	0.000		Culvert	
1.207	0.000	Intersection		Rte 206
1.724	0.000		Intersection	
2.191	0.000		Culvert	
2.360	0.000		Culvert	
2.708	0.000		Culvert	
2.895	0.000	Intersection		
3.089	0.000		Culvert	
3.372	0.000		Intersection	
3.784	0.000		Intersection	
4.060	0.000	Boundary		End at West Boundary

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 013

Kolob Canyon Road

MILE POST BEGIN END	FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
0.000 0.000			Begin at Boundary
0.001 0.000		Boundary	
0.035 0.000		Intersection	Rte 926
0.089 0.000	Intersection		Rte 410
0.095 0.238	Curb		
0.124 0.000		Intersection	Rte 926
0.264 0.000		Pullout	
0.288 0.000		Culvert	
0.386 0.503		Ditch	
0.402 0.456	Curb		
0.430 0.000	Pullout		
0.562 1.094		Ditch	
0.591 0.700	Curb		
0.596 0.000		Drop Inlet	
0.704 0.000		Drop Inlet	
0.745 0.799	Guardrail		
0.779 0.000		Drop Inlet	
0.818 0.882	Curb		
0.860 0.000	Pullout		
0.881 0.000		Culvert	
0.935 0.000		Drop Inlet	
0.941 0.995	Ditch		
0.981 0.000		Culvert	
1.005 1.045	Ditch		
1.061 0.000		Drop Inlet	
1.120 1.144		Ditch	
1.145 1.303	Curb		
1.149 0.000	Drop Inlet		
1.154 0.000		Culvert	
1.164 1.209		Ditch	
1.239 1.280		Ditch	
1.278 0.000		Drop Inlet	
1.287 1.341		Ditch	
1.292 0.000	Pullout		
1.377 1.408		Ditch	
1.423 0.000		Culvert	
1.435 1.488		Ditch	
1.455 1.483	Guardrail		
1.538 0.000		Culvert	
1.561 1.672	Curb		
1.566 0.000	Drop Inlet		
1.620 1.724		Ditch	
1.671 0.000		Drop Inlet	
1.693 0.000		Drop Inlet	
1.757 0.000		Drop Inlet	

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 013

Kolob Canyon Road

MILE POST BEGIN END	FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
1.764 1.992		Ditch	
1.825 0.000		Drop Inlet	
1.848 1.911	Curb		
1.880 0.000	Pullout		
1.899 0.000		Drop Inlet	
1.946 2.011	Curb		
1.970 0.000	Pullout		
2.000 0.000	Drop Inlet		
2.006 2.101		Ditch	
2.016 0.000	Intersection		Rte 927
2.021 2.064	Curb		
2.065 0.000		Drop Inlet	
2.066 0.000		Drop Inlet	
2.070 0.000	Intersection		Rte 927
2.075 2.106	Curb		
2.109 0.000		Culvert	
2.117 2.251		Ditch	
2.143 0.000		Drop Inlet	
2.304 2.476		Ditch	
2.342 0.000	Pullout		
2.360 0.000		Drop Inlet	
2.436 0.000		Drop Inlet	
2.448 2.559	Curb		
2.453 0.000	Drop Inlet		
2.486 0.000		Culvert	
2.498 0.000	Drop Inlet		
2.523 0.000		Pullout	
2.528 2.636		Ditch	
2.676 2.693	Ditch		
2.697 0.000		Culvert	
2.703 2.749	Curb		
2.707 2.798		Ditch	
2.731 0.000	Pullout		
2.792 0.000		Culvert	
2.806 2.946		Ditch	
2.867 2.936	Curb		
2.951 2.973		Guardrail	
2.957 2.963	Guardwall		
2.991 3.045	Ditch		
2.993 0.000		Pullout	
3.018 0.000		Drop Inlet	
3.044 3.153		Curb	
3.071 3.286	Ditch		
3.088 0.000		Pullout	
3.206 0.000		Intersection	Rte 928

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 013

Kolob Canyon Road

MILE POST BEGIN END	FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
3.223 3.259		Curb	
3.266 0.000		Intersection	Rte 928
3.276 3.307		Curb	
3.294 3.375		Guardrail	
3.296 3.365	Curb		
3.323 0.000	Pullout		
3.387 3.437		Curb	
3.410 0.000		Drop Inlet	
3.453 3.570	Ditch		
3.528 3.674		Ditch	
3.588 3.722	Ditch		
3.602 0.000		Drop Inlet	
3.624 0.000		Pullout	
3.664 0.000	Drop Inlet		
3.697 3.778		Curb	
3.745 3.906	Curb		
3.751 0.000	Drop Inlet		
3.809 0.000	Drop Inlet		
3.839 4.062		Ditch	
3.888 0.000	Pullout		Rte 929
3.953 4.036	Curb		
4.006 0.000	Pullout		
4.007 0.000		Drop Inlet	
4.076 0.000		Culvert	
4.095 4.224		Ditch	
4.150 4.218	Curb		
4.159 0.000		Drop Inlet	
4.180 0.000		Culvert	
4.224 0.000		Drop Inlet	
4.242 4.278	Curb		
4.261 0.000	Pullout		
4.298 4.353	Curb		
4.337 0.000	Pullout		
4.356 4.393	Ditch		
4.432 4.485	Curb		
4.475 0.000	Pullout		
4.489 0.000		Culvert	
4.497 4.587		Ditch	
4.535 0.000		Drop Inlet	
4.620 4.661		Ditch	
4.651 0.000	Drop Inlet		
4.658 4.775	Curb		
4.719 0.000		Culvert	
4.726 4.896		Ditch	
4.754 0.000		Culvert	

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 013

Kolob Canyon Road

MILE POST BEGIN END	FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
4.795 4.858	Curb		
4.820 0.000		Drop Inlet	
4.842 0.000	Pullout		
4.908 0.000		Culvert	
4.922 4.966		Ditch	
4.945 5.103	Curb		
4.975 0.000	Pullout		
4.998 5.108		Ditch	
5.096 0.000	Pullout		
5.111 5.138	Ditch		
5.131 5.191		Ditch	
5.144 0.000	Pullout		
5.154 5.189	Ditch		
5.226 5.260		Ditch	
5.255 0.000		Drop Inlet	
5.280 0.000			End at Rte 930

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 014

Kolob Terrace Road North

MILE POST BEGIN END	FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
0.001 0.000		Boundary	BEGIN NORTH SECTION
0.290 0.000	Intersection		
0.645 0.000	Intersection		
0.794 0.000		Culvert	
0.886 0.000		Intersection	
0.941 0.000		Pullout	
1.720 0.000	Intersection		
2.010 0.000		Culvert	
2.015 0.000	Intersection		
2.032 0.000	Intersection		
2.411 0.000		Culvert	
3.160 0.000		Intersection	
3.342 0.000	Intersection		
3.364 0.000	Intersection		
4.816 0.000		Culvert	
4.929 0.000		Culvert	
4.995 0.000	Intersection		
5.451 0.000		Culvert	
5.679 0.000	Intersection		
5.840 0.000	Boundary		
5.840 0.000			End at North Boundary

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 202

Watchman Campground Road

MILE POST		FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
BEGIN	END			
0.000	0.000			Begin at Rte 010
0.087	0.106		Bridge	
0.111	0.169		Curb	
0.123	0.000		Drop Inlet	
0.141	0.000		Pullout	
0.183	0.000		Intersection	
0.194	0.000		Intersection	Rte 902
0.380	0.000		Intersection	Rte 203
0.420	0.000			End at Loop D

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 207

Watchman Trail Road

MILE POST BEGIN	END	FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
0.000	0.000			Begin at Rte 202
0.025	0.000		Intersection	
0.220	0.000			End at Rte 401

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 401

Watchman Residence Road

MILE POST BEGIN END	FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
0.000 0.000			Begin at Rte 403
0.239 0.260		Bridge	
0.520 0.000		Culvert	
0.600 0.000			End at Rte 207

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 402

Oak Creek Road

MILE POST BEGIN END	FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
0.000 0.000			Begin at Rte 010
0.077 0.000		Intersection	Rte 403
0.295 0.000		Intersection	Rte 407
0.454 0.000		Culvert	
0.494 0.000		Culvert	
0.537 0.000	Pullout		Rte 909
0.542 0.000		Intersection	
0.560 0.000			End at Gate

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 407

Oak Creek Residence Road

MILE POST		FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
BEGIN	END			
0.000	0.000			Begin at Rte 402
0.050	0.000		Culvert	
0.220	0.000			End at End

ROUTE MAINTENANCE FEATURES ROAD LOG

ROUTE 410

Kolob Service Road

MILE POST BEGIN END	FEATURE DESCRIPTION LEFT	FEATURE DESCRIPTION RIGHT	REMARKS
0.000 0.000			Begin at Rte 011
0.095 0.000		Pullout	
0.113 0.000		Culvert	
0.182 0.000		Drop Inlet	
0.192 0.000		Pullout	
0.230 0.000		Pullout	
0.327 0.000		Pullout	
0.420 0.000		Intersection	Rte 411
0.440 0.000			End at end loop

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590
ROUTE NUMBER: 010
DATE: 11/99



Photo #14 - MP 0.00 South Entrance - Typical Pavement Section

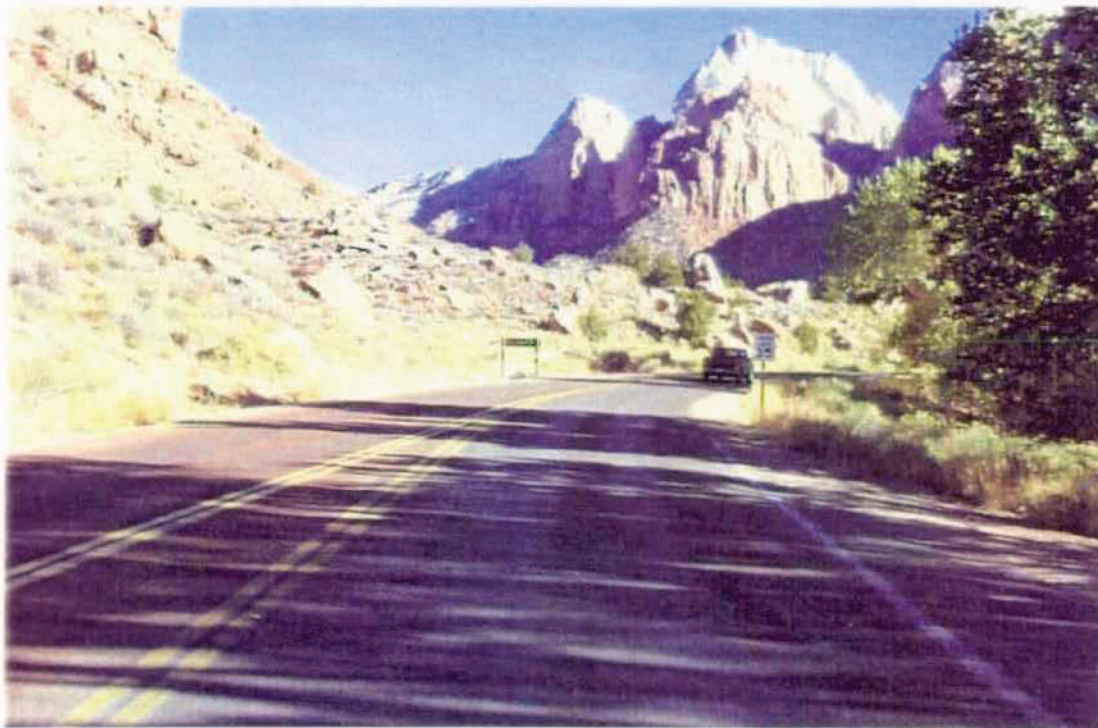


Photo #15 - MP 0.12 - Typical Pavement Section

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590
ROUTE NUMBER: 010
DATE: 11/99



Photo #16 - MP 0.89 - Typical Pavement Section



Photo #17 - MP 2.10 - Longitudinal Cracks, sealed transverse cracks..

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590
ROUTE NUMBER: 010
DATE: 11/99



Photo #18 - MP 3.30 - Pavement Change



Photo #19 - MP 4.70 - Typical Pavement Section

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590
ROUTE NUMBER: 010
DATE: 11/99

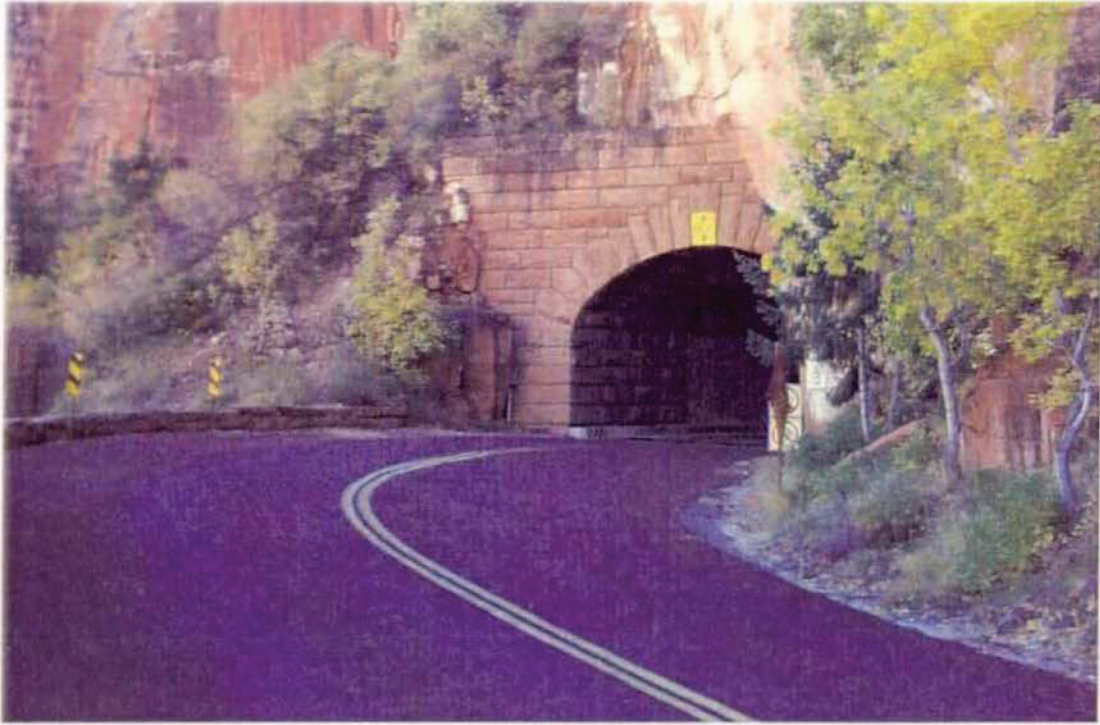


Photo #20 - MP 4.90 - Tunnel Entrance

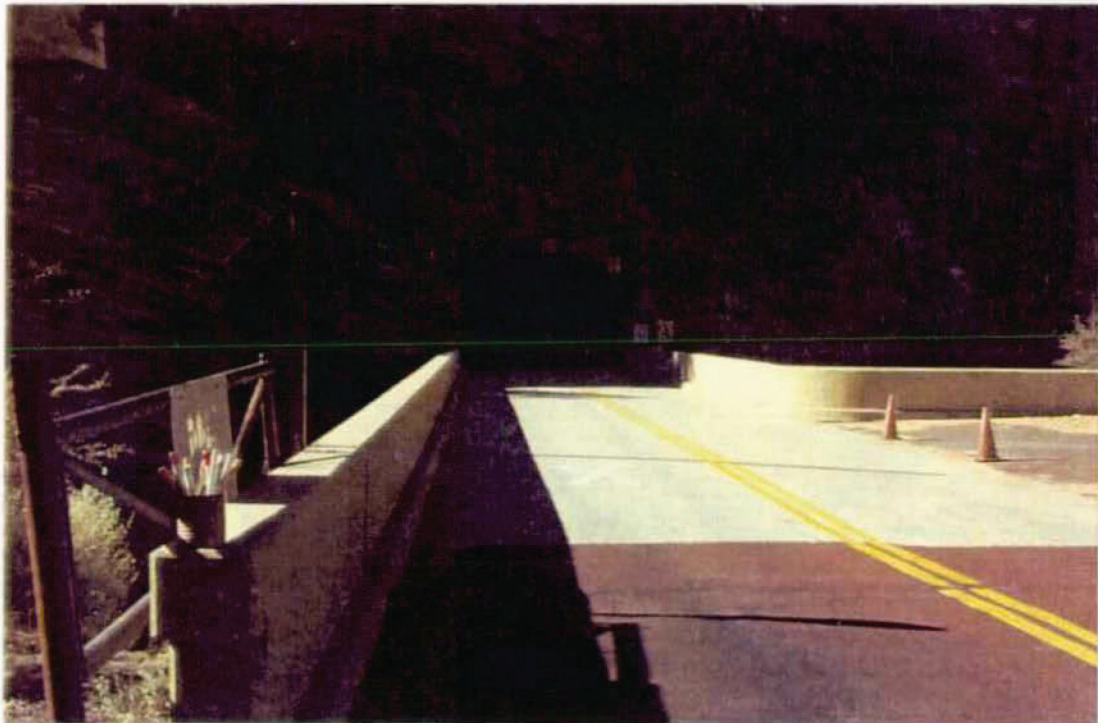


Photo #21 - MP 6.10 East Tunnel entrance, looking back.

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590

ROUTE NUMBER: 010

DATE: 11/99



Photo #22 - MP 7.35 - Tunnel entrance

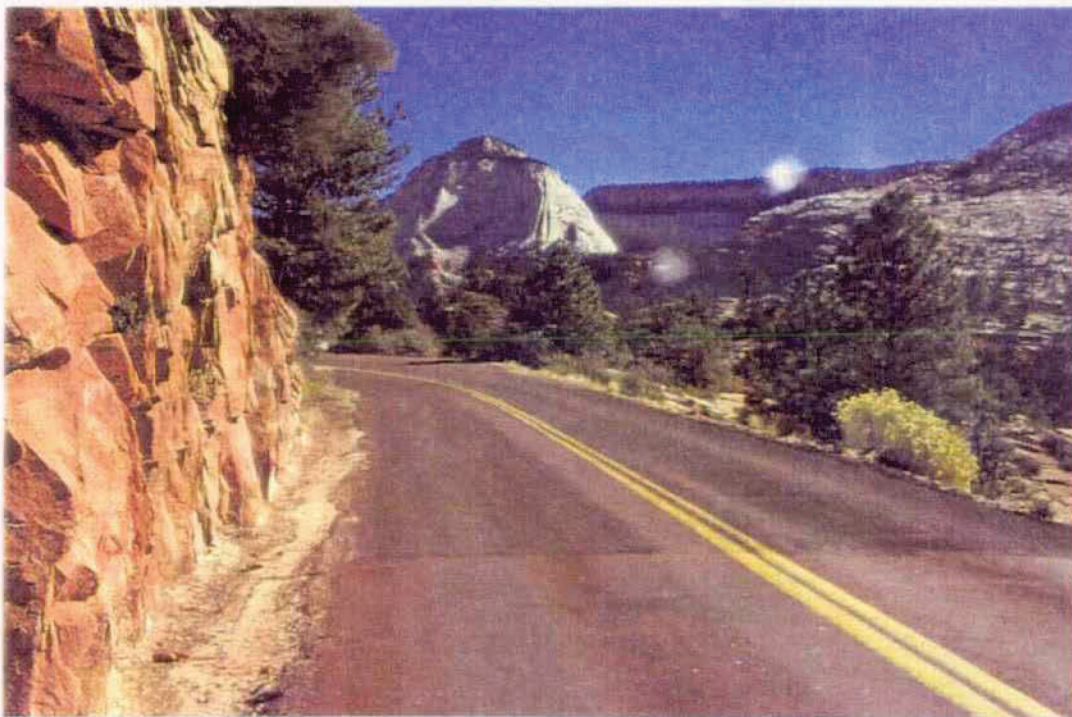


Photo #23 - MP 8.60 - Pavement Change

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590
ROUTE NUMBER: 010
DATE: 11/99



Photo #24 - MP 11.55 - Typical Pavement Section, looking back



Photo #25 - MP 12.14 - East Park Entrance, looking back.

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590
ROUTE NUMBER: 011
DATE: 11/99



Photo #30 - MP 0.00 - Begin at Rte 010, Typical Pavement Section



Photo #31 - MP 0.04 - Typical Pavement Change

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590
ROUTE NUMBER: 011
DATE: 11/99

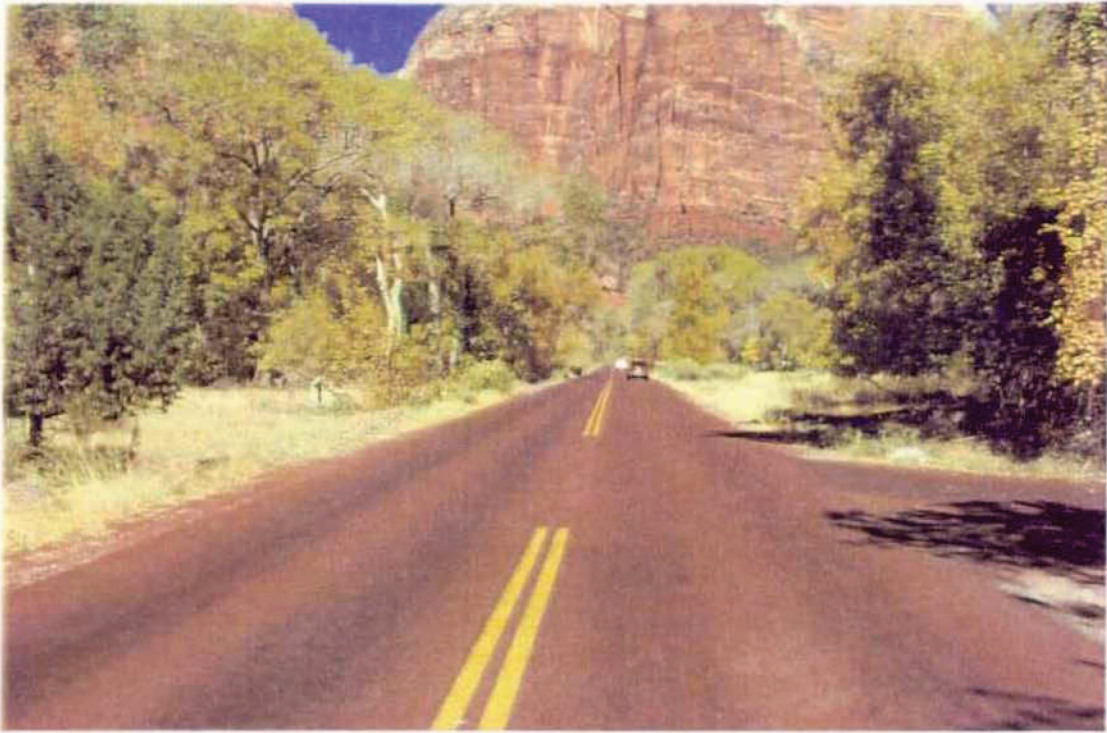


Photo #32 - MP 2.35 - Typical Pavement Section



Photo #33 - MP 4.58 - Typical Pavement Section

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590
ROUTE NUMBER: 012
DATE: 11/99

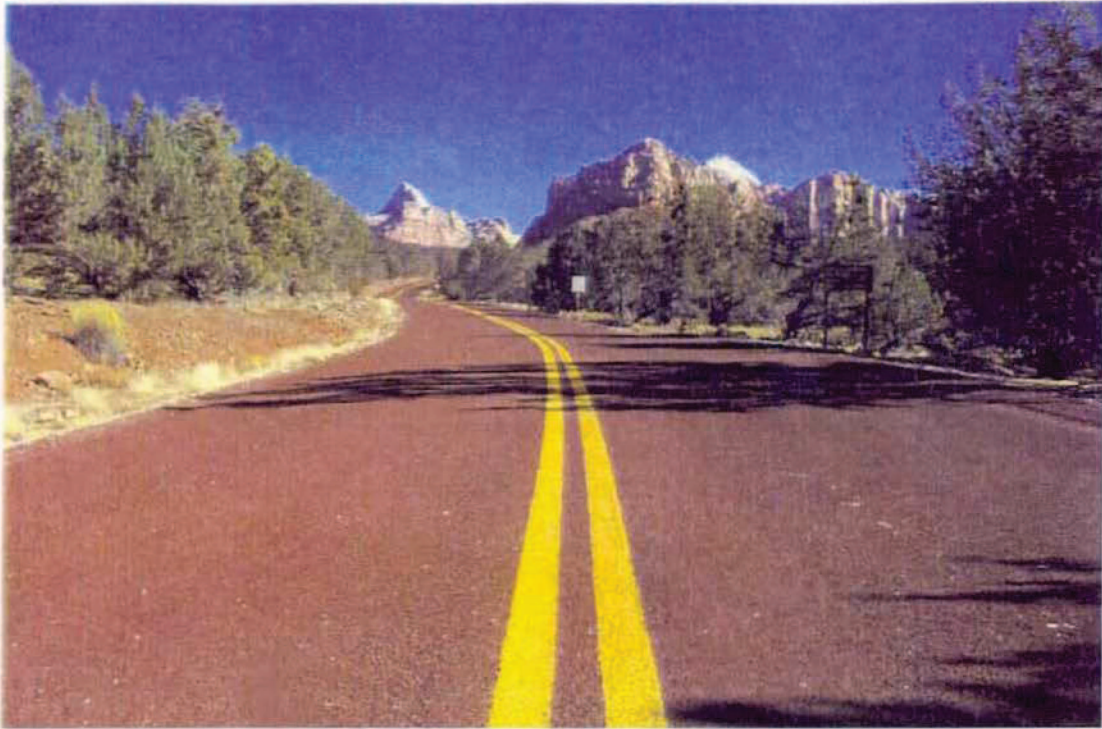


Photo #399 - MP 0.00 - Begin South Section, Typical Pavement Section



Photo #400 - MP 0.00 - Begin North Section, Typical Pavement Section

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590
ROUTE NUMBER: 013
DATE: 11/99



Photo #401 - MP 0.00 - Begin Rte, Typical Pavement Section

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590
ROUTE NUMBER: 202
DATE: 11/99



Photo #42 - MP 0.00 - Typical Pavement Section

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590
ROUTE NUMBER: 207
DATE: 11/99



Photo #36 - MP 0.00 - Typical Pavement Section

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590
ROUTE NUMBER: 401
DATE: 11/99



Photo #53 - MP 0.00 - Typical Pavement Section

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590

ROUTE NUMBER: 402

DATE: 11/99



Photo #50 - MP 0.05 - Typical Pavement Section

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590

ROUTE NUMBER: 407

DATE: 11/99



Photo #52 - MP 0.00 - Typical Pavement Section

PHOTOGRAPHIC SHEET

PARK NUMBER: 1590
ROUTE NUMBER: 410
DATE: 11/99

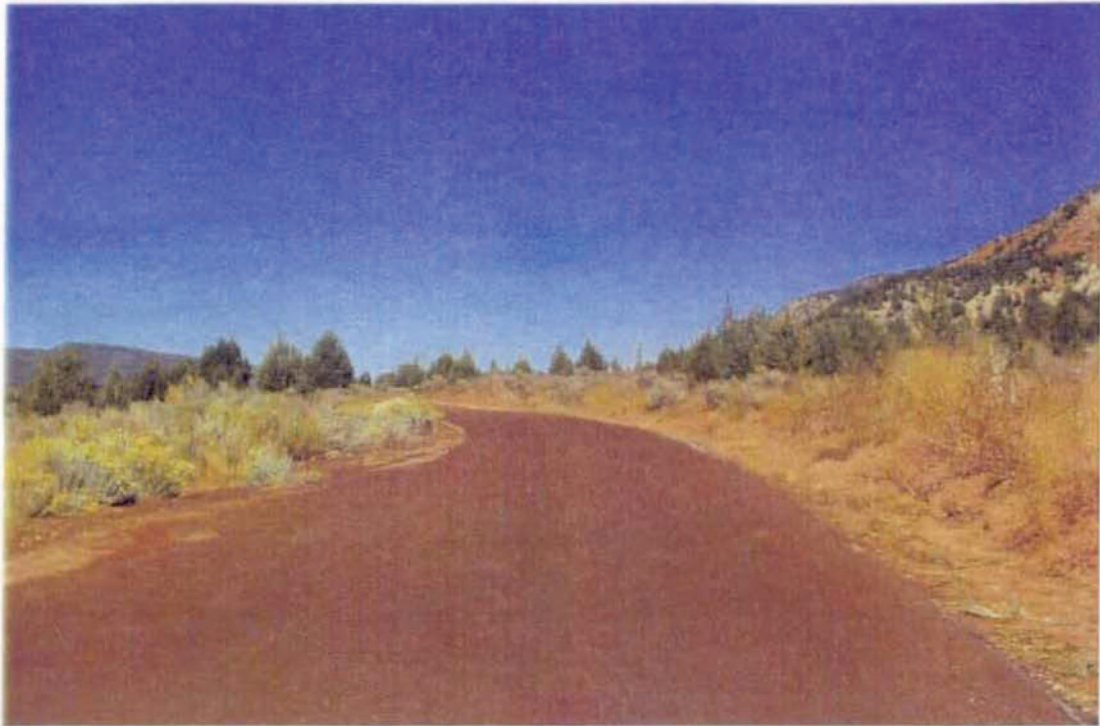


Photo #27 - MP 0.00 - Typical Pavement Section

XI. UNPAVED ROUTES

Unpaved routes are not addressed in this report at this time. Section "IV. ROUTE INVENTORY" includes a current register of all unpaved routes (name, number, estimated mileage to the nearest 0.01, functional class, number of lanes, and termini description). Any further information will be added post 1997-99 data collection. Data was collected for unpaved routes in numerous parks during the '94-'96 data collection cycle. This data (digital images, GPS traces, features inventory, and condition assessments) may be processed in the future.

ZION NATIONAL PARK - ZION - 1590 - R.O.W. VIDEO TAPE INDEX

PAVED ROUTE NO.	MILEAGE AT BEGINNING FRAME	FROM	TO	BEGINNING FRAME NO.	ENDING FRAME NO.	VIDEO TAPE NO.*	DATE	DIR: PRIM/ OPP
010	0.00	S Boundary	E Boundary	2433	54035	1	991108	P
010	12.14	E Boundary	S Boundary	55475	109130	1	991108	O
011	0.00	Rte 010	Parking	113027	135318	1	991108	P
011	6.14	Parking	Rte 010	138348	159342	1	991108	O
012	0.00	W Boundary	W Boundary	43039	55455	2	991109	P
012	4.06	W Boundary	W Boundary	88293	100359	2	991109	O
013	0.00	W Boundary	Parking	1127	16716	2	991109	P
013	5.28	Parking	W Boundary	20554	36771	2	991109	O
014	0.00	W Boundary	N Boundary	60446	79457	2	991109	P
202	0.00	Rte 010	Rte 203	185527	187361	1	991108	P
207	0.00	Rte 202	Rte 401	182915	183823	1	991108	P
401	0.00	Rte 403	Rte 207	178185	181093	1	991108	P
402	0.00	Rte 010	Gate	161536	163795	1	991108	P
402	0.56	Gate	Rte 010	167986	170101	1	991108	O
403	0.00	Rte 402	Parking	175519	175692	1	991108	P
407	0.00	Parking	Rte 402	172019	172983	1	991108	P
410	0.00	Rte 013	Loop	38886	40514	2	991109	P

GLOSSARY OF TERMS
AND
ABBREVIATIONS

<u>TERM OR ABBREVIATION</u>	<u>DESCRIPTION OR DEFINITION</u>
1590	Zion National Park Numeric Code
AADT	Annually adjusted average daily traffic. Average daily traffic for the term period comprising 80% of annual visitation.
CRS	Condition Rating Sheet. Index rating for pavement distresses, roadway condition and cross section information.
DCR	Drainage Condition Rating
Deficient Lane Miles	Lane Miles rated in POOR Condition.
DIRI	Driver International Roughness Index
Drainage Condition Rating	Drainage condition rating. An alpha rating from P (failed) to E (excellent) based on visual observations.
EXCELLENT	Excellent rating. PCR (or SCR) 95 or greater.
F_C	Functional Class. See Table 1 in appendix.
FAIR	Fair rating. PCR (or SCR) between 61 and 84.
GOOD	Good rating. PCR or (SCR) between 85 and 94
IRI	International Roughness Index
Lane	The portion of roadway from centerline to fogline or edge of pavement if no fog line exists.
Lane Miles	Mileage of total pavement coverage, based on a standard lane width. Either calculated as straight route mileage times the number of lanes, or as an area converted to 11 foot lane widths.
LRUT	Left Rut
NA	Not applicable.

PAV_MI Paved portion of route, length in miles.

Pavement Width The entire portion of roadway from edge of pavement to edge of pavement.

PCR Pavement condition rating. Numerical rating from 0 to 100 (excellent). Based on the surface condition and roughness of the road.

POOR Poor rating. PCR (or SCR) 60 or less.

RI Roughness Index.

RMR Rocky Mountain Region

RRUT Right Rut

RT# Route number.

RTE_DESCRIPTION Description of the route terminus.

RTE_MI Total route length in miles.

RTE_NAME Route name.

SADT Seasonal Annual Daily Traffic. Average daily traffic for the total "season".

SCR Surface Condition Rating. Numerical rating from 0 (failed) to 100 (excellent). Based on the extent of alligator cracking, patching, longitudinal cracking, rutting, and transverse cracking.

Shoulder Condition Rating Alpha rating from P (failed) to E (excellent). Visual and measured observations of the adequacy of a section of shoulder. Also applies to curb and gutter.

Shoulder Width If fogline exists, the portion of pavement outside lane, from fogline to edge of pavement.

UNPAV_MI Unpaved portion of route, length in miles.

ZION Zion National Park Alpha Code

GENERAL PARK ROAD FUNCTIONAL CLASSIFICATION - TABLE 1

Class I	<p>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.</p> <p>All other FC 1 routes have two digit numbers.</p>
Class II	<p>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.</p>
Class III	<p>Special Purpose Park Road (Public Roads) - Roads which provide circulation within public areas, such as campgrounds, picnic areas, visitor center complexes, concessionaire facilities, etc.</p> <p>These roads generally serve low-speed traffic and are often designed for one-way circulation. Route Numbers 200-299.</p>
Class IV	<p>Primitive Park Roads (Public Roads) - Roads which provide circulation through remote areas and/or access to primitive campgrounds and undeveloped areas.</p> <p>These roads frequently have no minimum design standards and their use may be limited to specially equipped vehicles. Route Numbers 200-299.</p> <p>Note: Functional Classes III and IV have the same route numbers because, historically, they were numbered similarly.</p>
Class V	<p>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.</p>
Class VI	<p>Restricted Road (Administrative Roads) - All roads normally closed to the public, including patrol roads, truck trails, and other similar roads. Route Numbers 400-499.</p> <p>Note: Functional Classes V and VI have the same route numbers because historically they were numbered similarly and often there is little distinction between these routes.</p> <p>For example, because utility areas and employee housing are often closed to the public, this restriction would result in classification of FC VI rather than FC V.</p>
Class VII	<p>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.</p> <p>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.</p>
Class VIII	<p>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.</p> <p>The construction and/or reconstruction should conform with accepted local engineering practice and local conditions. Route Numbers 600-699.</p>

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.

DESCRIPTION OF RATING SYSTEM

Data is collected on the following distresses and conditions:

- **Alligator Cracking** - a series of interconnecting cracks resembling alligator skin or chicken wire which usually occur in the wheel path.
- **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.
- **Rutting** - surface depressions in the wheel paths.

In addition, **Roughness** has been collected and is used in the PCR formula.

A Rating Index value is calculated for each of these 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 = $100 - [40 * (low/15.1 + medium/7.5 + high/1.9)]$

Patching Index = $100 - [40 * (\%patching / 80)]$

Rutting Index: Asphalt Surface = $[13.33 * (deepest\ rut)^2] - [86.67 * deepest\ rut] + 100$

Chipseal (1-5 yrs. old) = $[9.53 * (deepest\ rut)^2] - [86.67 * deepest\ rut] + 108.57$

Chipseal (>5 yrs. old) = $[3.85 * (deepest\ rut)^2] - [83.46 * deepest\ rut] + 116.53$

Roughness Index: (RI) = $29 * [5 * e^{(-0.0041 * average\ RI)}]$

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

Surface Condition Rating (SCR) = $100 - [40 * (LOW\ ALLIGATOR\ CRACKING/70 + MEDIUM\ ALLIGATOR\ CRACKING/30 + HIGH\ ALLIGATOR\ CRACKING/10 + PATCHING/80 + LOW\ TRANSVERSE\ CRACKING/15.1 + MEDIUM\ TRANSVERSE\ CRACKING/7.5 + HIGH\ TRANSVERSE\ CRACKING/1.9 + LOW\ LONGITUDINAL\ CRACKING/350 + MEDIUM\ LONGITUDINAL\ CRACKING/200 + HIGH\ LONGITUDINAL\ CRACKING/75 + MAXIMUM\ RUT\ VALUE)]$

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

NOTE: Collection of roughness data is dependant on the data collection vehicle traveling at a minimum speed of 22 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.

Drainage Condition Rating Definitions

- Excellent:** No drainability problem. If funding were available for pavement maintenance, no funds would be required for drainage concerns.
- Good:** Minimal overall drainability problems. If funding were available for pavement maintenance, 25% or less is estimated to correct drainage deficiencies.
- Fair:** Moderate problems with drainability that needs correcting before it deteriorates to a poor rating. If funding were available for pavement maintenance in this section, 25% to 50% is estimated to correct deficiencies.
- Poor:** Severe 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 Rating Criteria

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

A. Excellent Drainability

All water clears the road prism adequately without any chance of base saturation.

- Pavement drains without interruption.
- Curbs are flawless with the exception of minor cracking.
- Down drains are secure and placed properly.
- Drop inlets are at the correct grade and location with no deficiencies.
- Culverts are adequate in numbers, size, and condition.
- Ditches are constructed of asphalt and are sufficient to carry required volumes of water.

B. Good Drainability

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

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

C. Fair Drainability

Some areas have questionable ability for the water to clear the road prism with an uncomfortable concern for base saturation.

- Pavement shows moderate flaws, such as rutting, and other irregularities that would hold minor amounts of water, interrupting the flow of water.
- Shoulder grades restrict the flow of water, however, water exits after some ponding.
- Down drains show evidence that limited water is causing erosion as a result of deterioration, or other similar flaws (e.g. missing asphalt that guides water to down drain).
- Drop inlet encasements are cracked, iron is bent, or are misaligned to cause limited water to escape,
- Culvert headwalls show moderate damage or are inadequate, the exit shows some damage to fill areas, or entry asphalt is moderately damaged.
- Ditches have some permeable material, unmovable obstructions to interrupt flow obviously hard to maintain due to inconsistencies, or have a less than desirable area to carry required volumes of water.

D. Poor Drainability

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

- Pavement grade is irregular and holds dangerous amounts of water (hydroplaning is a concern), or shows massive alligator cracking.
- Shoulder design induces ponding that encroaches on the pavement (drivers try to avoid ponds).
- Portions of curbs are missing, allowing water to escape causing erosion.
- Drop inlets, due to various reasons, are only able to drain 50% or less efficiently.
- Down drains show signs of water exiting in areas by the down drain causing erosion.
- Culverts are functionally deficient including size, installation, location, or grade giving water opportunity to saturate the road base.
- 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

- Excellent:** Shoulder is new or under construction. It meets or exceeds standards. The curb is new.
- Good:** The shoulder is below standard width for posted speed and grading is required. The curb is functional.
- Fair:** There are variations in the shoulder, irregular width with material replacement required. The curb is in need of repairs or adjustments.
- Poor:** There isn't any shoulder, erosion has removed it. The curb needs replacement.

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 this criteria should give a feel for where the flaws would apply in the ratings.

The overall shoulder condition rating for a section is determined by the lowest individual rating for any one of the above categories (width, rutting, cracking, erosion, drop-off, and curbs).

A. Excellent Shoulders

- If shoulder is unpaved there will not be any drop-offs or erosion.
- If shoulder is paved there isn't any rutting, cracking, or erosion.
- Curbs are flawless with the exception of minor cracking and no erosion behind curb.

B. Good Shoulders

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

C. Fair Shoulder

- If shoulder is unpaved drop-offs are from 1" to 4" and replacement of material required.
- If shoulder is paved rut depth is from 1/2" to 1". Open cracks are present but less than 1/4" deep, replacement of material is needed from erosion.
- If curbs are present they need repairs, and there is erosion behind the curb.

D. Poor Shoulder

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