Idaho Transportation System

2009 Performance Report

Idaho Transportation Department

Division of Transportation Planning

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1.0 Introduction/Purpose of the Report

The Idaho Transportation Department's (ITD's) Idaho Transportation System Performance Report is a summary of the status of ITD-jurisdiction pavements, bridges, public transportation and railroad crossings. It is our intention to provide the reader with an accurate and useful review of the historical and current condition of Idaho's roads, bridges, public transportation facilities and railroad crossings, with a goal to eventually provide information on several other facilities, such as pedestrian and bicycle systems and congestion.

Our long term vision is to include a summary of the status of all transportation in Idaho, with the cooperation of our partners in Idaho's cities, counties and highway districts.

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2.0 Purpose of a Pavement Management System (PMS)

A Pavement Management System is defined as a system which involves the identification of optimum strategies at various management levels and maintains pavements at an adequate level of serviceability. These include, but are not limited to, systematic procedures for scheduling maintenance and rehabilitation activities based on optimization of benefits and minimization of costs.

Idaho manages an extensive Pavement Management System. Through the use of their program, ITD has made significant progress toward reducing deficient pavements and giving motorists a safer and smoother ride. Pavement deficiencies on the State Highway System have been reduced from 41% in 1993 to **17.6%** by the end of calendar year 2009. This has been accomplished by:

1. Establishing department efficiency measures
2. Consolidating programs and applying the cost savings to pavement-rehabilitation projects
3. Utilizing a successful maintenance / preventative maintenance program which slows the rate of pavement deterioration
4. Improving the way we collect, analyze, and report pavement data
5. Continued coordination efforts between the Districts and the Planning Services section in Headquarters, to exchange project planning information and project history.

Idaho's Pavement Management System covers both the network and project level. Network-level pavement management is performed by the Division of Planning while project-level pavement management is performed by ITD's Headquarters Materials section and the six Idaho districts. Pavement condition testing conducted at the network level is also split, with Materials overseeing skid testing while the Planning Division collects roughness and rutting measurements. Planning Services is responsible for surveying pavement distress (cracking), analyzing network PMS data, producing reports, and developing and maintaining computer programs needed for pavement management. Deflection data, or Falling Weight Deflectometer Data (FWD) for project level pavement management is collected, analyzed, and reported by the Materials section.

The program will be further explained in detail in Item 3.0, Description of the Current System.

3.0 Description of the Current System

3.1 Brief History of Idaho pavements

In 1977, the Idaho Transportation Department began a review of existing pavement management programs with the goal of adopting one to fit Idaho's needs. The following year a Pavement Performance Management Information System (PPMIS) was acquired and made operational on ITD's mainframe computer. Since 1978, the PPMIS has been steadily improved and modified to meet conditions in Idaho. It has been tested and refined by both ITD and consultant contract. Economic analysis and optimization was completed in July 1986. The HERS-ST model for improved pavement management analysis (discussed in later chapters) was implemented in 2007.

In 2008, the Planning Services section of ITD introduced a plan to design several new tools to improve how the information was collected, distributed, and reported. One of these tools is this Idaho Transportation System Performance Report, which has been extensively modified to provide more historical data, pertinent graphs and tables, and data to assist design engineers with decision making.

Other tools scheduled for implementation in 2009 and beyond are discussed in the Methodology section of this report.

3.2 Total Lane Miles in Idaho

Our ITD Highway System consists of approximately 5,000 centerline miles of paved highway, including 612 centerline miles of Interstate (see Table 3.2). In previous years, network-level pavement management has been divided into about 2,000 sections varying in length from less than one mile to approximately ten miles. These 2,000 sections are analyzed annually for several items.

TABLE 3.2: ROAD MILEAGE OF IDAHO

	CENTERLINE MILES					LANE MILES				
	FUNCTIONAL CLASS					FUNCTIONAL CLASS				
	INTERSTATE	ARTERIAL	COLLECTOR	LOCAL	TOTAL	INTERSTATE	ARTERIAL	COLLECTOR	LOCAL	TOTAL
FEDERAL	0	0	558	7,340	7,898	0	0	1,116	14,680	15,796
ITD	612	3,194	1,139	0	4,944	2,483	7,234	2,323	0	12,040
DISTRICT 1	74	398	123	0	595	294	924	262	0	1,480
DISTRICT 2	0	456	238	0	695	0	1,021	477	0	1,499
DISTRICT 3	125	751	150	0	1,026	533	1,725	302	0	2,560
DISTRICT 4	169	507	252	0	929	677	1,126	519	0	2,323
DISTRICT 5	160	333	216	0	709	642	775	441	0	1,858
DISTRICT 6	84	749	159	0	992	337	1,661	322	0	2,320
COUNTY	0	120	4,629	10,768	15,517	0	255	9,259	21,536	31,050
HWY DIST.	0	627	3,267	8,559	12,453	0	1,393	6,537	17,118	25,049
CITY	0	253	452	5,605	6,310	0	610	921	11,211	12,741
OTHER	0	0	410	250	661	0	0	816	501	1,317
TOTAL	612	4,195	10,455	32,523	47,784	2,483	9,492	20,970	65,047	97,992

Note: ITD mileage is as of October, 2009. Other mileage is as of May 2009 as per ITD certification of public road mileage.

3.3 Methodology

3.3.1 Cracking Index and the Arizona Method

The Idaho state-jurisdiction road system has been analyzed historically by using the Arizona Method. The Arizona method is a surface distress evaluation typically performed by visual survey on the most-travelled lane of the road being assessed. A condition index (Cracking Index) between 0.0 and 5.0 is given to the pavement, based on size and location of cracks, percentage of the roadway surveyed that shows distress, and type of road surface. A 5.0 rating is good pavement with no visible distress and 0.0 is the maximum distress classification.

Up until the year 2009, a roadway that received a structural improvement (improving the ability of a pavement to support traffic loads through reconstruction or rehabilitation) received a rating of 5.0 the year that the completion of the construction was observed. A roadway that received a maintenance project (preserving the structural condition of a pavement at an acceptable level - typically a sealcoat) had its rating "frozen" until the cracks would reappear through the maintenance project. The disadvantages of always cycling a pavement cracking index back to 5.0 after a treatment is that while several treatments are available of different depths, they all would receive the same improvement increase. For instance, a plant mix overlay of 1.0" on a road would render all cracks not visible, just the same as a full reconstruction of a roadbed from subgrade upward. However, a full reconstruction of a road is a much deeper and more effective structural improvement than an overlay. Our system did not reflect this fact.

In 2009, Planning Services introduced a new cracking index improvement rating system (Table 3.3.1). The cracking index improvement would relate directly to the depth and severity of the treatment received. Maintenance improvements such as sealcoats do not offer any structural improvement to the roadbed (although they are an important part of pavement preservation). Thus, they do not increase the cracking index when performed. A plant mix overlay is a minimal procedure that only affects the topmost layer of the pavement structure; thus, when an overlay is performed, the cracking index is increased only one full point. A Cement Recycled Asphalt Base Stabilization (CRABS) digs deeper into the pavement structure, removing some of the base, adding structural strength and replacing it. Thus, a CRABS project receives a cracking index of two full points. Only a few types of projects that involve replacing the entire pavement structure, such as a reconstruction or new construction, receive an automatic cracking index of 5.0. Table 3.3.1 lists the cracking index increases for each type of project. Note that this table will be changed in 2010 as part of the new Agile Asset system (see Section 9.2).

TABLE 3.3.1: CRACKING INDEX IMPROVEMENT BY PROJECT TYPE

WORKCODE	DESCRIPTION	CRACKING INDEX INCREASE
00	NO INFORMATION	WILL VARY
01	NEW CONSTRUCTION OR RECONSTRUCTION (ASPHALT)	TO 5.0
02	BITUMINOUS SURFACE TREATMENT (NOMINAL 0.8") (CHIP SEAL)	0
03	PLANT MIX OVERLAY	+1.0
04	ROAD MIX OVERLAY	+1.0
05	NEW CONSTRUCTION OR RECONSTRUCTION (CONCRETE)	TO 5.0
06	BASE WORK AND RESURFACE	+1.5
07	REHABILITATION AND RESURFACE	+1.5
08	RESURFACE	+1.0
09	MILL AND INLAY	+1.5
10	CONCRETE RESURFACE(CRACK-SEAT WITH PLANT MIX OVERLAY)	+2.5
11	PAVEMENT ON EXISTING GRAVEL ROADWAY	TO 5.0
12	MILL AND INLAY, OVERLAY	+2.0
13	PLANT MIX SEAL	0
14	OPEN GRADED FRICTION COURSE	0
15	RUT FILLING (SLURRY SEALS & MICROSURFACING)	+0.5
16	GRIND AND JOINT SEAL (CONCRETE)	0
17	SLAB REPLACEMENT (CONCRETE)	+1.0
18	CRACK SEALING (CONCRETE)	0
19	CONCRETE REHAB. (GRIND, SEAL JOINTS, SLAB REPL. 2%)	+1.5
20	HOT IN-PLACE RECYCLE	+1.5

21	COLD IN-PLACE RECYCLE	+1.5
22	HOT IN PLACE RECYCLE WITH OVERLAY	+2.0
23	COLD IN PLACE RECYCLE WITH OVERLAY	+2.0
24	CEMENT RECYCLED ASPHALT BASE STABILIZATION (CRABS)	+2.0
25	MINOR WIDENING	0
26	MAJOR WIDENING	VARIES
27	SCRUB COAT	0
30	RECYCLED ASPHALT BASE STABILIZATION (RABS)	+2.0
31	STRESS ABSORBING LAYER OF STRAIGHT ASPHALT (SALSA) AND OVERLAY	+1.5
G1	NO DIRECT INFORMATION (BASE + SURFACE)< 7”	+1.0
G2	NO DIRECT INFORMATION (BASE + SURFACE)> 7”	+1.5
SC	SEALCOAT (CHIP SEAL)	0
DS	DOUBLE SEALCOAT	0
FC	FOGCOAT	0
LC	LEVELING COURSE	+0.5

3.3.2 The Pathway Profiler Van

Since 1995, Idaho has used Pathway®Profiler van technology and its predecessors to gather the majority of their roadway data. In 2008 a new road profiler van was purchased by the state to greatly enhance the data quality and quantity that we are able to obtain and process. The profiler van drives every mile of state jurisdiction highway in the State of Idaho and digitally records its condition. Those crystal clear images of both the front view out of the van as well as the pavement surface are collected by ITD’s Planning Division and used by ITD staff to analyze pavement distress. With the new 2008 van, the rutting detection lasers have been vastly improved (previous versions used 5 laser points to collect rutting data; the new van employs 1280 points), the images are of much higher resolution, the roughness measure (IRI) is more accurate, and several other items are greatly enhanced. In 2009, Planning Services performed a comparison study between the old van and the new van’s IRI data to ensure that our statewide ratings did not suddenly change only due to new equipment. With this comparison, a mathematical equation has been applied to the new data for statistical continuity. ITD looks forward to using this higher quality data to increase accuracy of data collection, analysis and reporting.

3.3.3 Field Recorder

ITD's Pavement Management Engineer uses the Arizona Method to rate the state-jurisdiction roads every year- usually by windshield method (driving the roads) or by using the digital images collected by the Profiler van. The engineer uses a Field Recorder program designed by the Planning Services staff on a laptop computer and records the condition of the pavement distress using the Arizona Method for each section of highway. The Field Recorder has information on several other factors of a road section: number of lanes, last maintenance improvement, last rehabilitation or reconstruction, number of railroad crossings, speed limit, shoulder width, and terrain type, to name a few. The Pavement Management Engineer takes note of any changes in the field and updates the records annually.

3.3.4 Pavement Rutting

Pavement rutting is the surface depression of a road in the wheel path. As mentioned above, rutting data is automatically collected by sensors and lasers on the profiler van.

In 2008, ITD purchased a new profiler van which greatly enhanced the rutting data available for analysis. As a result, Planning Services has proposed rutting thresholds to include as a measurement of pavement deficiency.

ITD's pavement management engineer spoke with several surrounding state representatives to get a survey of typical rutting measurement standards in practice today. In speaking further with Washington and Oregon DOT representatives, it was noted that studded tires present a unique problem to our northwestern states. Studded tire usage increases and quickens the rutting damage to pavements. Thus, we propose an aggressive standard of rutting measurement for Idaho.

It was decided that the rutting thresholds be based on the speed limit of the road, since rutting presents a greater danger and is less tolerable to the driver as speed increases. Deeper rutting is more tolerated at lower speeds.

<u>The rutting measurement standards are proposed as follows:</u>

TABLE 3.3.4: PROPOSED RUTTING DEPTH TRIGGERS

SPEED LIMIT OF ROADWAY	DEPTH AT WHICH MINOR REHAB IS RECOMMENDED
SPEED LIMIT ≥ 65 MPH	**0.30"**
64 MPH ≥ SPEED LIMIT ≥ 55 MPH	**0.50"**
54 MPH ≥ SPEED LIMIT ≥ 35 MPH	**0.75"**
SPEED LIMIT ≤ 34 MPH	**1.00"**

3.3.5 International Roughness Index (IRI) and Roughness Index (RI)

ITD uses a worldwide standard for measuring pavement smoothness called the International Roughness Index, or IRI. IRI was developed by the World Bank in the 1980s and is used in all of the states, as well as several countries. IRI is used to define a characteristic of the longitudinal profile of a traveled wheel track and constitutes a standardized roughness measurement. The commonly recommended units are meters per kilometer (m/km) or millimeters per meter (mm/m).

The index measures pavement roughness in terms of the number of inches per mile that a laser, mounted on the Profiler van, jumps as the van is driven along the roadway. Typically, the lower the IRI number, the smoother the ride; although IRI is not known as a direct measure of rider discomfort.

Idaho takes the measured IRI values for pavement and compresses them onto a 0.0-5.0 scale, similar to the Cracking Index scale, where 0.0 is very rough and 5.0 is very smooth. ITD calls this the pavement Roughness Index, or "RI". These numbers are reported annually.

3.3.6 Arizona Method: When a pavement is considered "deficient"

Currently, pavement condition assessment is dependent upon functional classification and is divided into two categories: (1) interstates and arterials, and (2) collectors.

- Pavements on interstates, arterials, and collectors are classified as "**good**" if the lower of the Cracking Index (CI) or Roughness Index (RI) is greater than 3.0;
- Interstate and arterial pavements are considered "**fair**" if the lower of CI or RI is between 2.5 and 3.0 (2.0 to 3.0 for collectors);
- "**Poor**" pavements (Interstate and arterial) exhibit indices between 2.0 and 2.4 (1.5 to 1.9 on collectors);
- Interstate and arterial pavements considered to be "**very poor** "are those with the lower of the two indices falling below 2.0 (CI or RI rating below 1.5 for collectors).
- Pavement sections are considered deficient if they are classified as "poor" or "very poor".

These pavement conditions are also shown in Table 3.3.6.

The current statewide distribution of good, fair, poor, and very poor pavements, based upon roughness and cracking indices, is shown in the section Condition of the State-Jurisdiction Pavement in Idaho.

TABLE 3.3.6: PAVEMENT DEFICIENCY BY CONDITION

Pavement Condition	Interstate and Arterials	Collectors
	Lower Index of Cracking (CI) or Roughness (RI)	
Good	(CI or RI) > 3.0	(CI or RI) > 3.0
Fair	2.5 ≤ (CI or RI) ≤ 3.0	2.0 ≤ (CI or RI) ≤ 3.0
Poor	2.0 ≤ (CI or RI) <2.5	1.5 ≤ (CI or RI) < 2.0
Very Poor	(CI or RI) < 2.0	(CI or RI) < 1.5

3.3.7 Skid Testing

Skid data is collected by the Materials Section of ITD by towing a small trailer that measures the force on a wheel that is locked but not rotating (skidding). Tests conducted on state routes are used in the planning of construction, reconstruction, or rehabilitation of pavements. Most of this data is collected annually or every other year.

3.3.8 Falling Weight Deflectometer (FWD) Testing

The FWD (Falling Weight Deflectometer) is a non-destructive testing device that is used to complete structural testing for pavement rehabilitation projects, research, and pavement structure failure detection. The FWD is a device capable of applying dynamic loads to the pavement surface, similar in magnitude and duration to that of a single heavy moving wheel load. The response of the pavement system is measured in terms of vertical deformation, or deflection, over a given area using seismometers. The Materials section of ITD collects this data on sections of state highways that are eligible for paving projects, and uses the results to design the new pavement that is needed.

3.3.9 Old Reporting Styles versus New Reporting Styles

Until the year 2009, ITD's Planning Services reported annual pavement information in several formats. The **Index List Report**, the **SYSTDY (SYstem STuDY) Report, the Deficiency Report** and the **Highway Needs Report** were all useful reports on various parts of the highway system and its condition.

In 2008, the Planning Services section began the design of a new Universal Reporting Tool (URT) that has been released for use in 2010 with 2009 data. The URT provides an interface to the user where the user can specify the data they would like to see in the format they would like to apply, and the URT will send the request to a database that stores all the annual pavement information, retrieve the data, and compile it into the requested format. For example, a user can ask when the last pavement maintenance project was constructed near Moscow on State Highway 8, and the URT will quickly reply that the last maintenance project was a sealcoat performed in 2004 between milepost 0.0 and 0.5, which are within Moscow city limits.

In this manner, all previously available data will still be available to the public, but the user will not have to sort through large reports to find a single piece of information. Instead, they can request data from the URT, and within seconds, the database will reply with the information, configured in their report format. Planning Services will be rolling out this program to headquarters and the districts with a short course on how to operate the software, and will also offer a user manual and a help desk feature.

3.4 How Does Planning Services Predict and Recommend Projects?

Rehabilitation and reconstruction project recommendations are generated by ITD's pavement management software, the Highway Economic Requirements System – State Version (HERS-ST). HERS-ST is a federally maintained computer model run with data taken from ITD's mainframe and executed by the Planning Services staff.

Planning Services uses the HERS-ST model to provide information on how quickly the ITD pavements will deteriorate, what types of projects are recommended for the pavement sections, what year the projects might be programmed, and approximately how much they will cost. This information, as well as several other items, has traditionally been presented in the Highway Needs Report. Now that the URT is available, this information will be obtainable by user request.

HERS-ST evaluates the relationship between highway investment and system condition, performance, and user cost levels. The software simulates future highway condition and performance levels and identifies deficiencies using engineering principles. It then simulates the selection of improvements for implementation, relying on economic criteria. Questions that HERS-ST can help answer include:

- What level of program capital expenditure is economically justified?
- What pavement deficiency rating will result from a given stream of investment?
- What investment level is required to maintain current pavement deficiency rating?
- What are the benefits and costs associated with scheduled projects?

4.0 Condition of the ITD-Jurisdiction Pavement in Idaho

The following section details the findings for ITD-Jurisdiction pavement in Idaho for 2009 and previous years. In 2009, **17.6%** of the state-jurisdiction roads were considered deficient.

4.1 Deficient Lane Miles: Historically and now

In the following sections, the past three years of deficiency, in both lane mileage and percentage, will be displayed in tabular, graphical and map form.

TABLE 4.1: DEFICIENT LANE MILES, IDAHO STATE HIGHWAY

	DEFICIENT LANE MILES			% DEFICIENT		
District	**2007**	**2008**	**2009**	**2007**	**2008**	**2009**
1	169	224	195	11%	15%	13%
2	244	247	274	17%	17%	19%
3	559	544	503	22%	21%	20%
4	627	652	615	27%	28%	27%
5	252	289	260	14%	16%	14%
6	417	389	263	18%	17%	11%
TOTAL	2267	2343	2110	19%	20%	18%

4.2 Statewide Pavement Condition, Maintenance History, and Rehabilitation History

The following section shows 2009 pavement condition (Figures 4.2.1 through 4.2.3), as well as Pavement Condition, Pavement Maintenance History, and Pavement Rehabilitation History for each district (Figures 4.2.4 through 4.2.21.)

Figure 4.2.1: Statewide Pavement Condition, Historical and 2009

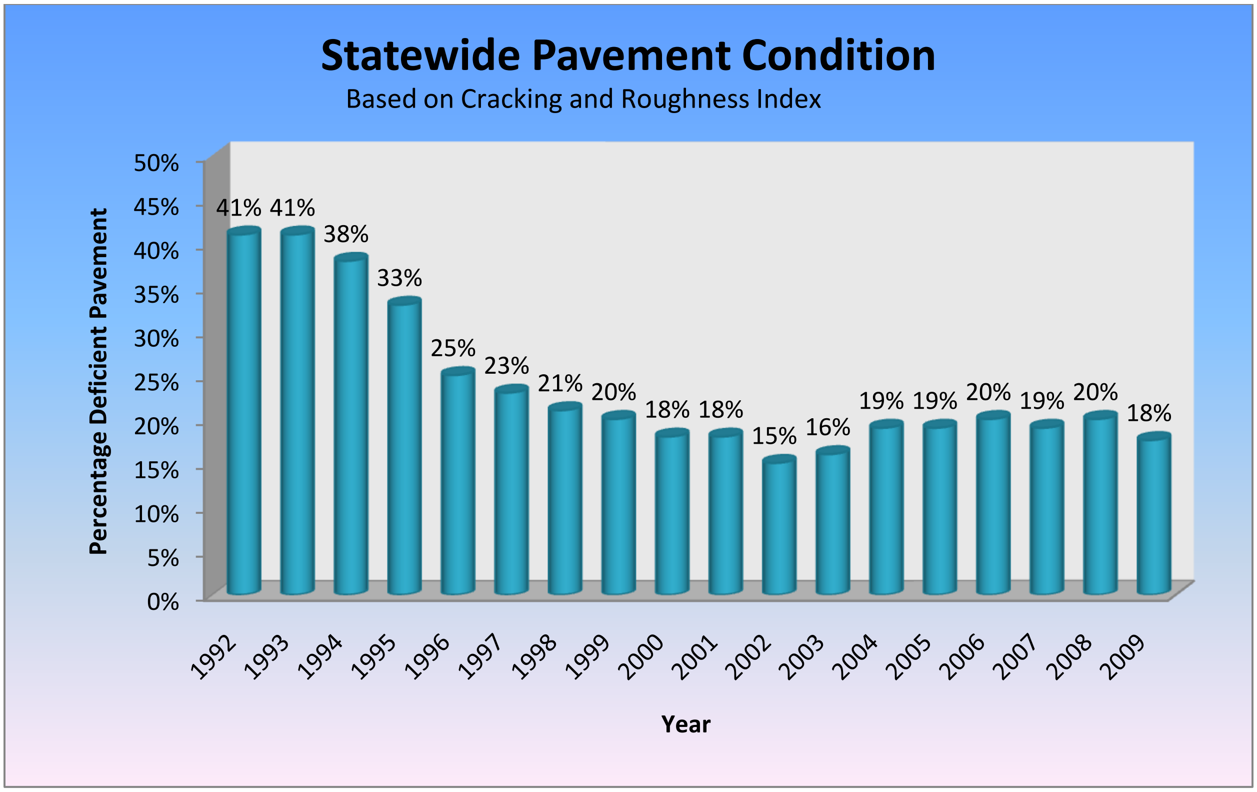


Figure 4.2.2: 2009 Statewide Pavement Condition

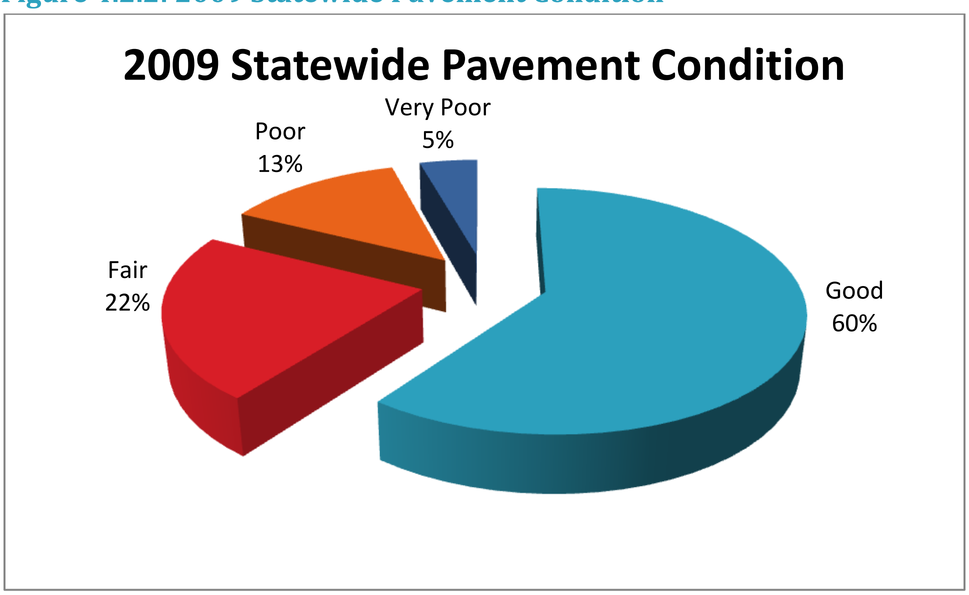


Figure 4.2.3: 2009 Pavement Condition by District

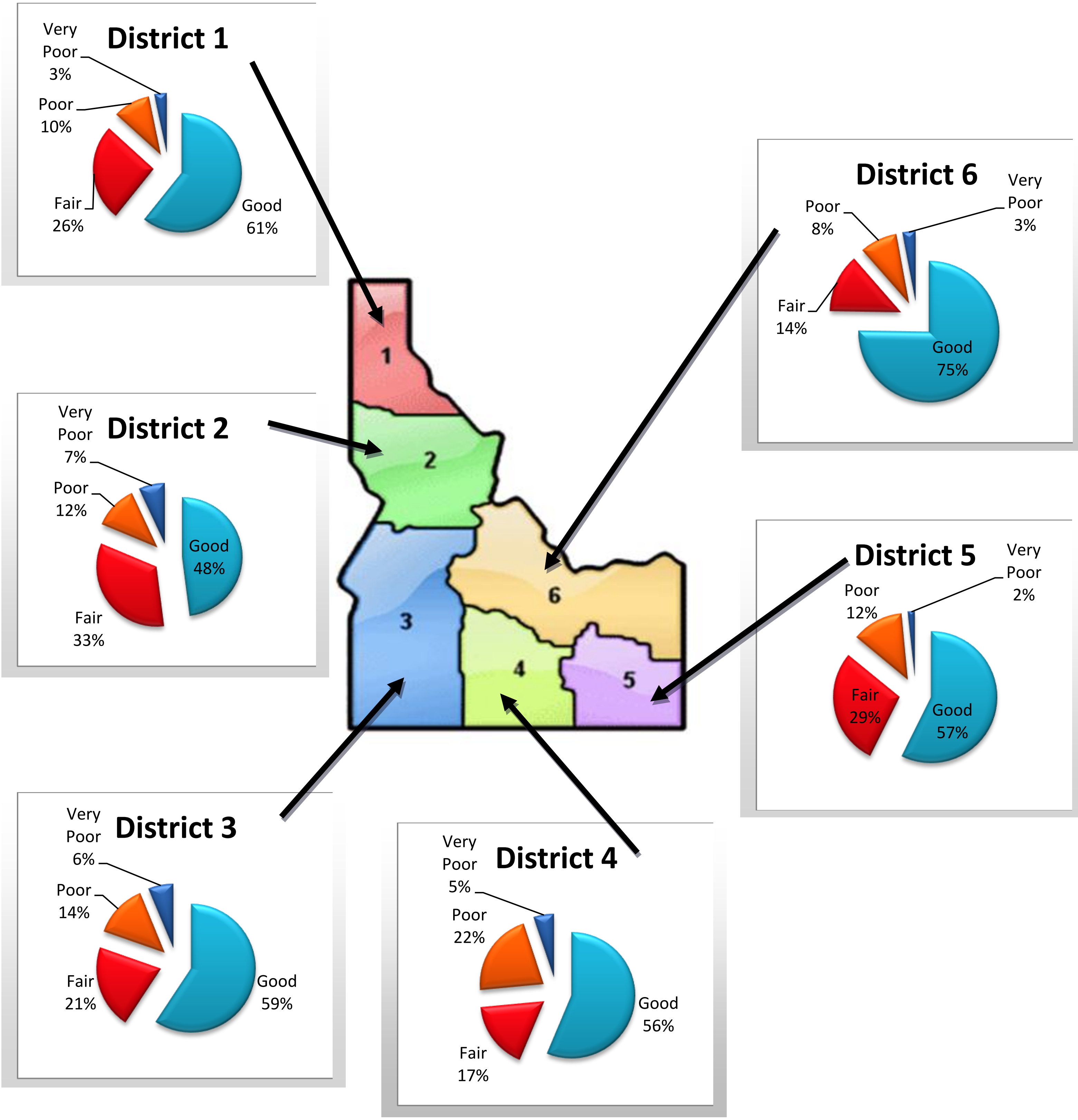


Figure 4.2.4: District 1- Pavement Condition Map

Figure 4.2.5: District 1- Pavement Maintenance History

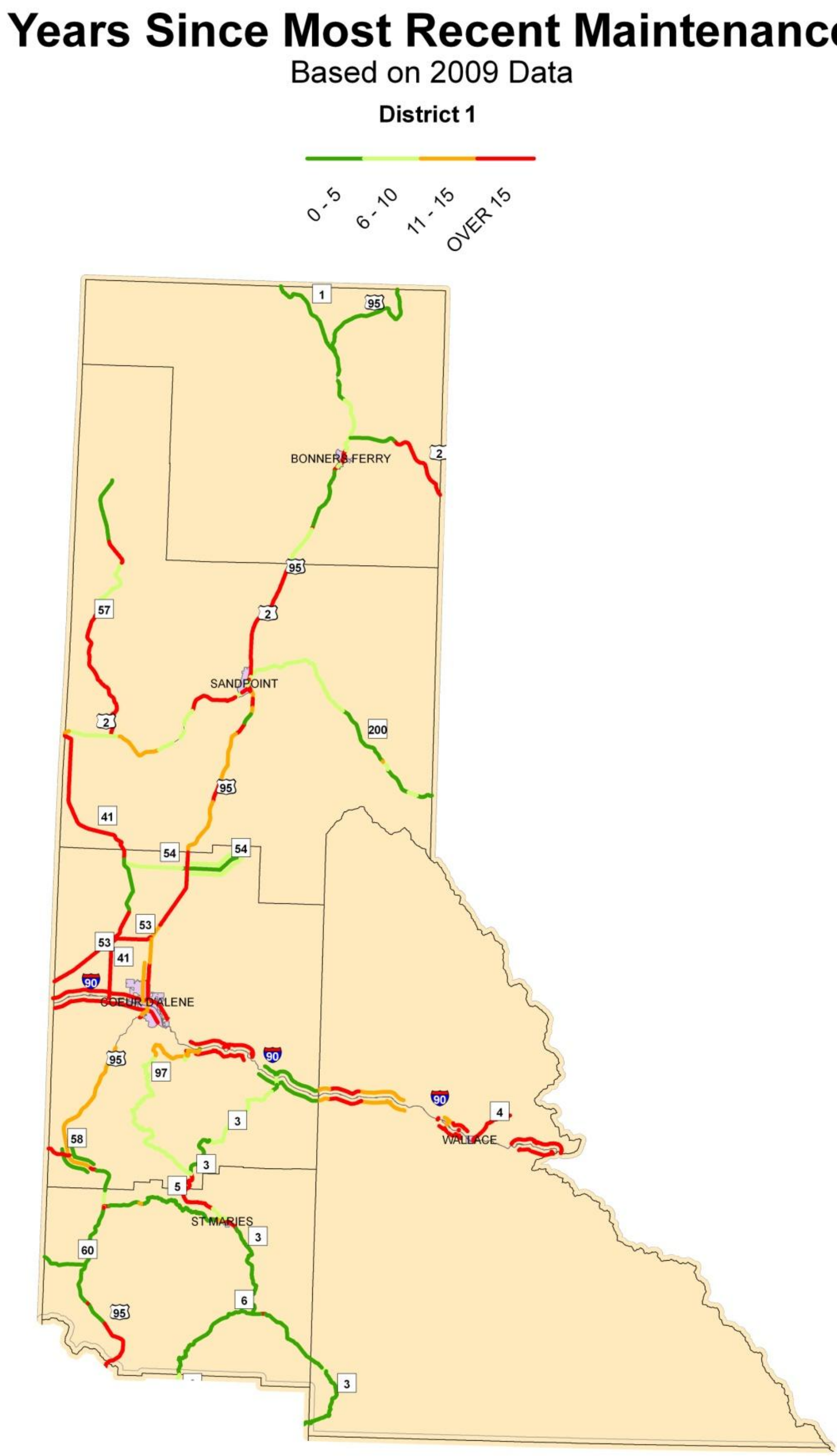


Figure 4.2.6: District 1- Pavement Rehabilitation History

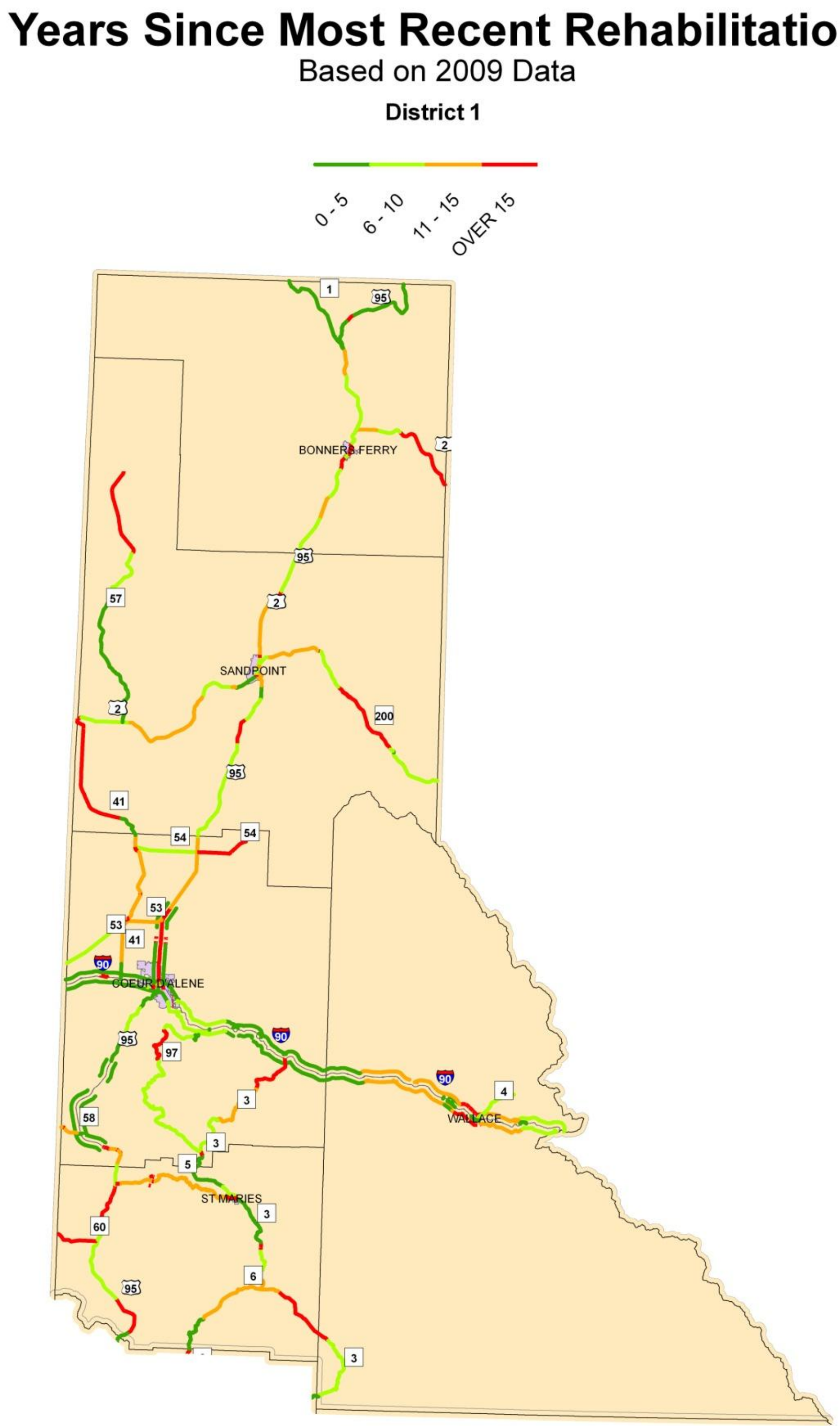


Figure 4.2.7: District 2- Pavement Condition Map

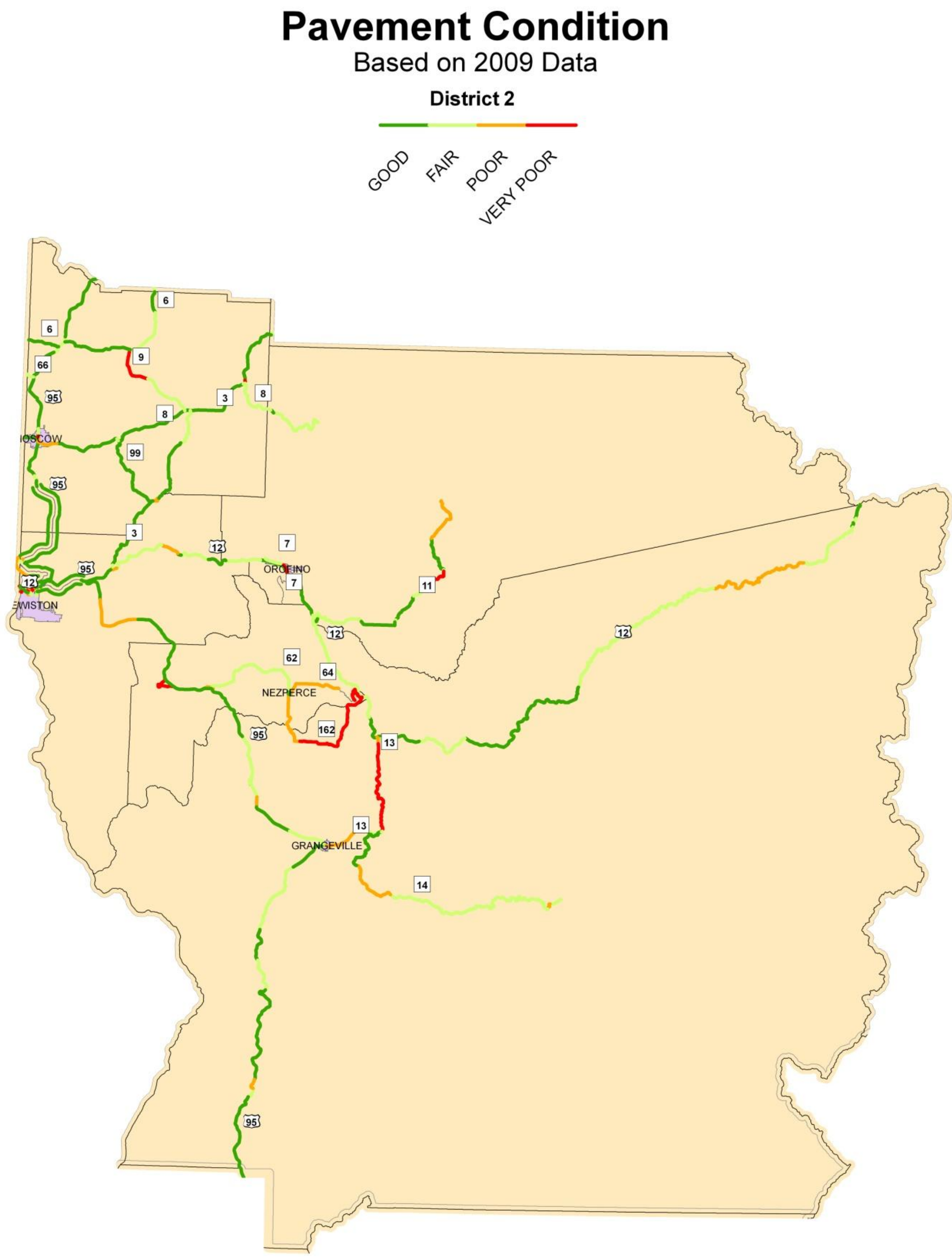


Figure 4.2.8: District 2- Pavement Maintenance History

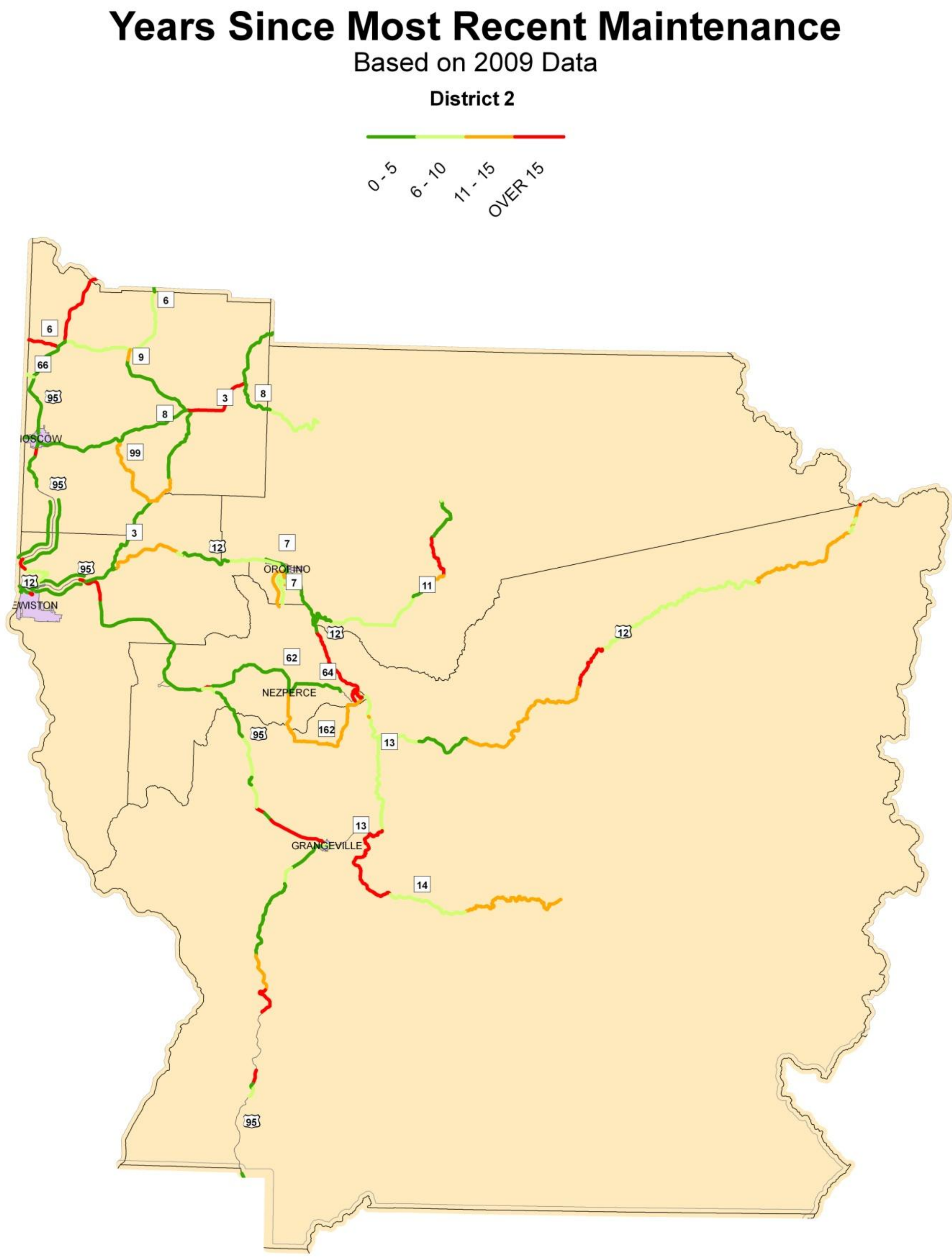


Figure 4.2.9: District 2- Pavement Rehabilitation History

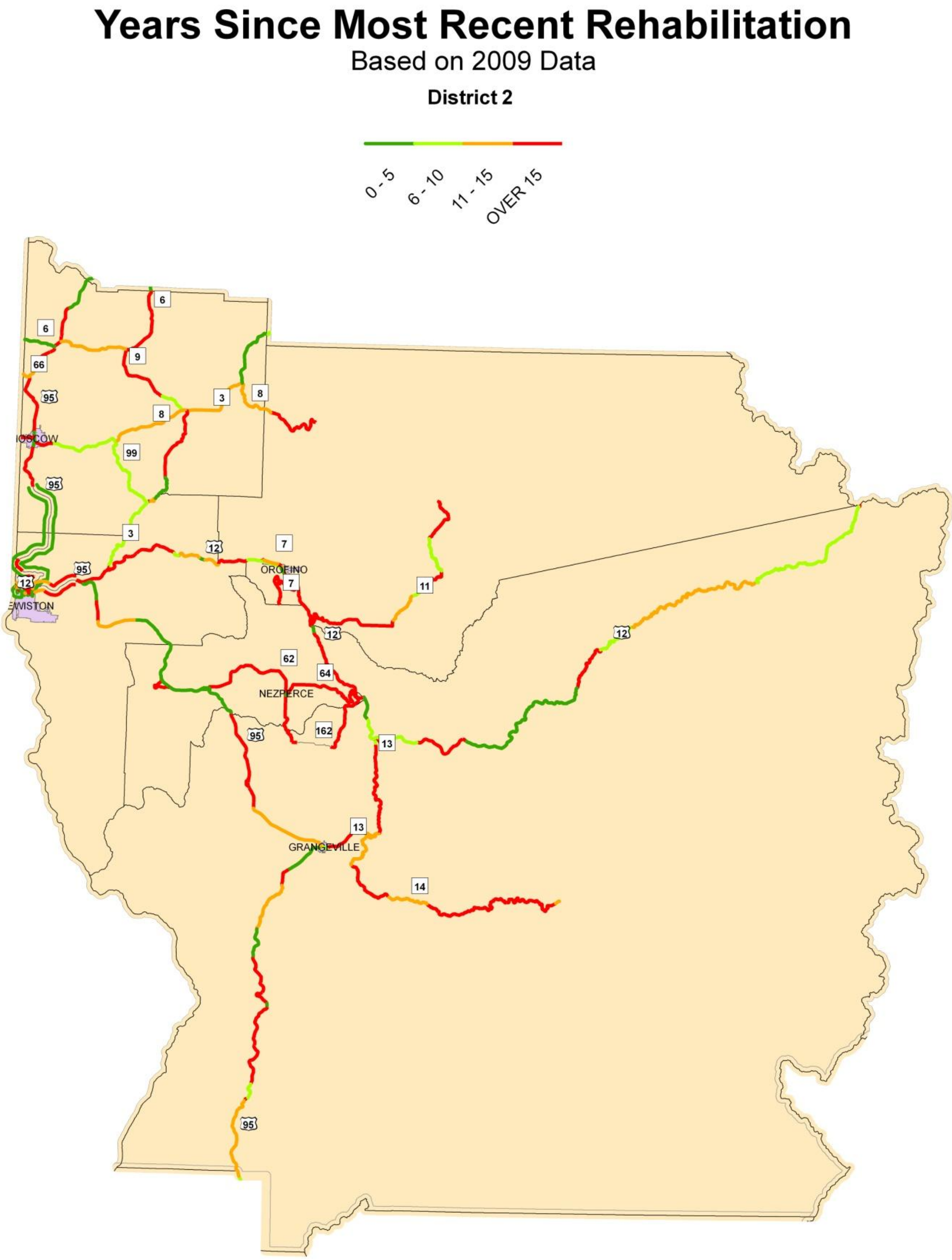


Figure 4.2.10: District 3- Pavement Condition Map

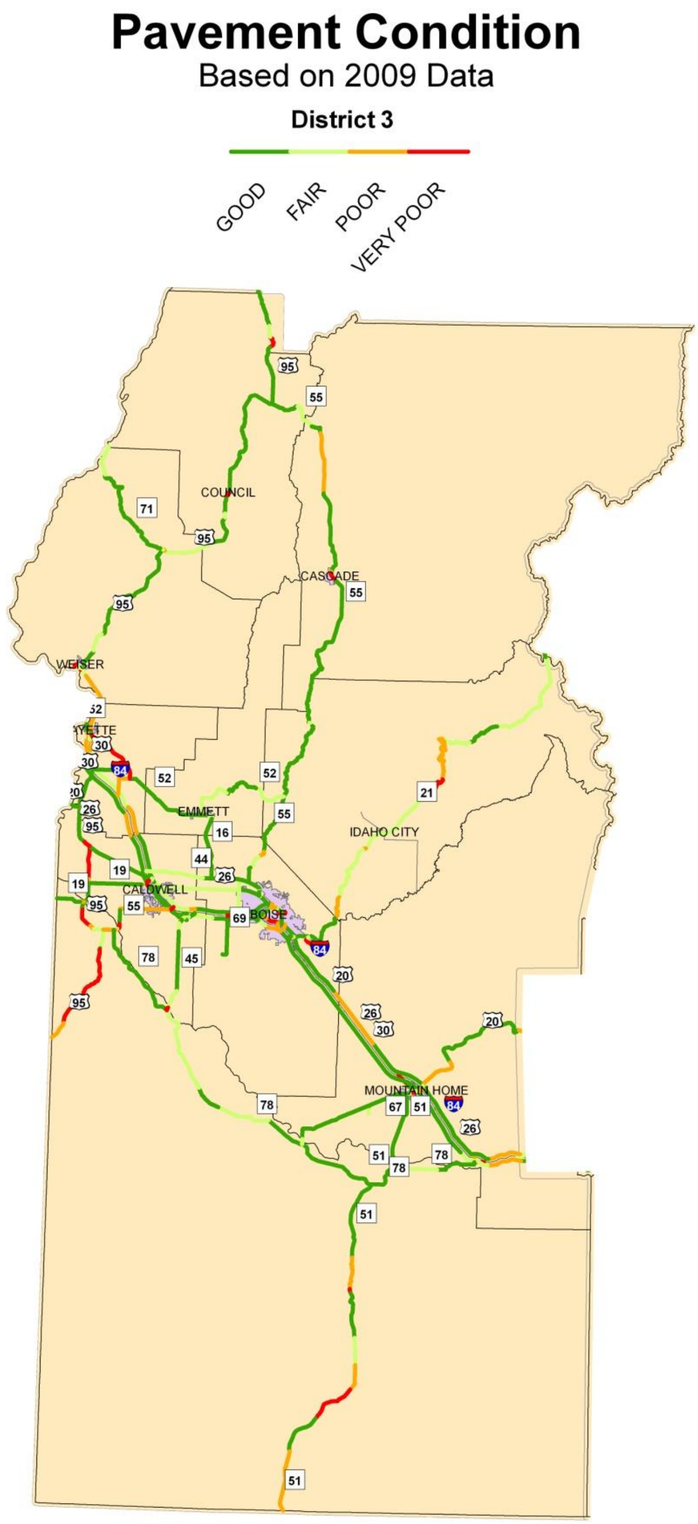


Figure 4.2.11: District 3- Pavement Maintenance History

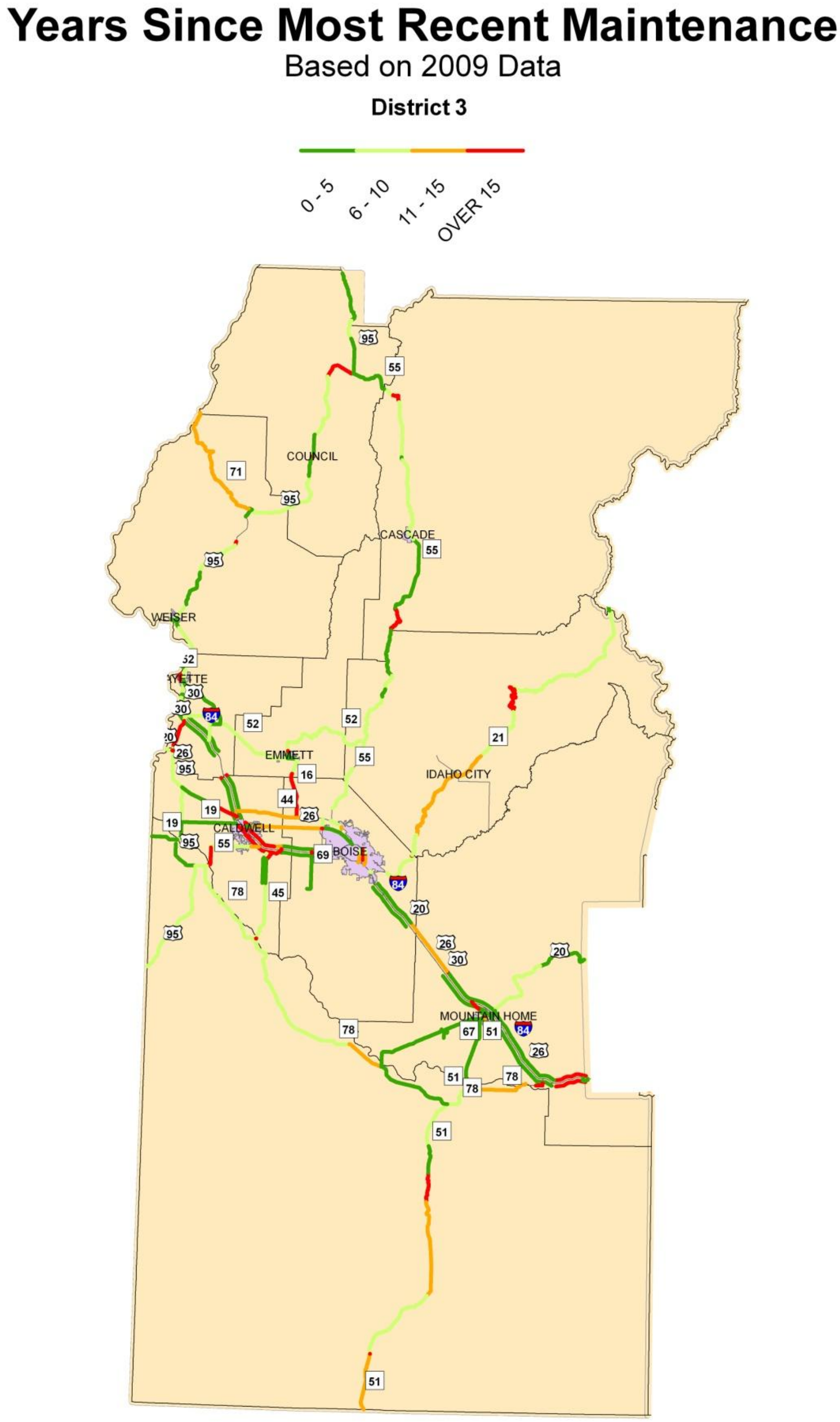


Figure 4.2.12: District 3- Pavement Rehabilitation History

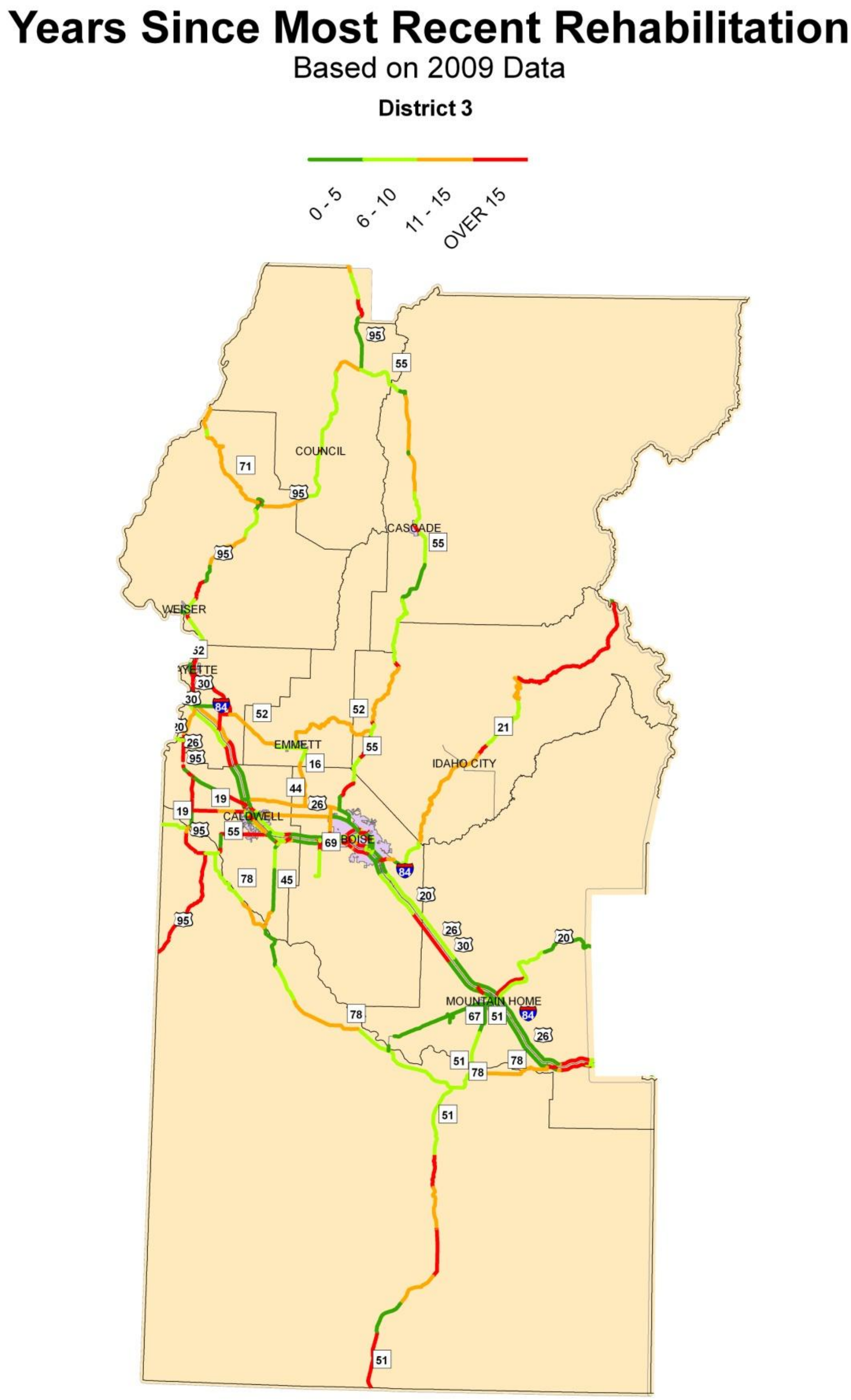


Figure 4.2.13: District 4- Pavement Condition Map

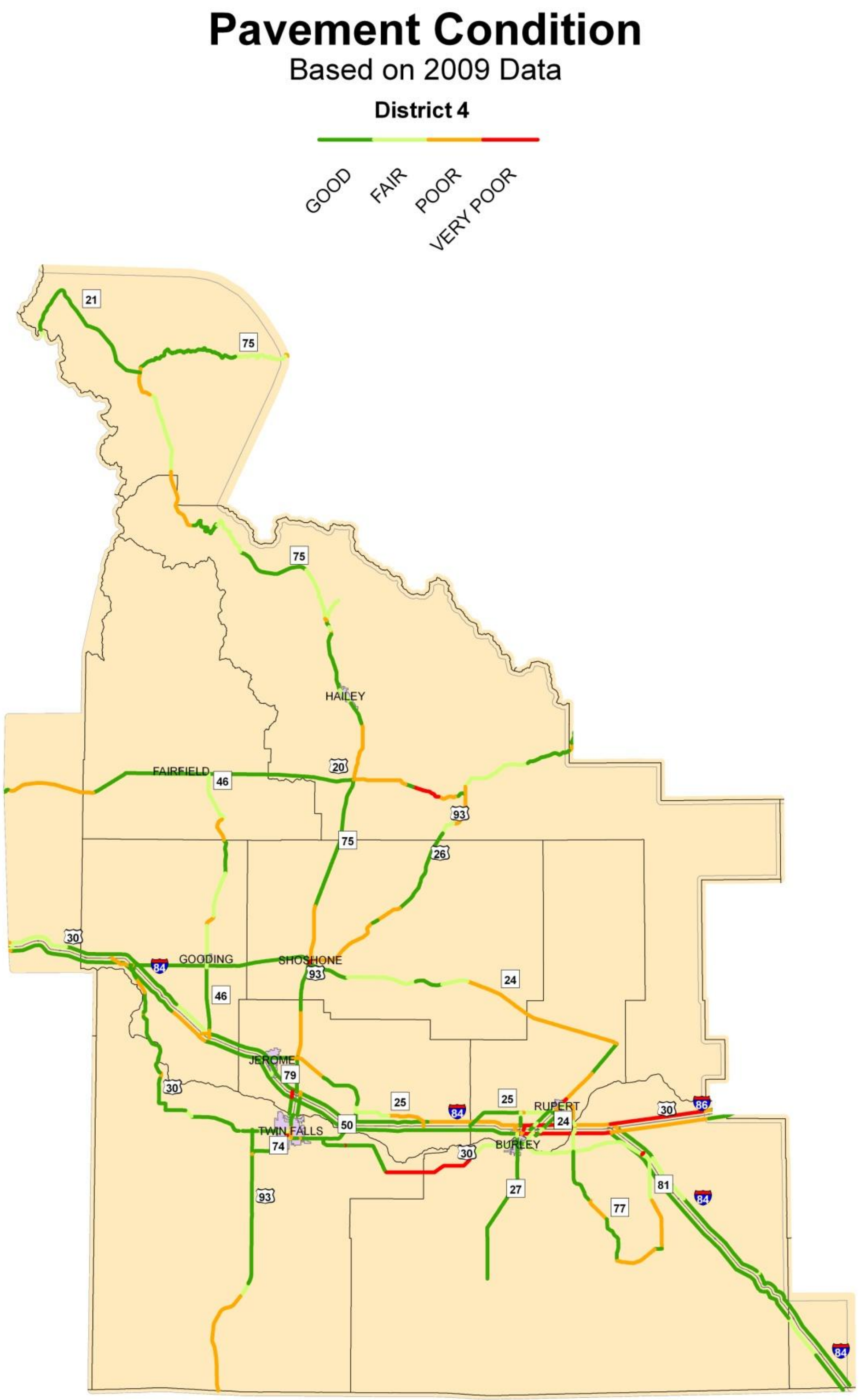


Figure 4.2.14: District 4- Pavement Maintenance History

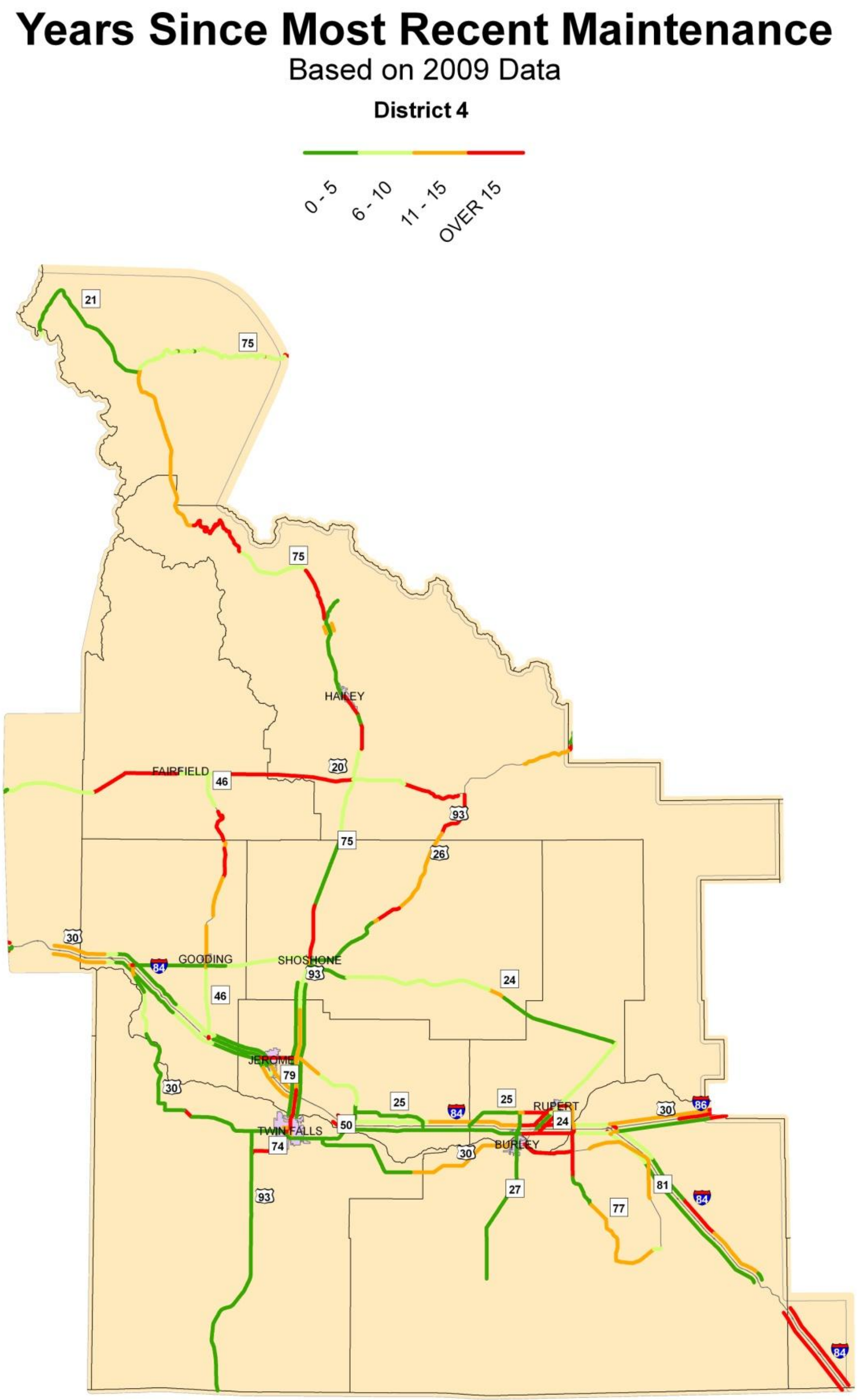


Figure 4.2.15: District 4- Pavement Rehabilitation History

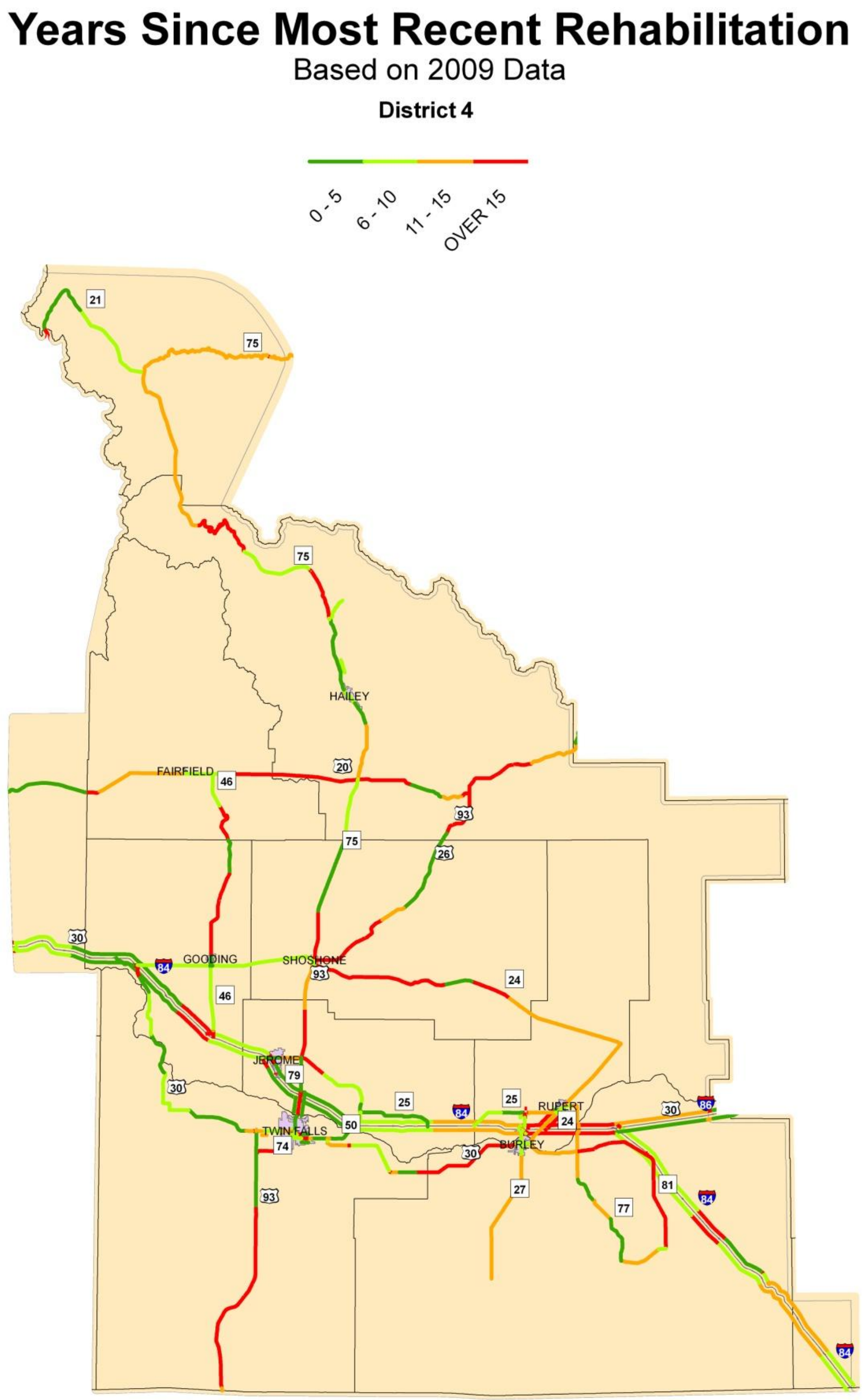


Figure 4.2.16: District 5- Pavement Condition Map

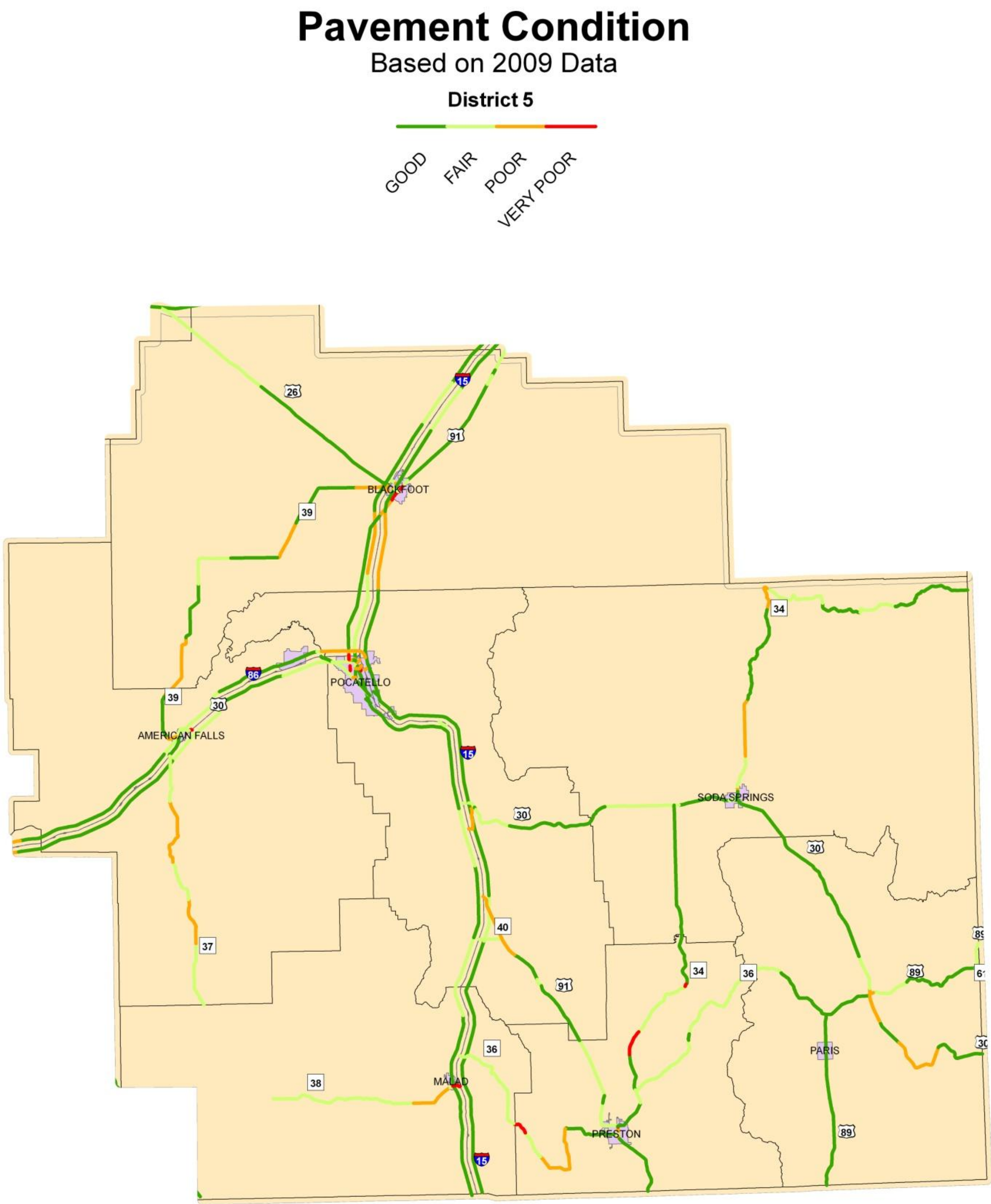


Figure 4.2.17: District 5- Pavement Maintenance History

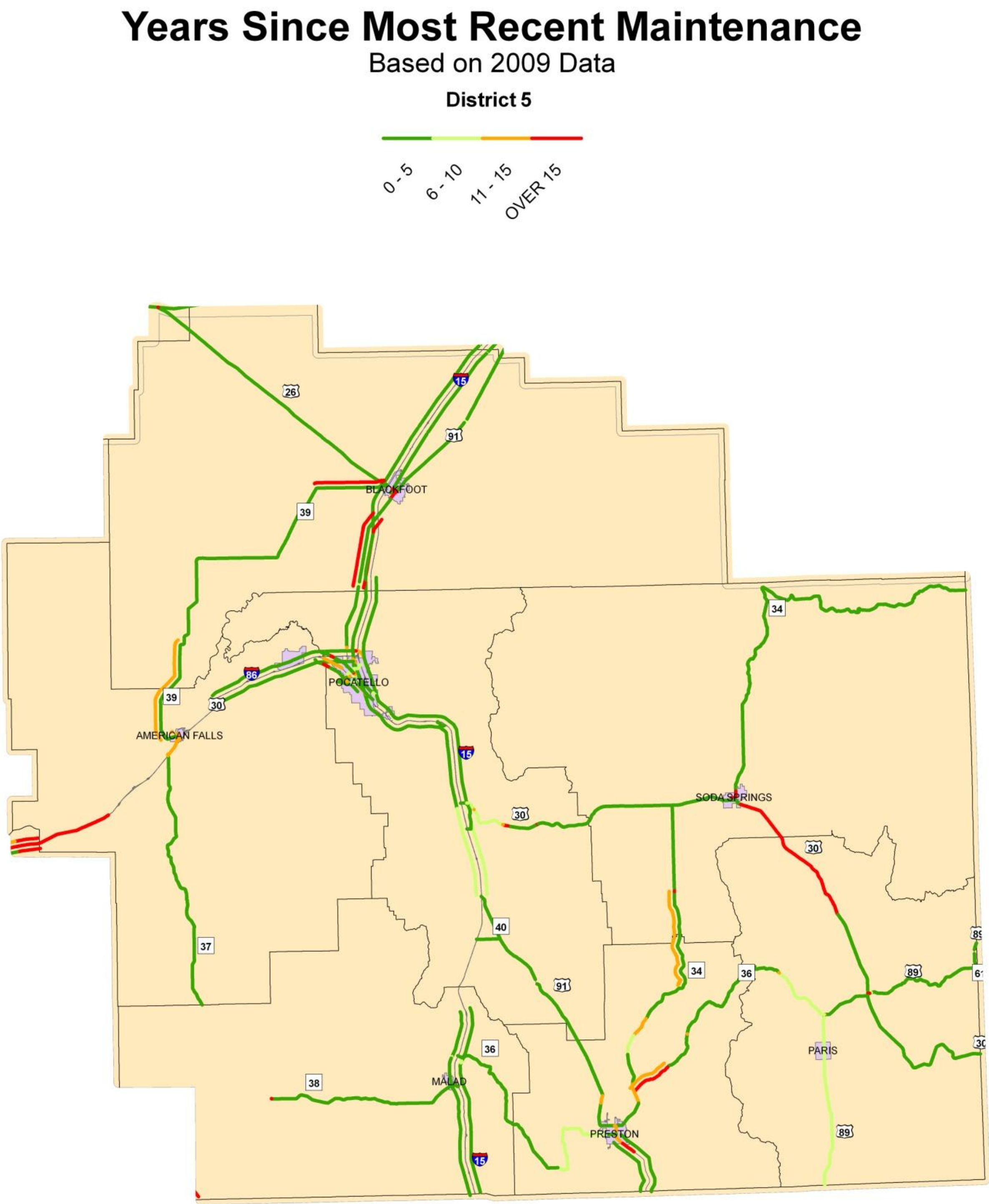


Figure 4.2.18: District 5- Pavement Rehabilitation History

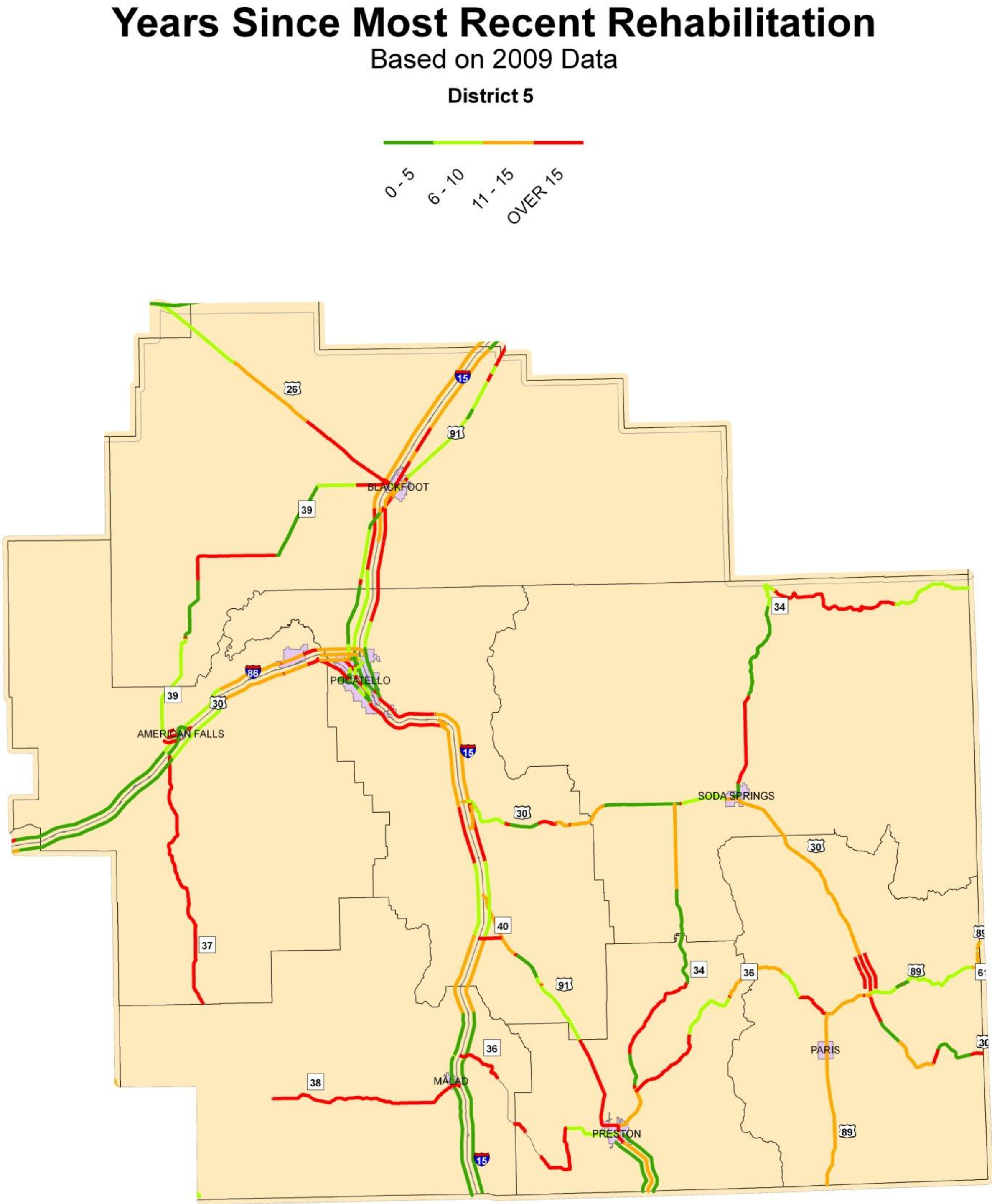


Figure 4.2.19: District 6- Pavement Condition Map

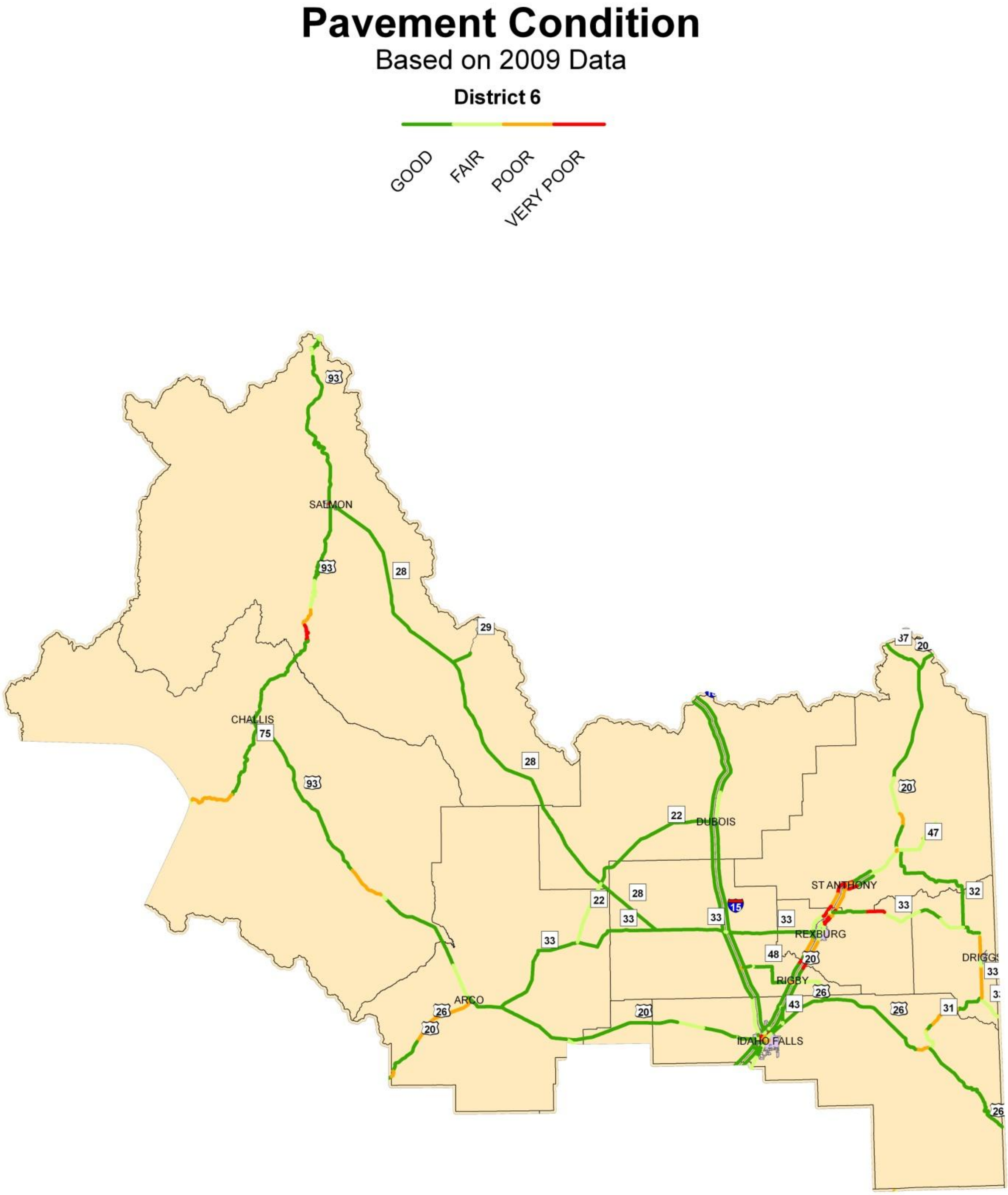


Figure 4.2.20: District 6- Pavement Maintenance History

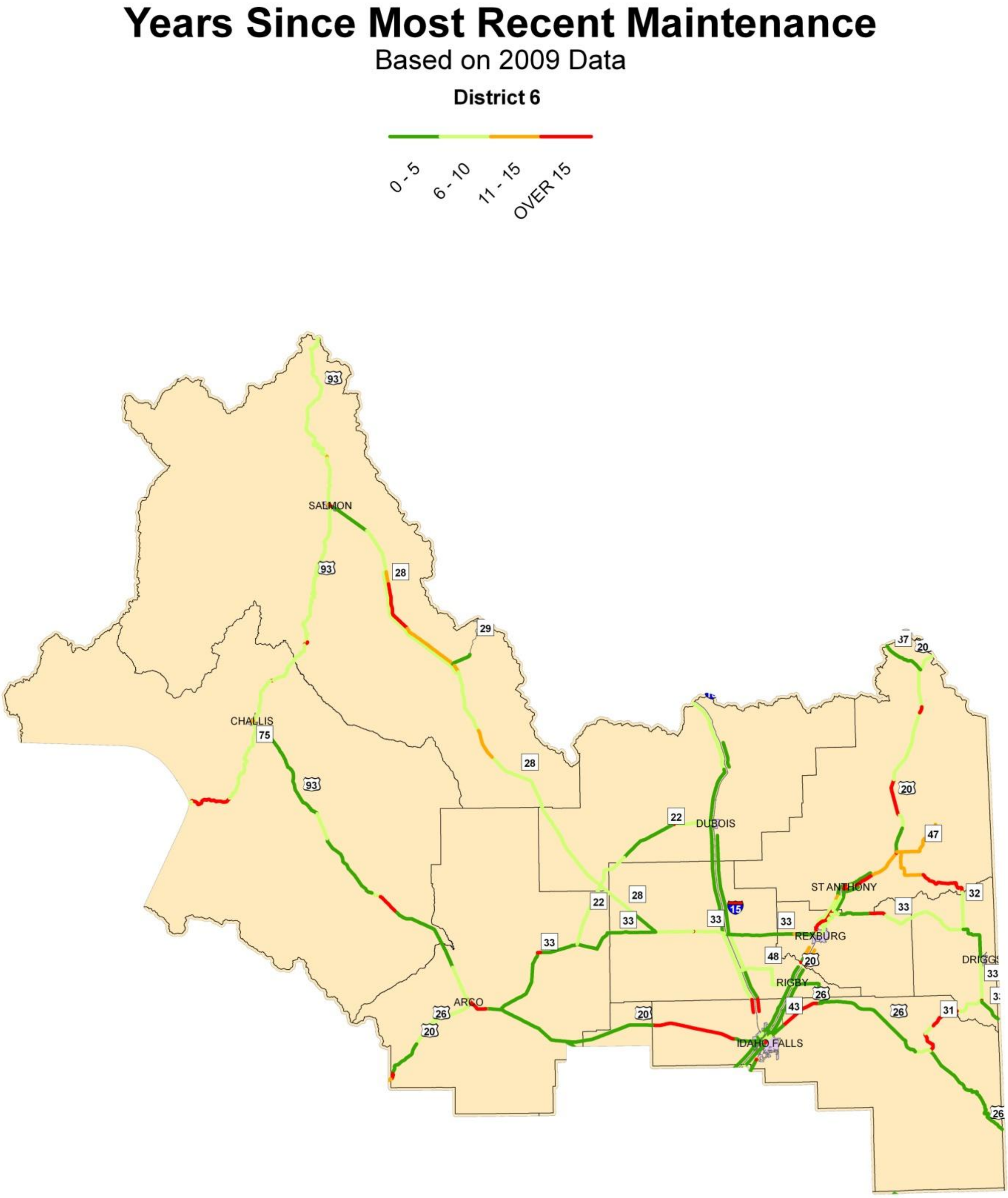
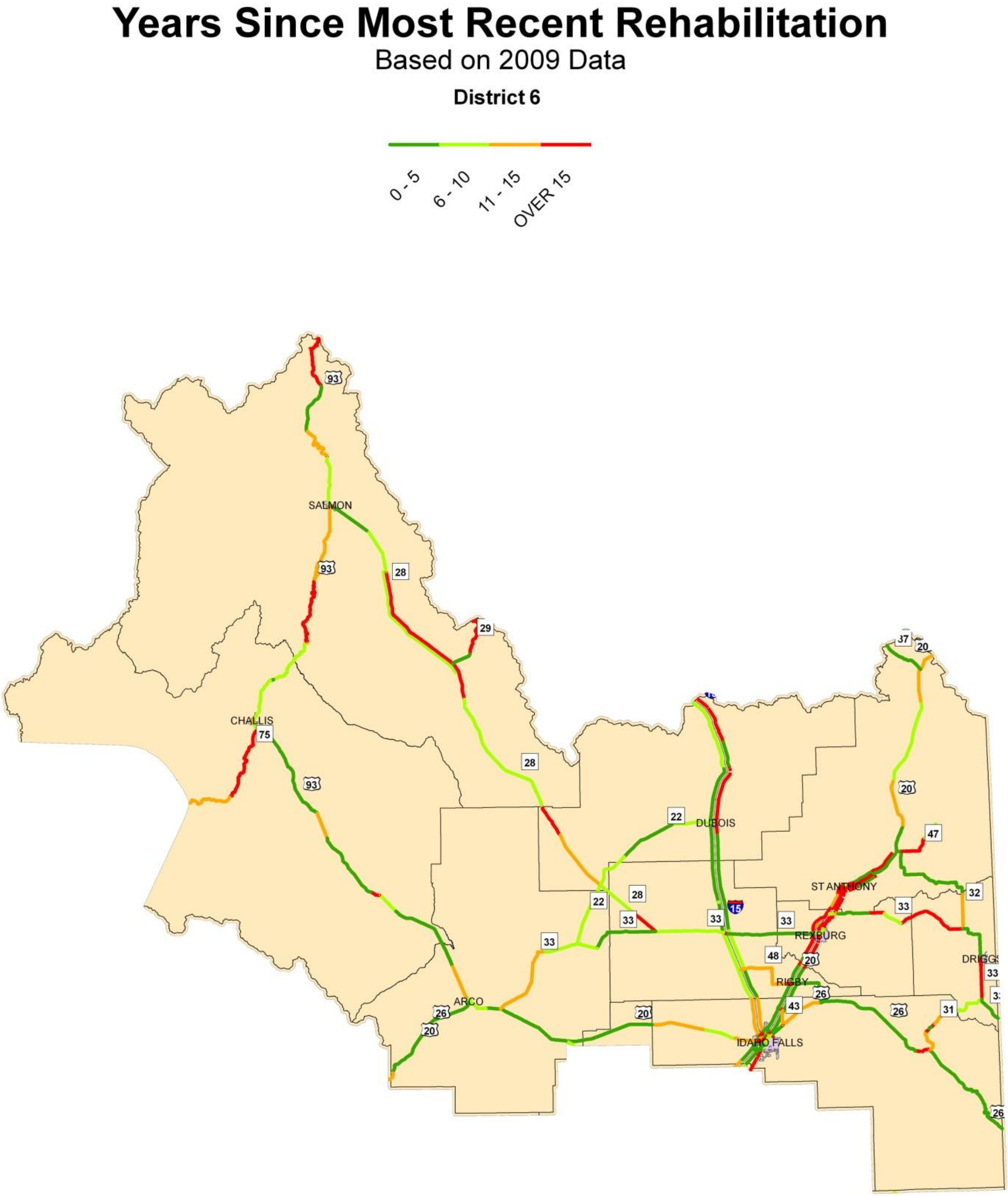


Figure 4.2.21: District 6- Pavement Rehabilitation History



5.0 Condition of State-Jurisdiction Bridges in Idaho

5.1 Idaho Bridge Section

ITD's Bridge Section develops plans, specifications, and estimates for bridges, sign structures, retaining walls, and other transportation structures. They also review shop drawings and falsework/formwork and construction project support. Bridge Section functions include review of consultant designs as well as providing assistance to the Local Highway Technical Assistance Council (LHTAC). Responsibilities also include development, implementation, and operation of the Bridge Management System to provide system wide condition analysis and reporting to support bridge programming decisions.

5.2 How Bridges are rated

In regards to the existing inventory of bridges, the Bridge Section performs biennial bridge inspections to insure safety for the traveling public in accordance with the National Bridge Inspection Standards (NBIS), develops repair recommendations for existing bridges, performs load rating, and determines load posting and closing of unsafe bridges. The ITD Bridge Section has published a manual describing their techniques, which can be viewed here:

http://itd.idaho.gov/bridge/inspection/BridgeInspectionCodingManual.pdf

The Bridge Section maintains all of the approximately 1700 bridges in Idaho, and each year prioritizes this list to accentuate the bridges that they recommend for annual programming related to rehabilitation and replacement funding. The bridge section additionally manages funding for bridge routine maintenance and repair, but that information is not included in this report. The information provided in the summary table below and in Appendix A only highlights bridges over 20' in length that are not in good condition that have been classified as either Functionally Obsolete (FO) or Structurally Deficient (SD). That list is summarized below.

TABLE 5.2.1: 2009 BRIDGES OVER 20 FEET IN LENGTH CLASSIFIED AS EITHER FUNCTIONALLY OBSOLETE OR STRUCTURALLY DEFICIENT

2009 BRIDGE LOCATIONS AND STATISTICS- SUMMARY			
DISTRICT	TOTAL NUMBER OF BRIDGES (ITD JURISDICTION)	NUMBER OF BRIDGES CLASSIFIED AS EITHER "FO" OR "SD"	PERCENTAGE OF TOTAL BRIDGES CLASSIFIED AS EITHER "FO" OR "SD"
1	206	65	31.5%
2	104	10	9.6%
3	291	54	18.6%
4	212	44	20.8%
5	242	62	25.6%
6	233	32	13.7%
TOTAL	**1288**	**267**	**20.7%**

In Appendix A, Idaho's bridge data is shown for the year 2009 by district. This table relates all bridges classified as either FO (Functionally Obsolete) or SD (Structurally Deficient.)

6.0 Railroad-Road Crossing Safety Improvements

6.1 Brief Railroad Description

There are 1,630 track miles of operational railroad lines in Idaho, including main lines, secondary main lines, branch lines, and short lines with 1,440 public railroad-road crossings and 16 pedestrian crossings. Idaho is served by two major long-haul railroads, Union Pacific Railroad and the BNSF Railway, which provide connections to points in the United States, Canada, and Mexico along with one regional railroad and six short line railroads acting as feeders to the major long-haul railroads. During a typical calendar year there are approximately 20 accidents involving a train and vehicles or pedestrians resulting in 3 fatalities and 5 injuries to people, and 20 incidents involving property damage at public railroad-road crossings.

Idaho does not own or operate any railroad lines. The role of the Idaho Transportation Department is to:

- Assist with the preservation of essential railroad lines through the Idaho Rural Economic Development and Integrated Freight Transportation Program.
- Prepare and periodically update a state railroad and intermodal plan.
- Maintain an inventory of all public railroad-road crossings (include grade separated and pedestrian) in accordance with the federal Rail Safety Improvement Act of 2008.
- Administer a federal and state funded public railroad-road crossing safety program in accordance with federal and state laws.

6.2 Rural Economic Development and Integrated Freight Transportation (REDIFiT) Program

The Idaho REDIFiT program was created in 2006 by Idaho Code Title 49 Chapter 29, with the Idaho Department of Agriculture as administrator of the program. An Interagency Working Group makes recommendations on criteria for analyzing and prioritizing freight railroad & intermodal projects. The Interagency Working Group is comprised of eight members, of which four are appointed by the Idaho Transportation Department, three appointed by the Idaho Department of Agriculture, and one from the Idaho Department of Commerce. Eligible projects include rehabilitating or improving railroad lines (which possibly could include railroad-road crossings if part of the project), purchasing or rehabilitating railroad equipment, constructing railroad loading facilities, and coordinating intermodal truck and railroad traffic. Funding of $5 million was appropriated for the program through revolving loans that are paid back into the program, and slightly over $2 million is available for revolving loans in 2010.

6.3 Railroad and Intermodal Plan

The Idaho Transportation Department, in accordance with Idaho Code Title 49 subsection 2905, prepares and periodically updates a state railroad and intermodal plan to identify, evaluate, and encourage the development and preservation of essential railroad and intermodal services. The state railroad and intermodal plan is based upon a number of criteria use to identify, describe, and evaluate:

- Idaho’s railroad system
- railroad commodity flows and traffic types
- railroad and intermodal issues affecting Idaho’s freight transportation system and regional and local economies
- priorities for determining potential worthwhile recipients to receive state or federal financial support depending on available funding

6.4 Inventory of Public Railroad-Road Crossings

The United States Department of Transportation and the American Association of Railroads established a voluntary national railroad-road crossing inventory in the early 1970s. States voluntarily inventoried public railroad-road crossings (including grade-separated, at-grade, and pedestrian) located within their state. Inventory data was recorded into a National Inventory File maintained by the Federal Railroad Administration. Inventory data included crossing location, train traffic volume and speeds, and road traffic control devices at the crossing. The federal Rail Safety Improvement Act of 2008 requires States to provide railroad-road crossing inventory data to the Federal Railroad Administration starting October 2010. The Idaho Transportation Department started voluntarily inventorying public railroad-road crossings back in the 1970s and therefore is well positioned to stay in compliance with the federal Rail Safety Improvement Act of 2008.

6.5 Public Railroad-Road Safety Program

The Idaho Transportation Department administers federal and state funded safety programs in accordance with federal and state laws. Approximately $1.4 million is annually appropriated by the Federal Highway Administration and $250,000 annually appropriated by the Idaho Legislature for safety improvements to public railroad-road crossings including public education and enforcement of railroad-road crossing laws. The Idaho Transportation Department selects safety improvement projects for individual public railroad-road crossings based upon a number of criteria including (placed in order of importance):

- accident history (number and severity of accidents)
- near-miss reporting by railroad owners
- train traffic volume and speeds
- vehicle traffic volume and speeds
- existing traffic control devices
- site conditions

The Idaho Transportation Department also funds public education and law enforcement projects promoting safety at railroad-road crossings.

7.0 Public Transportation in Idaho

7.1 Public Transportation at the Idaho Transportation Department

The Idaho Transportation Department's (ITD) Division of Public Transportation has a set of key performance measures. One of these measures is the number of passengers using public transportation or other mobility services where the riders are counted every time they board a vehicle. The purpose of the measure is to track the "effectiveness" of multi-modal services and choices. These modes would include motor buses servicing both urban and rural areas, motor buses operating over intercity routes, van pools, taxicabs, and demand response/paratransit services where passengers have to telephone ahead for door-to-door service.

The goal for the Division is increase the levels of ridership over time. Some of the means for doing so would include:

- Promoting cost reduction via providers sharing vehicles and facilities.
- Promoting increased ridership by recommending extension of services to evenings and weekends.
- Work with stakeholders to link provider transfer locations and times.
- Work with metropolitan planning organizations (MPOs) and other entities to update their transportation and mobility plans to take advantage of underutilized Federal funding opportunities in Idaho's small urban areas for…
    - Services designed to transport low income individuals to and from jobs, child care, or training.
    - Services designed to transport residents of urban, suburban and rural areas to suburban workplaces.
    - Programs designed to address the needs of the elderly or those with disabilities beyond the requirements of the Americans with Disabilities Act (ADA).

The number of passengers or riders is collected by the Division every month from those transportation providers who have agreed to provide their data either as the result of a federal or state grant agreement or are voluntarily submitting their information to improve the coordination of the state's transportation services and network.

Table 7.1.1 below shows the <u>forecast number of one-way passenger trips for 2009</u> within the State of Idaho. The data are shown by ITD District and Service Provider. The modes operated by each provider are also indicated.

Statewide, we are forecasting almost 3.8 million passenger trips on some mode of public transportation during 2009. It has been a strong year despite the fact that declining levels of employment have led to fewer commute-to-work trips. This was particularly acute early in the year in the winter destination resort areas such as Teton, Valley, and Blaine counties.

TABLE 7.1.1: LARGEST SERVICE PROVIDERS BY ITD DISTRICT

DISTRICT	LARGEST SERVICE PROVIDERS	NUMBER OF RIDERS
District 1	Coeur d'Alene Tribe (Citylink)	448,592
District 2	Regional Public Transportation (Valley Transit)	129,018
District 3	ACHD Commuteride	234,911
	Treasure Valley Transit	144,207
	Valley Regional Transit (ValleyRide)	1,421,507
District 4	College of Southern Idaho (Trans IV)	111,491
	Mountain Rides Transit Authority (MRTA)	404,826
District 5	Pocatello Regional Transit (PRT)	459,324
District 6	Targhee Regional Public Transportation (TRPTA)	134,745

7.2 Public Transportation Ridership

Below is Table 7.2.1, showing the ridership for Idaho, as of November 2009.

TABLE 7.2.1: IDAHO PUBLIC TRANSPORTATION AND MOBILITY SERVICES

IDAHO PUBLIC TRANSPORTATION & MOBILITY SERVICES			
(updated 11/13/09)			
MODE	IC = Intercity		
	MB = Motor Bus		**Forecast**
	DR = Demand Response (Telephone for Service)		**Number of One-Way**
	VP = Van Pool		**Passenger Trips (Boardings)**
	TX = Taxicab (Vouchers)		**for CY 2009**
STATEWIDE	**Idaho Grand Total**	**All Modes**	**3,773,427**
REGIONAL	Northwestern Stage Lines (Trailways)	IC	10,164
	Salt Lake Express	IC	70,659
	Regional Total	**Total**	**80,823**
DISTRICT 1	Coeur d'Alene Tribe (Citylink)	MB	448,592
	Kootenai Medical Center	DR	8,652
	North Idaho Community Express (NICE + KATS)	IC/DR	75,242
	Senior Hospitality Center	DR	2,031
	Special Mobility Services	DR	263
	TESH, Inc.	DR	161
	Valley Vista Care (Benewah Area Transit)	DR	6,686
	District 1 Total	**Total**	**541,625**
DISTRICT 2	COAST	DR	5,660
	Palouse Clearwater Enviro. Inst. (City of Moscow)	VP	2,171
	Regional Public Transportation (Valley Transit)	IC/MB/DR	129,018
	University of Idaho	MB	10,599
	District 2 Total	**Total**	**141,788**
DISTRICT 3	ACHD Commuteride	VP	234,911
	Adams County Health Center	DR	87
	Boise Basin Senior Center	DR	197
	Cambridge Senior Citizens, Inc.	DR	686
	Cascade Senior Center	DR	302
	CCOA-Aging Weatherization & Human Services	DR	7,883

	Eagle Senior Citizens	DR	2,513
	Garden City Senior Citizens	DR	569
	Gem County Senior Citizens	DR	4,562
	Homedale Senior Citizens	DR	215
	Horseshoe Bend Senior Center	DR	1,121
	Marsing Senior Center	DR	278
	Melba Valley Senior Center	DR	2,855
	Meridian Sebior Center	DR	3,021
	Mountain Home Senior Citizens	DR	563
	NCOA-Nampa Senior Center	DR	4,655
	New Meadows Senior Center	DR	761
	Parma Senior Citizens	DR	1,499
	Rimrock Senior Center	DR	681
	Roman Catholic Diocese of Boise (St. Mark's)	DR	198
	Star Senior Citizens, Inc.	DR	1,125
	Three Island Senior Center	DR	4,239
	Treasure Valley Transit (TVT)	MB/DR	144,207
	Valley Regional Transit (ValleyRide)	MB/DR	1,421,507
	WITCO-Western Idaho Training Company, Inc.	DR	3,672
	District 3 Total	**Total**	**1,842,299**
DISTRICT 4	Blaine County Senior Center (Senior Connections)	DR	4,841
	College of Southern Idaho (Trans IV)	DR	111,491
	Golden Years Senior Center	DR	183
	Gooding County Senior Center	DR	150
	Living Independent Network Corp. (LINC)	TX	8,789
	Minidoka Memorial Hospital	DR	2,357
	Mountain Rides Transit Authority (MRTA)	MB/DR/VP	404,826
	West End Senior Center	DR	968
	District 4 Total	**Total**	**533,603**
DISTRICT 5	ARC of Bannock County (Independence Home)	DR	386
	Bingham County Senior Center	DR	1,890
	Franklin County	DR	7,013
	Franklin County Medical Center	DR	1,073
	Oneida County Hospital	DR	534
	Pocatello Regional Transit (PRT)	MB/DR	459,324
	Southeastern Idaho Community Action Agency	DR	237
	District 5 Total	**Total**	**470,456**

DISTRICT 6	Clark County Senior Center	DR	1,319
	START Bus (Jackson, WY)	IC	14,457
	Targehee Regional Public Trans. Authority (TRPTA)	IC/MB/DR	134,745
	Valley Vista Care (Lost River Area Transit)	DR	12,315
	District 6 Total	**Total**	**162,836**

8.0 Budgets and Finances

Much of Idaho's transportation funding is tracked by the Statewide Transportation Improvement Program (STIP). The purpose of the STIP is to provide for a fiscally sound, set (1-5 years) capital improvement plan for the state's surface transportation program. The STIP is a fully integrated transportation planning process for transportation planning and transportation project selection. The STIP is updated annually and follows this planning cycle closely to ensure that projects are identified, selected, and prioritized.

ITD project selection operates under a federal fiscal year (October 1 — September 30) and the STIP must be approved by the Federal Highway Administrative (FHWA) and Federal Transit Administration (FTA) and the Environmental Protection Agency (EPA). This multi-year and multi-modal program identifies the transportation projects that have been through an inclusive and ongoing public involvement process. A more detailed explanation of the STIP can be found at:

http://itd.idaho.gov/planning/stip/index.htm

9.0 A view to the Future

From 2009 forward, the Planning Division anticipates a higher demand for budget efficiency, and pressure to streamline the current methodology for the pavement management system. In response, the URT has been rolled out for use in 2010, and we will continue to receive public comment and modify our tools to best serve those who request and use our information. Additional software tools are being developed including a main database for the storage of all pavement management system information, to improve the speed at which Planning Services can answer inquiries.

The ITD pavement management system is also working towards modification of the current rating system, which has been criticized as a "worst-first" approach. A worst-first approach has little to no maintenance projects performed (such as sealcoats, slurry seals, or plant mix seal projects), and instead, the pavements rated the worst in the state are the ones first programmed for available funding. While this approach is useful in targeting pavements that are in dire need of improvement, it does not take into account other factors that affect the facility's deterioration, such as traffic congestion or heavy vehicle usage. Thus, a rural road that has very low traffic volume and has poor pavement may come up first for a paving project, rather than an interstate that has fair pavement but is deteriorating much faster due to heavy traffic volume. While ITD's pavement management system has several features that are contrary to a worst-first approach, there are many future modifications that are desirable. Planning Services has proposed a new system, called the Greek Method, to more accurately define when roads are in need of repair.

9.1 The Greek Method Proposal

Currently, ITD uses a road's functional class to classify deficiency. If the functional class of a road is Interstate or Arterial, it becomes deficient when the cracking or roughness index is below 2.5. If the functional class of a road is a Collector, it becomes deficient when the cracking or roughness index is below 2.0.

This system of using functional class to determine deficiency has served the department for many years, but the system has several flaws. The system does not account for heavy vehicle traffic volume or speed limit of a road, both of which greatly affect the cracking, roughness and rutting in the pavement. The speed limit affects the tolerance of rutting, roughness and cracking by the user; these pavement deficiency types are more tolerable at low speeds. The daily truck traffic affects how quickly the roadbed will deteriorate; roadways with greater truck volume can be expected to deteriorate at a faster pace.

Drivers on a local road with a low speed limit or minimal truck traffic can tolerate a greater cracking, roughness and rutting deficiency than an interstate with a high speed limit or high truck traffic. Thus, Planning Services proposes a new set of deficiency measures that classifies roads into four types, based on speed limit and daily truck traffic. The proposed methodology is shown in Table 9.1.1.

TABLE 9.1.1: THE GREEK METHOD: THE FOUR ROAD CLASSIFICATIONS

ROAD TYPE	SPEED LIMIT	DAILY TRUCK TRAFFIC (DTT)
ALPHA	≥65 MPH	≥ 2000 TRUCKS PER DAY
BETA	≥55 MPH	≥ 500 TRUCKS PER DAY
GAMMA	≥35 MPH	≥ 100 TRUCKS PER DAY
DELTA	<35 MPH	< 100 TRUCKS PER DAY

Within the classification of these road types, more deficiency can be tolerated on the roads with lower speed limits and minimal truck volume. For example, there are state highways in Idaho that stay deficient at a rating of 2.4 because their functional class is listed as "arterial", even though they carry minimal truck traffic or have a low speed limit. For these roads, a sealcoat remedy would be adequate to smooth the pavement and seal the cracks; yet that remedy does not change the cracking index, so the road will continue to be listed as deficient until a deeper remedy is performed. Program planners may look at that road and recognize that the truck traffic or speed limit are low; and therefore, a deeper remedy is never programmed. The roadway stays listed as "deficient". This affects the overall deficiency rating for Idaho.

By changing how we rate roadways as deficient, the Greek Method offers a much more realistic view of our pavements and which ones should qualify for a remedy every year. The Greek Method suggests new cracking indices tolerances based on speed limit or daily truck traffic, as shown in Table 9.1.2.

TABLE 9.1.2: THE GREEK METHOD: CRACKING INDICES VS. DEFICIENCY

Deficiency	Alpha Roads: Tolerated Cracking Indices	Beta Roads: Tolerated Cracking Indices	Gamma Roads: Tolerated Cracking Indices	Delta Roads: Tolerated Cracking Indices
Good	5.0 – 4.0	5.0- 3.5	5.0-3.0	5.0- 2.5
Fair	3.9- 3.0	3.4- 2.5	2.9-2.0	2.4- 1.5
Poor	2.9- 2.5	2.4- 2.0	1.0- 1.5	1.4- 1.0
Very Poor	≤ 2.4	≤1.9	≤1.4	≤ 0.9

In Table 9.1.2 we can see that an Alpha Road would trigger the need for a remedy when the pavement reaches a cracking index less than 3.0, which is higher than the 2.5 that we currently use. This would allow the project programmers more advance notice that their interstate or highway is reaching the point where a preventative remedy will no longer be enough to fix the roadway.

On the other hand, a Delta Road would be allowed to deteriorate to below 1.0 before triggering a remedy, which is lower than the 2.0 we currently use. In this way, a roadway that has very little truck traffic will not trigger as deficient until the pavement is in a more realistic state of disrepair.

The implementation of the Greek Method would lead to a much more accurate deficiency rating for the department, and allow the project programmers to have a greater understanding of which pavements actually should qualify for remedies.

9.2 New Pavement and Maintenance Management System Software

In 2009, after several external reviews of the current maintenance and pavement management systems, a recommendation was made for ITD to purchase new pavement and maintenance management software. Most of 2009 was spent writing a Request for Proposal (RFP) for the software, determining the needs of the new software, interviewing applicants, and deciding on the software system that best fits our needs.

In 2010, Agile Assets presented ITD with software that best fit our RFP, and we have begun the process of discussing how this new system will adapt to our current system and business rules. It is expected to be fully implemented in 2011.

APPENDIX A: 2009 BRIDGES OVER 20 FEET IN LENGTH EITHER FUNCTIONALLY OBSOLETE (FO) OR STRUCTURALLY DEFICIENT (SD)

District	Bridge Key	Route	Milepost	Features	Year Built	NBI Rating
1	10025	US 2	25.418	UPRR AND BNRR(DOVER BR)	1937	SD
1	10150	SH 3	117.623	I 90 EB-WB;ROSE LAKE IC	1962	FO
1	10175	SH 5	0.423	ST.MARIES RR	1937	SD
1	14240	SH 41	0.135	BURLINGTON NORTHERN RR	1936	SD
1	14255	SH 41	38.71	BURLINGTON NORTHERN RR	1966	SD
1	14665	SH 53	14.063	UNION PACIFIC RAILROAD	1936	FO
1	16745	I 90 EBL	2.067	S 8505;PLEASANT VIEW IC	1976	FO
1	16750	I 90 WBL	2.068	S 8505;PLEASANT VIEW IC	1976	FO
1	16785	I 90 EBL	7.116	SH 41;SH 41 IC	1971	FO
1	16790	I 90 WBL	7.117	SH 41;SH 41 IC	1971	FO
1	16795	I 90 WBL	9.214	HUETTER ROAD GS	1971	FO
1	16800	I 90 EBL	9.215	HUETTER ROAD GS	1971	FO
1	16810	I 90 WBL	10.326	ATLAS ROAD GS	1971	FO
1	16855	I 90 EBL	13.551	SMA 7335;FIFTEENTH ST.IC	1960	FO
1	16860	I 90 WBL	13.552	SMA 7335;FIFTEENTH ST.IC	1960	FO
1	16885	I 90 EBL	14.775	SMA 7445;SHERMAN AVE.IC	1960	FO
1	16890	I 90 WBL	14.776	SMA 7445;SHERMAN AVE.IC	1960	FO
1	17070	I 90 EBL	45.224	S 5750;PINE CR;PINEHURST	1965	FO
1	17075	I 90 WBL	45.225	S 5750;PINE CR;PINEHURST	1965	FO
1	17080	I 90 WBL	45.494	PINEHURST ROAD GS	1965	SD
1	17085	I 90 EBL	45.495	PINEHURST ROAD GS	1965	SD
1	17120	I 90 EBL	50.308	HILL STREET IC	1964	FO
1	17125	I 90 WBL	50.309	HILL STREET IC	1964	FO
1	17130	I 90 EBL	50.544	DIVISION ST. IC	1964	FO
1	17135	I 90 WBL	50.545	DIVISION ST. IC	1964	FO
1	17140	I 90 EBL	51.956	ELIZABETH PARK ROAD GS	1969	FO
1	17145	I 90 WBL	51.957	ELIZABETH PARK ROAD GS	1969	FO
1	17160	I 90 EBL	54.175	STC 5756;BIG CREEK RD IC	1969	FO

District	Bridge Key	Route	Milepost	Features	Year Built	NBI Rating
1	17165	I 90 WBL	54.176	STC 5756;BIG CREEK RD IC	1969	FO
1	17195	I 90 EBL	57.025	I 90B;THIRD ST.IC	1969	FO
1	17200	I 90 WBL	57.026	I 90B;THIRD ST.IC	1969	FO
1	17220	I 90	59.541	STC 5766;SILVERTON IC	1978	FO
1	17247	I 90	61.236	I 90B;CANYON CR	1991	FO
1	17249	I 90 RAMP EB OFF	0.08	I90R.AB;I90B;S.F.CDA RVR	1991	FO
1	17265	I 90 EBL & WBL	64.263	GOLCONDA ACCESS ROAD IC	1963	SD
1	17290	I 90 EBL & WBL	68.088	I 90 EB OFF;W.MULLAN IC	1973	FO
1	17345	STC 5765;NEW ST	0.019	I 90 EB-WB;NEW ST. IC	1964	FO
1	17375	I 90B LOOP	0.234	S.FK.COEUR D'ALENE RIVER	1936	SD
1	17380	I 90B LOOP	0.456	S.FK.COEUR D'ALENE RIVER	1936	SD
1	17390	I 90B LOOP	0.949	I 90 EB-WB;E.MULLAN IC	1973	FO
1	17410	I 90RAMP WB ON	0.019	PINE CREEK;WB ON RAMP	1965	FO
1	17425	I 90RAMPS BC & CD	0.02	CANYON CREEK	1985	FO
1	17440	I 90RAMP WB 2WAY	0.076	S.FK.CD'A R.;ON OFF RAMP	1964	FO
1	18690	US 95	430.61	I 90 E-WB;LINCOLN WAY IC	1960	SD
1	18750	US 95	496.918	DEEP CR;BNRR;SIRR;NAPLES	1965	FO
1	18860	SH 3	71.984	ST MARIES R(MASHBURN BR)	1961	SD
1	18895	SH 3	84.647	ST JOE RIVER	1953	FO
1	18935	SH 97	96.373	I 90 EB-WB;WOLF LODGE IC	1960	FO
1	19045	SH 200	42.286	TRESTLE CREEK	1939	SD
1	19050	SH 200	44.8	BNRR;LAKE PEND OREILLE	1963	SD
1	19070	SH 200	54.695	LIGHTNING CREEK	1939	SD
1	19080	SH 200B	45.925	STRONG CREEK;E.HOPE BR.	1924	FO
1	20495	STC 5752	0.04	I 90 EB-WB;KINGSTON IC	1967	FO
1	21365	STC 7195;4TH ST.	1.63	I 90 EB-WB;4TH ST.IC	1985	FO
1	30620	POTLATCH HILL ROAD	100.908	SMA 7235	1960	FO
1	30625	DUDLEY ROAD	101.894	I 90 EB-WB;DUDLEY RD GS	1962	FO

District	Bridge Key	Route	Milepost	Features	Year Built	NBI Rating
1	30630	CATALDO MISSION RD	0.228	I 90;CATALDO MISSION IC	1964	FO
1	30870	HILLTOP ROAD	100.116	I 90 EB-WB;HILLTOP RD.GS	1967	FO
1	30875	SHIPLETT ROAD	100.009	I 90;SHIPLETT ROAD GS	1967	FO
1	30895	COUNTY ROAD	0.692	I 90;SMELTERVILLE IC	1964	FO
1	30925	NUCKOLS GULCH ROAD	0	I 90;NUCKOLS GULCH RD GS	1969	SD
1	30955	COMPRESSOR ROAD	0.01	I 90;COMPRESSOR IC	1963	FO
1	30960	MORNING MILL ROAD	0.01	I 90;MORNING MILL IC	1963	FO
1	30965	THIRD STREET	100.196	I 90 EB-WB;THIRD ST.GS	1973	FO
1	30975	WILLOW CREEK RD	1.563	I 90 EB-WB;WILLOW CR. GS	1973	FO
2	10375	US 12	1.94	CLEARWATER RIVER;BNRR	1951	FO
2	10515	US 12	169.681	CROOKED FK.CLEARWATER R.	1960	SD
2	10520	US 12RAMP NBL	312.219	US 95 SBL;LEWISTON IC	1977	FO
2	10560	SH 13B	0.703	M.F.CLWATER R.;E.KOOSKIA	1935	SD
2	18325	US 95	196.725	RACE CREEK	1932	FO
2	18465	US 95	304.089	NPRR;CLEARWATER RIVER	1962	SD
2	18470	US 95	304.494	US 12;US 12-95 IC	1964	FO
2	18520	US 95	352.855	FOUR MILE CREEK	1949	FO
2	18535	US 95	360.46	W.I.& M. RAILROAD	1924	SD
2	18545	US 95	361.541	DEEP CREEK	1939	FO
3	12155	SH 16	6.372	WILLOW CREEK	1959	SD
3	12170	SH 19	3.78	SUCKER CREEK	1963	SD
3	12220	US 20	22.062	I 84 EB-WB;PARMA IC	1964	FO
3	12270	US 20 ;I 84B	49.943	BOISE RIVER(BROADWAY BR)	1956	SD
3	12290	US 20	52.722	I 84 EB-WB;BROADWAY IC	1969	SD
3	13500	I 84B	59.168	INDIAN CREEK	1951	FO
3	13530	US 30	0.08	I 184B WB-EB;FAIRVIEW RP	1968	FO

District	Bridge Key	Route	Milepost	Features	Year Built	NBI Rating
3	13785	I 84B	2.422	UPRR;E.HAMMETT RR OP	1931	SD
3	14300	SH 45	10.428	SNAKE R.(WALTERS FERRY)	1972	SD
3	14560	SH 51	76.919	SNAKE RIVER	1958	SD
3	14565	SH 52	0	SNAKE RIVER;PAYETTE BR.	1953	FO
3	14650	SH 52	31.844	PAYETTE RIVER;EMMETT BR.	1971	SD
3	14670	SH 55	2.605	SNAKE RIVER(MARSING BR)	1955	SD
3	14705	SH 55	12.558	DEER FLAT CANAL	1973	FO
3	14760	SH 55	63.647	PAYETTE RIVER	1934	SD
3	14790	SH 55	78.762	S.FK.PAYETTE RIVER	1955	SD
3	14825	SH 55	113.809	N.FK.PAYETTE RIVER	1933	SD
3	15155	SH 69	67.939	I 84;SH 69 MERIDIAN IC	1965	SD
3	15325	I 84 EBL	2.125	WHITLEY ROAD GS	1960	FO
3	15335	I 84 WBL	2.124	WHITLEY ROAD GS	1960	FO
3	15385	I 84 EBL	14.678	SE 9TH AVENUE GS	1961	FO
3	15390	I 84 WBL	14.679	SE 9TH AVENUE GS	1961	FO
3	15535	I 84 EBL	29.766	SMA 7923;LINDEN ROAD GS	1966	FO
3	15540	I 84 WBL	29.767	SMA 7923;LINDEN ROAD GS	1966	FO
3	15580	I 84 WBL	35.222	UPRR;EAST LATERAL CANAL	1966	SD
3	15605	I 84 EBL	36.442	UPRR;EAST NAMPA OP	1966	SD
3	15620	I 84 EBL	37.935	I 84B;GARRITY BLVD IC	1965	FO
3	15625	I 84 WBL	37.936	I 84B; GARRITY BLVD IC	1965	FO
3	15750	I 84 EBL	54.805	UPRR;GOWEN SPUR	1969	SD
3	15755	I 84 WBL	54.806	UPRR;GOWEN SPUR	1969	SD
3	15770	I 84 EBL	56.921	SH 21;GOWEN RD-SH 21 IC	1969	FO
3	15775	I 84 WBL	56.922	SH 21;GOWEN RD-SH 21 IC	1969	FO
3	15785	I 84 EBL	63.508	KUNA RD;BLACKS CREEK IC	1963	FO
3	16595	I 84 OFF RAMP	0.15	BOISE RIVER;RAMP AB BR	1980	FO
3	18075	US 95	45.205	US 20;UPRR;US 20-95 IC	1964	SD

District	Bridge Key	Route	Milepost	Features	Year Built	NBI Rating
3	18105	US 95 NBL	66.179	PAYETTE RIVER	1927	SD
3	18110	US 95 SBL	66.18	PAYETTE RIVER	1968	SD
3	18120	US 95	81.014	ROBERTSON SLOUGH	1927	FO
3	18125	US 95	81.525	WEISER RIVER	1935	SD
3	18265	US 95	174.112	LITTLE SALMON RIVER	1932	FO
3	18270	US 95	176.554	LITTLE SALMON RIVER	1957	SD
3	18996	I 184 EBL CONNECTR	3.56	US 20-26;BOISE RV SLOUGH	1991	FO
3	18997	I 184 WBL CONNECTR	3.561	US 20-26;BOISE RV SLOUGH	1991	FO
3	19850	SH 67	0.793	SNAKE RIVER;GRANDVIEW BR	1970	SD
3	21285	SMA 7113;CURTIS RD	1.858	I 184B;CURTIS RD IC	1968	FO
3	21325	STP7343;ORCHARD ST	3.08	I 184B;ORCHARD ST GS	1968	FO
3	21452	STP 7343;MAIN ST.	77.677	US 20-26 CHINDEN BLVD	1991	FO
3	21675	SMA7553;FEDERAL WY	52.078	US 20 26;FEDERAL WAY IC	1970	FO
3	21820	STP 7983;USTICK RD	3.339	I 84 EB-WB;USTICK RD GS	1966	FO
3	21825	STC 8223;KARCHER R	0.595	I 84;KARCHER ROAD GS	1966	FO
3	21885	STC 8433;11TH AVE.	1.06	I 84;ELEVENTH AVENUE GS	1965	FO
3	27880	CLEFT ROAD	100.107	I 84 EB-WB;CLEFT RD GS	1959	FO
3	28695	COUNTY ROAD	0.028	US 95 SPUR; WEISER IC	1960	FO
3	28720	W. COMMERCIAL ST.	100.094	US 95 SPUR;COMMERCIAL UP	1960	FO
4	10590	I 86 WBL	0	I 84 WB-EB;SALT LAKE IC	1960	FO
4	10600	I 86 EBL	0.01	I 84 WB-EB;SALT LAKE IC	1960	FO
4	10615	I 86 EBL	6.43	FARM RD;MACHINE PASS GS	1960	FO
4	10620	I 86 WBL	6.44	FARM RD;MACHINE PASS GS	1960	FO
4	13050	SH 25 ;RIDGEWAY RD	30.462	I 84;RIDGEWAY ROAD IC	1966	FO
4	13090	SH 25	57.975	I 84;RUPERT-DECLO IC	1960	FO
4	13645	US 30	230.159	TWIN FALLS MAIN CANAL	1933	SD

District	Bridge Key	Route	Milepost	Features	Year Built	NBI Rating
4	13650	US 30	231.92	UPRR;BICKEL OVERPASS	1936	SD
4	13655	US 30	236.46	TWIN FALLS MAIN CANAL	1936	SD
4	16035	I 84 EBL	145.987	FRONTAGE RD;GS NO.3	1977	FO
4	16040	I 84 WBL	145.988	FRONTAGE RD;GS NO.3	1977	FO
4	16065	I 84	151.58	CO.RD.;250 NORTH RD.GS	1972	FO
4	16170	I 84 EBL	170.04	400 SOUTH RD GS 2	1965	FO
4	16175	I 84 WBL	170.043	400 SOUTH RD GS 2	1965	FO
4	16190	I 84 EBL	176.63	WINDY GLENN RD GS	1966	FO
4	16195	I 84 WBL	176.631	WINDY GLENN RD GS	1966	FO
4	16210	I 84 EBL	184.198	BODENHEIMER ROAD GS	1966	FO
4	16215	I 84 WBL	184.2	BODENHEIMER ROAD GS	1966	FO
4	16235	I 84 EBL	188.29	STC2767;VALLEY SCHOOL GS	1966	FO
4	16240	I 84 WBL	188.3	STC2767;VALLEY SCHOOL GS	1966	FO
4	16300	I 84 EBL	197.6	CO.RD.;CRESTVIEW RD.GS	1966	FO
4	16305	I 84 WBL	197.602	CO.RD.;CRESTVIEW RD.GS	1966	FO
4	16310	I 84 EBL	200.526	SH 25;KASOTA RD.IC	1966	FO
4	16315	I 84 WBL	200.527	SH 25;KASOTA RD.IC	1966	FO
4	16320	I 84 EBL	202.664	SHODDE ROAD GS	1966	FO
4	16325	I 84 WBL	202.67	SHODDE ROAD GS	1966	FO
4	16360	I 84 EBL	210.527	I 84B; HEYBURN IC	1961	FO
4	16365	I 84 WBL	210.528	I 84B; HEYBURN IC	1961	FO
4	16390	I 84 EBL	215.94	SNAKE RIVER	1960	SD
4	16395	I 84 WBL	215.944	SNAKE RIVER	1960	SD
4	16405	I 84 EBL	217.378	SOUTHSIDE CANAL	1960	FO
4	16410	I 84 WBL	217.379	SOUTHSIDE CANAL	1960	FO
4	16435	I 84	224.66	CO.RD.;HORSE BUTTE GS	1963	FO
4	16470	I 84	247.887	CO.RD.;GS NO.1	1968	FO
4	16475	I 84	250.304	CO.RD.;GS NO.2	1968	FO

District	Bridge Key	Route	Milepost	Features	Year Built	NBI Rating
4	16500	I 84 EBL	257.948	CO.RD.;GS NO.3	1968	FO
4	16505	I 84 WBL	257.949	CO.RD.;GS NO.3	1968	FO
4	16510	I 84 EBL	260.624	CO.RD.;GS NO.4	1968	FO
4	16515	I 84 WBL	260.625	CO.RD.;GS NO.4	1968	FO
4	16625	SH 81B SPUR	0.263	I 84;MALTA-YALE RD IC	1963	FO
4	17620	SH 75	75.519	MILNER GOODING CANAL	1931	FO
4	17625	SH 75	77.038	BIG WOOD RIVER	1931	SD
4	17630	SH 75	80.335	NORTH GOODING CANAL	1930	SD
4	25315	500 WEST ROAD	100.44	I 84;500 WEST RD GS	1961	SD
5	10665	I 86 WBL & EBL	18.84	COUNTY ROAD GS	1979	FO
5	10790	I 86 EBL	41.323	KOPP ROAD GS	1959	FO
5	10795	I 86 WBL	41.324	KOPP ROAD GS	1959	FO
5	10800	I 86 EBL	42.498	LEYSHON ROAD GS	1959	FO
5	10805	I 86 WBL	42.499	LEYSHON ROAD GS	1959	FO
5	10810	I 86 EBL	44.316	CO.RD.;SEAGULL BAY IC	1963	FO
5	10815	I 86 WBL	44.317	CO.RD.;SEAGULL BAY IC	1963	FO
5	10885	I 86 EBL	60.576	SMA 7031;HAWTHORNE RD.GS	1968	FO
5	10890	I 86 WBL	60.577	SMA 7031;HAWTHORNE RD.GS	1968	FO
5	10925	I 86B AM FALLS IC	4.504	I 86 EB-WB;AM.FALLS IC	1959	SD
5	10980	I 15 NBL & SBL	8.598	FOUR MILE CREEK RD GS	1975	FO
5	11050	I 15 NBL	26.773	MARSH VALLEY ROAD	1971	FO
5	11055	I 15 SBL	26.774	MARSH VALLEY ROAD	1971	FO
5	11060	I 15 NBL	29.427	WOODLAND RD.GS	1971	FO
5	11065	I 15 SBL	29.428	WOODLAND RD.GS	1971	FO
5	11160	I 15 SBL	56.636	I 15B;S.INKOM IC	1962	FO
5	11175	I 15 NBL	57.172	MAIN STREET GS	1962	FO

District	Bridge Key	Route	Milepost	Features	Year Built	NBI Rating
5	11180	I 15 SBL	57.173	MAIN STREET GS	1962	FO
5	11185	I 15 NBL	57.685	I 15B;W.INKOM IC	1962	FO
5	11190	I 15 SBL	57.686	I 15B;W.INKOM IC	1962	FO
5	11195	I 15 NBL	61.782	BLACKROCK RD.GS	1965	FO
5	11200	I 15 SBL	61.783	BLACKROCK RD.GS	1965	FO
5	11205	I 15 NBL	63.023	STC 1762;PORTNEUF RD IC	1963	FO
5	11210	I 15 SBL	63.024	STC 1762;PORTNEUF RD IC	1963	FO
5	11225	I 15 NBL	66.781	I 15B;S.POCATELLO IC	1965	FO
5	11230	I 15 SBL	66.782	I 15B;S.POCATELLO IC	1965	FO
5	11235	I 15 NBL	67.678	BARTON RD.GS	1964	FO
5	11240	I 15 SBL	67.679	BARTON RD.GS	1964	FO
5	11245	I 15 NBL	68.763	SMA 7461;E. TERRY ST	1964	FO
5	11250	I 15 SBL	68.764	SMA 7461;E. TERRY ST	1964	FO
5	11280	I 15 SBL	72.01	I 86 WB RAMP	1962	SD
5	11285	I 15 SBL	72.15	I 86 EB RAMP	1962	SD
5	11475	I 15 NBL	92.51	US 26;WEST BLACKFOOT IC	1962	FO
5	11480	I 15 SBL	92.511	US 26;WEST BLACKFOOT IC	1962	FO
5	12005	I 15B	0.033	I 15 SB-NB;MCCAMMON IC	1964	FO
5	12025	I 15B	4.446	I 15;LAVA HOT SPRINGS IC	1963	SD
5	13215	US 26	303.384	DANSKIN CANAL	1954	FO
5	13690	US 30 ;W. POKY IC	330.851	I 86;WEST POCATELLO IC	1968	FO
5	13705	US 30	365.276	UPRR & CANAL;TOPAZ OP	1949	SD
5	14100	SH 36	130.91	BEAR RIVER;W.PRESTON BR	1954	FO
5	14140	I 86B	100.215	UPRR;AMERICAN FALLS OP	1990	FO
5	16520	I 84 EBL	262.494	JUNIPER ROAD IC	1968	FO
5	16525	I 84 WBL	262.495	JUNIPER ROAD IC	1968	FO
5	16530	I 84 WBL	266.12	JUNIPER ROAD GS 5	1968	FO
5	16535	I 84 EBL	266.121	JUNIPER ROAD GS 5	1968	FO

District	Bridge Key	Route	Milepost	Features	Year Built	NBI Rating
5	16560	I 84 EBL	270.64	COUNTY ROAD GS 6	1968	FO
5	16565	I 84 WBL	270.65	COUNTY ROAD GS 6	1968	FO
5	16685	US 89	19.837	OVID CREEK	1934	FO
5	16690	US 89	20.404	OVID CREEK	1934	SD
5	17490	US 91 ;QUINN RD.	79.161	UPRR;QUINN ROAD OP	1986	FO
5	17555	US 91	120.266	SNAKE RIVER VALLEY CANAL	1941	FO
5	21215	STP 7041;CHUBBUCK	2.333	I 15 SB;CHUBBUCK RD.GS	1962	FO
5	21220	STP 7041;CHUBBUCK	2.407	I 15 NB;CHUBBUCK RD.GS	1962	FO
5	22151	MONTE VISTA AVENUE	100.648	I 15;MONTE VISTA AVE GS	1997	FO
5	22155	2-1/2 MILE ROAD	100.94	I 15;2-1/2 MILE ROAD GS	1959	FO
5	22160	ROSS FORK RD	1.507	I 15 NB-SB;FORT HALL IC	1960	FO
5	23095	COUNTY ROAD	106.293	I 15;TRUCHOT ROAD GS	1959	FO
5	23105	WILLIE RD	100.489	I 15;WILLIE ROAD GS	1959	FO
5	23125	COUNTY ROAD	16.879	I 15;W.PORTERVILLE RD.GS	1962	FO
5	23130	ROSE ROAD	4.742	I 15;ROSE ROAD I.C.	1962	FO
5	23170	BASELINE ROAD	101.036	I 15 NB-SB;BASELINE GS	1962	FO
5	23180	COUNTY LINE ROAD	100.425	I 15 NB-SB;CO.LINE RD.GS	1962	FO
6	11720	I 15 NBL	118.532	I 15B;BROADWAY ST.IC	1962	FO
6	11725	I 15 SBL	118.533	I 15B;BROADWAY ST.IC	1962	FO
6	11800	I 15 NBL	127.515	STC 6731;BASSETT RD.IC	1962	FO
6	11805	I 15 SBL	127.516	STC 6731;BASSETT RD.IC	1962	FO
6	11940	I 15	178.59	FRONTAGE ROAD	1965	FO
6	11945	I 15 NBL	180.379	SPENCER ROAD IC	1969	FO
6	11950	I 15 SBL	180.38	SPENCER ROAD IC	1969	FO
6	11965	I 15 NBL	184.398	CO.RD.;STODDARD CREEK IC	1969	FO
6	11970	I 15 SBL	184.399	CO.RD.;STODDARD CREEK IC	1969	FO

District	Bridge Key	Route	Milepost	Features	Year Built	NBI Rating
6	11975	I 15	187.119	FRONTAGE ROAD GS	1969	FO
6	11985	I 15 NBL	189.846	HUMPHREY ROAD IC	1966	FO
6	11986	I 15 SBL	189.847	HUMPHREY ROAD IC	1991	FO
6	12310	US 20	307.565	I 15 NB-SB;JOHNS HOLE IC	1992	FO
6	12320	US 20 NBL & SBL	307.696	SMA 7076;LINDSAY BLVD.IC	1966	FO
6	12360	US 20 WBL	309.869	US 20B;LEWISVILLE RD IC	1987	FO
6	12740	US 20B	348.114	HENRY'S FK. SNAKE RIVER	1932	SD
6	12990	SH 22	68.507	I 15 NB-SB;DUBOIS IC	1965	FO
6	13202	US 26	270.84	INEL CENTRAL CONNECTOR	1993	FO
6	13830	SH 31	0.052	RAINY CREEK	1936	SD
6	13895	SH 33	335.4	S.FK.TETON RIVER	1971	FO
6	13970	SH 33	151.062	TRAIL CREEK	1959	SD
6	13980	SH 33	153.224	MOOSE CREEK	1959	SD
6	14435	SH 48	0.166	MARKET LAKE CANAL	1968	SD
6	16645	SH 33	73.436	HENRY'S FK.SNAKE RIVER	1977	SD
6	17785	SH 75	213.47	SALMON RIVER;SLATE CR.BR	1934	SD
6	17890	US 93	309.03	SALMON RIVER;CARMEN BR.	1970	SD
6	21555	SMA 7406;PANCHERI	3.79	I 15;PANCHERI DR GS	1962	SD
6	31385	OSGOOD ROAD	105.72	I 15 NB-SB;OSGOOD RD.GS	1962	FO
6	31395	SHATTOCK BUTTE RD.	114.296	I 15;SHATTOCK BUTTE GS	1962	FO
6	32615	MCCARTY ROAD	106.17	I 15 NB-SB;MCCARTY RD.GS	1968	FO
6	32630	W. HAMER ROAD	109.997	I 15 NB-SB;W.HAMER RD.GS	1960	FO
6	32635	HAMER ROAD	7.572	I 15 NB-SB;HAMER ROAD IC	1960	FO