

Rehabilitation of Jointed Portland Cement Concrete Pavements: SPS-6—Initial Evaluation and Analysis

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FOREWORD

The Long-Term Pavement Performance (LTPP) program Specific Pavement Studies 6 (SPS-6) experiment, “Rehabilitation of Jointed Portland Cement Concrete Pavements,” is one of the key experiments of the LTPP program. The main objective of this experiment is to determine the effects of specific rehabilitation design features that directly influence the long-term effectiveness of rehabilitated jointed plain concrete pavements (JPCP) and jointed reinforced concrete pavements (JRCP). This report documents the first comprehensive review and evaluation of the SPS-6 experiment. The evaluation concludes that many important and useful findings and results can be obtained from the SPS-6 experiment despite several limitations resulting from not constructing a few of the test sites and the few construction deviations that occurred. In addition, some materials and traffic data are missing from some sites or sections, which are important to achieving the objectives of the experiment. These data are now being sought from the SPS-6 sites.

Some interesting and important early trends have already been identified that will be useful to the rehabilitation of JPCP, even though the sections were only a maximum of 10 years old at the time of this study. As time and traffic loadings accumulate on the SPS-6 sites, much more valuable performance data will be obtained. For example, the direct comparison of the performance of the designs with and without fractured concrete is of intense interest to State highway agencies. Future analyses of the performance data from the SPS-6 experiment will lead to significant new and important findings on the value of: minimum and maximum preparation with and without an asphalt concrete (AC) overlay; sawing and sealing of AC joints; fracturing of the concrete pavement prior to an AC overlay; existing concrete pavement conditions prior to rehabilitation; traffic level; and climate. These findings will lead to more reliable and cost-effective rehabilitation designs for JPCP.

This report will be of interest to highway agency engineers involved in the design, construction, and management of the pavements, and also to future researchers who will analyze the performance of the SPS-6 sections.

Steve Chase, Ph.D.
Acting Director, Office of Infrastructure
Research and Development

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16. Abstract <p>The Specific Pavement Studies 6 (SPS-6) experiment, "Rehabilitation of Jointed Portland Cement Concrete Pavements," was designed as a controlled field experiment that focuses on the study of specific rehabilitation design features of jointed plain concrete pavements (JPCP) and jointed reinforced concrete pavements (JRCP). This experiment examines the effects of climatic regions (wet-freeze, wet-no freeze, dry-freeze, or dry-no freeze), type of concrete pavement (plain or reinforced), condition of existing pavement prior to rehabilitation (fair or poor), and traffic rate (as a covariant), incorporating the different methods of rehabilitation with and without asphalt concrete (AC) overlays. This report documents the first comprehensive review and evaluation of the SPS-6 experiment. Fourteen SPS-6 projects have been constructed. At each site, there are eight core sections plus various numbers of supplemental sections.</p> <p>Data availability and completeness for the SPS-6 experiment are good overall. In general, most of the data are at the releasable level E status. However, some data, such as traffic, climatic, and materials data, are not yet available in the Information Management System (IMS) database. These deficiencies need to be addressed before a comprehensive analysis of the SPS-6 experiment is conducted. The required experimental design factors were compared with the actual constructed values. This includes both the site condition factors and the pavement design features. Most SPS-6 sections follow the experimental design for the great majority of the design factors. Three of the 14 sites are still relatively new and, therefore, do not have much data available at this time. It is believed that the information has been collected and is in the process of being entered into the IMS database.</p> <p>This evaluation has shown that several significant problems clearly limit the results that can be obtained from the SPS-6 experiment. Specifically, no SPS-6 projects were built in certain climatic regions. Some SPS-6 sites have construction deviations, and significant materials data and traffic data are missing from other sites or sections. However, even though the SPS-6 sections are relatively young, some interesting and important early trends have already been identified that will be useful to the rehabilitation of jointed portland cement concrete (PCC) pavements. As time and traffic loadings accumulate, much more valuable performance data will be obtained. It is believed that even more results can be obtained if a concerted effort is made to obtain missing data (materials, traffic, climate, and monitoring) and to perform proper analyses of the data. Specific recommendations for further analyses are included.</p>			
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SI* (MODERN METRIC) CONVERSION FACTORS				
APPROXIMATE CONVERSIONS TO SI UNITS				
Symbol	When You Know	Multiply By	To Find	Symbol
LENGTH				
in	inches	25.4	millimeters	mm
ft	feet	0.305	meters	m
yd	yards	0.914	meters	m
mi	miles	1.61	kilometers	km
AREA				
in ²	square inches	645.2	square millimeters	mm ²
ft ²	square feet	0.093	square meters	m ²
yd ²	square yard	0.836	square meters	m ²
ac	acres	0.405	hectares	ha
mi ²	square miles	2.59	square kilometers	km ²
VOLUME				
fl oz	fluid ounces	29.57	milliliters	mL
gal	gallons	3.785	liters	L
ft ³	cubic feet	0.028	cubic meters	m ³
yd ³	cubic yards	0.765	cubic meters	m ³
NOTE: volumes greater than 1000 L shall be shown in m ³				
MASS				
oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2000 lb)	0.907	megagrams (or "metric ton")	Mg (or "t")
TEMPERATURE (exact degrees)				
°F	Fahrenheit	5 (F-32)/9 or (F-32)/1.8	Celsius	°C
ILLUMINATION				
fc	foot-candles	10.76	lux	lx
fl	foot-Lamberts	3.426	candela/m ²	cd/m ²
FORCE and PRESSURE or STRESS				
lbf	poundforce	4.45	newtons	N
lbf/in ²	poundforce per square inch	6.89	kilopascals	kPa
APPROXIMATE CONVERSIONS FROM SI UNITS				
Symbol	When You Know	Multiply By	To Find	Symbol
LENGTH				
mm	millimeters	0.039	inches	in
m	meters	3.28	feet	ft
m	meters	1.09	yards	yd
km	kilometers	0.621	miles	mi
AREA				
mm ²	square millimeters	0.0016	square inches	in ²
m ²	square meters	10.764	square feet	ft ²
m ²	square meters	1.195	square yards	yd ²
ha	hectares	2.47	acres	ac
km ²	square kilometers	0.386	square miles	mi ²
VOLUME				
mL	milliliters	0.034	fluid ounces	fl oz
L	liters	0.264	gallons	gal
m ³	cubic meters	35.314	cubic feet	ft ³
m ³	cubic meters	1.307	cubic yards	yd ³
MASS				
g	grams	0.035	ounces	oz
kg	kilograms	2.202	pounds	lb
Mg (or "t")	megagrams (or "metric ton")	1.103	short tons (2000 lb)	T
TEMPERATURE (exact degrees)				
°C	Celsius	1.8C+32	Fahrenheit	°F
ILLUMINATION				
lx	lux	0.0929	foot-candles	fc
cd/m ²	candela/m ²	0.2919	foot-Lamberts	fl
FORCE and PRESSURE or STRESS				
N	newtons	0.225	poundforce	lbf
kPa	kilopascals	0.145	poundforce per square inch	lbf/in ²

*SI is the symbol for the International System of Units. Appropriate rounding should be made to comply with Section 4 of ASTM E380.
(Revised March 2003)

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1. INTRODUCTION

The Specific Pavement Studies 6 (SPS-6) experiment, “Rehabilitation of Jointed Portland Cement Concrete Pavements,” was designed as a controlled field experiment that focuses on the study of specific rehabilitation design features of jointed plain concrete pavements (JPCP) and jointed reinforced concrete pavements (JRCP). The successful completion of this experiment will lead to improvements in rehabilitation design procedures and standards for jointed concrete pavements. These improvements will contribute to achieving the overall goal of the Long-Term Pavement Performance (LTPP) program: increased pavement life and better use of resources.

This goal will be achieved through investigation of the effects of the specific experimental rehabilitation design features (overlay thickness and restoration activities) and site conditions (existing pavement condition, subgrade soil, traffic, and climate) and their interactions on pavement performance. This will make it possible to evaluate existing rehabilitation design methods and performance equations; develop new and improved rehabilitation design equations; and calibrate mechanistic models, including the *2002 Guide for the Design of New and Rehabilitated Pavement Structures* (hereafter known as the *2002 Design Guide*).

BACKGROUND

The SPS-6 experimental plans were originally designed to incorporate project sites in all four LTPP climatic regions and on both fine-grained and coarse-grained subgrades. This requirement makes it potentially possible to cover a large inferential space of the continental United States. A major effort was made by the Strategic Highway Research Program (SHRP), the State highway administrations (SHAs), and the Federal Highway Administration (FHWA) to identify appropriate SPS-6 sites and to construct all the sections according to their original experimental design. A wide range of specific data was collected during construction. Extensive field monitoring data (traffic, profile, cracking, etc.) have been collected from these sections over time.

The original expectations for the LTPP program are summarized in a SHRP report.⁽¹⁾ Originally, the following objectives were established for the LTPP program:

- Evaluation of existing design methods.
- Development of improved strategies and design procedures for the rehabilitation of existing pavements.
- Development of improved design equations for new and reconstructed pavements.
- Determination of the effects on pavement distress and performance of (1) loading, (2) environment, (3) material properties and variability, (4) construction quality, and (5) maintenance levels.
- Determination of specific design procedures to improve pavement performance.
- Establishment of a database to support these objectives and future needs.

The experimental designs for various LTPP experiments were developed with a clear relationship to these objectives. The following products were identified for the LTPP program:⁽¹⁾

General Products: Evaluation of existing design methods and performance equations, new and improved design equations, and calibration of mechanistic models.

Specific Products: Effects of the specific experimental design features (asphalt concrete (AC) overlay thickness, pre-overlay repair, etc.) and site conditions (subgrade, traffic, and climate).

Other Products: Test methods developed specifically for SPS test sections, correlations among material properties determined by different methods, study of other features and materials, and technology transfer.

The following objectives of the SPS-5 (Rehabilitation of Flexible Pavements) and SPS-6 (Rehabilitation of Jointed Portland Cement Concrete Pavements) experiments are stated in the same report:⁽¹⁾

“The primary objective of the experiments on rehabilitation of asphalt concrete and jointed portland cement concrete pavements is to develop conclusions concerning the effectiveness of different rehabilitation techniques and strategies and their contribution to pavement performance and service life.”

While the LTPP program has been oriented toward research, the client agencies (SHAs) expect “down-to-earth” implementable products that will help the agencies better manage their highway networks. Specifically, the highway agencies expect that the overall LTPP program and, specifically, the SPS experiments will contribute significantly toward improving knowledge in the following areas:

- Controllable pavement design and construction factors that are under the direct control of the design agency and/or the constructor (e.g., overlay thickness).
- Conditional factors affecting pavement performance (factors cannot be directly controlled by the agency for a given project and include traffic loading, climatic factors, and subgrade soils).
- Performance evaluation of various design features for new and rehabilitated pavements.
- Development of improved design techniques incorporating distress-specific, mechanistic-based predictive models.
- Distress-specific rehabilitation strategies and improved design techniques incorporating distress-specific, mechanistic-based predictive models.
- Optimal timing for rehabilitation intervention.
- Optimal maintenance strategies.
- Improvements in pavement management, including data collection activities.

- Pavement policy issues, such as cost allocation among highway users and life-cycle cost-analysis models.
- Supplemental sections may add to the specific knowledge of the SHA that constructed the section.

As the SPS experiments have been constructed and monitored over time, concerns have been expressed regarding their ability to satisfactorily meet these expectations. These concerns include:

- Lack of more detailed expectations and objectives from each of these SPS experiments.
- Ability of the SPS experiments to meet expectations in terms of the quality and completeness of the data available now and in the future.
- Deviations in the design and construction features of an in-place test section (e.g., layers built to a different thickness or lack of compaction of the subgrade).
- Deficiencies in construction, materials, climate, traffic, and performance data in relation to current and future analytical needs.

It is known that some of these SPS projects were not constructed in some climatic areas because of lack of interest by the SHAs or lack of suitable sites, leaving a portion of the desired inferential space with no performance data. It is also known that some of the SPS projects, as constructed, are not in complete conformity with the original experimental plans. Despite best efforts, the amount of inventory and monitoring data that has been collected from these sections during construction and for several years afterward may be deficient.

The full extent of the deviation and the potential impact of that deviation have not yet been fully evaluated for most of the SPS experiments. Thus, this study was initiated to conduct a comprehensive review of all SPS-6 experiment sites. This review compares the experiment sites as they exist today with the original expectations and, in addition, compares these projects as they exist today with any new expectations for the 21st century. For example, there is a greater emphasis on mechanistic-based design now than existed a decade ago. This review provides a sound basis for:

- Planning remedial actions that may be warranted because of various deficiencies in construction or data collection.
- Decisions about future monitoring and data collection.
- Planning future analysis of the collected data.

Issues of experimental design (e.g., existence of planned SPS projects), construction quality, data quality, and data completeness (with respect to both current data collection guidelines and anticipated pavement engineering needs) should be addressed.

The SPS-6 projects were constructed between 1989 and 1998 and, thus, many are fairly young and may not yet directly support analytical activities to improve the level of knowledge in many of the areas listed above. However, a number of the SPS-6 sections have exhibited distress, allowing some preliminary evaluations to be made. However, no indepth assessment has yet been undertaken to determine to what extent the SPS-6 experiment will provide the necessary data to ensure that the broader expectations of each experiment are attained.

This evaluation of SPS-6 is being conducted at the same time and in coordination with the evaluation of SPS-1 (new flexible pavement), SPS-2 (new rigid pavement), and SPS-5 (rehabilitated flexible pavement).

STUDY OBJECTIVES

This review concentrates on the core experiment sections that were included in the experimental design for the SPS-6 project. In addition, the SHAs often added supplementary sections to each SPS-6 project that do not fit any formal controlled experimental plan. The value of these sections was also evaluated.

The objectives of this study are:

1. Identify specific objectives and expectations that should be pursued for the SPS-6 experiment given the original expectations and the needs of the future. Consider the expectations at the local SHA level, the regional level, and the national level as appropriate.
2. Evaluate the set of core and supplemental test sections constructed in the SPS-6 experiment in relation to their ability to support the objectives and characterize the overall “health” and analytical potential of each SPS-6 experiment. Identify areas of strength and weakness, and develop a plan of recommended corrective measures, as appropriate, to strengthen the SPS-6 experiment and to accomplish its objectives. Develop analytical plans for both short-term and long-term horizons.
3. Identify the confounding factors introduced into each SPS-6 experiment evaluated by virtue of construction deviations or other factors not accounted for in the original experimental design.
4. Evaluate the quality and completeness (in relation to the current data collection requirements) of the SPS-6 construction data. Provide recommendations for the resolution/correction of data that are anomalous or of inadequate quality.
5. Evaluate the adequacy of existing data and current data collection requirements in relation to anticipated analytical needs. Identify areas where current requirements are excessive or deficient, and provide recommendations where adjustments (in quantity, quality, frequency, or data type) are warranted.
6. Consider both short-term and long-term time horizons in the evaluation and preparation of data analysis recommendations.

7. Evaluate the opportunities for local, regional, or national analysis of the core and supplemental sections.

REPORT ORGANIZATION

This report first focuses on the original SPS-6 experimental design and compares this to the SPS-6 projects actually constructed. Chapter 3 reviews the availability and completeness of the SPS-6 experiment data. Chapter 3 also includes a detailed discussion of the quantity and percentage of level E (releasable to the public) data available in the Information Management System (IMS) database. Chapter 4 presents achieved versus required testing frequency at these sites. Chapter 5 compares the designed versus constructed section parameters. Chapter 6 contains a status assessment of each of the SPS-6 experimental projects. Initial evaluations of the key performance trends are then discussed in chapter 7. Chapter 8 provides a summary, conclusions, and recommendations. Appendix A presents a summary of the SPS-6 projects that were constructed. The materials testing information is summarized in appendix B. Finally, all of the monitoring activities from IMS are listed in appendix C.

2. SPS-6 EXPERIMENTAL PLAN

This chapter describes the SPS-6 experimental plan, including a detailed discussion to define the SPS-6 experimental design matrix and the current status of the design cells (constructed sections) as nominated. It is important to note that even if a site is nominated to a specific cell of the design matrix, the actual properties of the site, such as climatic factors, may result in the site not meeting the originally nominated characteristics. For example, a site nominated as being in the dry-freeze zone may have too much annual precipitation to be classified as “dry” and is actually “wet,” resulting in a wet-freeze site rather than the nominated dry-freeze site.

ORIGINAL DESIGN FACTORIAL

The SPS-6 experiment examines the effects of climatic factors (wet-freeze, wet-no freeze, dry-freeze, or dry-no freeze), type of concrete pavement (plain or reinforced), condition of existing pavement (fair or poor), and traffic rate (as a covariant) on pavement sections incorporating different methods of rehabilitation with and without AC overlays. Table 1 shows the number of sites that are required to complete the original design factorial as established by the LTPP program. The shaded area was not included because there are no JRCP sections in that area of the country. Note that there are two replicate experiments planned within most cells.

Table 1. Number of sites required to complete original design factorial.

		Wet		Dry	
		Freeze	No Freeze	Freeze	No Freeze
JPCP	Fair	2	2	2	1
	Poor	2	2	2	1
JRCP	Fair	2	2	1	
	Poor	2	2	1	

REHABILITATION ALTERNATIVES

There are eight different rehabilitation alternatives incorporated into each site of the SPS-6 experiment. These eight rehabilitation alternatives are referred to as the eight core sections of the experiment. Every site constructed as part of the SPS-6 experiment must contain the eight core pavement sections. These rehabilitation alternatives include variations in pavement preparation, restoration, AC overlay thickness, and additional treatments (saw and seal).

Table 2 lists the eight core experiment sections required for an SPS-6 project. Each section varies by a combination of the extent of pavement preparation, other treatments (saw and seal of the AC overlay), and the overlay thickness. It was also required that at least six of these core sections have 152-meter (m) (499 foot) nondestructive performance monitoring areas and that two have 305-m (1,000 foot) areas, with an additional 15 m (49 feet) on each end for destructive testing. In addition, traffic in the test lane must also exceed 200,000 equivalent single-axle loads (ESALs) per year (rigid ESALs).

Table 2. Core sections of SPS-6 experiment.

SPS-6 Section	PCC Pavement Preparation	Other Treatments	Overlay Thickness
01	Routine maintenance	–	–
02	Minimum restoration	–	–
03	Minimum restoration	–	102 mm
04	Minimum restoration	Saw and seal joints in AC	102 mm
05	Maximum restoration	–	–
06	Maximum restoration	–	102 mm
07	Crack/break and seat	–	102 mm
08	Crack/break and seat	–	203 mm

1 mm = .039 inch

If desired by the participating SHA, additional sections incorporating other types of rehabilitation variations in pavement preparation, other treatments, or overlay thicknesses were included. For example, the supplemental sections included variations in the crack/break and seat dimensions, rubblized pavements, varying AC overlay thicknesses, use of fabrics and fibers, and other features. The State-selected supplemental sections are discussed in more detail later in this chapter.

A discussion of the various levels of preparation, other treatments, and AC overlays follows.

Portland Cement Concrete (PCC) Pavement Preparation

The control section received routine maintenance, including joint and crack sealing, and limited patching. In addition to the control section, three levels of pavement preparation were applied: minimum preparation, maximum preparation, and crack/break and seat. The preparation techniques are discussed below:

Minimum Preparation: Consists of routine maintenance, which includes limited patching (filling potholes), crack repair and sealing, and stabilization of joints. This level of rehabilitation is typical of the current practices of many highway agencies prior to overlay. Note that some of these minimum-preparation sections also included diamond grinding when faulting was severe.

Maximum Preparation: Consists of several activities, depending on pavement distress and condition. This level represents a premium level of pavement preparation, including subsealing, subdrainage, joint repair and sealing, full-depth repairs with restoration of load transfer, diamond grinding (nearly always), and shoulder rehabilitation. Diamond grinding and joint and crack sealing were not performed on sections that received an AC overlay and, in at least one case, not on the bare concrete sections.

Crack/Break and Seat: Uses mechanical means to reduce slab size to minimize or eliminate reflection cracking in the AC overlay. The cracking and seating process is used with JPCP and the breaking and seating process is used with JRCP. The fracturing (cracking and/or breaking) is intended to produce hairline cracks through the full depth of the PCC slab, plus fractures in any reinforcing steel, when present, so that all reinforcing materials are completely separated.

Other Treatments

The only other special AC overlay reflection treatment included in the core experiments is saw and seal. For the SPS-6 section ***604, with a 102-millimeter (mm) (4-inch) -thick AC overlay, sawing was performed directly above the existing joints and cracks of the PCC pavement. No other treatments were included as part of the core experiment; however, several SHAs provided supplemental sections using other treatments, such as fabric interlayers or fibrous AC overlays.

AC Overlays

The study design includes two overlay thicknesses (102 and 203 mm (4 and 8 inches)). The 102-mm (4-inch) overlays were placed on sections receiving the minimal restoration level of pavement preparation, the maximum restoration, and the crack/break and seat pavement preparation. In addition, a minimum-rehabilitation section with a 102-mm (4-inch) overlay, in which joints are sawed above the existing PCC joints and then sealed, was included. Also included in the experiment is a 203-mm (2-inch) overlay placed on the cracked/broken and seated section.

The overlays allowed for use on the sections were constrained to ensure a reasonable level of consistency as indicated below:

- All overlays must use virgin AC material.
- Application does not incorporate stress-absorbing membrane interlayer (SAMI) or any type of reinforcement (e.g., fibers and geotextiles).

AS-NOMINATED DESIGN FACTORIAL

As of August 1999, the SPS-6 experiment had 14 sites located throughout the United States. The distribution of the currently constructed SPS-6 sites by State and geographical region is shown in figure 1. Table 3 provides a list of all of these sections, including the core and State supplemental sections. Each site has the same core of eight standard test sections. In addition, many State agencies have included additional sections, which are referred to as State supplemental sections. Currently, a total of 112 core sections and 59 State supplemental sections have been constructed for SPS-6 experiments.

Each site was nominated to fill a specific cell of the design matrix. Table 4 shows how each of the nominated/constructed SPS-6 sites fills the design matrix. Cells containing one or more asterisks highlight a missing site in the design matrix. These asterisks clearly show that 11 sites were not constructed. Unfortunately, no additional SPS-6 sites will be constructed. Therefore, the empty portion of the design matrix will remain unfilled. These missing sections will ultimately impact the potential for rehabilitation findings for these site conditions. A detailed description of each SPS-6 section, including the supplemental sections, is provided in appendix A. This information highlights the rehabilitation efforts performed and any significant deviations from the initial experimental design factorial.



Figure 1. States participating in SPS-6 PCC rehabilitation study.

Table 3. SPS-6 pavement sections.

State	State Code	Core Sections	Supplemental Sections
Alabama	01	010601-010608	010661-010663
Arizona	04	040601-040608	040659-040669
Arkansas	05	05A601-05A608	–
California	06	060601-060608	060659-060664
Illinois	17	170601-170608	170659-170664
Indiana	18	180601-180608	180659-180672
Iowa	19	190601-190608	190659
Mississippi	26	260601-260608	260659
Missouri	29	290601-290608	290659-290666
Missouri	29	29A601-29A608	–
Oklahoma	40	400601-400608	–
Pennsylvania	42	420601-420608	420659-420662
South Dakota	46	460601-460608	460660-460662
Tennessee	47	470601-470608	470661-470662
Total Number of Sections		112	59

Table 4. Nominated and constructed sites for original design factorial.

		Wet		Dry	
		Freeze	No Freeze	Freeze	No Freeze
JPCP	Fair	MO(A)*	AL, TN	SD*	*
	Poor	IN*	AR*	AZ, CA	*
JRCP	Fair	IA, MI, PA	OK*	*	
	Poor	IL, MO	**	*	

Notes:

- Each * indicates that an additional site is needed to complete the original design matrix.
- MO(A) is the second SPS-6 site constructed in Missouri; the first site is designated as MO.

STATE SUPPLEMENTAL SECTIONS

In addition to the eight core sections required by the SPS-6 experiment, the SHAs have included additional experiment sections (referred to as State supplemental sections). Table 5 lists the design variables selected by a given SHA for nonfractured PCC pavements, and table 6 lists the supplemental sections with fractured PCC pavements as a form of rehabilitation. Based on the number of supplemental sections in these tables, it appears that there is interest by the SHAs in the performance of fractured PCC pavements as a rehabilitation alternative.

Both of these tables highlight rehabilitation design variables that interest the SHAs. Many SHAs are interested in the performance of design features that were not included within the eight core

sections of the experiment to determine their potential influence on the performance of the rehabilitated pavement section.

SUMMARY

- Twenty-four SPS-6 sites were planned; however, only 14 were actually constructed. These 14 sites will provide performance data for some major areas of the United States where JPCP and JRCP exist.
- The central portion of the United States was well covered (wet-freeze and wet-no freeze); however, portions of the west and east coasts were generally not covered (particularly dry climatic areas).
- Many additional State supplemental sections were added to the core sections. These typically emphasize reflection crack control sections.

Table 5. Types of SPS-6 supplemental experiment sections within each State with nonfractured PCC

Preparation Technique	State									
	AL	AZ	AR	CA	IL	IN	IA	MI	MO	MO
State preparation and diamond grinding					✓					
State preparation and milling					✓					
Minimum preparation w/undersealing									✓	
State preparation w/83-mm overlay					✓					
State preparation w/208-mm overlay										
State preparation w/geotextile and 83-mm overlay					✓					
State preparation w/102-mm overlay							✓			
Minimum preparation w/102-mm overlay with fibers						✓				
State preparation w/reinforcing grid and 102-mm overlay										
State preparation w/127-mm overlay									✓	
Minimum preparation w/140-mm overlay		✓✓				✓				
Minimum preparation w/140-mm overlay with fibers						✓✓				

Each ✓ represents one experiment section.

1 mm = .039 inch

Table 6. Types of SPS-6 supplemental experiment sections within each State with fractured PCC p

Preparation Technique	State									
	AL	AZ	AR	CA	IL	IN	IA	MI	MO	MS
Crack/break and seat w/reinforcing grid and 102-mm overlay		✓								
Crack/break and seat w/102-mm overlay and rubber		✓✓								
Crack/break and seat w/102-mm overlay and fibers						✓✓✓				
Crack/break and seat w/107-mm overlay				✓✓						
Crack/break and seat w/107-mm urethane polymer resin (UPR) overlay				✓						
Crack/break and seat w/107-mm modified latex emulsion (MLE) overlay				✓						
Crack/break and seat w/107-mm overlay and reinforcing mesh				✓						
Crack/break and seat w/127-mm overlay									✓	
Crack/break and seat w/140-mm overlay		✓✓								
Crack/break and seat w/140-mm overlay and fibers						✓✓✓ ✓✓✓				
Crack/break and seat w/152-mm overlay										
Crack/break and seat w/204-mm overlay									✓	
Crack/break and seat w/204-mm overlay with $\frac{1}{3}$ -point saw cut										
Crack/break and seat w/254-mm overlay		✓				✓				
Crack/break and no seat w/107-mm overlay				✓						
Rubblized w/102-mm overlay	✓									
Rubblized w/140-mm overlay		✓✓								
Rubblized w/152-mm overlay					✓					
Rubblized w/178-mm overlay								✓	✓✓	
Rubblized w/203-mm overlay	✓	✓			✓					
Rubblized w/241-mm overlay	✓									
Rubblized w/290-mm overlay									✓✓	
Rubblized w/330-mm overlay										

Each ✓ represents one experiment section.

1 mm = .039 inch

3. ASSESSMENT OF DATA AVAILABILITY AND COMPLETENESS

The next step in the SPS-6 experiment review and evaluation study is to assess key data availability and completeness. LTPP data availability and quality control (QC) are discussed first. Then, key data elements are assessed for their quality level and completeness. The data reviews are divided into the following categories for presentation:

- General site information.
- Climatic data.
- Traffic data.
- Pavement structure.
- Materials data.
- Monitoring data.

IMS data release 9.8, obtained on August 10, 1999, was used for this study, with the exception of the MON_PROFILE_MASTER table that was obtained on September 12, 1999. In addition, the monitoring data were updated from data obtained from the IMS on February 1, 2000.

LTPP DATA AVAILABILITY AND QUALITY CONTROL CHECKS

The quality of the data is the most important factor in any type of analysis. From the outset of the LTPP program, data quality has been considered to be of paramount importance. Procedures for collecting and processing data were defined (and are modified as necessary) to ensure consistency across various reporting contractors, laboratories, equipment operators, etc. Although these procedures formed the foundation of quality control/quality assurance (QC/QA) and data integrity, many more components of a QC/QA plan were necessary to ensure that the data sent to researchers were as error-free as practical.

LTPP has developed and implemented an extensive QC program that classifies each of the data elements into categories based on the location of the data in this QC process. Several components or steps that comprise the overall QC/QA plan used on LTPP data are discussed below:

1. **Collect Data:** Procedures for collecting data are documented for each module in the IMS. These procedures are intended to ensure that data are collected in similar formats, amounts, conditions, etc. Documentation references include the *Data Collection Guide for Long-Term Pavement Performance Studies*⁽³⁾ and various module-specific guides.
2. **Review Data:** Regional engineers review essentially all data input into the regional IMS (RIMS) to check for possible errors related to keystroke input, field operations, procedures, equipment operations, etc. The regional review is intended to catch obvious data collection errors. In addition, some data are preprocessed before they are entered into the IMS. For example, PROFAL software is used on SHRP profilometers to provide a system check by comparing measurements taken at different speeds. PROFSCAN is a field QA tool that allows an operator to identify invalid data while still in the field, thus saving costly revisits to the site.

3. **Load Data in IMS:** Some checks are programmed into the IMS to identify errors as data are entered. The IMS contains mandatory, logic, range, data verification, and other miscellaneous checks that are invoked during input.
4. **Quality Control/Quality Assurance:** Once data are input into the IMS and reviewed by regional engineers, formal QC/QA software programs are run on the data.

Level A: Random checks of the data are performed to ensure correct RIMS to IMS data transfer.

Level B: A set of dependency checks is performed to ensure that basic essential section information has been recorded in the IMS. In addition, experiment types are verified based on the inventory data. These checks are currently being incorporated into the level E checks for all modules.

Level C: A minimal data search is performed for critical elements (e.g., inventory data should contain the coordinates of the section, friction data should contain the skid number, and rehabilitation data should have a code entered to identify each type of work activity).

Level D: Expanded range checks are applied to certain fields to identify data element values that fall outside an expected range. These checks are more stringent than the input range checks reviewed by the regional engineers.

Level E: Intramodular checks are employed to verify the consistency of the data within a data module (e.g., if an overlay is identified in the inventory layer structure, the data of the overlay should be recorded in the inventory table recording major improvements to the pavement structure).

Once the QC/QA programs are completed, the regional engineers review the output and resolve any possible data errors. Often, the data entered are accurate and legitimate, but do not pass a QC/QA check. When this occurs, the regional engineer can document that the data have been confirmed using a comments table in the IMS and manually upgrade the record to level E.

Figure 2 provides a flowchart that shows the movement of the data elements and quality checks completed on the data prior to release to the public. Only a fraction of the data fields are checked. A value of “A” is automatically assigned to a record upon entry into the database. A value of “B” indicates that the QC process was executed and a level C check was failed. Any record for which correct section information is stored in the database is available after the quality check has been completed. A record of QC processing is included with the record. Since the checks are run in sequence from A through E, the last successful check is identified on the record as the record status variable. A value of “B” or “C” does not necessarily indicate that a higher level of quality check was unsuccessful, merely that a necessary data element was not available when the quality check was done.

There are numerous reasons why some important data may not be available from a publicly released IMS database at the time of analysis. The following are some possible examples:

AVC = Automatic Vehicle Classification FWD = Falling-Weight Deflectometer IRI = International Roughness Index
AWS = Automated Weather Station WIM = Weigh-in-Motion

Figure 2. LTPP data collection and data movement flowchart.

- Data have not yet been collected or the laboratory tests have not yet been performed.
- Data are under regional review.
- Data have failed one of the quality checks and are to be reviewed.
- Data have failed one of the quality checks and were identified as anomalies.
- Data have not yet been checked for quality.

As such, the unavailable data identified in this report do not necessarily mean that the data were not collected or submitted by the States. There are several places where data may get held up and not reach level E. Note that the results reported in this report are based on level E status only. The LTPP program is embarking on a systemwide effort to resolve all unavailable data so that they will be available to future researchers. Some data have already been located during the course of this study.

GENERAL SITE INFORMATION

The availability of general site-related information is assessed in this section. This includes site identification, location, report availability, and important dates associated within each SPS-6 site. This information was obtained from a variety of sources, such as the IMS database, construction reports, and deviation reports. It is important that the integrity of all of these sources be assessed.

As discussed above, the EXPERIMENT_SECTION table is a key table in the IMS database. This table contains records for all SPS-6 sections. Most of the sections are at level E except for the three sites (Alabama, Missouri (A), and Tennessee) that are at level A. These three States have a level A record status because there are no values available in the BASIC_INFO_RS column. No information relative to these three sites will be released until the record status reaches level E. In addition, all supplemental sections have a record status of “*”, indicating that these sections are not subjected to the QC review that the core sections must meet. Therefore, the supplemental sections are only available when requested by that particular State agency.

The general SPS-6 site-level information is fundamental to the experiment and is very important to the overall understanding of the sites. Unfortunately, no SPS-6 site information is currently available in the INV_ID table (as of August 1999). This table contains general site information for each site in the experiment, such as the route, county, location, etc. Because no information was available in the SPS_ID table, the information provided in tables 7 and 8 was obtained from the construction reports instead of the SPS_ID table. Tables 7 and 8 list some of the general State information and reports that are available for each site. The construction reports, in combination with the data available in the IMS database, are necessary to fully research this experiment.

The ages of the initial construction and rehabilitation are also part of the general information required for analysis of this experiment. The approximate average construction dates for each SPS-6 site are listed in table 9. This table summarizes the construction date of the original (bare) PCC and the date that it was initially opened to traffic. In addition, this table includes the beginning and ending dates of the SPS-6 rehabilitation efforts. If both the beginning and ending rehabilitation dates are not known, then the same date is listed for both the beginning and ending dates. This table shows that the PCC age, based on an August 1, 1999 date, ranges from 20.7 to 41.3 years and that they were rehabilitated between 1 and 10 years ago. Of the 170 SPS-6 sections, only 6 have been deassigned and listed in table 10. Deassigned sections have been removed from the study for various reasons, such as excessive roughness or distress.

Table 7. SPS-6 general site information and report availability.

State Information				Construction Report Availability
Abbreviation	Code	Name	SHRP Region	
AL	01	Alabama	S	✓
AZ	04	Arizona	W	✓
AR	05	Arkansas	S	✓
CA	06	California	W	✓
IL	17	Illinois	NC	✓
IN	18	Indiana	NC	
IA	19	Iowa	NC	✓
MI	26	Michigan	NC	✓
MO	29	Missouri	NC	✓
MO(A)	29(A)	Missouri	NC	
OK	40	Oklahoma	S	✓
PA	42	Pennsylvania	NA	✓
SD	46	South Dakota	NC	✓
TN	47	Tennessee	S	✓

NA = North Atlantic Region S = Southern Region
 NC = North Central Region W = Western Region

Table 8. SPS-6 site location information.

State	County	Route No.	Functional Class	Lanes
AL	Etowah	Interstate 59	Rural Principal Arterial–Interstate	2
AZ	Coconino	Interstate 40	Rural Principal Arterial–Interstate	2
AR	Jefferson	U.S. 65	Rural Principal Arterial–Other	2
CA	Siskiyou	Interstate 5	Rural Principal Arterial–Interstate	2
IL	Champaign	Interstate 57	Rural Principal Arterial–Interstate	2
IN	Marshall	U.S. 31	Rural Principal Arterial–Other	2
IA	Polk	Interstate 35	Rural Principal Arterial–Interstate	2
MI	Bay	U.S. 10	Rural Principal Arterial–Other	2
MO	Harrison	Interstate 35	Rural Principal Arterial–Other	2
MO(A)	Washington	SR 8	Rural Principal Arterial–Other	2
OK	Kay	Interstate 35	Rural Principal Arterial–Interstate	2
PA	Centre	Interstate 80	Rural Principal Arterial–Interstate	2
SD	Brown	U.S. 12	Rural Principal Arterial–Other	2
TN	Madison	Interstate 40	Rural Principal Arterial–Interstate	2

Table 9. Initial construction and rehabilitation dates for SPS-6 projects.

State	Initial PCC		Rehabilitation		PCC Age, years	SPS-6 Rehabilitation Age, years
	Begin Construction	Open to Traffic	Begin	Open to Traffic		
AL	N/A	1/01/64*	3/04/98	6/26/98	35.7	1.2
AZ	9/01/66	1/01/67	6/19/90	10/06/90	32.7	8.9
AR	12/01/78	1/01/79	10/01/96	12/17/96	20.7	2.7
CA	11/01/73	8/01/74	5/04/92	9/01/92	25.1	7.0
IL	6/01/64	4/01/65	3/27/90	6/11/90	34.4	9.2
IN	1/01/72	1/01/74	6/11/90	8/30/90	25.7	9.0
IA	11/01/65	11/01/65	7/17/89	8/30/89	33.9	10.0
MI	6/01/58	6/01/58	5/30/90	5/30/90	41.3	9.3
MO	7/01/75	10/01/75	4/28/92**	8/21/92**	23.9	7.0
MO(A)	N/A	1/01/69*	6/22/98	9/03/98	30.7	1.0
OK	11/01/62	1/01/63	7/10/92	8/27/92	36.7	7.0
PA	9/01/68	9/01/68	8/19/92	9/30/92	31.0	6.9
SD	4/01/73	10/01/73	4/24/92	9/28/92	25.9	7.1
TN	N/A	1/01/66*	3/11/96	6/08/96	33.7	3.2

N/A = not available

*Obtained from construction reports or the LTPP coordinating office.

**Based on North Central Regional Center Office (NCRCO) data sheets.

Table 10. Deassigned SPS-6 sections.

Sections	Deassign Date
040601, 040602, and 040605	4/28/95
180601	7/27/93
290607 and 290659	9/02/95

CLIMATE

The SPS-6 database contains general environmental weather station data. The general environmental information includes actual measurements from at least one nearby weather station for each LTPP site. In addition, a site-specific statistical estimate based on as many as five nearby weather stations is available. The estimates are called virtual weather stations (VWS) and are stored in the IMS database. The IMS contains monthly and annual summary statistics. Daily data for the VWS are kept offline. General environmental data that are available in the IMS are derived from weather data originally collected from the National Climatic Data Center and the Canadian Climatic Center.

The climatic information for each experiment is linked to an associated VWS. Table 11 shows the VWS link associated with each SPS-6 site. Without this link, no climatic data can be associated with the experiment. Currently, there are no climatic links established for Alabama, California, and Missouri (A) at level E or non-level E status.

Table 11. Data quality and availability for IMS table CLM_SITE_VWS_LINK.

State	Section	Number of Records Available	Number of Records at Level E	Percentage of Records at Level E
AL	600	0	0	N/A
AZ	600	1	1	100
AR	A600	1	1	100
CA	600	0	0	N/A
IL	600	1	1	100
IN	600	1	1	100
IA	600	1	1	100
MI	600	1	1	100
MO	600	1	1	100
MO(A)	600	0	0	N/A
OK	600	1	1	100
PA	600	1	1	100
SD	600	1	1	100
TN	600	1	1	100

N/A = not available

Based on the virtual weather links associated with each site presented in IMS table CLM_SITE_VWS_LINK, the amount of available data for each VWS, including key temperature and precipitation data, are assessed, as shown in table 12. Each site with a VWS link has 17 to 39 years of climatic data available. In addition, all of the climatic data are at level E status.

Table 12. SPS-6 years of key temperature and precipitation data available.

State	Key Temperature, years of data	Key Precipitation, years of data	Percentage at Level E
AL	N/A	N/A	N/A
AZ	31	31	100
AR	18	18	100
CA	N/A	N/A	N/A
IL	17	17	100
IN	25	25	100
IA	32	32	100
MI	39	39	100
MO	17	17	100
MO(A)	N/A	N/A	N/A
OK	35	35	100
PA	29	29	100
SD	17	17	100
TN	33	33	100

N/A = not available

TRAFFIC

Traffic data provide estimates of annual vehicle counts by vehicle classification and distribution of axle weight by axle type. The annual traffic summary statistics are stored in the IMS database. Data are supposed to be provided for each year since the road was opened to traffic. With few exceptions (values based on annual average daily traffic (AADT)), the information applies only to the lane being studied. ESALs for loading are estimated based on American Association of State Highway and Transportation Officials (AASHTO) procedures.

Traffic data are collected using a combination of permanent and portable equipment by the individual States/Provinces. Table 13 lists the number of years of traffic data stored in the IMS database TRF_MONITOR_BASIC_INFO for each core SPS-6 section. Alabama, Arkansas, Missouri (A), and Tennessee do not have any traffic data in the IMS database. Because these sections are relatively new to the program, they probably have traffic information. However, as of the date of this report, information had not been entered into the database. In addition, Arizona and California have negative ESAL values for most of the AC-overlaid sections and, therefore, have a non-level E record status.

By reviewing table 13, several observations about the quantity of the data stored in the IMS can be made:

- Most of the sites do not have all of the annual traffic data since rehabilitation occurred.
- Because the sections within a specific site are adjacent to each other, all of the sections should have the same amount of traffic data and it should all be at the same record status. Unfortunately, this is not the case. Depending on the site, traffic levels, years of available data, record status, or any combination of these data may occur.
- Traffic data at these sites range from 0 to 100 percent at level E status.

Table 13. SPS-6 years of traffic data available.

State	Age of Pavement Since Rehabilitation, years	Traffic Data at All Levels, years	Traffic Data at Level E, years	Percentage at Level E
AL	1.2	N/A	N/A	N/A
AZ	8.9	4 to 9	2 to 5	50 to 56
AR	2.7	N/A	N/A	N/A
CA	7.0	3 to 6	2 to 3	40 to 50
IL	9.2	8	8	100
IN	9.0	3	3	100
IA	10.0	4	3	75
MI	9.3	8	6 to 8	75 to 100
MO	7.0	1	1	100
MO(A)	1.0	N/A	N/A	N/A
OK	7.0	3	0 to 3	0 to 100
PA	6.9	1 to 2	0	0
SD	7.1	3 to 4	3 to 4	100
TN	3.2	N/A	N/A	N/A

N/A = not available

Annual ESAL Estimate in the LTPP Lane

Table TRF_MONITOR_BASIC_INFO was examined to identify SPS-6 records with annual ESAL estimates. No traffic data are stored in the IMS for Alabama, Arkansas, Missouri (A), and Tennessee. For those sites with traffic data, non-zero annual ESAL records were found for all sites. In addition, Arizona and California have negative ESALs, which need to be examined and corrected.

PAVEMENT STRUCTURE DATA

The pavement layer data for SPS-6 sections are available from IMS table TST_L05B. This table was examined for the following pavement structure data elements:

- AC overlay thickness.
- PCC slab thickness.
- Base type and thickness.
- Subgrade type.

Data availability and QC levels for these data elements are summarized in table 14. This table shows that 87 of 111 core sections (78 percent) have PCC slab thickness information at levels A through E, while 85 of 111 sections (77 percent) have information at level E.

Table 14. SPS-6 pavement structure QC levels currently in IMS database for TST_L05B.

Data Availability	AC Thickness	PCC Thickness	Base Layer	Subgrade
Core Sections				
At All Levels (A Through E)	55 of 70	87 of 111	87 of 111	102 of 111
At Level E Only	43 of 70	85 of 111	86 of 111	101 of 111
Percentage of Data at All Levels (A Through E)	78%	78%	78%	92%
Percentage of Data at Level E	61%	77%	77%	91%
Supplemental Sections				
Supplemental Sections With Data	50	56	56	59
Supplemental Sections With Missing Data	5	2	2	0
Sites With Missing Data for Core and Supplemental Sections				
State	AL, AR, MO(A)	AL, AR, MO(A)	AL, AR, MO(A)	AR, MO(A)

As mentioned in chapter 2, there are 112 core SPS-6 sections. Table 14 shows a total of 111 sections. This difference is because the data for section 060601 were not included in the data dump at the time of analysis. It can also be noted that all sections do not have AC overlays. Therefore, there are 70 core and 55 supplemental sections with AC overlays.

The following observations are made for the core sections of the SPS-6 experiment. Currently, for levels A through E, 78 to 92 percent of the sections have data in the database for the PCC slab, base layer, and subgrade. When reviewing the percentages of data at level E, 61 to 91 percent of the sections have data at level E. The AC layer has the lowest percentage of level E data, while the subgrade has the highest percentage. In addition, all of the layer information for the Arkansas and Missouri (A) sites is missing from the database, as is some of the layer information for the Alabama site. This is a key table in the IMS database and it is very important that this information be collected and entered in the database as soon as possible.

MATERIALS TESTING DATA

Field and laboratory tests are conducted to establish the material properties and characteristics for LTPP sections. Characterization of the material properties and the variations in these properties among and within the test sections is required to evaluate the causes of performance differences among the test sections. It also provides a basis for improving the models used in pavement design. The material characterization includes the parameters used in current pavement design and mechanical analysis models. The engineering properties are generally required to assess the characteristics and the behavior of the materials.

The sampling and testing program is conducted on many different types of materials, such as PCC, AC, asphalt-treated base, cement-treated base, permeable asphalt-treated bases, and unbound granular subbase materials. The sampling and testing requirements for the preconstruction and post-construction laboratory testing plans described in the *Specific Pavement*

Studies Materials Sampling and Testing Requirements for Experiment SPS-6 report were used to determine the minimum testing requirements for each section.⁽²⁾

The data available from the two IMS data requests (August 1999 and January 2000) were used in the assessment of the sampling and testing program. The results for each site were tabulated and are shown in appendix B. The results for each site are summarized into a single table as shown in table 15. This table summarizes the minimum number of tests required for all core test sections. It also includes the number of materials tests performed for each test and the amount of level E data. The last two columns list the percentages of data at level E and the percentage of the required tests that have been performed.

The data in table 15 show that many of the materials tests have nearly 50 percent or more of the results at level E.

PAVEMENT MONITORING

Pavement monitoring is an ongoing process for all of the SPS-6 sections that are active in the LTPP program. Monitoring activities include profile, falling-weight deflectometer (FWD), faulting, manual distress, 35-mm (1.4-inch) photographic distress surveys (PASCO), rutting, and friction collection. The data within each of these monitoring activities were divided into two distinct categories. The first category includes all levels of data stored in the IMS database (labeled as “All”), and the second category includes only IMS data at level E (labeled as “E only”).

Table 16 summarizes the data availability for each SPS-6 site. These values represent the total number of dates that a particular monitoring activity was performed for each section of a given site. For example, for Oklahoma, manual distress data were collected 48 times. This is a summation of all of the manual distress visits to sections 400601 through 400608. Therefore, each section was probably visited once before being rehabilitated and about five times each after construction. Of the 48 visits to the Oklahoma site, 47 visits are at level E status in the IMS database. Based on these values, table 17 summarizes the percentage of data at level E.

Table 17 shows that for each monitoring type, 84 to 99 percent of the data in the IMS are available. Manual distress and faulting monitoring collections have the greatest percentages of non-level E data. Over time, it is anticipated that more of these data will be upgraded to level E status as the QC procedure is periodically performed on the database.

Table 17 clearly indicates that some of the State sites have very limited amounts of monitoring data in the IMS database, including Alabama, Arkansas, Missouri (A), and Tennessee. The lack of monitoring activities for these States may be partially because of the age of the sections. Some of these experiment sites were constructed close to the time of the preparation of this report and, therefore, data may have been collected that have not yet been entered into the database because of other factors. In addition to the four States mentioned above, California, Pennsylvania, and South Dakota do not have any friction data.

However, despite these monitoring deficiencies, it can be seen that most of the data stored in the IMS database are at level E. In other words, most of the States with monitoring activities have 100 percent, or reasonably close to 100 percent, of the data in the database available at level E.

More detailed information regarding the specific number of monitoring activities per section is included in appendix C. Appendix C lists the visit dates for each monitoring activity for each section of a site. In addition, the table in appendix C includes the visits for monitoring activities for each of the State supplemental sections.

Table 15. Summary of materials testing for all SPS-6 core pavement sections.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at Level E	Percentage at Level E	Percentage of Required
Subgrade:					
Sieve analysis	42	28	20	71	67
Hydrometer to 0.001 mm (0.000039 inch)	42	34	20	59	81
Atterberg limits	42	31	31	100	74
Classification	84	34	27	79	40
Moisture-density relationships	42	31	31	100	74
Resilient modulus	42	10	6	60	24
Unit weight	84	6	6	100	7
Natural moisture content	42	44	44	100	105
Unbound Base and Subbase:					
Particle size analysis	42	20	15	75	48
Sieve analysis	42	20	15	75	48
Atterberg limits	42	20	10	50	48
Moisture-density relationships	42	20	20	100	48
Resilient modulus	42	0	0	0	0
Classification	42	20	15	75	48
Permeability	42	3	2	67	7
Natural moisture content	42	33	31	94	79
Treated Base:					
Type and classification of material and treatment	42	7	7	100	17
Pozzolanic/cementitious: Compressive strength	42	5	5	100	12
Dynamic modulus at 25 °C (77 °F)	42	0	0	0	0
Portland Cement Concrete:					
Compressive concrete strength	140	72	71	99	51
Splitting tensile strength	140	65	60	92	46
PCC coefficient of thermal expansion	42	0	0	0	0
Static modulus of elasticity	84	45	38	84	54
PCC unit weight	140	54	53	98	39
Core examination/thickness	322	168	168	100	52
Asphalt Concrete:					
Core examination/thickness	280	117	116	99	42
Bulk specific gravity	280	151	95	63	54
Maximum specific gravity	42	66	10	15	157
Asphalt content (extraction)	42	6	6	100	14
Moisture susceptibility	42	0	0	0	0
Creep compliance	42	0	0	0	0
Resilient modulus/tensile strength	42	12	0	0	29
Extracted Aggregate (from mix):					
Bulk specific gravity: Coarse aggregate	42	6	6	100	14
Bulk specific gravity: Fine aggregate	42	6	6	100	14
Type and classification	42	0	0	0	0
Gradation of aggregate	42	67	11	16	160
Roundness index of coarse aggregate	42	0	0	0	0
Aggregate particle shape	42	63	7	11	150

Table 15. Summary of materials testing for all SPS-6 core pavement sections—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at Level E	Percentage at Level E	Percentage of Required
Asphalt Cement (from mix):					
Abson recovery	42	6	6	100	14
Penetration at 10 °C, 25 °C, 32 °C (50 °F, 77 °F, 90 °F)	42	6	6	100	14
Specific gravity 16 °C (60 °F))	42	6	6	100	14
Viscosity at 25 °C (77 °F)	42	3	3	100	7
Viscosity at 60 °C, 135 °C (140 °F, 275 °F)	42	0	0	0	0

Table 16. Number of SPS-6 core section test dates with IMS data at all levels and level E.

State	Profile		FWD		Fault		Manual Distress		PASCO		Rutting		Friction	
	All	E only	All	E only	All	E only	All	E only	All	E only	All	E only	All	E only
AL	8	—	11	—	11	—	24	—	—	—	5	—	—	—
AZ	56	56	43	43	4	4	19	19	16	16	26	26	16	16
AR	32	32	20	20	11	11	16	16	—	—	2	2	—	—
CA	37	37	40	40	7	7	38	38	14	14	40	40	—	—
IL	65	65	57	57	24	23	56	53	32	32	40	40	8	8
IN	76	76	44	44	8	8	39	38	22	21	31	31	54	54
IA	64	64	56	56	4	4	32	21	32	31	30	30	65	65
MI	83	83	44	44	10	10	31	31	22	22	41	41	24	24
MO	48	48	59	59	24	24	46	46	16	16	36	36	23	23
MO(A)	—	—	1	—	5	—	6	—	—	—	1	—	—	—
OK	38	38	37	37	23	23	48	47	16	16	35	35	15	7
PA	67	67	41	41	17	17	40	40	16	16	31	31	—	—
SD	50	50	35	35	11	11	27	26	16	16	30	30	—	—
TN	26	—	21	—	11	—	22	—	—	—	8	—	8	—
Total	650	616	509	476	170	142	444	375	202	200	356	342	213	197

Table 17. Percentage of SPS-6 core section monitoring data at level E for each site.

State	Profile	FWD	Fault	Manual Distress	PASCO	Rutting	Friction
AL	0	0	0	0	–	0	–
AZ	100	100	100	100	100	100	100
AR	100	100	100	100	–	100	–
CA	100	100	100	100	100	100	–
IL	100	100	96	95	100	100	100
IN	100	100	100	97	95	100	100
IA	100	100	100	66	97	100	100
MI	100	100	100	100	100	100	100
MO	100	100	100	100	100	100	100
MO(A)	–	0	0	0	–	0	–
OK	100	100	100	98	100	100	47
PA	100	100	100	100	100	100	–
SD	100	100	100	96	100	100	–
TN	0	0	0	0	–	0	0
Total	95	94	84	84	99	96	92

4. MONITORING FREQUENCY

The frequency of the collection of monitoring data at each site is critical to identifying the unique performance trends specific to a particular rehabilitation alternative. For each monitoring type, the frequency of the collection of monitoring data is evaluated below, including pre- and post-monitoring collection and long-term testing after rehabilitation.

DATA COLLECTION DIRECTIVES

During the lives of these pavement sections, multiple directives have been issued regarding the testing frequency for each type of monitoring data collected. These directives are rules published by the FHWA-LTPP Division to ensure that consistent data are collected, monitored, and stored. Some of these directives slightly adjusted the testing intervals during the life of the program. All of the known directives as of the time of this report that reference the SPS-6 data collection monitoring frequency are listed in table 18. This table also identifies directives that supersede the previous directives.

Table 18. Directives that reference LTPP data collection monitoring frequency.

Directive	Date Issued	Supersedes
DCG, Section 3.2 ⁽³⁾	May 1991	None
D-02 ⁽⁴⁾	Jan. 7, 1991	None
D-05 ⁽⁵⁾	Mar. 14, 1995	D-02
D-09 ⁽⁶⁾	Dec. 20, 1996	None
FWD-01 ⁽⁷⁾	Jan. 15, 1993	None
FWD-02 ⁽⁸⁾	May 7, 1993	FWD Manual, Version 1.0
FWD-03 ⁽⁹⁾	Sept. 16, 1993	FWD-05 and FWD-12
FWD-05 (Draft) ⁽¹⁰⁾	Feb. 27, 1991	FWD-01
FWD-10 ⁽¹¹⁾	Sept. 1, 1994	FWD-03 (Parts A and B)
FWD-12 ⁽¹²⁾	Aug. 30, 1991	FWD-02
P-01 ⁽¹³⁾	Mar. 9, 1994	All previous <i>SHRP-LTPP Manual for Profile Measurements</i> , <i>Manual for Dipstick Profile Measurements</i> , and SHRP Directive P-04
P-02 ⁽¹⁴⁾	Sept. 1, 1994	P-01
GO-20 ⁽¹⁵⁾	Mar. 23, 1999	DCG, Section 3.2
GO-21 ⁽¹⁶⁾	Oct. 1, 1999	D-05, FWD-10, and P-02

These directives were used to identify all previous testing frequencies for each type of monitoring data collected and are summarized in table 19. The testing frequencies are listed chronologically from the oldest to the most recent within each cell of the table. Therefore, the current—as of the time of this report—testing frequency is listed at the bottom of each cell within the table. This allows for easy review of all previous SPS-6 testing frequencies that had been specified during the data collection process. Table 20 lists the current—again, as of the time of this report—monitoring frequencies for data collection.

Table 19. Testing frequencies for collection of monitoring data.

Data Collection Type	Before Construction	After Construction	Long Term
Longitudinal profile	< 3 months is desired ¹ but < 6 months is permitted ⁷	< 2 months is desired ¹ < 3 months is desired ⁷ but < 6 months is permitted ⁷	Biennially, ⁷ but may be postponed up to 1 year ⁷ Annually ⁹
Deflection (for nonfractured PCC)	< 3 months ¹ but < 1 year is permitted ⁵ but < 6 months is permitted ⁶	1 to 3 months ¹ but < 6 months is permitted ⁵	Annually, but may be postponed up to 1 year ⁵ Biennially ⁶ Biennially and responsive ^{9*}
Deflection (for fractured PCC)	Before fracture ¹ : < 1 year is permitted ⁵ < 6 months is permitted ⁶ Immediately after fracture ¹ Immediately after seating ¹	1 to 3 months ¹ but < 6 months is permitted ⁵	Annually, but may be postponed up to 1 year ⁵ Biennially ⁶ Biennially and responsive ^{9*}
Manual distress	< 6 months ¹ < 3 months ² Only required if not done with PASCO unit ³ < 6 months ³	< 6 months ¹ < 3 months ²	Biennially ² Biennially, but may be postponed up to 1 year ³ Annually ^{9*}
Faulting	With each manual distress survey	With each manual distress survey	With each manual distress survey
Transverse profile/rutting	Not applicable	With each AC distress survey ⁴	With each AC distress survey ⁴
PASCO	If PASCO unit is not used, then must perform manual distress survey in < 6 months ³	Not specified	Biennially ^{9*}
Friction	< 12 months ¹	3 to 12 months ¹	None (as of Mar. 23, 1999 ⁸)

¹DCG, Section 3.2, May 1991⁴D-09, Dec. 20, 1996⁷P-02, Sept. 1, 1994²D-02, Jan. 7, 1991⁵FWD-03, Sept. 16, 1993⁸GO-20, Mar. 23, 1999³D-05, Mar. 14, 1995⁶FWD-10, Sept. 1, 1994⁹GO-21, Oct. 1, 1999

*For supplemental sections, the frequencies are every 3 years for manual distress, every 2 years and responsive for PASCO, and every 5 years and responsive for FWD testing.

Table 20. Current—as of this report—testing frequencies for collection of monitoring data.

Data Collection Type	Before Construction	After Construction	Long Term
Longitudinal profile	< 6 months is permitted ⁷	< 6 months is permitted ⁷	Annually ⁹
Deflection (for nonfractured and fractured PCC)	< 6 months is permitted ⁶	< 6 months is permitted ⁵	Biennially and responsive ^{9*}
Manual distress, rutting, and faulting	< 6 months ³	< 3 months ²	Annually ^{9*}
PASCO	If PASCO unit is not used, then must perform manual distress survey in < 6 months ³	Not specified	Biennially ^{9*}
Friction	< 12 months ¹	< 12 months ¹	None

¹DCG, Section 3.2, May 1991⁴D-09, Dec. 20, 1996⁷P-02, Sept. 1, 1994²D-02, Jan. 7, 1991⁵FWD-03, Sept. 16, 1993⁸GO-20, Mar. 23, 1999³D-05, Mar. 14, 1995⁶FWD-10, Sept. 1, 1994⁹GO-21, Oct. 1, 1999

*For supplemental sections, the frequencies are every 3 years for manual distress, every 2 years and responsive for PASCO, and every 5 years and responsive for FWD testing.

In addition, closeout monitoring (FWD, profile, and manual distress surveys) should be conducted on each section. According to Directive GO-21, this is “when it is determined that the test section will be taken out-of-study (due to a construction event or at the option of the highway agency) or at the end of the field monitoring portion of the LTPP program, whichever comes first.”

MONITORING FREQUENCIES AS COLLECTED

Appendix C provides a tabular listing for all of the monitoring activity dates at each SPS-6 section. These dates were used to determine the monitoring interval of each data collection type for each SPS-6 section. These testing frequencies were then summarized in tables 21 through 29 for each SPS-6 site. Each of these monitoring tables evaluates the monitoring interval prior to rehabilitation, immediately after rehabilitation, and throughout the long-term monitoring of these sections. These tables also include an additional column listing the number of sections without long-term monitoring data. It should be noted that most of the sections without long-term monitoring are a result of long-term monitoring data not having been entered or collected for the supplemental pavement sections. For easy comparison of the actual testing frequencies and the frequencies specified in the directives, the periods prior to and immediately after rehabilitation were assessed in terms of months and long-term monitoring was assessed in terms of years.

All of the testing intervals are assumed to originate from the end of the construction date. This date was determined by evaluating various SPS-6 rehabilitation tables. The rehabilitation dates were then compared, and the date that rehabilitation was completed was determined. Based on the intervals specified in the directives listed in table 19, it was assumed that the testing interval immediately after construction should have occurred within the first 12-month interval after construction, except for friction that was limited to an 18-month interval. These monitoring intervals are slightly greater than those specified in the directives to allow for a reasonable margin of error within the desired testing interval. It was assumed that if a section was not tested within the 12- or 18-month interval immediately after construction, then the monitoring for the interval immediately after construction was not conducted. Therefore, any testing that exceeds the 12- or 18-month interval immediately after construction was then included as part of the long-term monitoring.

The directives for the fractured PCC pavement states that testing must be conducted prior to fracturing the PCC; immediately after fracturing the PCC, but prior to seating; and immediately after seating, but before placement of the AC overlay. Because it is very difficult to identify the monitoring activities of the fractured sections that were tested immediately before and then after seating, this information was not assessed at this time. Monitoring activities conducted before rehabilitation (before cracking) and after rehabilitation (after placement of the AC overlay) were included in table 23.

The long-term monitoring interval begins immediately following the initial monitoring after rehabilitation and, therefore, does not include any testing prior to or immediately after rehabilitation, and ends at the test date prior to the deassign date. The long-term monitoring portion of the tables also provides a more detailed summary of the testing interval, including the minimum, maximum, and mean testing intervals that occurred during the long-term monitoring of each section.

Table 21. SPS-6 testing frequency for longitudinal profile.

State	Age, years	Number of Sections Tested Before Construction	Number of Sections Tested After Construction	Long-Term Monitoring (LTM), years			Number of Sections Without LTM
				Minimum	Mean	Maximum	
AL	1.1	11 of 11	0 of 11	–	–	–	11
AZ	8.8	13 of 19	19 of 19	0.4	0.9	1.8	11
AR	2.6	8 of 8	8 of 8	0.5	1.4	2.0	2
CA	6.9	13 of 14	13 of 14	1.9	2.5	3.2	7
IL	9.1	14 of 14	10 of 14	0.8	1.7	4.0	6
IN	8.9	22 of 22	21 of 22	0.6	1.4	3.0	14
IA	9.9	1 of 9	9 of 9	0.8	1.5	4.9	1
MI	9.2	9 of 9	8 of 9	0.4	1.5	3.2	1
MO	6.9	16 of 16	13 of 16	0.6	1.5	2.8	8
MO(A)	0.9	0 of 8	0 of 8	–	–	–	8
OK	6.9	8 of 8	8 of 8	1.8	3.0	4.4	0
PA	6.8	11 of 11	11 of 11	0.9	1.2	1.9	3
SD	6.8	11 of 11	0 of 11	0.8	1.4	2.9	3
TN	3.1	8 of 10	10 of 10	–	–	–	10

Table 22. SPS-6 testing frequency for nonfractured deflection testing.

State	Age, years	Number of Sections Tested Before Construction	Number of Sections Tested After Construction	Long-Term Monitoring (LTM), years			Number of Sections Without LTM
				Minimum	Mean	Maximum	
AL	1.1	6 of 6	0 of 6	–	–	–	6
AZ	8.8	6 of 6	6 of 6	0.5	1.3	3.1	0
AR	2.6	6 of 6	6 of 6	–	–	–	6
CA	6.9	5 of 6	5 of 6	0.8	2.4	3.7	1
IL	9.1	10 of 10	10 of 10	0.8	1.5	2.3	4
IN	8.9	4 of 10	4 of 10	0.8	1.5	3.2	4
IA	9.9	6 of 7	7 of 7	0.6	1.3	1.8	1
MI	9.2	6 of 6	0 of 6	1.0	1.9	2.7	0
MO	6.9	7 of 8	6 of 8	0.0	1.5	3.2	2
MO(A)	0.9	1 of 6	1 of 6	–	–	–	6
OK	6.9	6 of 6	6 of 6	2.8	2.8	2.8	0
PA	6.8	6 of 6	2 of 6	0.0	2.3	3.2	0
SD	6.8	8 of 8	8 of 8	0.6	1.9	3.0	2
TN	3.1	8 of 8	8 of 8	–	–	–	8

Table 23. SPS-6 testing frequency for fractured deflection testing.

State	Age, years	Number of Sections Tested Before Construction	Number of Sections Tested After Construction	Long-Term Monitoring (LTM), years			Number of Sections Without LTM
				Minimum	Mean	Maximum	
AL	1.1	5 of 5	0 of 5	—	—	—	5
AZ	8.8	7 of 13	13 of 13	0.5	2.2	3.1	11
AR	2.6	2 of 2	2 of 2	—	—	—	2
CA	6.9	8 of 8	8 of 8	0.8	1.8	2.9	6
IL	9.1	4 of 4	4 of 4	0.9	1.6	2.3	2
IN	8.9	7 of 12	7 of 12	0.8	1.5	3.2	10
IA	9.9	2 of 2	2 of 2	0.6	1.3	1.9	0
MI	9.2	3 of 3	0 of 3	1.0	1.8	2.7	1
MO	6.9	8 of 8	2 of 8	0.4	1.4	3.1	6
MO(A)	0.9	0 of 2	0 of 2	—	—	—	2
OK	6.9	2 of 2	2 of 2	2.8	2.8	2.8	0
PA	6.8	5 of 5	0 of 5	3.2	3.2	3.2	3
SD	6.8	3 of 3	3 of 3	0.6	1.9	3.0	1
TN	3.1	2 of 2	2 of 2	—	—	—	2

Table 24. SPS-6 testing frequency for manual distress.

State	Age, years	Number of Sections Tested Before Construction	Number of Sections Tested After Construction	Long-Term Monitoring (LTM), years			Number of Sections Without LTM
				Minimum	Mean	Maximum	
AL	1.1	11 of 11	11 of 11	—	—	—	11
AZ	8.8	0 of 19	19 of 19	0.5	2.6	3.1	13
AR	2.6	8 of 8	8 of 8	—	—	—	8
CA	6.9	13 of 14	13 of 14	0.8	2.0	3.7	7
IL	9.1	1 of 14	0 of 14	0.5	1.7	6.2	6
IN	8.9	0 of 22	6 of 22	0.3	1.6	3.2	14
IA	9.9	0 of 9	0 of 9	0.9	2.3	3.7	4
MI	9.2	0 of 9	0 of 9	0.3	1.7	3.4	1
MO	6.9	14 of 16	16 of 16	0.7	1.4	2.5	8
MO(A)	0.9	5 of 8	1 of 8	—	—	—	8
OK	6.9	8 of 8	8 of 8	0.6	1.5	2.6	0
PA	6.8	0 of 11	0 of 11	1.9	2.6	3.2	3
SD	6.8	0 of 11	8 of 11	0.8	2.7	3.0	3
TN	3.1	0 of 10	0 of 10	—	—	—	10

Table 25. SPS-6 testing frequency for PASCO testing.

State	Age, years	Number of Sections Tested Before Construction	Number of Sections Tested After Construction	Long-Term Monitoring (LTM), years			Number of Sections Without LTM
				Minimum	Mean	Maximum	
AL	1.1	0 of 11	0 of 11	–	–	–	11
AZ	8.8	8 of 19	0 of 19	–	–	–	19
AR	2.6	0 of 8	0 of 8	–	–	–	8
CA	6.9	0 of 14	0 of 14	2.8	2.8	2.8	7
IL	9.1	8 of 14	9 of 14	1.7	1.7	1.7	6
IN	8.9	22 of 22	0 of 22	3.1	3.1	3.1	15
IA	9.9	8 of 9	8 of 9	0.6	2.3	3.0	1
MI	9.2	7 of 9	0 of 9	2.0	2.0	2.0	1
MO	6.9	0 of 16	0 of 16	3.0	3.0	3.0	8
MO(A)	0.9	0 of 8	0 of 8	–	–	–	8
OK	6.9	0 of 8	8 of 8	3.1	3.1	3.1	0
PA	6.8	0 of 11	0 of 11	1.9	1.9	1.9	3
SD	6.8	0 of 11	8 of 11	2.8	2.8	2.8	3
TN	3.1	10 of 10	10 of 10	–	–	–	10

Table 26. SPS-6 testing frequency for combination of manual distress and PASCO testing.

State	Age, years	Number of Sections Tested Before Construction	Number of Sections Tested After Construction	Long-Term Monitoring (LTM), years			Number of Sections Without LTM
				Minimum	Mean	Maximum	
AL	1.1	11 of 11	11 of 11	–	–	–	11
AZ	8.8	8 of 19	19 of 19	0.5	2.4	3.5	11
AR	2.6	8 of 8	8 of 8	–	–	–	8
CA	6.9	13 of 14	13 of 14	0.1	1.2	3.1	7
IL	9.1	8 of 14	9 of 14	0.5	1.2	2.5	6
IN	8.9	22 of 22	6 of 22	0.2	1.1	2.0	14
IA	9.9	8 of 9	8 of 9	0.4	1.8	3.0	1
MI	9.2	7 of 9	0 of 9	0.0	1.0	3.3	1
MO	6.9	14 of 16	16 of 16	0.0	1.3	2.5	8
MO(A)	0.9	5 of 8	1 of 8	–	–	–	8
OK	6.9	8 of 8	8 of 8	0.3	1.0	1.5	0
PA	6.8	0 of 11	0 of 11	0.1	1.3	1.9	3
SD	6.8	0 of 11	11 of 11	0.7	1.4	2.1	3
TN	3.1	10 of 10	10 of 10	–	–	–	10

Table 27. SPS-6 testing frequency for faulting.

State	Age, years	Number of sections Tested Before Construction	Number of Sections Tested After Construction	Long-Term Monitoring (LTM), years			Number of Sections Without LTM
				Minimum	Mean	Maximum	
AL	1.1	11 of 11	3 of 11	—	—	—	3
AZ	8.8	0 of 19	3 of 19	0.5	0.5	0.5	2
AR	2.6	8 of 8	3 of 8	—	—	—	3
CA	6.9	0 of 14	2 of 14	1.3	2.8	3.7	1
IL	9.1	0 of 14	0 of 14	0.0	1.4	3.2	2
IN	8.9	0 of 22	0 of 22	0.9	1.9	3.2	1
IA	9.9	0 of 9	0 of 9	0.9	0.9	0.9	2
MI	9.2	0 of 9	0 of 9	0.8	1.3	2.0	0
MO	6.9	3 of 16	0 of 16	1.8	2.5	3.2	1
MO(A)	0.9	0 of 8	0 of 8	—	—	—	3
OK	6.9	8 of 8	3 of 8	0.6	1.5	2.6	0
PA	6.8	8 of 11	0 of 11	1.9	2.5	3.2	0
SD	6.8	0 of 11	3 of 11	1.2	2.6	3.0	0
TN	3.1	10 of 10	3 of 10	—	—	—	3

Table 28. SPS-6 testing frequency for transverse profile of rutting.

State	Age, years	Number of Sections Tested Before Construction	Number of Sections Tested After Construction	Long-Term Monitoring (LTM), years			Number of Sections Without LTM
				Minimum	Mean	Maximum	
AL	1.1	0 of 8	8 of 8	—	—	—	8
AZ	8.8	0 of 16	8 of 16	0.5	2.0	3.0	11
AR	2.6	0 of 5	2 of 5	—	—	—	5
CA	6.9	5 of 11	5 of 11	0.1	1.5	3.6	6
IL	9.1	0 of 9	0 of 9	0.2	1.3	2.5	4
IN	8.9	0 of 19	3 of 19	0.0	1.2	2.9	14
IA	9.9	0 of 6	0 of 6	0.4	1.2	3.0	1
MI	9.2	0 of 6	0 of 6	0.0	1.0	2.7	1
MO	6.9	0 of 12	5 of 12	0.2	1.1	2.4	7
MO(A)	0.9	0 of 5	1 of 5	—	—	—	5
OK	6.9	5 of 5	5 of 5	0.3	1.9	3.1	0
PA	6.8	0 of 8	0 of 8	0.1	1.3	1.9	3
SD	6.8	0 of 8	5 of 8	0.3	1.3	2.1	3
TN	3.1	0 of 7	0 of 7	—	—	—	7

Table 29. SPS-6 testing frequency for friction testing.

State	Age, years	Number of Sections Tested Before Construction	Number of Sections Tested After Construction	Long-Term Monitoring (LTM), years			Number of Sections Without LTM
				Minimum	Mean	Maximum	
AL	1.1	0 of 11	0 of 11	–	–	–	11
AZ	8.8	0 of 19	0 of 19	1.1	1.1	1.1	11
AR	2.6	0 of 8	0 of 8	–	–	–	8
CA	6.9	0 of 14	0 of 14	–	–	–	14
IL	9.1	0 of 14	0 of 14	–	–	–	14
IN	8.9	0 of 22	8 of 22	0.7	1.0	2.2	14
IA	9.9	0 of 9	8 of 9	0.0	1.0	1.3	1
MI	9.2	0 of 9	0 of 9	2.0	2.6	3.3	1
MO	6.9	0 of 16	7 of 16	0.9	1.5	1.9	8
MO(A)	0.9	0 of 8	0 of 8	–	–	–	8
OK	6.9	0 of 8	0 of 8	–	–	–	8
PA	6.8	0 of 11	0 of 11	–	–	–	11
SD	6.8	0 of 11	0 of 11	–	–	–	11
TN	3.1	0 of 10	0 of 10	–	–	–	10

The directives do not limit the interval when closeout tests must be performed. It can be assumed that the last test conducted during the long-term monitoring of each section is the closeout test. Therefore, closeout monitoring was not evaluated during this analysis.

Based on these assumptions, the frequency of the monitoring data is summarized for each site in tables 21 through 29. For each of these tables, the number of sections tested before and after construction is given in terms of the total number of sections. For example, in table 21, Alabama had 11 of 11 sections that had received longitudinal profile monitoring immediately before and after rehabilitation. In addition, all of these sections have had long-term monitoring ranging from an interval of 0.9 to 3.0 years. Most of the sites have received the required testing.

The more recently rehabilitated sections, including Alabama, Arkansas, Missouri (A), and Tennessee may have received all of the initial monitoring immediately before and after construction as specified in the directives. However, this information may be in the process of being entered into the regional IMS databases and, therefore, had not yet reached the IMS database as of the August 1999 or January 2000 IMS downloads.

Figures 3 through 11 visually show the long-term monitoring intervals that were graphically presented in tables 21 through 29 for each of the data monitoring types. Each figure shows the long-term monitoring intervals for all sections of a particular site. This includes the minimum and maximum testing interval, and the average monitoring frequency that occurred at each site. Typically, all of the sections within a site were tested within a 3-year period.

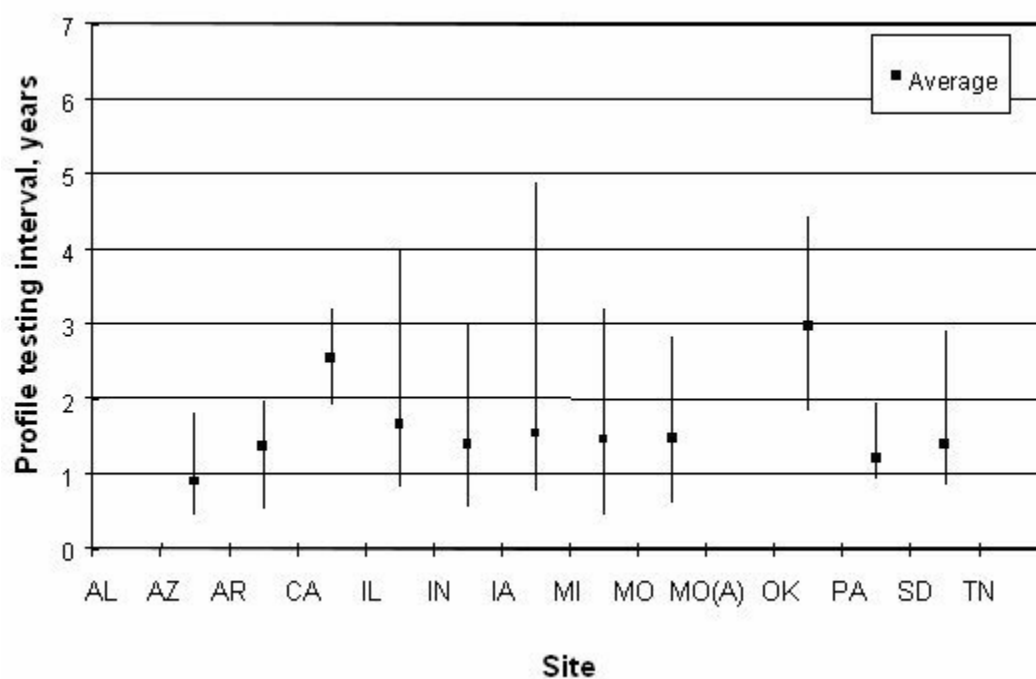


Figure 3. Profile testing intervals for each site.

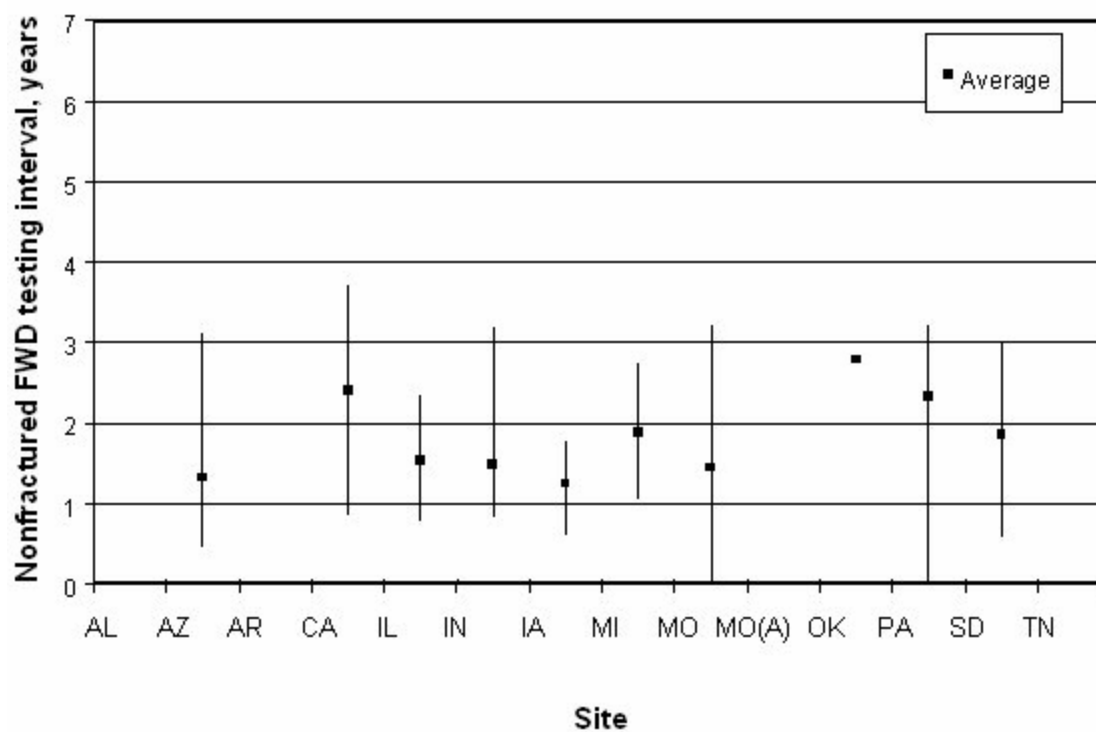


Figure 4. Nonfractured FWD testing intervals for each site.

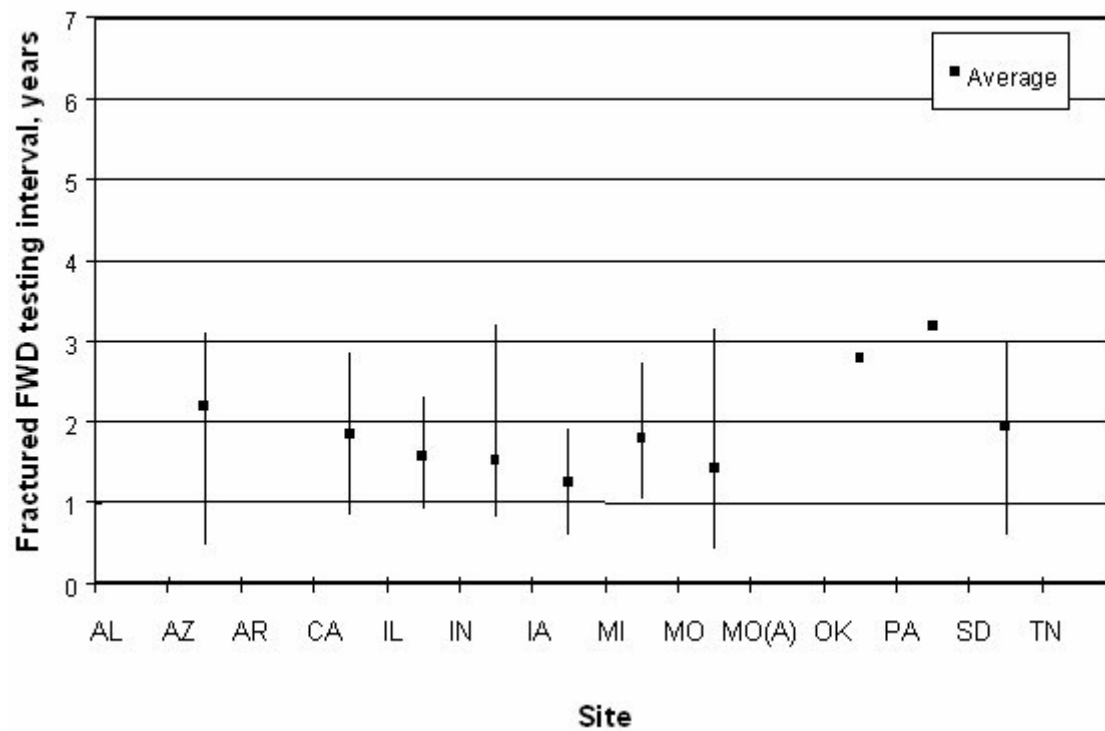


Figure 5. Fractured FWD testing intervals for each site.

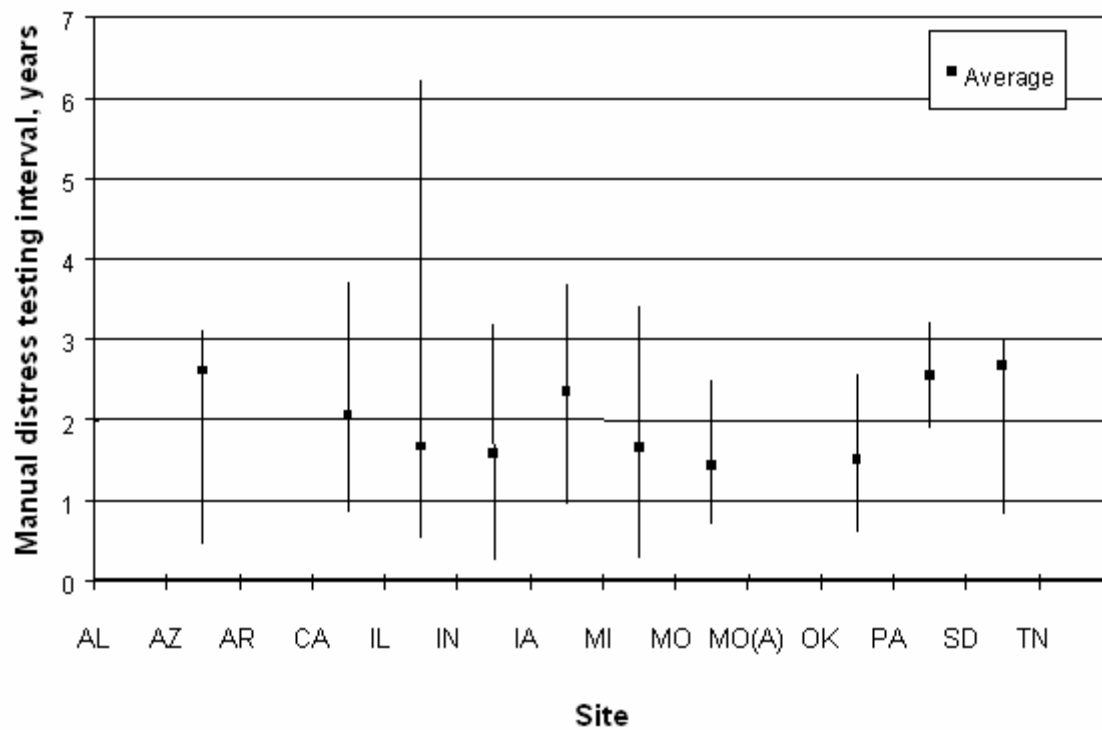


Figure 6. Manual distress testing intervals for each site.

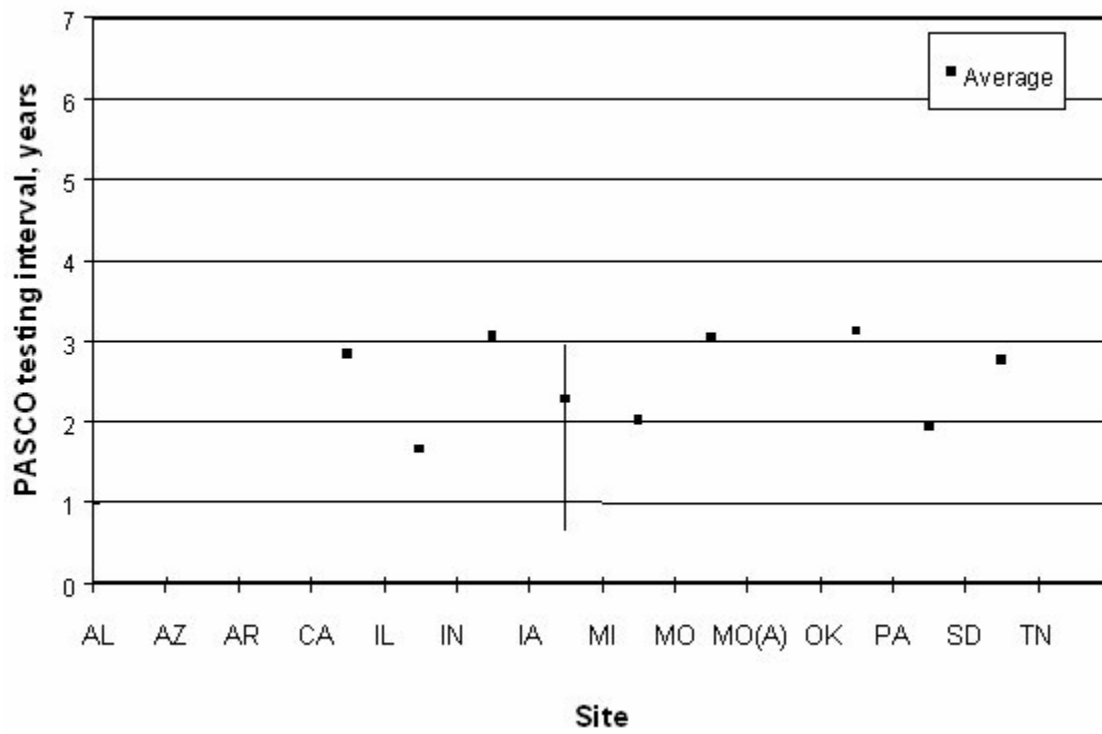


Figure 7. PASCO testing intervals for each site.

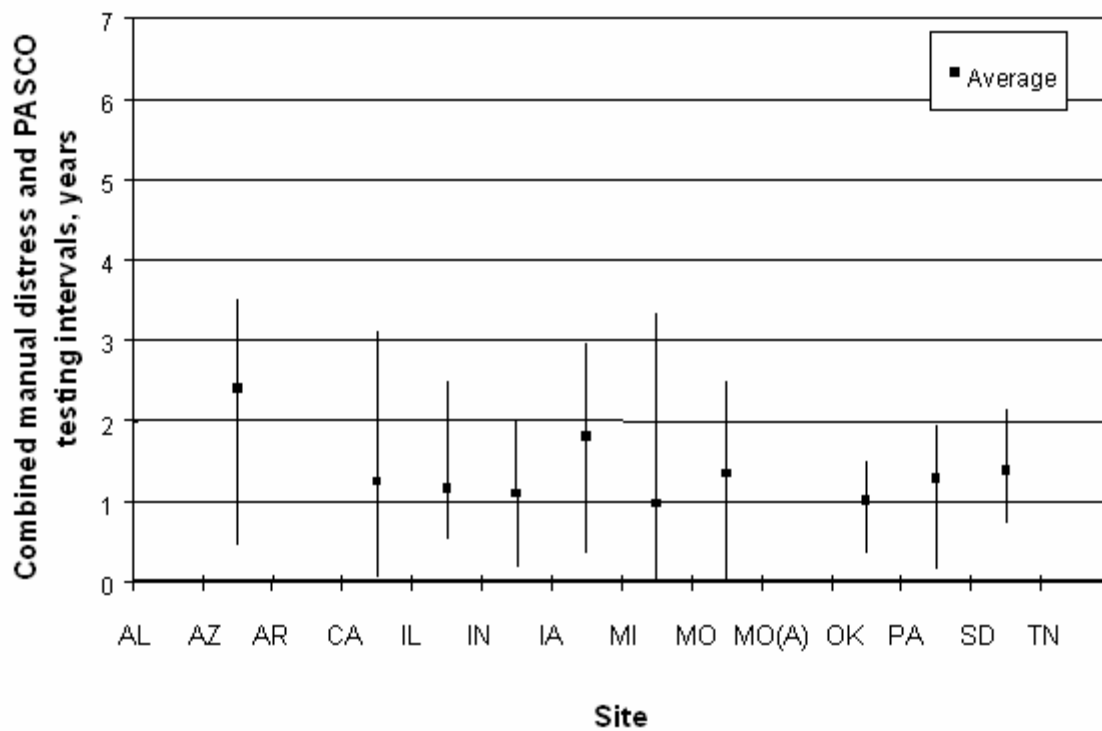


Figure 8. Combined manual distress and PASCO testing intervals for each site.

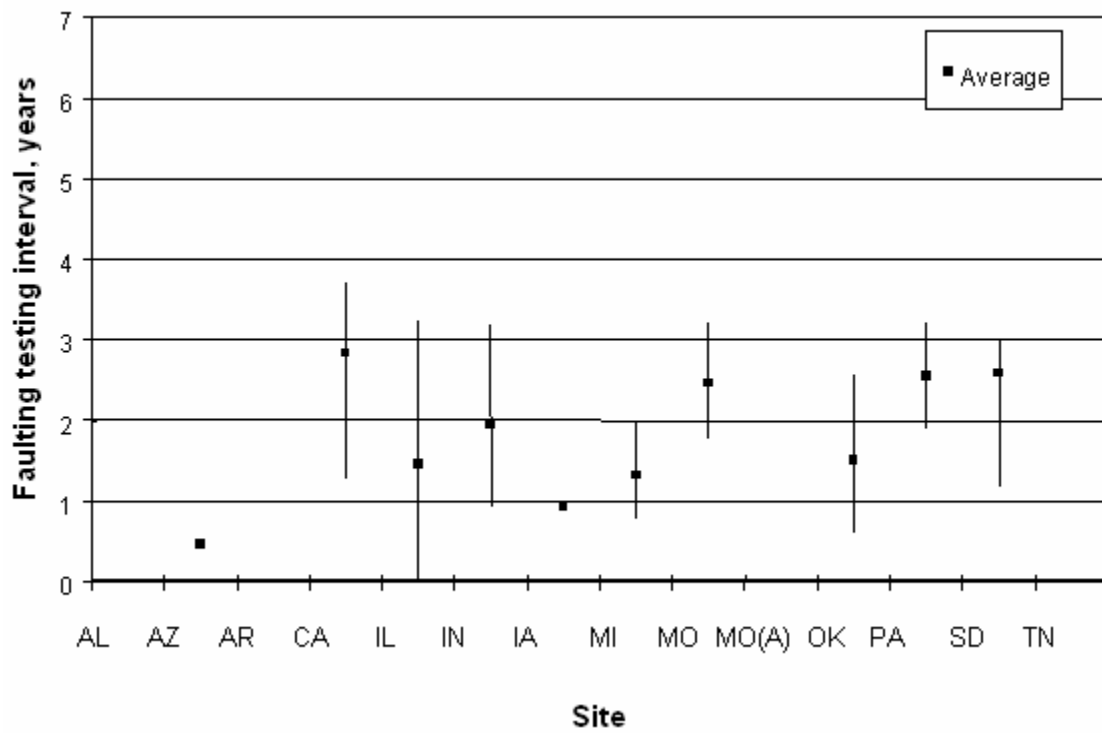


Figure 9. Faulting testing intervals for each site.

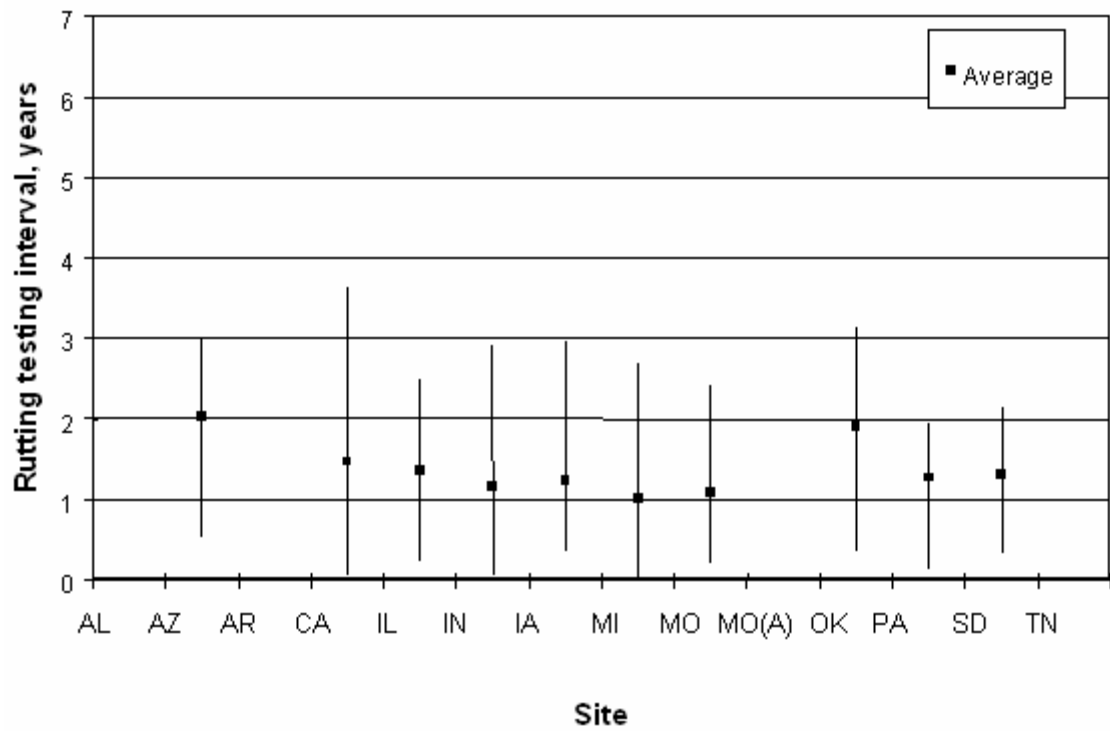


Figure 10. Rutting testing intervals for each site.

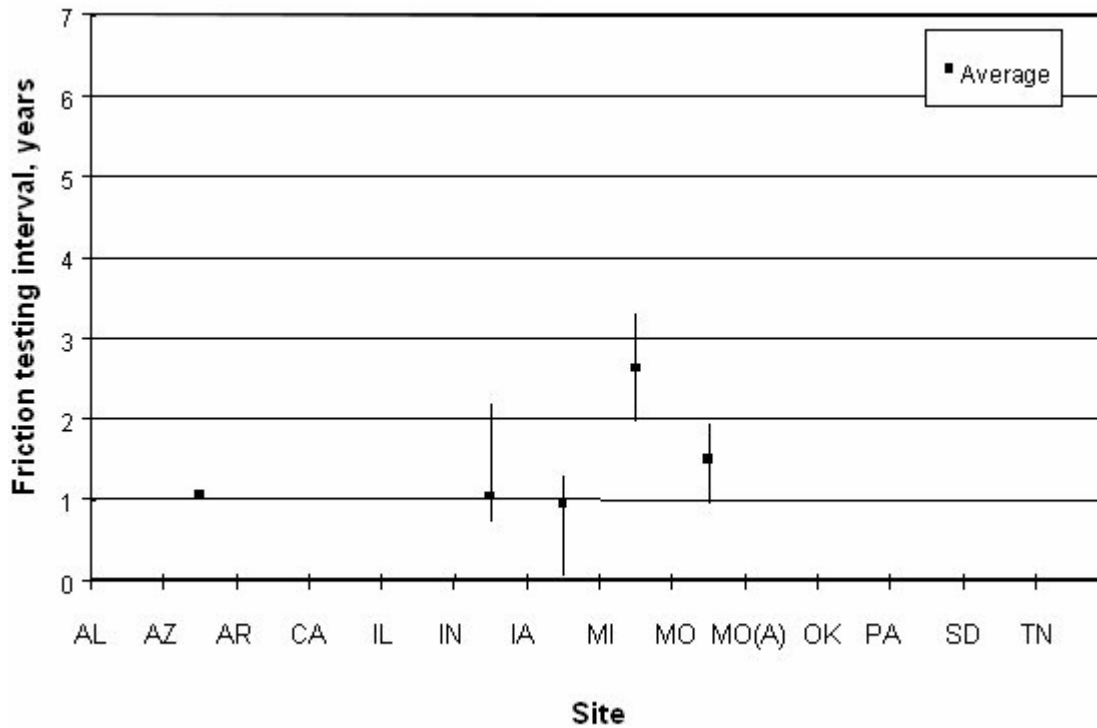


Figure 11. Friction testing intervals for each site.

In addition, because the data collection monitoring for the manual distress and PASCO surveys is used to identify the same information (surface distress), these dates were combined in figure 8. Using the combination of manual distress and PASCO survey dates, almost all of the sites have an average survey time of between 1 and 2 years. This interval is very good and it is vital information that will be used later to evaluate each pavement section. Surface distress may be a key parameter in identifying and recommending appropriate rehabilitation techniques for future projects.

5. DESIGN VERSUS ACTUAL CONSTRUCTION

One of the main objectives of this report is to identify factors introduced into the SPS-6 experiment by virtue of construction deviation or other factors not accounted for in the original experimental design. It is important to evaluate the design variables that are considered key design factors in the SPS-6 experiment and to determine if the as-constructed sections meet the design parameters established in the design factorial. Therefore, this section of the report evaluates the design construction versus the actual construction of key variables as defined by the guidelines for the experiment. The major guidelines established in these documents are described below:

The first report, *Guidelines for Nomination and Evaluation of Candidate Projects for Experiment SPS-6 Rehabilitation of Jointed Portland Cement Concrete Pavements*, was used to nominate potential candidates for the SPS-6 experiment.⁽¹⁷⁾ According to this report, several key guidelines were listed as follows:

- Entire project must have the same structural design and construction date.
- Type, extent, and severity of distress should be relatively uniform over the entire project.
- Fine-grained soils, such as silty clay materials (A-4, A-5, A-6, and A-7), are preferred; however, coarse-grained soils will also be considered.
- Pavement must have at least 76 mm (3 inches) of a stabilized or unstabilized base or subbase.
- Original PCC pavement must have been constructed between 1965 and 1979.
- PCC pavement must be 203 to 254 mm (8 to 10 inches) thick.

The second report, *Specific Pavement Studies Construction Guidelines for Experiment SPS-6, Rehabilitation of Jointed Portland Cement Concrete Pavements*, establishes the rehabilitation guidelines for each of the SPS-6 sections.⁽¹⁸⁾ This includes the following guidelines:

- Thickness tolerances for the AC overlays are ± 6 mm (0.2 inches) for a 102- (4-inch) AC overlay and ± 12 mm (0.5 inches) for a 203-mm (8-inch) AC overlay.
- Finished AC overlay surfaces should have a prorated profile index (PI) of less than 0.16 m per kilometer (km) (10 inches per mile (mi)) as measured by a California-type profilograph.
- If a friction course is added to the pavement surface, it shall be limited to 19 mm (0.7 inches) and should not be included in the structural thickness of the AC overlay.

This report also defines the rehabilitation treatments to be applied for each experiment section type. This includes all mandatory and optional rehabilitation treatments, and specific rehabilitation treatments that should not be performed.

This chapter evaluates the design construction versus the actual construction of key variables identified from the experimental design factorial and the experiment guidelines mentioned above. This includes:

- Site climatic condition.
- Site traffic.
- Construction age of original PCC and rehabilitated pavement.
- Pavement structure.
- Initial AC smoothness.
- Rehabilitation treatments.

SITE CLIMATIC CONDITION

All sections in the LTPP program are classified by climatic region based on annual precipitation and the annual freezing index. It was determined that pavements that receive less than 508 mm (20 inches) of precipitation are located in a “dry” region, while precipitation greater than this amount indicates a “wet” region. Pavements located in areas where the annual freezing index is less than 83.3 degree-days (degrees Celsius (°C)) are classified as “no freeze” regions, while a value greater than this indicates a “freeze” region. These climatic zones were used to develop the original SPS-6 design matrix.

Based on this classification system, each of the SPS-6 sites was selected to fill part of the original design matrix. The designated precipitation and freezing index zones are listed in tables 30 and 31, respectively. The actual annual precipitation and freezing index values for each site were obtained from the IMS tables CLM_VWS_PRECIP_ANNUAL and CLM_VWS_TEMP_ANNUAL, respectively, with the exception of the California site. The climatic information was not included in the database received from IMS. Therefore, the climatic information for California was obtained from the DataPave, version 2.0, software program. The average annual precipitation and freezing index values were then compared to those of the designated zone for each SPS-6 site.

Tables 30 and 31 summarize the design versus constructed climatic results. As shown in these tables, most of the sections were constructed in the anticipated climatic zones. However, a few sections did not quite meet the criteria. According to the limits established by the LTPP program, the Arizona, California, and South Dakota sites should be classified as “wet” climatic zones. In addition, the Oklahoma and Tennessee sites should be classified as “freeze” climatic zones and the California sites should be classified as “no freeze” climatic zones.

These changes in the designated climatic zones will alter the original experimental design matrix. This will result in more sites located in the wet-freeze zone and, consequently, fewer sites located in the wet-no freeze and dry-freeze zones.

Table 30. Summary of SPS-6 design versus constructed average annual precipitation.

State	Weather Station	Designated		From General Climatic Information	Same as Designated?
		Zone	Precipitation, mm	Actual Precipitation, mm	
AL	N/A	Wet	> 508	N/A	–
AZ	VWS	Dry	< 508	548	No
AR	VWS	Wet	> 508	1326	Yes
CA	N/A	Dry	< 508	910*	No
IL	VWS	Wet	> 508	1040	Yes
IN	VWS	Wet	> 508	980	Yes
IA	VWS	Wet	> 508	860	Yes
MI	VWS	Wet	> 508	782	Yes
MO	VWS	Wet	> 508	983	Yes
MO(A)	N/A	Wet	> 508	N/A	–
OK	VWS	Wet	> 508	855	Yes
PA	VWS	Wet	> 508	1031	Yes
SD	VWS	Dry	< 508	529	No
TN	VWS	Wet	> 508	1363	Yes

1 mm = .039 inch

N/A = not available

VWS = Contains link between test site and associated virtual weather station.

*Information obtained from DataPave.

Table 31. Summary of design versus constructed average annual freezing index.

State	Weather Station	Designated		From General Climatic Information	Same as Designated?
		Zone	Freezing Index, degree-days (°C) (Designed)	Freezing Index, degree-days (°C) (Actual)	
AL	N/A	No Freeze	< 83.3	N/A	–
AZ	VWS	Freeze	> 83.3	275	Yes
AR	VWS	No Freeze	< 83.3	46	Yes
CA	N/A	Freeze	> 83.3	59*	No
IL	VWS	Freeze	> 83.3	343	Yes
IN	VWS	Freeze	> 83.3	472	Yes
IA	VWS	Freeze	> 83.3	656	Yes
MI	VWS	Freeze	> 83.3	550	Yes
MO	VWS	Freeze	> 83.3	427	Yes
MO(A)	N/A	Freeze	> 83.3	N/A	–
OK	VWS	No Freeze	< 83.3	142	No
PA	VWS	Freeze	> 83.3	405	Yes
SD	VWS	Freeze	> 83.3	1068	Yes
TN	VWS	No Freeze	< 83.3	94	No

°F=1.8*°C+32

N/A = not available

VWS = Contains link between test site and associated virtual weather station.

*Information obtained from DataPave.

SITE TRAFFIC

Table 32 lists the average annual ESALs for each SPS-6 site. Alabama, Arkansas, Missouri (A), and Tennessee do not have any ESAL information in the IMS database. Arizona and California have negative ESAL values in the IMS database. These values are in error and should be corrected before further analysis is conducted. Of the remaining sites, only South Dakota does not meet the ESAL requirement of more than 200,000 rigid ESALs per year. However, based on the location of the site in South Dakota, the ESAL values appear to be correct even though they are lower than that required for the SPS-6 experiment.

Table 32. Average annual ESALs for each SPS-6 site.

State	Designated Design ESALs	Actual Average ESALs	Same as Designed?
AL	> 200,000	N/A	–
AZ	> 200,000	Negative value	–
AR	> 200,000	N/A	–
CA	> 200,000	Negative value	–
IL	> 200,000	619,495	Yes
IN	> 200,000	443,417	Yes
IA	> 200,000	369,056	Yes
MI	> 200,000	345,230	Yes
MO	> 200,000	499,948	Yes
MO(A)	> 200,000	N/A	–
OK	> 200,000	373,309	Yes
PA	> 200,000	2,136,964	Yes
SD	> 200,000	58,630	No
TN	> 200,000	N/A	–

N/A = not available

Because of the existing condition of the calculated ESAL values, a brief review of the single- and tandem-axle distributions and the vehicle classification trends was conducted. In general, the traffic trends appear to be reasonable from year to year. Occasionally, it appears that 1 or 2 years of traffic data were not consistent with the rest of the years. These data should be reviewed and adjusted or corrected as required.

CONSTRUCTION AGE OF ORIGINAL PCC AND REHABILITATED PAVEMENT SECTIONS

According to the design guidelines, the original PCC pavement must have been constructed between 1965 and 1979. Most of the data obtained for this comparison were extracted from the INV_AGE table of the IMS database. Additional dates were obtained from the SPS construction forms/construction reports as noted. The ages of the original PCC pavements (constructed and opened to traffic) for each site are listed in table 33.

Based on these results, most of the sites meet the design guidelines. It should be noted that, of the sites that do not meet the age criteria, Alabama, Illinois, Michigan, and Oklahoma are older than the construction age desired for the project. This should pose no significant problem in the analysis.

Table 33. Designed versus selected age of original PCC.

State	Constructed	Open to Traffic	Design Age Criteria	Meets Design Criteria?
AL	N/A	1/01/64*	1965-1979	No
AZ	9/01/66	1/01/67		Yes
AR	12/01/78	1/01/79		Yes
CA	11/01/73	8/01/74		Yes
IL	6/01/64	4/01/65		No
IN	1/01/72	1/01/74		Yes
IA	11/01/65	11/01/65		Yes
MI	6/01/58	6/01/58		No
MO	7/01/75	10/01/75		Yes
MO(A)	N/A	1/01/69*		Yes
OK	11/01/62	1/01/63		No
PA	9/01/68	9/01/68		Yes
SD	4/01/73	10/01/73		Yes
TN	N/A	1/01/66*		Yes

N/A = not available

*Dates obtained from the SPS construction report or LTPP coordinating offices.

PAVEMENT STRUCTURE

Several key parameters were developed for the pavement structure, including the subgrade, base, PCC, and AC overlay layers. Within each of these layers, there are key design components that will affect the overall quality of the SPS-6 experiment. Each key design component was evaluated and discussed as follows for each section within the experiment. This information was extracted from the TST_L05B table (levels A through E) unless specified otherwise.

Subgrade

The initial guidelines established for this experiment identify the subgrade material type as a key design variable.

Material Type

The factorial design for this experiment identifies the fine-grained subgrade soils, such as silty clay materials (A-4, A-5, A-6, and A-7), as influencing factors; however, sections with coarse-grained subgrade soils will also be considered. Table 34 lists the subgrade material codes that were used in the SPS-6 experiment. Most of these codes refer to fine-grained subgrade materials. A few sections have subgrade materials classified as coarse-grained. Even though coarse-grained materials are not recommended for inclusion in this experiment, they are tolerated and, therefore, are included in the study.

Table 35 shows the subgrade material codes for each core and supplemental section included in the experiment. As shown in the table, each section within the experiment has uniform subgrade materials. In addition, most of the sites generally have similar subgrade materials within the

entire site. Only Arizona and California were constructed on coarse-grained subgrades. In addition, a couple of sections in Tennessee were also built on coarse-grained subgrade materials.

Table 34. IMS material codes and description.

Material Code	Material Code Description
102	Fine-grained soils: Lean inorganic clay
104	Fine-grained soils: Clay with gravel
113	Fine-grained soils: Sandy clay
114	Fine-grained soils: Sandy lean clay
119	Fine-grained soils: Sandy clay with gravel
131	Fine-grained soils: Silty clay
141	Fine-grained soils: Silt
148	Fine-grained soils: Clayey silt
203	Coarse-grained soils: Poorly graded sand with gravel
204	Coarse-grained soils: Poorly graded sand with silt
215	Coarse-grained soils: Silty sand with gravel
253	Coarse-grained soils: Poorly graded gravel with sand
287	Sandstone

Base Layer

The initial guidelines established for this experiment identify the thickness of the existing base layer as a key variable in this experiment.

Thickness

As part of the selection criteria for the SPS-6 factorial design, all of the core sections should have a base thickness of at least 76 mm (3 inches). This thickness includes all stabilized or unstabilized base and subbase materials. Table 36 shows the average base thickness for each core and supplemental section included in the experiment. All of the core and State supplemental sections have thicknesses of at least 76 mm (3 inches) and, therefore, meet this criterion.

Table 35. As-constructed subgrade material type.

Section	State											
	AL	AZ	AR	CA	IL	IN	IA	MI	MO	MO(A)	OK	PA
***601	113	287	–	–	113	–	113	131	113	–	141	141
***602	113	287	–	253	113	113	113	131	113	–	141	141
***603	113	287	–	253	113	113	113	131	113	–	141	141
***604	113	287	–	253	113	113	113	131	113	–	141	141
***605	113	215	–	253	113	113	113	131	113	–	141	141
***606	113	215	–	253	113	113	113	131	113	–	141	141
***607	113	287	–	253	113	113	113	104	113	–	141	141
***608	113	215	–	203	113	113	113	104	113	–	141	141
***659		215		253	113	113	113	104	113			
***660		215		253	113	113			113			141
***661	113	287		253	113	113			113			141
***662	113	215		203	113	113			113			141
***663	113	215		203	113	113			113			
***664		287		253	113	113			113			
***665		287				113			113			
***666		287				113			113			
***667		287				113						
***668		287				113						
***669		287				113						
***670						113						
***671						113						
***672						113						
Materials in Each State	113	215/287		203/253	113	113	113	104/131	113		141	141

Table 36. Designed versus constructed base thickness.

Section	Design Base Thickness, mm	State										
		AL	AZ	AR	CA	IL	IN*	IA*	MI	MO	MO(A)	OK
***601	At least 76	N/A	325	N/A	N/A	178	76	102	1321	107	N/A	419
***602	At least 76	N/A	853	N/A	104	178	76	102	1321	86	N/A	419
***603	At least 76	N/A	307	N/A	102	178	76	102	1016	122	N/A	386
***604	At least 76	N/A	274	N/A	130	178	76	102	1016	114	N/A	386
***605	At least 76	N/A	851	N/A	114	178	76	102	1321	97	N/A	376
***606	At least 76	N/A	292	N/A	114	178	76	102	1016	89	N/A	376
***607	At least 76	N/A	452	N/A	117	178	76	102	1778	107	N/A	386
***608	At least 76	N/A	462	N/A	112	183	76	102	1321	135	N/A	376
***659	At least 76		137		124	178	76	102	864	152		
***660	At least 76		284		211	178	76			107		
***661	At least 76	N/A	279		130	178	76			107		
***662	At least 76	N/A	762		130	178	76			140		
***663	At least 76	N/A	274		137	178	76			114		
***664	At least 76		315		135	178	76			130		
***665	At least 76		315				76			117		
***666	At least 76		315				76			117		
***667	At least 76		315				76					
***668	At least 76		315				76					
***669	At least 76		315				76					
***670	At least 76						76					
***671	At least 76						76					
***672	At least 76						76					

1 mm = 039 inch
N/A = not available

*Values listed are the “as-designed” values.

PCC Pavement

The initial guidelines established for this experiment identify the thickness of the existing PCC pavement to be rehabilitated as a key variable in this experiment. In addition, it was specified that the type, extent, and severity of distress should be relatively uniform over the entire project. It is nearly impossible to determine the uniformity of these distresses without the distress maps, which are not currently available. Therefore, at this time, this parameter could not be evaluated.

Thickness

As part of the selection criteria for the SPS-6 factorial design, all of the core sections should have a PCC thickness between 203 and 254 mm (8 and 10 inches). Table 37 shows the average PCC thicknesses for all core and supplemental sections included in the experiment. Because the State supplemental sections are not part of the design factorial established by the experiment, no PCC thickness limits were established for the supplemental sections.

Figure 12 visually illustrates the ranges of constructed PCC thicknesses for the core experiment sections. This figure shows that 9 percent (8 sections) were less than, 89 percent (77 sections) were within, and 2 percent (2 sections) exceeded the proposed design thickness range of 203 to 254 mm (8 to 10 inches).

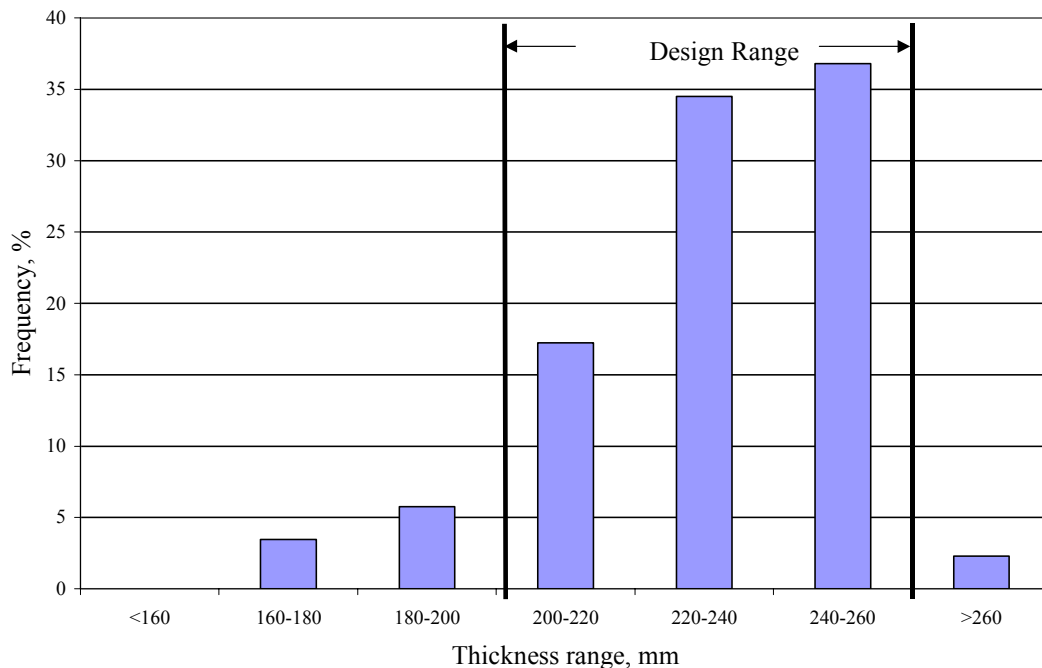


Figure 12. Frequency of PCC thickness.

Table 37. Designed versus constructed PCC thickness.

Section	Design PCC Thickness, mm	State										
		AL	AZ	AR	CA	IL	IN*	IA	MI	MO	MO(A)	OK
***601	203 to 254	N/A	201	N/A	N/A	259	254	254	229	231	N/A	224
***602	203 to 254	N/A	203	N/A	218	257	254	257	229	234	N/A	224
***603	203 to 254	N/A	211	N/A	203	254	254	254	229	231	N/A	229
***604	203 to 254	N/A	208	N/A	211	259	254	246	234	231	N/A	229
***605	203 to 254	N/A	211	N/A	226	259	254	254	229	231	N/A	229
***606	203 to 254	N/A	216	N/A	208	257	254	254	241	226	N/A	231
***607	203 to 254	N/A	213	N/A	208	257	254	254	229	236	N/A	229
***608	203 to 254	N/A	208	N/A	216	257	254	254	236	239	N/A	234
***659	203 to 254		213		216	259	254	244	241	236		
***660	203 to 254		211		114	259	254			246		
***661	203 to 254	N/A	213		216	267	254			239		
***662	203 to 254	N/A	203		208	259	254			239		
***663	203 to 254	N/A	254		25	254	254			241		
***664	203 to 254		201		211	254	254			246		
***665	203 to 254		201				254			229		
***666	203 to 254		201				254			231		
***667	203 to 254		201				254					
***668	203 to 254		201				254					
***669	203 to 254		201				254					
***670	203 to 254						254					
***671	203 to 254						254					
***672	203 to 254						254					

1 mm = 039 inch
N/A = not available

*Values listed are the “as-designed” values.

AC Overlay Thickness

Based on the data stored in IMS for the SPS-6 experimental design plan, sections ***603, ***604, ***606, and ***607 were designed to have 102-mm (4-inch) AC overlays and section ***608 was designed with a 203-mm (8-inch) AC overlay. The allowable construction design thickness ranges from 95 to 108 mm (3.7 inches to 4.3 inches) for the 102-mm (4-inch) overlays and 190 to 216 mm (7.5 inches to 8.5 inches) for the 203-mm (8-inch) overlays.

Table 38 shows the average AC overlay thicknesses as constructed for all core and supplemental sections included in the SPS-6 experiment. Because the State supplemental sections are not part of the design factorial established by the experiment, no AC overlay thickness limits were established. This information is visually illustrated in figures 13 and 14 for the core experiment sections with 102-mm (4-inch) and 203-mm (8-inch) AC overlays, respectively. Figure 13 shows that 16 percent (7 sections) were less than, 48 percent (21 sections) were within, and 36 percent (16 sections) exceeded the design thickness of 102 mm (4 inches). Likewise, figure 14 shows that 27 percent (three sections) were less than, 55 percent (six sections) were within, and 18 percent (two sections) exceeded the proposed design thickness of 203 mm (8 inches).

INITIAL AC OVERLAY SMOOTHNESS

The initial smoothness of the AC overlays has also been identified as a key issue. It is important that the surface of an AC overlay be constructed to a sufficient smoothness. A high degree of variability in the pavement smoothness will result in a very rough riding surface. This constructed roughness may lead to early deterioration of the pavement because of vehicular response and dynamic loading. The smoothness of each AC overlay will be evaluated using the initial PI.

Initial Profile Index

The construction guidelines have noted the importance of AC surface smoothness on the finished surface of the overlay immediately after construction.⁽¹⁸⁾ It is desirable that each AC overlay is smooth and provides an excellent level of ride; each overlay shall be evaluated using the prorated PI. A PI of less than 0.16 m/km (10 inches/mi) (5-mm (0.2-inch) blanking band) as measured by a California-type profilograph will achieve this goal.

Table 38. Designed versus constructed AC overlay thickness.

Section	Design AC Thickness, mm	State										
		AL	AZ	AR	CA	IL	IN*	IA	MI	MO	MO(A)	OK
***601												
***602												
***603	95 to 108	N/A	102	N/A	97	94	102	102	130	97	N/A	102
***604	95 to 108	N/A	102	N/A	114	94	102	117	137	97	N/A	97
***605												
***606	95 to 108	N/A	119	N/A	79	79	102	104	127	91	N/A	109
***607	95 to 108	N/A	117	N/A	94	94	102	104	117	109	N/A	117
***608	190 to 216	N/A	224	N/A	206	173	203	203	173	201	N/A	198
***659	Variable		114		107	84	140	102	102	109		
***660	Variable		216		107		140			198		
***661	Variable	N/A	114		107		102			290		
***662	Variable	N/A	114			89	254			185		
***663	Variable	N/A	51			203	140			272		
***664	Variable		152		107	152	140			175		
***665	Variable		152				140			117		
***666	Variable		152				140					
***667	Variable		152				140					
***668	Variable		152				140					
***669	Variable		152				102					
***670	Variable						102					
***671	Variable						102					
***672	Variable						140					

1 mm = 039 inch

N/A = not available

*Values listed are the “as-designed” values.

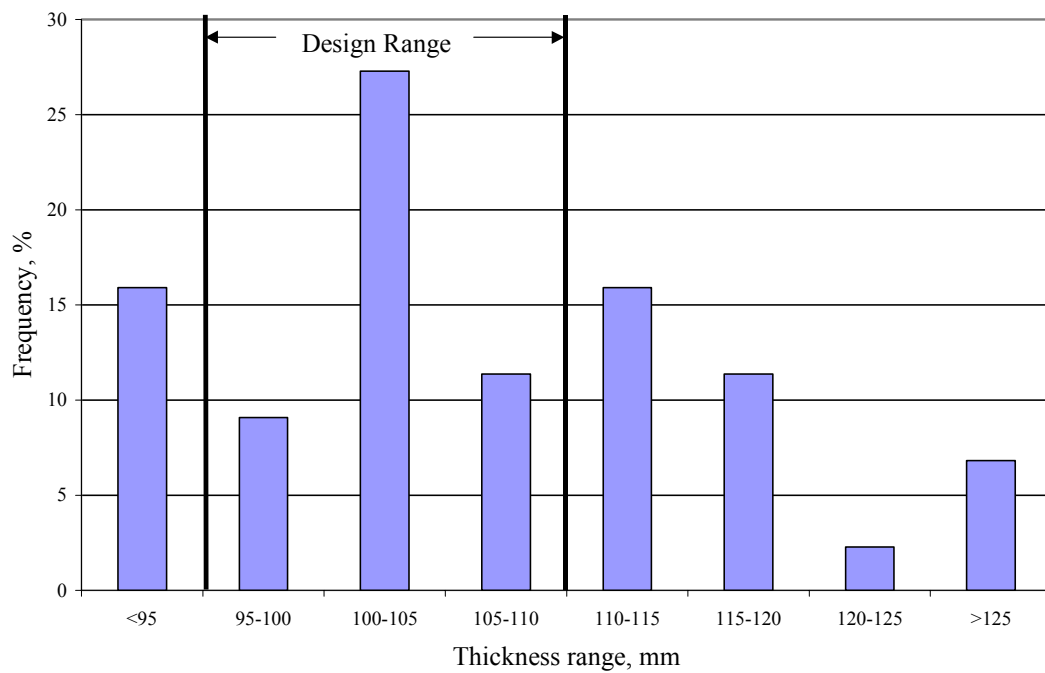


Figure 13. Frequency of 102-mm (4-inch) AC overlays.

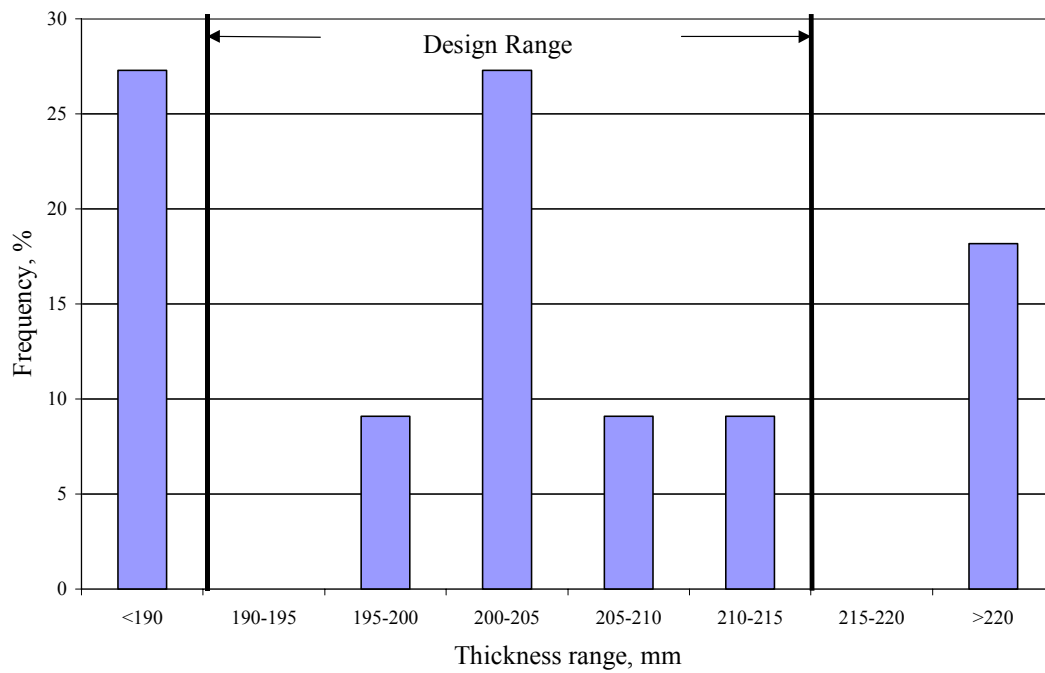


Figure 14. Frequency of 203-mm (8 inch) AC overlays.

The PI values immediately after construction are listed in IMS table SPS6_QC_MEASUREMENTS. These results are listed in table 39. Unfortunately, this table only contains PI values for three States, and only a small percentage of these PI values meet the design criteria. In addition, the PI values for Missouri are significantly different than the Indiana and Iowa sites, indicating that Missouri data may, in fact, be another measure of roughness and should not be included in this IMS table. Therefore, it is not possible to accurately assess the PI value directly for each of the SPS-6 sites. However, a correlation exists between the PI and the International Roughness Index (IRI). Therefore, it can be determined whether these sections were approximately below the specified PI values immediately after construction based on the corresponding IRI values. This correlation is based on a study by Kalevela, Kombe, and Scofield⁽¹⁹⁾ and is shown as follows (in English units of inches/mi):

$$Avg\ IRI = 52.9 + 6.1 * PI \quad (1)$$

Based on a PI value of 0.16 m/km (10 inches/mi), the estimated average IRI is approximately 1.82 m/km (114 inches/mi). Table 40 lists the average IRI values for each section using the first average IRI rating available immediately after the AC overlay was placed. All average IRI data for these sections were collected between 2 and 13 months after placement of the AC overlay. All of the pavement sections listed meet this criterion.

REHABILITATION TREATMENTS

The appropriate rehabilitation treatments for each section of the SPS-6 experiment are listed in table 41. A comparison of the designed rehabilitation treatments and the treatments applied to each section is summarized in tables 42 through 49. These tables provide an overview of the rehabilitation treatments applied at each section. More detailed information about the rehabilitation conducted is available in appendix A or in the construction reports.

In general, the sections in poor condition received more treatments than the pavement sections in fair condition. From these tables, it can be noted that most of the SHAs completed the required rehabilitation treatments as designated for each section. In addition, most of the SHAs conducted some optional rehabilitation alternatives based on their pavement experience and the initial pavement condition prior to rehabilitation. A few of the SHAs also performed rehabilitation treatments that were specifically identified as treatments not to be performed. The required and optional treatments, and the treatments that were not to be performed, will have some effect on the performance of each pavement section and should be monitored closely.

Table 39. PI values (5-mm (0.2-inch) blanking band) immediately after rehabilitation.

Section	Design PI, inches/mi	State										
		AL	AZ	AR	CA	IL	IN	IA	MI	MO	MO(A)	OK
***601												
***602												
***603	< 10						27	12		2		
***604	< 10						15	12		1.5		
***605												
***606	< 10						5	12		1.8		
***607	< 10						25	12		1.8		
***608	< 10						15	12		1.8		
***659	< 10						35	12		1.8		
***660	< 10						13			1.8		
***661	< 10						5			1.8		
***662	< 10						10			1.8		
***663	< 10						38			1.8		
***664	< 10						15			1.8		
***665	< 10						8			1.8		
***666	< 10						10					
***667	< 10											
***668	< 10						40					
***669	< 10						23					
***670	< 10						30					
***671	< 10						8					
***672	< 10						55					

1 inch/mi = 15.8 mm/km

Table 40. Average IRI values after AC overlay construction.

Section	Average IRI, m/km	State										
		AL	AZ	AR	CA	IL	IN	IA	MI	MO	MO(A)	OK
***601												
***602												
***603	< 1.82		0.88	0.91	0.85	1.02	0.88	0.90	1.29	1.09		0.74
***604	< 1.82		0.86	0.99	0.81	1.13	0.92	1.06	1.15	1.08		0.86
***605												
***606	< 1.82		1.00	0.98	0.95	1.07	0.94	0.92	0.90	1.10		0.92
***607	< 1.82		0.80	1.05	1.01	1.22	0.99	1.02	1.07	1.31		1.08
***608	< 1.82		0.90	0.87	0.89	1.16	0.93	1.21	0.87	1.28		1.27
***659	< 1.82		1.06		0.70	1.37	1.10	1.00	1.14	1.26		
***660	< 1.82		1.01		0.81		1.10			1.18		
***661	< 1.82		0.72		0.83		0.95			1.22		
***662	< 1.82		0.77			1.10	0.85			1.24		
***663	< 1.82		1.44			0.92	1.17			1.37		
***664	< 1.82		0.69		0.91	1.08	1.15			1.18		
***665	< 1.82		0.69				0.93			1.15		
***666	< 1.82		0.63				0.88					
***667	< 1.82		1.05				0.95					
***668	< 1.82		0.61				1.07					
***669	< 1.82		0.77				1.04					
***670	< 1.82						1.00					
***671	< 1.82						1.08					
***672	< 1.82						1.10					

1 m/km = 63.36 inches

Table 41. Rehabilitation treatments for SPS-6 test sections.

Section	Rehabilitation Treatments
***601	Routine maintenance only (as per agency practice): 3 to 5 years of service desired.
***602	Minimal surface preparation, no AC overlay: <ul style="list-style-type: none"> • Perform joint and crack sealing, if warranted. • Perform partial and full-depth patching, if warranted. • Perform full-surface diamond grinding, if warranted.
***603	Minimal surface preparation with 102-mm (4-inch) AC overlay: <ul style="list-style-type: none"> • Perform partial- and full-depth patching, if warranted. • Place 102-mm- (4-inch-) thick AC overlay.
***604	Minimal surface preparation with saw and seal of 102-mm (4-inch) AC overlay: <ul style="list-style-type: none"> • Perform partial- and full-depth patching, if warranted. • Place 102-mm- (4-inch-) thick AC overlay. • Saw and seal overlay over existing PCC pavement joints and working cracks.
***605	Intensive surface preparation, no AC overlay: <ul style="list-style-type: none"> • Remove and replace existing joint and crack sealing. • Perform additional joint and crack sealing, if warranted. • Remove and replace existing partial- and full-depth patches. • Perform additional partial- and full-depth patching, if warranted. • Correct poor load transfer at joints and/or working cracks by full-depth patching or retrofitting dowels. • Perform full-surface diamond grinding. • Retrofit subsurface edge drainage system. • Perform undersealing, if warranted.
***606	Intensive surface preparation with 102-mm (4-inch) AC overlay: <ul style="list-style-type: none"> • Remove and replace existing partial- and full-depth patches. • Perform additional partial- and full-depth patching, if warranted. • Correct poor load transfer at joints and/or working cracks by full-depth patching or retrofitting dowels. • Retrofit subsurface edge drainage system. • Perform undersealing, if warranted. • Place 102-mm- (4-inch-) thick AC overlay.
***607	Crack/break and seat section with 102-mm (4-inch) AC overlay: <ul style="list-style-type: none"> • Crack/break and seat. • Retrofit subsurface edge drainage system. • Total section length, including transition, should be at least 457.5 m (1500 ft) (152.5-m (500-ft) transitions at each end). • Place 102-mm- (4-inch-) thick AC overlay.
***608	Crack and seat section with 203-mm (8-inch) AC overlay: <ul style="list-style-type: none"> • Crack/break and seat. • Retrofit subsurface edge drainage system. • Place 203-mm- (8-inch-) thick AC overlay.

Table 42. Control section with routine maintenance, no restoration or rehabilitation (**601

Preparation Technique	State											
	AL	AZ	AR	CA	IL	IN	IA	MI	MO	MO(A)	OK	P
Joint sealing ¹			✓							✓	✓	
Crack sealing ¹			✓							✓		
Partial-depth patch ²			✓									
Full-depth patch/ joint repair ²			✓								✓	
Slab replacement ²												
Initial Pavement Condition	Fair	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Poor	Fair	Fair	Fa

¹Optional treatment

²“Do not perform” treatment

Table 43. Minimum restoration for bare PCC sections (**602).

Preparation Technique	State											
	AL	AZ	AR	CA	IL	IN	IA	MI	MO	MO(A)	OK	P
Joint sealing ¹	✓	✓	✓	✓	✓		✓		✓	✓	✓	
Crack sealing ¹		✓	✓	✓	✓			✓	✓	✓		
Partial-depth patch ¹		✓	✓	✓			✓	✓				
Full-depth patch/ joint repair ¹	✓		✓	✓	✓	✓		✓	✓	✓	✓	
Diamond grinding ¹	✓		✓	✓			✓		✓	✓	✓	
Initial Pavement Condition	Fair	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Poor	Fair	Fair	Fa

¹Optional treatment

Table 44. Minimum restoration prior to AC overlay (***603).

Preparation Technique	State											
	AL	AZ	AR	CA	IL	IN	IA	MI	MO	MO(A)	OK	P
Partial-depth patch ¹		✓	✓	✓		✓		✓				✓
Full-depth patch/ joint repair ¹		✓	✓	✓				✓		✓	✓	✓
Joint sealing ²			✓									
Crack sealing ²			✓									
Subdrainage ²						✓						✓
Diamond grinding ²												
Initial Pavement Condition	Fair	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Poor	Fair	Fair	F

¹Optional treatment
²“Do not perform” treatment

Table 45. Minimum restoration prior to AC overlay with saw and seal (***604).

Preparation Technique	State											
	AL	AZ	AR	CA	IL	IN	IA	MI	MO	MO(A)	OK	P
Saw and seal ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Partial-depth patch ²		✓	✓	✓		✓		✓				✓
Full-depth patch/ joint repair ²		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Crack sealing ³			✓									
Joint sealing ³			✓									
Diamond grinding ³												
Subdrainage ³												✓
Initial Pavement Condition	Fair	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Poor	Fair	Fair	Fa

¹Required treatment

²Optional treatment

³“Do not perform” treatment

Table 46. Maximum restoration of bare PCC (***605).

Preparation Technique	State											
	AL	AZ	AR	CA	IL	IN	IA	MI	MO	MO(A)	OK	PA
Diamond grinding ¹	✓	✓	✓	3	✓		✓		✓	✓	✓	✓
Subdrainage ¹	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Joint sealing ²	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓
Crack sealing ²		✓	✓		✓		✓	✓	✓	✓		
Partial-depth patch ²		✓	✓				✓	✓				✓
Full-depth patch/ joint repair ²	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Full-depth slab replacement ²				✓								
Load-transfer restoration ²	✓		✓				✓					✓
Undersealing ²	✓				✓				✓	✓		✓
Initial Pavement Condition	Fair	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Poor	Fair	Fair	Fa

¹Required treatment

²Optional treatment

Table 47. Maximum restoration prior to AC overlay (***606).

Preparation Technique	State											
	AL	AZ	AR	CA	IL	IN	IA	MI	MO	MO(A)	OK	P
Subdrainage ¹	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Partial-depth patch ²		✓	✓	✓		✓	✓	✓				✓
Full-depth patch/ joint repair ²	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
Load-transfer restoration ²	✓		✓				✓					✓
Undersealing ²					✓				✓	✓		✓
Joint sealing ³			✓									
Crack sealing ³			✓									
Diamond grinding ³												
Initial Pavement Condition	Fair	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Poor	Fair	Fair	Fa

¹Required treatment²Optional treatment³“Do not perform” treatment

Table 48. Crack/break and seat with 102-mm (4-inch) AC overlay (**607).

Preparation Technique	State											
	AL	AZ	AR	CA	IL	IN	IA	MI	MO	MO(A)	OK	P
Crack/break and seat ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Subdrainage ¹	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓
Rubblizing ²											✓	
Full-depth repair ²												
Initial Pavement Condition	Fair	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Poor	Fair	Fair	Fa

¹Required treatment

²“Do not perform” treatment

✓ Procedure did not break through slabs.

Table 49. Crack/break and seat with 203-mm (8-inch) AC overlay (**608).

Preparation Technique	State											
	AL	AZ	AR	CA	IL	IN	IA	MI	MO	MO(A)	OK	TX
Crack/break and seat ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Subdrainage ¹	✓		✓	✓	✓	✓	✓		✓	✓	✓	
Rubblizing ²											✓	
Full-depth repair ²												
Initial Pavement Condition	Fair	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Poor	Fair	Fair	Fair

¹Required treatment

²“Do not perform” treatment

✓ Procedure did not break through slabs.

IMPACT ON EXPERIMENTAL FACTORIAL DESIGN

Based on the data available at the time of the IMS data request for each of these sites, the actual traffic and climatic information was used to reorganize the sites within the original design matrix. The climatic location of the Alabama site could not be verified at this time. In addition, the traffic levels for Alabama, Arizona, Arkansas, California, Missouri (A), and Tennessee could not be verified either. Additional information is needed in the IMS database to further verify the location of these sites within the design matrix.

According to the climatic specifications of less than 508 mm (20 inches) of precipitation signifying a “dry” climatic zone and a freezing index of less than 83.3 degree-days signifying a “no freeze” climatic zone, the SPS-6 sites should be placed in the cells shown in table 50. Actual climatic data were used to relocate each site into the appropriate location within the design matrix. Bolded sites indicate that the site was designed and nominated for a different climatic zone than that supported by the as-built climatic data. In addition, the South Dakota site does not meet the minimum traffic requirement of more than 200,000 ESALs per year.

As noted in table 50, many sites are now located in the wet-freeze climatic region. This will allow for a complete analysis of the wet-freeze climatic region. Unfortunately, many sites are now missing from the wet-no freeze, dry-freeze, and dry-no freeze zones. As mentioned earlier, each asterisk indicates that an additional site is needed to complete that portion of the design matrix. The impact of changing the climatic zones of the sites is only important in that it limits the range of climatic site conditions for which performance results are available for each climatic region. In other words, there is excellent coverage in the wet-freeze areas for both JPCP and JRCP, and excellent coverage for JPCP in wet-no freeze areas. There is no coverage of either JPCP or JRCP in dry areas.

Table 50. As-built sites as placed in original design factorial.

		Wet		Dry	
		Freeze	No Freeze	Freeze	No Freeze
JPCP	Fair	MO(A), <i>SD</i> , TN	AL, *	**	*
	Poor	AZ, IN	AR, CA	**	*
JRCP	Fair	IA, MI, OK , PA	**	*	
	Poor	IL, MO	**	*	

Notes:

- Each * indicates that an additional site is needed to complete the original design matrix.
- **Bolded** sections were originally in another cell of the design matrix.
- *Italicized* sections indicate that the site did not meet the minimum traffic requirements.
- MO(A) is the second SPS-6 site constructed in Missouri; the first site is designated as MO.

6. STATUS ASSESSMENT OF THE SPS-6 SITES

This chapter summarizes key site information, pavement design factors, and the activities for monitoring data for each of the SPS-6 projects. The SPS-6 projects are presented in the following alphabetical order:

- Alabama (State Code: 01).
- Arizona (04).
- Arkansas (05).
- California (06).
- Illinois (17).
- Indiana (18).
- Iowa (19).
- Michigan (26).
- Missouri (29 and 29A).
- Oklahoma (40).
- Pennsylvania (42).
- South Dakota (46).
- Tennessee (47).

For each site, two tables are used. The first table summarizes key site information, such as constructed thicknesses and the number of dates for collecting monitoring data. This table shows the site and monitoring information available for each SPS-6 section. The site information section of the table includes some key information about the restoration techniques used, the pavement structure that was constructed, and significant dates for each pavement section. The monitoring information section of this table shows the number of dates for collecting monitoring data, the initial AC IRI, and the average traffic ESALs for each section.

The second table assesses whether the key site criteria for the site and monitoring data meet the expectations and general guidelines established by the LTPP program for the SPS-6 experiment. The guidelines presented in earlier chapters of this report were used to create a rating system of Yes, Almost, No, N/A, or dash (–) for each cell. A rating of “Yes” indicates that the section met the criteria, “Almost” means that the data were relatively close to meeting the established criteria, and “No” indicates that the criteria were not met. A rating of “N/A” indicates that data were not available at the time of this evaluation. A dash indicates that the cell does not apply to the criteria. For example, there is no AC thickness for bare PCC pavement and, therefore, a dash is placed in those cells.

ALABAMA

All levels of data were used to complete the summaries presented in tables 51 and 52. The information presented in table 51 that is italicized highlights information that does not meet the specifications established for this particular site and/or section. As shown, for Alabama, the original construction date does not fall within the original design parameters established for the SPS-6 experiment.

Table 52 summarizes the site and monitoring requirements that were and were not met based on the IMS data requests for this project. As shown in this table, there was not enough information available at the time of this report to determine if the traffic and as-constructed design data requirements had been met. In addition, it appears that the monitoring requirements for the FWD and profile data for immediately after rehabilitation had not been met. It may be possible that these data had been collected, but had not yet been entered into the IMS database. Also, because this section is still relatively new, none of the long-term monitoring distress requirements had been met. It is very likely that not enough time had passed for all of the long-term monitoring activities to be collected and loaded into the IMS database. Therefore, it is anticipated that the long-term monitoring requirements will be met as these pavement sections continue to age.

Table 51. Alabama SPS-6 site summary.

General Site Information:

PCC type: JPCP Climatic zone: Wet, No Freeze Traffic availability: None
Initial pavement condition: Fair Climatic availability: None

Site Information:

Restoration Technique			Pavement Structure						Date		
ID	Design	Compliance	AC Overlay Thick. mm		PCC	Base		Subgrade Type	Orig. Constr.	Rehab.	Deassigned
			Design	Actual	Thick. mm	Type	Thick. mm				
0601	Routine	A	—	—	N/A	303	N/A	113	1/1/1964	5/13/1998	
0602	Minimum	O	—	—	N/A	303	N/A	113	1/1/1964	5/13/1998	
0603	Minimum	A	102	N/A	N/A	303	N/A	113	1/1/1964	6/26/1998	
0604	Minimum*	A	102	N/A	N/A	303	N/A	113	1/1/1964	6/23/1998	
0605	Maximum	A, O	—	—	N/A	303	N/A	113	1/1/1964	5/18/1998	
0606	Maximum	A, O	102	N/A	N/A	303	N/A	113	1/1/1964	6/26/1998	
0607	Crack & Seat	A	102	N/A	N/A	303	N/A	113	1/1/1964	6/26/1998	
0608	Crack & Seat	A	203	N/A	N/A	303	N/A	113	1/1/1964	6/26/1998	
0661	Rubblized	—, (1)	Variable	N/A	N/A	303	N/A	113	1/1/1964	6/26/1998	
0662	Rubblized	—	Variable	N/A	N/A	303	N/A	113	1/1/1964	6/26/1998	
0663	Rubblized	—	Variable	N/A	N/A	303	N/A	113	1/1/1964	6/26/1998	

Monitoring Information:

Number of Monitoring Data Collection Dates								Profile	Traffic
			Distress					Initial AC IRI, m/km	Average ESALs
ID	IRI	FWD	Manual	PASCO	Faulting	Friction	Rutting		
0601	1	1	3	0	2	0	0	—	N/A
0602	1	1	3	0	2	0	0	—	N/A
0603	1	1	3	0	1	0	1	N/A	N/A
0604	1	1	3	0	1	0	1	N/A	N/A
0605	1	1	3	0	2	0	0	—	N/A
0606	1	1	3	0	1	0	1	N/A	N/A
0607	1	2	3	0	1	0	1	N/A	N/A
0608	1	3	3	0	1	0	1	N/A	N/A
0661	1	1	3	0	1	0	1	N/A	N/A
0662	1	1	3	0	1	0	1	N/A	N/A
0663	1	1	3	0	1	0	1	N/A	N/A

General Notes:

N/A: Data are not in the IMS database yet.

Dash (—): Does not apply to this cell.

Italicized letters and numbers represent section information that was not acquired within the experiment specifications.

Thick. mm: Thickness in mm.

Orig. Constr.: Date of original construction.

Rehab.: Date of rehabilitation.

Additional Notes:

*AC overlay has been sawed and sealed.

(1) = 0.61 m did not get rubblized.

A = All requirements satisfied, M = Most requirements satisfied, O = Optional treatments applied, and D = "Do not perform" treatments applied.

113 = Fine-grained soils: sandy clay.

1 mm = .039 inch

Table 52. Design and monitoring requirements for Alabama SPS-6 site.

Site Information:

Section	Climate		Traffic	As Constructed		
	Moisture	Temperature		Compliance	AC Thick.	PCC Thick.
010601	Yes	Yes	N/A	Yes	–	N/A
010602	Yes	Yes	N/A	Yes	–	N/A
010603	Yes	Yes	N/A	Yes	N/A	N/A
010604	Yes	Yes	N/A	Yes	N/A	N/A
010605	Yes	Yes	N/A	Yes	–	N/A
010606	Yes	Yes	N/A	Yes	N/A	N/A
010607	Yes	Yes	N/A	Yes	N/A	N/A
010608	Yes	Yes	N/A	Yes	N/A	N/A
010661	Yes	Yes	N/A	–	–	N/A
010662	Yes	Yes	N/A	–	–	N/A
010663	Yes	Yes	N/A	–	–	N/A

Monitoring Information:

Section	Monitoring Immediately Before Rehabilitation			Monitoring Immediately After Rehabilitation			Long-Term Monitoring				
	Distress	FWD	Profile	Distress	FWD	Profile	Distress	Faulting	FWD	Rutting	Profile
010601	Yes	Yes	Yes	Yes	No	No	N/A	N/A	N/A	–	N/A
010602	Yes	Yes	Yes	Yes	No	No	N/A	N/A	N/A	–	N/A
010603	Yes	Yes	Yes	Yes	No	No	N/A	–	N/A	N/A	N/A
010604	Yes	Yes	Yes	Yes	No	No	N/A	–	N/A	N/A	N/A
010605	Yes	Yes	Yes	Yes	No	No	N/A	N/A	N/A	–	N/A
010606	Yes	Yes	Yes	Yes	No	No	N/A	–	N/A	N/A	N/A
010607	Yes	Yes	Yes	Yes	No	No	N/A	–	N/A	N/A	N/A
010608	Yes	Yes	Yes	Yes	No	No	N/A	–	N/A	N/A	N/A
010661	Yes	Yes	Yes	Yes	No	No	N/A	–	N/A	N/A	N/A
010662	Yes	Yes	Yes	Yes	No	No	N/A	–	N/A	N/A	N/A
010663	Yes	Yes	Yes	Yes	No	No	N/A	–	N/A	N/A	N/A

Yes = Design criteria met.

N/A = Not available.

Almost = Close to meeting design criteria. Dash (–) = Data do not apply to this cell.

No = Design criteria not met.

ARIZONA

All levels of data were used to complete the summaries presented in tables 53 and 54. The information presented in table 53 that is italicized highlights information that does not meet the specifications established for this particular site and/or section. As shown, for Arizona, some of the AC and PCC thicknesses and some of the traffic ESALs do not fall within the original design parameters established for the SPS-6 experiment. The sections with negative ESAL values do not have a level E record status, and it is anticipated that these values will need to be corrected before the data can reach the level E record status.

Table 54 summarizes the site and monitoring requirements that were and were not met based on the IMS data requests for this project. As shown in this table, the climatic data almost meet the requirements established for the SPS-6 experiment. Only the sections with positive ESAL values

meet the requirements of the experiment. Once the sections with negative ESAL values are corrected, it is expected that all of the Arizona sections will meet the ESAL requirement. In general, most of the as-constructed design data meet the SPS-6 requirements. In addition, most of the monitoring data from immediately before and after rehabilitation were collected, with the exception of the distress data for the supplemental sections immediately before rehabilitation occurred. In general, the long-term monitoring requirements were met with the exception of faulting.

Table 53. Arizona SPS-6 site summary.

General Site Information:

PCC type: JPCP Climatic zone: Dry, Freeze Traffic availability: 4 to 9 years
 Initial pavement condition: Poor Climatic availability: 31 years

Site Information:

Restoration Technique			Pavement Structure						Date		
ID	Design	Compliance	AC Overlay Thick. mm		PCC	Base		Subgrade Type	Orig. Constr.	Rehab.	Deassigned
			Design	Actual	Thick. mm	Type	Thick. mm				
0601	Routine	A	—	—	201	302, 331	325	287	1/1/1967	7/12/1990	4/28/1995
0602	Minimum	O	—	—	203	302, 307, 331	853	287	1/1/1967	7/12/1990	4/28/1995
0603	Minimum	O	102	102	211	302, 331	307	287	1/1/1967	7/25/1990	
0604	Minimum*	A, O	102	102	208	302, 331	274	287	1/1/1967	10/6/1990	
0605	Maximum	M, O	—	—	211	302, 307, 331	851	215	1/1/1967	8/20/1990	4/28/1995
0606	Maximum	M, O	102	119	216	302, 331	292	215	1/1/1967	10/6/1990	
0607	Crack & Seal	M	102	117	213	302, 307, 331	452	287	1/1/1967	10/6/1990	
0608	Crack & Seal	M	203	224	208	302, 307, 331	462	215	1/1/1967	10/6/1990	
0659	Rubblized	—	Variable	114	213	74, 302, 331	241	215	1/1/1967	10/6/1990	
0660	Crack & Seal	—	Variable	216	211	302, 331	284	215	1/1/1967	8/6/1990	
0661	Crack & Seal	—	Variable	114	213	302, 331	279	287	1/1/1967	10/6/1990	
0662	Crack & Seal	—	Variable	114	203	302, 307, 331	762	215	1/1/1967	10/6/1990	
0663	Crack & Seal	—	Variable	203-mm PCC over 51-mm AC	254	302, 331	239	215	1/1/1967	8/5/1990	
0664	No Maint.	—	Variable	152	201	302, 331	315	287	1/1/1967	12/4/1992	
0665	Crack & Seal	—	Variable	152	201	302, 331	315	287	1/1/1967	12/4/1992	
0666	Rubblized	—	Variable	152	201	302, 331	315	287	1/1/1967	12/4/1992	
0667	Crack & Seal	—	Variable	152	201	302, 331	315	287	1/1/1967	12/4/1992	
0668	No Maint.	—	Variable	152	201	302, 331	315	287	1/1/1967	12/4/1992	
0669	Rubblized	—	Variable	152	201	302, 307	315	287	1/1/1967	12/4/1992	

Monitoring Information:

Number of Monitoring Data Collection Dates								Profile	Traffic
ID	IRI	FWD	Distress			Friction	Rutting	Initial AC IRI, m/km	Average ESALs
			Manual	PASCO	Faulting				
0601	3	4	1	2	1	2	2	—	1,951,989
0602	4	5	1	2	1	2	2	—	1,588,852
0603	9	6	3	2	0	2	4	0.88	-44,314
0604	9	6	3	2	0	2	4	0.86	-45,642
0605	4	4	2	2	2	2	2	—	1,596,797
0606	9	6	3	2	0	2	4	1.00	-40,129
0607	9	6	3	2	0	2	4	0.80	-41,554
0608	9	6	3	2	0	2	4	0.90	-32,210
0659	9	5	3	1	0	2	3	1.06	-258,921
0660	9	5	3	1	0	2	3	1.01	-249,741
0661	9	5	3	1	0	2	3	0.72	-258,921
0662	9	6	3	1	0	2	3	0.77	-263,368
0663	9	4	4	1	4	2	1	1.44	-505,622

1 mm = .039 inch

Table 54. Design and monitoring requirements for Arizona SPS-6 site.

Site Information:

Section	Climate		Traffic	As Constructed		
	Moisture	Temperature		Compliance	AC Thick.	PCC Thick.
040601	Almost	Yes	Yes	Yes	–	Almost
040602	Almost	Yes	Yes	Yes	–	Yes
040603	Almost	Yes	No	Yes	Yes	Yes
040604	Almost	Yes	No	Yes	Yes	Yes
040605	Almost	Yes	Yes	Yes	–	Yes
040606	Almost	Yes	No	Yes	No	Yes
040607	Almost	Yes	No	Yes	No	Yes
040608	Almost	Yes	No	Yes	Almost	Yes
040659	Almost	Yes	No	–	–	Yes
040660	Almost	Yes	No	–	–	Yes
040661	Almost	Yes	No	–	–	Yes
040662	Almost	Yes	No	–	–	Yes
040663	Almost	Yes	No	–	–	Yes
040664	Almost	Yes	No	–	–	Almost
040665	Almost	Yes	No	–	–	Almost
040666	Almost	Yes	No	–	–	Almost
040667	Almost	Yes	No	–	–	Almost
040668	Almost	Yes	No	–	–	Almost
040669	Almost	Yes	No	–	–	Almost

Monitoring Information:

Section	Monitoring Immediately Before Rehabilitation			Monitoring Immediately After Rehabilitation			Long-Term Monitoring				
	Distress	FWD	Profile	Distress	FWD	Profile	Distress	Faulting	FWD	Rutting	Profile
040601	Almost	Yes	Yes	Almost	Almost	Almost	Almost	No	Yes	–	Yes
040602	Almost	Yes	Yes	Almost	Almost	Almost	Almost	No	Yes	–	Yes
040603	Almost	Yes	Yes	Almost	Almost	Almost	Almost	–	Almost	Almost	Yes
040604	Almost	Yes	Yes	Almost	Almost	Almost	Almost	–	Almost	Almost	Yes
040605	Almost	Yes	Yes	Almost	Almost	Almost	Almost	Yes	Yes	–	Yes
040606	Almost	Yes	Yes	Almost	Almost	Almost	Almost	–	Almost	Almost	Yes
040607	Almost	Yes	Yes	Almost	Almost	Almost	Almost	–	Almost	Almost	Yes
040608	Almost	Yes	Yes	Almost	Almost	Almost	Almost	–	Almost	Almost	Yes
040659	No	Yes	Yes	Almost	Almost	Almost	Almost	–	Almost	Yes	Yes
040660	No	Yes	Yes	Almost	Almost	Almost	Almost	–	Almost	Yes	Yes
040661	No	Yes	Yes	Almost	Almost	Almost	Almost	–	Almost	Yes	Yes
040662	No	Yes	Yes	Almost	Almost	Almost	Almost	–	Almost	Yes	Yes
040663	No	Yes	Yes	Almost	Almost	Almost	Almost	–	Almost	No	Yes
040664	No	No	No	Almost	Almost	Almost	Almost	–	Almost	Yes	Yes
040665	No	No	No	Almost	Almost	Almost	Almost	–	Almost	Yes	Yes
040666	No	No	No	Almost	Almost	Almost	Almost	–	Almost	Yes	Yes
040667	No	No	No	Almost	Almost	Almost	Almost	–	Almost	Yes	Yes
040668	No	No	No	Almost	Almost	Almost	Almost	–	Almost	Yes	Yes
040669	No	No	No	Almost	Almost	Almost	Almost	–	Almost	Yes	Yes

Yes = Design criteria met.

No = Design criteria not met.

Almost = Close to meeting design criteria. Dash (–) = Data do not apply to this cell.

ARKANSAS

All levels of data were used to complete the summaries presented in tables 55 and 56. The information presented in table 55 that is italicized highlights information that does not meet the specifications established for this particular site and/or section. It should be noted that the as-constructed design data were not available in the IMS at this time. Excluding the as-constructed design data, only a few sections did not meet the design criteria for the SPS-6 experiment because of variations in rehabilitation techniques. All other design features for this section met the original design expectations for the SPS-6 experiment.

Table 56 summarizes the site and monitoring requirements that were and were not met based on the IMS data requests for this project. The climatic requirements were met. However, as shown in this table, there was not enough information available at the time of this report to determine if the traffic and as-constructed design data were met. In general, the monitoring requirements for immediately before and after rehabilitation were met. It should also be noted that, because this section is still relatively new, very few of the long-term monitoring distress requirements have been met. It is very likely that not enough time has passed for all of the long-term monitoring activities to be collected and loaded into the IMS database. Therefore, it is anticipated that the long-term monitoring requirements will be met as these pavement sections continue to age.

Table 55. Arkansas SPS-6 site summary.

1 mm = .039 inch

General Site Information:

PCC type: JPCP Climatic zone: Wet, No Freeze Traffic availability: None
 Initial pavement condition: Poor Climatic availability: 18 years

Site Information:

ID	Restoration Technique		Pavement Structure						Date		
	Design	Compliance	AC Overlay Thick. mm		PCC	Base		Subgrade Type	Orig. Constr.	Rehab.	Deassigned
			Design	Actual	Thick. mm	Type	Thick. mm				
0601	Routine	O, D	—	N/A	N/A	339	N/A	N/A	1/1/1979	12/1/1996	
0602	Minimum	O	—	N/A	N/A	339	N/A	N/A	1/1/1979	12/1/1996	
0603	Minimum	O, D	102	N/A	N/A	339	N/A	N/A	1/1/1979	12/17/1996	
0604	Minimum*	A, O, D	102	N/A	N/A	339	N/A	N/A	1/1/1979	10/15/1996	
0605	Maximum	A, O	—	N/A	N/A	339	N/A	N/A	1/1/1979	12/26/1996	
0606	Maximum	A, O, D	102	N/A	N/A	339	N/A	N/A	1/1/1979	12/11/1996	
0607	Crack & Seat	A, (1), (2)	102	N/A	N/A	339	N/A	N/A	1/1/1979	11/11/1996	
0608	Crack & Seat	A, (1)	203	N/A	N/A	339	N/A	N/A	1/1/1979	11/11/1996	

Monitoring Information:

	Number of Monitoring Data Collection Dates							Profile	Traffic
			Distress					Initial AC	Average
ID	IRI	FWD	Manual	PASCO	Faulting	Friction	Rutting	IRI, m/km	ESALs
0601	2	3	2	0	2	0	0	—	N/A
0602	5	3	2	0	2	0	0	—	N/A
0603	4	2	2	0	1	0	0	0.91	N/A
0604	5	2	2	0	1	0	1	0.99	N/A
0605	3	3	2	0	2	0	0	—	N/A
0606	4	3	2	0	1	0	1	0.98	N/A
0607	5	2	2	0	1	0	0	1.05	N/A
0608	4	2	2	0	1	0	0	0.87	N/A

General Notes:

N/A: Data are not in the IMS database yet.

Dash (—): Does not apply to this cell.

Italicized letters and numbers represent section information that was not acquired within the experiment specifications.

Abbreviations: **Thick. mm** = Thickness in mm; **Orig. Constr.** = Date of original construction; **Rehab.** = Rehabilitation.

Additional Notes:

*AC overlay has been sawed and sealed.

A = All requirements satisfied, M = Most requirements satisfied, O = Optional treatments applied, and D = "Do not perform" treatments applied.

(1) = Did not receive a full-depth hairline cracking pattern.

(2) = Traffic permitted on AC leveling coarse prior to placement of the AC surface coarse and cold paving joint within the section.

Table 56. Design and monitoring requirements for Arkansas SPS-6 site.

Site Information:

Section	Climate		Traffic	As Constructed		
	Moisture	Temperature		Compliance	AC Thick.	PCC Thick.
05A601	Yes	Yes	N/A	No	–	N/A
05A602	Yes	Yes	N/A	Yes	–	N/A
05A603	Yes	Yes	N/A	No	N/A	N/A
05A604	Yes	Yes	N/A	No	N/A	N/A
05A605	Yes	Yes	N/A	Yes	–	N/A
05A606	Yes	Yes	N/A	No	N/A	N/A
05A607	Yes	Yes	N/A	Yes	N/A	N/A
05A608	Yes	Yes	N/A	Yes	N/A	N/A

Monitoring Information:

Section	Monitoring Immediately Before Rehabilitation			Monitoring Immediately After Rehabilitation			Long-Term Monitoring				
	Distress	FWD	Profile	Distress	FWD	Profile	Distress	Faulting	FWD	Rutting	Profile
05A601	Yes	Yes	Yes	Almost	Yes	Almost	N/A	N/A	N/A	–	N/A
05A602	Yes	Yes	Yes	Almost	Yes	Almost	N/A	N/A	N/A	–	N/A
05A603	Yes	Yes	Yes	Almost	Yes	Yes	N/A	–	N/A	N/A	Yes
05A604	Yes	Yes	Yes	Almost	Yes	Yes	N/A	–	N/A	N/A	Yes
05A605	Yes	Yes	Yes	Almost	Yes	Almost	N/A	N/A	N/A	–	N/A
05A606	Yes	Yes	Yes	Almost	Yes	Yes	N/A	–	N/A	N/A	Yes
05A607	Yes	Yes	Yes	Almost	Yes	Yes	N/A	–	N/A	N/A	Yes
05A608	Yes	Yes	Yes	Almost	Yes	Yes	N/A	–	N/A	N/A	Yes

Yes = Design criteria met.

N/A = Not available.

Almost = Close to meeting design criteria. Dash (–) = Data do not apply to this cell.

No = Design criteria not met.

CALIFORNIA

All levels of data were used to complete the summaries presented in tables 57 and 58. The information presented in table 57 that is italicized highlights information that does not meet the specifications established for this particular site and/or section. As shown, for California, some of the layer properties and traffic levels do not fall within the original design parameters established for the SPS-6 experiment. The sections with negative ESAL values do not have a level E record status, and it is anticipated that these values will need to be corrected before the data can reach the level E record status.

Table 58 summarizes the site and monitoring requirements that were and were not met based on the IMS data requests for this project. As shown in this table, the climatic requirements were not met for this site. Only the sections with positive ESAL values meet the requirements of the experiment. Once the sections with negative ESAL values are corrected, it is expected that all of the California sections will meet the ESAL requirement. In general, most of the as-constructed design data meet the SPS-6 requirements. In addition, most of the monitoring data from immediately before and after rehabilitation were collected. In general, the long-term monitoring requirements were met.

Table 57. California SPS-6 site summary.

General Site Information:

PCC type: JPCP Climatic zone: Dry, Freeze Traffic availability: 3 to 6 years
 Initial pavement condition: Poor Climatic availability: None

Site Information:

Restoration Technique			Pavement Structure						Date		
ID	Design	Compliance	AC Overlay Thick. mm		PCC	Base		Subgrade Type	Orig. Constr.	Rehab.	Deassigned
			Design	Actual	Thick. mm	Type	Thick. mm				
0601	Routine	A	—	—	N/A	—	—	—	8/1/1974	5/20/1992	
0602	Minimum	O	—	—	218	331	104	253	8/1/1974	5/20/1992	
0603	Minimum	O	102	97	203	331	102	253	8/1/1974	9/1/1992	
0604	Minimum*	A, O	102	114	211	331	130	253	8/1/1974	9/1/1992	
0605	Maximum	M, O	—	—	226	331	114	253	8/1/1974	5/19/1992	
0606	Maximum	A, M	102	79	208	331	114	253	8/1/1974	9/1/1992	
0607	Crack & Seat	A	102	94	208	331	117	253	8/1/1974	9/1/1992	
0608	Crack & Seat	A	203	206	216	331	112	203	8/1/1974	9/1/1992	
0659	Crack & No Seat	—	Variable	107	216	331	124	253	8/1/1974	8/31/1992	
0660	Crack & Seat	—	Variable	107	114	74, 331	211	253	8/1/1974	8/30/1992	
0661	Crack & Seat	—	Variable	107	216	74, 331	130	253	8/1/1974	8/30/1992	
0662	Crack & Seat	—	Variable	—	208	331	130	203	8/1/1974	5/26/1992	
0663	Crack & Seat	—	Variable	AC?	25	331	137	203	8/1/1974	9/1/1992	
0664	Crack & Seat	—	Variable	107	211	85, 331	135	253	8/1/1974	9/1/1992	

Monitoring Information:

Number of Monitoring Data Collection Dates								Profile	Traffic
ID	IRI	FWD	Distress					Initial AC IRI, m/km	Average ESALs
			Manual	PASCO	Faulting	Friction	Rutting		
0601	0	0	0	0	0	0	0	—	N/A
0602	5	6	5	2	4	0	3	—	856,852
0603	6	6	6	2	0	0	7	0.85	-437,854
0604	5	5	5	2	0	0	7	0.81	-435,129
0605	5	5	3	2	3	0	3	—	860,924
0606	5	6	6	2	0	0	7	0.95	-437,715
0607	5	6	6	2	0	0	7	1.01	-436,849
0608	6	6	7	2	0	0	6	0.89	-429,819
0659	5	4	4	1	0	0	4	0.70	-776,938
0660	5	6	5	2	0	0	4	0.81	-781,258
0661	5	6	4	2	0	0	4	0.83	-776,938
0662	5	5	4	2	0	0	4	—	-781,923
0663	5	5	4	2	4	0	1	—?	-783,419
0664	7	5	7	2	0	0	5	0.91	-777,602

General Notes:

N/A: Data are not in the IMS database yet.

Dash (—): Does not apply to this cell.

Italicized letters and numbers represent section information that was not acquired within the experiment specifications.

Abbreviations: **Thick. mm** = Thickness in mm; **Orig. Constr.** = Date of original construction; **Rehab.** = Rehabilitation.

Additional Notes:

*AC overlay has been sawed and sealed.

A = All requirements satisfied, M = Most requirements satisfied, O = Optional treatments applied, and D = "Do not perform" treatments applied.

203 = Coarse-grained soils: poorly graded sand with gravel.

253 = Coarse-grained soils: poorly graded gravel with sand.

1 mm = .039 inch

Table 58. Design and monitoring requirements for California SPS-6 site.

Site Information:

Section	Climate		Traffic	As Constructed		
	Moisture	Temperature		Compliance	AC Thick.	PCC Thick.
060601	No	No	N/A	Yes	–	Yes
060602	No	No	Yes	Yes	–	Yes
060603	No	No	No	Yes	Yes	Yes
060604	No	No	No	Yes	Almost	Yes
060605	No	No	Yes	Yes	–	Yes
060606	No	No	No	Yes	No	Yes
060607	No	No	No	Yes	Almost	Yes
060608	No	No	No	Yes	Yes	Yes
060659	No	No	No	–	–	Yes
060660	No	No	No	–	–	No
060661	No	No	No	–	–	Yes
060662	No	No	No	–	–	Yes
060663	No	No	No	–	–	No
060664	No	No	No	–	–	Yes

Monitoring Information:

Section	Monitoring Immediately Before Rehabilitation			Monitoring Immediately After Rehabilitation			Long-Term Monitoring				
	Distress	FWD	Profile	Distress	FWD	Profile	Distress	Faulting	FWD	Rutting	Profile
060601	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	–	N/A
060602	Yes	Yes	Yes	Yes	Yes	Almost	Almost	Almost	Almost	–	Almost
060603	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	Almost	Yes	Almost
060604	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	Almost	Yes	Almost
060605	Yes	Yes	Yes	Yes	Yes	Almost	Almost	Almost	Almost	–	Almost
060606	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	Almost	Yes	Almost
060607	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	Almost	Yes	Almost
060608	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	Almost	Yes	Almost
060659	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	Almost	Yes	Almost
060660	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	Almost	Yes	Almost
060661	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	Almost	Yes	Almost
060662	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	Almost	Yes	Almost
060663	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	Almost	No	Almost
060664	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	Almost	Yes	Yes

Yes = Design criteria met.

N/A = Not available.

Almost = Close to meeting design criteria. Dash (–) = Data do not apply to this cell.

No = Design criteria not met.

ILLINOIS

All levels of data were used to complete the summaries presented in tables 59 and 60. The information presented in table 59 that is italicized highlights information that does not meet the specifications established for this particular site and/or section. As shown, for Illinois, the original construction date and some of the pavement layer properties do not fall within the original design parameters established for the SPS-6 experiment.

Table 60 summarizes the site and monitoring requirements that were and were not met based on the IMS data requests for this project. As shown in this table, the climate, traffic, and, in general, the as-constructed design data meet the design requirements established for the SPS-6 projects. Most of the monitoring requirements for before and after rehabilitation were met. On average, the long-term monitoring requirements were met.

Table 59. Illinois SPS-6 site summary.

General Site Information:

PCC type: JRCP Climatic zone: Wet, Freeze Traffic availability: 8 years
Initial pavement condition: Poor Climatic availability: 17 years

Site Information:

ID	Restoration Technique		Pavement Structure						Date		
	Design	Compliance	AC Overlay Thick. mm		PCC	Base		Subgrade	Orig. Constr.	Rehab.	Deassigned
			Design	Actual	Thick. mm	Type	Thick. mm	Type			
0601	Routine	A	—	—	259	302	178	113	4/1/1965	4/16/1990	
0602	Minimum	O	—	—	257	302	178	113	4/1/1965	4/16/1990	
0603	Minimum	A	102	94	254	302	178	113	4/1/1965	6/11/1990	
0604	Minimum*	A, O	102	94	259	302	178	113	4/1/1965	6/11/1990	
0605	Maximum	A, O	—	—	259	302	178	113	4/1/1965	5/18/1990	
0606	Maximum	A, O	102	79	257	302	178	113	4/1/1965	6/18/1991	
0607	Crack & Seat	A	102	94	257	302	178	113	4/1/1965	6/18/1990	
0608	Crack & Seat	A	203	173	257	302	183	113	4/1/1965	6/18/1991	
0659	State Rehab.	—	Variable	84	259	302	178	113	4/1/1965	6/18/1991	
0660	Milling	—	—	—	259	302	178	113	4/1/1965	5/17/1990	
0661	Diamond Grinding	—	—	—	267	302	178	113	4/1/1965	5/18/1990	
0662	State Rehab.	—	Variable	89	259	302	178	113	4/1/1965	6/11/1991	
0663	Rubblized	—	Variable	203	254	302	178	113	4/1/1965	6/18/1990	
0664	Rubblized	—	Variable	152	254	302	178	113	4/1/1965	6/18/1990	

Monitoring Information:

ID	Number of Monitoring Data Collection Dates							Profile	Traffic
			Distress					Initial AC IRI, m/km	Average ESALs
	IRI	FWD	Manual	PASCO	Faulting	Friction	Rutting		
0601	9	7	9	4	8	1	2	—	619,495
0602	8	7	8	4	8	1	2	—	619,495
0603	8	7	7	4	0	1	8	1.02	619,495
0604	8	8	6	4	0	1	7	1.13	619,495
0605	7	6	7	4	8	1	2	—	619,495
0606	8	7	7	4	0	1	7	1.07	619,495
0607	8	8	6	4	0	1	6	1.22	619,495
0608	9	7	6	4	0	1	6	1.16	619,495
0659	7	6	6	2	0	1	6	1.37	619,495
0660	7	6	4	2	5	1	2	—	619,495
0661	7	6	4	2	4	1	2	—	619,495
0662	9	6	6	2	0	1	4	1.10	619,495
0663	9	6	4	2	0	1	4	0.92	619,495
0664	8	6	3	2	0	1	3	1.08	619,495

General Notes:

N/A: Data are not in the IMS database yet.

Dash (—): Does not apply to this cell.

Italicized letters and numbers represent section information that was not acquired within the experiment specifications.

Abbreviations: **Thick. mm** = Thickness in mm; **Orig. Constr.** = Date of original construction; **Rehab.** = Rehabilitation.

Additional Notes:

*AC overlay has been sawed and sealed.

A = All requirements satisfied, M = Most requirements satisfied, O = Optional treatments applied, and D = "Do not perform" treatments applied.

113 = Fine-grained soils: Sandy clay.

1 mm = .039 inch

Table 60. Design and monitoring requirements for Illinois SPS-6 site.

Site Information:

Section	Climate		Traffic	As Constructed		
	Moisture	Temperature		Compliance	AC Thick.	PCC Thick.
170601	Yes	Yes	Yes	Yes	–	Almost
170602	Yes	Yes	Yes	Yes	–	Almost
170603	Yes	Yes	Yes	Yes	Almost	Yes
170604	Yes	Yes	Yes	Yes	Almost	Almost
170605	Yes	Yes	Yes	Yes	–	Almost
170606	Yes	Yes	Yes	Yes	No	Almost
170607	Yes	Yes	Yes	Yes	Almost	Almost
170608	Yes	Yes	Yes	Yes	No	Almost
170659	Yes	Yes	Yes	–	–	Almost
170660	Yes	Yes	Yes	–	–	Almost
170661	Yes	Yes	Yes	–	–	Almost
170662	Yes	Yes	Yes	–	–	Almost
170663	Yes	Yes	Yes	–	–	Yes
170664	Yes	Yes	Yes	–	–	Yes

Monitoring Information:

Section	Monitoring Immediately Before Rehabilitation			Monitoring Immediately After Rehabilitation			Long-Term Monitoring				
	Distress	FWD	Profile	Distress	FWD	Profile	Distress	Faulting	FWD	Rutting	Profile
170601	Yes	Yes	Yes	Yes	Yes	Almost	Almost	Almost	Almost	–	Yes
170602	Yes	Yes	Yes	Yes	Yes	No	Almost	Almost	Almost	–	Almost
170603	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	Almost	Yes	Yes
170604	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	Almost	Yes	Yes
170605	Yes	Yes	Yes	Yes	Yes	No	Almost	Almost	Almost	–	Almost
170606	Almost	Yes	Almost	Almost	Yes	Almost	Almost	–	Almost	Yes	Yes
170607	Yes	Yes	Yes	Almost	Almost	Almost	Almost	–	Almost	Yes	Yes
170608	Yes	Almost	Yes	Almost	Almost	Almost	Almost	–	Almost	Yes	Yes
170659	No	Yes	Yes	Almost	No	Yes	Almost	–	Almost	Yes	Yes
170660	No	Yes	Yes	No	Yes	No	Almost	Almost	Almost	–	Yes
170661	No	Yes	Yes	No	Yes	No	Almost	Almost	Almost	–	Yes
170662	No	Almost	Yes	No	Yes	Almost	Almost	–	Almost	Yes	Yes
170663	No	Yes	Yes	No	Yes	Almost	Almost	–	Almost	Yes	Yes
170664	No	Yes	Yes	No	Yes	Almost	Almost	–	Almost	Almost	Yes

Yes = Design criteria met.

No = Design criteria not met.

Almost = Close to meeting design criteria. Dash (–) = Data do not apply to this cell.

INDIANA

All levels of data were used to complete the summaries presented in tables 61 and 62. The information presented in table 61 that is italicized highlights information that does not meet the specifications established for this particular site and/or section. As shown, for Indiana, only section 180603 does not meet the original design parameters for the SPS-6 experiment because of deviations that occurred during application of the rehabilitation treatments. In addition, it should be noted that all of the material properties appear to be design values and are not based on field data. The field data should be reviewed and these fields in the database should be corrected.

Table 62 summarizes the site and monitoring requirements that were and were not met based on the IMS data requests for this project. As shown in this table, the climate, traffic, and most of the as-constructed design data requirements were met. It is important to note that the as-constructed design data appear to be the design values and are not currently based on field measurements. This should be addressed prior to further analysis of these pavement sections. In addition, most of the monitoring requirements for before and after rehabilitation were met. On average, the long-term monitoring requirements were also met.

Table 61. Indiana SPS-6 site summary.

General Site Information:

PCC type: JPCP Climatic zone: Wet, Freeze Traffic availability: 3 years
 Initial pavement condition: Poor Climatic availability: 25 years

Site Information:

ID	Restoration Technique		Pavement Structure						Date		
	Design	Compliance	AC Overlay Thick. mm		PCC	Base		Subgrade Type	Orig. Constr.	Rehab.	Deassigned
			Design	Actual	Thick. mm	Type	Thick. mm				
0601	Routine	A	—	—	254	326	76	—	1/1/1974	6/11/1990	7/27/1993
0602	Minimum	O	—	—	254	326	76	113	1/1/1974	6/11/1990	
0603	Minimum	O, D	102	102	254	326	76	113	1/1/1974	8/30/1990	
0604	Minimum*	A, O	102	102	254	326	76	113	1/1/1974	8/30/1990	
0605	Maximum	M, O	—	—	254	326	76	113	1/1/1974	6/27/1990	
0606	Maximum	A, O	102	102	254	326	76	113	1/1/1974	8/30/1990	
0607	Crack & Seat	A	102	102	254	326	76	113	1/1/1974	8/30/1990	
0608	Crack & Seat	A	203	203	254	326	76	113	1/1/1974	8/30/1990	
0659	Minimum	—	Variable	140	254	326	76	113	1/1/1974	8/30/1990	
0660	Minimum	—	Variable	140	254	326	76	113	1/1/1974	8/30/1990	
0661	Minimum	—	Variable	102	254	326	76	113	1/1/1974	8/30/1990	
0662	Crack & Seat	—	Variable	254	254	326	76	113	1/1/1974	8/30/1990	
0663	Crack & Seat	—	Variable	140	254	326	76	113	1/1/1974	8/30/1990	
0664	Crack & Seat	—	Variable	140	254	326	76	113	1/1/1974	8/30/1990	
0665	Crack & Seat	—	Variable	140	254	326	76	113	1/1/1974	8/30/1990	
0666	Crack & Seat	—	Variable	140	254	326	76	113	1/1/1974	8/30/1990	
0667	Crack & Seat	—	Variable	140	254	326	76	113	1/1/1974	8/30/1990	
0668	Crack & Seat	—	Variable	140	254	326	76	113	1/1/1974	8/30/1990	
0669	Crack & Seat	—	Variable	102	254	326	76	113	1/1/1974	8/30/1990	
0670	Crack & Seat	—	Variable	102	254	326	76	113	1/1/1974	8/30/1990	
0671	Crack & Seat	—	Variable	102	254	326	76	113	1/1/1974	8/30/1990	
0672	Minimum	—	Variable	140	254	326	76	113	1/1/1974	8/30/1990	

Monitoring Information:

ID	Number of Monitoring Data Collection Dates							Profile	Traffic
	Distress							Initial AC IRI, m/km	Average ESALs
	IRI	FWD	Manual	PASCO	Faulting	Friction	Rutting		
0601	2	3	2	2	0	6	1	—	443,417
0602	13	7	5	3	4	7	2	—	443,417
0603	8	5	5	3	0	6	4	0.88	443,417
0604	9	6	7	3	0	7	7	0.92	443,417
0605	13	6	4	3	4	7	2	—	443,417
0606	12	5	5	3	0	7	5	0.94	443,417
0607	9	6	6	3	0	7	5	0.99	443,417
0608	10	6	5	2	0	7	5	0.93	443,417
0659	8	4	3	2	0	7	4	1.10	443,417
0660	8	3	3	2	0	7	5	1.10	443,417
0661	10	3	5	2	1	7	5	0.95	443,417
0662	11	5	4	2	0	7	5	0.85	443,417
0663	8	5	3	2	0	7	5	1.17	443,417
0664	8	4	3	2	0	7	5	1.15	443,417
0665	7	5	4	2	0	7	5	0.93	443,417
0666	7	5	3	2	0	7	5	0.88	443,417
0667	9	3	3	2	0	7	5	0.95	443,417
0668	7	3	3	2	0	7	5	1.07	443,417
0669	8	4	4	2	0	7	5	1.04	443,417
0670	8	4	4	2	0	7	5	1.00	443,417
0671	7	3	3	2	0	7	5	1.08	443,417
0672	8	3	3	2	0	7	5	1.10	443,417

General Notes:

N/A: Data are not in the IMS database yet.

Dash (—): Does not apply to this cell.

Italicized letters and numbers represent section information that was not acquired within the experiment specifications.

Abbreviations: Thick. mm = Thickness in mm; **Orig. Constr.** = Date of original construction; **Rehab.** = Rehabilitation.

Additional Notes:

*AC overlay has been sawed and sealed.

A = All requirements satisfied, M = Most requirements satisfied, O = Optional treatments applied, and D = "Do not perform" treatments applied.

113 = Fine-grained soils: Sandy clay.

1 mm = .039 inch

Table 62. Design and monitoring requirements for Indiana SPS-6 site.

Site Information:

Section	Climate		Traffic	As Constructed		
	Moisture	Temperature		Compliance	AC Thick.	PCC Thick.
180601	Yes	Yes	Yes	Yes	–	Yes*
180602	Yes	Yes	Yes	Yes	–	Yes*
180603	Yes	Yes	Yes	No	Yes*	Yes*
180604	Yes	Yes	Yes	Yes	Yes*	Yes*
180605	Yes	Yes	Yes	Yes	–	Yes*
180606	Yes	Yes	Yes	Yes	Yes*	Yes*
180607	Yes	Yes	Yes	Yes	Yes*	Yes*
180608	Yes	Yes	Yes	Yes	Yes*	Yes*
180659	Yes	Yes	Yes	–	–	Yes*
180660	Yes	Yes	Yes	–	–	Yes*
180661	Yes	Yes	Yes	–	–	Yes*
180662	Yes	Yes	Yes	–	–	Yes*
180663	Yes	Yes	Yes	–	–	Yes*
180664	Yes	Yes	Yes	–	–	Yes*
180665	Yes	Yes	Yes	–	–	Yes*
180666	Yes	Yes	Yes	–	–	Yes*
180667	Yes	Yes	Yes	–	–	Yes*
180668	Yes	Yes	Yes	–	–	Yes*
180669	Yes	Yes	Yes	–	–	Yes*
180670	Yes	Yes	Yes	–	–	Yes*
180671	Yes	Yes	Yes	–	–	Yes*
180672	Yes	Yes	Yes	–	–	Yes*

Table 62. Design and monitoring requirements for Indiana SPS-6 site—continued.

Monitoring Information:

Section	Monitoring Immediately Before Rehabilitation			Monitoring Immediately After Rehabilitation			Long-Term Monitoring				
	Distress	FWD	Profile	Distress	FWD	Profile	Distress	Faulting	FWD	Rutting	Profile
180601	Yes	Yes	No	No	Yes	No	Yes	No	Yes	–	Yes
180602	Yes	Yes	Yes	No	Yes	Yes	Almost	Almost	Almost	–	Yes
180603	Yes	No	Yes	Almost	No	Yes	Almost	–	Almost	Yes	Yes
180604	Yes	Yes	Yes	Almost	Yes	Yes	Almost	–	Almost	Yes	Yes
180605	Yes	Yes	Yes	Almost	Yes	Yes	Almost	Almost	Almost	–	Yes
180606	Yes	No	Yes	Almost	No	Yes	Almost	–	Almost	Yes	Yes
180607	Yes	Yes	Yes	Almost	Yes	Yes	Almost	–	Almost	Yes	Yes
180608	Yes	Yes	Yes	Almost	Yes	Yes	Almost	–	Almost	Yes	Yes
180659	Yes	No	Yes	No	No	Yes	Yes	–	Almost	Yes	Yes
180660	Yes	No	Yes	No	No	Yes	Almost	–	No	Yes	Yes
180661	Yes	No	Yes	No	No	Yes	Almost	–	No	Yes	Yes
180662	Yes	Yes	Yes	No	Yes	Yes	Almost	–	Almost	Yes	Yes
180663	Yes	Yes	Yes	No	Yes	Yes	Almost	–	Almost	Yes	Yes
180664	Yes	Yes	Yes	No	Yes	Yes	Almost	–	No	Yes	Yes
180665	Yes	Yes	Yes	No	Yes	Yes	Almost	–	Almost	Yes	Yes
180666	Yes	Yes	Yes	No	Yes	Yes	Almost	–	Almost	Yes	Yes
180667	Yes	No	Yes	No	No	Yes	Almost	–	No	Yes	Yes
180668	Yes	No	Yes	No	No	Yes	Almost	–	No	Yes	Yes
180669	Yes	No	Yes	No	No	Yes	Almost	–	Almost	Yes	Yes
180670	Yes	No	Yes	No	No	Yes	Almost	–	Almost	Yes	Yes
180671	Yes	No	Yes	No	No	Yes	Almost	–	No	Yes	Yes
180672	Yes	No	Yes	No	No	Yes	Almost	–	No	Yes	Yes

Yes = Design criteria met.

No = Design criteria not met.

Almost = Close to meeting design criteria. Dash (–) = Data do not apply to this cell.

* Thickness information appears to be design information, not field measured as expected.

IOWA

All levels of data were used to complete the summaries presented in tables 63 and 64. The information presented in table 63 that is italicized highlights information that does not meet the specifications established for this particular site and/or section. As shown, for Iowa, only a few of the design properties do not meet the original design parameters established for the SPS-6 experiment.

Table 64 summarizes the site and monitoring requirements that were and were not met based on the IMS data requirements for this project. As shown in this table, currently the climate, traffic, and most of the as-constructed design data meet the design requirements. In addition, most of the monitoring requirements for immediately before and after rehabilitation were met, with the exception of the profile immediately before rehabilitation. In general, the long-term monitoring requirements were met, with the exception of faulting.

Table 63. Iowa SPS-6 site summary.

General Site Information:

PCC type: JRCP Climatic zone: Wet, Freeze Traffic availability: 4 years
 Initial pavement condition: Fair Climatic availability: 32 years

Site Information:

ID	Restoration Technique		Pavement Structure						Date		
	Design	Compliance	AC Overlay Thick. mm		PCC	Base		Subgrade Type	Orig. Constr.	Rehab.	Deassigned
			Design	Actual	Thick. mm	Type	Thick. mm				
0601	Routine	A	—	—	254	303	102	113	11/1/1965	8/17/1989	
0602	Minimum	O	—	—	257	303	102	113	11/1/1965	8/17/1989	
0603	Minimum	O, D	102	102	254	303	102	113	11/1/1965	8/17/1989	
0604	Minimum*	A	102	117	246	303	102	113	11/1/1965	8/17/1989	
0605	Maximum	A, O	—	—	254	303	102	113	11/1/1965	8/17/1989	
0606	Maximum	A, O	102	104	254	303	102	113	11/1/1965	8/17/1989	
0607	Crack & Seat	A	102	104	254	303	102	113	11/1/1965	8/30/1989	
0608	Crack & Seat	A	203	203	254	303	102	113	11/1/1965	8/22/1989	
0659	State Rehab.	—	Variable	102	244	303	102	113	11/1/1965	7/20/1989	

Monitoring Information:

ID	Number of Monitoring Data Collection Dates							Profile	Traffic
	IRI	FWD	Distress			Friction	Rutting	Initial AC IRI, m/km	Average ESALs
			Manual	PASCO	Faulting				
0601	7	6	4	4	1	9	2	—	369,844
0602	5	6	3	4	1	8	2	—	371,523
0603	10	7	4	4	0	8	5	0.90	368,591
0604	10	7	4	4	0	8	5	1.06	368,591
0605	5	8	3	4	2	8	2	—	368,591
0606	8	6	4	4	0	8	4	0.92	368,591
0607	9	8	5	4	0	8	5	1.02	368,591
0608	10	8	5	4	0	8	5	1.21	368,591
0659	8	7	4	2	0	8	5	1.00	368,591

General Notes:

N/A: Data are not in the IMS database yet.

Dash (—): Does not apply to this cell.

Italicized letters and numbers represent section information that was not acquired within the experiment specifications.

Abbreviations: **Thick. mm** = Thickness in mm; **Orig. Constr.** = Date of original construction; **Rehab.** = Rehabilitation.

Additional Notes:

*AC overlay has been sawed and sealed.

A = All requirements satisfied, M = Most requirements satisfied, O = Optional treatments applied, and D = "Do not perform" treatments applied.

113 = Fine-grained soils: Sandy clay.

1 mm = .039 inch

Table 64. Design and monitoring requirements for Iowa SPS-6 site.

Site Information:

Section	Climate		Traffic	As Constructed		
	Moisture	Temperature		Compliance	AC Thick.	PCC Thick.
190601	Yes	Yes	Yes	Yes	–	Yes
190602	Yes	Yes	Yes	Yes	–	Almost
190603	Yes	Yes	Yes	No	Yes	Yes
190604	Yes	Yes	Yes	Yes	No	Yes
190605	Yes	Yes	Yes	Yes	–	Yes
190606	Yes	Yes	Yes	Yes	Yes	Yes
190607	Yes	Yes	Yes	Yes	Yes	Yes
190608	Yes	Yes	Yes	Yes	Yes	Yes
190659	Yes	Yes	Yes	–	–	Yes

Monitoring Information:

Section	Monitoring Immediately Before Rehabilitation			Monitoring Immediately After Rehabilitation			Long-Term Monitoring				
	Distress	FWD	Profile	Distress	FWD	Profile	Distress	Faulting	FWD	Rutting	Profile
190601	Yes	Yes	No	Yes	Yes	Almost	Almost	No	Yes	–	Almost
190602	Yes	Yes	Yes	Yes	Yes	Almost	Almost	No	Yes	–	Almost
190603	Yes	Yes	No	Yes	Yes	Almost	Almost	–	Yes	Yes	Almost
190604	Yes	Yes	No	Yes	Yes	Almost	Almost	–	Yes	Yes	Almost
190605	Yes	Yes	No	Yes	Yes	Almost	Almost	Yes	Yes	–	Almost
190606	Yes	Yes	No	Yes	No	Almost	Almost	–	Yes	Yes	Almost
190607	Yes	Yes	No	Yes	Yes	Almost	Almost	–	Yes	Yes	Almost
190608	Yes	Yes	No	Yes	Yes	Almost	Almost	–	Yes	Yes	Almost
190659	No	Yes	No	No	Yes	Almost	Almost	–	Yes	Yes	Almost

Yes = Design criteria met.

No = Design criteria not met.

Almost = Close to meeting design criteria. Dash (–) = Data do not apply to this cell.

MICHIGAN

All levels of data were used to complete the summaries presented in tables 65 and 66. The information presented in table 65 that is italicized highlights information that does not meet the specifications established for this particular site and/or section. As shown, for Michigan, the original construction date and most of the actual AC overlay thicknesses do not fall within the original design parameters established for the SPS-6 experiment.

Table 66 summarizes the site and monitoring requirements that were and were not met based on the IMS data requests for this project. As shown in this table, currently the climate, traffic, and most of the as-constructed design data, with the exception of the AC thickness, meet the design requirements for the SPS-6 experiment. In addition, most of the monitoring requirements for immediately before rehabilitation were met, while the monitoring requirements for immediately after rehabilitation were not met. On average, the long-term monitoring requirements were met.

Note that the full-depth repairs consisted of AC material rather than the PCC used at all other sites. This may have a significant impact on the performance of the rehabilitated pavement.

Table 65. Michigan SPS-6 site summary.

General Site Information:

PCC type: JRCP Climatic zone: Wet, Freeze Traffic availability: 8 years
 Initial pavement condition: Fair Climatic availability: 39 years

Site Information:

Restoration Technique			Pavement Structure						Date		
ID	Design	Compliance	AC Overlay Thick. mm		PCC	Base		Subgrade Type	Orig. Constr.	Rehab.	Deassigned
			Design	Actual	Thick. mm	Type	Thick. mm				
0601	Routine	A	—	—	229	201, 302	1321	131	6/1/1958	5/30/1990	
0602	Minimum	O, (1)	—	—	229	201, 302	1321	131	6/1/1958	5/30/1990	
0603	Minimum	O, (1)	102	130	229	201, 302	1016	131	6/1/1958	5/30/1990	
0604	Minimum*	A, O, (1)	102	137	234	201, 302	1016	131	6/1/1958	5/30/1990	
0605	Maximum	M, O, (2)	—	—	229	201, 302	1321	131	6/1/1958	5/30/1990	
0606	Maximum	A, O, (1)	102	127	241	201, 302	1016	131	6/1/1958	5/30/1990	
0607	Crack & Seat	M	102	117	229	202, 302	1778	104	6/1/1958	5/30/1990	
0608	Crack & Seat	M	203	173	236	202, 302	1321	104	6/1/1958	5/30/1990	
0659	Rubblized	—	Variable	102	241	202, 302	864	104	6/1/1958	5/30/1990	

Monitoring Information:

Number of Monitoring Data Collection Dates								Profile	Traffic
ID	IRI	FWD	Distress			Friction	Rutting	Initial AC IRI, m/km	Average ESALs
			Manual	PASCO	Faulting				
0601	11	5	3	3	3	3	2	—	345,230
0602	11	5	3	2	4	3	2	—	345,230
0603	12	6	5	2	0	3	7	1.29	345,230
0604	12	6	5	3	0	3	8	1.15	345,230
0605	4	4	3	3	3	3	2	—	345,230
0606	11	6	4	3	0	3	6	0.90	345,230
0607	11	6	4	3	0	3	7	1.07	345,230
0608	11	6	4	3	0	3	7	0.87	345,230
0659	11	5	4	2	0	2	6	1.14	345,230

General Notes:

N/A: Data are not in the IMS database yet.

Dash (—): Does not apply to this cell.

Italicized letters and numbers represent section information that was not acquired within the experiment specifications.

Abbreviations: Thick. mm = Thickness in mm; Orig. Constr. = Date of original construction; Rehab. = Rehabilitation.

Additional Notes:

*AC overlay has been sawed and sealed.

A = All requirements satisfied, M = Most requirements satisfied, O = Optional treatments applied, and D = "Do not perform" treatments applied.

(1) = Partial- and full-depth repairs are AC.

(2) = Partial-depth AC repairs and PCC full-depth repairs.

104 = Fine-grained soils: Clay with gravel.

131 = Fine-grained soils: Silty clay.

1 mm = .039 inch

Table 66. Design and monitoring requirements for Michigan SPS-6 site.

Site Information:

Section	Climate		Traffic	As Constructed		
	Moisture	Temperature		Compliance	AC Thick.	PCC Thick.
260601	Yes	Yes	Yes	Yes	–	Yes
260602	Yes	Yes	Yes	Yes	–	Yes
260603	Yes	Yes	Yes	Yes	No	Yes
260604	Yes	Yes	Yes	Yes	No	Yes
260605	Yes	Yes	Yes	Yes	–	Yes
260606	Yes	Yes	Yes	Yes	No	Yes
260607	Yes	Yes	Yes	Yes	No	Yes
260608	Yes	Yes	Yes	Yes	No	Yes
260659	Yes	Yes	Yes	–	–	Yes

Monitoring Information:

Section	Monitoring Immediately Before Rehabilitation			Monitoring Immediately After Rehabilitation			Long-Term Monitoring				
	Distress	FWD	Profile	Distress	FWD	Profile	Distress	Faulting	FWD	Rutting	Profile
260601	Yes	Yes	Yes	No	No	Almost	Yes	Yes	Almost	–	Yes
260602	No	Yes	Yes	No	No	Almost	Yes	Yes	Almost	–	Yes
260603	No	Yes	Yes	No	No	Almost	Almost	–	Almost	Yes	Yes
260604	Yes	Yes	Yes	No	No	Almost	Almost	–	Almost	Yes	Yes
260605	Yes	Yes	Yes	No	No	No	Yes	Yes	Almost	–	Almost
260606	Yes	Yes	Yes	No	No	Almost	Almost	–	Almost	Yes	Yes
260607	Yes	Yes	Yes	No	No	Almost	Almost	–	Almost	Yes	Yes
260608	Yes	Yes	Yes	No	No	Almost	Almost	–	Almost	Yes	Yes
260659	No	Yes	Yes	No	No	Almost	Almost	–	No	Yes	Yes

Yes = Design criteria met.

No = Design criteria not met.

Almost = Close to meeting design criteria. Dash (–) = Data do not apply to this cell.

MISSOURI

All levels of data were used to complete the summaries presented in tables 67 and 68. The information presented in table 67 that is italicized highlights information that does not meet the specifications established for this particular site and/or section. As shown, for Missouri, only a few design and traffic data do not meet the original design parameters established for the SPS-6 experiment.

Table 68 summarizes the site and monitoring requirements that were and were not met based on the IMS data requests for this project. As shown in this table, currently all of the climate, traffic, and as-constructed design data, with the exception of AC overlay thickness, meet the SPS-6 design parameters. In addition, most of the monitoring requirements for immediately before and after rehabilitation were met. On average, the long-term monitoring requirements were met.

Table 67. Missouri SPS-6 site summary.

General Site Information:

PCC type: JRCP Climatic zone: Wet, Freeze Traffic availability: 1 year
 Initial pavement condition: Poor Climatic availability: 17 years

Site Information:

ID	Restoration Technique		Pavement Structure						Date		
	Design	Compliance	AC Overlay Thick. mm		PCC	Base		Subgrade Type	Orig. Constr.	Rehab.	Deassigned
			Design	Actual	Thick. mm	Type	Thick. mm				
0601	Routine	A	—	—	231	303	107	113	10/1/1975	8/21/1992	
0602	Minimum	O	—	—	234	303	86	113	10/1/1975	8/21/1992	
0603	Minimum	A	102	97	231	303	122	113	10/1/1975	8/10/1992	
0604	Minimum*	A, O	102	97	231	303	114	113	10/1/1975	8/10/1992	
0605	Maximum	A, O	—	—	231	303	97	113	10/1/1975	8/21/1992	
0606	Maximum	A, O	102	97	226	303	89	113	10/1/1975	8/10/1992	
0607	Crack & Seat	A	102	109	236	303	107	113	10/1/1975	8/8/1992	9/2/1995
0608	Crack & Seat	A	203	201	239	303	135	113	10/1/1975	8/8/1992	
0659	Crack & Seat	—	Variable	109	236	303	152	113	10/1/1975	8/8/1992	9/2/1995
0660	Crack & Seat	—	Variable	198	246	303	107	113	10/1/1975	8/8/1992	
0661	Rubblized	—	Variable	290	239	303	107	113	10/1/1975	8/10/1992	
0662	Rubblized	—	Variable	185	239	303	140	113	10/1/1975	6/8/1992	
0663	Rubblized	—	Variable	272	241	303	114	113	10/1/1975	8/8/1992	
0664	Rubblized	—	Variable	175	246	303	130	113	10/1/1975	7/9/1992	
0665	State	—	Variable	117	229	303	117	113	10/1/1975	8/10/1992	
0666	Minimum	—	—	—	231	303	117	113	10/1/1975	6/9/1992	

Monitoring Information:

ID	Number of Monitoring Data Collection Dates							Profile	Traffic
	IRI	FWD	Distress				Rutting	Initial AC IRI, m/km	Average ESALs
			Manual	PASCO	Faulting	Friction			
0601	7	7	5	2	4	2	2	—	498,612
0602	5	7	6	2	5	3	2	—	498,612
0603	6	7	6	2	2	3	6	1.09	498,612
0604	6	8	6	2	2	3	6	1.08	498,612
0605	5	6	6	2	5	3	2	—	498,612
0606	7	6	6	2	2	3	6	1.10	497,870
0607	5	10	5	2	2	3	6	1.31	498,612
0608	7	8	6	2	2	3	6	1.28	499,354
0659	5	4	4	2	2	3	6	1.26	498,612
0660	7	4	6	2	2	3	6	1.18	500,096
0661	6	6	7	2	2	3	6	1.22	499,354
0662	6	2	6	2	2	2	6	1.24	499,354
0663	6	7	6	2	2	3	6	1.37	514,194
0664	6	4	6	2	2	3	6	1.18	500,096
0665	5	3	5	2	2	3	6	1.15	498,612
0666	6	5	6	2	5	3	2	—	N/A

General Notes:

N/A: Data are not in the IMS database yet.

Dash (—): Does not apply to this cell.

Italicized letters and numbers represent section information that was not acquired within the experiment specifications.

Abbreviations: **Thick. mm** = Thickness in mm; **Orig. Constr.** = Date of original construction; **Rehab.** = Rehabilitation.

Additional Notes:

*AC overlay has been sawed and sealed.

A = All requirements satisfied, M = Most requirements satisfied, O = Optional treatments applied, and D = "Do not perform" treatments applied.

113 = Fine-grained soils: Sandy clay.

1 mm = .039 inch

Table 68. Design and monitoring requirements for Missouri SPS-6 site.

Site Information:

Section	Climate		Traffic	As Constructed		
	Moisture	Temperature		Compliance	AC Thick.	PCC Thick.
290601	Yes	Yes	Yes	Yes	–	Yes
290602	Yes	Yes	Yes	Yes	–	Yes
290603	Yes	Yes	Yes	Yes	Yes	Yes
290604	Yes	Yes	Yes	Yes	Yes	Yes
290605	Yes	Yes	Yes	Yes	–	Yes
290606	Yes	Yes	Yes	Yes	Almost	Yes
290607	Yes	Yes	Yes	Yes	Almost	Yes
290608	Yes	Yes	Yes	Yes	Yes	Yes
290659	Yes	Yes	Yes	–	–	Yes
290660	Yes	Yes	Yes	–	–	Yes
290661	Yes	Yes	Yes	–	–	Yes
290662	Yes	Yes	Yes	–	–	Yes
290663	Yes	Yes	Yes	–	–	Yes
290664	Yes	Yes	Yes	–	–	Yes
290665	Yes	Yes	Yes	–	–	Yes
290666	Yes	Yes	N/A	–	–	Yes

Monitoring Information:

Section	Monitoring Immediately Before Rehabilitation			Monitoring Immediately After Rehabilitation			Long-Term Monitoring				
	Distress	FWD	Profile	Distress	FWD	Profile	Distress	Faulting	FWD	Rutting	Profile
290601	No	No	Yes	Almost	Yes	Almost	Almost	Almost	Almost	–	Yes
290602	Yes	Yes	Yes	Almost	Almost	No	Almost	Almost	Almost	–	Yes
290603	Yes	Yes	Yes	Almost	Almost	Almost	Almost	–	Almost	Yes	Yes
290604	Yes	Yes	Yes	Almost	Yes	Almost	Almost	–	Almost	Yes	Yes
290605	Yes	Yes	Yes	Almost	Almost	No	Almost	Almost	Almost	–	Yes
290606	Yes	Yes	Yes	Almost	Yes	Almost	Almost	–	Almost	Yes	Yes
290607	Yes	Yes	Yes	Almost	Yes	Almost	Yes	–	Yes	Yes	Yes
290608	Yes	Yes	Yes	Almost	Yes	Almost	Almost	–	Almost	Yes	Yes
290659	Yes	Yes	Yes	Almost	No	Almost	Yes	–	No	Yes	Yes
290660	Yes	Yes	Yes	Almost	No	Almost	Almost	–	Almost	Yes	Yes
290661	Yes	Yes	Yes	Almost	No	Almost	Almost	–	Almost	Yes	Yes
290662	Yes	Yes	Yes	Almost	No	Almost	Almost	–	Almost	Yes	Yes
290663	Yes	Yes	Yes	Almost	No	Almost	Almost	–	Almost	Yes	Yes
290664	Yes	Yes	Yes	Almost	No	Almost	Almost	–	Almost	Yes	Yes
290665	No	Yes	Yes	Almost	No	No	Almost	–	Almost	Yes	Yes
290666	Yes	Yes	Yes	Almost	Yes	Almost	Almost	Almost	Almost	–	Yes

Yes = Design criteria met.

N/A = Not available.

Almost = Close to meeting design criteria. Dash (–) = Data do not apply to this cell.

No = Design criteria not met.

MISSOURI (A)

All levels of data were used to complete the summaries presented in tables 69 and 70. The information presented in table 69 that italicized highlights information that does not meet the specifications established for this particular site and/or section. As shown, for the Missouri (A) site, most of the design and traffic information is not in the IMS database at this time. Therefore, it is impossible to determine if these section properties meet all of the original design parameters established for the SPS-6 experiment.

Table 70 summarizes the site and monitoring requirements that were and were not met based on the IMS data requests for this project. All of the climatic factors have been met for this site. Unfortunately, as shown in this table, currently there is not enough information available to determine if the traffic, as-constructed design data, short-term monitoring, and long-term monitoring requirements have been met. It is very likely that not enough time has passed for all of the monitoring activities (short and long term) to be collected and loaded into the IMS database. Therefore, it is anticipated that some of these monitoring requirements will be met as these pavement sections continue to age and the information is added to the IMS database.

Table 69. Missouri (A) SPS-6 site summary.

General Site Information:

PCC type: JCP Climatic zone: Wet, Freeze Traffic availability: None
Initial pavement condition: Fair Climatic availability: None

Site Information:

ID	Restoration Technique		Pavement Structure						Date		
	Design	Compliance	AC Overlay Thick. mm		PCC	Base		Subgrade Type	Orig. Constr.	Rehab.	Deassigned
			Design	Actual	Thick. mm	Type	Thick. mm				
A601	Routine	O	—	—	N/A	N/A	N/A	—	1/1/1969	9/3/1998	
A602	Minimum	O	—	—	N/A	N/A	N/A	—	1/1/1969	9/3/1998	
A603	Minimum	A	102	N/A	N/A	N/A	N/A	—	1/1/1969	9/3/1998	
A604	Minimum*	A, O	102	N/A	N/A	N/A	N/A	—	1/1/1969	9/3/1998	
A605	Maximum	A, O	—	—	N/A	N/A	N/A	—	1/1/1969	9/3/1998	
A606	Maximum	A, O	102	N/A	N/A	N/A	N/A	—	1/1/1969	9/3/1998	
A607	Crack & Seat	A	102	N/A	N/A	N/A	N/A	—	1/1/1969	9/3/1998	
A608	Crack & Seat	A	203	N/A	N/A	N/A	N/A	—	1/1/1969	9/3/1998	

Monitoring Information:

ID	Number of Monitoring Data Collection Dates							Profile	Traffic
	Distress							Initial AC IRI, m/km	Average ESALs
	IRI	FWD	Manual	PASCO	Faulting	Friction	Rutting		
A601	0	0	1	0	1	0	0	—	N/A
A602	0	0	1	0	1	0	0	—	N/A
A603	0	0	1	0	1	0	0	N/A	N/A
A604	0	0	0	0	0	0	0	N/A	N/A
A605	0	0	0	0	0	0	0	—	N/A
A606	0	1	2	0	1	0	1	N/A	N/A
A607	0	0	1	0	1	0	0	N/A	N/A
A608	0	0	0	0	0	0	0	N/A	N/A

General Notes:

N/A: Data are not in the IMS database yet.

Dash (—): Does not apply to this cell.

Italicized letters and numbers represent section information that was not acquired within the experiment specifications.

Abbreviations: Thick. mm = Thickness in mm; Orig. Constr. = Date of original construction; Rehab. = Rehabilitation.

Additional Notes:

*AC overlay has been sawed and sealed.

A = All requirements satisfied, M = Most requirements satisfied, O = Optional treatments applied, and D = "Do not perform" treatments applied.

1 mm = .039 inch

Table 70. Design and monitoring requirements for Missouri (A) SPS-6 site.

Site Information:

Section	Climate		Traffic	As Constructed		
	Moisture	Temperature		Compliance	AC Thick.	PCC Thick.
29A601	Yes	Yes	N/A	Yes	–	N/A
29A602	Yes	Yes	N/A	Yes	–	N/A
29A603	Yes	Yes	N/A	Yes	N/A	N/A
29A604	Yes	Yes	N/A	Yes	N/A	N/A
29A605	Yes	Yes	N/A	Yes	–	N/A
29A606	Yes	Yes	N/A	Yes	N/A	N/A
29A607	Yes	Yes	N/A	Yes	N/A	N/A
29A608	Yes	Yes	N/A	Yes	N/A	N/A

Monitoring Information:

Section	Monitoring Immediately Before Rehabilitation			Monitoring Immediately After Rehabilitation			Long-Term Monitoring				
	Distress	FWD	Profile	Distress	FWD	Profile	Distress	Faulting	FWD	Rutting	Profile
29A601	Yes	No	No	No	No	No	N/A	N/A	N/A	–	N/A
29A602	Yes	No	No	No	No	No	N/A	N/A	N/A	–	N/A
29A603	Yes	No	No	No	No	No	N/A	–	N/A	N/A	N/A
29A604	No	No	No	No	No	No	N/A	–	N/A	N/A	N/A
29A605	No	No	No	No	No	No	N/A	N/A	N/A	–	N/A
29A606	Yes	Yes	No	Yes	Yes	No	N/A	–	N/A	N/A	N/A
29A607	Yes	No	No	No	No	No	N/A	–	N/A	N/A	N/A
29A608	No	No	No	No	No	No	N/A	–	N/A	N/A	N/A

Yes = Design criteria met.

N/A = Not available.

No = Design criteria not met.

Dash (–) = Data do not apply to this cell.

OKLAHOMA

All levels of data were used to complete the summaries presented in tables 71 and 72. The information presented in table 71 that is italicized highlights information that does not meet the specifications established for this particular site and/or section. As shown, for Oklahoma, the original construction date does not fall within the original design parameters established for the SPS-6 experiment. In addition, some of the restoration techniques and AC overlay thicknesses do not meet the requirements of the SPS-6 experiment.

Table 72 summarizes the site and monitoring requirements that were and were not met based on the IMS data requests for this project. As shown in this table, some of the climatic data meet the requirements. The traffic data meet the SPS-6 requirements. In addition, it can be noted that most of the as-constructed design data and the monitoring data for immediately before and after rehabilitation meet the requirements. In general, the long-term monitoring intervals were typically met.

Table 71. Oklahoma SPS-6 site summary.

General Site Information:

PCC type: JRCP Climatic zone: Wet, No Freeze Traffic availability: 3 years
 Initial pavement condition: Fair Climatic availability: 35 years

Site Information:

Restoration Technique			Pavement Structure						Date		
ID	Design	Compliance	AC Overlay Thick. mm		PCC	Base		Subgrade Type	Orig. Constr.	Rehab.	Deassigned
			Design	Actual	Thick. mm	Type	Thick. mm				
0601	Routine	O, D	—	—	224	309	419	141	1/1/1963	7/10/1992	
0602	Minimum	O	—	—	224	309	419	141	1/1/1963	8/21/1992	
0603	Minimum	O	102	102	229	309	386	141	1/1/1963	8/9/1992	
0604	Minimum*	A, O	102	97	229	309	386	141	1/1/1963	8/9/1992	
0605	Maximum	A, O	—	—	229	309	376	141	1/1/1963	8/27/1992	
0606	Maximum	A, O	102	109	231	309	376	141	1/1/1963	8/9/1992	
0607	Crack & Seal	M, D	102	117	229	309	386	141	1/1/1963	8/3/1992	
0608	Crack & Seal	M, D	203	198	234	309	376	141	1/1/1963	8/3/1992	

Monitoring Information:

Number of Monitoring Data Collection Dates								Profile	Traffic
ID	IRI	FWD	Distress			Friction	Rutting	Initial AC IRI, m/km	Average ESALs
			Manual	PASCO	Faulting				
0601	4	6	6	2	6	2	3	—	487,376
0602	6	5	6	2	6	2	3	—	487,376
0603	5	4	6	2	1	2	6	0.74	304,987
0604	4	4	6	2	1	2	5	0.86	304,987
0605	6	6	6	2	6	2	3	—	487,768
0606	4	4	6	2	1	1	5	0.92	304,790
0607	4	4	6	2	1	2	5	1.08	304,790
0608	5	4	6	2	1	2	5	1.27	304,398

General Notes:

N/A: Data are not in the IMS database yet.

Dash (—): Does not apply to this cell.

Italicized letters and numbers represent section information that was not acquired within the experiment specifications.

Abbreviations: Thick. mm = Thickness in mm; Orig. Constr. = Date of original construction; Rehab. = Rehabilitation.

Additional Notes:

*AC overlay has been sawed and sealed.

A = All requirements satisfied, M = Most requirements satisfied, O = Optional treatments applied, and D = "Do not perform" treatments applied.

141 = Fine-grained soils: Silt.

1 mm = .039 inch

Table 72. Design and monitoring requirements for Oklahoma SPS-6 site.

Site Information:

Section	Climate		Traffic	As Constructed		
	Moisture	Temperature		Compliance	AC Thick.	PCC Thick.
400601	Yes	No	Yes	No	–	Yes
400602	Yes	No	Yes	Yes	–	Yes
400603	Yes	No	Yes	Yes	Yes	Yes
400604	Yes	No	Yes	Yes	Yes	Yes
400605	Yes	No	Yes	Yes	–	Yes
400606	Yes	No	Yes	Yes	Almost	Yes
400607	Yes	No	Yes	No	No	Yes
400608	Yes	No	Yes	No	Yes	Yes

Monitoring Information:

Section	Monitoring Immediately Before Rehabilitation			Monitoring Immediately After Rehabilitation			Long-Term Monitoring				
	Distress	FWD	Profile	Distress	FWD	Profile	Distress	Faulting	FWD	Rutting	Profile
400601	Yes	Yes	Yes	Yes	Almost	Almost	Yes	Almost	Almost	–	Almost
400602	Yes	Yes	Yes	Yes	Almost	Almost	Yes	Almost	Almost	–	Almost
400603	Yes	Yes	Yes	Yes	Almost	Almost	Yes	–	Almost	Yes	Almost
400604	Yes	Yes	Yes	Yes	Almost	Almost	Yes	–	Almost	Almost	Almost
400605	Yes	Yes	Yes	Yes	Almost	Almost	Yes	Almost	Almost	–	Almost
400606	Yes	Yes	Yes	Yes	Almost	Almost	Yes	–	Almost	Almost	Almost
400607	Yes	Yes	Yes	Yes	Almost	Almost	Yes	–	Almost	Almost	Yes
400608	Yes	Yes	Yes	Yes	Almost	Almost	Yes	–	Almost	Almost	Almost

Yes = Design criteria met.

No = Design criteria not met.

Almost = Close to meeting design criteria.

Dash (–) = Data do not apply to this cell.

PENNSYLVANIA

All levels of data were used to complete the summaries presented in tables 73 and 74. The information presented in table 73 that is italicized highlights information that does not meet the specifications established for this particular site and/or section. As shown, for Pennsylvania, the PCC thicknesses and some additional material parameters did not meet the SPS-6 requirements.

Table 74 summarizes the site and monitoring requirements that were and were not met based on the IMS data requests for this project. As shown in this table, currently the climate, traffic, and most of the as-constructed design data requirements have been met. In addition, it can be noted that only some of the intervals immediately before and after rehabilitation meet the requirements of the SPS-6 experiment. The long-term monitoring intervals were typically met.

Table 73. Pennsylvania SPS-6 site summary.

General Site Information:

PCC type: JRCP Climatic zone: Wet, Freeze Traffic availability: 1 to 2 years
 Initial pavement condition: Fair Climatic availability: 29 years

Site Information:

ID	Restoration Technique		Pavement Structure						Date		
	Design	Compliance	AC Overlay Thick. mm		PCC	Base		Subgrade Type	Orig. Constr.	Rehab.	Deassigned
			Design	Actual	Thick. mm	Type	Thick. mm				
0601	Routine	A	—	—	262	303	254	141	9/1/1968	9/30/1992	
0602	Minimum	A	—	—	259	303	304.8	141	9/1/1968	9/30/1992	
0603	Minimum	O, <i>D</i>	102	102	257	303	254	141	9/1/1968	9/30/1992	
0604	Minimum*	A, O, <i>D</i>	102	<i>109</i>	262	303	254	141	9/1/1968	9/30/1992	
0605	Maximum	A, O	—	—	257	303	279.4	141	9/1/1968	9/17/1992	
0606	Maximum	A, O	102	<i>114</i>	257	303	228.6	141	9/1/1968	9/30/1992	
0607	Crack & Seal	A, O	102	<i>112</i>	257	303	264.16	141	9/1/1968	9/23/1992	
0608	Crack & Seal	A	203	213	257	303	241.3	141	9/1/1968	9/23/1992	
0660	Rubblized	—	Variable	241	269	303	254	141	9/1/1968	9/23/1992	
0661	Rubblized	—	Variable	665	254	303	279.4	141	9/1/1968	9/23/1992	
0662	Crack & Seal	—	Variable	196	259	303	254	141	9/1/1968	9/23/1992	

Monitoring Information:

ID	Number of Monitoring Data Collection Dates							Profile	Traffic
	IRI	FWD	Distress			Friction	Rutting	Initial AC IRI, m/km	Average ESALs
			Manual	PASCO	Faulting				
0601	8	7	5	2	4	0	2	—	2,146,737
0602	10	6	5	2	4	0	2	—	2,146,737
0603	8	4	5	2	1	0	5	1.07	2,146,737
0604	7	4	5	2	1	0	5	1.14	2,146,737
0605	10	7	5	2	4	0	2	—	2,146,737
0606	7	4	5	2	1	0	5	1.09	2,146,737
0607	8	5	5	2	1	0	5	1.04	2,146,737
0608	9	4	5	2	1	0	5	1.00	2,039,231
0660	9	3	4	2	0	0	5	0.96	2,146,737
0661	6	3	3	2	0	0	4	0.84	2,146,737
0662	8	3	3	2	0	0	4	0.91	2,146,737

General Notes:

N/A: Data are not in the IMS database yet.

Dash (—): Does not apply to this cell.

Italicized letters and numbers represent section information that was not acquired within the experiment specifications.

Abbreviations: Thick. mm = Thickness in mm; Orig. Constr. = Date of original construction; Rehab. = Rehabilitation.

Additional Notes:

*AC overlay has been sawed and sealed.

A = All requirements satisfied, M = Most requirements satisfied, O = Optional treatments applied, and D = "Do not perform" treatments applied.

141 = Fine-grained soils: Silt.

1 mm = .039 inch

Table 74. Design and monitoring requirements for Pennsylvania SPS-6 site.

Site Information:

Section	Climate		Traffic	As Constructed		
	Moisture	Temperature		Compliance	AC Thick.	PCC Thick.
420601	Yes	Yes	Yes	Yes	–	Almost
420602	Yes	Yes	Yes	Yes	–	Almost
420603	Yes	Yes	Yes	No	No	Almost
420604	Yes	Yes	Yes	No	Almost	Almost
420605	Yes	Yes	Yes	Yes	–	Almost
420606	Yes	Yes	Yes	Yes	Almost	Almost
420607	Yes	Yes	Yes	Yes	Almost	Almost
420608	Yes	Yes	Yes	Yes	Yes	Almost
420660	Yes	Yes	Yes	–	–	Almost
420661	Yes	Yes	Yes	–	–	Almost
420662	Yes	Yes	Yes	–	–	Almost

Monitoring Information:

Section	Monitoring Immediately Before Rehabilitation			Monitoring Immediately After Rehabilitation			Long-Term Monitoring				
	Distress	FWD	Profile	Distress	FWD	Profile	Distress	Faulting	FWD	Rutting	Profile
420601	No	Yes	Yes	No	Yes	Yes	Yes	Almost	Almost	–	Yes
420602	No	Yes	Yes	No	Yes	Yes	Yes	Almost	Almost	–	Yes
420603	No	Yes	Yes	No	No	Yes	Yes	–	Almost	Yes	Yes
420604	No	Yes	Yes	No	No	Yes	Yes	–	Almost	Yes	Yes
420605	No	Yes	Yes	No	No	Yes	Yes	Almost	Almost	–	Yes
420606	No	Yes	Yes	No	No	Yes	Yes	–	Almost	Yes	Yes
420607	No	Yes	Yes	No	No	Yes	Yes	–	Almost	Yes	Yes
420608	No	Yes	Yes	No	No	Yes	Yes	–	Almost	Yes	Yes
420660	No	Yes	Yes	No	No	Yes	Yes	–	Almost	Yes	Yes
420661	No	Yes	Yes	No	No	Yes	Yes	–	No	Yes	Yes
420662	No	Yes	Yes	No	No	Yes	Yes	–	No	Yes	Yes

Yes = Design criteria met.

No = Design criteria not met.

Almost = Close to meeting design criteria. Dash (–) = Data do not apply to this cell.

SOUTH DAKOTA

All levels of data were used to complete the summaries presented in tables 75 and 76. The information presented in table 75 that is italicized highlights information that does not meet the specifications established for this particular site and/or section. As shown, for South Dakota, some of the AC thicknesses, all of the PCC thicknesses, and all of the traffic levels do not fall within the original design parameters established for the SPS-6 experiment.

Table 76 summarizes the site and monitoring requirements that were and were not met based on the IMS data requests for this project. As shown in this table, the climatic factors were almost met. In addition, most of the as-constructed design data and some of the monitoring data from immediately before and after rehabilitation meet the requirements. On average, the long-term monitoring intervals were met.

Table 75. South Dakota SPS-6 site summary.

General Site Information:

PCC type: JPCP Climatic zone: Dry, Freeze Traffic availability: 3 to 4 years
 Initial pavement condition: Fair Climatic availability: 17 years

Site Information:

ID	Restoration Technique		Pavement Structure						Date		
	Design	Compliance	AC Overlay Thick. mm		PCC	Base		Subgrade Type	Orig. Constr.	Rehab.	Deassigned
			Design	Actual	Thick. mm	Type	Thick. mm				
0601	Routine	A	—	—	178	331	102	131	10/1/1973	9/27/1992	
0602	Minimum	A	—	—	178	331	112	131	10/1/1973	8/6/1992	
0603	Minimum	O	102	112	180	331	112	148	10/1/1973	9/25/1992	
0604	Minimum*	A, O	102	112	180	331	91	148	10/1/1973	9/25/1992	
0605	Maximum	A, O	—	—	178	331	102	131	10/1/1973	8/6/1992	
0606	Maximum	A, O	102	109	183	331	112	148	10/1/1973	9/25/1992	
0607	Crack & Seat	A	102	122	185	331	142	148	10/1/1973	9/24/1992	
0608	Crack & Seat	A	203	168	196	331	135	148	10/1/1973	9/24/1992	
0660	Crack & Seat	—	Variable	147	185	331	140	148	10/1/1973	9/24/1992	
0661	State	—	Variable	117	185	331	140	148	10/1/1973	9/25/1992	
0662	State	—	Variable	104	185	331	140	148	10/1/1973	9/25/1992	

Monitoring Information:

ID	Number of Monitoring Data Collection Dates							Profile	Traffic
	IRI	FWD	Distress			Friction	Rutting	Initial AC IRI, m/km	Average ESALs
			Manual	PASCO	Faulting				
0601	7	5	4	2	4	0	2	—	59,683
0602	6	4	3	2	4	0	2	—	59,683
0603	6	4	4	2	0	0	5	1.09	58,209
0604	6	4	3	2	0	0	4	1.26	58,224
0605	7	4	3	2	3	0	2	—	59,683
0606	6	4	3	2	0	0	5	1.04	58,209
0607	6	5	3	2	0	0	5	1.02	58,229
0608	6	5	4	2	0	0	5	0.84	58,344
0660	6	5	3	2	0	0	5	0.88	58,209
0661	6	4	3	2	0	0	5	1.02	58,229
0662	6	5	3	2	0	0	4	1.05	58,229

General Notes:

N/A: Data are not in the IMS database yet.

Dash (—): Does not apply to this cell.

Italicized letters and numbers represent section information that was not acquired within the experiment specifications.

Abbreviations: **Thick. mm** = Thickness in mm; **Orig. Constr.** = Date of original construction; **Rehab.** = Rehabilitation.

Additional Notes:

*AC overlay has been sawed and sealed.

A = All requirements satisfied, M = Most requirements satisfied, O = Optional treatments applied, and D = "Do not perform" treatments applied.

131 = Fine-grained soils: Silty clay.

148 = Fine-grained soils: Clayey silt.

1 mm = .039 inch

Table 76. Design and monitoring requirements for South Dakota SPS-6 site.

Site Information:

Section	Climate		Traffic	As Constructed		
	Moisture	Temperature		Compliance	AC Thick.	PCC Thick.
460601	Almost	Yes	No	Yes	–	Almost
460602	Almost	Yes	No	Yes	–	Almost
460603	Almost	Yes	No	Yes	Almost	Almost
460604	Almost	Yes	No	Yes	Almost	Almost
460605	Almost	Yes	No	Yes	–	Almost
460606	Almost	Yes	No	Yes	Almost	Almost
460607	Almost	Yes	No	Yes	No	Almost
460608	Almost	Yes	No	Yes	No	Almost
460660	Almost	Yes	No	–	–	Almost
460661	Almost	Yes	No	–	–	Almost
460662	Almost	Yes	No	–	–	Almost

Monitoring Information:

Section	Monitoring Immediately Before Rehabilitation			Monitoring Immediately After Rehabilitation			Long-Term Monitoring				
	Distress	FWD	Profile	Distress	FWD	Profile	Distress	Faulting	FWD	Rutting	Profile
460601	No	Yes	Yes	Yes	Yes	No	Almost	Almost	Almost	–	Yes
460602	No	Yes	Yes	Yes	Yes	No	Almost	Almost	Almost	–	Yes
460603	No	Yes	Yes	Yes	Yes	No	Almost	–	Almost	Yes	Yes
460604	No	Yes	Yes	Yes	Yes	No	Almost	–	Almost	Yes	Yes
460605	No	Yes	Yes	Yes	Yes	No	Almost	Almost	Almost	–	Yes
460606	No	Yes	Yes	Yes	Yes	No	Almost	–	Almost	Yes	Yes
460607	No	Yes	Yes	Yes	Yes	No	Almost	–	Almost	Yes	Yes
460608	No	Yes	Yes	Yes	Yes	No	Almost	–	Almost	Yes	Yes
460660	No	Yes	Yes	Yes	Yes	No	Almost	–	Almost	Yes	Yes
460661	No	Yes	Yes	Yes	Yes	No	Almost	–	Almost	Yes	Yes
460662	No	Yes	Yes	Yes	Yes	No	Almost	–	Almost	Yes	Yes

Yes = Design criteria met.

No = Design criteria not met.

Almost = Close to meeting design criteria. Dash (–) = Data do not apply to this cell.

TENNESSEE

All levels of data were used to complete the summaries presented in tables 77 and 78. The information presented in table 77 that is italicized highlights information that does not meet the specifications established for this particular site and/or section. As shown, for Tennessee, a couple of AC overlay thicknesses and some of the rehabilitation techniques do not meet the original design parameters established for the SPS-6 experiment.

Table 78 summarizes the site and monitoring requirements that were and were not met based on the IMS data requests for this project. As shown in this table, currently there is not enough information available to determine if the traffic data requirements have been met. In general, the as-constructed design data almost met the requirements. All of the monitoring requirements for immediately before and after rehabilitation were met. Also, because this section is still relatively new, only some of the long-term monitoring distress requirements have been met. It is very likely that not enough time has passed for all of the long-term monitoring activities to be

collected and loaded into the IMS database. Therefore, it is anticipated that the long-term monitoring requirements will be met as these pavement sections continue to age.

Table 77. Tennessee SPS-6 site summary.

General Site Information:

PCC type: JPCP Climatic zone: Wet, No Freeze Traffic availability: None
Initial pavement condition: Fair Climatic availability: 33 years

Site Information:

Restoration Technique			Pavement Structure						Date		
ID	Design	Compliance	AC Overlay Thick. mm		PCC	Base		Subgrade Type	Orig. Constr.	Rehab.	Deassigned
			Design	Actual	Thick. mm	Type	Thick. mm				
0601	Routine	O, <i>D</i>	—	—	229	339	152	204	1/1/1966	6/7/1996	
0602	Minimum	O	—	—	226	339	152	204	1/1/1966	6/7/1996	
0603	Minimum	<i>D</i>	102	<i>112</i>	229	339	191	102	1/1/1966	6/8/1996	
0604	Minimum*	A, O, <i>D</i>	102	107	229	339	168	114, 119	1/1/1966	6/7/1996	
0605	Maximum	A, O	—	—	229	339	191	102	1/1/1966	6/8/1996	
0606	Maximum	A, O, <i>D</i>	102	104	241	339	191	102	1/1/1966	6/7/1996	
0607	Crack & Seat	A, <i>D</i>	102	<i>112</i>	224	339	168	114	1/1/1966	6/8/1996	
0608	Crack & Seat	A, <i>D</i>	203	<i>221</i>	218	339	168	114	1/1/1966	6/8/1996	
0661	State	—	Variable	211	229	339	168	114	1/1/1966	6/8/1996	
0662	State	—	Variable	218	226	339	168	114	1/1/1966	6/8/1996	

Monitoring Information:

	Number of Monitoring Data Collection Dates							Profile	Traffic
			Distress					Initial AC	Average
ID	IRI	FWD	Manual	PASCO	Faulting	Friction	Rutting	IRI, m/km	ESALs
0601	3	2	3	0	2	1	1	—	N/A
0602	3	3	2	0	2	1	1	—	N/A
0603	3	2	3	0	1	1	1	0.71	N/A
0604	3	3	3	0	1	1	1	0.66	N/A
0605	2	3	2	0	2	1	1	—	N/A
0606	5	2	3	0	1	1	1	0.83	N/A
0607	3	3	3	0	1	1	1	0.68	N/A
0608	4	3	3	0	1	1	1	0.75	N/A
0661	2	2	3	0	1	1	0	0.76	N/A
0662	2	2	3	0	1	1	1	0.75	N/A

General Notes:

N/A: Data are not in the IMS database yet.

Dash (—): Does not apply to this cell.

Italicized letters and numbers represent section information that was not acquired within the experiment specifications.

Abbreviations: **Thick. mm** = Thickness in mm; **Orig. Constr.** = Date of original construction; **Rehab.** = Rehabilitation.

Additional Notes:

*AC overlay has been sawed and sealed.

A = All requirements satisfied, M = Most requirements satisfied, O = Optional treatments applied, and D = "Do not perform" treatments applied.

102 = Fine-grained soils: Lean inorganic clay.

114 = Fine-grained soils: Sandy lean clay.

119 = Fine-grained soils: Sandy clay with gravel.

204 = Coarse-grained soils: Poorly graded sand with gravel.

1 mm = .039 inch

Table 78. Design and monitoring requirements for Tennessee SPS-6 site.

Site Information:

Section	Climate		Traffic	As Constructed		
	Moisture	Temperature		Compliance	AC Thick.	PCC Thick.
470601	Yes	Almost	N/A	No	–	Yes
470602	Yes	Almost	N/A	Yes	–	Yes
470603	Yes	Almost	N/A	No	Almost	Yes
470604	Yes	Almost	N/A	No	Yes	Yes
470605	Yes	Almost	N/A	Yes	–	Yes
470606	Yes	Almost	N/A	No	Yes	Yes
470607	Yes	Almost	N/A	No	Almost	Yes
470608	Yes	Almost	N/A	No	Almost	Yes
470661	Yes	Almost	N/A	–	–	Yes
470662	Yes	Almost	N/A	–	–	Yes

Monitoring Information:

Section	Monitoring Immediately Before Rehabilitation			Monitoring Immediately After Rehabilitation			Long-Term Monitoring				
	Distress	FWD	Profile	Distress	FWD	Profile	Distress	Faulting	FWD	Rutting	Profile
470601	Yes	Yes	Yes	Yes	Yes	Almost	Almost	N/A	N/A	–	Yes
470602	Yes	Yes	Yes	Yes	Yes	Almost	No	N/A	N/A	–	Yes
470603	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	N/A	N/A	Yes
470604	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	N/A	N/A	Yes
470605	Yes	Yes	Yes	Yes	Yes	Almost	No	N/A	N/A	–	No
470606	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	N/A	N/A	Yes
470607	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	N/A	N/A	No
470608	Yes	Yes	Yes	Yes	Yes	Almost	Almost	–	N/A	N/A	Yes
470661	Yes	Yes	No	Yes	Yes	Almost	Almost	–	N/A	N/A	Yes
470662	Yes	Yes	No	Yes	Yes	Almost	Almost	–	N/A	N/A	Yes

Yes = Design criteria met.

N/A = Not available.

Almost = Close to meeting design criteria. Dash (–) = Data do not apply to this cell.

No = Design criteria not met.

7. INITIAL PERFORMANCE TRENDS

The LTPP sections have been surveyed periodically under the monitoring program to collect time-series performance data for each SPS-6 section. Monitoring activities include longitudinal profile, deflection testing, manual distress, faulting, transverse profile (or rutting), PASCO, and friction data. These data are available for evaluating the performance of each PCC pavement rehabilitation treatment. This chapter provides an initial review and evaluation using some of the key performance trends for the core sections of the SPS-6 experiment. Note that this initial evaluation of performance trends is only cursory; it is not within the scope of this study to conduct a comprehensive evaluation at this time. In addition, the oldest section is only 10 years old and, therefore, the results should only be considered as early trends. The longitudinal profile and surface distress (including transverse cracking, faulting, reflection cracking, fatigue cracking, and rutting) were selected for this preliminary review. An analysis of the deflection data will require an extensive evaluation of the backcalculation results, which is beyond the scope of this initial study.

The most important issue to be addressed in this evaluation is the relative performance of the different rehabilitation techniques. Because each experiment encompasses a range of rehabilitation techniques with widely varying levels of corrective effort, a comprehensive and fair comparison of the effectiveness of these techniques is difficult. For example, if one rehabilitation technique exhibits less transverse cracking, but more faulting than another, it would be difficult to say which one provided “better” performance. Therefore, it is nearly impossible to directly correlate the various surface distresses within the different rehabilitation techniques. For this reason, the surface distresses can be used to directly compare the pavement performances of similar rehabilitation techniques; however, these distresses cannot be used to correlate the performances of the different rehabilitation techniques.

However, one measure of performance that all techniques must ultimately satisfy is smoothness. The overall performance of all sections included in this report will be evaluated using the IRI. However, the development of various distresses is also important and it is critical that the performance of each rehabilitation technique be compared using a combination of the smoothness and key distress types.

The SPS-6 sections can be separated into three pavement categories: bare PCC, AC overlay of nonfractured PCC, and AC overlay of fractured PCC. Within each pavement category, direct comparisons of performance based on distress are also possible as described below:

- Bare PCC: Rehabilitation techniques in this category may include some or all of the concrete pavement restoration (CPR) techniques other than overlay, including full-depth repair, diamond grinding, joint sealing, and addition of retrofitted edge drains. For jointed concrete pavements, the performance measures of interest for this group of pavement sections include:
 - IRI.
 - Deteriorated transverse cracks.
 - Faulting of joints and cracks.

- AC overlay of nonfractured PCC: This technique involves applying varying degrees of pre-overlay repairs and placing an AC overlay. The performance measures of interest for this group of pavement sections include:
 - IRI.
 - Deteriorated transverse reflection cracks.

Rutting in this type of pavement is AC material-related, and fatigue cracking in most cases would be associated with deterioration of reflection cracks and joints or severe stripping at the AC/PCC interface.

- AC overlay of fractured PCC: This category includes AC overlays placed on cracked/broken and seated PCC or rubblized PCC. The performance measures of interest for this group of pavement sections include:
 - IRI.
 - Deteriorated transverse cracks.
 - Fatigue cracking.
 - Rutting.

These monitoring data are summarized in table 79. Table 79 shows that all three rehabilitation techniques can be compared using the IRI, and that the distresses cannot be directly compared in all three rehabilitation techniques. However, within each rehabilitation technique, the distress data can be directly compared for all sections.

Table 79. Monitoring activities for each rehabilitation technique.

	Bare PCC	Nonfractured PCC With AC Overlay	Fractured PCC With AC Overlay
Smoothness	• IRI	• IRI	• IRI
Distress	• Transverse cracks • Faulting	• Transverse reflection cracking	• Transverse cracking • Fatigue cracking • Rutting

Because the IRI values can be used to directly correlate the performance of all rehabilitation techniques, this chapter will first discuss the relative roughness performance of each technique. This will be followed by a comparison of the distress levels for all core sections within each rehabilitation technique.

IRI PERFORMANCE TRENDS

The IRI of the SPS-6 rehabilitated sections over time depends on both the initial IRI and the change in IRI over time. Figure 15 shows a plot of the IRI of all sections over time. The wide range of IRI values over time illustrates the variation in smoothness because of the various rehabilitation techniques.

Initial IRI

The initial IRI for the control sections and the minimum and maximum preparation of PCC without diamond grinding are typically quite high, ranging from about 2 to 4 m/km (127 inches/mi to 253 inches/mi). Thus, even the repair of all deteriorated areas of JRCP or JPCP does not result in a smooth pavement. Additional measures, such as diamond grinding or overlay placement, are needed to restore smoothness. Figure 15 shows that the initial IRI for all of the AC overlays and for the maximum preparation of PCC sections (with diamond grinding) is approximately 1 m/km (63.36 inches/mi), ranging from 0.7 to 1.5 m/km (44 to 95 inches/mi). Thus, properly rehabilitated PCC pavements can be restored to a smoothness level similar to that of new construction.

IRI Over Time

The change in IRI since rehabilitation is of interest to show how each rehabilitation technique performs over time. The existing pavement condition, subgrade, traffic, and climatic effects will contribute to the performance of each rehabilitation alternative. Thus, the following is only general early observations, and a detailed analysis of each SPS-6 site is needed to determine the specific findings.

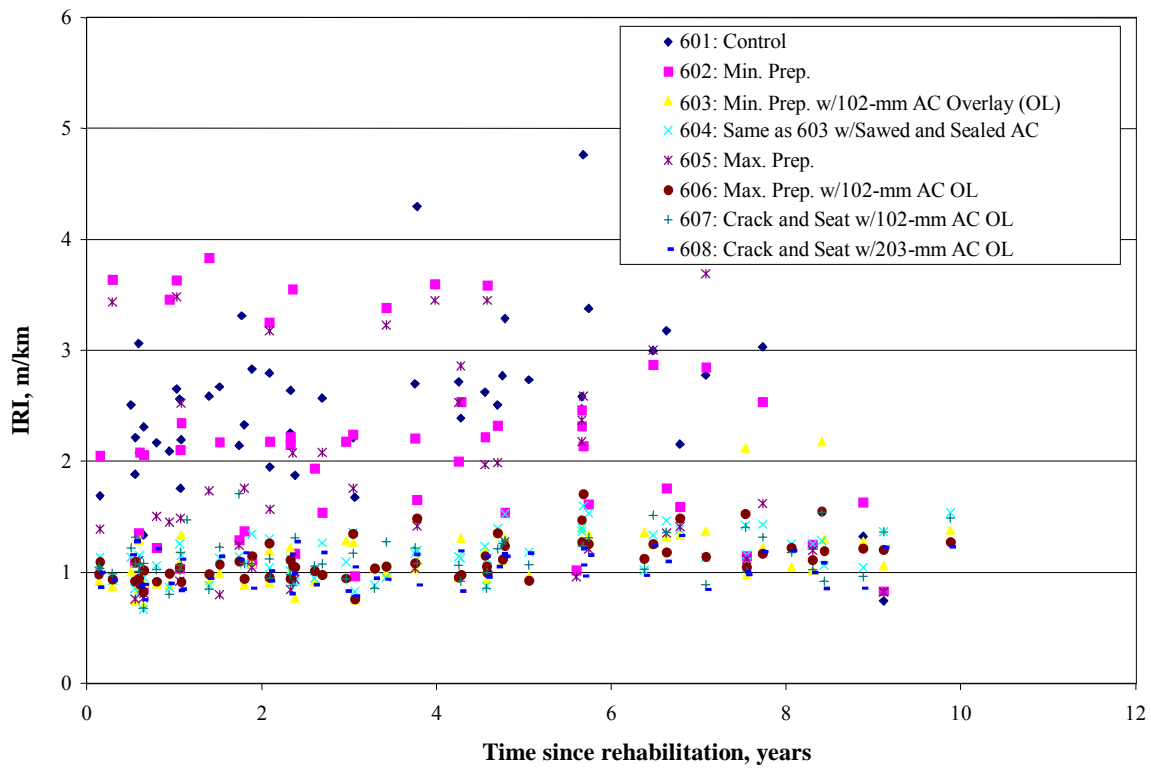
Figure 16 graphically shows the change in average IRI values for all of the core SPS-6 sections throughout their entire life since rehabilitation. The data plotted in this graph show that for the first year after construction, there is very little change in roughness for all types of rehabilitation. After rehabilitation, each of the pavement sections has a widely varying rate of increase in IRI, with some holding constant and others increasing greatly. Sections showing more than a 1.0-m/km (63.36 inches/mi) increase in IRI include the control section, the minimum-preparation bare PCC, the maximum-preparation bare PCC, and the minimum preparation with 102-mm (4-inch) AC overlay sections.

A statistical analysis software program was used to identify the preliminary trends that are developing based on the available data. In addition, this program was used to identify significant differences within each of the rehabilitation techniques. This information was then used to statistically group all of the rehabilitation techniques based on similar performance trends, as shown in table 80. It is important to note that this preliminary analysis did not include the effects of climate, traffic, initial pavement condition, or base or subgrade materials (other factors that obviously affect performance).

Table 80 shows that there is a significant influence in pavement smoothness based on the rehabilitation technique used. Based on the Duncan Group and a 5-percent confidence level, it can be noted that the bare PCC pavement sections are performing significantly differently than the AC-overlaid PCC pavements. In addition, the AC overlay of fractured PCC is performing significantly differently than the nonfractured PCC pavements. Therefore, three distinct performance trends are developing based on the rehabilitation technique used.

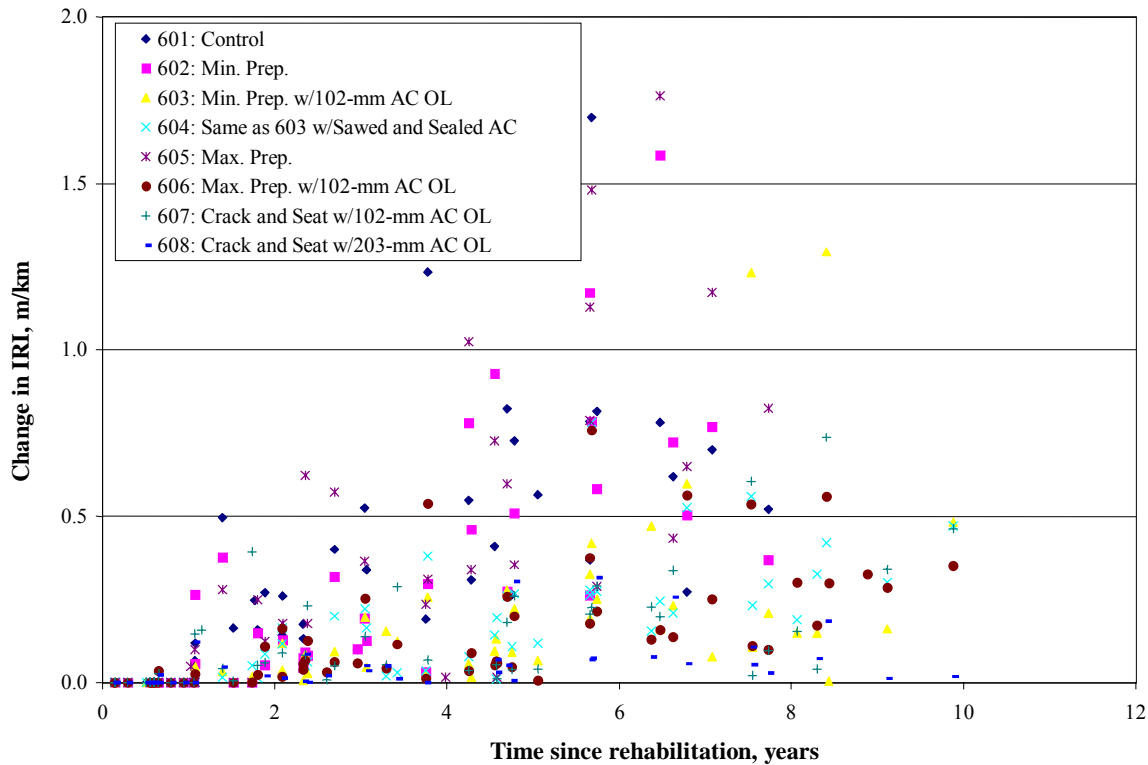
It is important to note that the fractured PCC pavement sections with a 102-mm (4-inch) AC overlay may be statistically grouped with either the nonfractured PCC pavements or the fractured PCC pavements. It is anticipated that, as this rehabilitation technique continues to age, these

pavement sections will become more significantly similar to one of these distinct rehabilitation techniques.



1 m/km = 63.36 inches/mi

Figure 15. IRI since rehabilitation for all core SPS-6 sections.



1 m/km = 63.36 inches/mi

Figure 16. Change in IRI since rehabilitation for all core SPS-6 sections.

Table 80. Statistical grouping of pavement sections based on IRI performance.

Section	Average Change in IRI per Year	Duncan Group
601: Control	0.3380	A
602: Min. preparation	0.2807	A
605: Max. preparation	0.3634	A
603: Min. preparation w/102-mm (4-inch) AC overlay	0.1580	B
604: Same as 603 w/sawed and sealed AC joints	0.1604	B
606: Max. preparation w/102-mm (4-inch) AC overlay	0.1429	B
607: Fractured PCC w/102-mm (4-inch) AC overlay	0.1269	B or C
608: Fractured PCC w/203-mm (8-inch) AC overlay	0.0507	C

Based on this statistical comparison of the core pavement sections, it can be noted that the rate of increase in IRI since rehabilitation is lowest for the AC-overlaid PCC pavements (and even lower for the fractured PCC with thicker AC overlays) and is highest for the bare PCC pavements. It is important to remember that smoothness is not the only pavement performance indicator and, therefore, it is important that the development of the various distresses also be considered. Each of these rehabilitation techniques has widely different costs. Thus, one alternative may not perform as well as another, but may still be more cost-effective.

SURFACE DISTRESS PERFORMANCE TRENDS

As discussed above, the distress data collected for each section can be compared for each distinct rehabilitation technique. Therefore, this section will compare the distress performance trends within each distinct rehabilitation technique (bare PCC, AC overlay of nonfractured PCC, and AC overlay of fractured PCC).

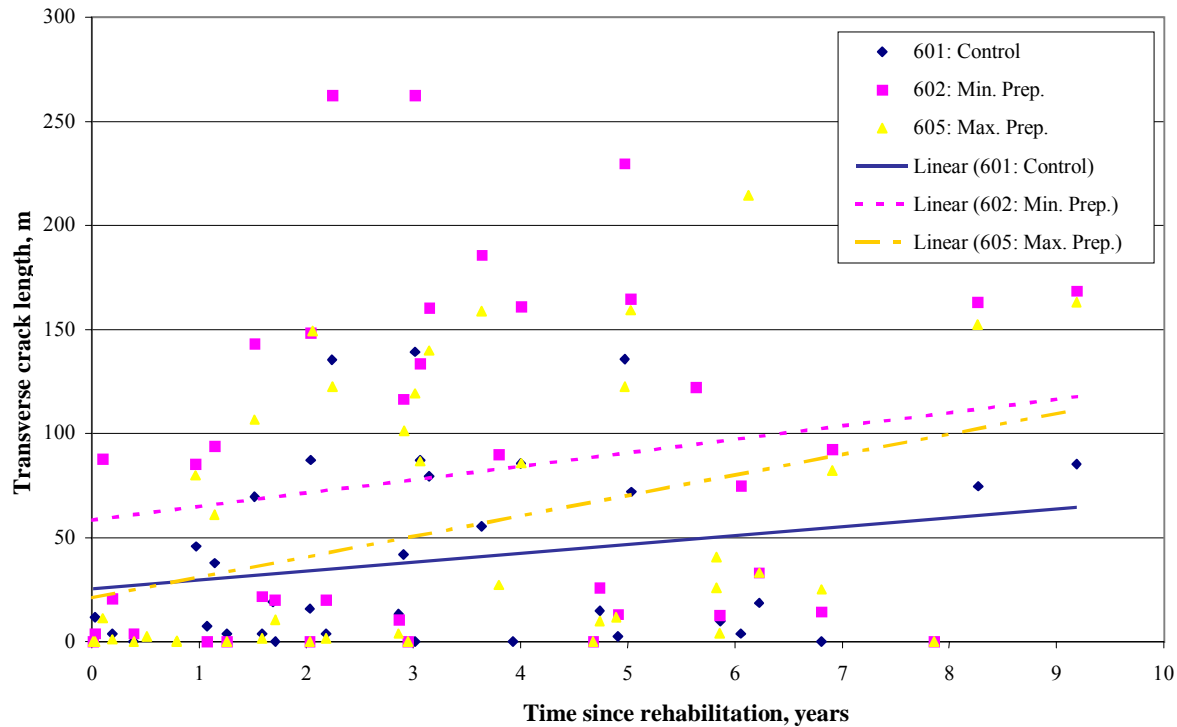
Bare PCC

As indicated in table 79, transverse cracking and faulting can be used to compare the performance of all bare PCC rehabilitated concrete pavements. Therefore, the control (**601), minimum-preparation (**602), and maximum-preparation (**605) sections can be directly compared to each other as follows:

Transverse Cracks

Figure 17 shows the length of the transverse cracking for all three bare concrete sections. From this figure, it can be observed that cracking gradually increases with age and that the minimum- and maximum-preparation sections generally have more transverse cracking than the control section. The scatter is so great that this difference may not be significant.

It appears that the control section and the minimum-preparation sections have approximately the same increase in transverse cracking (slope) per year. It can also be noted that the maximum-preparation section has a higher rate of transverse cracking per year than the other two sections. There are no obvious reasons for this result, and a detailed analysis of each SPS-6 site is needed to ascertain the cause. The rate of increase in transverse cracking for each rehabilitation treatment will become more distinct as the pavement sections continue to age.



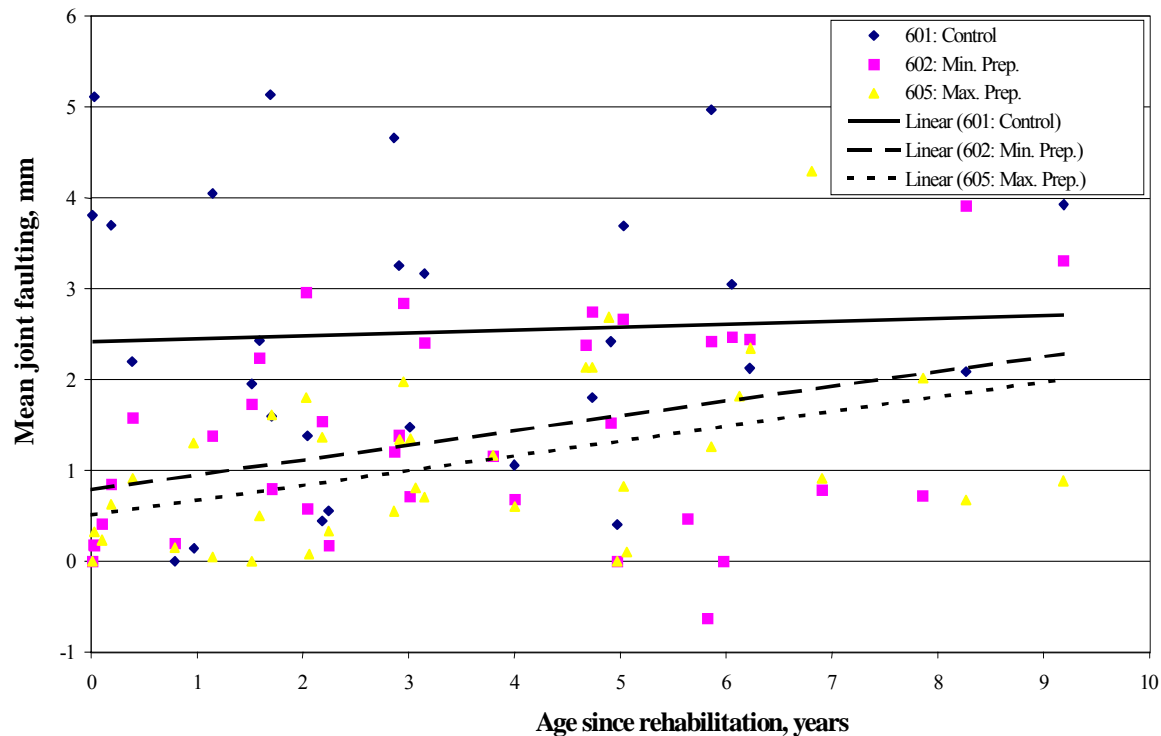
1 m = 3.28 feet

Figure 17. Total transverse cracking for bare PCC pavement sections.

Faulting

The average joint faulting values and their associated trends for the bare concrete sections are shown in figure 18. From this figure, it can be noted that there is very little increase in the amount of faulting for the control sections, while both the minimum- and maximum-preparation sections are showing an increase in faulting since rehabilitation occurred. Both rehabilitation alternatives can be projected to reach the same magnitude of faulting as the control section after about 10 to 12 years.

It is important to note that both the minimum- and maximum-preparation sections had reduced faulting values for several years after rehabilitation was completed because of diamond grinding, which reduces faulting to zero. The minimum-preparation sections, on average, had slightly more faulting than the maximum-rehabilitation alternative. This may be partially explained by the fact that most of the maximum-preparation sections had diamond grinding performed, while the minimum-preparation sections may or may not have had this treatment. At this time, it is difficult to tell if the increase in roughness (slope) for both the minimum- and maximum-rehabilitation treatments is significantly different. As these pavement sections continue to age, it is expected that the performance of the minimum- and maximum-preparation sections will become more distinct. These data trend lines show that the faulting of the maximum-preparation (with diamond grinding) sections will not equal the control section until after about 12 years.



1 mm = .039 inch

Figure 18. Mean joint faulting for bare PCC sections.

AC Overlay of Nonfractured PCC

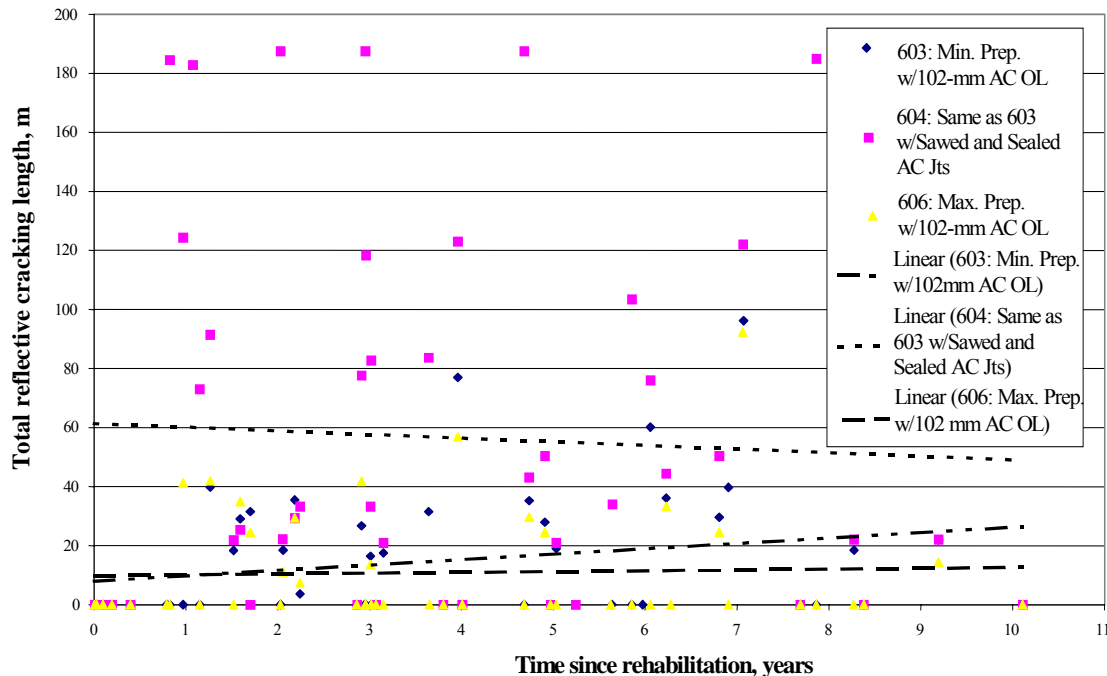
As indicated in table 79, reflection cracking can be used to compare the performance of all AC overlays of PCC pavements. Therefore, the minimum preparation with a 102-mm (4-inch) AC overlay (**603), the minimum preparation with a 102-mm (4-inch) AC overlay with sawed and sealed joints (**604), and the maximum preparation with a 203-mm (8-inch) AC overlay (**606) can be directly compared with each other.

Transverse Reflection Cracking

Figure 19 shows the linear amount of reflection cracking for the AC overlay of nonfractured PCC sections. It is important to note that the minimum-preparation section with a 102-mm (4-inch) AC overlay with sawed and sealed joints (**604) has many survey dates with extremely high values of reflection cracking and a considerable amount of variability. It appears that the survey techniques are not consistent from survey to survey. These discrepancies may be a result of some confusion by the survey crew regarding the changing definition of reflection cracking distress over the life of the LTPP program. These discrepancies should be addressed and corrected in the database before further conclusions can be reached.

In addition, none of these sections exhibited reflection cracking during the first year following rehabilitation. However, it can be noted that most of the reflection cracking appeared during the second year after rehabilitation. Also, it can be noted that there is a relatively small increase in the length of the reflection cracking over time (slope of the line) for all of the rehabilitation techniques. Therefore, it appears that most reflection cracking will typically occur within a 2-year period after rehabilitation. In addition, the amount of reflection cracking does not

significantly increase after this period; however, it is expected that these cracks will continue to deteriorate.



1 m = 3.28 ft

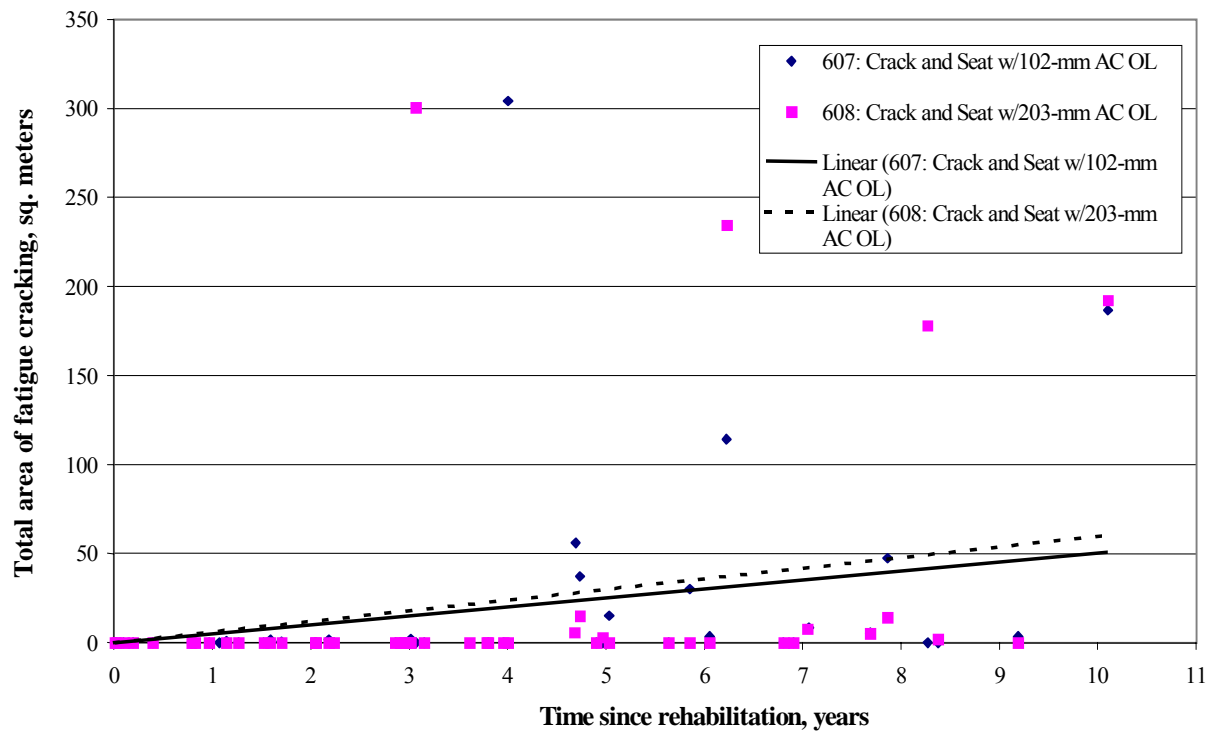
Figure 19. Total reflection cracking for nonfractured PCC pavement sections.

AC Overlay of Fractured PCC

As indicated in table 79, fatigue and rutting can be used to compare the performance of all AC overlays of nonfractured PCC pavements. Therefore, the cracked/broken and seated PCC with 102- and 203-mm (4- and 8-inch) AC overlays (**607 and **608, respectively) can be directly compared with each other.

Fatigue Cracking

Wheelpath fatigue and the associated trends for the AC overlay of fractured PCC pavements are shown in figure 20. Many of the fractured PCC sections have not exhibited any fatigue cracking since rehabilitation. However, some sections are showing a tendency toward fatigue cracking. Of those sections with fatigue cracking, it can be noted that the increase in cracking over time for both rehabilitation alternatives appears very similar. As these pavement sections continue to age, these performance trends will become more distinct.



1 square meter = 10.8 square feet

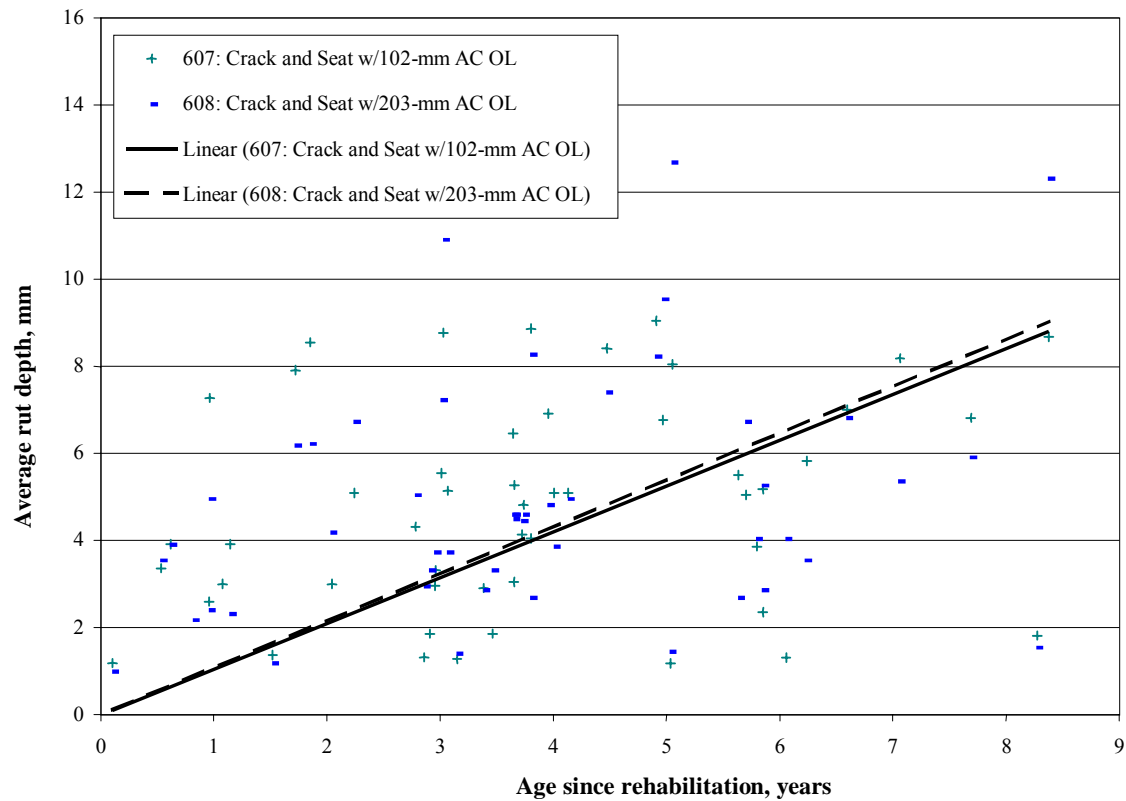
Figure 20. Total fatigue cracking for fractured PCC pavement sections.

Rutting

The average rutting values (combined values of the mean left and right wheelpath rut depths obtained from the MON_T_PROF_INDEX_SECTION table) and their associated trends are shown in figure 21. From this figure, it can be noted that there is a very wide amount of scatter in the rutting data. Both of the crack/break and seat rehabilitation alternatives appear to be rutting at similar rates. As these pavement sections continue to age, these performance trends will become more distinct.

Transverse Cracking

An important comparison is the extent of transverse cracking (including all reflection cracking) between the fractured and nonfractured slab sections. This would indicate whether the fractured slab treatment had any effect on the reduction of transverse cracking. This comparison will require the direct comparison of transverse cracking between nonfractured and fractured sections at each SPS-6 site. No initial performance trends have been determined yet because these sections are still relatively young. As these sections continue to age, it is expected that valuable findings will be obtained regarding the influence of various levels of maintenance on PCC pavements.



1 mm = .039 inch

Figure 21. Average rut depth for fractured PCC pavement sections.

More Detailed Analysis

The previous performance trends should be considered only as tentative and general. Each SPS-6 site must be analyzed separately and specific findings should be determined at each site. Then these findings need to be combined and synthesized to produce an overall set of findings and trends. An overall analysis of all SPS-6 site data is beyond the scope of this initial analysis; however, this needs to be done in the future.

8. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The SPS-6 experiment, Rehabilitation of Jointed Portland Cement Concrete Pavements, is one of the key experiments in the LTPP program. The main objective of this experiment is to determine the effectiveness of different rehabilitation techniques and strategies and their contributions to pavement performance and service life. There are some concerns about the ability of the SPS-6 experiment to meet expectations, given that several SPS-6 sites were not constructed. In addition, some construction deviations and data collection deficiencies exist for the SPS-6 sites that were constructed.

This study presents the first comprehensive evaluation of the SPS-6 experiment. First, this chapter summarizes the experiment site factors, data availability, and data completeness for the SPS-6 experiment. Next, this chapter provides a convenient summary of the conclusions drawn from the early performance trends identified in this report. This is followed by a brief summary of some of the States' expectations for the SPS-6 experiment. Finally, this chapter provides the research team's recommendations for improving the SPS-6 experiment, its data availability, expectations for the SPS-6 experiment, and future data collection and analysis topics.

SUMMARY

A summary of experiment site factors and data availability and completeness is provided below:

SPS-6 Experiment Site Factors Summary

Fourteen SPS-6 sites have been constructed throughout the United States. Each SPS-6 site was selected to fulfill a portion of the original SPS-6 design factorial. Once these sections were constructed, a review of the climatic data resulted in several sites being reclassified in the wet-freeze zone (as shown in table 81). This reclassification completes the wet-freeze design factorial. This will allow a complete analysis of the wet-freeze climatic areas, which encompass a large geographic region of the United States. Unfortunately, many sites are now missing from the wet-no freeze, dry-freeze, and dry-no freeze zones. Thus, there is excellent coverage in the wet-freeze climatic zones for both JPCP and JRCP, and excellent coverage for JPCP in wet-no freeze climatic zones. Unfortunately, there is no coverage for either JPCP or JRCP in dry climatic zones. Note that this will only be important if increased precipitation significantly affects the performance of rehabilitated JRCP and JPCP.

It is also important to consider the variations in the design properties associated with each experiment section and variations in the monitoring interval from that designated by the SPS-6 experimental plan. All of these deviations from the requirements of the SPS-6 experimental plan must be considered during all future analytical efforts.

Table 81. As-built sites as placed in original experimental design factorial.

		Wet		Dry	
		Freeze	No Freeze	Freeze	No Freeze
JPCP	Fair	MO(A), <i>SD</i> , TN	AL, *	**	*
	Poor	AZ, IN	AR, CA	**	*
JRCP	Fair	IA, MI, OK , PA	**	*	
	Poor	IL, MO	**	*	

Notes:

- Each * indicates that an additional site is needed to complete the original design matrix.
- **Bolded** sections were originally in another cell of the design matrix.
- *Italicized* sections indicate that the site did not meet the minimum traffic requirements.
- MO(A) is the second SPS-6 site constructed in Missouri; the first site is designated as MO.

Data Availability and Completeness Summary

Data availability and completeness for the SPS-6 experiment are good overall. A high percentage of the SPS-6 data are at level E; however, a significant amount of data was not available at the time of analysis, especially traffic, distress surveys, and key materials testing data. These deficiencies need to be addressed before serious analysis of the SPS-6 experiment can occur. This includes:

- Data that were not available at the time of the study and are required by the LTPP data collection guidelines (unavailable data).
- Data elements that are important to future research, but are not required by the LTPP data collection guidelines for SPS-6 (missing data elements).

Unavailable Data

This section summarizes the data that were unavailable at the time of the study and are required by LTPP data collection guidelines. It should be stressed that there are numerous reasons why some important data may not be available from the publicly released IMS database at the time of analysis. The following are some possible examples:

- Data are yet to be collected or the laboratory tests have not yet been performed.
- Data are under regional review.
- Data have failed one of the quality checks and are being reviewed.
- Data have failed one of the quality checks and were identified as anomalies.
- Data need to be quality checked.

As such, the unavailable data identified in this section do not necessarily mean that the data were not collected or submitted by the States. There are several instances where data may get held up and not reach level E. Note that the results reported in this section are based on level E data only. The LTPP program is embarking on a systemwide effort to resolve all unavailable data so that they will be available to future researchers. Some data have already been located during the course of this study.

Table 82 summarizes data availability and completeness by some of the key data types, while table 83 summarizes data availability and completeness for the key data types that are to be monitored over the long term. Note that any rating of “Fair” or “Poor” means that these sites would not meet analytical needs and, therefore, must be improved as soon as possible. The SPS-6 data deficiencies are summarized below:

- Alabama and Missouri (A): Sites are newly constructed and data processing is underway.
- Indiana: Design thicknesses are in the database in place of the as-constructed thicknesses.
- Traffic data are deficient or there are negative ESAL values for 6 of 14 sites (40 percent).
- All States (except Arizona) need to conduct some of the materials testing.
- Some of the monitoring data from immediately before and after construction were not collected or are not yet available in the database.
- Most of the long-term monitoring data are at level E.

Table 82. Summary of SPS-6 data availability and completeness for key data types.

Type of Data	SPS-6 Core Sections (Total: 14 Sites, 112 Sections)				SPS-6 Supplemental Sections (Total: 59 Sections)
	Number of Sites (Sections)		% at Level E	Comments	
	w/Data	Missing Data			
Site Information (Reports, location, and significant dates data)	10 to 14 sites	AL, MO, MO(A), TN (Construction dates)	100%	Excellent	Excellent (Same as the core sections)
Pavement Structure (Subgrade layer, base, and surface)	10 to 14 sites	AL, AR, IN*, MO(A)	61-91%	Good	Good (Available for 50 to 59 sections)
Climatic Data	11 sites	AL, CA, MO(A)	100%	Good	Good (Same as core sections)
Traffic	11 sites	AL, AR, MO(A), TN	40-100%	Good	Good (Same as core sections)
Key AC and PCC Materials Testing	11 sites	All but AZ	70-100%	Good-Fair	Not evaluated

*For Indiana, design values were used as actual pavement layer thicknesses.

Table 83. Summary of SPS-6 data availability and completeness assessment for monitoring data.

Monitoring Data Types	SPS-6 Sites and Core Sections (Total: 14 Sites, 112 Sections)								Comments
	Initial Survey Immediately Before Rehab.		Initial Survey Immediately After Rehab.		Long Term Maximum < 3 years				
	Yes	No	Yes	No	Yes	No	No Data	% at Level E	
Longitudinal Profile	11	AL, IL, IA	12	AL, SD	13	AL	MO(A)	95%	Good
Deflection	9	AL, CA, IL, IN, TN	10	AL, MI, PA, SD	13	AL	MO(A)	94%	Good
Faulting					13	AL, AR, TN	MO(A)	84%	Fair
Distress: Manual and PASCO	8	CA, IA, OK, PA, SD, TN	11	IL, MI, PA	9	AL, AZ, AR, IA, TN	MO(A)	84-99%	Fair
Friction					13	AR	MO(A)	92%	Good
Rutting					11	AL, AR, TN	MO(A)	96%	Good

Detailed data availability and completeness assessments are provided in the following sections for traffic, materials, and monitoring data.

Traffic Data

The SPS-6 experimental design calls for traffic data to be collected using a combination of permanent and portable equipment by the individual States. Table TRF_MONITOR_BASIC_INFO was examined to identify SPS-6 records with annual ESAL estimates. As discussed in this report, Alabama, Arkansas, Missouri (A), and Tennessee do not have any traffic data in the IMS database. Because these sections are relatively new to the program, they probably have traffic information. However, as of August 1999, information had not yet been entered into the database. The remaining sites have 1 to 9 years of traffic data available, depending on the age of the site. In addition, Arizona and California have negative ESAL values for most of the AC-overlaid sections and, therefore, have a non-level E record status. Reportedly, these values have been corrected since these data were originally extracted from the IMS database.

Materials Testing Data

Data availability and completeness assessment results for the key AC and PCC materials testing tables show that none of the materials tests meets the required number of tests initially established by the LTPP program. It is important to point out that, even though all of the materials tests have not been conducted, many States have conducted some of these tests. In addition, many States are looking into and addressing their materials testing deficiencies. As of the time of this report, very little materials testing data were available for the sites in Alabama, Arkansas, and Missouri (A) because of the relatively young ages of these sites. In addition, California, Indiana, and South Dakota had very little materials testing data available when this

report was prepared. The remaining eight sites have completed a significant portion of the materials testing results. Arizona has the most complete set of materials testing results in the IMS database based on the data extracted from the IMS database for this report.

Monitoring Data

Seven types of monitoring data are included in the LTPP IMS: (1) automated distress, (2) manual distress, (3) friction, (4) longitudinal profile, (5) cross profile, (6) deflection, and (7) dynamic load response. Using the minimum requirements for the collection of monitoring data noted in these tables, an assessment of data availability and completeness follows:

- Long-term monitoring data were not yet releasable at the time of this data analysis for Alabama, Arkansas, Missouri (A), and Tennessee.
- Longitudinal profile data are acceptable for most sites. Long-term monitoring was typically conducted at an interval averaging less than 3 years.
- Deflection data are complete, with a long-term monitoring interval averaging 3 years or less.
- Faulting data are, on average, at an interval of 3 years or less.
- Rutting data are, on average, at an interval of 2 years or less.
- Combined distress data result in periodic surveys within an average interval of 2 years, except for Arizona, which is at an interval of 2.4 years.
- Friction testing was not available for nine sites. However, sites with friction data have a relatively good monitoring period that averages 3 years or less.

Missing Data Elements

The following data elements or information were not included in the SPS-6 data collection plan; however, they will probably be needed for future analyses of the data. These data elements or activities are recommended for future data collection activities for the SPS-6 experiment:

- Measure the dynamic modulus in uniaxial compression over a temperature range for hot mix asphalt (HMA) mixtures.
- Measure the performance grade of the asphalt that was used in the HMA layers and measure the aging that has occurred since construction.
- Measure the indirect tensile strain at failure in accordance with the method identified in National Cooperative Highway Research Program (NCHRP) Report 338. This value can be easily measured during the indirect tensile strength test.

CONCLUSIONS

Conclusions drawn from the early performance trends identified in this report are provided below.

Early Performance Trends Summary

Note that these performance trends represent early findings and that these results may be altered once all of the data have been collected and a more thorough investigation has been conducted in the future. This includes detailed analysis of every SPS-6 site. Tables 84 through 87 show the preliminary performance trends for each general type of rehabilitation treatment applied.

Table 84. Summary of roughness performance.


Section	Rehabilitation Alternative	Initial Roughness	Change in IRI Over Time	
***601	Control	High	High	Roughest  Smoothest
***602	Minimum preparation (w/o diamond grinding)	High	High	
***605	Maximum preparation (w/diamond grinding)	Low	High	
***603	Minimum preparation with 102-mm (4-inch) AC overlay	Low	Moderate	
***604	Same as ***603 with sawed and sealed joints	Low	Moderate	
***606	Maximum preparation with 102-mm (4-inch) AC overlay	Low	Moderate	
***607	Crack and seat with 102-mm (4-inch) AC overlay	Low	Low to moderate	
***608	Crack and seat with 203-mm (8-inch) AC overlay	Low	Low	

Table 85. Summary of distress performance trends for bare PCC pavement.

Section	Rehabilitation Alternative	Transverse Cracking		Faulting	
		Initial Effect of Rehabilitation	Change Over Time	Initial Effect of Rehabilitation	Change Over Time
***601	Control	Unchanged	Least	Unchanged	Little change
***602	Minimum preparation	Reduced	Similar to ***605	Reduced	More
***605	Maximum preparation	Reduced	Similar to ***602	Reduced	More

Table 86. Summary of reflection cracking performance for AC overlays on nonfractured PCC.

Section	Rehabilitation Alternative	Initial Effect of Rehabilitation	Change Over Time
***603	Minimum preparation with 102-mm (4-inch) AC overlay	None	Slightly more than ***606
***604	Same as ***603 with sawed and sealed joints	N/A	N/A
***606	Maximum preparation with 102-mm (4-inch) AC overlay	None	Little change

N/A: Surveys for section ***604 are not sufficient to identify preliminary trends.

Table 87. Summary of distress performance trends for AC overlays on fractured PCC pavement.

Section	Rehabilitation Alternative	Fatigue Cracking		Rutting	
		Initial Effect of Rehabilitation	Change Over Time	Initial Effect of Rehabilitation	Change Over Time
***607	Crack and seat with 102-mm (4-inch) AC overlay	None	Similar to ***608	None	Similar to ***608
***608	Crack and seat with 203-mm (8-inch) AC overlay	None	Similar to ***607	None	Similar to ***607

N/A: Surveys for section ***604 are not sufficient to identify preliminary trends.

Bare PCC Pavements

Roughness

- Control sections (maintenance only) and minimum-preparation sections (without diamond grinding) exhibit the roughest pavements. Even those sections having the maximum preparation, but no diamond grinding exhibited considerable roughness or IRI. Thus, if the pre-rehabilitated section has significant roughness, diamond grinding should be thoroughly considered or the section will retain its roughness. By themselves, full-depth repairs did not remove significant roughness from JRCP or JPCP.
- Maximum preparation with diamond grinding resulted in initially smooth pavements (initial IRI about 1.0 m/km (63.36 inches/mi)) that were similar to AC overlays. The IRI of these sections did increase over time (more so than for the AC overlays), probably because of more joint and crack faulting in some sections.

Transverse Cracking

- Both minimum- and maximum-rehabilitation treatments reduce the amount of transverse cracking immediately after rehabilitation because of full-depth repairs and slab replacements.
- The rate of increase in transverse cracking is somewhat less for the control section. The minimum-preparation section (***602) has a higher rate of increase in transverse cracking,

while the maximum-preparation section (**605) has the highest rate. The cause of these trends needs to be explored on a site-by-site basis.

Faulting

- The control section had the least change in joint faulting over time. This can be explained by the fact that all of the slabs within this section have reached equilibrium and have reduced movement.
- Maximum-preparation rehabilitation with diamond grinding reduces the amount of faulting to zero immediately after rehabilitation.
- Minimum- and maximum-preparation sections had a higher rate of increase in faulting over time than the control section. This may be partially caused by the fact that most of these sections were diamond ground, giving a zero faulting, and then a more rapid increase followed over time at both the regular joints and the joints of the new full-depth repairs.
- Faulting of the maximum-preparation sections is projected to equal that of the control sections after about 12 years, on average.
- The major advantage of maximum preparation over minimum preparation in the early analysis appears to be the smoothness resulting from diamond grinding.

AC Overlay of Nonfractured PCC

Roughness

- AC overlay of nonfractured PCC reduces the roughness immediately after rehabilitation, typically to a smooth level (1 m/km (63.36 inches/mi)).
- These sections are experiencing a faster increase in IRI over time than the AC overlay of fractured PCC.
- These sections are experiencing a lower increase in IRI over time than the maximum-preparation PCC sections.
- The amount of preparation (minimum or maximum) did not yet appear to have a significant effect on the IRI of AC nonfractured JRCP or JPCP. This may change as the pavements age.

Reflection Cracking

- Neither the minimum- nor maximum-preparation sections with 102-mm (4-inch) AC overlays had any reflection cracking within the first year after construction.
- Reflective cracking survey information for the minimum-preparation sections with a 102-mm (4-inch) AC overlay with sawed and sealed joints (**604) appears to be inconsistent from survey date to survey date. It is recommended that these inconsistencies be addressed before this rehabilitation alternative is further evaluated.

- Maximum-preparation sections had very little change or increase in reflection cracking, while minimum-preparation sections had a slightly higher increase in reflection cracking over time.

AC Overlay of Fractured PCC

Roughness

- AC overlay of fractured PCC had a low IRI immediately after rehabilitation (typically 1.0 m/km (63.36 inches/mi)).
- This rehabilitation had the lowest rate of increase in IRI after rehabilitation than any of the other rehabilitation alternatives.

Fatigue Cracking

- Both crack/break and seat rehabilitation techniques with 102-mm (4-inch) and 203-mm (8-inch) AC overlay show low amounts of fatigue cracking over time.

Transverse Cracking

- As these pavement sections continue to age, a direct comparison should be made between the transverse (reflection) cracking occurring for the nonfractured PCC rehabilitation and that found for the fractured PCC rehabilitation. This should be done, site-by-site, for each SPS-6 experiment to obtain the maximum trends and findings for each rehabilitation alternative.

STATE EXPECTATIONS

One national workshop was held recently where input was received from the States on the SPS-6 experiment. The meeting was held on April 28, 2000, in Newport, RI. The research team made presentations at the conference on the status of SPS-6 data collection, data availability, near- and long-term LTPP products, and the analysis of SPS-6 data. Several participating States made presentations on the status and analyses of their SPS-6 projects and their expectations for the SPS-6 experiment. There were many discussions on future directions for the SPS-6 experiment and analyses of the data.

In general, the States are satisfied with the SPS-6 experiment and fully expect to get valuable information about the different rehabilitation features included in the SPS-6 experiment. Many States have been conducting and are planning their own analyses on their SPS-6 projects. Some of these analyses have already yielded useful results. The States would like to see a focus on implementation of SPS-6 findings as they evolve over time.

First and foremost, what the States want from the SPS-6 experiment are the effects on pavement performance and the cost-effectiveness of the experimental design factor features, such as:

- Condition of existing pre-rehabilitated jointed plain concrete.
- Pre-restoration effectiveness.

- Pre-overlay effectiveness.
- AC overlay thickness.
- Fractured versus nonfractured influence.
- Diamond grinding effectiveness.
- Edge drain effectiveness.

In addition to the structural design features, the States also want to know which major site condition factors influence the performance of rehabilitated concrete pavement, including:

- Climate.
- Traffic volume.
- Traffic loading.

Other specific expectations from the States include:

- Maximum years of service life for rehabilitated pavements.
- Next-best alternative.
- Dollar design.
- Standard solutions for a given pavement condition.
- Best rehabilitation methods for minimizing reflection cracking.
- State-specific findings.

As for future analytical plans for the SPS-6 experiment, the States believe that it is worthwhile to first fill in the missing data (backcasting, if necessary, to obtain traffic and materials data). It is believed that many fundamental studies can be conducted to see how SPS-6 sections are responding to loading and environmental stresses. It was also suggested that an integrated analytical plan is needed for future research.

This evaluation has shown that several significant problems will limit the results that can be obtained from the SPS-6 experiment. Specifically, the SPS-6 projects have construction and rehabilitation deviations. In addition, significant materials and traffic data are missing from some sites or sections. The missing traffic data and key materials data must be obtained or forecasted before meaningful global analysis can be performed.

However, this does not mean that many important and useful findings and results cannot be obtained from the SPS-6 experiment. Some interesting and important early trends have already been identified that will be useful for the rehabilitation of jointed plain concrete, even though the sections are less than 10 years old. As time and traffic loadings accumulate on the SPS-6 sites, much more valuable performance data will be obtained.

Because of FHWA's intense ongoing effort to obtain missing data (construction, materials, traffic, and monitoring), valuable results can be obtained from the SPS-6 sites. It is further believed that even more results can be obtained if a concerted effort is made to perform proper analyses of the data.

RECOMMENDATIONS

Finally, this chapter provides the research team's recommendations for improving the SPS-6 experiment, data availability, expectations for the SPS-6 experiment, and future data collection and analysis topics as follows.

Missing SPS-6 Experiments

It is recommended that the following sites be constructed:

- Construct additional sites in dry climatic regions (assuming that States such as Arizona and California agree) so that the findings can be extended to these regions. There are currently no SPS-6 sites within a dry climatic region. Precipitation and temperature are known to affect diamond-ground joints and may affect HMA overlays over conventional and cracked and seated pavements as well.

Missing SPS-6 Data

Significant efforts should be put forth to obtain the following missing data:

- Materials: Extensive data are currently missing. It is important that these data be obtained and moved to level E in the database or the evaluation of various rehabilitation treatments will be hampered.
- Traffic: Data at level E are limited or missing for a large number of sites.
- Pavement structure data (primarily thickness): Data at level E are limited or missing for about 25 percent of the sites.
- Monitoring: Data are very limited at four sites; joint faulting is limited. Pre- and post-rehabilitation testing are missing for most sections.

Expectations From SPS-6 Experiments

The overall objective is for SPS-6 performance results to provide the SHAs with documented findings to help them improve their management, design, construction, and materials procedures for the rehabilitation of jointed concrete pavements. The following specific expectations for the SPS-6 experiments are recommended:

Effects of Specific Design, Climate, and Traffic

- Effects of level of pre-restoration preparation for bare JPCP and JRCP on performance (faulting, transverse cracking, joint spalling, IRI).
- Effects of level of pre-HMA overlay preparation on performance (rutting, reflection/transverse cracking, IRI).

- Effects of HMA-overlaid sawed and sealed joints on performance (reflection/transverse cracking, IRI).
- Effects of cracking and seating of JRCP and JPCP prior to HMA overlay on performance (rutting, reflection/transverse cracking, IRI).
- Effects of HMA overlay thickness over cracked and seated JRCP and JPCP on performance (rutting, reflection/transverse cracking, fatigue, longitudinal cracking, IRI).
- Effects of climatic region on the performance of various rehabilitation treatments (temperature, precipitation).
- Effects of traffic loading on the performance of various rehabilitation treatments.

Data for Use in Calibration of Mechanistic-Empirical Distress Models

- 2002 Design Guide distress models:
 - Data for use in empirical performance modeling (for pavement management).
 - Data for use in a variety of mechanistic modeling (backcalculation, structural analysis, and reflection cracking).

Data for Use in a Variety of Cost-Benefit Analyses

Future Data Collection

The following are recommended:

- Routine current data collection:
 - Weigh-in-motion (WIM) and automatic vehicle classification (AVC) traffic monitoring: Ensure that LTPP guidelines are followed.
 - Resolve irregular distress measurements over time for each SPS-6 section (wild swings of distress quantities over time) and resolve saw and seal reflection/transverse cracking interpretation problems.
- Collect new data:
 - None recommended.

Recommended Future Analyses for SPS-6 Experiment

As stated previously, the SPS-6 test sections are currently developing initial performance trends. Currently, no long-term performance trends have been identified and only a few sections have been taken out of service. The real benefit from this experiment will occur over the next 10 to 15 years as more and more test sections exhibit higher levels of distress, magnifying the effects of the experimental factors on performance.

This report focuses on the quality and completeness of the SPS-6 construction and monitoring data and on the adequacy of the experiment to achieve the original expectations and objectives. Detailed analysis of the effects of different rehabilitation alternatives on performance was

outside the scope of this study. Thus, future studies using the SPS-6 experiment data should be planned and prioritized so that they can be initiated as the SPS-6 projects exhibit higher levels of distress.

These future studies should be planned in two stages, focusing on local and national expectations for the experiment. The first stage is to conduct a detailed assessment or case study on each experimental cell in the experiment to ensure data adequacy, assess construction deficiencies, and support local interests and expectations, while the second stage evaluates the effects of different rehabilitation alternatives across the entire national experiment. Both analytical stages are briefly discussed in the following sections. A third analytical stage will ultimately be needed after the sections are 10 to 15 years of age to fully reap the benefits of the SPS-6 experiment.

Initial Stage: Analysis of Local Expectations or Experimental Factorial Cells

Each major cell in the SPS-6 experiment consists of a duplicated project. Each SPS-6 site constitutes a full factorial of design factors and makes it possible to evaluate the performance results for each experimental factor for those site conditions. A detailed evaluation of the replicated projects within each major cell should be completed as soon as possible to ensure that all of the required data exist and to examine any construction anomalies. The objectives of the case studies in the first stage are to:

- Resolve construction and monitoring data anomalies and experimental cell differences for those projects that changed cell locations from the original experimental design as they relate to the specific cell in the experiment.
- Conduct comparative analyses of the individual test sections at each site, *including the supplemental test sections*, to identify the differences in pavement performance and response. These comparative studies should include performance measures, material properties, and as-built conditions.
- Determine the effects of any construction difficulties, problems, and material noncompliance issues with the SPS-6 project specifications, if any, on pavement performance and response at each site.
- Develop findings regarding comparisons made between the companion projects and test sections and prepare a case study report that will be useful for the SHAs involved (the report will also be useful for the national studies).

This first analytical stage is considered absolutely essential prior to initiation of the second analytical stage.

Second Stage: Analysis of National Expectations or Experimental Findings

The second analytical stage should not be pursued until the first analytical stage has been completed. It is expected that the analyses performed at this stage will be coordinated with the Strategic Plan for LTPP Data Analysis. The SPS-6 experiment can contribute to the following specific analyses outlined in the strategic plan:

- Relationships to enable interchangeable use of laboratory- and field-derived material parameters (Strategic Plan No. 2B).
- Procedures for determining as-built material properties (2C).
- Estimation of material design parameters from other materials data (2E).
- Information as to the relationship between as-designed and as-built material characteristics (2F).
- Recommendations for climatic data collection to adequately predict pavement performance (3D).
- Models relating functional and structural performance (4C).
- Calibrated relationships (transfer functions) between pavement response and individual distress types (5C).
- Quantitative information on the performance of maintenance and rehabilitation treatments, including the effect of pretreatment conditions (6A).
- Guidance on the timing and selection of pavement maintenance and rehabilitation options, and the expected performance life of each (6B).
- Quantitative information on the impact of design features on measured pavement responses (deflections, load transfer, strains, etc.) (7A).
- Quantitative information on the impact of design features on pavement distress (7B).

In summary, the following future analytical objectives are recommended for the SPS-6 experiment. These analytical topics are discussed in more detail in figures 22 through 26.

1. Perform site-by-site analyses of SPS-6 projects to resolve data problems and the impact of construction anomalies on the performance of individual test sections (initial stage (figure 22)).
2. Determine the effects of the SPS-6 experimental factors on the performance of the rehabilitation of JPCP and JRCP (figure 23).
3. Conduct cost-benefit analyses of SPS-6 site data to determine the cost-effectiveness of various rehabilitation design features (figure 24).
4. Calibrate and validate relationships (transfer functions) between pavement structural response and individual distress types (figure 25).
5. Determine the optimum rehabilitation techniques for jointed concrete pavement design features for specific site conditions and traffic loading (study of the SPS-6 experimental factors) (figure 26).

The full results from the SPS-6 experiment will require 10 to 15 years of monitoring for the majority of the sections. Additional studies beyond those proposed will be required.

OBJECTIVE NO. 1 Perform site-by-site analyses of SPS-6 projects to gain understanding of the performance of individual test sections and the impact of construction anomalies (initial stage, expected timeframe: 2001-2002).	
TOPIC AREA Pavement design	PROBABILITY OF SUCCESS High
LTPP STRATEGIC PLAN 7A, 7B, and 7C (Study of the Experimental Factors)	SUPPLEMENTAL EXPERIMENTS General Pavement Studies (GPS)-7
END PRODUCT <ul style="list-style-type: none"> • Performance review of each test section and identification of those that perform well and poorly at each SPS-6 site, including supplemental sections. • Determination of the effect of any construction anomalies and material noncompliance issues on pavement performance and response. 	POTENTIAL PRODUCT USE Important knowledge for the SHAs regarding early findings on rehabilitation and vital information for future analyses of SPS-6 experiments.
GENERAL TASKS <ul style="list-style-type: none"> • Resolve construction and monitoring data anomalies and experimental cell differences for those projects that changed cell locations from the original experimental design as they relate to the specific cell in the experiment. • Conduct comparative analyses of the individual test sections at each site, <i>including the supplemental test sections</i>, to identify the differences in pavement performance and response and the potential causes. • Determine the effects of any construction difficulties and problems and material noncompliance issues with the SPS-6 project specifications, if any, on pavement performance and response. • Develop findings regarding comparisons made between the duplicate projects and test sections and prepare a case study report that will be useful for the SHAs involved and also for the national studies. 	

Figure 22. Recommended future analyses for SPS-6 experiment: Site-by-site analyses of SPS-6 projects to gain understanding of the performance of individual test sections (initial stage).

OBJECTIVE NO. 2 Determine the effects of the SPS-6 experimental factors on the performance of the rehabilitation of jointed concrete pavements (expected timeframe: 2003 to 2005).	
TOPIC AREA Pavement design	PROBABILITY OF SUCCESS High
LTPP STRATEGIC PLAN 7A, 7B, and 7C	SUPPLEMENTAL EXPERIMENTS GPS-7
END PRODUCT <ul style="list-style-type: none"> • Effects of site conditions (subgrade, climate, traffic) on the performance of rehabilitation alternatives, including restoration without overlay and rehabilitations such as various overlays. • Effects of jointed concrete pavement design features on the performance of rehabilitation alternatives, including restoration without overlay and rehabilitations such as various overlays. • Effects of minimum and maximum preparation on the performance of restoration without overlay. • Effects of minimum and maximum preparation on the performance of overlays. • Effects of overlay thickness on the performance of crack and seat rehabilitations. • Effects of sawing and sealing of overlays on performance. • Comparative performance of key supplemental sections (e.g., rubblized PCC sections, other reflection crack treatments). 	
POTENTIAL PRODUCT USE Rehabilitation of jointed concrete pavements in a cost-effective and reliable manner.	
GENERAL TASKS <ul style="list-style-type: none"> • Review results and findings from each SPS-6 site from Objective No. 1. • Conduct statistical analysis to determine significant factors and interactions on performance. • Conduct mechanistic-empirical analyses for slab cracking, joint faulting, rutting of overlays, reflection cracking of overlays, and IRI. • Based on statistical and mechanistic analyses, determine the effects of different experimental factors or design features and their interaction on rehabilitated pavement performance and response. • Prepare practical presentations of the results, including software, decision trees, etc., for use by practicing engineers, which will aid them in using the knowledge gained from previous tasks. 	

Figure 23. Recommended future analyses for SPS-6 experiment: Study of the effects of experimental factors on the performance of rehabilitated jointed concrete pavement.

OBJECTIVE NO. 3 Conduct cost-benefit analyses of SPS-6 sites to gain knowledge of the cost-effectiveness of design features in different site conditions for rehabilitated jointed concrete pavements (expected timeframe: 2005 to 2007).	
TOPIC AREA Pavement design and construction	PROBABILITY OF SUCCESS Moderate to high
LTPP STRATEGIC PLAN 7B and 7C	SUPPLEMENTAL EXPERIMENTS GPS-7
END PRODUCT In-depth field-verified knowledge as to the cost-effectiveness of key design features, including minimum and maximum preparation, AC overlay thickness, and cracking and seating of the existing PCC pavement plus other findings from supplemental sections.	POTENTIAL PRODUCT USE Knowledge gained from this experiment will be directly useful to pavement designers in improving the cost-effectiveness of their designs.
GENERAL TASKS <ul style="list-style-type: none"> • Review all findings from Objective 1 and Objective 2 analyses. • Establish a comprehensive input database that includes design, construction, materials testing, traffic, climatic, existing pavement condition, and monitoring data. • Establish the typical costs of various rehabilitation alternatives from the SHAs in the States where SPS-6 experiments are located. • Analyze the results and develop the findings and recommendations as to the cost-effectiveness of each rehabilitation alternative in each of the main climatic zones covered by the SPS-6 experiment. 	

Figure 24. Recommended future analyses for SPS-6 experiment: Cost-benefit analyses of rehabilitated jointed concrete pavement.

OBJECTIVE NO. 4 Calibrate and validate the relationships (transfer functions) between pavement response and individual distress types for rehabilitated jointed concrete pavements (expected timeframe: 2003 to 2005).	
TOPIC AREA Pavement design	PROBABILITY OF SUCCESS High
LTPP STRATEGIC PLAN 7A, 7B, and 7C	SUPPLEMENTAL EXPERIMENTS GPS-7
END PRODUCT Calibrated and/or validated relationship between pavement structural responses (stress) and individual distresses (perhaps update mechanistic-empirical models from <i>2002 Design Guide</i>).	POTENTIAL PRODUCT USE Design new cost-effective and reliable jointed concrete pavement rehabilitation alternatives.
GENERAL TASKS <ul style="list-style-type: none"> • Establish a comprehensive input database that includes design, construction, materials testing, traffic, climatic, existing pavement condition, and monitoring data for the response model. • Perform mechanistic analysis to determine the critical response stress and cumulative fatigue damage for traffic loading applied until the time of distress measurement. • Establish the relationships between the cumulative fatigue damage and the measured distress. • Perform model assessment and develop calibration coefficients. 	

Figure 25. Recommended future analyses for SPS-6 experiment: Calibration and validation of the transfer functions of rehabilitated jointed concrete pavement.

OBJECTIVE NO. 5 Determine the optimum rehabilitation techniques for the design features for specific site conditions and traffic loading for rehabilitated jointed concrete pavements (expected timeframe: 2005 to 2007).	
TOPIC AREA Pavement design	PROBABILITY OF SUCCESS High
LTPP STRATEGIC PLAN 7A, 7B, and 7C (Study of the Experimental Factors)	SUPPLEMENTAL EXPERIMENTS GPS-7
END PRODUCT Guidelines, catalog, or software design tool for selecting optimum combinations of rehabilitation design features for specific site conditions and traffic level.	POTENTIAL PRODUCT USE Design cost-effective and reliable rehabilitation alternatives for jointed concrete pavements.
GENERAL TASKS <ul style="list-style-type: none"> • Review results from each SPS-6 site (Objective 1) and from Objectives 2 and 3. • Conduct statistical analysis to determine significant factors and interactions on up-to-date data. • Conduct mechanistic-empirical analyses for transverse cracking, joint faulting, rutting of overlays, reflection cracking of overlays, and IRI. • Obtain representative construction cost data for all needed rehabilitation features of JPCP over selected regions that include an SPS-6 experiment. • Based on statistical and mechanistic analyses, identify the optimum combination of pavement design features to be used for various site conditions to provide cost-effective and reliable jointed concrete pavement rehabilitation. • Prepare practical presentations of the results, including software for use by practicing engineers, guidelines, catalogs, etc., which will aid in determining the end products above. 	

Figure 26. Recommended future analyses for SPS-6 experiment: Study of the effects of experimental factors on the performance of rehabilitated jointed concrete pavement.

APPENDIX A: DESCRIPTION OF REHABILITATION TECHNIQUES

The section summaries provided in this appendix are based on information provided in the SPS-6 construction reports, deviation reports, and the individual construction data sheets. An exception to this statement is made for the Michigan site, where the individual construction data sheets were not available.

ALABAMA

Section 010601: Control Section (Do Nothing)

This section of JPCP did not receive any rehabilitation, and the existing distresses, joints, and repairs were left intact.

Section 010602: Minimum Preparation of Original PCC

This section received some full-depth, doweled-concrete repairs of severely distressed areas, sealing of transverse and longitudinal joints, full-surface diamond grinding, and bituminous shoulder removal and replacement.

Sections 010603 and 010606: 102-mm (4-inch) AC Overlay With Minimum and Maximum Preparation

Section 010603 received no preparation prior to overlay. Section 010606 received maximum pavement preparation prior to overlay. In this section, the maximum pavement preparation consisted of full-depth pavement repair on all deteriorated joints and cracks, load-transfer restoration, and subdrainage retrofitting. Both sections were rehabilitated using a 102-mm (4-inch) asphalt overlay. The overlay was placed in two lifts (71-mm (2.7-inch)) hot mix asphalt concrete (HMAC) and 31-mm (1.2-inch) base layer).

Section 010604: 102-mm (4-inch) AC Overlay With Saw and Seal

This section received minimum preparation followed by a 102-mm (4-inch) asphalt overlay. An 81-mm (3-inch) bituminous shoulder was removed and replaced. In this section, the asphalt surface was sawed directly above the joints and midslab cracks in the original concrete pavement. Joints were sawed to an average depth of 38 mm (1.5 inches) and were immediately cleaned and sealed using a sealant (AASHTO M213). The saw and seal operation is designed to anticipate the location of future reflection cracking and provide a clean, straight joint in the asphalt surface that can be properly maintained.

Section 010605: Maximum Preparation of Original PCC

This section received full-depth, doweled-concrete repairs of failed joints and midpanel cracks. Faulted joints and midslab cracks were subsealed. The concrete surface was diamond ground to remove faults. Transverse and longitudinal joints were routed and sealed using an elastic, hot-poured sealant. This section also received load-transfer restoration. A filter mat underdrain system was installed and the bituminous shoulder was removed and replaced.

Sections 010607 and 010608: 102-mm (4-inch) and 203-mm (8-inch) AC Overlays of Cracked and Seated PCC

These sections were rehabilitated by cracking and seating the JPCP slab and placing an AC overlay. The machine dropped a 4.9-metric ton (5.4-ton) load at a height of 1.8 m every 0.46 m (6 feet every 1.5 feet). This caused longitudinal cracking down the center of the lane. Coring on top of the marks left by the 4.9 metric ton (5.4-ton) load confirmed that the 254-mm- (10-inch-) thick pavement was cracked to its full depth. Two passes of a 27.2-metric ton (30-ton) roller were used to seat the cracked slabs before overlay. Subdrainage systems were retrofitted using a 25-mm by 457-mm (1-inch by 18-inch) drainage mat and the bituminous shoulder was removed and replaced. Section 010607 received a 102-mm (4-inch) AC overlay and section 010608 received a 203-mm (8-inch) AC overlay. A pass is defined as one round trip over a given area of the section.

Sections 010661, 010662, and 010663: Alabama Supplemental Test Sections, Rubblization and AC Overlay

These three sections were rubblized using a Badger Breaker[®] (Model MHB). Following rubblization, an Ingersoll-Rand[®] 27.2-metric ton (30-ton) vibratory steel roller (Model SD-150D) made two passes over each section. After the roller completed its second pass, the rubble was reduced in size from 203 mm (8 inches) to approximately 76 mm (3 inches) in diameter. It was noted that approximately 0.61 m (2 feet) of section 010661 was not rubblized. The sections received three passes of a 9.1-metric ton (10-ton) vibratory roller and one pass of the haul trucks backing up to the paver as part of the seating process. Section 010661 received a 102-mm (4-inch) overlay, section 010662 received a 203-mm (8-inch) overlay, and section 010663 received a 241-mm (9.5-inch) overlay.

ARIZONA

Section 040601: Control Section (Do Nothing)

This section of JPCP did not receive any rehabilitation. It receives routine maintenance as typically performed by the Arizona Department of Transportation (DOT). Three to five years of service is desired from this section.

Section 040602: Minimum Preparation of Original PCC

This section received some partial-depth spall repairs, joint and crack sealing touch-up, shoulder milling and replacement, and joint sealing between the shoulders and existing JPCP.

Sections 040603 and 040606: 102-mm (4-inch) AC Overlay With Minimum and Maximum Preparation

These sections were rehabilitated using a 102-mm (4-inch) asphalt overlay. Section 040603 received minimum preparation prior to overlay, which included spall repair and partial- and full-depth patching. The overlay was placed in two lifts (51 mm (2 inches) each). Tack coats were applied between lifts and on top of the concrete pavement. A 16-mm (0.7-inch) AC friction course (ACFC) was added to this section approximately 1 month after construction. Section

040606 received maximum preparation prior to overlay, which included removing existing AC patches, full-depth removal and replacement of existing slabs (including dowels and tie bars), partial-depth spall repair, and milling and replacing existing AC shoulders. The overlay was placed in two lifts (51 mm (2 inches) each). Tack coats were applied between lifts and on top of the concrete pavement. A 16-mm (0.7-inch) ACFC was added to this section approximately 1 month after construction.

Section 040604: 102-mm (4-inch) AC Overlay With Saw and Seal

This section received minimum preparation followed by a 102-mm (4-inch) asphalt overlay. Minimum restoration included partial-depth spall repair and partial- and full-depth patching. The overlay was placed in two lifts (51 mm (2 inches) each). Tack coats were applied between lifts and on top of the concrete pavement. On this section, the asphalt surface was sawed directly above the joints and working cracks in the JPCP.

Section 040605: Maximum Preparation of Original PCC

This section received maximum preparation, which included AC patching, removing and replacing slabs, and installing tie bars and dowels. Partial-depth spall repair and diamond grinding of the pavement surface were also performed. The new and existing joints, cracks, and longitudinal shoulder joints were also sawed and sealed.

Sections 040607 and 040608: 102-mm (4-inch) and 203-mm (8-inch) AC Overlays of Cracked and Seated PCC

These sections were rehabilitated by cracking and seating the JPCP slab and placing an AC overlay. The existing JPCP was cracked and seated according to special provisions. Section 040607 received a 102-mm (4-inch) AC overlay. The overlay was placed in two lifts (51 mm (2 inches) each). Section 040608 received a 203-mm (8-inch) AC overlay. The overlay was placed in three lifts (76 mm, 76 mm, and 51 mm (3 inches, 3 inches, and 2 inches)) for a total thickness of 203 mm (8 inches). Tack coats were applied between lifts and on top of the concrete pavement. A 16-mm (0.7 inch) ACFC was added to both sections approximately 1 month after construction.

Section 040609: Arizona Rehabilitation: Rubblizing and 203-mm (8-inch) AC Overlay

This existing pavement consisted of 203-mm to 229-mm (8-inch to 9-inch) PCC according to the project's special provisions. The pavement was broken into nominal 25-mm to 51-mm (1-inch to 2-inch) pieces and compacted with a vibratory roller and a tack coat was placed prior to overlay. The overlay was placed in three lifts (76 mm, 76 mm, and 51 mm (3 inches, 3 inches, and 2 inches)) for a total thickness of 203 mm (8 inches). Tack coats were applied between lifts and on top of the concrete pavement.

Sections 040610, 040611, and 040612: 102-mm (4-inch) AC Overlays of Cracked and Seated PCC

These sections were rehabilitated by cracking and seating the JPCP slab and placing a 102-mm (4-inch) AC overlay. The existing JPCP was cracked and seated according to special provisions.

Section 040610 received two 51-mm (2 inch) lifts of AC (top size was 19.1 mm (0.75 inch)) with binder coat and paving fabric between lifts. Section 040611 received a 51-mm (2-inch) lift of AC (top size was 19.1-mm (0.75 inch)) and a 51-mm (1-inch) lift of asphalt-rubber AC-ARAC (top size was 12.7 mm (.5 inch)) on the top. Section 040612 received a 51-mm (1-inch) lift of asphalt-rubber AC-ARAC (top size was 12.7 mm(0.5 inch)) and a 51-mm (2 inch) lift of AC (top size was 19.1 mm (0.75 inch)) on the top. Tack coats were applied between lifts and on top of the concrete pavement. A 16-mm (0.6-inch) ACFC was added to both sections approximately 1 month after construction.

Section 040613: Cracking and Seating With 254-mm (10-inch) PCC Overlay

This section received cracking and seating with a normal crack spacing of 0.91 m by 0.91 m (3 feet by 3 feet). The pavement was then rolled until the broken pieces were seated. A 203-mm (8-inch) AC overlay was placed and 152 mm (6 inches) of the 203-mm (8-inch) overlay were milled off, leaving 51 mm (2 inches) in place as an AC bondbreaker. A new unbonded 203-mm (8-inch) PCC overlay was constructed with dowels and tie bars.

Sections 040614 and 040618: No Preparation With 140-mm (5.5-inch) Overlay

This section received no preparation on the existing surface. The overlay was placed in three lifts (76-mm (3-inch) AC (top size was 19.1 mm (0.75 inches)), 51-mm (2-inch) ARAC, and 13-mm (0.5-inch) AR-ACFC) for a total thickness of 140 mm (5.5 inches). Tack coats were applied between lifts and on top of the concrete pavement.

Sections 040615 and 040617: Cracking and Seating With 140-mm (5.5-inch) Overlay

These sections received cracking and seating on the existing PCC. The overlay was placed in three lifts (76-mm (3-inch) AC (top size was 19.1 mm (0.75 inches)), 51-mm (2-inch) ARAC, and 13-mm 0.5 inch) AR-ACFC) for a total thickness of 140 mm (5.5 inches). Tack coats were applied between lifts and on top of the concrete pavement.

Sections 040616 and 040619: Rubblizing With 140-mm (5.5-inch) Overlay

These sections received rubblizing of the existing PCC. The overlay was placed in three lifts (76-mm (3-inch) AC (top size was 19.1 mm (0.75 inches)), 51-mm (2-inch) ARAC, and 13-mm (0.5-inch) AR-ACFC) for a total thickness of 140 mm (5.5 inches). Tack coats were applied between lifts and on top of the concrete pavement.

ARKANSAS

Section 05A601: Control Section (Do Nothing)

This section of JPCP received joint and crack sealing, some full-depth repairs, and partial-depth patching.

Section 05A602: Minimum Preparation of Original PCC

This section received some full-depth repairs, partial-depth patching, sealing of transverse and longitudinal joints and cracks, joint resealing, and full-surface diamond grinding.

Sections 05A603 and 05A606: 102-mm (4-inch) AC Overlay With Minimum and Maximum Preparation

Section 05A603 received minimum preparation prior to overlay. The preparation consisted of some full-depth repairs, partial-depth patching, crack sealing, and joint resealing. Section 05A606 received maximum pavement preparation prior to overlay. The maximum pavement preparation consisted of full-depth pavement repair on all deteriorated joints and cracks, load-transfer restoration, joint resealing, crack sealing, and subdrainage retrofitting. Both sections were rehabilitated using a 102-mm (4-inch) asphalt overlay. The in-place overlay thickness in section 05A603 was 122 mm (4.8 inches) and the overlay thickness in section 05A606 was 130 mm (5 inches).

Section 05A604: 102-mm (4-inch) AC Overlay With Saw and Seal

This section received minimum preparation followed by a 102-mm (4-inch) asphalt overlay. The preparation consisted of some full-depth repairs, partial-depth patching, crack sealing, and joint resealing. In this section, the asphalt surface was sawed directly above the joints and midslab cracks in the original concrete pavement. Joints were sawed to an average depth of 38 mm (1.5 inches) and then immediately cleaned and sealed. The saw and seal operation is designed to anticipate the location of future reflection cracking and provide a clean, straight joint in the asphalt surface that can be properly maintained.

Section 05A605: Maximum Preparation of Original PCC

This section received full-depth concrete repairs of failed joints and midpanel cracks. The concrete surface was diamond ground to remove faults. The other preparation included partial-depth patching, joint resealing, crack sealing, and load-transfer restoration. A drainage pipe was retrofitted.

Sections 05A607 and 05A608: 102-mm and 203-mm (8-inch) AC Overlays of Cracked and Seated PCC

These sections were rehabilitated by cracking and seating the JPCP slab and placing an AC overlay. The pavement was broken by a guillotine-type drop hammer and seated by one pass of a 45.3-metric ton (50-ton) roller before being overlaid. After the subcontractor (for the cracking and seating process) had left the project, it was noticed that the cracking process did not fully crack the entire depth of the existing concrete pavement.

Some other deviations during overlay placement on section 05A607 were also recorded:

- HMAC level-up layer between station 4+00 and 4+50 was placed on the first layer of HMAC binder. More than a month later, the surface HMAC layer was placed on top of the binder layer.

- Another deviation occurred when the asphalt paver had to stop paving temporarily and left a transverse cold joint in the surface layer.

Subdrainage systems were retrofitted using 102-mm (4-inch) drainage pipes. Section 05A607 received an overlay with an average thickness of 124 mm (4.8 inches) and section 05A608 received an AC overlay with an average thickness of 239 mm (9.4 inches).

CALIFORNIA

Section 060601: Control Section (Do Nothing)

This section of JPCP did not receive any rehabilitation, and the existing distresses, joints, and repairs were left intact. This section is also referred to as section 063005 (a GPS-7B section).

Section 060602: Minimum Preparation of Original PCC

This section received some full-depth repairs, spall repairs, sealing of transverse and longitudinal joints and cracks, and full-surface diamond grinding. Cracks and joints were routed, cleaned, and sealed with asphalt-rubber joint sealant that conformed to American Society for Testing and Materials (ASTM) D3405.

Section 060603: 102-mm (4-inch) AC Overlay With Minimum Preparation

This section received some full-depth repairs and spall repairs prior to overlay. The section was rehabilitated using a 102-mm (4 inches) asphalt overlay.

Section 060604: 102-mm (4-inch) AC Overlay With Saw and Seal

This section received minimum preparation followed by an actual 102-mm (4-inch) asphalt overlay. The preparation consisted of some full-depth repairs. Any spalls present within the section were sawed out and replaced with PCC. At the completion of the overlay, 10-mm-wide by 38-mm-deep (0.4-inches-deep by 1.5-inches-deep) saw cuts were made over the referenced joints. The saw cuts were then sealed with an asphalt-rubber joint sealant that conformed to ASTM D3405.

Section 060605: Maximum Preparation of Original PCC

This section received full-depth concrete repairs. Because of the poor condition of the slabs and poor load transfer, it was decided to replace all of the slabs in the outside lane. The edge drains were removed and retrofitted.

Section 060606: 102-mm (4-inch) AC Overlay With Maximum Preparation

This section received full-depth pavement repairs prior to overlay and subdrainage retrofitting. Any spalls within the section were cut out and patched with PCC. Any existing partial- or full-depth patches were removed and replaced. Longitudinal edge drains within the section were removed and replaced. This section was rehabilitated using a 102-mm (4-inch) asphalt overlay.

Sections 060607 and 060608: 102-mm (4-inch) and 203-mm (8-inch) AC Overlays of Cracked and Seated PCC

These sections were cracked with a guillotine-type pavement breaker. The majority of the broken pieces were 457 mm (18 inches) in size. The pavement was then seated with a rubber-tire roller. Longitudinal edge drains within these sections were removed and replaced. The use of the pavement breaker caused considerable spalling in the pavement surface of section 060607. Therefore, several panels were replaced within the section because of spalling.

Section 060609: California Rehabilitation: Crack and No Seat, 107-mm (4.2-inch) AC Overlay

The existing PCC was cracked in a 1.2-m (4-foot) transverse by 1.8-m (6-foot) longitudinal pattern, but was not seated. The purpose of not seating the PCC was to compare this section against section 060610, which was seated. The edge drains were cleaned, but not replaced.

Section 060610: California Rehabilitation: Crack and Seat, 107-mm (4.2-inch) AC Overlay

The existing PCC was cracked in a 1.2-m (4-foot) transverse by 1.8-m (6-foot) longitudinal pattern and was seated. The edge drains were cleaned, but not replaced.

Section 060611: California Rehabilitation: Crack and Seat With Urethane Polymer Resin (UPR) Overlay

This 122-m-long (122-foot-long) section received some slab replacement. The existing PCC was cracked in a 1.2-m (4-foot) transverse by 1.8-m (6-foot) longitudinal pattern and was seated. The cracking and seating created considerable damage to the pavement and the damaged pieces were chipped out. Spall repairs were made prior to placement of an elastic-cement (UPR) overlay with a thickness of 25 mm. A geotextile fabric and a 76-mm (3-inch) AC overlay were then placed over the UPR overlay.

Section 060612: California Rehabilitation: Crack and Seat With Modified Latex Emulsion (MLE) PCC Overlay

The existing PCC was cracked in a 1.2-m (4-foot) transverse by 1.8-m (6-foot) longitudinal pattern and was seated. The cracking and seating created considerable damage to the pavement, which was not repaired because the MLE was expected to fill the cracks prior to placement of the elastic-cement material. The thickness of the MLE PCC overlay was 25 mm (1 inch).

Section 060613: California Rehabilitation: Crack and Seat With AC Overlay and Pavement Reinforcing Mesh

The existing PCC was cracked in a 1.2-m (4-foot) transverse by 1.8-m (6-foot) longitudinal pattern and was seated. The edge drains were cleaned, but not replaced. The laydown thickness of the first lift AC overlay was 40 mm (1.6 inches). After the glass-fiber meshes were placed, another 117-mm (4.6-inch) laydown thickness of AC overlay was placed on top of the mesh.

Section 060614: California Rehabilitation: Crack and Seat With AC Overlay

This section used the standard State rehabilitation strategy consisting of cracking and seating with a 107-mm (4.2-inch) AC overlay. This section was used as a comparison against all other rehabilitated sections.

ILLINOIS

Section 170601: Control Section (Do Nothing)

This section of JRCF did not receive any rehabilitation, and the existing distresses, joints, and repairs were left intact.

Section 170602: Minimum Preparation of Original PCC

This section received some full-depth, doweled-concrete repairs of severely distressed areas, sealing of transverse and longitudinal joints, sealing of midslab breaks, and bituminous shoulder removal and replacement.

Sections 170603 and 170606: 102-mm (4-inch) AC Overlay With Minimum and Maximum Preparation

These sections were rehabilitated using a 102-mm (4-inch) asphalt overlay. Section 170603 received minimum preparation prior to overlay, which consisted of bituminous shoulder removal and replacement. Section 170606 received maximum pavement preparation prior to overlay. Preparation work included full-depth pavement repair of failed joints and midpanel cracks, undersealing, subdrainage retrofitting, and bituminous shoulder removal and replacement.

Section 170604: 102-mm (4-inch) AC Overlay With Saw and Seal

This section received full-depth repair followed by a 102-mm (4-inch) asphalt overlay. In this section, the asphalt surface was sawed directly above the joints and midslab cracks in the original concrete pavement. The bituminous shoulder was milled and replaced. Joints were sawed to a depth of one-third the thickness of the asphalt overlay and were then immediately cleaned and sealed using a hot-poured bituminous sealant. The saw and seal operation is designed to anticipate the location of future reflection cracking and provide a clean, straight joint in the asphalt surface that can be properly maintained.

Section 170605: Maximum Preparation of Original PCC

This section received full-depth, doweled-concrete repairs. Faulted joints and midslab cracks were undersealed. The concrete surface was diamond ground to remove faults. Transverse, longitudinal, and midslab cracks were routed and sealed using an elastic, hot-poured sealant. A pipe underdrain system was installed, and the bituminous shoulder was milled and replaced.

Sections 170607 and 170608: 102-mm (4-inch) and 203-mm (8-inch) AC Overlays of Cracked and Seated PCC

These sections were rehabilitated by cracking and seating the JRC slab and placing an AC overlay. Section 170607 received a 102-mm (4-inch) AC overlay and section 170608 received a 203-mm (8-inch) AC overlay. The objectives of the cracking operation were to crack the concrete through its full depth into large pieces and to either rupture the reinforcing steel or separate it from the concrete. A guillotine-type hammer with a mass of at least 5443 kilograms (kg) (70 pounds) was specified for this project. Rolling to seat the pieces securely on the subgrade followed breaking. A 32,000-kg (70,548-pound) pneumatic-tire roller was used to seat the broken pavement. Pipe underdrains were installed prior to seating. A 76-mm (3-inch) AC shoulder was milled and replaced.

Sections 170659 and 170662: Illinois Rehabilitation: AC Overlay

These two sections received the Illinois policy rehabilitation: full-depth repair of deteriorated joints and transverse cracks and an 83-mm (3.3-inch) asphalt overlay. This was the standard treatment applied to the remainder of a section (not included in the SHRP test sections) that comprised approximately 2.8 km of pavement in the northbound lanes and the entire 6.5-km length of pavement in the southbound direction. Section 170659 also received undersealing and restoration of the shoulder. Section 170662 also received partial-depth patching, and joint and crack sealing. Undersealing was also provided with a geotextile as a preventive measure against reflection cracking.

Section 170660: PCC Milling

One section of pavement was prepared by milling with no subsequent overlay. Full- and partial-depth repairs were performed prior to milling. Partial-depth repairs were used in areas of spalling and high steel. After milling, the joints and cracks were routed and sealed. The bituminous shoulders were removed and replaced. A 102-mm (4-inch) drainage pipe was installed.

Section 170661: Diamond Grinding of Original PCC

Diamond grinding was performed on this section to remove faulting. Any necessary partial- or full-depth repairs or subsealing of the pavement were performed prior to the grinding operation. Cracks and joints were routed and sealed after grinding. The bituminous shoulders were removed and replaced. A 102-mm (4-inch) drainage pipe was installed.

Sections 170663 and 170664: 152-mm (6-inch) and 203-mm (8-inch) AC Overlays of Rubblized PCC

The last two sections of the test pavement were rubblized with a high-frequency breaking unit that was capable of delivering low-amplitude impacts of 277 m/kg at a rate of 44 blows per second. The breaking unit was to be operated in such a manner as to rubblize the concrete into particles ranging from the size of sand to pieces no larger than 152 mm (6 inches). After the concrete was rubblized, it was compacted using steel-wheel vibratory rollers. The inspector's daily reports and contract documents indicated that a pipe underdrain system was in place prior to rubblizing.

INDIANA

Section 180601: Control Section (Do Nothing)

At the time of implementation of the project in 1990, this section of JPCP did not receive any rehabilitation, and the existing distresses, joints, and patches were left intact. Subsequently, the original pavement was covered with an AC overlay; therefore, it was removed from the study on July 27, 1993.

Section 180602: Minimum Preparation of Original JPCP

The slabs received 25 doweled-concrete full-depth repairs (total area of 549 square meters (m^2)) of severely distressed areas. Virtually every joint was replaced with a full-depth repair. The dowel bars were epoxy-coated and were 29 mm (1.1 inches) in diameter.

Sections 180603 and 180606: 102-mm (4-inch) AC Overlay With Minimum and Maximum Preparation

In these sections, the pavement received a 102-mm (4-inch) dense-graded asphalt overlay and the shoulders received a 76-mm (3-inch) AC overlay. Edge drains were installed and a tack coat was used in both sections prior to placement of the AC overlay. Section 180603 received minimum preparation prior to overlay, consisting of repairing only the severely deteriorated areas with partial-depth AC patches. There were 25 AC patches with an average depth of 51 mm (2 inches) and a total area of 274 m^2 (1550 inches^2). The AC mixture was modified using 3.75 kg/metric ton (7.5 pounds per ton (lb/ton)) of fibers. Section 180606 received maximum pavement preparation prior to overlay. The slabs received 25 concrete full-depth PCC repairs (total area of 167 m^2 (258,850.5 inches^2)) of severely distressed areas and some partial-depth patching. The dowel bars were epoxy-coated and were 29 mm (1 inch) in diameter. A geocomposite edge drain was installed.

Section 180604: 102-mm AC Overlay With Saw and Seal

This section received full-depth repairs and partial-depth patching followed by a 102-mm (4-inch) dense-graded asphalt overlay that was sawed directly above the transverse joints in the original concrete pavement. The sawing operation was performed within 6 to 20 days after placement of the asphalt overlay and then immediately cleaned and sealed. The average depth and width of the saw cuts in the asphalt overlay were 41 and 6 mm (1.6 and 0.2 inches), respectively. The saw and seal operation is designed to anticipate the location of future reflection cracking and provide a clean, straight joint in the asphalt surface that can be maintained properly.

Section 180605: Maximum Preparation of Original JPCP

All joints received full-depth, doweled-concrete repairs (total area of 167 m^2 (258,850.5 inches^2)). The dowel bars were epoxy-coated and were 29 mm (1 inch) in diameter. A pipe underdrain system was installed and the shoulder was overlaid with a 76-mm (3-inch) AC layer.

Sections 180607 and 180608: With AC Overlays of Cracked and Seated JPCP

The objective of the cracking operation is to crack the concrete through its full depth into large pieces (approximately 0.6 m (2 feet) on a side). A guillotine-type hammer capable of delivering dynamic blows sufficient to produce hairline cracks through the full depth of the pavement was required. Rolling to seat the pieces securely on the subgrade followed cracking. A 36-metric ton (39.5 ton) seating roller was used to seat the broken pavement and then an asphalt tack coat was applied. A geocomposite edge drain was installed.

Table 88 summarizes the SHRP and State supplemental sections that were rehabilitated by cracking and seating the JPCP slab and placing an AC overlay. The State supplemental sections consisted of varying quantities and placement of fibers in the AC overlay mixture. Each section consisted of three AC lifts: surface, binder, and base courses.

Sections 180659, 180660, 180661, and 180672: 140-mm, 140-mm, 102-mm, and 140-mm (5.5-inch, 5.5-inch, 4-inch, and 5.5-inch) AC Overlays With Minimum Preparation (With and Without Fibers)

These sections were selected by the State as additional rehabilitation sections. No underdrain system was installed. The shoulder was overlaid with a 76-mm (3-inch) AC layer. Blended throughout the entire AC overlay in sections 180660 and 180672 were fibers amounting to 3.75 and 2.5 kg/metric ton (7.5 and 5 lb/ton), respectively.

Table 88. Summary of SPS-6 cracked and seated sections in Indiana.

Section	Program	AC Overlay Thickness, mm	Fiber, kg/ton ¹	Fiber in Surface Course	Fiber in Binder Course	Fiber in Base Course
180607	SHRP	102	None	No	No	No
180608	SHRP	203	None	No	No	No
180662	State	254	None	No	No	No
180663	State	140	3.75	Yes	Yes	Yes
180664	State	140	3.75	No	Yes	Yes
180665	State	140	3.75	No	No	Yes
180666	State	140	2.50	No	No	Yes
180667	State	140	2.50	No	Yes	Yes
180668	State	140	2.50	Yes	Yes	Yes
180669	State	102	3.75	Yes	Yes	Yes
180670	State	102	3.75	No	Yes	Yes
180671	State	102	3.75	No	No	Yes

¹metric ton

1 mm = .039 inch

1 metric ton = 2000 pounds (1 ton)

IOWA

Section 190601: Control Section (Do Nothing)

This section of JRCP did not receive any rehabilitation. Existing distresses, joints, and repairs were left intact.

Section 190602: Minimum Preparation of Original PCC

This section received some partial-depth AC repairs of severely distressed areas, sawing and sealing of the joints, longitudinal joint repair, and some isolated diamond grinding. No full-depth repairs were performed and no subdrains were installed.

Sections 190603 and 190606: 102-mm (4-inch) AC Overlay With Minimum and Maximum Preparation

These sections were rehabilitated using an asphalt overlay with an average thickness of 107 mm (4.2 inches). Section 190603 received no preparation prior to overlay and section 190606 received maximum pavement preparation. The preparation included partial-depth patching, full-depth repairs (slab replacement), and load-transfer restoration. A 102-mm (4-inch) drainage pipe was installed.

Section 190604: 102-mm (4-inch) AC Overlay With Saw and Seal

These sections received no preparation prior to overlay and were rehabilitated using an asphalt overlay with an average thickness of 107 mm (4.2 inches). In this section, the asphalt surface was sawed directly above the location of the joints and midslab cracks in the original concrete pavement. The saw and seal operation is designed to anticipate the location of future reflection cracking and provide a clean, straight joint in the asphalt surface that can be maintained properly.

Section 190605: Maximum Preparation of Original PCC

This section received PCC partial-depth patching, full-depth repairs of failed joints and midpanel cracks, joint and crack sealing, load-transfer restoration, edge drains, and diamond grinding.

Sections 190607 and 190608: 102-mm (4-inch) and 203-mm (8-inch) AC Overlays of Cracked/Broken and Seated PCC

These sections of pavement were rehabilitated by cracking/breaking and seating the JRCP slab and placing an AC overlay. Sections 190607 and 190608 received AC overlays with average thicknesses of 107 and 203 mm (4.2 and 8 inches), respectively. A 102-mm (4-inch) drainage pipe was installed on both sections.

The objectives of the cracking/breaking operation are to crack the concrete and break the reinforcing steel through its full depth into large pieces (approximately 0.5 m (1.5 feet) on a side). A guillotine-type hammer capable of delivering dynamic blows sufficient to produce hairline cracks through the full depth of the pavement was required. Rolling to seat the pieces securely on the subgrade followed cracking/breaking. A 45,000-kg (99,208-pound) roller towed by a front-end loader was used to seat the cracked pavement.

Section 190659: 102-mm (4-inch) AC Overlay Over Standard Iowa Preparation

This section was selected by the State as an additional rehabilitation section. The JRCP was prepared according to the State standards, with edge drains installed and a 102-mm (4-inch) AC overlay placed.

MICHIGAN

Section 260601: Control Section (Do Nothing)

This section of JRCP did not receive any rehabilitation.

Section 260602: Minimum Preparation of Original PCC

This section received some partial- and full-depth AC repairs of severely distressed areas and crack sealing. The concrete surface was not diamond ground or milled to remove faulting.

Sections 260603 and 260606: 102-mm (4-inch) AC Overlay With Minimum and Maximum Preparation

These sections were rehabilitated using a 102-mm (4-inch) AC overlay. Section 260603 received minimum preparation prior to overlay, consisting of partial- and full-depth AC repairs of only the severely deteriorated areas. Section 260606 received maximum preparation prior to overlay, meaning that all deteriorated joints and cracks were repaired. All partial-depth repairs were made with AC; however, full-depth repairs were made with PCC for the maximum preparation. In addition, subdrains were installed in section 260606.

Within sections 260603 and 260606, there were 305-mm (12-inch) culverts located at stations 3+75 and 4+40, respectively.

Section 260604: 102-mm (4-inch) AC Overlay With Saw and Seal

This section received minimum preparation, consisting of partial- and full-depth repairs with AC, followed by a 102-mm (4-inch) AC overlay. In this section, the AC surface was sawed directly above the joints and midslab cracks in the original concrete pavement. Joints were sawed to a depth of one-third the thickness of the AC overlay and then immediately cleaned and sealed using a hot-poured bituminous sealant. The saw and seal operation is designed to anticipate the location of future reflection cracking and provide a clean, straight joint in the AC surface that can be maintained properly.

Section 260605: Maximum Preparation of Original PCC

This section received AC partial-depth repairs, PCC full-depth repairs of failed joints and midpanel cracks, joint sealing, and crack sealing. Underdrains were installed. The concrete surface was not diamond ground to remove faults.

Sections 260607 and 260608: 102-mm (4-inch) and 203-mm (8-inch) AC Overlays of Broken and Seated PCC

These two sections were rehabilitated by breaking and seating the JRCPC slab and placing an AC overlay. Sections 260607 and 260608 received AC overlays of 102 and 203 mm (4 and 8 inches), respectively. The device used to break the PCC slabs into individual pieces was not specified other than the fact that it had to produce full-depth hairline cracks in the reinforcing steel and the PCC. However, it was specified that a 27- to 45-metric ton (30- to 50-ton) pneumatic-tire roller be used for the seating operation.

Section 260659: 178-mm (7-inch) AC Overlay of Rubblized PCC

This section was selected by the State as an additional rehabilitation section. The JRCPC was rubblized before the 178-mm (7-inch) AC overlay was placed.

MISSOURI

Section 290601: Control Section (Do Nothing)

This section of JRCPC did not receive any rehabilitation. The existing distresses, joints, and patches were left intact.

Sections 290602 and 290666: Minimum Preparation of Original PCC

Section 290602 received 10 full-depth repairs (total area of 75 m²) of the slab and 4 full-depth repairs (total area of 38 m²) of the slab and base. A slab in section 290666 received one full-depth repair (total area of 7 m²). In both sections, joints and cracks were sealed. Diamond grinding was performed in section 290602 to improve the surface profile. After patching section 290666, a cement-pozzolan slurry was used for undersealing.

Sections 290603, 290606, and 290665: 102-mm and 127-mm (4-inch and 5-inch) AC Overlays With Minimum, Maximum, and Typical Preparation

Cores taken from sections 290603 and 290606 showed that the average AC overlay thicknesses were 96.5 and 91.4 mm (3.8 and 3.6 inches), respectively. The average AC overlay thickness for section 290665 was 116.8 mm (4.6 inches). All of these sections received an asphalt tack coat prior to placement of the overlay, and the rehabilitation of section 290606 also included placing edge drains and subsealing. Section 290665 received some undersealing. Table 89 presents the amount of pre-overlay repair in each section. The repairs consisted of doweled concrete with epoxy-coated No. 12 bars.

Table 89. Amount of full-depth repair in sections 290603, 290606, and 290666.

Section	Total Area, m ² (Number of Repairs)	
	Slab Only	Slab and Base
290603	33 (5)	36 (3)
290606	33 (6)	51 (2)
290665	42 (5)	0

Section 290604: 102-mm (4-inch) AC Overlay With Saw and Seal and Minimum Preparation of PCC

This section received an AC overlay with an average thickness of 96.5 mm (3.8 inches). Prior to overlay, the section received seven full-depth patches (total area of 49 m² (75,950 inches²)) and a tack coat. The full-depth repairs consisted of doweled concrete with epoxy-coated No. 12 bars. The AC overlay was sawed directly above the transverse joints in the original concrete pavement and then immediately cleaned and sealed. The average depth and width of the saw cuts in the asphalt overlay were 51 and 16 mm (2 and 0.6 inches), respectively. The saw and seal operation is designed to anticipate the location of future reflection cracking and provide a clean, straight joint in the asphalt surface that can be maintained properly.

Section 290605: Maximum Preparation of Original PCC

This section received two full-depth repairs (total area of 63 m²) of the slab and one full-depth repair (total area of 61 m²) of the slab and base. The slab repairs consisted of doweled concrete with epoxy-coated No. 12 bars. After the repairs were made, the joints and cracks were sealed, edge drains were installed, and diamond grinding was performed. This section also received undersealing.

Sections 290607, 290608, 290659, and 290660: AC Overlays of Cracked and Seated PCC

Table 90 summarizes the LTPP and State supplemental sections that were rehabilitated by cracking/breaking and seating the JRCF slab and placing an AC overlay. The objective of the cracking operation is to crack the concrete through its full depth into large pieces (approximately 0.6 m (2-feet) on a side). A guillotine-type hammer capable of delivering dynamic blows sufficient to produce hairline cracks through the full depth of the pavement was used. Rolling to seat the pieces securely on the subgrade followed cracking. A 45.3-metric ton (50-ton) seating roller was used to seat the broken pavement. In November 1993, a 25-mm (1 inch) AC leveling course was placed on sections 290607, 290608, and 290659 to improve the safety and rideability of the pavement surface.

Table 90. Summary of SPS-6 cracked and seated sections in Missouri.

Section	Surface Preparation	AC Overlay Thickness, mm
290607	Geocomposite edge drains and asphalt tack coat	109.2 ⁽¹⁾
290608	Geocomposite edge drains, shoulder widening, and asphalt tack coat	200.7 ⁽¹⁾
290659	Asphalt tack coat	109.2 ⁽¹⁾
290660	Shoulder widening and asphalt tack coat	200.7

¹ Additional 25-mm AC leveling course was placed in November 1993.

1 mm = .039 inch

Sections 290661, 290662, 290663, and 290664: AC Overlays of Rubblized PCC

Table 91 summarizes the Missouri sections that were rehabilitated by rubblizing the JRCF slab and placing an AC overlay. The average overlay thickness was determined from cores.

Table 91. Summary of SPS-6 rubblized sections in Missouri.

Section	Subdrainage Retrofitting	AC Overlay Thickness, mm
290661	Geocomposite edge drains	289.6
290662	Geocomposite edge drains	185.4
290663	None	292.1
290664	None	175.3

1 mm = .039 inch

Section 29A601: Control Section (Do Nothing)

This section of JPCP received some joint and crack sealing. The other existing distresses, joints, and patches were left intact.

Section 29A602: Minimum Preparation of Original PCC

Section 29A602 received full-depth repairs (total area of 124 m²) of the slab. The other preparations included joint and crack sealing and diamond grinding.

Sections 29A603 and 29A606: 102-mm (4-inch) AC Overlay With Minimum and Maximum Preparation

Both sections received full-depth repairs. Cores taken from sections 29A603 and 29A606 showed that the average AC overlay thicknesses were 109 and 111.8 mm (4.3 and 4.4 inches), respectively. Both sections received an asphalt tack coat prior to placement of the overlay. Rehabilitation of section 29A606 also included undersealing and the placement of edge drains. Shoulders were restored with a 102-mm (4-inch) aggregate layer on both sections.

Section 29A604: 102-mm (4-inch) AC Overlay With Saw and Seal and Minimum Preparation of JPCP

This section received an AC overlay with an average thickness of 104.1 mm (4.1 inches). Prior to overlay, the section received seven full-depth patches (total area of 41 m² (63,550 inches²)) and a tack coat. The AC overlay was sawed directly above the transverse joints in the original concrete pavement and then immediately cleaned and sealed. The average depth and width of the saw cuts in the asphalt overlay were 102 and 6 mm (4 and 0.2 inches), respectively. The saw and seal operation is designed to anticipate the location of future reflection cracking and provide a clean, straight joint in the asphalt surface that can be maintained properly. The outside shoulder was also restored with a 102-mm (4-inch) aggregate layer.

Section 29A605: Maximum Preparation of Original PCC

This section received 11 full-depth repairs (total area of 67 m² (103,850 inches²)) of the slab. The other preparation also included joint and crack sealing, slab undersealing, and diamond grinding. A geocomposite edge drain was installed.

Sections 29A607 and 29A608: AC Overlays of Cracked and Seated PCC

These sections were rehabilitated by cracking/breaking and seating the JPCP slabs and placing an AC overlay. The objective of the cracking operation is to crack the concrete through its full depth into large pieces. A guillotine-type hammer capable of delivering dynamic blows sufficient to produce hairline cracks through the full depth of the pavement was used. Rolling to seat the pieces securely on the subgrade followed cracking. A 45.3-metric ton (50-ton) seating roller was used to seat the broken pavement. Section 29A607 received an overlay with an average thickness of 107 mm (4.2 inches) and section 29A608 received an overlay with an average thickness of 202 mm (7.9 inches). A geocomposite edge drain was installed on section 29A608. The shoulders of both sections received a 102-mm (4-inch) aggregate layer.

OKLAHOMA

Section 400601: Control Section (Do Nothing)

This section of JRCF received joint sealing and some full-depth repairs in areas of severe deterioration of the existing pavement.

Section 400602: Minimum Preparation of Original PCC

This section received some full-depth repairs, sealing of transverse and longitudinal joints, and full-surface diamond grinding.

Sections 400603 and 400606: 102-mm (4-inch) AC Overlay With Minimum and Maximum Preparation

Section 400603 received some full-depth repairs prior to overlay. Section 400606 received full-depth pavement repairs prior to overlay and subdrainage retrofitting. Both sections were rehabilitated using a 102-mm (4-inch) asphalt overlay. The in-place overlay thickness in section 400603 was 99 mm (3.9 inches) and the overlay thickness in section 400606 was 104 mm (4 inches).

Section 400604: 102-mm (4-inch) AC Overlay With Saw and Seal

This section received minimum preparation followed by an actual 102-mm (4-inch) asphalt overlay. The preparation consisted of some full-depth repairs. In this section, the asphalt surface was sawed directly above the joints and midslab cracks in the original concrete pavement. The joints were sawed to an average depth of 38 mm (1.5 inch) and then immediately cleaned and sealed. The saw and seal operation is designed to anticipate the location of future reflection cracking and provide a clean, straight joint in the asphalt surface that can be properly maintained.

Section 400605: Maximum Preparation of Original PCC

This section received full-depth concrete repairs. The concrete surface was diamond ground to remove faults. The other preparation included joint sealing. The subdrainage was retrofitted using a 51-mm by 457-mm (2-inch by 18-inch) rectangular plastic perforated channel, which was encapsulated by a filter fabric.

Sections 400607 and 400608: 102-mm (4-inch) and 203-mm (8-inch) AC Overlays of Cracked and Seated PCC

These sections were rubblized with a resonant frequency breaker, resulting in smaller pieces than normally experienced during cracking and seating. Pieces at the surface were, on average, 51 mm by 76 mm (2 by 3 inches) in size. From trenching and additional exploration, it was determined that the pieces on the bottom of the slab were generally larger (127 mm by 203 mm (5 inches by 8 inches)). A 35.4-metric ton (39-ton) pneumatic roller was used to seat the broken concrete. Two passes were made over the section.

Subdrainage systems were retrofitted using a 51-mm by 457-mm (2-inch by 18-inch) rectangular plastic perforated channel, which was encapsulated by a filter fabric. Section 400607 received an overlay with an average thickness of 114 mm (4.5 inches) and section 400608 received an AC overlay with an average thickness of 201 mm (8 inches).

PENNSYLVANIA

Section 420601: Control Section (Do Nothing)

This section of JRCF did not receive any rehabilitation. Existing distresses, joints, and repairs were left intact.

Section 420602: Minimum Preparation of Original JRCF

This section of JRCF did not receive any rehabilitation. Existing distresses, joints, and repairs were left intact.

Section 420603: 102-mm (4-inch) AC Overlay With Minimum Preparation

This section was rehabilitated using a 102-mm (4-inch) asphalt overlay after minor pre-overlay repairs. The pre-overlay repairs included full-depth repairs of three slabs (total area of 40 m²), partial-depth patching, and subdrainage retrofitting using 102-mm (4-inch) pipe.

Section 420604: 102-mm (4-inch) AC Overlay With Saw and Seal

This section received surface preparation prior to overlay. The preparation consisted of full-depth repairs of three slabs (total area of 40 m²), partial-depth patching, and subdrainage retrofitting using 102-mm (4-inch) pipe. Additionally, the AC surface was sawed after placement of the overlay directly above the joints and midslab cracks in the original concrete pavement. The saw and seal treatment is designed to alleviate the problem of deterioration of reflected cracks by providing a clean, straight joint in the AC surface that can be maintained at locations where reflection cracks are anticipated.

Section 420605: Maximum Preparation of Original JRCF

This section received full-depth repairs, partial-depth patching, joint sealing, and load-transfer restoration. Faulted joints and midslab cracks were subsealed. After all of the repairs were made,

the concrete surface was diamond ground to remove faulting. A 102-mm (4-inch) drainage pipe was also installed.

Section 420606: 102-mm (4-inch) AC Overlay With Maximum Preparation

This section was rehabilitated using a 102-mm (4-inch) asphalt overlay after extensive pre-overlay repairs. The repairs included partial-depth patching, full-depth repairs, load-transfer restoration, and undersealing. A 102-mm (4-inch) drainage pipe was also installed.

Sections 420607 and 420608: AC Overlays of Cracked and Seated JRCP

These sections were rehabilitated by cracking and seating the JRCP slab and placing an AC overlay. Sections 420607 and 420608 received AC overlays of 102 and 203 mm (4 and 8 inches), respectively. A 102-mm (4-inch) drainage pipe was also installed. A guillotine-type hammer was used to break the existing JRCP into pieces approximately 0.5 m by 0.5 m (1.5 feet by 1.5 feet). Rolling to seat the pieces securely on the subgrade followed cracking. A 45-metric ton (49.6 ton) roller was used to seat the broken pavement.

Sections 420660 and 420661: AC Overlays of Rubblized JRCP

These sections were added by Pennsylvania DOT as supplemental sections. Both sections were rubblized before the AC overlay. Sections 420660 and 420661 received AC overlays of 241 and 330 mm (9.5 and 13 inches), respectively. A 102-mm (4-inch) drainage pipe was also installed in both sections.

Section 420662: AC Overlay of Cracked and Seated JRCP With 1/3-Point Saw Cut

This section was added by Pennsylvania DOT as a supplemental section. The section was cracked and seated before overlay. A guillotine-type hammer was used to break the existing JRCP into pieces approximately 0.5 m by 0.5 m (19 inches by 19 inches). Rolling to seat the pieces securely on the subgrade followed cracking. A 45-metric ton (49.6 ton) roller was used to seat the broken pavement. Section 420662 received an AC overlay of 203 mm (8 inches). A 102-mm (4 inch) drainage pipe was also installed in the section.

SOUTH DAKOTA

Section 460601: Control Section (Do Nothing)

This section of JPCP did not receive any rehabilitation. Existing distresses, joints, and repairs were left intact.

Section 460602: Minimum Preparation of Original JPCP

This section received full-depth, doweled-concrete repairs of severely distressed areas, diamond grinding, and sealing of transverse and longitudinal joints and cracks.

Section 460603: 102-mm (4-inch) AC Overlay With Minimum Preparation

This section was rehabilitated using a 102-mm (4-inch) asphalt overlay after minor pre-overlay repairs. The pre-overlay repairs included full-depth patches and AC shoulder overlay.

Section 460604: 102-mm (4-inch) AC Overlay With Saw and Seal

This section received full-depth repairs prior to overlay. Additionally, the AC surface was sawed 4 days after placement of the overlay, directly above the joints and midslab cracks in the original concrete pavement. The saw and seal treatment is designed to alleviate the problem of deterioration of reflected cracks by providing a clean, straight joint in the AC surface that can be maintained at locations where reflection cracks are anticipated.

Section 460605: Maximum Preparation of Original JPCP

This section received full-depth repairs, joint and crack sealing, and load-transfer restoration. Faulted joints and midslab cracks were subsealed. After all of the repairs were made, the concrete surface was diamond ground to remove faulting. Transverse, longitudinal, and midslab cracks were routed and sealed using an elastic, hot-poured sealant. A drainage mat was also installed and the bituminous shoulder was overlaid with asphalt concrete.

Section 460606: 102-mm (4-inch) AC Overlay With Maximum Preparation

This section was rehabilitated using a 102-mm (4-inch) asphalt overlay after extensive pre-overlay repairs. The repairs included full-depth repairs, load-transfer restoration, and undersealing. A drainage mat was also installed and the bituminous shoulder was overlaid with asphalt concrete.

Sections 460607, 460608, and 460660: AC Overlays of Cracked and Seated JPCP

These sections were rehabilitated by cracking and seating the JPCP slab and placing an AC overlay. Sections 460607, 460608, and 460660 received AC overlays of 102, 203, and 152 mm (4 inches, 8 inches, and 6 inches, respectively). Section 460660 (152-mm (6-inch) AC overlay) represented an additional rehabilitation alternative selected by the State. A guillotine-type hammer was used to break the existing JPCP into pieces approximately 4.6 m (15 feet) wide by 0.8 m (2.5 feet) long. Rolling to seat the pieces securely on the subgrade followed cracking. A 32-metric ton (35-ton) roller was used to seat the broken pavement. Drainage mats were also installed in these sections prior to seating. After seating the cracked PCC, a power sweeper was used to remove any debris from the pavement surface before the tack coat and AC overlays were placed.

Sections 460661 and 460662: 102-mm (4-inch) AC Overlay With a Reinforcing Grid

These sections were added by South Dakota DOT as additional rehabilitation sections. The reinforcing was added in these sections as a measure to prevent reflection cracking. Section 460661 was overlaid after making full-depth repairs of severely deteriorated cracks and joints. Section 460662 was cracked and seated. The reinforcing grid was placed directly on top of the PCC immediately before the 102-mm (4 inch) AC overlay was placed. A drainage mat was also installed in section 460662. Both sections had shoulders restored with an AC overlay.

TENNESSEE

Section 470601: Control Section (Do Nothing)

This section of JPCP received joint sealing and two slab replacements.

Section 470602: Minimum Preparation of Original JPCP

This section received some full-depth, doweled-concrete repairs of deteriorated patch areas, sealing of transverse and longitudinal joints, and full-surface diamond grinding.

Sections 470603 and 470606: 102-mm (4-inch) AC Overlay With Minimum and Maximum Preparation

Section 470603 received diamond grinding prior to overlay and was also retrofitted with a 102-mm (4-inch) drainage pipe. Section 470606 received maximum pavement preparation prior to overlay. The maximum pavement preparation in this section consisted of full-depth pavement repair on all deteriorated cracks and patches, diamond grinding, and subdrainage retrofitting. Both sections were rehabilitated using a 102-mm (4-inch) asphalt overlay. Both sections received overlays with an average thickness of 114 mm (4.6 inches).

Section 470604: 102-mm (4-inch) AC Overlay With Saw and Seal

This section received minimum preparation followed by a 114-mm (4.6-inch) asphalt overlay. The preparation consisted of diamond grinding and full-depth repair. In this section, the asphalt surface was sawed directly above joints and midslab cracks in the original concrete pavement. Joints were sawed to an average depth of 38 mm (1.5 inches) and then were immediately cleaned and sealed. The saw and seal operation is designed to anticipate the location of future reflection cracking and provide a clean, straight joint in the asphalt surface that can be properly maintained.

Section 470605: Maximum Preparation of Original JPCP

This section received full-depth concrete repairs of failed joints and patches. The concrete surface was diamond ground to remove faults. The transverse longitudinal joints were routed and sealed using a hard limestone composite. A 102-mm (4-inch) pipe underdrain system was installed.

Sections 470607 and 470608: 102-mm (4-inch) and 203-mm (8-inch) AC Overlays of Cracked and Seated JPCP

Both sections received some full-depth repairs and were rehabilitated by cracking and seating the JPCP slab. Two passes of a 40.8-metric ton (45-ton) roller were used to seat the cracked slabs before overlay. Subdrainage systems were retrofitted using a 102-mm (4-inch) pipe underdrain system. Section 470607 received a 114-mm (4.5-inch) AC overlay and section 470608 received a 132-mm (5.2-inch) AC overlay.

Sections 470661 and 470662: Tennessee Supplemental Test Sections, Subdrainage Retrofitting and AC Overlay

Both sections received subdrainage retrofitting and an AC overlay as the Tennessee supplemental test sections. A 102-mm (4-inch) corrugated plastic pipe was installed in both sections. Both sections received a 208-mm (8.2-inch) overlay. Section 460661 received a polymer-modified AC overlay and section 470662 received a latex-modified AC overlay.

APPENDIX B: MATERIALS TESTING SUMMARIES

Table 92. Materials summary for Alabama.

Site:	AL	SHRP:	All core sections		
Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Subgrade:					
Sieve Analysis	3				0
Hydrometer to 0.001 mm	3				0
Atterburg Limits	3				0
Classification	6				0
Moisture-Density Relations	3				0
Resilient Modulus	3				0
Unit Weight	6				0
Natural Moisture Content	3	5	5	100	167
Unbound Base and Subbase:					
Particle Size Analysis	3				0
Sieve Analysis	3				0
Atterburg Limits	3				0
Moisture-Density Relations	3				0
Resilient Modulus	3				0
Classification	3				0
Permeability	3				0
Natural Moisture Content	3	5	5	100	167
Treated Base:					
Type and Classification of Material and Treatment	3				0
Pozzolanic/Cementitious: Compressive Strength	3				0
Dynamic Modulus at 77 °F	3				0
Portland Cement Concrete:					
Compressive Concrete Strength	10				0
Splitting Tensile Strength	10				0
PCC Coefficient of Thermal Expansion	3				0
Static Modulus of Elasticity	6				0
PCC Unit Weight	10				0
Core Examination/Thickness	23				0
Asphalt Concrete:					
Core Examination/Thickness	20	3	3	100	15
Bulk Specific Gravity	20				0
Maximum Specific Gravity	3				0
Asphalt Content (Extraction)	3				0
Moisture Susceptibility	3				0
Creep Compliance	3				0
Resilient Modulus/Tensile Strength	3				0

Table 92. Materials summary for Alabama—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Extracted Aggregate (from mix):					
Bulk Specific Gravity: Coarse Aggregate	3				0
Bulk Specific Gravity: Fine Aggregate	3				0
Type and Classification	3				0
Gradation of Aggregate	3				0
Roundness Index of Coarse Aggregate	3				0
Aggregate Particle Shape	3				0
Asphalt Cement (from mix):	3				0
Abson Recovery	3				0
Penetration at 50 °F, 77 °F, 90 °F	3				0
Specific Gravity (60 °F)	3				0
Viscosity at 77 °F	3				0
Viscosity at 140 °F, 275 °F	3				0

°C = (°F-32)/1.8
1 mm = .039 inch

Table 93. Materials summary for Arizona.

Site:	AZ	SHRP:	All core sections		
Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Subgrade:					
Sieve Analysis	3	2	2	100	67
Hydrometer to 0.001 mm	3	2	2	100	67
Atterburg Limits	3	2	2	100	67
Classification	6	2	2	100	33
Moisture-Density Relations	3	2	2	100	67
Resilient Modulus	3				0
Unit Weight	6				0
Natural Moisture Content	3	7	7	100	233
Unbound Base and Subbase:					
Particle Size Analysis	3	2	2	100	67
Sieve Analysis	3	2	2	100	67
Atterburg Limits	3	2	2	100	67
Moisture-Density Relations	3	2	2	100	67
Resilient Modulus	3				0
Classification	3	2	2	100	67
Permeability	3	2	2	100	67
Natural Moisture Content	3	8	8	100	267

Table 93. Materials summary for Arizona—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Treated Base:					
Type and Classification of Material and Treatment	3	4	4	100	133
Pozzolanic/Cementitious: Compressive Strength	3	4	4	100	133
Dynamic Modulus at 77 °F	3				0
Portland Cement Concrete:					
Compressive Concrete Strength	10	9	9	100	90
Splitting Tensile Strength	10	10	10	100	100
PCC Coefficient of Thermal Expansion	3				0
Static Modulus of Elasticity	6				0
PCC Unit Weight	10	9	9	100	90
Core Examination/Thickness	23	31	31	100	135
Asphalt Concrete:					
Core Examination/Thickness	20	20	20	100	100
Bulk Specific Gravity	20	20	20	100	100
Maximum Specific Gravity	3	3	3	100	100
Asphalt Content (Extraction)	3	3	3	100	100
Moisture Susceptibility	3				0
Creep Compliance	3				0
Resilient Modulus/Tensile Strength	3				0
Extracted Aggregate (from mix):					
Bulk Specific Gravity: Coarse Aggregate	3	3	3	100	100
Bulk Specific Gravity: Fine Aggregate	3	3	3	100	100
Type and Classification	3				0
Gradation of Aggregate	3	3	3	100	100
Roundness Index of Coarse Aggregate	3				0
Aggregate Particle Shape	3				0
Asphalt Cement (from mix):					
Abson Recovery	3	3	3	100	100
Penetration at 50 °F, 77 °F, 90 °F	3	3	3	100	100
Specific Gravity (60 °F)	3	3	3	100	100
Viscosity at 77 °F	3				0
Viscosity at 140 °F, 275 °F	3				0

°C = (°F-32)/1.8
1 mm = .039 inch

Table 94. Materials summary for Arkansas.

Site: AR		SHRP: All core sections			
Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Subgrade:					
Sieve Analysis	3	5	5	100	167
Hydrometer to 0.001 mm	3	5	5	100	167
Atterburg Limits	3	1	1	100	33
Classification	6	5	5	100	83
Moisture-Density Relations	3	2	2	100	67
Resilient Modulus	3				0
Unit Weight	6				0
Natural Moisture Content	3	5	5	100	167
Unbound Base and Subbase:					
Particle Size Analysis	3				0
Sieve Analysis	3				0
Atterburg Limits	3				0
Moisture-Density Relations	3				0
Resilient Modulus	3				0
Classification	3				0
Permeability	3				0
Natural Moisture Content	3				0
Treated Base:					
Type and Classification of Material and Treatment	3				0
Pozzolanic/Cementitious: Compressive Strength	3				0
Dynamic Modulus at 77 °F	3				0
Portland Cement Concrete:					
Compressive Concrete Strength	10				0
Splitting Tensile Strength	10				0
PCC Coefficient of Thermal Expansion	3				0
Static Modulus of Elasticity	6				0
PCC Unit Weight	10				0
Core Examination/Thickness	23				0
Asphalt Concrete:					
Core Examination/Thickness	20	12	12	100	60
Bulk Specific Gravity	20	11	11	100	55
Maximum Specific Gravity	3				0
Asphalt Content (Extraction)	3				0
Moisture Susceptibility	3				0
Creep Compliance	3				0
Resilient Modulus/Tensile Strength	3				0

Table 94. Materials summary for Arkansas—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Extracted Aggregate (from mix):					
Bulk Specific Gravity: Coarse Aggregate	3				0
Bulk Specific Gravity: Fine Aggregate	3				0
Type and Classification	3				0
Gradation of Aggregate	3				0
Roundness Index of Coarse Aggregate	3				0
Aggregate Particle Shape	3				0
Asphalt Cement (from mix):					
Abson Recovery	3				0
Penetration at 50 °F, 77 °F, 90 °F	3				0
Specific Gravity (60 °F)	3				0
Viscosity at 77 °F	3				0
Viscosity at 140 °F, 275 °F	3				0

°C = (°F-32)/1.8
1 mm = .039 inch

Table 95. Materials summary for California.

Site: CA **SHRP:** All core sections

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Subgrade:					
Sieve Analysis	3				0
Hydrometer to 0.001 mm	3				0
Atterburg Limits	3				0
Classification	6				0
Moisture-Density Relations	3				0
Resilient Modulus	3				0
Unit Weight	6				0
Natural Moisture Content	3				0
Unbound Base and Subbase:					
Particle Size Analysis	3				0
Sieve Analysis	3				0
Atterburg Limits	3				0
Moisture-Density Relations	3				0
Resilient Modulus	3				0
Classification	3				0
Permeability	3				0
Natural Moisture Content	3				0

Table 95. Materials summary for California—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Treated Base:					
Type and Classification of Material and Treatment	3				0
Pozzolanic/Cementitious: Compressive Strength	3				0
Dynamic Modulus at 77 °F	3				0
Portland Cement Concrete:					
Compressive Concrete Strength	10				0
Splitting Tensile Strength	10				0
PCC Coefficient of Thermal Expansion	3				0
Static Modulus of Elasticity	6				0
PCC Unit Weight	10				0
Core Examination/Thickness	23				0
Asphalt Concrete:					
Core Examination/Thickness	20				0
Bulk Specific Gravity	20				0
Maximum Specific Gravity	3				0
Asphalt Content (Extraction)	3				0
Moisture Susceptibility	3				0
Creep Compliance	3				0
Resilient Modulus/Tensile Strength	3				0
Extracted Aggregate (from mix):					
Bulk Specific Gravity: Coarse Aggregate	3				0
Bulk Specific Gravity: Fine Aggregate	3				0
Type and Classification	3				0
Gradation of Aggregate	3				0
Roundness Index of Coarse Aggregate	3				0
Aggregate Particle Shape	3				0
Asphalt Cement (from mix):					
Abson Recovery	3				0
Penetration at 50 °F, 77 °F, 90 °F	3				0
Specific Gravity (60 °F)	3				0
Viscosity at 77 °F	3				0
Viscosity at 140 °F, 275 °F	3				0

°C = (°F-32)/1.8
1 mm = .039 inch

Table 96. Materials summary for Illinois.

Site: IL		SHRP: All core sections			
Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Subgrade:					
Sieve Analysis	3	2	0	0	67
Hydrometer to 0.001 mm	3	2	0	0	67
Atterburg Limits	3	2	2	100	67
Classification	6	2	0	0	33
Moisture-Density Relations	3	2	2	100	67
Resilient Modulus	3				0
Unit Weight	6				0
Natural Moisture Content	3				0
Unbound Base and Subbase:					
Particle Size Analysis	3	2	0	0	67
Sieve Analysis	3	2	0	0	67
Atterburg Limits	3	2	0	0	67
Moisture-Density Relations	3	2	2	100	67
Resilient Modulus	3				0
Classification	3	2	0	0	67
Permeability	3				0
Natural Moisture Content	3				0
Treated Base:					
Type and Classification of Material and Treatment	3				0
Pozzolanic/Cementitious: Compressive Strength	3				0
Dynamic Modulus at 77 °F	3				0
Portland Cement Concrete:					
Compressive Concrete Strength	10	9	8	89	90
Splitting Tensile Strength	10	8	8	100	80
PCC Coefficient of Thermal Expansion	3				0
Static Modulus of Elasticity	6	5	0	0	83
PCC Unit Weight	10	9	9	100	90
Core Examination/Thickness	23	18	18	100	78
Asphalt Concrete:					
Core Examination/Thickness	20	1	1	100	5
Bulk Specific Gravity	20	20	20	100	100
Maximum Specific Gravity	3				0
Asphalt Content (Extraction)	3				0
Moisture Susceptibility	3				0
Creep Compliance	3				0
Resilient Modulus/Tensile Strength	3				0

Table 96. Materials summary for Illinois—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Extracted Aggregate (from mix):					
Bulk Specific Gravity: Coarse Aggregate	3				0
Bulk Specific Gravity: Fine Aggregate	3				0
Type and Classification	3				0
Gradation of Aggregate	3				0
Roundness Index of Coarse Aggregate	3				0
Aggregate Particle Shape	3				0
Asphalt Cement (from mix):					
Abson Recovery	3				0
Penetration at 50 °F, 77 °F, 90 °F	3				0
Specific Gravity (60 °F)	3				0
Viscosity at 77 °F	3				0
Viscosity at 140 °F, 275 °F	3				0

°C = (°F-32)/1.8
1 mm = .039 inch

Table 97. Materials summary for Indiana.

Site: IN SHRP: All core sections

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Subgrade:					
Sieve Analysis	3				0
Hydrometer to 0.001 mm	3				0
Atterburg Limits	3				0
Classification	6				0
Moisture-Density Relations	3				0
Resilient Modulus	3				0
Unit Weight	6				0
Natural Moisture Content	3				0
Unbound Base and Subbase:					
Particle Size Analysis	3				0
Sieve Analysis	3				0
Atterburg Limits	3				0
Moisture-Density Relations	3				0
Resilient Modulus	3				0
Classification	3				0
Permeability	3				0
Natural Moisture Content	3				0

Table 97. Materials summary for Indiana—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Treated Base:					
Type and Classification of Material and Treatment	3				0
Pozzolanic/Cementitious: Compressive Strength	3				0
Dynamic Modulus at 77 °F	3				0
Portland Cement Concrete:					
Compressive Concrete Strength	10				0
Splitting Tensile Strength	10				0
PCC Coefficient of Thermal Expansion	3				0
Static Modulus of Elasticity	6				0
PCC Unit Weight	10				0
Core Examination/Thickness	23				0
Asphalt Concrete:					
Core Examination/Thickness	20				0
Bulk Specific Gravity	20				0
Maximum Specific Gravity	3				0
Asphalt Content (Extraction)	3				0
Moisture Susceptibility	3				0
Creep Compliance	3				0
Resilient Modulus/Tensile Strength	3				0
Extracted Aggregate (from mix):					
Bulk Specific Gravity: Coarse Aggregate	3				0
Bulk Specific Gravity: Fine Aggregate	3				0
Type and Classification	3				0
Gradation of Aggregate	3				0
Roundness Index of Coarse Aggregate	3				0
Aggregate Particle Shape	3				0
Asphalt Cement (from mix):					
Abson Recovery	3				0
Penetration at 50 °F, 77 °F, 90 °F	3				0
Specific Gravity (60 °F)	3				0
Viscosity at 77 °F	3				0
Viscosity at 140 °F, 275 °F	3				0

°C = (°F-32)/1.8
1 mm = .039 inch

Table 98. Materials summary for Iowa.

Site: IA		SHRP: All core sections			
Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Subgrade:					
Sieve Analysis	3	3	3	100	100
Hydrometer to 0.001 mm	3	3	2	67	100
Atterburg Limits	3	3	3	100	100
Classification	6	3	3	100	50
Moisture-Density Relations	3	3	3	100	100
Resilient Modulus	3	4	0	0	133
Unit Weight	6				0
Natural Moisture Content	3	6	6	100	200
Unbound Base and Subbase:					
Particle Size Analysis	3	3	3	100	100
Sieve Analysis	3	3	3	100	100
Atterburg Limits	3	3	0	0	100
Moisture-Density Relations	3	3	3	100	100
Resilient Modulus	3				0
Classification	3	3	3	100	100
Permeability	3				0
Natural Moisture Content	3	8	6	75	267
Treated Base:					
Type and Classification of Material and Treatment	3				0
Pozzolanic/Cementitious: Compressive Strength	3				0
Dynamic Modulus at 77 °F	3				0
Portland Cement Concrete:					
Compressive Concrete Strength	10				0
Splitting Tensile Strength	10				0
PCC Coefficient of Thermal Expansion	3				0
Static Modulus of Elasticity	6				0
PCC Unit Weight	10				0
Core Examination/Thickness	23				0
Asphalt Concrete:					
Core Examination/Thickness	20				0
Bulk Specific Gravity	20				0
Maximum Specific Gravity	3				0
Asphalt Content (Extraction)	3				0
Moisture Susceptibility	3				0
Creep Compliance	3				0
Resilient Modulus/Tensile Strength	3				0

Table 98. Materials summary for Iowa—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Extracted Aggregate (from mix):					
Bulk Specific Gravity: Coarse Aggregate	3				0
Bulk Specific Gravity: Fine Aggregate	3				0
Type and Classification	3				0
Gradation of Aggregate	3				0
Roundness Index of Coarse Aggregate	3				0
Aggregate Particle Shape	3				0
Asphalt Cement (from mix):					
Abson Recovery	3				0
Penetration at 50 °F, 77 °F, 90 °F	3				0
Specific Gravity (60 °F)	3				0
Viscosity at 77 °F	3				0
Viscosity at 140 °F, 275 °F	3				0

°C = (°F-32)/1.8
1 mm = .039 inch

Table 99. Materials summary for Michigan.

Site: MI SHRP: All core sections

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Subgrade:					
Sieve Analysis	3	1	0	0	33
Hydrometer to 0.001 mm	3	1	1	100	33
Atterburg Limits	3	1	1	100	33
Classification	6	1	0	0	17
Moisture-Density Relations	3	1	1	100	33
Resilient Modulus	3				0
Unit Weight	6				0
Natural Moisture Content	3	1	1	100	33
Unbound Base and Subbase:					
Particle Size Analysis	3	3	0	0	100
Sieve Analysis	3	3	0	0	100
Atterburg Limits	3	3	0	0	100
Moisture-Density Relations	3	3	3	100	100
Resilient Modulus	3				0
Classification	3	3	3	100	100
Permeability	3				0
Natural Moisture Content	3	3	3	100	100

Table 99. Materials summary for Michigan—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Treated Base:					
Type and Classification of Material and Treatment	3				0
Pozzolanic/Cementitious: Compressive Strength	3				0
Dynamic Modulus at 77 °F	3				0
Portland Cement Concrete:					
Compressive Concrete Strength	10	18	18	100	180
Splitting Tensile Strength	10	7	6	86	70
PCC Coefficient of Thermal Expansion	3				0
Static Modulus of Elasticity	6	17	15	88	283
PCC Unit Weight	10				0
Core Examination/Thickness	23	25	25	100	109
Asphalt Concrete:					
Core Examination/Thickness	20	20	20	100	100
Bulk Specific Gravity	20	60	4	7	300
Maximum Specific Gravity	3	60	4	7	2000
Asphalt Content (Extraction)	3				0
Moisture Susceptibility	3				0
Creep Compliance	3				0
Resilient Modulus/Tensile Strength	3				0
Extracted Aggregate (from mix):					
Bulk Specific Gravity: Coarse Aggregate	3				0
Bulk Specific Gravity: Fine Aggregate	3				0
Type and Classification	3				0
Gradation of Aggregate	3	60	4	7	2000
Roundness Index of Coarse Aggregate	3				0
Aggregate Particle Shape	3	60	4	7	2000
Asphalt Cement (from mix):					
Abson Recovery	3				0
Penetration at 50 °F, 77 °F, 90 °F	3				0
Specific Gravity (60 °F)	3				0
Viscosity at 77 °F	3				0
Viscosity at 140 °F, 275 °F	3				0

°C = (°F-32)/1.8
1 mm = .039 inch

Table 100. Materials summary for Missouri.

Site: MO		SHRP: All core sections			
Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Subgrade:					
Sieve Analysis	3	5	2	40	167
Hydrometer to 0.001 mm	3	5	0	0	167
Atterburg Limits	3	5	5	100	167
Classification	6	5	1	20	83
Moisture-Density Relations	3	5	5	100	167
Resilient Modulus	3				0
Unit Weight	6				0
Natural Moisture Content	3	5	5	100	167
Unbound Base and Subbase:					
Particle Size Analysis	3	5	5	100	167
Sieve Analysis	3	5	5	100	167
Atterburg Limits	3	5	5	100	167
Moisture-Density Relations	3	5	5	100	167
Resilient Modulus	3				0
Classification	3	5	2	40	167
Permeability	3	1	0	0	33
Natural Moisture Content	3	4	4	100	133
Treated Base:					
Type and Classification of Material and Treatment	3				0
Pozzolanic/Cementitious: Compressive Strength	3				0
Dynamic Modulus at 77 °F	3				0
Portland Cement Concrete:					
Compressive Concrete Strength	10	11	11	100	110
Splitting Tensile Strength	10	13	13	100	130
PCC Coefficient of Thermal Expansion	3				0
Static Modulus of Elasticity	6	8	8	100	133
PCC Unit Weight	10	11	10	91	110
Core Examination/Thickness	23	31	31	100	135
Asphalt Concrete:					
Core Examination/Thickness	20				0
Bulk Specific Gravity	20				0
Maximum Specific Gravity	3				0
Asphalt Content (Extraction)	3				0
Moisture Susceptibility	3				0
Creep Compliance	3				0
Resilient Modulus/Tensile Strength	3				0

Table 100. Materials summary for Missouri—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Extracted Aggregate (from mix):					
Bulk Specific Gravity: Coarse Aggregate	3				0
Bulk Specific Gravity: Fine Aggregate	3				0
Type and Classification	3				0
Gradation of Aggregate	3				0
Roundness Index of Coarse Aggregate	3				0
Aggregate Particle Shape	3				0
Asphalt Cement (from mix):					
Abson Recovery	3				0
Penetration at 50 °F, 77 °F, 90 °F	3				0
Specific Gravity (60 °F)	3				0
Viscosity at 77 °F	3				0
Viscosity at 140 °F, 275 °F	3				0

°C = (°F-32)/1.8
1 mm = .039 inch

Table 101. Materials summary for Missouri (A).

Site: MO(A)

SHRP: All core sections

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Subgrade:					
Sieve Analysis	3				0
Hydrometer to 0.001 mm	3				0
Atterburg Limits	3				0
Classification	6				0
Moisture-Density Relations	3				0
Resilient Modulus	3				0
Unit Weight	6				0
Natural Moisture Content	3				0
Unbound Base and Subbase:					
Particle Size Analysis	3				0
Sieve Analysis	3				0
Atterburg Limits	3				0
Moisture-Density Relations	3				0
Resilient Modulus	3				0
Classification	3				0
Permeability	3				0
Natural Moisture Content	3				0

Table 101. Materials summary for Missouri (A)—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Treated Base:					
Type and Classification of Material and Treatment	3				0
Pozzolanic/Cementitious: Compressive Strength	3				0
Dynamic Modulus at 77 °F	3				0
Portland Cement Concrete:					
Compressive Concrete Strength	10				0
Splitting Tensile Strength	10				0
PCC Coefficient of Thermal Expansion	3				0
Static Modulus of Elasticity	6				0
PCC Unit Weight	10				0
Core Examination/Thickness	23				0
Asphalt Concrete:					
Core Examination/Thickness	20				0
Bulk Specific Gravity	20				0
Maximum Specific Gravity	3				0
Asphalt Content (Extraction)	3				0
Moisture Susceptibility	3				0
Creep Compliance	3				0
Resilient Modulus/Tensile Strength	3				0
Extracted Aggregate (from mix):					
Bulk Specific Gravity: Coarse Aggregate	3				0
Bulk Specific Gravity: Fine Aggregate	3				0
Type and Classification	3				0
Gradation of Aggregate	3				0
Roundness Index of Coarse Aggregate	3				0
Aggregate Particle Shape	3				0
Asphalt Cement (from mix):					
Abson Recovery	3				0
Penetration at 50 °F, 77 °F, 90 °F	3				0
Specific Gravity (60 °F)	3				0
Viscosity at 77 °F	3				0
Viscosity at 140 °F, 275 °F	3				0

°C = (°F-32)/1.8
1 mm = .039 inch

Table 102. Materials summary for Oklahoma.

Site: OK		SHRP: All core sections			
Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Subgrade:					
Sieve Analysis	3	3	3	100	100
Hydrometer to 0.001 mm	3	3	3	100	100
Atterburg Limits	3	3	3	100	100
Classification	6	3	3	100	50
Moisture-Density Relations	3	3	3	100	100
Resilient Modulus	3	3	3	100	100
Unit Weight	6	3	3	100	50
Natural Moisture Content	3	3	3	100	100
Unbound Base and Subbase:					
Particle Size Analysis	3	3	3	100	100
Sieve Analysis	3	3	3	100	100
Atterburg Limits	3	3	3	100	100
Moisture-Density Relations	3	3	3	100	100
Resilient Modulus	3				0
Classification	3	3	3	100	100
Permeability	3				0
Natural Moisture Content	3	3	3	100	100
Treated Base:					
Type and Classification of Material and Treatment	3				0
Pozzolanic/Cementitious: Compressive Strength	3				0
Dynamic Modulus at 77 °F	3				0
Portland Cement Concrete:					
Compressive Concrete Strength	10	10	10	100	100
Splitting Tensile Strength	10	10	10	100	100
PCC Coefficient of Thermal Expansion	3				0
Static Modulus of Elasticity	6	6	6	100	100
PCC Unit Weight	10	10	10	100	100
Core Examination/Thickness	23	23	23	100	100
Asphalt Concrete:					
Core Examination/Thickness	20	20	20	100	100
Bulk Specific Gravity	20	20	20	100	100
Maximum Specific Gravity	3				0
Asphalt Content (Extraction)	3				0
Moisture Susceptibility	3				0
Creep Compliance	3				0
Resilient Modulus/Tensile Strength	3	12	0	0	400

Table 102. Materials summary for Oklahoma—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Extracted Aggregate (from mix):					
Bulk Specific Gravity: Coarse Aggregate	3				0
Bulk Specific Gravity: Fine Aggregate	3				0
Type and Classification	3				0
Gradation of Aggregate	3				0
Roundness Index of Coarse Aggregate	3				0
Aggregate Particle Shape	3				0
Asphalt Cement (from mix):					
Abson Recovery	3				0
Penetration at 50 °F, 77 °F, 90 °F	3				0
Specific Gravity (60 °F)	3				0
Viscosity at 77 °F	3				0
Viscosity at 140 °F, 275 °F	3				0

°C = (°F-32)/1.8
1 mm = .039 inch

Table 103. Materials summary for Pennsylvania.

Site: PA		SHRP: All core sections			
Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Subgrade:					
Sieve Analysis	3	2	2	100	67
Hydrometer to 0.001 mm	3	2	2	100	67
Atterburg Limits	3	2	2	100	67
Classification	6	2	2	100	33
Moisture-Density Relations	3	2	2	100	67
Resilient Modulus	3				0
Unit Weight	6				0
Natural Moisture Content	3	2	2	100	67
Unbound Base and Subbase:					
Particle Size Analysis	3	2	2	100	67
Sieve Analysis	3	2	2	100	67
Atterburg Limits	3	2	0	0	67
Moisture-Density Relations	3	2	2	100	67
Resilient Modulus	3				0
Classification	3	2	2	100	67
Permeability	3				0
Natural Moisture Content	3	2	2	100	67

Table 103. Materials summary for Pennsylvania—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Treated Base:					
Type and Classification of Material and Treatment	3				0
Pozzolanic/Cementitious: Compressive Strength	3				0
Dynamic Modulus at 77 °F	3				0
Portland Cement Concrete:					
Compressive Concrete Strength	10	6	6	100	60
Splitting Tensile Strength	10	7	3	43	70
PCC Coefficient of Thermal Expansion	3				0
Static Modulus of Elasticity	6	3	3	100	50
PCC Unit Weight	10	6	6	100	60
Core Examination/Thickness	23	17	17	100	74
Asphalt Concrete:					
Core Examination/Thickness	20	19	18	95	95
Bulk Specific Gravity	20				0
Maximum Specific Gravity	3				0
Asphalt Content (Extraction)	3				0
Moisture Susceptibility	3				0
Creep Compliance	3				0
Resilient Modulus/Tensile Strength	3				0
Extracted Aggregate (from mix):					
Bulk Specific Gravity: Coarse Aggregate	3				0
Bulk Specific Gravity: Fine Aggregate	3				0
Type and Classification	3				0
Gradation of Aggregate	3				0
Roundness Index of Coarse Aggregate	3				0
Aggregate Particle Shape	3				0
Asphalt Cement (from mix):					
Abson Recovery	3				0
Penetration at 50 °F, 77 °F, 90 °F	3				0
Specific Gravity (60 °F)	3				0
Viscosity at 77 °F	3				0
Viscosity at 140 °F, 275 °F	3				0

°C = (°F-32)/1.8
1 mm = .039 inch

Table 104. Materials summary for South Dakota.

Site: SD		SHRP: All core sections			
Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Subgrade:					
Sieve Analysis	3	2	0	0	67
Hydrometer to 0.001 mm	3	8	2	25	267
Atterburg Limits	3	9	9	100	300
Classification	6	2	2	100	33
Moisture-Density Relations	3	8	8	100	267
Resilient Modulus	3				0
Unit Weight	6				0
Natural Moisture Content	3	7	7	100	233
Unbound Base and Subbase:					
Particle Size Analysis	3				0
Sieve Analysis	3				0
Atterburg Limits	3				0
Moisture-Density Relations	3				0
Resilient Modulus	3				0
Classification	3				0
Permeability	3				0
Natural Moisture Content	3				0
Treated Base:					
Type and Classification of Material and Treatment	3				0
Pozzolanic/Cementitious: Compressive Strength	3				0
Dynamic Modulus at 77 °F	3				0
Portland Cement Concrete:					
Compressive Concrete Strength	10				0
Splitting Tensile Strength	10				0
PCC Coefficient of Thermal Expansion	3				0
Static Modulus of Elasticity	6				0
PCC Unit Weight	10				0
Core Examination/Thickness	23				0
Asphalt Concrete:					
Core Examination/Thickness	20				0
Bulk Specific Gravity	20				0
Maximum Specific Gravity	3				0
Asphalt Content (Extraction)	3				0
Moisture Susceptibility	3				0
Creep Compliance	3				0
Resilient Modulus/Tensile Strength	3				0

Table 104. Materials summary for South Dakota—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Extracted Aggregate (from mix):					
Bulk Specific Gravity: Coarse Aggregate	3				0
Bulk Specific Gravity: Fine Aggregate	3				0
Type and Classification	3				0
Gradation of Aggregate	3				0
Roundness Index of Coarse Aggregate	3				0
Aggregate Particle Shape	3				0
Asphalt Cement (from mix):					
Abson Recovery	3				0
Penetration at 50 °F, 77 °F, 90 °F	3				0
Specific Gravity (60 °F)	3				0
Viscosity at 77 °F	3				0
Viscosity at 140 °F, 275 °F	3				0

°C = (°F-32)/1.8
1 mm = .039 inch

Table 105. Materials summary for Tennessee.

Site: TN

SHRP: All core sections

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Subgrade:					
Sieve Analysis	3	3	3	100	100
Hydrometer to 0.001 mm	3	3	3	100	100
Atterburg Limits	3	3	3	100	100
Classification	6	9	9	100	150
Moisture-Density Relations	3	3	3	100	100
Resilient Modulus	3	3	3	100	100
Unit Weight	6	3	3	100	50
Natural Moisture Content	3	3	3	100	100
Unbound Base and Subbase:					
Particle Size Analysis	3				0
Sieve Analysis	3				0
Atterburg Limits	3				0
Moisture-Density Relations	3				0
Resilient Modulus	3				0
Classification	3				0
Permeability	3				0
Natural Moisture Content	3				0

Table 105. Materials summary for Tennessee—continued.

Test	Minimum Number per Layer	Number Conducted	Number Conducted at E	Percent at E	Percent of Required
Treated Base:					
Type and Classification of Material and Treatment	3	3	3	100	100
Pozzolanic/Cementitious: Compressive Strength	3	1	1	100	33
Dynamic Modulus at 77 °F	3				0
Portland Cement Concrete:					
Compressive Concrete Strength	10	9	9	100	90
Splitting Tensile Strength	10	10	10	100	100
PCC Coefficient of Thermal Expansion	3				0
Static Modulus of Elasticity	6	6	6	100	100
PCC Unit Weight	10	9	9	100	90
Core Examination/Thickness	23	23	23	100	100
Asphalt Concrete:					
Core Examination/Thickness	20	22	22	100	110
Bulk Specific Gravity	20	20	20	100	100
Maximum Specific Gravity	3	3	3	100	100
Asphalt Content (Extraction)	3	3	3	100	100
Moisture Susceptibility	3				0
Creep Compliance	3				0
Resilient Modulus/Tensile Strength	3				0
Extracted Aggregate (from mix):					
Bulk Specific Gravity: Coarse Aggregate	3	3	3	100	100
Bulk Specific Gravity: Fine Aggregate	3	3	3	100	100
Type and Classification	3				0
Gradation of Aggregate	3	4	4	100	133
Roundness Index of Coarse Aggregate	3				0
Aggregate Particle Shape	3	3	3	100	100
Asphalt Cement (from mix):					
Abson Recovery	3	24	3	13	800
Penetration at 50 °F, 77 °F, 90 °F	3	3	3	100	100
Specific Gravity (60 °F)	3	3	3	100	100
Viscosity at 77 °F	3	3	3	100	100
Viscosity at 140 °F, 275 °F	3				0

°C = (°F-32)/1.8

1 mm = .039 inch

APPENDIX C: INDIVIDUAL SECTION MONITORING ACTIVITIES

The following list provides the Federal Information Processing (FIPS) codes for States. The codes are used in the first column, “State,” in the following table that summarizes the visits to the LTPP sites.

FEDERAL INFORMATION PROCESSING STANDARD (FIPS) CODES FOR STATES

Alabama	01
Alaska	02
Arizona	04
Arkansas	05
California	06
Colorado	08
Connecticut	09
Delaware	10
District of Columbia	11
Florida	12
Georgia	13
Hawaii	15
Idaho	16
Illinois	17
Indiana	18
Iowa	19
Kansas	20
Kentucky	21
Louisiana	22
Maine	23
Maryland	24
Massachusetts	25
Michigan	26
Minnesota	27
Mississippi	28
Missouri	29
Montana	30
Nebraska	31
Nevada	32
New Hampshire	33
New Jersey	34
New Mexico	35
New York	36
North Carolina	37
North Dakota	38
Ohio	39
Oklahoma	40
Oregon	41
Pennsylvania	42

Rhode Island	44
South Carolina	45
South Dakota	46
Tennessee	47
Texas	48
Utah	49
Vermont	50
Virginia	51
Washington	53
West Virginia	54
Wisconsin	55
Wyoming	56
American Samoa	60
Guam	66
Northern Marianas	69
Puerto Rico	72
Virgin Islands	78

Table 106. Summary of visits to the LTPP sites.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
1	0600													
		1	S	6	18-Nov-97									
1	0601													
		1	S	6	18-Nov-97		28-Jan-98	28-Jan-98						
		1	S	6	18-Nov-97		05-Feb-98		05-Feb-98	05-Feb-98	05-Feb-98	m-jpccr		
		1	S	6	18-Nov-97		01-Jul-98			01-Jul-98	01-Jul-98	m-jpccr		
		1	S	6	18-Nov-97		30-Sep-99				30-Sep-99	m-jpccr		
1	0602													
		1	S	6	18-Nov-97		28-Jan-98	28-Jan-98						
		1	S	6	18-Nov-97		05-Feb-98			05-Feb-98	05-Feb-98	m-jpccr		
		1	S	6	18-Nov-97		12-Feb-98		12-Feb-98					
		1	S	6	18-Nov-97		01-Jul-98			01-Jul-98	01-Jul-98	m-jpccr		
		1	S	6	18-Nov-97		30-Sep-99				30-Sep-99	m-jpccr		
1	0603													
		1	S	6	18-Nov-97		28-Jan-98	28-Jan-98						
		1	S	6	18-Nov-97		06-Feb-98			06-Feb-98	06-Feb-98	m-jpccr		
		1	S	6	18-Nov-97		10-Feb-98		10-Feb-98					
		2	S	6	18-Nov-97		28-Jun-98				28-Jun-98	m-acr		
		2	S	6	18-Nov-97		01-Oct-99				01-Oct-99	m-acr		
1	0604													
		1	S	6	18-Nov-97		28-Jan-98	28-Jan-98						
		1	S	6	18-Nov-97		05-Feb-98			05-Feb-98	05-Feb-98	m-jpccr		
		1	S	6	18-Nov-97		10-Feb-98		10-Feb-98					
		2	S	6	18-Nov-97		28-Jun-98				28-Jun-98	m-acr		
		2	S	6	18-Nov-97		01-Oct-99				01-Oct-99	m-acr		
1	0605													
		1	S	6	18-Nov-97		28-Jan-98	28-Jan-98						
		1	S	6	18-Nov-97		05-Feb-98			05-Feb-98	05-Feb-98	m-jpccr		
		1	S	6	18-Nov-97		19-Feb-98		19-Feb-98					
		1	S	6	18-Nov-97		01-Jul-98			01-Jul-98	01-Jul-98	m-jpccr		
		1	S	6	18-Nov-97		30-Sep-99				30-Sep-99	m-jpccr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
184	1	0606												
			1	S	6	18-Nov-97	28-Jan-98	28-Jan-98						
			1	S	6	18-Nov-97	06-Feb-98			06-Feb-98	06-Feb-98	m-jpccr		
			1	S	6	18-Nov-97	09-Feb-98		09-Feb-98					
			2	S	6	18-Nov-97	28-Jun-98				28-Jun-98	m-acr		
			2	S	6	18-Nov-97	01-Oct-99				01-Oct-99	m-acr		
	1	0607												
			1	S	6	18-Nov-97	28-Jan-98	28-Jan-98						
			1	S	6	18-Nov-97	05-Feb-98			05-Feb-98	05-Feb-98	m-jpccr		
			1	S	6	18-Nov-97	13-Feb-98		13-Feb-98					
			2	S	6	18-Nov-97	05-May-98		05-May-98					
			2	S	6	18-Nov-97	29-Jun-98				29-Jun-98	m-acr		
			2	S	6	18-Nov-97	30-Sep-99				30-Sep-99	m-acr		
	1	0608												
			1	S	6	18-Nov-97	28-Jan-98	28-Jan-98						
			1	S	6	18-Nov-97	05-Feb-98		05-Feb-98	05-Feb-98	05-Feb-98	m-jpccr		
			1	S	6	18-Nov-97	06-Feb-98		06-Feb-98					
			2	S	6	18-Nov-97	05-May-98		05-May-98					
			2	S	6	18-Nov-97	29-Jun-98				29-Jun-98	m-acr		
			2	S	6	18-Nov-97	30-Sep-99				30-Sep-99	m-acr		
	1	0661												
			1	S	6	18-Nov-97	28-Jan-98	28-Jan-98						
			1	S	6	18-Nov-97	05-Feb-98			05-Feb-98	05-Feb-98	m-jpccr		
			1	S	6	18-Nov-97	09-Feb-98		09-Feb-98					
			2	S	6	18-Nov-97	28-Jun-98				28-Jun-98	m-acr		
			2	S	6	18-Nov-97	01-Oct-99				01-Oct-99	m-acr		
	1	0662												
			1	S	6	18-Nov-97	28-Jan-98	28-Jan-98						
			1	S	6	18-Nov-97	05-Feb-98			05-Feb-98	05-Feb-98	m-jpccr		
			1	S	6	18-Nov-97	06-Feb-98		06-Feb-98					
			2	S	6	18-Nov-97	29-Jun-98				29-Jun-98	m-acr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
1	0663	2	S	6	18-Nov-97		01-Oct-99				01-Oct-99	m-acr		
		1	S	6	18-Nov-97		28-Jan-98	28-Jan-98						
		1	S	6	18-Nov-97		05-Feb-98			05-Feb-98	05-Feb-98	m-jpccr		
		1	S	6	18-Nov-97		06-Feb-98		06-Feb-98					
		2	S	6	18-Nov-97		29-Jun-98				29-Jun-98	m-acr		
		2	S	6	18-Nov-97		30-Sep-99				30-Sep-99	m-acr		
4	0600													
4	0601	1	S	6	01-Jan-87									
		1	S	6	01-Jan-87	28-Apr-95	21-Nov-89						21-Nov-89	p-j
		1	S	6	01-Jan-87	28-Apr-95	09-Apr-90	09-Apr-90						
		1	S	6	01-Jan-87	28-Apr-95	09-Jun-90		09-Jun-90					
		1	S	6	01-Jan-87	28-Apr-95	10-Jun-90		10-Jun-90					
		1	S	6	01-Jan-87	28-Apr-95	12-Apr-91		12-Apr-91					
		1	S	6	01-Jan-87	28-Apr-95	16-Sep-91	16-Sep-91						
		1	S	6	01-Jan-87	28-Apr-95	23-Sep-91							
		1	S	6	01-Jan-87	28-Apr-95	26-Sep-91		26-Sep-91	26-Sep-91	26-Sep-91	m-jpccr		
		1	S	6	01-Jan-87	28-Apr-95	27-Feb-92	27-Feb-92						
		1	S	6	01-Jan-87	28-Apr-95	12-Jun-92							
		1	S	6	01-Jan-87	28-Apr-95	02-Jul-93							
		1	S	6	01-Jan-87	28-Apr-95	27-Mar-95						27-Mar-95	p42
4	0602													
		1	S	6	01-Jan-87	28-Apr-95	21-Nov-89						21-Nov-89	p-j
		1	S	6	01-Jan-87	28-Apr-95	09-Apr-90	09-Apr-90						
		1	S	6	01-Jan-87	28-Apr-95	09-Jun-90		09-Jun-90					
		1	S	6	01-Jan-87	28-Apr-95	10-Jun-90		10-Jun-90					
		1	S	6	01-Jan-87	28-Apr-95	11-Apr-91		11-Apr-91					
		1	S	6	01-Jan-87	28-Apr-95	12-Apr-91		12-Apr-91					
		1	S	6	01-Jan-87	28-Apr-95	16-Sep-91	16-Sep-91						
		1	S	6	01-Jan-87	28-Apr-95	23-Sep-91							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Test Date	Distress Table	PASCO Test Date	Ta
186	4	0603												
			1	S	6	01-Jan-87	28-Apr-95	25-Sep-91		25-Sep-91	25-Sep-91	25-Sep-91	m-jpcr	
			1	S	6	01-Jan-87	28-Apr-95	27-Feb-92	27-Feb-92					
			1	S	6	01-Jan-87	28-Apr-95	12-Jun-92						
			1	S	6	01-Jan-87	28-Apr-95	12-Feb-93	12-Feb-93					
			1	S	6	01-Jan-87	28-Apr-95	02-Jul-93						
			1	S	6	01-Jan-87	28-Apr-95	27-Mar-95					27-Mar-95	p42
	4	0603												
			1	S	6	01-Jan-87		21-Nov-89					21-Nov-89	p-j
			1	S	6	01-Jan-87		09-Apr-90	09-Apr-90					
			1	S	6	01-Jan-87		09-Jun-90		09-Jun-90				
			1	S	6	01-Jan-87		10-Jun-90		10-Jun-90				
			2	S	6	01-Jan-87		08-Apr-91		08-Apr-91				
			2	S	6	01-Jan-87		16-Sep-91	16-Sep-91					
			2	S	6	01-Jan-87		23-Sep-91						
			2	S	6	01-Jan-87		25-Sep-91		25-Sep-91	25-Sep-91	m-acr		
			2	S	6	01-Jan-87		27-Feb-92	27-Feb-92					
			2	S	6	01-Jan-87		12-Jun-92						
			2	S	6	01-Jan-87		12-Feb-93	12-Feb-93					
			2	S	6	01-Jan-87		02-Jul-93						
			2	S	6	01-Jan-87		21-Jan-94	21-Jan-94					
			2	S	6	01-Jan-87		21-Sep-94		21-Sep-94	21-Sep-94	m-acr		
			2	S	6	01-Jan-87		27-Mar-95					27-Mar-95	p42
			2	S	6	01-Jan-87		02-May-95	02-May-95					
			2	S	6	01-Jan-87		19-Feb-97	19-Feb-97					
			2	S	6	01-Jan-87		29-Oct-97		29-Oct-97	29-Oct-97	m-acr		
			2	S	6	01-Jan-87		17-Apr-98	17-Apr-98					
			2	S	6	01-Jan-87		02-Mar-99	02-Mar-99					
186	4	0604												
			1	S	6	01-Jan-87		21-Nov-89					21-Nov-89	p-j
			1	S	6	01-Jan-87		09-Apr-90	09-Apr-90					
			1	S	6	01-Jan-87		09-Jun-90		09-Jun-90				

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Ta
187		1	S	6	01-Jan-87		10-Jun-90		10-Jun-90					
		2	S	6	01-Jan-87		10-Apr-91		10-Apr-91					
		2	S	6	01-Jan-87		16-Sep-91	16-Sep-91						
		2	S	6	01-Jan-87		23-Sep-91							
		2	S	6	01-Jan-87		24-Sep-91		24-Sep-91		24-Sep-91	m-acr		
		2	S	6	01-Jan-87		27-Feb-92	27-Feb-92						
		2	S	6	01-Jan-87		12-Jun-92							
		2	S	6	01-Jan-87		12-Feb-93	12-Feb-93						
		2	S	6	01-Jan-87		02-Jul-93							
		2	S	6	01-Jan-87		21-Jan-94	21-Jan-94						
		2	S	6	01-Jan-87		20-Sep-94				20-Sep-94	m-acr		
		2	S	6	01-Jan-87		21-Sep-94		21-Sep-94					
		2	S	6	01-Jan-87		27-Mar-95							
		2	S	6	01-Jan-87		02-May-95	02-May-95						
		2	S	6	01-Jan-87		27-Mar-96						27-Mar-96	p42
		2	S	6	01-Jan-87		19-Feb-97	19-Feb-97						
		2	S	6	01-Jan-87		28-Oct-97		28-Oct-97		28-Oct-97	m-acr		
		2	S	6	01-Jan-87		17-Apr-98	17-Apr-98						
		2	S	6	01-Jan-87		02-Mar-99	02-Mar-99						
4	0605													
		1	S	6	01-Jan-87	28-Apr-95	21-Nov-89						21-Nov-89	p-jp
		1	S	6	01-Jan-87	28-Apr-95	09-Apr-90	09-Apr-90						
		1	S	6	01-Jan-87	28-Apr-95	09-Jun-90		09-Jun-90					
		1	S	6	01-Jan-87	28-Apr-95	10-Jun-90		10-Jun-90					
		1	S	6	01-Jan-87	28-Apr-95	12-Apr-91		12-Apr-91	12-Apr-91	12-Apr-91	m-jpccr		
		1	S	6	01-Jan-87	28-Apr-95	16-Sep-91	16-Sep-91						
		1	S	6	01-Jan-87	28-Apr-95	23-Sep-91							
		1	S	6	01-Jan-87	28-Apr-95	25-Sep-91		25-Sep-91	25-Sep-91	25-Sep-91	m-jpccr		
		1	S	6	01-Jan-87	28-Apr-95	27-Feb-92	27-Feb-92						
		1	S	6	01-Jan-87	28-Apr-95	12-Jun-92							
		1	S	6	01-Jan-87	28-Apr-95	12-Feb-93	12-Feb-93						

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
188	4	0606												
			1	S	6	01-Jan-87	28-Apr-95	02-Jul-93						
			1	S	6	01-Jan-87	28-Apr-95	27-Mar-95					27-Mar-95	p42
			1	S	6	01-Jan-87		21-Nov-89					21-Nov-89	p-j
			1	S	6	01-Jan-87		09-Apr-90	09-Apr-90					
			1	S	6	01-Jan-87		09-Jun-90		09-Jun-90				
			1	S	6	01-Jan-87		10-Jun-90		10-Jun-90				
			2	S	6	01-Jan-87		08-Apr-91		08-Apr-91				
			2	S	6	01-Jan-87		16-Sep-91	16-Sep-91					
			2	S	6	01-Jan-87		23-Sep-91						
			2	S	6	01-Jan-87		24-Sep-91		24-Sep-91		24-Sep-91	m-acr	
			2	S	6	01-Jan-87		27-Feb-92	27-Feb-92					
			2	S	6	01-Jan-87		12-Jun-92						
			2	S	6	01-Jan-87		12-Feb-93	12-Feb-93					
			2	S	6	01-Jan-87		02-Jul-93						
			2	S	6	01-Jan-87		21-Jan-94	21-Jan-94					
			2	S	6	01-Jan-87		20-Sep-94		20-Sep-94		20-Sep-94	m-acr	
			2	S	6	01-Jan-87		27-Mar-95						
			2	S	6	01-Jan-87		02-May-95	02-May-95					
			2	S	6	01-Jan-87		27-Mar-96					27-Mar-96	p42
			2	S	6	01-Jan-87		19-Feb-97	19-Feb-97					
			2	S	6	01-Jan-87		27-Oct-97		27-Oct-97		27-Oct-97	m-acr	
			2	S	6	01-Jan-87		17-Apr-98	17-Apr-98					
			2	S	6	01-Jan-87		02-Mar-99	02-Mar-99					
189	4	0607												
			1	S	6	01-Jan-87		21-Nov-89					21-Nov-89	p-j
			1	S	6	01-Jan-87		09-Apr-90	09-Apr-90					
			1	S	6	01-Jan-87		09-Jun-90		09-Jun-90				
			1	S	6	01-Jan-87		10-Jun-90		10-Jun-90				
			2	S	6	01-Jan-87		08-Apr-91		08-Apr-91				
			2	S	6	01-Jan-87		16-Sep-91	16-Sep-91					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
189	4	0608		2	S	6	01-Jan-87		23-Sep-91					
				2	S	6	01-Jan-87		24-Sep-91	24-Sep-91	24-Sep-91	m-acr		
				2	S	6	01-Jan-87		27-Feb-92	27-Feb-92				
				2	S	6	01-Jan-87		12-Jun-92					
				2	S	6	01-Jan-87		12-Feb-93	12-Feb-93				
				2	S	6	01-Jan-87		02-Jul-93					
				2	S	6	01-Jan-87		21-Jan-94	21-Jan-94				
				2	S	6	01-Jan-87		19-Sep-94	19-Sep-94	19-Sep-94	m-acr		
				2	S	6	01-Jan-87		27-Mar-95				27-Mar-95	p42
				2	S	6	01-Jan-87		02-May-95	02-May-95				
				2	S	6	01-Jan-87		19-Feb-97	19-Feb-97				
				2	S	6	01-Jan-87		27-Oct-97	27-Oct-97	27-Oct-97	m-acr		
				2	S	6	01-Jan-87		17-Apr-98	17-Apr-98				
				2	S	6	01-Jan-87		02-Mar-99	02-Mar-99				
				1	S	6	01-Jan-87		21-Nov-89				21-Nov-89	p-j
				1	S	6	01-Jan-87		09-Apr-90	09-Apr-90				
				1	S	6	01-Jan-87		09-Jun-90		09-Jun-90			
				1	S	6	01-Jan-87		10-Jun-90		10-Jun-90			
				2	S	6	01-Jan-87		08-Apr-91		08-Apr-91			
				2	S	6	01-Jan-87		16-Sep-91	16-Sep-91				
				2	S	6	01-Jan-87		23-Sep-91					
				2	S	6	01-Jan-87		24-Sep-91	24-Sep-91	24-Sep-91	m-acr		
				2	S	6	01-Jan-87		27-Feb-92	27-Feb-92				
				2	S	6	01-Jan-87		12-Jun-92					
				2	S	6	01-Jan-87		12-Feb-93	12-Feb-93				
				2	S	6	01-Jan-87		02-Jul-93					
				2	S	6	01-Jan-87		21-Jan-94	21-Jan-94				
				2	S	6	01-Jan-87		19-Sep-94	19-Sep-94	19-Sep-94	m-acr		
				2	S	6	01-Jan-87		27-Mar-95				27-Mar-95	p42
				2	S	6	01-Jan-87		02-May-95	02-May-95				

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
190	4	0659		2	S	6	01-Jan-87		19-Feb-97	19-Feb-97				
				2	S	6	01-Jan-87		23-Oct-97		23-Oct-97	m-acr		
				2	S	6	01-Jan-87		24-Oct-97					
				2	S	6	01-Jan-87		17-Apr-98	17-Apr-98				
				2	S	6	01-Jan-87		02-Mar-99	02-Mar-99				
	4	0660												
				1	S	6	01-Jan-87		09-Apr-90	09-Apr-90				
				1	S	6	01-Jan-87		08-Jun-90		08-Jun-90			
				2	S	6	01-Jan-87		10-Apr-91		10-Apr-91			
				2	S	6	01-Jan-87		16-Sep-91	16-Sep-91				
				2	S	6	01-Jan-87		24-Sep-91		24-Sep-91	m-acr		
				2	S	6	01-Jan-87		27-Feb-92	27-Feb-92				
				2	S	6	01-Jan-87		12-Jun-92					
				2	S	6	01-Jan-87		12-Feb-93	12-Feb-93				
				2	S	6	01-Jan-87		02-Jul-93					
				2	S	6	01-Jan-87		21-Jan-94	21-Jan-94				
				2	S	6	01-Jan-87		20-Sep-94		20-Sep-94	m-acr		
				2	S	6	01-Jan-87		27-Mar-95				27-Mar-95	p42
				2	S	6	01-Jan-87		02-May-95	02-May-95				
				2	S	6	01-Jan-87		19-Feb-97	19-Feb-97				
				2	S	6	01-Jan-87		27-Oct-97		27-Oct-97	m-acr		
				2	S	6	01-Jan-87		17-Apr-98	17-Apr-98				
				2	S	6	01-Jan-87		02-Mar-99	02-Mar-99				
	4	0660												
				1	S	6	01-Jan-87		09-Apr-90	09-Apr-90				
				1	S	6	01-Jan-87		07-Jun-90		07-Jun-90			
				2	S	6	01-Jan-87		09-Apr-91		09-Apr-91			
				2	S	6	01-Jan-87		16-Sep-91	16-Sep-91				
				2	S	6	01-Jan-87		23-Sep-91		23-Sep-91	m-acr		
				2	S	6	01-Jan-87		27-Feb-92	27-Feb-92				
				2	S	6	01-Jan-87		12-Jun-92					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
4	0661	2	S	6	01-Jan-87		12-Feb-93	12-Feb-93						
		2	S	6	01-Jan-87		02-Jul-93							
		2	S	6	01-Jan-87		21-Jan-94	21-Jan-94						
		2	S	6	01-Jan-87		19-Sep-94		19-Sep-94	m-acr				
		2	S	6	01-Jan-87		21-Sep-94							
		2	S	6	01-Jan-87		27-Mar-95				27-Mar-95	p42		
		2	S	6	01-Jan-87		02-May-95	02-May-95						
		2	S	6	01-Jan-87		19-Feb-97	19-Feb-97						
		2	S	6	01-Jan-87		23-Oct-97		23-Oct-97	m-acr				
		2	S	6	01-Jan-87		17-Apr-98	17-Apr-98						
2	S	6	01-Jan-87		02-Mar-99	02-Mar-99								
4	0662	1	S	6	01-Jan-87		09-Apr-90	09-Apr-90						
		1	S	6	01-Jan-87		08-Jun-90		08-Jun-90					
		2	S	6	01-Jan-87		10-Apr-91		10-Apr-91					
		2	S	6	01-Jan-87		16-Sep-91	16-Sep-91						
		2	S	6	01-Jan-87		24-Sep-91		24-Sep-91	m-acr				
		2	S	6	01-Jan-87		27-Feb-92	27-Feb-92						
		2	S	6	01-Jan-87		12-Jun-92							
		2	S	6	01-Jan-87		12-Feb-93	12-Feb-93						
		2	S	6	01-Jan-87		02-Jul-93							
		2	S	6	01-Jan-87		21-Jan-94	21-Jan-94						
		2	S	6	01-Jan-87		20-Sep-94		20-Sep-94	m-acr				
		2	S	6	01-Jan-87		22-Sep-94							
		2	S	6	01-Jan-87		27-Mar-95				27-Mar-95	p42		
		2	S	6	01-Jan-87		02-May-95	02-May-95						
		2	S	6	01-Jan-87		19-Feb-97	19-Feb-97						
		2	S	6	01-Jan-87		28-Oct-97		28-Oct-97	m-acr				
2	S	6	01-Jan-87		17-Apr-98	17-Apr-98								
2	S	6	01-Jan-87		02-Mar-99	02-Mar-99								

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
192		1	S	6	01-Jan-87		09-Apr-90	09-Apr-90						
		1	S	6	01-Jan-87		08-Jun-90		08-Jun-90					
		1	S	6	01-Jan-87		10-Jun-90		10-Jun-90					
		2	S	6	01-Jan-87		11-Apr-91		11-Apr-91					
		2	S	6	01-Jan-87		16-Sep-91	16-Sep-91						
		2	S	6	01-Jan-87		25-Sep-91		25-Sep-91		25-Sep-91	m-acr		
		2	S	6	01-Jan-87		27-Feb-92	27-Feb-92						
		2	S	6	01-Jan-87		12-Jun-92							
		2	S	6	01-Jan-87		12-Feb-93	12-Feb-93						
		2	S	6	01-Jan-87		02-Jul-93							
		2	S	6	01-Jan-87		21-Jan-94	21-Jan-94						
		2	S	6	01-Jan-87		20-Sep-94		20-Sep-94		20-Sep-94	m-acr		
		2	S	6	01-Jan-87		22-Sep-94							
		2	S	6	01-Jan-87		27-Mar-95						27-Mar-95	p42
		2	S	6	01-Jan-87		02-May-95	02-May-95						
		2	S	6	01-Jan-87		19-Feb-97	19-Feb-97						
		2	S	6	01-Jan-87		28-Oct-97		28-Oct-97		28-Oct-97	m-acr		
		2	S	6	01-Jan-87		29-Oct-97							
		2	S	6	01-Jan-87		17-Apr-98	17-Apr-98						
		2	S	6	01-Jan-87		02-Mar-99	02-Mar-99						
4	0663													
		1	S	6	01-Jan-87		09-Apr-90	09-Apr-90						
		1	S	6	01-Jan-87		09-Jun-90		09-Jun-90					
		2	S	6	01-Jan-87		09-Apr-91		09-Apr-91					
		2	S	6	01-Jan-87		16-Sep-91	16-Sep-91						
		2	S	6	01-Jan-87		23-Sep-91			23-Sep-91	23-Sep-91	m-jpccr		
		2	S	6	01-Jan-87		18-Nov-91			18-Nov-91	18-Nov-91	m-jpccr		
		2	S	6	01-Jan-87		27-Feb-92	27-Feb-92						
		2	S	6	01-Jan-87		12-Jun-92							
		2	S	6	01-Jan-87		12-Feb-93	12-Feb-93						
		2	S	6	01-Jan-87		02-Jul-93							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Table
		2	S	6	01-Jan-87		21-Jan-94	21-Jan-94						
		2	S	6	01-Jan-87		19-Sep-94			19-Sep-94	19-Sep-94	m-jpccr		
		2	S	6	01-Jan-87		21-Sep-94		21-Sep-94					
		2	S	6	01-Jan-87		27-Mar-95						27-Mar-95	p42
		2	S	6	01-Jan-87		02-May-95	02-May-95						
		2	S	6	01-Jan-87		19-Feb-97	19-Feb-97						
		2	S	6	01-Jan-87		23-Oct-97		23-Oct-97	23-Oct-97	23-Oct-97	m-jpccr		
		2	S	6	01-Jan-87		17-Apr-98	17-Apr-98						
		2	S	6	01-Jan-87		02-Mar-99	02-Mar-99						
4	0664													
		1	S	6	01-Jan-87									
		2	S	6	01-Jan-87		16-Sep-91	16-Sep-91						
		2	S	6	01-Jan-87		26-Sep-91		26-Sep-91		26-Sep-91	m-acr		
		2	S	6	01-Jan-87		27-Feb-92	27-Feb-92						
		2	S	6	01-Jan-87		12-Jun-92							
		2	S	6	01-Jan-87		12-Feb-93	12-Feb-93						
		2	S	6	01-Jan-87		02-Jul-93							
		2	S	6	01-Jan-87		21-Jan-94	21-Jan-94						
		2	S	6	01-Jan-87		21-Sep-94			21-Sep-94	m-acr			
		2	S	6	01-Jan-87		22-Sep-94							
		2	S	6	01-Jan-87		23-Sep-94		23-Sep-94					
		2	S	6	01-Jan-87		27-Mar-95						27-Mar-95	p42
		2	S	6	01-Jan-87		02-May-95	02-May-95						
		2	S	6	01-Jan-87		19-Feb-97	19-Feb-97						
		2	S	6	01-Jan-87		29-Oct-97		29-Oct-97		29-Oct-97	m-acr		
		2	S	6	01-Jan-87		17-Apr-98	17-Apr-98						
		2	S	6	01-Jan-87		02-Mar-99	02-Mar-99						
4	0665													
		1	S	6	01-Jan-87									
		2	S	6	01-Jan-87		16-Sep-91	16-Sep-91						
		2	S	6	01-Jan-87		26-Sep-91		26-Sep-91		26-Sep-91	m-acr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Table	
4	0666	2	S	6	01-Jan-87		27-Feb-92	27-Feb-92							
		2	S	6	01-Jan-87		12-Jun-92								
		2	S	6	01-Jan-87		12-Feb-93	12-Feb-93							
		2	S	6	01-Jan-87		02-Jul-93								
		2	S	6	01-Jan-87		21-Jan-94	21-Jan-94							
		2	S	6	01-Jan-87		21-Sep-94			21-Sep-94	m-acr				
		2	S	6	01-Jan-87		22-Sep-94								
		2	S	6	01-Jan-87		23-Sep-94		23-Sep-94						
		2	S	6	01-Jan-87		27-Mar-95							27-Mar-95	p42
		2	S	6	01-Jan-87		02-May-95	02-May-95							
		2	S	6	01-Jan-87		19-Feb-97	19-Feb-97							
		2	S	6	01-Jan-87		29-Oct-97		29-Oct-97		29-Oct-97	m-acr			
		2	S	6	01-Jan-87		17-Apr-98	17-Apr-98							
		2	S	6	01-Jan-87		02-Mar-99	02-Mar-99							
		4	0666												
1	S			6	01-Jan-87										
2	S			6	01-Jan-87		16-Sep-91	16-Sep-91							
2	S			6	01-Jan-87		26-Sep-91		26-Sep-91		26-Sep-91	m-acr			
2	S			6	01-Jan-87		27-Feb-92	27-Feb-92							
2	S			6	01-Jan-87		12-Jun-92								
2	S			6	01-Jan-87		12-Feb-93	12-Feb-93							
2	S			6	01-Jan-87		02-Jul-93								
2	S			6	01-Jan-87		21-Jan-94	21-Jan-94							
2	S			6	01-Jan-87		21-Sep-94			21-Sep-94	m-acr				
2	S			6	01-Jan-87		22-Sep-94		22-Sep-94						
2	S			6	01-Jan-87		27-Mar-95							27-Mar-95	p42
2	S			6	01-Jan-87		02-May-95	02-May-95							
2	S			6	01-Jan-87		19-Feb-97	19-Feb-97							
2	S			6	01-Jan-87		30-Oct-97		30-Oct-97		30-Oct-97	m-acr			
2	S	6	01-Jan-87		17-Apr-98	17-Apr-98									
2	S	6	01-Jan-87		02-Mar-99	02-Mar-99									

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
4	0667													
		1	S	6	01-Jan-87									
		2	S	6	01-Jan-87		16-Sep-91	16-Sep-91						
		2	S	6	01-Jan-87		26-Sep-91		26-Sep-91		26-Sep-91	m-acr		
		2	S	6	01-Jan-87		27-Feb-92	27-Feb-92						
		2	S	6	01-Jan-87		12-Jun-92							
		2	S	6	01-Jan-87		12-Feb-93	12-Feb-93						
		2	S	6	01-Jan-87		02-Jul-93							
		2	S	6	01-Jan-87		21-Jan-94	21-Jan-94						
		2	S	6	01-Jan-87		21-Sep-94				21-Sep-94	m-acr		
		2	S	6	01-Jan-87		22-Sep-94							
		2	S	6	01-Jan-87		23-Sep-94		23-Sep-94					
		2	S	6	01-Jan-87		27-Mar-95						27-Mar-95	p42
		2	S	6	01-Jan-87		02-May-95	02-May-95						
		2	S	6	01-Jan-87		19-Feb-97	19-Feb-97						
		2	S	6	01-Jan-87		17-Apr-98	17-Apr-98						
		2	S	6	01-Jan-87		02-Mar-99	02-Mar-99						
4	0668													
		1	S	6	01-Jan-87									
		2	S	6	01-Jan-87		16-Sep-91	16-Sep-91						
		2	S	6	01-Jan-87		26-Sep-91		26-Sep-91		26-Sep-91	m-acr		
		2	S	6	01-Jan-87		27-Feb-92	27-Feb-92						
		2	S	6	01-Jan-87		12-Jun-92							
		2	S	6	01-Jan-87		12-Feb-93	12-Feb-93						
		2	S	6	01-Jan-87		02-Jul-93							
		2	S	6	01-Jan-87		21-Jan-94	21-Jan-94						
		2	S	6	01-Jan-87		21-Sep-94				21-Sep-94	m-acr		
		2	S	6	01-Jan-87		22-Sep-94							
		2	S	6	01-Jan-87		23-Sep-94		23-Sep-94					
		2	S	6	01-Jan-87		27-Mar-95						27-Mar-95	p42
		2	S	6	01-Jan-87		02-May-95	02-May-95						

Table 106. Summary of visits to the LTPP sites—continued.

[illegible]

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
		1	S	6	01-Jan-87		11-Sep-96	11-Sep-96						
		1	S	6	01-Jan-87		11-Sep-96	11-Sep-96						
		1	S	6	01-Jan-87		11-Sep-96	11-Sep-96						
		1	S	6	01-Jan-87		12-Sep-96			12-Sep-96	12-Sep-96	m-jpccr		
		1	S	6	01-Jan-87		14-Sep-96		14-Sep-96					
		1	S	6	01-Jan-87		14-Sep-96		14-Sep-96					
		1	S	6	01-Jan-87		09-Jan-97		09-Jan-97					
		1	S	6	01-Jan-87		11-Aug-97	11-Aug-97						
		1	S	6	01-Jan-87		02-Oct-97			02-Oct-97	02-Oct-97	m-jpccr		
		1	S	6	01-Jan-87		26-Jul-99	26-Jul-99						
197	5	A603												
			1	S	6	01-Jan-87	11-Sep-96	11-Sep-96						
			1	S	6	01-Jan-87	12-Sep-96			12-Sep-96	12-Sep-96	m-jpccr		
			1	S	6	01-Jan-87	13-Sep-96		13-Sep-96					
			2	S	6	01-Jan-87	07-Jan-97		07-Jan-97					
			2	S	6	01-Jan-87	05-Feb-97	05-Feb-97						
			2	S	6	01-Jan-87	11-Aug-97	11-Aug-97						
			2	S	6	01-Jan-87	01-Oct-97				01-Oct-97	m-acr		
			2	S	6	01-Jan-87	26-Jul-99	26-Jul-99						
	5	A604												
		1	S	6	01-Jan-87		11-Sep-96	11-Sep-96						
		1	S	6	01-Jan-87		11-Sep-96	11-Sep-96						
		1	S	6	01-Jan-87		12-Sep-96			12-Sep-96	12-Sep-96	m-jpccr		
		1	S	6	01-Jan-87		13-Sep-96		13-Sep-96					
		2	S	6	01-Jan-87		08-Jan-97		08-Jan-97					
		2	S	6	01-Jan-87		05-Feb-97	05-Feb-97						
		2	S	6	01-Jan-87		11-Aug-97	11-Aug-97						
		2	S	6	01-Jan-87		01-Oct-97				01-Oct-97	m-acr		
		2	S	6	01-Jan-87		26-Jul-99	26-Jul-99						
	5	A605												
		1	S	6	01-Jan-87		11-Sep-96	11-Sep-96						

Table 106. Summary of visits to the LTPP sites—continued.

	State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress		PASCO		
												Test Date	Table	Test Date	Ta	
198	5	A606	1	S	6	01-Jan-87		11-Sep-96	11-Sep-96							
			1	S	6	01-Jan-87		12-Sep-96			12-Sep-96	12-Sep-96	m-jpccr			
			1	S	6	01-Jan-87		13-Sep-96		13-Sep-96						
			1	S	6	01-Jan-87		08-Jan-97		08-Jan-97						
			1	S	6	01-Jan-87		09-Jan-97		09-Jan-97						
			1	S	6	01-Jan-87		11-Aug-97	11-Aug-97							
			1	S	6	01-Jan-87		02-Oct-97			02-Oct-97	02-Oct-97	m-jpccr			
	5	A607	1	S	6	01-Jan-87		11-Sep-96	11-Sep-96							
			1	S	6	01-Jan-87		12-Sep-96		12-Sep-96	12-Sep-96	12-Sep-96	m-jpccr			
			1	S	6	01-Jan-87		13-Sep-96		13-Sep-96						
			2	S	6	01-Jan-87		07-Jan-97		07-Jan-97						
			2	S	6	01-Jan-87		05-Feb-97	05-Feb-97							
			2	S	6	01-Jan-87		11-Aug-97	11-Aug-97							
			2	S	6	01-Jan-87		01-Oct-97				01-Oct-97	m-acr			
			2	S	6	01-Jan-87		26-Jul-99	26-Jul-99							
	5	A608	1	S	6	01-Jan-87		11-Sep-96	11-Sep-96							
			1	S	6	01-Jan-87		11-Sep-96	11-Sep-96							
			1	S	6	01-Jan-87		12-Sep-96		12-Sep-96	12-Sep-96	12-Sep-96	m-jpccr			
			2	S	6	01-Jan-87		08-Jan-97		08-Jan-97						
			2	S	6	01-Jan-87		05-Feb-97	05-Feb-97							
			2	S	6	01-Jan-87		11-Aug-97	11-Aug-97							
			2	S	6	01-Jan-87		01-Oct-97				01-Oct-97	m-acr			
			2	S	6	01-Jan-87		26-Jul-99	26-Jul-99							
	5	A608	1	S	6	01-Jan-87		11-Sep-96	11-Sep-96							
			1	S	6	01-Jan-87		12-Sep-96		12-Sep-96	12-Sep-96	12-Sep-96	m-jpccr			
			2	S	6	01-Jan-87		07-Jan-97		07-Jan-97						
			2	S	6	01-Jan-87		05-Feb-97	05-Feb-97							
			2	S	6	01-Jan-87		11-Aug-97	11-Aug-97							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Test Date	Distress Table	PASCO Test Date	Ta
199		2	S	6	01-Jan-87		01-Oct-97				01-Oct-97	m-acr		
		2	S	6	01-Jan-87		26-Jul-99	26-Jul-99						
	6	0600												
		1	S	6	01-Jan-87									
	6	0602												
		1	S	6	01-Jan-87		08-Nov-89		08-Nov-89					
		1	S	6	01-Jan-87		11-May-91	11-May-91						
		1	S	6	01-Jan-87		18-Jul-91							
		1	S	6	01-Jan-87		21-Feb-92							
		1	S	6	01-Jan-87		14-Apr-92	14-Apr-92						
		1	S	6	01-Jan-87		04-May-92		04-May-92					
		1	S	6	01-Jan-87		05-May-92				05-May-92	m-jpccr		
		1	S	6	01-Jan-87		08-Oct-92		08-Oct-92					
		1	S	6	01-Jan-87		09-Oct-92		09-Oct-92	09-Oct-92	09-Oct-92	m-jpccr		
		1	S	6	01-Jan-87		06-Apr-93	06-Apr-93						
		1	S	6	01-Jan-87		24-Jul-93						24-Jul-93	p42-
		1	S	6	01-Jan-87		27-May-96						27-May-96	p42-
		1	S	6	01-Jan-87		11-Jun-96	11-Jun-96						
		1	S	6	01-Jan-87		18-Jun-96			18-Jun-96	18-Jun-96	m-jpccr		
		1	S	6	01-Jan-87		19-Jun-96		19-Jun-96					
		1	S	6	01-Jan-87		20-Apr-98		20-Apr-98	20-Apr-98	20-Apr-98	m-jpccr		
		1	S	6	01-Jan-87		06-May-98	06-May-98						
		1	S	6	01-Jan-87		28-Jul-99			28-Jul-99	28-Jul-99	m-jpccr		
	6	0603												
		1	S	6	01-Jan-87		08-Nov-89		08-Nov-89					
		1	S	6	01-Jan-87		11-May-91	11-May-91						
		1	S	6	01-Jan-87		11-May-91	11-May-91						
		1	S	6	01-Jan-87		18-Jul-91							
		1	S	6	01-Jan-87		21-Feb-92							
		1	S	6	01-Jan-87		14-Apr-92	14-Apr-92						
		1	S	6	01-Jan-87		04-May-92				04-May-92	m-jpccr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Table
6	0604	1	S	6	01-Jan-87		05-May-92		05-May-92					
		2	S	6	01-Jan-87		07-Oct-92			07-Oct-92	m-acr			
		2	S	6	01-Jan-87		09-Oct-92		09-Oct-92					
		2	S	6	01-Jan-87		06-Apr-93	06-Apr-93						
		2	S	6	01-Jan-87		24-Jul-93					24-Jul-93	p42	
		2	S	6	01-Jan-87		16-Aug-95			16-Aug-95	m-acr			
		2	S	6	01-Jan-87		17-Aug-95		17-Aug-95					
		2	S	6	01-Jan-87		27-May-96					27-May-96	p42	
		2	S	6	01-Jan-87		11-Jun-96	11-Jun-96						
		2	S	6	01-Jan-87		19-Jun-96			19-Jun-96	m-acr			
		2	S	6	01-Jan-87		20-Jun-96		20-Jun-96					
		2	S	6	01-Jan-87		21-Apr-98		21-Apr-98		21-Apr-98	m-acr		
		2	S	6	01-Jan-87		06-May-98	06-May-98						
		2	S	6	01-Jan-87		29-Jul-99			29-Jul-99	m-acr			
		6	0604	1	S	6	01-Jan-87		08-Nov-89		08-Nov-89			
1	S			6	01-Jan-87		11-May-91	11-May-91						
1	S			6	01-Jan-87		18-Jul-91							
1	S			6	01-Jan-87		21-Feb-92							
1	S			6	01-Jan-87		14-Apr-92	14-Apr-92						
1	S			6	01-Jan-87		05-May-92		05-May-92	05-May-92	m-jpccr			
2	S			6	01-Jan-87		08-Oct-92			08-Oct-92	m-acr			
2	S			6	01-Jan-87		09-Oct-92							
2	S			6	01-Jan-87		10-Oct-92		10-Oct-92					
2	S			6	01-Jan-87		06-Apr-93	06-Apr-93						
2	S			6	01-Jan-87		24-Jul-93					24-Jul-93	p42	
2	S			6	01-Jan-87		17-Aug-95			17-Aug-95	m-acr			
2	S			6	01-Jan-87		27-May-96					27-May-96	p42	
2	S			6	01-Jan-87		11-Jun-96	11-Jun-96						
2	S			6	01-Jan-87		20-Jun-96		20-Jun-96	20-Jun-96	m-acr			
2	S	6	01-Jan-87		22-Apr-98		22-Apr-98	22-Apr-98	m-acr					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
201	6	0605	2	S	6	01-Jan-87	06-May-98	06-May-98						
			1	S	6	01-Jan-87	07-Nov-89		07-Nov-89					
			1	S	6	01-Jan-87	11-May-91	11-May-91						
			1	S	6	01-Jan-87	18-Jul-91							
			1	S	6	01-Jan-87	21-Feb-92							
			1	S	6	01-Jan-87	14-Apr-92	14-Apr-92						
			1	S	6	01-Jan-87	06-May-92		06-May-92					
			1	S	6	01-Jan-87	08-Oct-92		08-Oct-92	08-Oct-92	08-Oct-92	m-jpccr		
			1	S	6	01-Jan-87	06-Apr-93	06-Apr-93						
			1	S	6	01-Jan-87	24-Jul-93						24-Jul-93	p42
			1	S	6	01-Jan-87	27-May-96						27-May-96	p42
			1	S	6	01-Jan-87	11-Jun-96	11-Jun-96						
			1	S	6	01-Jan-87	18-Jun-96		18-Jun-96	18-Jun-96	18-Jun-96	m-jpccr		
			1	S	6	01-Jan-87	17-Apr-98		17-Apr-98					
			1	S	6	01-Jan-87	06-May-98	06-May-98						
			1	S	6	01-Jan-87	28-Jul-99			28-Jul-99	28-Jul-99	m-jpccr		
	6	0606												
			1	S	6	01-Jan-87	08-Nov-89		08-Nov-89					
			1	S	6	01-Jan-87	11-May-91	11-May-91						
			1	S	6	01-Jan-87	18-Jul-91							
			1	S	6	01-Jan-87	21-Feb-92							
			1	S	6	01-Jan-87	14-Apr-92	14-Apr-92						
			1	S	6	01-Jan-87	04-May-92				04-May-92	m-jpccr		
			1	S	6	01-Jan-87	05-May-92		05-May-92					
			2	S	6	01-Jan-87	07-Oct-92				07-Oct-92	m-acr		
			2	S	6	01-Jan-87	09-Oct-92		09-Oct-92					
			2	S	6	01-Jan-87	06-Apr-93	06-Apr-93						
			2	S	6	01-Jan-87	24-Jul-93						24-Jul-93	p42
			2	S	6	01-Jan-87	16-Aug-95		16-Aug-95		16-Aug-95	m-acr		
			2	S	6	01-Jan-87	27-May-96						27-May-96	p42

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
202	6	0607		2	S	6	01-Jan-87		11-Jun-96	11-Jun-96				
				2	S	6	01-Jan-87		19-Jun-96		19-Jun-96	m-acr		
				2	S	6	01-Jan-87		17-Apr-98		17-Apr-98	m-acr		
				2	S	6	01-Jan-87		06-May-98	06-May-98				
				2	S	6	01-Jan-87		28-Jul-99		28-Jul-99	m-acr		
	6	0608												
				1	S	6	01-Jan-87		08-Nov-89		08-Nov-89			
				1	S	6	01-Jan-87		11-May-91	11-May-91				
				1	S	6	01-Jan-87		18-Jul-91					
				1	S	6	01-Jan-87		21-Feb-92					
				1	S	6	01-Jan-87		14-Apr-92	14-Apr-92				
				1	S	6	01-Jan-87		04-May-92		04-May-92			
				1	S	6	01-Jan-87		06-May-92			06-May-92	m-jpccr	
				2	S	6	01-Jan-87		07-Oct-92			07-Oct-92	m-acr	
				2	S	6	01-Jan-87		09-Oct-92		09-Oct-92			
				2	S	6	01-Jan-87		06-Apr-93	06-Apr-93				
				2	S	6	01-Jan-87		24-Jul-93				24-Jul-93	p42
				2	S	6	01-Jan-87		16-Aug-95		16-Aug-95	m-acr		
				2	S	6	01-Jan-87		17-Aug-95					
				2	S	6	01-Jan-87		27-May-96				27-May-96	p42
				2	S	6	01-Jan-87		11-Jun-96	11-Jun-96				
				2	S	6	01-Jan-87		19-Jun-96			19-Jun-96	m-acr	
				2	S	6	01-Jan-87		20-Jun-96		20-Jun-96			
				2	S	6	01-Jan-87		20-Apr-98		20-Apr-98		20-Apr-98	m-acr
				2	S	6	01-Jan-87		06-May-98	06-May-98				
				2	S	6	01-Jan-87		28-Jul-99			28-Jul-99	m-acr	
	6	0608												
				1	S	6	01-Jan-87		08-Nov-89		08-Nov-89			
				1	S	6	01-Jan-87		11-May-91	11-May-91				
				1	S	6	01-Jan-87		11-May-91	11-May-91				
				1	S	6	01-Jan-87		18-Jul-91					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Photo		
6	0659	1	S	6	01-Jan-87		21-Feb-92									
		1	S	6	01-Jan-87		14-Apr-92	14-Apr-92								
		1	S	6	01-Jan-87		04-May-92				04-May-92	m-jpccr				
		1	S	6	01-Jan-87		11-May-92		11-May-92							
		2	S	6	01-Jan-87		08-Oct-92				08-Oct-92	m-acr				
		2	S	6	01-Jan-87		09-Oct-92		09-Oct-92							
		2	S	6	01-Jan-87		06-Apr-93	06-Apr-93								
		2	S	6	01-Jan-87		24-Jul-93						24-Jul-93	p42		
		2	S	6	01-Jan-87		16-Aug-95				16-Aug-95	m-acr				
		2	S	6	01-Jan-87		17-Aug-95		17-Aug-95							
		2	S	6	01-Jan-87		27-May-96						27-May-96	p42		
		2	S	6	01-Jan-87		11-Jun-96	11-Jun-96								
		2	S	6	01-Jan-87		17-Jun-96				17-Jun-96	m-acr				
		2	S	6	01-Jan-87		20-Jun-96		20-Jun-96		20-Jun-96	m-acr				
		2	S	6	01-Jan-87		21-Apr-98		21-Apr-98		21-Apr-98	m-acr				
		2	S	6	01-Jan-87		06-May-98	06-May-98								
		2	S	6	01-Jan-87		29-Jul-99				29-Jul-99	m-acr				
		6	0659	1	S	6	01-Jan-87		11-May-91	11-May-91						
				1	S	6	01-Jan-87		14-Apr-92	14-Apr-92						
				1	S	6	01-Jan-87		11-May-92		11-May-92					
2	S			6	01-Jan-87		06-Oct-92		06-Oct-92		06-Oct-92	m-acr				
2	S			6	01-Jan-87		07-Oct-92									
2	S			6	01-Jan-87		06-Apr-93	06-Apr-93								
2	S			6	01-Jan-87		27-May-96						27-May-96	p42		
2	S			6	01-Jan-87		11-Jun-96	11-Jun-96								
2	S			6	01-Jan-87		17-Jun-96		17-Jun-96		17-Jun-96	m-acr				
2	S			6	01-Jan-87		15-Apr-98		15-Apr-98		15-Apr-98	m-acr				
2	S			6	01-Jan-87		06-May-98	06-May-98								
2	S			6	01-Jan-87		27-Jul-99				27-Jul-99	m-acr				

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
6	0660													
		1	S	6	01-Jan-87		07-Nov-89		07-Nov-89					
		1	S	6	01-Jan-87		11-May-91	11-May-91						
		1	S	6	01-Jan-87		14-Apr-92	14-Apr-92						
		1	S	6	01-Jan-87		07-May-92				07-May-92	m-jpccr		
		1	S	6	01-Jan-87		11-May-92		11-May-92					
		2	S	6	01-Jan-87		06-Oct-92		06-Oct-92		06-Oct-92	m-acr		
		2	S	6	01-Jan-87		07-Oct-92							
		2	S	6	01-Jan-87		06-Apr-93	06-Apr-93						
		2	S	6	01-Jan-87		24-Jul-93						24-Jul-93	p42
		2	S	6	01-Jan-87		15-Aug-95		15-Aug-95					
		2	S	6	01-Jan-87		27-May-96						27-May-96	p42
		2	S	6	01-Jan-87		11-Jun-96	11-Jun-96						
		2	S	6	01-Jan-87		17-Jun-96		17-Jun-96		17-Jun-96	m-acr		
		2	S	6	01-Jan-87		15-Apr-98		15-Apr-98		15-Apr-98	m-acr		
		2	S	6	01-Jan-87		06-May-98	06-May-98						
		2	S	6	01-Jan-87		26-Jul-99				26-Jul-99	m-acr		
6	0661													
		1	S	6	01-Jan-87		07-Nov-89		07-Nov-89					
		1	S	6	01-Jan-87		11-May-91	11-May-91						
		1	S	6	01-Jan-87		14-Apr-92	14-Apr-92						
		1	S	6	01-Jan-87		12-May-92		12-May-92					
		2	S	6	01-Jan-87		06-Oct-92				06-Oct-92	m-acr		
		2	S	6	01-Jan-87		07-Oct-92		07-Oct-92					
		2	S	6	01-Jan-87		06-Apr-93	06-Apr-93						
		2	S	6	01-Jan-87		24-Jul-93						24-Jul-93	p42
		2	S	6	01-Jan-87		15-Aug-95		15-Aug-95					
		2	S	6	01-Jan-87		27-May-96						27-May-96	p42
		2	S	6	01-Jan-87		11-Jun-96	11-Jun-96						
		2	S	6	01-Jan-87		17-Jun-96		17-Jun-96		17-Jun-96	m-acr		
		2	S	6	01-Jan-87		09-Oct-96							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
205		2	S	6	01-Jan-87		16-Apr-98		16-Apr-98		16-Apr-98	m-acr		
		2	S	6	01-Jan-87		06-May-98	06-May-98						
		2	S	6	01-Jan-87		27-Jul-99				27-Jul-99	m-acr		
	6	0662												
		1	S	6	01-Jan-87		07-Nov-89		07-Nov-89					
		1	S	6	01-Jan-87		11-May-91	11-May-91						
		1	S	6	01-Jan-87		14-Apr-92	14-Apr-92						
		1	S	6	01-Jan-87		12-May-92		12-May-92					
		2	S	6	01-Jan-87		06-Oct-92				06-Oct-92	m-acr		
		2	S	6	01-Jan-87		07-Oct-92		07-Oct-92					
		2	S	6	01-Jan-87		06-Apr-93	06-Apr-93						
		2	S	6	01-Jan-87		24-Jul-93						24-Jul-93	p42
		2	S	6	01-Jan-87		27-May-96						27-May-96	p42
		2	S	6	01-Jan-87		11-Jun-96	11-Jun-96						
		2	S	6	01-Jan-87		17-Jun-96		17-Jun-96					
		2	S	6	01-Jan-87		18-Jun-96				18-Jun-96	m-acr		
		2	S	6	01-Jan-87		16-Apr-98		16-Apr-98		16-Apr-98	m-acr		
		2	S	6	01-Jan-87		06-May-98	06-May-98						
		2	S	6	01-Jan-87		27-Jul-99				27-Jul-99	m-acr		
	6	0663												
		1	S	6	01-Jan-87		07-Nov-89		07-Nov-89					
		1	S	6	01-Jan-87		11-May-91	11-May-91						
		1	S	6	01-Jan-87		14-Apr-92	14-Apr-92						
		1	S	6	01-Jan-87		12-May-92		12-May-92					
		2	S	6	01-Jan-87		06-Oct-92				06-Oct-92	m-jpccr		
		2	S	6	01-Jan-87		07-Oct-92		07-Oct-92	07-Oct-92				
		2	S	6	01-Jan-87		06-Apr-93	06-Apr-93						
		2	S	6	01-Jan-87		24-Jul-93						24-Jul-93	p42
		2	S	6	01-Jan-87		27-May-96						27-May-96	p42
		2	S	6	01-Jan-87		11-Jun-96	11-Jun-96						
		2	S	6	01-Jan-87		18-Jun-96		18-Jun-96	18-Jun-96	18-Jun-96	m-jpccr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
206		2	S	6	01-Jan-87		16-Apr-98		16-Apr-98	16-Apr-98	16-Apr-98	m-jpccr		
		2	S	6	01-Jan-87		06-May-98	06-May-98						
		2	S	6	01-Jan-87		27-Jul-99			27-Jul-99	27-Jul-99	m-jpccr		
	6	0664												
		1	S	6	01-Jan-87		08-Nov-89		08-Nov-89					
		1	S	6	01-Jan-87		11-May-91	11-May-91						
		1	S	6	01-Jan-87		11-May-91	11-May-91						
		1	S	6	01-Jan-87		14-Apr-92	14-Apr-92						
		1	S	6	01-Jan-87		07-May-92				07-May-92	m-jpccr		
		1	S	6	01-Jan-87		13-May-92		13-May-92					
		2	S	6	01-Jan-87		06-Oct-92				06-Oct-92	m-acr		
		2	S	6	01-Jan-87		08-Oct-92				08-Oct-92	m-acr		
		2	S	6	01-Jan-87		09-Oct-92							
		2	S	6	01-Jan-87		10-Oct-92		10-Oct-92					
		2	S	6	01-Jan-87		06-Apr-93	06-Apr-93						
		2	S	6	01-Jan-87		24-Jul-93						24-Jul-93	p42
		2	S	6	01-Jan-87		09-Jun-94	09-Jun-94						
		2	S	6	01-Jan-87		17-Aug-95				17-Aug-95	m-acr		
		2	S	6	01-Jan-87		27-May-96						27-May-96	p42
		2	S	6	01-Jan-87		11-Jun-96	11-Jun-96						
		2	S	6	01-Jan-87		19-Jun-96		19-Jun-96		19-Jun-96	m-acr		
		2	S	6	01-Jan-87		22-Apr-98		22-Apr-98		22-Apr-98	m-acr		
		2	S	6	01-Jan-87		06-May-98	06-May-98						
		2	S	6	01-Jan-87		29-Jul-99				29-Jul-99	m-acr		
	17	0600												
		1	S	6	01-Jan-87									
	17	0601												
		1	S	6	01-Jan-87		05-Oct-89				05-Oct-89	m-jpccr		
		1	S	6	01-Jan-87		07-Nov-89						07-Nov-89	p-j
		1	S	6	01-Jan-87		03-Apr-90		03-Apr-90					
		1	S	6	01-Jan-87		18-Apr-90	18-Apr-90						

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
207		1	S	6	01-Jan-87		06-May-90						06-May-90	p-j
		1	S	6	01-Jan-87		14-Nov-90		14-Nov-90					
		1	S	6	01-Jan-87		13-Dec-90	13-Dec-90						
		1	S	6	01-Jan-87		17-Dec-91	17-Dec-91		17-Dec-91	17-Dec-91	m-jpccr		
		1	S	6	01-Jan-87		17-Dec-91	17-Dec-91		17-Dec-91	17-Dec-91	m-jpccr		
		1	S	6	01-Jan-87		17-Dec-91	17-Dec-91		17-Dec-91	17-Dec-91	m-jpccr		
		1	S	6	01-Jan-87		26-May-92							
		1	S	6	01-Jan-87		26-Jun-92			26-Jun-92	26-Jun-92	m-jpccr		
		1	S	6	01-Jan-87		01-Jul-92		01-Jul-92					
		1	S	6	01-Jan-87		09-Oct-92	09-Oct-92						
		1	S	6	01-Jan-87		03-Aug-93		03-Aug-93	03-Aug-93	03-Aug-93	m-jpccr		
		1	S	6	01-Jan-87		13-Mar-94	13-Mar-94						
		1	S	6	01-Jan-87		29-Jul-94						29-Jul-94	p42
		1	S	6	01-Jan-87		13-Mar-95	13-Mar-95						
		1	S	6	01-Jan-87		22-Jun-95		22-Jun-95	22-Jun-95	22-Jun-95	m-jpccr		
		1	S	6	01-Jan-87		26-Mar-96						26-Mar-96	p42
		1	S	6	01-Jan-87		16-Oct-97		16-Oct-97					
		1	S	6	01-Jan-87		04-Mar-98	04-Mar-98						
		1	S	6	01-Jan-87		15-Sep-98			15-Sep-98	15-Sep-98	m-jpccr		
		1	S	6	01-Jan-87		16-Sep-98		16-Sep-98					
		1	S	6	01-Jan-87		17-Aug-99			17-Aug-99	17-Aug-99	m-jpccr		
17	0602													
		1	S	6	01-Jan-87		07-Nov-89						07-Nov-89	p-j
		1	S	6	01-Jan-87		18-Apr-90	18-Apr-90						
		1	S	6	01-Jan-87		18-Apr-90	18-Apr-90						
		1	S	6	01-Jan-87		06-May-90						06-May-90	p-j
		1	S	6	01-Jan-87		13-Nov-90		13-Nov-90					
		1	S	6	01-Jan-87		14-Nov-90		14-Nov-90					
		1	S	6	01-Jan-87		17-Dec-91	17-Dec-91		17-Dec-91	17-Dec-91	m-jpccr		
		1	S	6	01-Jan-87		17-Dec-91	17-Dec-91		17-Dec-91	17-Dec-91	m-jpccr		
		1	S	6	01-Jan-87		26-May-92							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta	
17	0603	1	S	6	01-Jan-87		26-Jun-92		26-Jun-92	26-Jun-92	26-Jun-92	m-jpccr			
		1	S	6	01-Jan-87		09-Oct-92	09-Oct-92							
		1	S	6	01-Jan-87		02-Aug-93		02-Aug-93						
		1	S	6	01-Jan-87		03-Aug-93			03-Aug-93	03-Aug-93	m-jpccr			
		1	S	6	01-Jan-87		13-Mar-94	13-Mar-94							
		1	S	6	01-Jan-87		13-Mar-94	13-Mar-94							
		1	S	6	01-Jan-87		29-Jul-94						29-Jul-94	p42	
		1	S	6	01-Jan-87		20-Jun-95		20-Jun-95	20-Jun-95	20-Jun-95	m-jpccr			
		1	S	6	01-Jan-87		26-Mar-96						26-Mar-96	p42	
		1	S	6	01-Jan-87		14-Oct-97		14-Oct-97						
		1	S	6	01-Jan-87		04-Mar-98	04-Mar-98							
		1	S	6	01-Jan-87		14-Sep-98			14-Sep-98	14-Sep-98	m-jpccr			
		1	S	6	01-Jan-87		14-Sep-98			14-Sep-98	14-Sep-98	m-acr			
		1	S	6	01-Jan-87		01-Oct-98		01-Oct-98						
		1	S	6	01-Jan-87		16-Aug-99			16-Aug-99	16-Aug-99	m-jpccr			
		17	0603	1	S	6	01-Jan-87		07-Nov-89						
1	S			6	01-Jan-87		04-Apr-90		04-Apr-90						
1	S			6	01-Jan-87		18-Apr-90	18-Apr-90							
1	S			6	01-Jan-87		06-May-90						06-May-90	p-jr	
2	S			6	01-Jan-87		14-Nov-90		14-Nov-90						
2	S			6	01-Jan-87		13-Dec-90	13-Dec-90							
2	S			6	01-Jan-87		17-Dec-91	17-Dec-91			17-Dec-91	m-acr			
2	S			6	01-Jan-87		17-Dec-91	17-Dec-91			17-Dec-91	m-acr			
2	S			6	01-Jan-87		26-May-92								
2	S			6	01-Jan-87		01-Jul-92		01-Jul-92		01-Jul-92	m-acr			
2	S			6	01-Jan-87		09-Oct-92	09-Oct-92							
2	S			6	01-Jan-87		04-Aug-93		04-Aug-93		04-Aug-93	m-acr			
2	S			6	01-Jan-87		13-Mar-94	13-Mar-94							
2	S			6	01-Jan-87		29-Jul-94						29-Jul-94	p42	
2	S			6	01-Jan-87		13-Mar-95	13-Mar-95							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Test Date	Distress Table	PASCO Test Date	Ta
209	17	0604		2	S	6	01-Jan-87		22-Jun-95		22-Jun-95	m-acr		
				2	S	6	01-Jan-87		23-Jun-95					
				2	S	6	01-Jan-87		27-Jun-95	27-Jun-95				
				2	S	6	01-Jan-87		26-Mar-96				26-Mar-96	p42
				2	S	6	01-Jan-87		17-Oct-97	17-Oct-97				
				2	S	6	01-Jan-87	04-Mar-98	04-Mar-98					
				2	S	6	01-Jan-87		16-Sep-98		16-Sep-98	m-acr		
				2	S	6	01-Jan-87		17-Sep-98	17-Sep-98				
				2	S	6	01-Jan-87		18-Aug-99		18-Aug-99	m-acr		
	17	0604												
				1	S	6	01-Jan-87		07-Nov-89				07-Nov-89	p-j
				1	S	6	01-Jan-87		04-Apr-90	04-Apr-90				
				1	S	6	01-Jan-87	18-Apr-90	18-Apr-90					
				1	S	6	01-Jan-87		06-May-90				06-May-90	p-j
				2	S	6	01-Jan-87		14-Nov-90	14-Nov-90				
				2	S	6	01-Jan-87		13-Dec-90	13-Dec-90				
				2	S	6	01-Jan-87		21-Aug-91	21-Aug-91				
				2	S	6	01-Jan-87		17-Dec-91	17-Dec-91				
				2	S	6	01-Jan-87		17-Dec-91	17-Dec-91				
				2	S	6	01-Jan-87		18-Dec-91		18-Dec-91	m-acr		
				2	S	6	01-Jan-87		26-May-92					
				2	S	6	01-Jan-87		29-Jun-92	29-Jun-92	29-Jun-92	m-acr		
				2	S	6	01-Jan-87		09-Oct-92	09-Oct-92				
				2	S	6	01-Jan-87		04-Aug-93	04-Aug-93	04-Aug-93	m-acr		
				2	S	6	01-Jan-87		13-Mar-94	13-Mar-94				
				2	S	6	01-Jan-87		13-May-94					
				2	S	6	01-Jan-87		29-Jul-94				29-Jul-94	p42
				2	S	6	01-Jan-87		13-Mar-95	13-Mar-95				
				2	S	6	01-Jan-87		22-Jun-95		22-Jun-95	m-acr		
				2	S	6	01-Jan-87		23-Jun-95					
				2	S	6	01-Jan-87		27-Jun-95	27-Jun-95				

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Table
		2	S	6	01-Jan-87		26-Mar-96						26-Mar-96	p42
		2	S	6	01-Jan-87		17-Oct-97		17-Oct-97					
		2	S	6	01-Jan-87		04-Mar-98	04-Mar-98						
		2	S	6	01-Jan-87		09-Sep-98							
		2	S	6	01-Jan-87		16-Sep-98				16-Sep-98	m-acr		
		2	S	6	01-Jan-87		18-Sep-98		18-Sep-98					
		2	S	6	01-Jan-87		18-Aug-99				18-Aug-99	m-acr		
17	0605													
		1	S	6	01-Jan-87		07-Nov-89						07-Nov-89	p-jp
		1	S	6	01-Jan-87		18-Apr-90	18-Apr-90						
		1	S	6	01-Jan-87		18-Apr-90	18-Apr-90						
		1	S	6	01-Jan-87		06-May-90						06-May-90	p-jp
		1	S	6	01-Jan-87		13-Nov-90		13-Nov-90					
		1	S	6	01-Jan-87		17-Dec-91	17-Dec-91		17-Dec-91	17-Dec-91	m-jpccr		
		1	S	6	01-Jan-87		17-Dec-91	17-Dec-91		17-Dec-91	17-Dec-91	m-jpccr		
		1	S	6	01-Jan-87		26-May-92							
		1	S	6	01-Jan-87		30-Jun-92		30-Jun-92					
		1	S	6	01-Jan-87		02-Jul-92			02-Jul-92	02-Jul-92	m-jpccr		
		1	S	6	01-Jan-87		09-Oct-92	09-Oct-92						
		1	S	6	01-Jan-87		02-Aug-93		02-Aug-93					
		1	S	6	01-Jan-87		03-Aug-93			03-Aug-93	03-Aug-93	m-jpccr		
		1	S	6	01-Jan-87		13-Mar-94	13-Mar-94						
		1	S	6	01-Jan-87		29-Jul-94						29-Jul-94	p42
		1	S	6	01-Jan-87		21-Jun-95		21-Jun-95	21-Jun-95	21-Jun-95	m-jpccr		
		1	S	6	01-Jan-87		02-Jul-95			02-Jul-95				
		1	S	6	01-Jan-87		26-Mar-96						26-Mar-96	p42
		1	S	6	01-Jan-87		15-Oct-97		15-Oct-97					
		1	S	6	01-Jan-87		04-Mar-98	04-Mar-98						
		1	S	6	01-Jan-87		14-Sep-98			14-Sep-98	14-Sep-98	m-jpccr		
		1	S	6	01-Jan-87		02-Oct-98		02-Oct-98					
		1	S	6	01-Jan-87		16-Aug-99			16-Aug-99	16-Aug-99	m-jpccr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
17	0606													
		1	S	6	01-Jan-87		07-Nov-89						07-Nov-89	p-j
		1	S	6	01-Jan-87		04-Apr-90		04-Apr-90					
		1	S	6	01-Jan-87		18-Apr-90	18-Apr-90						
		1	S	6	01-Jan-87		18-Apr-90	18-Apr-90						
		1	S	6	01-Jan-87		06-May-90						06-May-90	p-j
		2	S	6	01-Jan-87		14-Nov-90		14-Nov-90					
		2	S	6	01-Jan-87		17-Dec-91	17-Dec-91			17-Dec-91	m-acr		
		2	S	6	01-Jan-87		17-Dec-91	17-Dec-91			17-Dec-91	m-acr		
		2	S	6	01-Jan-87		26-May-92							
		2	S	6	01-Jan-87		01-Jul-92		01-Jul-92		01-Jul-92	m-acr		
		2	S	6	01-Jan-87		09-Oct-92	09-Oct-92						
		2	S	6	01-Jan-87		04-Aug-93		04-Aug-93		04-Aug-93	m-acr		
		2	S	6	01-Jan-87		13-Mar-94	13-Mar-94						
		2	S	6	01-Jan-87		29-Jul-94						29-Jul-94	p42
		2	S	6	01-Jan-87		13-Mar-95	13-Mar-95						
		2	S	6	01-Jan-87		22-Jun-95		22-Jun-95		22-Jun-95	m-acr		
		2	S	6	01-Jan-87		26-Mar-96						26-Mar-96	p42
		2	S	6	01-Jan-87		20-Oct-97		20-Oct-97					
		2	S	6	01-Jan-87		04-Mar-98	04-Mar-98						
		2	S	6	01-Jan-87		15-Sep-98				15-Sep-98	m-acr		
		2	S	6	01-Jan-87		17-Sep-98		17-Sep-98					
		2	S	6	01-Jan-87		19-Aug-99				19-Aug-99	m-acr		
17	0607													
		1	S	6	01-Jan-87		07-Nov-89						07-Nov-89	p-j
		1	S	6	01-Jan-87		04-Apr-90		04-Apr-90					
		1	S	6	01-Jan-87		05-Apr-90		05-Apr-90					
		1	S	6	01-Jan-87		18-Apr-90	18-Apr-90						
		1	S	6	01-Jan-87		06-May-90						06-May-90	p-j
		2	S	6	01-Jan-87		16-Nov-90		16-Nov-90					
		2	S	6	01-Jan-87		13-Dec-90	13-Dec-90						

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
212		2	S	6	01-Jan-87		13-Dec-90	13-Dec-90						
		2	S	6	01-Jan-87		17-Dec-91	17-Dec-91						
		2	S	6	01-Jan-87		17-Dec-91	17-Dec-91						
		2	S	6	01-Jan-87		18-Dec-91				18-Dec-91	m-acr		
		2	S	6	01-Jan-87		26-May-92							
		2	S	6	01-Jan-87		29-Jun-92		29-Jun-92		29-Jun-92	m-acr		
		2	S	6	01-Jan-87		04-Aug-93		04-Aug-93		04-Aug-93	m-acr		
		2	S	6	01-Jan-87		13-Mar-94	13-Mar-94						
		2	S	6	01-Jan-87		29-Jul-94						29-Jul-94	p42
		2	S	6	01-Jan-87		13-Mar-95	13-Mar-95						
		2	S	6	01-Jan-87		23-Jun-95				23-Jun-95	m-acr		
		2	S	6	01-Jan-87		27-Jun-95		27-Jun-95					
		2	S	6	01-Jan-87		26-Mar-96						26-Mar-96	p42
		2	S	6	01-Jan-87		17-Oct-97		17-Oct-97					
		2	S	6	01-Jan-87		04-Mar-98	04-Mar-98						
		2	S	6	01-Jan-87		16-Sep-98				16-Sep-98	m-acr		
		2	S	6	01-Jan-87		18-Sep-98		18-Sep-98					
		2	S	6	01-Jan-87		19-Aug-99				19-Aug-99	m-acr		
17	0608													
		1	S	6	01-Jan-87		07-Nov-89						07-Nov-89	p-jr
		1	S	6	01-Jan-87		05-Apr-90		05-Apr-90					
		1	S	6	01-Jan-87		18-Apr-90	18-Apr-90						
		1	S	6	01-Jan-87		18-Apr-90	18-Apr-90						
		1	S	6	01-Jan-87		06-May-90						06-May-90	p-jr
		2	S	6	01-Jan-87		16-Nov-90		16-Nov-90					
		2	S	6	01-Jan-87		13-Dec-90	13-Dec-90						
		2	S	6	01-Jan-87		17-Dec-91	17-Dec-91						
		2	S	6	01-Jan-87		17-Dec-91	17-Dec-91						
		2	S	6	01-Jan-87		18-Dec-91				18-Dec-91	m-acr		
		2	S	6	01-Jan-87		26-May-92							
		2	S	6	01-Jan-87		29-Jun-92		29-Jun-92		29-Jun-92	m-acr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Tal	
		2	S	6	01-Jan-87		09-Oct-92	09-Oct-92							
		2	S	6	01-Jan-87		04-Aug-93				04-Aug-93	m-acr			
		2	S	6	01-Jan-87		05-Aug-93		05-Aug-93						
		2	S	6	01-Jan-87		13-Mar-94	13-Mar-94							
		2	S	6	01-Jan-87		29-Jul-94							29-Jul-94	p42
		2	S	6	01-Jan-87		13-Mar-95	13-Mar-95							
		2	S	6	01-Jan-87		23-Jun-95				23-Jun-95	m-acr			
		2	S	6	01-Jan-87		27-Jun-95			27-Jun-95					
		2	S	6	01-Jan-87		26-Mar-96							26-Mar-96	p42
		2	S	6	01-Jan-87		17-Oct-97			17-Oct-97					
		2	S	6	01-Jan-87		04-Mar-98	04-Mar-98							
		2	S	6	01-Jan-87		16-Sep-98					16-Sep-98	m-acr		
		2	S	6	01-Jan-87		08-Oct-98			08-Oct-98					
		2	S	6	01-Jan-87		19-Aug-99					19-Aug-99	m-acr		
		17	0659												
		1	S	6	01-Jan-87		04-Apr-90			04-Apr-90					
		1	S	6	01-Jan-87		18-Apr-90	18-Apr-90							
		2	S	6	01-Jan-87		16-Nov-90			16-Nov-90					
		2	S	6	01-Jan-87		17-Dec-91	17-Dec-91							
		2	S	6	01-Jan-87		17-Dec-91	17-Dec-91							
		2	S	6	01-Jan-87		18-Dec-91				18-Dec-91	m-acr			
		2	S	6	01-Jan-87		26-May-92								
		2	S	6	01-Jan-87		29-Jun-92				29-Jun-92	m-acr			
		2	S	6	01-Jan-87		09-Oct-92	09-Oct-92							
		2	S	6	01-Jan-87		04-Aug-93			04-Aug-93	04-Aug-93	m-acr			
		2	S	6	01-Jan-87		13-Mar-94	13-Mar-94							
		2	S	6	01-Jan-87		29-Jul-94							29-Jul-94	p42
		2	S	6	01-Jan-87		13-Mar-95	13-Mar-95							
		2	S	6	01-Jan-87		23-Jun-95				23-Jun-95	m-acr			
		2	S	6	01-Jan-87		27-Jun-95			27-Jun-95					
2	S	6	01-Jan-87		26-Mar-96							26-Mar-96	p42		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
214	17	0660		2	S	6	01-Jan-87		17-Oct-97	17-Oct-97				
				2	S	6	01-Jan-87		04-Mar-98	04-Mar-98				
				2	S	6	01-Jan-87		16-Sep-98		16-Sep-98	m-acr		
				2	S	6	01-Jan-87		18-Sep-98	18-Sep-98				
				2	S	6	01-Jan-87		18-Aug-99		18-Aug-99	m-acr		
	17	0660												
				1	S	6	01-Jan-87		04-Apr-90	04-Apr-90				
				1	S	6	01-Jan-87		18-Apr-90	18-Apr-90				
				1	S	6	01-Jan-87		13-Nov-90	13-Nov-90				
				1	S	6	01-Jan-87		17-Dec-91	17-Dec-91				
				1	S	6	01-Jan-87		26-May-92					
				1	S	6	01-Jan-87		02-Jul-92		02-Jul-92	02-Jul-92	m-jpccr	
				1	S	6	01-Jan-87		09-Oct-92	09-Oct-92				
				1	S	6	01-Jan-87		09-Oct-92	09-Oct-92				
				1	S	6	01-Jan-87		03-Aug-93	03-Aug-93	03-Aug-93	03-Aug-93	m-jpccr	
				1	S	6	01-Jan-87		13-Mar-94	13-Mar-94				
				1	S	6	01-Jan-87		29-Jul-94				29-Jul-94	p42
				1	S	6	01-Jan-87		13-Mar-95	13-Mar-95				
				1	S	6	01-Jan-87		22-Jun-95	22-Jun-95	22-Jun-95	22-Jun-95	m-jpccr	
				1	S	6	01-Jan-87		26-Mar-96				26-Mar-96	p42
				1	S	6	01-Jan-87		16-Oct-97	16-Oct-97				
				1	S	6	01-Jan-87		04-Mar-98	04-Mar-98				
				1	S	6	01-Jan-87		15-Sep-98	15-Sep-98	15-Sep-98			
				1	S	6	01-Jan-87		17-Aug-99	17-Aug-99	17-Aug-99	m-jpccr		
	17	0661												
				1	S	6	01-Jan-87		03-Apr-90	03-Apr-90				
				1	S	6	01-Jan-87		18-Apr-90	18-Apr-90				
				1	S	6	01-Jan-87		13-Nov-90	13-Nov-90				
				1	S	6	01-Jan-87		17-Dec-91	17-Dec-91				
				1	S	6	01-Jan-87		17-Dec-91	17-Dec-91				
				1	S	6	01-Jan-87		26-May-92					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Table
17	0662	1	S	6	01-Jan-87		02-Jul-92			02-Jul-92	02-Jul-92	m-jpccr		
		1	S	6	01-Jan-87		09-Oct-92	09-Oct-92						
		1	S	6	01-Jan-87		03-Aug-93		03-Aug-93	03-Aug-93	03-Aug-93	m-jpccr		
		1	S	6	01-Jan-87		13-Mar-94	13-Mar-94						
		1	S	6	01-Jan-87		29-Jul-94						29-Jul-94	p42
		1	S	6	01-Jan-87		13-Mar-95	13-Mar-95						
		1	S	6	01-Jan-87		21-Jun-95		21-Jun-95	21-Jun-95	21-Jun-95	m-jpccr		
		1	S	6	01-Jan-87		26-Mar-96						26-Mar-96	p42
		1	S	6	01-Jan-87		16-Oct-97		16-Oct-97					
		1	S	6	01-Jan-87		04-Mar-98	04-Mar-98						
		1	S	6	01-Jan-87		14-Sep-98		14-Sep-98					
		1	S	6	01-Jan-87		17-Aug-99			17-Aug-99	17-Aug-99	m-jpccr		
17	0662	1	S	6	01-Jan-87		04-Apr-90		04-Apr-90					
		1	S	6	01-Jan-87		18-Apr-90	18-Apr-90						
		2	S	6	01-Jan-87		14-Nov-90		14-Nov-90					
		2	S	6	01-Jan-87		13-Dec-90	13-Dec-90						
		2	S	6	01-Jan-87		13-Dec-90	13-Dec-90						
		2	S	6	01-Jan-87		17-Dec-91	17-Dec-91						
		2	S	6	01-Jan-87		17-Dec-91	17-Dec-91						
		2	S	6	01-Jan-87		26-May-92							
		2	S	6	01-Jan-87		01-Jul-92			01-Jul-92	m-acr			
		2	S	6	01-Jan-87		09-Oct-92	09-Oct-92						
		2	S	6	01-Jan-87		03-Aug-93			03-Aug-93	m-acr			
		2	S	6	01-Jan-87		04-Aug-93		04-Aug-93	04-Aug-93	m-acr			
		2	S	6	01-Jan-87		13-Mar-94	13-Mar-94						
		2	S	6	01-Jan-87		29-Jul-94						29-Jul-94	p42
		2	S	6	01-Jan-87		13-Mar-95	13-Mar-95						
		2	S	6	01-Jan-87		22-Jun-95		22-Jun-95		22-Jun-95	m-acr		
2	S	6	01-Jan-87		26-Mar-96						26-Mar-96	p42		
2	S	6	01-Jan-87		16-Oct-97		16-Oct-97							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
17	0663	2	S	6	01-Jan-87		04-Mar-98	04-Mar-98						
		2	S	6	01-Jan-87		15-Sep-98			15-Sep-98	m-acr			
		2	S	6	01-Jan-87		15-Oct-98		15-Oct-98					
		2	S	6	01-Jan-87		17-Aug-99				17-Aug-99	m-acr		
		1	S	6	01-Jan-87		05-Apr-90		05-Apr-90					
		1	S	6	01-Jan-87		18-Apr-90	18-Apr-90						
		2	S	6	01-Jan-87		16-Nov-90		16-Nov-90					
		2	S	6	01-Jan-87		13-Dec-90	13-Dec-90						
		2	S	6	01-Jan-87		13-Dec-90	13-Dec-90						
		2	S	6	01-Jan-87		17-Dec-91	17-Dec-91						
		2	S	6	01-Jan-87		26-May-92							
		2	S	6	01-Jan-87		29-Jun-92			29-Jun-92	m-acr			
		2	S	6	01-Jan-87		09-Oct-92	09-Oct-92						
		2	S	6	01-Jan-87		05-Aug-93		05-Aug-93					
		2	S	6	01-Jan-87		13-Mar-94	13-Mar-94						
		2	S	6	01-Jan-87		29-Jul-94					29-Jul-94	p42	
		2	S	6	01-Jan-87		13-Mar-95	13-Mar-95						
		2	S	6	01-Jan-87		13-Mar-95	13-Mar-95						
		2	S	6	01-Jan-87		23-Jun-95			23-Jun-95	m-acr			
		2	S	6	01-Jan-87		28-Jun-95		28-Jun-95					
2	S	6	01-Jan-87		26-Mar-96					26-Mar-96	p42			
2	S	6	01-Jan-87		17-Oct-97		17-Oct-97							
2	S	6	01-Jan-87		04-Mar-98	04-Mar-98								
2	S	6	01-Jan-87		17-Sep-98			17-Sep-98	m-acr					
2	S	6	01-Jan-87		08-Oct-98		08-Oct-98							
2	S	6	01-Jan-87		19-Aug-99				19-Aug-99	m-acr				
17	0664													
17	0664	1	S	6	01-Jan-87		05-Apr-90		05-Apr-90					
		1	S	6	01-Jan-87		18-Apr-90	18-Apr-90						
		2	S	6	01-Jan-87		16-Nov-90		16-Nov-90					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
217		2	S	6	01-Jan-87		13-Dec-90	13-Dec-90						
		2	S	6	01-Jan-87		13-Dec-90	13-Dec-90						
		2	S	6	01-Jan-87		17-Dec-91	17-Dec-91						
		2	S	6	01-Jan-87		26-May-92							
		2	S	6	01-Jan-87		29-Jun-92				29-Jun-92	m-acr		
		2	S	6	01-Jan-87		09-Oct-92	09-Oct-92						
		2	S	6	01-Jan-87		05-Aug-93		05-Aug-93					
		2	S	6	01-Jan-87		13-Mar-94	13-Mar-94						
		2	S	6	01-Jan-87		29-Jul-94						29-Jul-94	p42
		2	S	6	01-Jan-87		13-Mar-95	13-Mar-95						
		2	S	6	01-Jan-87		23-Jun-95				23-Jun-95	m-acr		
		2	S	6	01-Jan-87		28-Jun-95		28-Jun-95					
		2	S	6	01-Jan-87		26-Mar-96						26-Mar-96	p42
		2	S	6	01-Jan-87		17-Oct-97		17-Oct-97					
		2	S	6	01-Jan-87		04-Mar-98	04-Mar-98						
		2	S	6	01-Jan-87		17-Sep-98				17-Sep-98	m-acr		
		2	S	6	01-Jan-87		08-Oct-98		08-Oct-98					
18	0600													
		1	S	6	01-Jan-87									
18	0601													
		1	S	6	01-Jan-87	27-Jul-93	23-Apr-90						23-Apr-90	p-j
		1	S	6	01-Jan-87	27-Jul-93	27-Nov-90		27-Nov-90					
		1	S	6	01-Jan-87	27-Jul-93	09-Sep-91	09-Sep-91						
		1	S	6	01-Jan-87	27-Jul-93	26-Sep-91		26-Sep-91		26-Sep-91	m-jpccr		
		1	S	6	01-Jan-87	27-Jul-93	09-Oct-91							
		1	S	6	01-Jan-87	27-Jul-93	20-Aug-92							
		1	S	6	01-Jan-87	27-Jul-93	10-Sep-92				10-Sep-92	m-jpccr		
		1	S	6	01-Jan-87	27-Jul-93	14-Sep-92		14-Sep-92					
		1	S	6	01-Jan-87	27-Jul-93	01-Oct-92	01-Oct-92						
		1	S	6	01-Jan-87	27-Jul-93	22-Oct-93							
		1	S	6	01-Jan-87	27-Jul-93	14-Jul-94							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
218	0602	1	S	6	01-Jan-87	27-Jul-93	19-Sep-95							
		1	S	6	01-Jan-87	27-Jul-93	04-Jul-96						04-Jul-96	p42
		1	S	6	01-Jan-87	27-Jul-93	18-Sep-97							
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		1	S	6	01-Jan-87		23-Apr-90						23-Apr-90	p-jp
		1	S	6	01-Jan-87		26-Nov-90		26-Nov-90					
		1	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		1	S	6	01-Jan-87		09-Sep-91	09-Sep-91						
		1	S	6	01-Jan-87		09-Sep-91	09-Sep-91						
		1	S	6	01-Jan-87		23-Sep-91		23-Sep-91					
		1	S	6	01-Jan-87		26-Sep-91				26-Sep-91	m-jpccr		
		1	S	6	01-Jan-87		09-Oct-91							
		1	S	6	01-Jan-87		20-Aug-92							
		1	S	6	01-Jan-87		10-Sep-92		10-Sep-92	10-Sep-92	10-Sep-92	m-jpccr		
		1	S	6	01-Jan-87		01-Oct-92	01-Oct-92						
		1	S	6	01-Jan-87		10-Jun-93						10-Jun-93	p42
		1	S	6	01-Jan-87		10-Aug-93		10-Aug-93	10-Aug-93	10-Aug-93	m-jpccr		
		1	S	6	01-Jan-87		22-Oct-93							
		1	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		1	S	6	01-Jan-87		14-Jul-94							
		1	S	6	01-Jan-87		23-Aug-94	23-Aug-94						
		1	S	6	01-Jan-87		23-Aug-94	23-Aug-94						
		1	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		1	S	6	01-Jan-87		03-May-95		03-May-95	03-May-95	03-May-95	m-jpccr		
		1	S	6	01-Jan-87		19-Sep-95							
		1	S	6	01-Jan-87		04-Apr-96	04-Apr-96						
		1	S	6	01-Jan-87		04-Jul-96						04-Jul-96	p42
		1	S	6	01-Jan-87		18-Sep-96							
		1	S	6	01-Jan-87		18-Sep-97							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
219	18	0603	1	S	6	01-Jan-87	16-Mar-98	16-Mar-98						
			1	S	6	01-Jan-87	07-Jul-98		07-Jul-98	07-Jul-98	07-Jul-98	m-jpccr		
			1	S	6	01-Jan-87	08-Jul-98		08-Jul-98					
			1	S	6	01-Jan-87	17-Dec-98	17-Dec-98						
	18	0604												
			1	S	6	01-Jan-87	04-Apr-90	04-Apr-90						
			1	S	6	01-Jan-87	04-Apr-90	04-Apr-90						
			1	S	6	01-Jan-87	23-Apr-90						23-Apr-90	p-j
			2	S	6	01-Jan-87	14-Dec-90	14-Dec-90						
			2	S	6	01-Jan-87	26-Jun-91				26-Jun-91	m-acr		
			2	S	6	01-Jan-87	23-Sep-91		23-Sep-91					
			2	S	6	01-Jan-87	09-Oct-91							
			2	S	6	01-Jan-87	20-Aug-92							
			2	S	6	01-Jan-87	10-Sep-92		10-Sep-92		10-Sep-92	m-acr		
			2	S	6	01-Jan-87	01-Oct-92	01-Oct-92						
			2	S	6	01-Jan-87	10-Jun-93						10-Jun-93	p42
			2	S	6	01-Jan-87	10-Aug-93		10-Aug-93		10-Aug-93	m-acr		
			2	S	6	01-Jan-87	22-Oct-93							
			2	S	6	01-Jan-87	01-Feb-94	01-Feb-94						
			2	S	6	01-Jan-87	14-Jul-94							
			2	S	6	01-Jan-87	29-Mar-95	29-Mar-95						
			2	S	6	01-Jan-87	05-May-95		05-May-95		05-May-95	m-acr		
			2	S	6	01-Jan-87	04-Jul-96						04-Jul-96	p42
			2	S	6	01-Jan-87	18-Sep-96							
			2	S	6	01-Jan-87	18-Sep-97							
			2	S	6	01-Jan-87	16-Mar-98	16-Mar-98						
			2	S	6	01-Jan-87	09-Jul-98		09-Jul-98		09-Jul-98	m-acr		
			2	S	6	01-Jan-87	17-Dec-98	17-Dec-98						
	18	0604												
			1	S	6	01-Jan-87	06-Feb-90				06-Feb-90	m-crcpr		
			1	S	6	01-Jan-87	04-Apr-90	04-Apr-90						

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Table
220		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		1	S	6	01-Jan-87		23-Apr-90						23-Apr-90	p-jr
		2	S	6	01-Jan-87		26-Nov-90		26-Nov-90					
		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		26-Jun-91				26-Jun-91	m-acr		
		2	S	6	01-Jan-87		24-Sep-91		24-Sep-91					
		2	S	6	01-Jan-87		26-Sep-91				26-Sep-91	m-acr		
		2	S	6	01-Jan-87		09-Oct-91							
		2	S	6	01-Jan-87		20-Aug-92							
		2	S	6	01-Jan-87		10-Sep-92		10-Sep-92		10-Sep-92	m-acr		
		2	S	6	01-Jan-87		01-Oct-92	01-Oct-92						
		2	S	6	01-Jan-87		10-Jun-93						10-Jun-93	p42
		2	S	6	01-Jan-87		26-Jun-93							
		2	S	6	01-Jan-87		11-Aug-93		11-Aug-93		11-Aug-93	m-acr		
		2	S	6	01-Jan-87		22-Oct-93							
		2	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		2	S	6	01-Jan-87		14-Jul-94							
		2	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		2	S	6	01-Jan-87		05-May-95		05-May-95		05-May-95	m-acr		
		2	S	6	01-Jan-87		19-Sep-95							
		2	S	6	01-Jan-87		04-Jul-96						04-Jul-96	p42
		2	S	6	01-Jan-87		18-Sep-96							
		2	S	6	01-Jan-87		18-Sep-97							
		2	S	6	01-Jan-87		16-Mar-98	16-Mar-98						
		2	S	6	01-Jan-87		09-Jul-98		09-Jul-98		09-Jul-98	m-acr		
		2	S	6	01-Jan-87		17-Dec-98	17-Dec-98						
18	0605													
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		1	S	6	01-Jan-87		23-Apr-90						23-Apr-90	p-jr

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
221		1	S	6	01-Jan-87		26-Nov-90		26-Nov-90					
		1	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		1	S	6	01-Jan-87		09-Sep-91	09-Sep-91						
		1	S	6	01-Jan-87		09-Sep-91	09-Sep-91						
		1	S	6	01-Jan-87		23-Sep-91		23-Sep-91					
		1	S	6	01-Jan-87		09-Oct-91							
		1	S	6	01-Jan-87		20-Aug-92							
		1	S	6	01-Jan-87		10-Sep-92		10-Sep-92	10-Sep-92	10-Sep-92	m-jpccr		
		1	S	6	01-Jan-87		01-Oct-92	01-Oct-92						
		1	S	6	01-Jan-87		10-Jun-93						10-Jun-93	p42
		1	S	6	01-Jan-87		10-Aug-93			10-Aug-93	10-Aug-93	m-jpccr		
		1	S	6	01-Jan-87		11-Aug-93		11-Aug-93					
		1	S	6	01-Jan-87		22-Oct-93							
		1	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		1	S	6	01-Jan-87		14-Jul-94							
		1	S	6	01-Jan-87		23-Aug-94	23-Aug-94						
		1	S	6	01-Jan-87		23-Aug-94	23-Aug-94						
		1	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		1	S	6	01-Jan-87		03-May-95		03-May-95	03-May-95	03-May-95	m-jpccr		
		1	S	6	01-Jan-87		19-Sep-95							
		1	S	6	01-Jan-87		04-Apr-96	04-Apr-96						
		1	S	6	01-Jan-87		04-Jul-96						04-Jul-96	p42
		1	S	6	01-Jan-87		18-Sep-96							
		1	S	6	01-Jan-87		18-Sep-97							
		1	S	6	01-Jan-87		16-Mar-98	16-Mar-98						
		1	S	6	01-Jan-87		08-Jul-98		08-Jul-98	08-Jul-98	08-Jul-98	m-jpccr		
		1	S	6	01-Jan-87		17-Dec-98	17-Dec-98						
18	0606													
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		1	S	6	01-Jan-87		23-Apr-90						23-Apr-90	p-jp

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
222		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		26-Jun-91				26-Jun-91	m-acr		
		2	S	6	01-Jan-87		24-Sep-91		24-Sep-91					
		2	S	6	01-Jan-87		09-Oct-91							
		2	S	6	01-Jan-87		20-Aug-92							
		2	S	6	01-Jan-87		10-Sep-92		10-Sep-92		10-Sep-92	m-acr		
		2	S	6	01-Jan-87		01-Oct-92	01-Oct-92						
		2	S	6	01-Jan-87		01-Oct-92	01-Oct-92						
		2	S	6	01-Jan-87		10-Jun-93						10-Jun-93	p42
		2	S	6	01-Jan-87		10-Aug-93		10-Aug-93					
		2	S	6	01-Jan-87		11-Aug-93				11-Aug-93	m-acr		
		2	S	6	01-Jan-87		22-Oct-93							
		2	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		2	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		2	S	6	01-Jan-87		14-Jul-94							
		2	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		2	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		2	S	6	01-Jan-87		05-May-95		05-May-95		05-May-95	m-acr		
		2	S	6	01-Jan-87		19-Sep-95							
		2	S	6	01-Jan-87		04-Jul-96						04-Jul-96	p42
		2	S	6	01-Jan-87		18-Sep-96							
		2	S	6	01-Jan-87		18-Sep-97							
		2	S	6	01-Jan-87		16-Mar-98	16-Mar-98						
		2	S	6	01-Jan-87		09-Jul-98		09-Jul-98		09-Jul-98	m-acr		
		2	S	6	01-Jan-87		17-Dec-98	17-Dec-98						
18	0607													
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		1	S	6	01-Jan-87		23-Apr-90						23-Apr-90	p-jr
		2	S	6	01-Jan-87		27-Nov-90		27-Nov-90					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
223		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		26-Jun-91				26-Jun-91	m-acr		
		2	S	6	01-Jan-87		26-Sep-91		26-Sep-91		26-Sep-91	m-acr		
		2	S	6	01-Jan-87		09-Oct-91							
		2	S	6	01-Jan-87		20-Aug-92							
		2	S	6	01-Jan-87		14-Sep-92		14-Sep-92		14-Sep-92	m-acr		
		2	S	6	01-Jan-87		02-Oct-92	02-Oct-92						
		2	S	6	01-Jan-87		10-Jun-93						10-Jun-93	p42
		2	S	6	01-Jan-87		13-Aug-93		13-Aug-93		13-Aug-93	m-acr		
		2	S	6	01-Jan-87		22-Oct-93							
		2	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		2	S	6	01-Jan-87		14-Jul-94							
		2	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		2	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		2	S	6	01-Jan-87		08-May-95		08-May-95		08-May-95	m-acr		
		2	S	6	01-Jan-87		19-Sep-95							
		2	S	6	01-Jan-87		04-Jul-96						04-Jul-96	p42
		2	S	6	01-Jan-87		18-Sep-96							
		2	S	6	01-Jan-87		18-Sep-97							
		2	S	6	01-Jan-87		16-Mar-98	16-Mar-98						
		2	S	6	01-Jan-87		10-Jul-98		10-Jul-98		10-Jul-98	m-acr		
		2	S	6	01-Jan-87		17-Dec-98	17-Dec-98						
18	0608													
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		2	S	6	01-Jan-87		27-Nov-90		27-Nov-90					
		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		26-Jun-91				26-Jun-91	m-acr		
		2	S	6	01-Jan-87		24-Sep-91		24-Sep-91					
		2	S	6	01-Jan-87		09-Oct-91							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
224		2	S	6	01-Jan-87		20-Aug-92							
		2	S	6	01-Jan-87		11-Sep-92		11-Sep-92					
		2	S	6	01-Jan-87		14-Sep-92				14-Sep-92	m-acr		
		2	S	6	01-Jan-87		01-Oct-92	01-Oct-92						
		2	S	6	01-Jan-87		10-Jun-93						10-Jun-93	p42
		2	S	6	01-Jan-87		12-Aug-93		12-Aug-93		12-Aug-93	m-acr		
		2	S	6	01-Jan-87		22-Oct-93							
		2	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		2	S	6	01-Jan-87		14-Jul-94							
		2	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		2	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		2	S	6	01-Jan-87		05-May-95		05-May-95		05-May-95	m-acr		
		2	S	6	01-Jan-87		19-Sep-95							
		2	S	6	01-Jan-87		04-Jul-96						04-Jul-96	p42
		2	S	6	01-Jan-87		18-Sep-96							
		2	S	6	01-Jan-87		18-Sep-97							
		2	S	6	01-Jan-87		16-Mar-98	16-Mar-98						
		2	S	6	01-Jan-87		10-Jul-98		10-Jul-98		10-Jul-98	m-acr		
		2	S	6	01-Jan-87		17-Dec-98	17-Dec-98						
18	0659													
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		26-Sep-91		26-Sep-91					
		2	S	6	01-Jan-87		09-Oct-91							
		2	S	6	01-Jan-87		20-Aug-92							
		2	S	6	01-Jan-87		11-Sep-92		11-Sep-92		11-Sep-92	m-acr		
		2	S	6	01-Jan-87		01-Oct-92	01-Oct-92						
		2	S	6	01-Jan-87		10-Jun-93						10-Jun-93	p42
		2	S	6	01-Jan-87		12-Aug-93				12-Aug-93	m-acr		
		2	S	6	01-Jan-87		22-Oct-93							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
18	0660	2	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		2	S	6	01-Jan-87		14-Jul-94							
		2	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		2	S	6	01-Jan-87		05-May-95		05-May-95		05-May-95	m-acr		
		2	S	6	01-Jan-87		19-Sep-95							
		2	S	6	01-Jan-87		04-Jul-96						04-Jul-96	p42
		2	S	6	01-Jan-87		18-Sep-96							
		2	S	6	01-Jan-87		18-Sep-97							
		2	S	6	01-Jan-87		16-Mar-98	16-Mar-98						
		2	S	6	01-Jan-87		11-Aug-98		11-Aug-98					
		2	S	6	01-Jan-87		17-Dec-98	17-Dec-98						
225	0660													
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		11-Sep-91							
		2	S	6	01-Jan-87		24-Sep-91		24-Sep-91					
		2	S	6	01-Jan-87		09-Oct-91							
		2	S	6	01-Jan-87		20-Aug-92							
		2	S	6	01-Jan-87		11-Sep-92		11-Sep-92		11-Sep-92	m-acr		
		2	S	6	01-Jan-87		01-Oct-92	01-Oct-92						
		2	S	6	01-Jan-87		10-Jun-93						10-Jun-93	p42
		2	S	6	01-Jan-87		12-Aug-93							
		2	S	6	01-Jan-87		13-Aug-93				13-Aug-93	m-acr		
		2	S	6	01-Jan-87		22-Oct-93							
		2	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		2	S	6	01-Jan-87		14-Jul-94							
		2	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		2	S	6	01-Jan-87		19-Sep-95							
		2	S	6	01-Jan-87		04-Jul-96						04-Jul-96	p42
		2	S	6	01-Jan-87		18-Sep-96							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Ta
226	18	0661												
			2	S	6	01-Jan-87	18-Sep-97							
			2	S	6	01-Jan-87	16-Mar-98	16-Mar-98						
			2	S	6	01-Jan-87	11-Aug-98		11-Aug-98					
			2	S	6	01-Jan-87	11-Sep-98				11-Sep-98	m-acr		
			2	S	6	01-Jan-87	17-Dec-98	17-Dec-98						
			1	S	6	01-Jan-87	04-Apr-90	04-Apr-90						
			1	S	6	01-Jan-87	04-Apr-90	04-Apr-90						
			2	S	6	01-Jan-87	14-Dec-90	14-Dec-90						
			2	S	6	01-Jan-87	10-Sep-91							
			2	S	6	01-Jan-87	24-Sep-91		24-Sep-91					
			2	S	6	01-Jan-87	09-Oct-91							
			2	S	6	01-Jan-87	20-Aug-92							
			2	S	6	01-Jan-87	11-Sep-92		11-Sep-92		11-Sep-92	m-acr		
			2	S	6	01-Jan-87	01-Oct-92	01-Oct-92						
			2	S	6	01-Jan-87	10-Jun-93						10-Jun-93	p42
			2	S	6	01-Jan-87	11-Aug-93				11-Aug-93	m-acr		
			2	S	6	01-Jan-87	22-Oct-93							
			2	S	6	01-Jan-87	01-Feb-94	01-Feb-94						
			2	S	6	01-Jan-87	01-Feb-94	01-Feb-94						
			2	S	6	01-Jan-87	14-Jul-94							
			2	S	6	01-Jan-87	29-Mar-95	29-Mar-95						
			2	S	6	01-Jan-87	29-Mar-95	29-Mar-95						
			2	S	6	01-Jan-87	08-May-95				08-May-95	m-acr		
			2	S	6	01-Jan-87	19-Sep-95							
			2	S	6	01-Jan-87	04-Jul-96						04-Jul-96	p42
			2	S	6	01-Jan-87	18-Sep-96							
			2	S	6	01-Jan-87	18-Sep-97							
			2	S	6	01-Jan-87	16-Mar-98	16-Mar-98						
			2	S	6	01-Jan-87	14-Sep-98			14-Sep-98	14-Sep-98	m-jpccr		
			2	S	6	01-Jan-87	15-Oct-98		15-Oct-98		15-Oct-98	m-acr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
18	0662	2	S	6	01-Jan-87		17-Dec-98	17-Dec-98						
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		2	S	6	01-Jan-87		27-Nov-90		27-Nov-90					
		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		25-Sep-91		25-Sep-91					
		2	S	6	01-Jan-87		09-Oct-91							
		2	S	6	01-Jan-87		20-Aug-92							
		2	S	6	01-Jan-87		11-Sep-92		11-Sep-92		11-Sep-92	m-acr		
		2	S	6	01-Jan-87		01-Oct-92	01-Oct-92						
		2	S	6	01-Jan-87		01-Oct-92	01-Oct-92						
		2	S	6	01-Jan-87		10-Jun-93						10-Jun-93	p42
		2	S	6	01-Jan-87		12-Aug-93				12-Aug-93	m-acr		
		2	S	6	01-Jan-87		22-Oct-93							
		2	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		2	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		2	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		2	S	6	01-Jan-87		14-Jul-94							
		2	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		2	S	6	01-Jan-87		08-May-95		08-May-95		08-May-95	m-acr		
		2	S	6	01-Jan-87		19-Sep-95							
		2	S	6	01-Jan-87		04-Jul-96						04-Jul-96	p42
		2	S	6	01-Jan-87		18-Sep-96							
		2	S	6	01-Jan-87		18-Sep-97							
		2	S	6	01-Jan-87		16-Mar-98	16-Mar-98						
		2	S	6	01-Jan-87		12-Aug-98		12-Aug-98		12-Aug-98	m-acr		
		2	S	6	01-Jan-87		17-Dec-98	17-Dec-98						
18	0663	1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		2	S	6	01-Jan-87		27-Nov-90		27-Nov-90					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
228		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		25-Sep-91		25-Sep-91					
		2	S	6	01-Jan-87		09-Oct-91							
		2	S	6	01-Jan-87		20-Aug-92							
		2	S	6	01-Jan-87		11-Sep-92		11-Sep-92		11-Sep-92	m-acr		
		2	S	6	01-Jan-87		01-Oct-92	01-Oct-92						
		2	S	6	01-Jan-87		10-Jun-93						10-Jun-93	p42
		2	S	6	01-Jan-87		12-Aug-93				12-Aug-93	m-acr		
		2	S	6	01-Jan-87		22-Oct-93							
		2	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		2	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		2	S	6	01-Jan-87		14-Jul-94							
		2	S	6	01-Jan-87		11-Sep-94							
		2	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		2	S	6	01-Jan-87		08-May-95		08-May-95					
		2	S	6	01-Jan-87		19-Sep-95							
		2	S	6	01-Jan-87		04-Jul-96						04-Jul-96	p42
		2	S	6	01-Jan-87		18-Sep-96							
		2	S	6	01-Jan-87		18-Sep-97							
		2	S	6	01-Jan-87		16-Mar-98	16-Mar-98						
		2	S	6	01-Jan-87		12-Aug-98		12-Aug-98		12-Aug-98	m-acr		
		2	S	6	01-Jan-87		17-Dec-98	17-Dec-98						
18	0664													
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		2	S	6	01-Jan-87		28-Nov-90		28-Nov-90					
		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		25-Sep-91		25-Sep-91					
		2	S	6	01-Jan-87		09-Oct-91							
		2	S	6	01-Jan-87		20-Aug-92							
		2	S	6	01-Jan-87		11-Sep-92		11-Sep-92		11-Sep-92	m-acr		
		2	S	6	01-Jan-87		01-Oct-92	01-Oct-92						

Table 106. Summary of visits to the LTPP sites—continued.

[illegible]

Table 106. Summary of visits to the LTPP sites—continued.

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State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
	0668	1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		25-Sep-91		25-Sep-91					
		2	S	6	01-Jan-87		09-Oct-91							
		2	S	6	01-Jan-87		20-Aug-92							
		2	S	6	01-Jan-87		14-Sep-92		14-Sep-92		14-Sep-92	m-acr		
		2	S	6	01-Jan-87		02-Oct-92	02-Oct-92						
		2	S	6	01-Jan-87		02-Oct-92	02-Oct-92						
		2	S	6	01-Jan-87		10-Jun-93						10-Jun-93	p42
		2	S	6	01-Jan-87		13-Aug-93				13-Aug-93	m-acr		
		2	S	6	01-Jan-87		22-Oct-93							
		2	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		2	S	6	01-Jan-87		14-Jul-94							
		2	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		2	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		2	S	6	01-Jan-87		19-Sep-95							
		2	S	6	01-Jan-87		04-Jul-96						04-Jul-96	p42
		2	S	6	01-Jan-87		18-Sep-96							
		2	S	6	01-Jan-87		18-Sep-97							
		2	S	6	01-Jan-87		16-Mar-98	16-Mar-98						
		2	S	6	01-Jan-87		13-Aug-98		13-Aug-98		13-Aug-98	m-acr		
		2	S	6	01-Jan-87		17-Dec-98	17-Dec-98						
18	0668													
	0668	1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		25-Sep-91		25-Sep-91					
		2	S	6	01-Jan-87		09-Oct-91							
		2	S	6	01-Jan-87		20-Aug-92							
		2	S	6	01-Jan-87		14-Sep-92		14-Sep-92		14-Sep-92	m-acr		
		2	S	6	01-Jan-87		02-Oct-92	02-Oct-92						
		2	S	6	01-Jan-87		10-Jun-93						10-Jun-93	p42

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Test Date	Distress Table	PASCO Test Date	Ta
232	18	0669												
			2	S	6	01-Jan-87	13-Aug-93				13-Aug-93	m-acr		
			2	S	6	01-Jan-87	22-Oct-93							
			2	S	6	01-Jan-87	01-Feb-94	01-Feb-94						
			2	S	6	01-Jan-87	14-Jul-94							
			2	S	6	01-Jan-87	29-Mar-95	29-Mar-95						
			2	S	6	01-Jan-87	19-Sep-95							
			2	S	6	01-Jan-87	04-Jul-96						04-Jul-96	p42
			2	S	6	01-Jan-87	18-Sep-96							
			2	S	6	01-Jan-87	18-Sep-97							
			2	S	6	01-Jan-87	16-Mar-98	16-Mar-98						
			2	S	6	01-Jan-87	13-Aug-98		13-Aug-98		13-Aug-98	m-acr		
			2	S	6	01-Jan-87	17-Dec-98	17-Dec-98						
			1	S	6	01-Jan-87	04-Apr-90	04-Apr-90						
			2	S	6	01-Jan-87	14-Dec-90	14-Dec-90						
			2	S	6	01-Jan-87	25-Sep-91		25-Sep-91					
			2	S	6	01-Jan-87	09-Oct-91							
			2	S	6	01-Jan-87	20-Aug-92							
			2	S	6	01-Jan-87	14-Sep-92		14-Sep-92		14-Sep-92	m-acr		
			2	S	6	01-Jan-87	02-Oct-92	02-Oct-92						
			2	S	6	01-Jan-87	02-Oct-92	02-Oct-92						
			2	S	6	01-Jan-87	10-Jun-93						10-Jun-93	p42
			2	S	6	01-Jan-87	13-Aug-93				13-Aug-93	m-acr		
			2	S	6	01-Jan-87	22-Oct-93							
			2	S	6	01-Jan-87	01-Feb-94	01-Feb-94						
			2	S	6	01-Jan-87	14-Jul-94							
			2	S	6	01-Jan-87	29-Mar-95	29-Mar-95						
			2	S	6	01-Jan-87	08-May-95		08-May-95		08-May-95	m-acr		
			2	S	6	01-Jan-87	19-Sep-95							
			2	S	6	01-Jan-87	04-Jul-96						04-Jul-96	p42
			2	S	6	01-Jan-87	18-Sep-96							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
233	18	0670		2	S	6	01-Jan-87		18-Sep-97					
				2	S	6	01-Jan-87		16-Mar-98	16-Mar-98				
				2	S	6	01-Jan-87		13-Aug-98	13-Aug-98	13-Aug-98	m-acr		
				2	S	6	01-Jan-87		17-Dec-98	17-Dec-98				
	18	0670												
				1	S	6	01-Jan-87		15-Oct-89					
				1	S	6	01-Jan-87		04-Apr-90	04-Apr-90				
				2	S	6	01-Jan-87		14-Dec-90	14-Dec-90				
				2	S	6	01-Jan-87		25-Sep-91	25-Sep-91				
				2	S	6	01-Jan-87		09-Oct-91					
				2	S	6	01-Jan-87		20-Aug-92					
				2	S	6	01-Jan-87		14-Sep-92	14-Sep-92	14-Sep-92	m-acr		
				2	S	6	01-Jan-87		02-Oct-92	02-Oct-92				
				2	S	6	01-Jan-87		10-Jun-93				10-Jun-93	p42
				2	S	6	01-Jan-87		13-Aug-93		13-Aug-93	m-acr		
				2	S	6	01-Jan-87		22-Oct-93					
				2	S	6	01-Jan-87		01-Feb-94	01-Feb-94				
				2	S	6	01-Jan-87		01-Feb-94	01-Feb-94				
				2	S	6	01-Jan-87		14-Jul-94					
				2	S	6	01-Jan-87		29-Mar-95	29-Mar-95				
				2	S	6	01-Jan-87		08-May-95	08-May-95	08-May-95	m-acr		
				2	S	6	01-Jan-87		19-Sep-95					
				2	S	6	01-Jan-87		04-Jul-96				04-Jul-96	p42
				2	S	6	01-Jan-87		18-Sep-96					
				2	S	6	01-Jan-87		18-Sep-97					
				2	S	6	01-Jan-87		16-Mar-98	16-Mar-98				
				2	S	6	01-Jan-87		15-Oct-98	15-Oct-98	15-Oct-98	m-acr		
				2	S	6	01-Jan-87		17-Dec-98	17-Dec-98				
	18	0671												
				1	S	6	01-Jan-87		15-Oct-89					
				1	S	6	01-Jan-87		04-Apr-90	04-Apr-90				

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
234		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		25-Sep-91		25-Sep-91					
		2	S	6	01-Jan-87		09-Oct-91							
		2	S	6	01-Jan-87		20-Aug-92							
		2	S	6	01-Jan-87		14-Sep-92		14-Sep-92		14-Sep-92	m-acr		
		2	S	6	01-Jan-87		02-Oct-92	02-Oct-92						
		2	S	6	01-Jan-87		10-Jun-93						10-Jun-93	p42
		2	S	6	01-Jan-87		13-Aug-93				13-Aug-93	m-acr		
		2	S	6	01-Jan-87		22-Oct-93							
		2	S	6	01-Jan-87		01-Feb-94	01-Feb-94						
		2	S	6	01-Jan-87		14-Jul-94							
		2	S	6	01-Jan-87		29-Mar-95	29-Mar-95						
		2	S	6	01-Jan-87		19-Sep-95							
		2	S	6	01-Jan-87		04-Jul-96						04-Jul-96	p42
		2	S	6	01-Jan-87		18-Sep-96							
		2	S	6	01-Jan-87		18-Sep-97							
		2	S	6	01-Jan-87		16-Mar-98	16-Mar-98						
		2	S	6	01-Jan-87		15-Oct-98		15-Oct-98		15-Oct-98	m-acr		
		2	S	6	01-Jan-87		17-Dec-98	17-Dec-98						
18	0672													
		1	S	6	01-Jan-87		04-Apr-90	04-Apr-90						
		2	S	6	01-Jan-87		14-Dec-90	14-Dec-90						
		2	S	6	01-Jan-87		24-Sep-91		24-Sep-91					
		2	S	6	01-Jan-87		09-Oct-91							
		2	S	6	01-Jan-87		20-Aug-92							
		2	S	6	01-Jan-87		11-Sep-92		11-Sep-92		11-Sep-92	m-acr		
		2	S	6	01-Jan-87		01-Oct-92	01-Oct-92						
		2	S	6	01-Jan-87		10-Jun-93						10-Jun-93	p42
		2	S	6	01-Jan-87		12-Aug-93				12-Aug-93	m-acr		
		2	S	6	01-Jan-87		13-Aug-93							
		2	S	6	01-Jan-87		22-Oct-93							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
235	19	0600		2	S	6	01-Jan-87		01-Feb-94	01-Feb-94				
				2	S	6	01-Jan-87		14-Jul-94					
				2	S	6	01-Jan-87		29-Mar-95	29-Mar-95				
				2	S	6	01-Jan-87		29-Mar-95	29-Mar-95				
				2	S	6	01-Jan-87		19-Sep-95					
				2	S	6	01-Jan-87		04-Jul-96				04-Jul-96	p42
				2	S	6	01-Jan-87		18-Sep-96					
				2	S	6	01-Jan-87		18-Sep-97					
				2	S	6	01-Jan-87		16-Mar-98	16-Mar-98				
				2	S	6	01-Jan-87		11-Aug-98	11-Aug-98	11-Aug-98	m-acr		
				2	S	6	01-Jan-87		17-Dec-98	17-Dec-98				
	19	0601		1	S	6	01-Jan-87							
				1	S	6	01-Jan-87		11-Jul-89	11-Jul-89				
				1	S	6	01-Jan-87		07-Aug-89	07-Aug-89				
				1	S	6	01-Jan-87		20-Sep-89				20-Sep-89	p-jr
				1	S	6	01-Jan-87		18-Oct-89	18-Oct-89				
				1	S	6	01-Jan-87		09-May-90				09-May-90	p-jr
				1	S	6	01-Jan-87		17-Jun-90	17-Jun-90				
				1	S	6	01-Jan-87		23-Oct-90					
				1	S	6	01-Jan-87		19-Jun-91	19-Jun-91				
				1	S	6	01-Jan-87		19-Jun-91	19-Jun-91				
				1	S	6	01-Jan-87		25-Jun-91	25-Jun-91				
				1	S	6	01-Jan-87		02-Jul-91					
				1	S	6	01-Jan-87		10-May-92	10-May-92				
				1	S	6	01-Jan-87		21-Sep-92		21-Sep-92	m-jpccr		
				1	S	6	01-Jan-87		22-Sep-92	22-Sep-92				
				1	S	6	01-Jan-87		13-Oct-92					
				1	S	6	01-Jan-87		31-Oct-92					
				1	S	6	01-Jan-87		21-Apr-93				21-Apr-93	p42

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Test Date	Distress Table	PASCO Test Date	Ta
236	19	0602	1	S	6	01-Jan-87	03-Aug-93				03-Aug-93	m-jpccr		
			1	S	6	01-Jan-87	30-Aug-93		30-Aug-93	30-Aug-93	30-Aug-93	m-jpccr		
			1	S	6	01-Jan-87	15-Oct-93							
			1	S	6	01-Jan-87	30-Nov-93	30-Nov-93						
			1	S	6	01-Jan-87	13-Sep-94							
			1	S	6	01-Jan-87	20-Sep-94	20-Sep-94						
			1	S	6	01-Jan-87	30-Aug-95							
			1	S	6	01-Jan-87	02-Apr-96						02-Apr-96	p42-
			1	S	6	01-Jan-87	11-Jul-96							
			1	S	6	01-Jan-87	11-Jul-97							
			1	S	6	01-Jan-87	10-Oct-98	10-Oct-98						
			1	S	6	01-Jan-87	05-Oct-99				05-Oct-99	m-acr		
	19	0602	1	S	6	01-Jan-87	11-Jul-89		11-Jul-89					
			1	S	6	01-Jan-87	20-Sep-89						20-Sep-89	p-j
			1	S	6	01-Jan-87	18-Oct-89		18-Oct-89					
			1	S	6	01-Jan-87	09-May-90						09-May-90	p-j
			1	S	6	01-Jan-87	17-Jun-90	17-Jun-90						
			1	S	6	01-Jan-87	23-Oct-90							
			1	S	6	01-Jan-87	19-Jun-91	19-Jun-91						
			1	S	6	01-Jan-87	25-Jun-91		25-Jun-91					
			1	S	6	01-Jan-87	02-Jul-91							
			1	S	6	01-Jan-87	10-May-92	10-May-92						
			1	S	6	01-Jan-87	21-Sep-92		21-Sep-92		21-Sep-92	m-jpccr		
			1	S	6	01-Jan-87	13-Oct-92							
			1	S	6	01-Jan-87	21-Apr-93						21-Apr-93	p42-
			1	S	6	01-Jan-87	31-Aug-93		31-Aug-93	31-Aug-93	31-Aug-93	m-jpccr		
			1	S	6	01-Jan-87	15-Oct-93							
			1	S	6	01-Jan-87	30-Nov-93	30-Nov-93						
			1	S	6	01-Jan-87	13-Sep-94							
			1	S	6	01-Jan-87	06-Jun-95		06-Jun-95					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Test Date	Distress Table	PASCO Test Date	Tal
19	0603	1	S	6	01-Jan-87		30-Aug-95							
		1	S	6	01-Jan-87		02-Apr-96						02-Apr-96	p42
		1	S	6	01-Jan-87		11-Jul-96							
		1	S	6	01-Jan-87		11-Jul-97							
		1	S	6	01-Jan-87		10-Oct-98	10-Oct-98						
		1	S	6	01-Jan-87		05-Oct-99				05-Oct-99	m-acr		
		1	S	6	01-Jan-87		12-Jul-89		12-Jul-89					
		2	S	6	01-Jan-87		20-Sep-89						20-Sep-89	p-
		2	S	6	01-Jan-87		19-Oct-89		19-Oct-89					
		2	S	6	01-Jan-87		09-May-90						09-May-90	p-
		2	S	6	01-Jan-87		17-Jun-90	17-Jun-90						
		2	S	6	01-Jan-87		23-Oct-90							
		2	S	6	01-Jan-87		20-Nov-90		20-Nov-90					
		2	S	6	01-Jan-87		19-Jun-91	19-Jun-91						
		2	S	6	01-Jan-87		19-Jun-91	19-Jun-91						
		2	S	6	01-Jan-87		19-Jun-91	19-Jun-91						
		2	S	6	01-Jan-87		26-Jun-91		26-Jun-91					
		2	S	6	01-Jan-87		02-Jul-91							
		2	S	6	01-Jan-87		10-May-92	10-May-92						
		2	S	6	01-Jan-87		24-Sep-92		24-Sep-92		24-Sep-92	m-acr		
		2	S	6	01-Jan-87		13-Oct-92							
		2	S	6	01-Jan-87		21-Apr-93						21-Apr-93	p42
		2	S	6	01-Jan-87		02-Sep-93		02-Sep-93		02-Sep-93	m-acr		
		2	S	6	01-Jan-87		15-Oct-93							
		2	S	6	01-Jan-87		30-Nov-93	30-Nov-93						
		2	S	6	01-Jan-87		13-Sep-94							
		2	S	6	01-Jan-87		20-Sep-94	20-Sep-94						
		2	S	6	01-Jan-87		08-Jun-95		08-Jun-95					
		2	S	6	01-Jan-87		30-Aug-95							
		2	S	6	01-Jan-87		02-Apr-96						02-Apr-96	p42

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Test Date	Distress Table	PASCO Test Date	Tal
238	19	0604												
			2	S	6	01-Jan-87	11-Jul-96							
			2	S	6	01-Jan-87	06-May-97				06-May-97	m-acr		
			2	S	6	01-Jan-87	02-Sep-97							
			2	S	6	01-Jan-87	21-Sep-97	21-Sep-97						
			2	S	6	01-Jan-87	10-Oct-98	10-Oct-98						
			2	S	6	01-Jan-87	16-Jul-99	16-Jul-99						
			2	S	6	01-Jan-87	06-Oct-99				06-Oct-99	m-acr		
	19	0604												
			1	S	6	01-Jan-87	12-Jul-89		12-Jul-89					
			2	S	6	01-Jan-87	20-Sep-89						20-Sep-89	p-
			2	S	6	01-Jan-87	19-Oct-89		19-Oct-89					
			2	S	6	01-Jan-87	09-May-90						09-May-90	p-
			2	S	6	01-Jan-87	17-Jun-90	17-Jun-90						
			2	S	6	01-Jan-87	23-Oct-90							
			2	S	6	01-Jan-87	20-Nov-90		20-Nov-90					
			2	S	6	01-Jan-87	19-Jun-91	19-Jun-91						
			2	S	6	01-Jan-87	19-Jun-91	19-Jun-91						
			2	S	6	01-Jan-87	19-Jun-91	19-Jun-91						
			2	S	6	01-Jan-87	26-Jun-91		26-Jun-91					
			2	S	6	01-Jan-87	02-Jul-91							
			2	S	6	01-Jan-87	10-May-92	10-May-92						
			2	S	6	01-Jan-87	24-Sep-92		24-Sep-92		24-Sep-92	m-acr		
			2	S	6	01-Jan-87	13-Oct-92							
			2	S	6	01-Jan-87	21-Apr-93						21-Apr-93	p42
			2	S	6	01-Jan-87	02-Sep-93		02-Sep-93		02-Sep-93	m-acr		
			2	S	6	01-Jan-87	15-Oct-93							
			2	S	6	01-Jan-87	30-Nov-93	30-Nov-93						
			2	S	6	01-Jan-87	13-Sep-94							
			2	S	6	01-Jan-87	20-Sep-94	20-Sep-94						
			2	S	6	01-Jan-87	08-Jun-95		08-Jun-95					
			2	S	6	01-Jan-87	30-Aug-95							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Test Date	Distress Table	PASCO Test Date	Tal
		2	S	6	01-Jan-87		02-Apr-96						02-Apr-96	p42
		2	S	6	01-Jan-87		11-Jul-96							
		2	S	6	01-Jan-87		06-May-97				06-May-97	m-acr		
		2	S	6	01-Jan-87		02-Sep-97							
		2	S	6	01-Jan-87		21-Sep-97	21-Sep-97						
		2	S	6	01-Jan-87		10-Oct-98	10-Oct-98						
		2	S	6	01-Jan-87		16-Jul-99	16-Jul-99						
		2	S	6	01-Jan-87		07-Oct-99				07-Oct-99	m-acr		
19	0605													
		1	S	6	01-Jan-87		11-Jul-89		11-Jul-89					
		1	S	6	01-Jan-87		07-Aug-89		07-Aug-89					
		1	S	6	01-Jan-87		20-Sep-89						20-Sep-89	p-c
		1	S	6	01-Jan-87		18-Oct-89		18-Oct-89					
		1	S	6	01-Jan-87		09-May-90						09-May-90	p-jp
		1	S	6	01-Jan-87		17-Jun-90	17-Jun-90						
		1	S	6	01-Jan-87		23-Oct-90							
		1	S	6	01-Jan-87		19-Jun-91	19-Jun-91						
		1	S	6	01-Jan-87		25-Jun-91		25-Jun-91					
		1	S	6	01-Jan-87		26-Jun-91		26-Jun-91					
		1	S	6	01-Jan-87		02-Jul-91							
		1	S	6	01-Jan-87		10-May-92	10-May-92						
		1	S	6	01-Jan-87		22-Sep-92		22-Sep-92	22-Sep-92	22-Sep-92	m-jpccr		
		1	S	6	01-Jan-87		13-Oct-92							
		1	S	6	01-Jan-87		21-Apr-93						21-Apr-93	p42
		1	S	6	01-Jan-87		31-Aug-93			31-Aug-93	31-Aug-93	m-jpccr		
		1	S	6	01-Jan-87		01-Sep-93		01-Sep-93					
		1	S	6	01-Jan-87		15-Oct-93							
		1	S	6	01-Jan-87		30-Nov-93	30-Nov-93						
		1	S	6	01-Jan-87		13-Sep-94							
		1	S	6	01-Jan-87		07-Jun-95		07-Jun-95					
		1	S	6	01-Jan-87		30-Aug-95							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Test Date	Distress Table	PASCO Test Date	Tal
240	0606	1	S	6	01-Jan-87		02-Apr-96						02-Apr-96	p42
		1	S	6	01-Jan-87		11-Jul-96							
		1	S	6	01-Jan-87		11-Jul-97							
		1	S	6	01-Jan-87		10-Oct-98	10-Oct-98						
		1	S	6	01-Jan-87		05-Oct-99				05-Oct-99	m-acr		
		1	S	6	01-Jan-87		12-Jul-89		12-Jul-89					
		2	S	6	01-Jan-87		20-Sep-89						20-Sep-89	p-
		2	S	6	01-Jan-87		09-May-90						09-May-90	p-
		2	S	6	01-Jan-87		17-Jun-90	17-Jun-90						
		2	S	6	01-Jan-87		23-Oct-90							
		2	S	6	01-Jan-87		20-Nov-90		20-Nov-90					
		2	S	6	01-Jan-87		19-Jun-91	19-Jun-91						
		2	S	6	01-Jan-87		26-Jun-91		26-Jun-91					
		2	S	6	01-Jan-87		02-Jul-91							
		2	S	6	01-Jan-87		10-May-92	10-May-92						
		2	S	6	01-Jan-87		24-Sep-92		24-Sep-92		24-Sep-92	m-acr		
		2	S	6	01-Jan-87		13-Oct-92							
		2	S	6	01-Jan-87		21-Apr-93						21-Apr-93	p42
		2	S	6	01-Jan-87		02-Sep-93		02-Sep-93		02-Sep-93	m-acr		
		2	S	6	01-Jan-87		15-Oct-93							
		2	S	6	01-Jan-87		30-Nov-93	30-Nov-93						
		2	S	6	01-Jan-87		13-Sep-94							
		2	S	6	01-Jan-87		20-Sep-94	20-Sep-94						
		2	S	6	01-Jan-87		08-Jun-95		08-Jun-95					
		2	S	6	01-Jan-87		30-Aug-95							
		2	S	6	01-Jan-87		02-Apr-96						02-Apr-96	p42
		2	S	6	01-Jan-87		11-Jul-96							
		2	S	6	01-Jan-87		07-May-97				07-May-97	m-acr		
		2	S	6	01-Jan-87		02-Sep-97							
		2	S	6	01-Jan-87		21-Sep-97	21-Sep-97						

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Talbot
		2	S	6	01-Jan-87		10-Oct-98	10-Oct-98						
		2	S	6	01-Jan-87		16-Jul-99	16-Jul-99						
		2	S	6	01-Jan-87		07-Oct-99			07-Oct-99	m-acr			
19	0607													
		1	S	6	01-Jan-87		12-Jul-89		12-Jul-89					
		1	S	6	01-Jan-87		14-Aug-89				14-Aug-89	m-jpccr		
		2	S	6	01-Jan-87		20-Sep-89						20-Sep-89	p-
		2	S	6	01-Jan-87		19-Oct-89		19-Oct-89					
		2	S	6	01-Jan-87		09-May-90						09-May-90	p-
		2	S	6	01-Jan-87		17-Jun-90	17-Jun-90						
		2	S	6	01-Jan-87		23-Oct-90							
		2	S	6	01-Jan-87		20-Nov-90		20-Nov-90					
		2	S	6	01-Jan-87		19-Jun-91	19-Jun-91						
		2	S	6	01-Jan-87		19-Jun-91	19-Jun-91						
		2	S	6	01-Jan-87		26-Jun-91		26-Jun-91					
		2	S	6	01-Jan-87		02-Jul-91							
		2	S	6	01-Jan-87		10-May-92	10-May-92						
		2	S	6	01-Jan-87		23-Sep-92		23-Sep-92		23-Sep-92	m-acr		
		2	S	6	01-Jan-87		13-Oct-92							
		2	S	6	01-Jan-87		21-Apr-93						21-Apr-93	p42
		2	S	6	01-Jan-87		31-Aug-93		31-Aug-93		31-Aug-93	m-acr		
		2	S	6	01-Jan-87		15-Oct-93							
		2	S	6	01-Jan-87		30-Nov-93	30-Nov-93						
		2	S	6	01-Jan-87		13-Sep-94							
		2	S	6	01-Jan-87		20-Sep-94	20-Sep-94						
		2	S	6	01-Jan-87		06-Jun-95		06-Jun-95					
		2	S	6	01-Jan-87		30-Aug-95							
		2	S	6	01-Jan-87		02-Apr-96						02-Apr-96	p42
		2	S	6	01-Jan-87		11-Jul-96							
		2	S	6	01-Jan-87		05-May-97		05-May-97					
		2	S	6	01-Jan-87		06-May-97				06-May-97	m-acr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Talbot	
19	0608	2	S	6	01-Jan-87		02-Sep-97								
		2	S	6	01-Jan-87		21-Sep-97	21-Sep-97							
		2	S	6	01-Jan-87		10-Oct-98	10-Oct-98							
		2	S	6	01-Jan-87		16-Jul-99	16-Jul-99							
		2	S	6	01-Jan-87		06-Oct-99					06-Oct-99	m-acr		
		1	S	6	01-Jan-87		12-Jul-89		12-Jul-89						
		1	S	6	01-Jan-87		15-Aug-89					15-Aug-89	m-jpccr		
		2	S	6	01-Jan-87		20-Sep-89							20-Sep-89	p-
		2	S	6	01-Jan-87		19-Oct-89		19-Oct-89						
		2	S	6	01-Jan-87		09-May-90							09-May-90	p-
		2	S	6	01-Jan-87		17-Jun-90	17-Jun-90							
		2	S	6	01-Jan-87		23-Oct-90			20-Nov-90					
		2	S	6	01-Jan-87		19-Jun-91	19-Jun-91							
		2	S	6	01-Jan-87		19-Jun-91	19-Jun-91							
		2	S	6	01-Jan-87		19-Jun-91	19-Jun-91							
		2	S	6	01-Jan-87		26-Jun-91		26-Jun-91						
		2	S	6	01-Jan-87		02-Jul-91								
		2	S	6	01-Jan-87		10-May-92	10-May-92							
		2	S	6	01-Jan-87		23-Sep-92		23-Sep-92			23-Sep-92	m-acr		
		2	S	6	01-Jan-87		13-Oct-92								
2	S	6	01-Jan-87		21-Apr-93							21-Apr-93	p42		
2	S	6	01-Jan-87		01-Sep-93		01-Sep-93			01-Sep-93	m-acr				
2	S	6	01-Jan-87		15-Oct-93										
2	S	6	01-Jan-87		30-Nov-93	30-Nov-93									
2	S	6	01-Jan-87		13-Sep-94										
2	S	6	01-Jan-87		20-Sep-94	20-Sep-94									
2	S	6	01-Jan-87		07-Jun-95		07-Jun-95								
2	S	6	01-Jan-87		30-Aug-95										
2	S	6	01-Jan-87		02-Apr-96							02-Apr-96	p42		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
243	19	0659												
			2	S	6	01-Jan-87	11-Jul-96							
			2	S	6	01-Jan-87	05-May-97		05-May-97					
			2	S	6	01-Jan-87	06-May-97				06-May-97	m-acr		
			2	S	6	01-Jan-87	02-Sep-97							
			2	S	6	01-Jan-87	21-Sep-97	21-Sep-97						
			2	S	6	01-Jan-87	10-Oct-98	10-Oct-98						
			2	S	6	01-Jan-87	16-Jul-99	16-Jul-99						
			2	S	6	01-Jan-87	06-Oct-99				06-Oct-99	m-acr		
	19	0659												
			1	S	6	01-Jan-87	12-Jul-89		12-Jul-89					
			2	S	6	01-Jan-87	19-Oct-89		19-Oct-89					
			2	S	6	01-Jan-87	17-Jun-90	17-Jun-90						
			2	S	6	01-Jan-87	23-Oct-90							
			2	S	6	01-Jan-87	20-Nov-90		20-Nov-90					
			2	S	6	01-Jan-87	19-Jun-91	19-Jun-91						
			2	S	6	01-Jan-87	26-Jun-91		26-Jun-91					
			2	S	6	01-Jan-87	02-Jul-91							
			2	S	6	01-Jan-87	10-May-92	10-May-92						
			2	S	6	01-Jan-87	23-Sep-92		23-Sep-92		23-Sep-92	m-acr		
			2	S	6	01-Jan-87	13-Oct-92							
			2	S	6	01-Jan-87	21-Apr-93						21-Apr-93	p42
			2	S	6	01-Jan-87	02-Sep-93		02-Sep-93		02-Sep-93	m-acr		
			2	S	6	01-Jan-87	15-Oct-93							
			2	S	6	01-Jan-87	30-Nov-93	30-Nov-93						
			2	S	6	01-Jan-87	13-Sep-94							
			2	S	6	01-Jan-87	20-Sep-94	20-Sep-94						
			2	S	6	01-Jan-87	08-Jun-95		08-Jun-95					
			2	S	6	01-Jan-87	30-Aug-95							
			2	S	6	01-Jan-87	02-Apr-96						02-Apr-96	p42
			2	S	6	01-Jan-87	11-Jul-96							
			2	S	6	01-Jan-87	06-May-97				06-May-97	m-acr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Ta
244	26	0600												
			2	S	6	01-Jan-87	02-Sep-97							
			2	S	6	01-Jan-87	21-Sep-97	21-Sep-97						
			2	S	6	01-Jan-87	10-Oct-98	10-Oct-98						
			2	S	6	01-Jan-87	16-Jul-99	16-Jul-99						
			2	S	6	01-Jan-87	06-Oct-99				06-Oct-99	m-acr		
	26	0601												
			1	S	6	01-Jan-87								
			1	S	6	01-Jan-87	02-Apr-90	02-Apr-90						
			1	S	6	01-Jan-87	21-Apr-90		21-Apr-90					
			1	S	6	01-Jan-87	01-May-90						01-May-90	p-jp
			1	S	6	01-Jan-87	06-Jan-91	06-Jan-91						
			1	S	6	01-Jan-87	06-Jan-91	06-Jan-91						
			1	S	6	01-Jan-87	28-Jun-91	28-Jun-91						
			1	S	6	01-Jan-87	13-Aug-91		13-Aug-91					
			1	S	6	01-Jan-87	17-Jun-92							
			1	S	6	01-Jan-87	26-Aug-92		26-Aug-92	26-Aug-92	26-Aug-92	m-jpccr		
			1	S	6	01-Jan-87	25-Sep-92	25-Sep-92						
			1	S	6	01-Jan-87	25-Sep-92	25-Sep-92						
			1	S	6	01-Jan-87	17-May-93	17-May-93						
			1	S	6	01-Jan-87	17-May-93	17-May-93						
			1	S	6	01-Jan-87	03-Jun-93			03-Jun-93	03-Jun-93	m-jpccr		
			1	S	6	01-Jan-87	09-Jun-93						09-Jun-93	p42-
			1	S	6	01-Jan-87	03-Jun-94							
			1	S	6	01-Jan-87	09-Sep-94	09-Sep-94						
			1	S	6	01-Jan-87	18-May-95		18-May-95					
			1	S	6	01-Jan-87	19-May-95			19-May-95	19-May-95	m-jpccr		
			1	S	6	01-Jan-87	16-Jun-95						16-Jun-95	p42-
			1	S	6	01-Jan-87	27-Jun-97	27-Jun-97						
			1	S	6	01-Jan-87	31-Jul-97		31-Jul-97					
			1	S	6	01-Jan-87	17-Sep-97							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Ta
245	26	0602	1	S	6	01-Jan-87	14-Apr-99	14-Apr-99						
			1	S	6	01-Jan-87	02-Apr-90	02-Apr-90						
			1	S	6	01-Jan-87	21-Apr-90		21-Apr-90					
			1	S	6	01-Jan-87	06-Jan-91	06-Jan-91						
			1	S	6	01-Jan-87	28-Jun-91	28-Jun-91						
			1	S	6	01-Jan-87	13-Aug-91		13-Aug-91					
			1	S	6	01-Jan-87	17-Jun-92							
			1	S	6	01-Jan-87	26-Aug-92		26-Aug-92					
			1	S	6	01-Jan-87	27-Aug-92			27-Aug-92	27-Aug-92	m-jpccr		
			1	S	6	01-Jan-87	25-Sep-92	25-Sep-92						
			1	S	6	01-Jan-87	25-Sep-92	25-Sep-92						
			1	S	6	01-Jan-87	17-May-93	17-May-93						
			1	S	6	01-Jan-87	17-May-93	17-May-93						
			1	S	6	01-Jan-87	03-Jun-93			03-Jun-93	03-Jun-93	m-jpccr		
			1	S	6	01-Jan-87	09-Jun-93						09-Jun-93	p42
			1	S	6	01-Jan-87	03-Jun-94							
			1	S	6	01-Jan-87	09-Sep-94	09-Sep-94						
			1	S	6	01-Jan-87	09-Sep-94	09-Sep-94						
			1	S	6	01-Jan-87	18-May-95		18-May-95					
			1	S	6	01-Jan-87	19-May-95			19-May-95	19-May-95	m-jpccr		
			1	S	6	01-Jan-87	16-Jun-95						16-Jun-95	p42
			1	S	6	01-Jan-87	19-May-96			19-May-96				
			1	S	6	01-Jan-87	27-Jun-97	27-Jun-97						
			1	S	6	01-Jan-87	31-Jul-97		31-Jul-97					
			1	S	6	01-Jan-87	17-Sep-97							
			1	S	6	01-Jan-87	14-Apr-99	14-Apr-99						
246	26	0603												
			1	S	6	01-Jan-87	02-Apr-90	02-Apr-90						
			1	S	6	01-Jan-87	21-Apr-90		21-Apr-90					
			2	S	6	01-Jan-87	06-Jan-91	06-Jan-91						

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Test Date	Distress Table	PASCO Test Date	Ta
246	0604	2	S	6	01-Jan-87		06-Jan-91	06-Jan-91						
		2	S	6	01-Jan-87		28-Jun-91	28-Jun-91						
		2	S	6	01-Jan-87		28-Jun-91	28-Jun-91						
		2	S	6	01-Jan-87		12-Aug-91		12-Aug-91					
		2	S	6	01-Jan-87		17-Jun-92							
		2	S	6	01-Jan-87		25-Aug-92		25-Aug-92		25-Aug-92	m-acr		
		2	S	6	01-Jan-87		25-Sep-92	25-Sep-92						
		2	S	6	01-Jan-87		25-Sep-92	25-Sep-92						
		2	S	6	01-Jan-87		17-May-93	17-May-93						
		2	S	6	01-Jan-87		02-Jun-93				02-Jun-93	m-acr		
		2	S	6	01-Jan-87		04-Jun-93							
		2	S	6	01-Jan-87		09-Jun-93						09-Jun-93	p42
		2	S	6	01-Jan-87		03-Jun-94							
		2	S	6	01-Jan-87		09-Sep-94	09-Sep-94						
		2	S	6	01-Jan-87		17-May-95		17-May-95					
		2	S	6	01-Jan-87		18-May-95							
		2	S	6	01-Jan-87		19-May-95				19-May-95	m-acr		
		2	S	6	01-Jan-87		16-Jun-95						16-Jun-95	p42
		2	S	6	01-Jan-87		08-Feb-96							
		2	S	6	01-Jan-87		18-May-96				18-May-96	m-acr		
		2	S	6	01-Jan-87		27-Jun-97	27-Jun-97						
		2	S	6	01-Jan-87		30-Jul-97		30-Jul-97					
		2	S	6	01-Jan-87		17-Sep-97							
		2	S	6	01-Jan-87		14-Oct-98		14-Oct-98		14-Oct-98	m-acr		
		2	S	6	01-Jan-87		03-Nov-98	03-Nov-98						
		2	S	6	01-Jan-87		14-Apr-99	14-Apr-99						
26	0604													
		1	S	6	01-Jan-87		02-Apr-90	02-Apr-90						
		1	S	6	01-Jan-87		21-Apr-90		21-Apr-90					
		1	S	6	01-Jan-87		01-May-90						01-May-90	p-jr
		2	S	6	01-Jan-87		06-Jan-91	06-Jan-91						

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Ta
247		2	S	6	01-Jan-87		06-Jan-91	06-Jan-91						
		2	S	6	01-Jan-87		28-Jun-91	28-Jun-91						
		2	S	6	01-Jan-87		12-Aug-91		12-Aug-91					
		2	S	6	01-Jan-87		17-Jun-92							
		2	S	6	01-Jan-87		26-Aug-92		26-Aug-92		26-Aug-92	m-acr		
		2	S	6	01-Jan-87		25-Sep-92	25-Sep-92						
		2	S	6	01-Jan-87		17-May-93	17-May-93						
		2	S	6	01-Jan-87		17-May-93	17-May-93						
		2	S	6	01-Jan-87		02-Jun-93				02-Jun-93	m-acr		
		2	S	6	01-Jan-87		09-Jun-93						09-Jun-93	p42
		2	S	6	01-Jan-87		03-Jun-94							
		2	S	6	01-Jan-87		09-Sep-94	09-Sep-94						
		2	S	6	01-Jan-87		09-Sep-94	09-Sep-94						
		2	S	6	01-Jan-87		05-May-95							
		2	S	6	01-Jan-87		17-May-95		17-May-95					
		2	S	6	01-Jan-87		18-May-95				18-May-95	m-acr		
		2	S	6	01-Jan-87		16-Jun-95						16-Jun-95	p42
		2	S	6	01-Jan-87		26-Aug-95				26-Aug-95	m-acr		
		2	S	6	01-Jan-87		08-Feb-96							
		2	S	6	01-Jan-87		27-Jun-97	27-Jun-97						
		2	S	6	01-Jan-87		30-Jul-97		30-Jul-97					
		2	S	6	01-Jan-87		17-Sep-97							
		2	S	6	01-Jan-87		14-Oct-98		14-Oct-98		14-Oct-98	m-acr		
		2	S	6	01-Jan-87		03-Nov-98	03-Nov-98						
		2	S	6	01-Jan-87		14-Apr-99	14-Apr-99						
26	0605													
		1	S	6	01-Jan-87		02-Apr-90	02-Apr-90						
		1	S	6	01-Jan-87		21-Apr-90		21-Apr-90					
		1	S	6	01-Jan-87		01-May-90						01-May-90	p-j
		1	S	6	01-Jan-87		28-Jun-91	28-Jun-91						
		1	S	6	01-Jan-87		13-Aug-91		13-Aug-91					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
26	0608													
		1	S	6	01-Jan-87		02-Apr-90	02-Apr-90						
		1	S	6	01-Jan-87		02-Apr-90	02-Apr-90						
		1	S	6	01-Jan-87		21-Apr-90		21-Apr-90					
		1	S	6	01-Jan-87		01-May-90						01-May-90	p-j
		2	S	6	01-Jan-87		06-Jan-91	06-Jan-91						
		2	S	6	01-Jan-87		06-Jan-91	06-Jan-91						
		2	S	6	01-Jan-87		28-Jun-91	28-Jun-91						
		2	S	6	01-Jan-87		12-Aug-91		12-Aug-91					
		2	S	6	01-Jan-87		17-Jun-92							
		2	S	6	01-Jan-87		25-Aug-92		25-Aug-92		25-Aug-92	m-acr		
		2	S	6	01-Jan-87		25-Sep-92	25-Sep-92						
		2	S	6	01-Jan-87		17-May-93	17-May-93						
		2	S	6	01-Jan-87		02-Jun-93				02-Jun-93	m-acr		
		2	S	6	01-Jan-87		09-Jun-93						09-Jun-93	p42
		2	S	6	01-Jan-87		03-Jun-94							
		2	S	6	01-Jan-87		09-Sep-94	09-Sep-94						
		2	S	6	01-Jan-87		17-May-95		17-May-95		17-May-95	m-acr		
		2	S	6	01-Jan-87		16-Jun-95						16-Jun-95	p42
		2	S	6	01-Jan-87		08-Feb-96							
		2	S	6	01-Jan-87		27-Jun-97	27-Jun-97						
		2	S	6	01-Jan-87		30-Jul-97		30-Jul-97					
		2	S	6	01-Jan-87		17-Sep-97							
		2	S	6	01-Jan-87		13-Oct-98		13-Oct-98		13-Oct-98	m-acr		
		2	S	6	01-Jan-87		03-Nov-98	03-Nov-98						
		2	S	6	01-Jan-87		14-Apr-99	14-Apr-99						
26	0659													
		1	S	6	01-Jan-87		02-Apr-90	02-Apr-90						
		1	S	6	01-Jan-87		21-Apr-90		21-Apr-90					
		2	S	6	01-Jan-87		06-Jan-91	06-Jan-91						
		2	S	6	01-Jan-87		28-Jun-91	28-Jun-91						

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
251		2	S	6	01-Jan-87		28-Jun-91	28-Jun-91						
		2	S	6	01-Jan-87		12-Aug-91		12-Aug-91					
		2	S	6	01-Jan-87		17-Jun-92							
		2	S	6	01-Jan-87		25-Jul-92							
		2	S	6	01-Jan-87		25-Aug-92		25-Aug-92		25-Aug-92	m-acr		
		2	S	6	01-Jan-87		25-Sep-92	25-Sep-92						
		2	S	6	01-Jan-87		17-May-93	17-May-93						
		2	S	6	01-Jan-87		17-May-93	17-May-93						
		2	S	6	01-Jan-87		02-Jun-93				02-Jun-93	m-acr		
		2	S	6	01-Jan-87		09-Jun-93						09-Jun-93	p42
		2	S	6	01-Jan-87		09-Sep-94	09-Sep-94						
		2	S	6	01-Jan-87		17-May-95				17-May-95	m-acr		
		2	S	6	01-Jan-87		16-Jun-95						16-Jun-95	p42
		2	S	6	01-Jan-87		08-Feb-96							
		2	S	6	01-Jan-87		27-Jun-97	27-Jun-97						
		2	S	6	01-Jan-87		30-Jul-97		30-Jul-97					
		2	S	6	01-Jan-87		17-Sep-97							
		2	S	6	01-Jan-87		13-Oct-98		13-Oct-98		13-Oct-98	m-acr		
		2	S	6	01-Jan-87		03-Nov-98	03-Nov-98						
		2	S	6	01-Jan-87		14-Apr-99	14-Apr-99						
29	0600													
		1	S	6	01-Jan-87									
29	0601													
		1	S	6	01-Jan-87		07-Aug-91			07-Aug-91	07-Aug-91	m-jpccr		
		1	S	6	01-Jan-87		13-Feb-92	13-Feb-92						
		1	S	6	01-Jan-87		02-Jun-92		02-Jun-92					
		1	S	6	01-Jan-87		17-Nov-92		17-Nov-92					
		1	S	6	01-Jan-87		13-Mar-93	13-Mar-93						
		1	S	6	01-Jan-87		04-Apr-93						04-Apr-93	p42
		1	S	6	01-Jan-87		22-Apr-93		22-Apr-93					
		1	S	6	01-Jan-87		10-May-93		10-May-93					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Test Date	Distress Table	PASCO Test Date	Ta
253	29	0603	1	S	6	01-Jan-87	09-Aug-96							
			1	S	6	01-Jan-87	11-Mar-97	11-Mar-97						
			1	S	6	01-Jan-87	18-Apr-98	18-Apr-98						
			1	S	6	01-Jan-87	10-Sep-98		10-Sep-98	10-Sep-98	10-Sep-98	m-jpccr		
			1	S	6	01-Jan-87	10-Feb-99	10-Feb-99						
	29	0603												
			1	S	6	01-Jan-87	07-Aug-91			07-Aug-91	07-Aug-91	m-jpccr		
			1	S	6	01-Jan-87	13-Feb-92	13-Feb-92						
			1	S	6	01-Jan-87	03-Mar-92		03-Mar-92	03-Mar-92	03-Mar-92	m-jpccr		
			1	S	6	01-Jan-87	04-Mar-92		04-Mar-92					
			2	S	6	01-Jan-87	13-Mar-93	13-Mar-93						
			2	S	6	01-Jan-87	04-Apr-93						04-Apr-93	p42
			2	S	6	01-Jan-87	11-May-93		11-May-93					
			2	S	6	01-Jan-87	22-Sep-93							
			2	S	6	01-Jan-87	14-Oct-93		14-Oct-93		14-Oct-93	m-acr		
			2	S	6	01-Jan-87	19-Oct-93		19-Oct-93					
			2	S	6	01-Jan-87	18-May-94	18-May-94						
			2	S	6	01-Jan-87	01-Sep-94							
			2	S	6	01-Jan-87	20-Jul-95				20-Jul-95	m-acr		
			2	S	6	01-Jan-87	21-Jul-95		21-Jul-95					
			2	S	6	01-Jan-87	05-Feb-96							
			2	S	6	01-Jan-87	11-Apr-96				11-Apr-96	m-acr		
			2	S	6	01-Jan-87	15-Apr-96						15-Apr-96	p42
			2	S	6	01-Jan-87	09-Aug-96							
			2	S	6	01-Jan-87	11-Mar-97	11-Mar-97						
			2	S	6	01-Jan-87	18-Apr-98	18-Apr-98						
			2	S	6	01-Jan-87	10-Sep-98		10-Sep-98		10-Sep-98	m-acr		
			2	S	6	01-Jan-87	10-Feb-99	10-Feb-99						
	29	0604												
			1	S	6	01-Jan-87	07-Aug-91			07-Aug-91	07-Aug-91	m-jpccr		
			1	S	6	01-Jan-87	13-Feb-92	13-Feb-92						

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Tal
254		1	S	6	01-Jan-87		02-Mar-92		02-Mar-92	02-Mar-92	02-Mar-92	m-jpccr		
		1	S	6	01-Jan-87		03-Mar-92		03-Mar-92					
		2	S	6	01-Jan-87		21-Oct-92		21-Oct-92					
		2	S	6	01-Jan-87		13-Mar-93	13-Mar-93						
		2	S	6	01-Jan-87		04-Apr-93						04-Apr-93	p42
		2	S	6	01-Jan-87		20-Apr-93		20-Apr-93					
		2	S	6	01-Jan-87		22-Sep-93							
		2	S	6	01-Jan-87		14-Oct-93		14-Oct-93		14-Oct-93	m-acr		
		2	S	6	01-Jan-87		19-Oct-93		19-Oct-93					
		2	S	6	01-Jan-87		18-May-94	18-May-94						
		2	S	6	01-Jan-87		01-Sep-94							
		2	S	6	01-Jan-87		20-Jul-95				20-Jul-95	m-acr		
		2	S	6	01-Jan-87		21-Jul-95		21-Jul-95					
		2	S	6	01-Jan-87		05-Feb-96							
		2	S	6	01-Jan-87		11-Apr-96				11-Apr-96	m-acr		
		2	S	6	01-Jan-87		15-Apr-96						15-Apr-96	p42
		2	S	6	01-Jan-87		09-Aug-96							
		2	S	6	01-Jan-87		11-Mar-97	11-Mar-97						
		2	S	6	01-Jan-87		18-Apr-98	18-Apr-98						
		2	S	6	01-Jan-87		10-Sep-98		10-Sep-98		10-Sep-98	m-acr		
		2	S	6	01-Jan-87		10-Feb-99	10-Feb-99						
29	0605													
		1	S	6	01-Jan-87		07-Aug-91			07-Aug-91	07-Aug-91	m-jpccr		
		1	S	6	01-Jan-87		13-Feb-92	13-Feb-92						
		1	S	6	01-Jan-87		10-Mar-92		10-Mar-92					
		1	S	6	01-Jan-87		11-Mar-92		11-Mar-92					
		1	S	6	01-Jan-87		16-Apr-92			16-Apr-92	16-Apr-92	m-jpccr		
		1	S	6	01-Jan-87		04-Apr-93						04-Apr-93	p42
		1	S	6	01-Jan-87		28-Apr-93		28-Apr-93					
		1	S	6	01-Jan-87		22-Sep-93							
		1	S	6	01-Jan-87		06-Oct-93		06-Oct-93					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Table
29	0606	1	S	6	01-Jan-87		13-Oct-93			13-Oct-93	13-Oct-93	m-jpccr		
		1	S	6	01-Jan-87		18-May-94	18-May-94						
		1	S	6	01-Jan-87		01-Sep-94							
		1	S	6	01-Jan-87		20-Jul-95		20-Jul-95	20-Jul-95	20-Jul-95	m-jpccr		
		1	S	6	01-Jan-87		09-Apr-96				09-Apr-96	m-jpccr		
		1	S	6	01-Jan-87		15-Apr-96						15-Apr-96	p42
		1	S	6	01-Jan-87		09-Aug-96							
		1	S	6	01-Jan-87		11-Mar-97	11-Mar-97						
		1	S	6	01-Jan-87		18-Apr-98	18-Apr-98						
		1	S	6	01-Jan-87		06-Oct-98		06-Oct-98	06-Oct-98	06-Oct-98	m-jpccr		
		1	S	6	01-Jan-87		10-Feb-99	10-Feb-99						
29	0606													
		1	S	6	01-Jan-87		07-Aug-91			07-Aug-91	07-Aug-91	m-jpccr		
		1	S	6	01-Jan-87		13-Feb-92	13-Feb-92						
		1	S	6	01-Jan-87		13-Feb-92	13-Feb-92						
		1	S	6	01-Jan-87		04-Mar-92		04-Mar-92	04-Mar-92	04-Mar-92	m-jpccr		
		2	S	6	01-Jan-87		01-Dec-92		01-Dec-92					
		2	S	6	01-Jan-87		13-Mar-93	13-Mar-93						
		2	S	6	01-Jan-87		04-Apr-93						04-Apr-93	p42
		2	S	6	01-Jan-87		12-May-93		12-May-93					
		2	S	6	01-Jan-87		22-Sep-93							
		2	S	6	01-Jan-87		14-Oct-93				14-Oct-93	m-acr		
		2	S	6	01-Jan-87		19-Oct-93		19-Oct-93					
		2	S	6	01-Jan-87		18-May-94	18-May-94						
		2	S	6	01-Jan-87		01-Sep-94							
		2	S	6	01-Jan-87		20-Jul-95				20-Jul-95	m-acr		
		2	S	6	01-Jan-87		21-Jul-95		21-Jul-95					
		2	S	6	01-Jan-87		05-Feb-96							
		2	S	6	01-Jan-87		15-Apr-96				15-Apr-96	m-acr	15-Apr-96	p42
2	S	6	01-Jan-87		09-Aug-96									
2	S	6	01-Jan-87		11-Mar-97	11-Mar-97								

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Ta
256		2	S	6	01-Jan-87		18-Apr-98	18-Apr-98						
		2	S	6	01-Jan-87		10-Aug-98							
		2	S	6	01-Jan-87		10-Sep-98		10-Sep-98		10-Sep-98	m-acr		
		2	S	6	01-Jan-87		10-Feb-99	10-Feb-99						
	29	0607												
		1	S	6	01-Jan-87	02-Sep-95	05-Aug-91			05-Aug-91	05-Aug-91	m-jpccr		
		1	S	6	01-Jan-87	02-Sep-95	11-Feb-92	11-Feb-92						
		1	S	6	01-Jan-87	02-Sep-95	15-Apr-92			15-Apr-92	15-Apr-92	m-jpccr		
		1	S	6	01-Jan-87	02-Sep-95	28-Apr-92		28-Apr-92					
		1	S	6	01-Jan-87	02-Sep-95	07-Jul-92		07-Jul-92					
		1	S	6	01-Jan-87	02-Sep-95	09-Jul-92		09-Jul-92					
		1	S	6	01-Jan-87	02-Sep-95	10-Jul-92		10-Jul-92					
		1	S	6	01-Jan-87	02-Sep-95	11-Jul-92		11-Jul-92					
		2	S	6	01-Jan-87	02-Sep-95	19-Oct-92		19-Oct-92					
		2	S	6	01-Jan-87	02-Sep-95	13-Mar-93	13-Mar-93						
		2	S	6	01-Jan-87	02-Sep-95	04-Apr-93						04-Apr-93	p42
		2	S	6	01-Jan-87	02-Sep-95	06-Apr-93		06-Apr-93					
		2	S	6	01-Jan-87	02-Sep-95	22-Sep-93							
		2	S	6	01-Jan-87	02-Sep-95	07-Oct-93		07-Oct-93					
		2	S	6	01-Jan-87	02-Sep-95	13-Oct-93				13-Oct-93	m-acr		
		2	S	6	01-Jan-87	02-Sep-95	14-Oct-93	14-Oct-93						
		2	S	6	01-Jan-87	02-Sep-95	18-May-94	18-May-94						
		2	S	6	01-Jan-87	02-Sep-95	07-Sep-94							
		2	S	6	01-Jan-87	02-Sep-95	19-Jul-95		19-Jul-95		19-Jul-95	m-acr		
		2	S	6	01-Jan-87	02-Sep-95	06-Feb-96							
		2	S	6	01-Jan-87	02-Sep-95	15-Apr-96						15-Apr-96	p42
		2	S	6	01-Jan-87	02-Sep-95	09-Aug-96							
		2	S	6	01-Jan-87	02-Sep-95	09-Sep-98		09-Sep-98		09-Sep-98	m-acr		
		2	S	6	01-Jan-87	02-Sep-95	10-Feb-99	10-Feb-99						
	29	0608												
		1	S	6	01-Jan-87		06-Aug-91			06-Aug-91	06-Aug-91	m-jpccr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
257		1	S	6	01-Jan-87		11-Feb-92	11-Feb-92						
		1	S	6	01-Jan-87		15-Apr-92			15-Apr-92	15-Apr-92	m-jpccr		
		1	S	6	01-Jan-87		28-Apr-92		28-Apr-92					
		1	S	6	01-Jan-87		08-Jul-92		08-Jul-92					
		1	S	6	01-Jan-87		10-Jul-92		10-Jul-92					
		2	S	6	01-Jan-87		04-Nov-92		04-Nov-92					
		2	S	6	01-Jan-87		13-Mar-93	13-Mar-93						
		2	S	6	01-Jan-87		13-Mar-93	13-Mar-93						
		2	S	6	01-Jan-87		04-Apr-93						04-Apr-93	p42
		2	S	6	01-Jan-87		21-Apr-93		21-Apr-93					
		2	S	6	01-Jan-87		21-Sep-93		21-Sep-93					
		2	S	6	01-Jan-87		22-Sep-93							
		2	S	6	01-Jan-87		13-Oct-93				13-Oct-93	m-acr		
		2	S	6	01-Jan-87		18-May-94	18-May-94						
		2	S	6	01-Jan-87		01-Sep-94							
		2	S	6	01-Jan-87		19-Jul-95		19-Jul-95		19-Jul-95	m-acr		
		2	S	6	01-Jan-87		06-Feb-96							
		2	S	6	01-Jan-87		02-Apr-96				02-Apr-96	m-acr		
		2	S	6	01-Jan-87		15-Apr-96						15-Apr-96	p42
		2	S	6	01-Jan-87		09-Aug-96							
		2	S	6	01-Jan-87		11-Mar-97	11-Mar-97						
		2	S	6	01-Jan-87		18-Apr-98	18-Apr-98						
		2	S	6	01-Jan-87		09-Sep-98		09-Sep-98		09-Sep-98	m-acr		
		2	S	6	01-Jan-87		10-Feb-99	10-Feb-99						
29	0659													
		1	S	6	01-Jan-87	02-Sep-95	05-Aug-91			05-Aug-91	05-Aug-91	m-jpccr		
		1	S	6	01-Jan-87	02-Sep-95	11-Feb-92	11-Feb-92						
		1	S	6	01-Jan-87	02-Sep-95	15-Apr-92			15-Apr-92	15-Apr-92	m-jpccr		
		1	S	6	01-Jan-87	02-Sep-95	05-May-92		05-May-92					
		1	S	6	01-Jan-87	02-Sep-95	07-Jul-92		07-Jul-92					
		2	S	6	01-Jan-87	02-Sep-95	13-Mar-93	13-Mar-93						

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Tal					
		2	S	6	01-Jan-87	02-Sep-95	04-Apr-93							04-Apr-93	p42				
		2	S	6	01-Jan-87	02-Sep-95	22-Sep-93												
		2	S	6	01-Jan-87	02-Sep-95	13-Oct-93							13-Oct-93	m-acr				
		2	S	6	01-Jan-87	02-Sep-95	14-Oct-93							14-Oct-93					
		2	S	6	01-Jan-87	02-Sep-95	18-May-94							18-May-94					
		2	S	6	01-Jan-87	02-Sep-95	07-Sep-94												
		2	S	6	01-Jan-87	02-Sep-95	19-Jul-95							19-Jul-95	19-Jul-95	m-acr			
		2	S	6	01-Jan-87	02-Sep-95	06-Feb-96												
		2	S	6	01-Jan-87	02-Sep-95	15-Apr-96									15-Apr-96	p42		
		2	S	6	01-Jan-87	02-Sep-95	09-Aug-96												
		2	S	6	01-Jan-87	02-Sep-95	09-Sep-98							09-Sep-98					
		2	S	6	01-Jan-87	02-Sep-95	10-Feb-99							10-Feb-99					
29	0660																		
		1	S	6	01-Jan-87		06-Aug-91												
		1	S	6	01-Jan-87		11-Feb-92									11-Feb-92			
		1	S	6	01-Jan-87		15-Apr-92									15-Apr-92	m-jpccr		
		1	S	6	01-Jan-87		05-May-92									05-May-92			
		1	S	6	01-Jan-87		08-Jul-92									08-Jul-92			
		2	S	6	01-Jan-87		13-Mar-93									13-Mar-93			
		2	S	6	01-Jan-87		13-Mar-93									13-Mar-93			
		2	S	6	01-Jan-87		04-Apr-93										04-Apr-93	p42	
		2	S	6	01-Jan-87		22-Sep-93												
		2	S	6	01-Jan-87		13-Oct-93										13-Oct-93	m-acr	
		2	S	6	01-Jan-87		18-May-94									18-May-94			
		2	S	6	01-Jan-87		01-Sep-94												
		2	S	6	01-Jan-87		19-Jul-95									19-Jul-95	19-Jul-95	m-acr	
		2	S	6	01-Jan-87		06-Feb-96												
		2	S	6	01-Jan-87		02-Apr-96										02-Apr-96	m-acr	
		2	S	6	01-Jan-87		15-Apr-96											15-Apr-96	p42
		2	S	6	01-Jan-87		09-Aug-96												
2	S	6	01-Jan-87		11-Mar-97	11-Mar-97													

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
259		2	S	6	01-Jan-87		18-Apr-98	18-Apr-98						
		2	S	6	01-Jan-87		09-Sep-98		09-Sep-98		09-Sep-98	m-accr		
		2	S	6	01-Jan-87		10-Feb-99	10-Feb-99						
	29	0661												
		1	S	6	01-Jan-87		07-Aug-91			07-Aug-91	07-Aug-91	m-jpccr		
		1	S	6	01-Jan-87		11-Feb-92	11-Feb-92						
		1	S	6	01-Jan-87		16-Apr-92			16-Apr-92	16-Apr-92	m-jpccr		
		1	S	6	01-Jan-87		04-Jun-92		04-Jun-92					
		1	S	6	01-Jan-87		09-Jul-92		09-Jul-92					
		1	S	6	01-Jan-87		10-Jul-92		10-Jul-92					
		1	S	6	01-Jan-87		11-Jul-92		11-Jul-92					
		2	S	6	01-Jan-87		13-Mar-93	13-Mar-93						
		2	S	6	01-Jan-87		04-Apr-93						04-Apr-93	p42
		2	S	6	01-Jan-87		11-Aug-93				11-Aug-93	m-accr		
		2	S	6	01-Jan-87		22-Sep-93							
		2	S	6	01-Jan-87		13-Oct-93				13-Oct-93	m-accr		
		2	S	6	01-Jan-87		18-May-94	18-May-94						
		2	S	6	01-Jan-87		01-Sep-94							
		2	S	6	01-Jan-87		19-Jul-95		19-Jul-95		19-Jul-95	m-accr		
		2	S	6	01-Jan-87		06-Feb-96							
		2	S	6	01-Jan-87		03-Apr-96				03-Apr-96	m-accr		
		2	S	6	01-Jan-87		15-Apr-96						15-Apr-96	p42
		2	S	6	01-Jan-87		09-Aug-96							
		2	S	6	01-Jan-87		11-Mar-97	11-Mar-97						
		2	S	6	01-Jan-87		18-Apr-98	18-Apr-98						
		2	S	6	01-Jan-87		07-Oct-98		07-Oct-98		07-Oct-98	m-accr		
		2	S	6	01-Jan-87		10-Feb-99	10-Feb-99						
	29	0662												
		1	S	6	01-Jan-87		06-Aug-91			06-Aug-91	06-Aug-91	m-jpccr		
		1	S	6	01-Jan-87		11-Feb-92	11-Feb-92						
		1	S	6	01-Jan-87		15-Apr-92			15-Apr-92	15-Apr-92	m-jpccr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Tal	
29	0663	2	S	6	01-Jan-87		13-Mar-93	13-Mar-93							
		2	S	6	01-Jan-87		04-Apr-93							04-Apr-93	p42
		2	S	6	01-Jan-87		13-Oct-93				13-Oct-93	m-acr			
		2	S	6	01-Jan-87		18-May-94	18-May-94							
		2	S	6	01-Jan-87		01-Sep-94								
		2	S	6	01-Jan-87		19-Jul-95		19-Jul-95		19-Jul-95	m-acr			
		2	S	6	01-Jan-87		06-Feb-96								
		2	S	6	01-Jan-87		03-Apr-96				03-Apr-96	m-acr			
		2	S	6	01-Jan-87		15-Apr-96							15-Apr-96	p42
		2	S	6	01-Jan-87		09-Aug-96								
		2	S	6	01-Jan-87		11-Mar-97	11-Mar-97							
		2	S	6	01-Jan-87		18-Apr-98	18-Apr-98							
		2	S	6	01-Jan-87		07-Oct-98		07-Oct-98		07-Oct-98	m-acr			
		2	S	6	01-Jan-87		10-Feb-99	10-Feb-99							
29	0663	1	S	6	01-Jan-87		07-Aug-91			07-Aug-91	07-Aug-91	m-jpccr			
		1	S	6	01-Jan-87		11-Feb-92	11-Feb-92							
		1	S	6	01-Jan-87		16-Apr-92			16-Apr-92	16-Apr-92	m-jpccr			
		1	S	6	01-Jan-87		04-Jun-92		04-Jun-92						
		1	S	6	01-Jan-87		08-Jul-92		08-Jul-92						
		1	S	6	01-Jan-87		10-Jul-92		10-Jul-92						
		1	S	6	01-Jan-87		11-Jul-92		11-Jul-92						
		1	S	6	01-Jan-87		14-Jul-92		14-Jul-92						
		2	S	6	01-Jan-87		13-Mar-93	13-Mar-93							
		2	S	6	01-Jan-87		04-Apr-93							04-Apr-93	p42
		2	S	6	01-Jan-87		22-Sep-93								
		2	S	6	01-Jan-87		13-Oct-93				13-Oct-93	m-acr			
		2	S	6	01-Jan-87		18-May-94	18-May-94							
		2	S	6	01-Jan-87		01-Sep-94								
		2	S	6	01-Jan-87		19-Jul-95		19-Jul-95		19-Jul-95	m-acr			
2	S	6	01-Jan-87		06-Feb-96										

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Test Date	Distress Table	PASCO Test Date	Ta
261	29	0664												
			2	S	6	01-Jan-87	04-Apr-96				04-Apr-96	m-acr		
			2	S	6	01-Jan-87	15-Apr-96						15-Apr-96	p42
			2	S	6	01-Jan-87	09-Aug-96							
			2	S	6	01-Jan-87	11-Mar-97	11-Mar-97						
			2	S	6	01-Jan-87	18-Apr-98	18-Apr-98						
			2	S	6	01-Jan-87	07-Oct-98		07-Oct-98		07-Oct-98	m-acr		
			2	S	6	01-Jan-87	10-Feb-99	10-Feb-99						
	29	0665												
			1	S	6	01-Jan-87	06-Aug-91			06-Aug-91	06-Aug-91	m-jpccr		
			1	S	6	01-Jan-87	11-Feb-92	11-Feb-92						
			1	S	6	01-Jan-87	15-Apr-92			15-Apr-92	15-Apr-92	m-jpccr		
			1	S	6	01-Jan-87	03-Jun-92		03-Jun-92					
			1	S	6	01-Jan-87	08-Jul-92		08-Jul-92					
			2	S	6	01-Jan-87	13-Mar-93	13-Mar-93						
			2	S	6	01-Jan-87	04-Apr-93						04-Apr-93	p42
			2	S	6	01-Jan-87	22-Sep-93							
			2	S	6	01-Jan-87	13-Oct-93				13-Oct-93	m-acr		
			2	S	6	01-Jan-87	18-May-94	18-May-94						
			2	S	6	01-Jan-87	01-Sep-94							
			2	S	6	01-Jan-87	19-Jul-95		19-Jul-95		19-Jul-95	m-acr		
			2	S	6	01-Jan-87	06-Feb-96							
			2	S	6	01-Jan-87	04-Apr-96				04-Apr-96	m-acr		
			2	S	6	01-Jan-87	15-Apr-96						15-Apr-96	p42
			2	S	6	01-Jan-87	09-Aug-96							
			2	S	6	01-Jan-87	11-Mar-97	11-Mar-97						
			2	S	6	01-Jan-87	18-Apr-98	18-Apr-98						
			2	S	6	01-Jan-87	07-Oct-98		07-Oct-98		07-Oct-98	m-acr		
			2	S	6	01-Jan-87	10-Feb-99	10-Feb-99						
	29	0665												
			1	S	6	01-Jan-87	07-Aug-91			07-Aug-91	07-Aug-91	m-jpccr		
			1	S	6	01-Jan-87	13-Feb-92	13-Feb-92						

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
262		1	S	6	01-Jan-87		15-Apr-92			15-Apr-92				
		1	S	6	01-Jan-87		23-Apr-92		23-Apr-92					
		2	S	6	01-Jan-87		04-Apr-93						04-Apr-93	p42
		2	S	6	01-Jan-87		23-Apr-93				23-Apr-93	m-acr		
		2	S	6	01-Jan-87		22-Sep-93							
		2	S	6	01-Jan-87		18-May-94	18-May-94						
		2	S	6	01-Jan-87		01-Sep-94							
		2	S	6	01-Jan-87		20-Jul-95				20-Jul-95	m-acr		
		2	S	6	01-Jan-87		24-Jul-95		24-Jul-95					
		2	S	6	01-Jan-87		06-Feb-96							
		2	S	6	01-Jan-87		15-Apr-96						15-Apr-96	p42
		2	S	6	01-Jan-87		17-Apr-96				17-Apr-96	m-acr		
		2	S	6	01-Jan-87		09-Aug-96							
		2	S	6	01-Jan-87		11-Mar-97	11-Mar-97						
		2	S	6	01-Jan-87		18-Apr-98	18-Apr-98						
		2	S	6	01-Jan-87		08-Oct-98		08-Oct-98		08-Oct-98	m-acr		
		2	S	6	01-Jan-87		10-Feb-99	10-Feb-99						
29	0666													
		1	S	6	01-Jan-87		07-Aug-91			07-Aug-91	07-Aug-91	m-jpccr		
		1	S	6	01-Jan-87		13-Feb-92	13-Feb-92						
		1	S	6	01-Jan-87		15-Apr-92			15-Apr-92	15-Apr-92	m-jpccr		
		1	S	6	01-Jan-87		22-Apr-92		22-Apr-92					
		1	S	6	01-Jan-87		02-Dec-92		02-Dec-92					
		1	S	6	01-Jan-87		13-Mar-93	13-Mar-93						
		1	S	6	01-Jan-87		04-Apr-93						04-Apr-93	p42
		1	S	6	01-Jan-87		12-May-93		12-May-93					
		1	S	6	01-Jan-87		22-Sep-93							
		1	S	6	01-Jan-87		15-Oct-93			15-Oct-93	15-Oct-93	m-jpccr		
		1	S	6	01-Jan-87		18-May-94	18-May-94						
		1	S	6	01-Jan-87		01-Sep-94							
		1	S	6	01-Jan-87		20-Jul-95			20-Jul-95	20-Jul-95	m-jpccr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Table
		1	S	6	01-Jan-87		24-Jul-95		24-Jul-95					
		1	S	6	01-Jan-87		15-Apr-96						15-Apr-96	p42
		1	S	6	01-Jan-87		17-Apr-96				17-Apr-96	m-jpccr		
		1	S	6	01-Jan-87		09-Aug-96							
		1	S	6	01-Jan-87		11-Mar-97	11-Mar-97						
		1	S	6	01-Jan-87		18-Apr-98	18-Apr-98						
		1	S	6	01-Jan-87		08-Oct-98		08-Oct-98	08-Oct-98	08-Oct-98	m-jpccr		
		1	S	6	01-Jan-87		10-Feb-99	10-Feb-99						
29	A600													
		1	S	6	01-Jan-98									
29	A601													
		1	S	6	01-Jan-98		18-Jun-98			18-Jun-98	18-Jun-98	m-jpccr		
29	A602													
		1	S	6	01-Jan-98		18-Jun-98			18-Jun-98	18-Jun-98	m-jpccr		
29	A603													
		1	S	6	01-Jan-98		18-Jun-98			18-Jun-98	18-Jun-98	m-jpccr		
29	A604													
		1	S	6	01-Jan-98									
29	A605													
		1	S	6	01-Jan-98									
29	A606													
		1	S	6	01-Jan-98		18-Jun-98			18-Jun-98	18-Jun-98	m-jpccr		
		1	S	6	01-Jan-98		30-Nov-98		30-Nov-98		30-Nov-98	m-acr		
29	A607													
		1	S	6	01-Jan-98		18-Jun-98			18-Jun-98	18-Jun-98	m-jpccr		
29	A608													
		1	S	6	01-Jan-98									
40	0600													
		1	S	6	01-Jan-87									
40	0601													
		1	S	6	01-Jan-87		28-Oct-91							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
264		1	S	6	01-Jan-87		14-Jan-92	14-Jan-92						
		1	S	6	01-Jan-87		04-Feb-92		04-Feb-92					
		1	S	6	01-Jan-87		27-Jul-92							
		1	S	6	01-Jan-87		28-Jul-92			28-Jul-92	28-Jul-92	m-jpccr		
		1	S	6	01-Jan-87		05-Nov-92			05-Nov-92	05-Nov-92	m-jpccr		
		1	S	6	01-Jan-87		10-Mar-93						10-Mar-93	p42
		1	S	6	01-Jan-87		16-Mar-93	16-Mar-93						
		1	S	6	01-Jan-87		21-Apr-93		21-Apr-93					
		1	S	6	01-Jan-87		22-Apr-93		22-Apr-93					
		1	S	6	01-Jan-87		30-Mar-94			30-Mar-94	30-Mar-94	m-jpccr		
		1	S	6	01-Jan-87		02-Nov-94			02-Nov-94	02-Nov-94	m-jpccr		
		1	S	6	01-Jan-87		13-Jan-95	13-Jan-95						
		1	S	6	01-Jan-87		29-Jan-96		29-Jan-96					
		1	S	6	01-Jan-87		22-Apr-96						22-Apr-96	p42
		1	S	6	01-Jan-87		22-May-97			22-May-97	22-May-97	m-jpccr		
		1	S	6	01-Jan-87		27-Jan-98							
		1	S	6	01-Jan-87		16-Nov-98		16-Nov-98	16-Nov-98	16-Nov-98	m-jpccr		
		1	S	6	01-Jan-87		17-Nov-98		17-Nov-98					
		1	S	6	01-Jan-87		09-Jun-99	09-Jun-99						
40	0602													
		1	S	6	01-Jan-87		28-Oct-91							
		1	S	6	01-Jan-87		14-Jan-92	14-Jan-92						
		1	S	6	01-Jan-87		14-Jan-92	14-Jan-92						
		1	S	6	01-Jan-87		04-Feb-92		04-Feb-92					
		1	S	6	01-Jan-87		27-Jul-92							
		1	S	6	01-Jan-87		28-Jul-92			28-Jul-92	28-Jul-92	m-jpccr		
		1	S	6	01-Jan-87		27-Jan-98							
		2	S	6	01-Jan-87		05-Nov-92			05-Nov-92	05-Nov-92	m-jpccr		
		2	S	6	01-Jan-87		10-Mar-93						10-Mar-93	p42
		2	S	6	01-Jan-87		16-Mar-93	16-Mar-93						
		2	S	6	01-Jan-87		21-Apr-93		21-Apr-93					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
265	40	0603		2	S	6	01-Jan-87				30-Mar-94			
				2	S	6	01-Jan-87				02-Nov-94			
				2	S	6	01-Jan-87				13-Jan-95	13-Jan-95		
				2	S	6	01-Jan-87				13-Jan-95	13-Jan-95		
				2	S	6	01-Jan-87				25-Jan-96			
				2	S	6	01-Jan-87				22-Apr-96		22-Apr-96	p42
				2	S	6	01-Jan-87				22-May-97			
				2	S	6	01-Jan-87			22-May-97	22-May-97	m-jpccr		
				2	S	6	01-Jan-87			16-Nov-98	16-Nov-98	m-jpccr		
				2	S	6	01-Jan-87			17-Nov-98				
				2	S	6	01-Jan-87			09-Jun-99	09-Jun-99			
				1	S	6	01-Jan-87				28-Oct-91			
				1	S	6	01-Jan-87				15-Jan-92			
				1	S	6	01-Jan-87				28-Jan-92			
				1	S	6	01-Jan-87				27-Jul-92			
				2	S	6	01-Jan-87				27-Jul-92			
				2	S	6	01-Jan-87				27-Jul-92			
				2	S	6	01-Jan-87				28-Jul-92	m-jpccr		
				2	S	6	01-Jan-87				05-Nov-92	m-acr		
				2	S	6	01-Jan-87				10-Mar-93		10-Mar-93	p42
				2	S	6	01-Jan-87				16-Mar-93			
				2	S	6	01-Jan-87				22-Apr-93			
				2	S	6	01-Jan-87				22-Apr-93			
				2	S	6	01-Jan-87				30-Mar-94	m-acr		
				2	S	6	01-Jan-87				02-Nov-94	m-acr		
				2	S	6	01-Jan-87				13-Jan-95			
				2	S	6	01-Jan-87				13-Jan-95			
				2	S	6	01-Jan-87				29-Jan-96			
				2	S	6	01-Jan-87				22-Apr-96		22-Apr-96	p42
				2	S	6	01-Jan-87				22-May-97	m-acr		
				2	S	6	01-Jan-87				27-Jan-98			
				2	S	6	01-Jan-87				17-Nov-98	m-acr		
				2	S	6	01-Jan-87				09-Jun-99	09-Jun-99		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Table
40	0604													
		1	S	6	01-Jan-87		28-Oct-91							
		1	S	6	01-Jan-87		15-Jan-92	15-Jan-92						
		1	S	6	01-Jan-87		28-Jan-92		28-Jan-92					
		1	S	6	01-Jan-87		27-Jul-92							
		2	S	6	01-Jan-87		28-Jul-92			28-Jul-92	28-Jul-92	m-jpccr		
		2	S	6	01-Jan-87		05-Nov-92				05-Nov-92	m-acr		
		2	S	6	01-Jan-87		10-Mar-93						10-Mar-93	p42
		2	S	6	01-Jan-87		16-Mar-93	16-Mar-93						
		2	S	6	01-Jan-87		22-Apr-93		22-Apr-93					
		2	S	6	01-Jan-87		30-Mar-94				30-Mar-94	m-acr		
		2	S	6	01-Jan-87		02-Nov-94				02-Nov-94	m-acr		
		2	S	6	01-Jan-87		13-Jan-95	13-Jan-95						
		2	S	6	01-Jan-87		29-Jan-96		29-Jan-96					
		2	S	6	01-Jan-87		22-Apr-96						22-Apr-96	p42
		2	S	6	01-Jan-87		22-May-97				22-May-97	m-acr		
		2	S	6	01-Jan-87		27-Jan-98							
		2	S	6	01-Jan-87		17-Nov-98		17-Nov-98		17-Nov-98	m-acr		
		2	S	6	01-Jan-87		09-Jun-99	09-Jun-99						
40	0605													
		1	S	6	01-Jan-87		28-Oct-91							
		1	S	6	01-Jan-87		15-Jan-92	15-Jan-92						
		1	S	6	01-Jan-87		30-Jan-92		30-Jan-92					
		1	S	6	01-Jan-87		27-Jul-92			27-Jul-92	27-Jul-92	m-jpccr		
		1	S	6	01-Jan-87		27-Jan-98							
		2	S	6	01-Jan-87		05-Nov-92			05-Nov-92	05-Nov-92	m-jpccr		
		2	S	6	01-Jan-87		10-Mar-93						10-Mar-93	p42
		2	S	6	01-Jan-87		16-Mar-93	16-Mar-93						
		2	S	6	01-Jan-87		16-Mar-93	16-Mar-93						
		2	S	6	01-Jan-87		23-Apr-93		23-Apr-93					
		2	S	6	01-Jan-87		30-Mar-94			30-Mar-94	30-Mar-94	m-jpccr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Tal
268		1	S	6	01-Jan-87		15-Jan-92	15-Jan-92						
		1	S	6	01-Jan-87		29-Jan-92		29-Jan-92					
		1	S	6	01-Jan-87		27-Jul-92							
		2	S	6	01-Jan-87		27-Jul-92			27-Jul-92	27-Jul-92	m-jpccr		
		2	S	6	01-Jan-87		05-Nov-92				05-Nov-92	m-acr		
		2	S	6	01-Jan-87		10-Mar-93						10-Mar-93	p42
		2	S	6	01-Jan-87		16-Mar-93	16-Mar-93						
		2	S	6	01-Jan-87		22-Apr-93		22-Apr-93					
		2	S	6	01-Jan-87		30-Mar-94				30-Mar-94	m-acr		
		2	S	6	01-Jan-87		02-Nov-94				02-Nov-94	m-acr		
		2	S	6	01-Jan-87		13-Jan-95	13-Jan-95						
		2	S	6	01-Jan-87		30-Jan-96		30-Jan-96					
		2	S	6	01-Jan-87		22-Apr-96						22-Apr-96	p42
		2	S	6	01-Jan-87		22-May-97				22-May-97	m-acr		
		2	S	6	01-Jan-87		27-Jan-98							
		2	S	6	01-Jan-87		17-Nov-98				17-Nov-98	m-acr		
		2	S	6	01-Jan-87		18-Nov-98		18-Nov-98					
		2	S	6	01-Jan-87		20-Nov-98							
40	0608													
		1	S	6	01-Jan-87		28-Oct-91							
		1	S	6	01-Jan-87		15-Jan-92	15-Jan-92						
		1	S	6	01-Jan-87		15-Jan-92	15-Jan-92						
		1	S	6	01-Jan-87		29-Jan-92		29-Jan-92					
		1	S	6	01-Jan-87		27-Jul-92							
		2	S	6	01-Jan-87		27-Jul-92			27-Jul-92	27-Jul-92	m-jpccr		
		2	S	6	01-Jan-87		05-Nov-92				05-Nov-92	m-acr		
		2	S	6	01-Jan-87		10-Mar-93						10-Mar-93	p42
		2	S	6	01-Jan-87		16-Mar-93	16-Mar-93						
		2	S	6	01-Jan-87		22-Apr-93		22-Apr-93					
		2	S	6	01-Jan-87		30-Mar-94				30-Mar-94	m-acr		
		2	S	6	01-Jan-87		02-Nov-94				02-Nov-94	m-acr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
269	42	0600		2	S	6	01-Jan-87		13-Jan-95	13-Jan-95				
				2	S	6	01-Jan-87		30-Jan-96	30-Jan-96				
				2	S	6	01-Jan-87		22-Apr-96				22-Apr-96	p42
				2	S	6	01-Jan-87		22-May-97		22-May-97	m-acr		
				2	S	6	01-Jan-87		27-Jan-98					
				2	S	6	01-Jan-87		18-Nov-98	18-Nov-98	18-Nov-98	m-acr		
				2	S	6	01-Jan-87		09-Jun-99	09-Jun-99				
	42	0601		1	S	6	01-Jan-87							
				1	S	6	01-Jan-87		30-Nov-89		30-Nov-89	30-Nov-89	m-jpccr	
				1	S	6	01-Jan-87		24-Jul-90		24-Jul-90	m-jpccr		
				1	S	6	01-Jan-87		13-Aug-90	13-Aug-90				
				1	S	6	01-Jan-87		24-Sep-91		24-Sep-91			
				1	S	6	01-Jan-87		26-Sep-91		26-Sep-91			
				1	S	6	01-Jan-87		03-Oct-91	03-Oct-91				
				1	S	6	01-Jan-87		04-Aug-92		04-Aug-92			
				1	S	6	01-Jan-87		18-Nov-92		18-Nov-92			
				1	S	6	01-Jan-87		24-Nov-92	24-Nov-92				
				1	S	6	01-Jan-87		20-Oct-93		20-Oct-93			
				1	S	6	01-Jan-87		26-Oct-93	26-Oct-93				
				1	S	6	01-Jan-87		14-Jun-94		14-Jun-94			
				1	S	6	01-Jan-87		16-Jun-94		16-Jun-94	m-jpccr		
				1	S	6	01-Jan-87		08-Aug-94				08-Aug-94	p42
				1	S	6	01-Jan-87		03-Nov-94	03-Nov-94				
				1	S	6	01-Jan-87		17-Oct-95	17-Oct-95				
				1	S	6	01-Jan-87		19-Jul-96				19-Jul-96	p42
				1	S	6	01-Jan-87		11-Jun-97	11-Jun-97				
				1	S	6	01-Jan-87		27-Aug-97	27-Aug-97	27-Aug-97	27-Aug-97	m-jpccr	
				1	S	6	01-Jan-87		28-May-98	28-May-98				
				1	S	6	01-Jan-87		20-Jul-99		20-Jul-99	20-Jul-99	m-jpccr	

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Ta
42	0602													
		1	S	6	01-Jan-87		30-Nov-89			30-Nov-89	30-Nov-89	m-jpccr		
		1	S	6	01-Jan-87		24-Jul-90				24-Jul-90	m-jpccr		
		1	S	6	01-Jan-87		13-Aug-90	13-Aug-90						
		1	S	6	01-Jan-87		13-Aug-90	13-Aug-90						
		1	S	6	01-Jan-87		11-Oct-91	11-Oct-91						
		1	S	6	01-Jan-87		11-Oct-91	11-Oct-91						
		1	S	6	01-Jan-87		17-Nov-92		17-Nov-92					
		1	S	6	01-Jan-87		18-Nov-92		18-Nov-92					
		1	S	6	01-Jan-87		24-Nov-92	24-Nov-92						
		1	S	6	01-Jan-87		19-Oct-93		19-Oct-93					
		1	S	6	01-Jan-87		26-Oct-93	26-Oct-93						
		1	S	6	01-Jan-87		13-Jun-94		13-Jun-94					
		1	S	6	01-Jan-87		14-Jun-94		14-Jun-94					
		1	S	6	01-Jan-87		15-Jun-94			15-Jun-94	15-Jun-94	m-jpccr		
		1	S	6	01-Jan-87		08-Aug-94						08-Aug-94	p42
		1	S	6	01-Jan-87		03-Nov-94	03-Nov-94						
		1	S	6	01-Jan-87		17-Oct-95	17-Oct-95						
		1	S	6	01-Jan-87		19-Jul-96						19-Jul-96	p42
		1	S	6	01-Jan-87		11-Jun-97	11-Jun-97						
		1	S	6	01-Jan-87		27-Aug-97		27-Aug-97	27-Aug-97	27-Aug-97	m-jpccr		
		1	S	6	01-Jan-87		28-May-98	28-May-98						
		1	S	6	01-Jan-87		20-Jul-99			20-Jul-99	20-Jul-99	m-jpccr		
42	0603													
		1	S	6	01-Jan-87		16-Nov-89			16-Nov-89	16-Nov-89	m-jpccr		
		1	S	6	01-Jan-87		24-Jul-90				24-Jul-90	m-jpccr		
		1	S	6	01-Jan-87		03-Oct-91	03-Oct-91						
		1	S	6	01-Jan-87		04-Aug-92	04-Aug-92						
		1	S	6	01-Jan-87		04-Aug-92	04-Aug-92						
		1	S	6	01-Jan-87		05-Aug-92		05-Aug-92					
		1	S	6	01-Jan-87		22-Sep-92		22-Sep-92					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
271	42	0604		2	S	6	01-Jan-87		24-Nov-92	24-Nov-92				
				2	S	6	01-Jan-87		13-Jun-94		13-Jun-94	m-acr		
				2	S	6	01-Jan-87		20-Jun-94	20-Jun-94				
				2	S	6	01-Jan-87		08-Aug-94				08-Aug-94	p42
				2	S	6	01-Jan-87	02-Nov-94	02-Nov-94					
				2	S	6	01-Jan-87		18-Oct-95	18-Oct-95				
				2	S	6	01-Jan-87		19-Jul-96				19-Jul-96	p42
				2	S	6	01-Jan-87		11-Jun-97	11-Jun-97				
				2	S	6	01-Jan-87		26-Aug-97		26-Aug-97	m-acr		
				2	S	6	01-Jan-87		27-Aug-97	27-Aug-97				
				2	S	6	01-Jan-87		28-May-98	28-May-98				
				2	S	6	01-Jan-87		21-Jul-99		21-Jul-99	m-acr		
	42	0605												
				1	S	6	01-Jan-87		16-Nov-89		16-Nov-89	m-jpccr		
				1	S	6	01-Jan-87		25-Jul-90		25-Jul-90	m-jpccr		
				1	S	6	01-Jan-87		03-Oct-91	03-Oct-91				
				1	S	6	01-Jan-87		04-Aug-92	04-Aug-92				
				1	S	6	01-Jan-87		05-Aug-92	05-Aug-92				
				1	S	6	01-Jan-87		22-Sep-92	22-Sep-92				
				2	S	6	01-Jan-87		24-Nov-92	24-Nov-92				
				2	S	6	01-Jan-87		13-Jun-94		13-Jun-94	m-acr		
				2	S	6	01-Jan-87		20-Jun-94	20-Jun-94				
				2	S	6	01-Jan-87		08-Aug-94				08-Aug-94	p42
				2	S	6	01-Jan-87		02-Nov-94	02-Nov-94				
				2	S	6	01-Jan-87		18-Oct-95	18-Oct-95				
				2	S	6	01-Jan-87		19-Jul-96				19-Jul-96	p42
				2	S	6	01-Jan-87		11-Jun-97	11-Jun-97				
				2	S	6	01-Jan-87		26-Aug-97	26-Aug-97	26-Aug-97	m-acr		
				2	S	6	01-Jan-87		28-May-98	28-May-98				
				2	S	6	01-Jan-87		21-Jul-99		21-Jul-99	m-acr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Test Date	Distress Table	PASCO Test Date	Ta
272		1	S	6	01-Jan-87		30-Nov-89			30-Nov-89	30-Nov-89	m-jpccr		
		1	S	6	01-Jan-87		24-Jul-90				24-Jul-90	m-jpccr		
		1	S	6	01-Jan-87		13-Aug-90	13-Aug-90						
		1	S	6	01-Jan-87		13-Aug-90	13-Aug-90						
		1	S	6	01-Jan-87		03-Oct-91	03-Oct-91						
		1	S	6	01-Jan-87		04-Aug-92	04-Aug-92	04-Aug-92					
		1	S	6	01-Jan-87		24-Sep-92		24-Sep-92					
		1	S	6	01-Jan-87		24-Nov-92	24-Nov-92						
		1	S	6	01-Jan-87		21-Oct-93		21-Oct-93					
		1	S	6	01-Jan-87		26-Oct-93	26-Oct-93						
		1	S	6	01-Jan-87		15-Jun-94		15-Jun-94					
		1	S	6	01-Jan-87		16-Jun-94		16-Jun-94	16-Jun-94	16-Jun-94	m-jpccr		
		1	S	6	01-Jan-87		08-Aug-94						08-Aug-94	p42
		1	S	6	01-Jan-87		03-Nov-94	03-Nov-94						
		1	S	6	01-Jan-87		17-Oct-95	17-Oct-95						
		1	S	6	01-Jan-87		19-Jul-96						19-Jul-96	p42
		1	S	6	01-Jan-87		11-Jun-97	11-Jun-97						
		1	S	6	01-Jan-87		21-Aug-97		21-Aug-97	21-Aug-97	21-Aug-97	m-jpccr		
		1	S	6	01-Jan-87		26-Aug-97		26-Aug-97					
		1	S	6	01-Jan-87		28-May-98	28-May-98						
		1	S	6	01-Jan-87		21-Jul-99			21-Jul-99	21-Jul-99	m-jpccr		
42	0606													
		1	S	6	01-Jan-87		16-Nov-89			16-Nov-89	16-Nov-89	m-jpccr		
		1	S	6	01-Jan-87		24-Jul-90				24-Jul-90	m-jpccr		
		1	S	6	01-Jan-87		03-Oct-91	03-Oct-91						
		1	S	6	01-Jan-87		04-Aug-92	04-Aug-92						
		1	S	6	01-Jan-87		05-Aug-92		05-Aug-92					
		1	S	6	01-Jan-87		22-Sep-92		22-Sep-92					
		2	S	6	01-Jan-87		24-Nov-92	24-Nov-92						
		2	S	6	01-Jan-87		13-Jun-94				13-Jun-94	m-acr		
		2	S	6	01-Jan-87		20-Jun-94		20-Jun-94					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Tal
273	42	0607		2	S	6	01-Jan-87		08-Aug-94				08-Aug-94	p42
				2	S	6	01-Jan-87		02-Nov-94	02-Nov-94				
				2	S	6	01-Jan-87		18-Oct-95	18-Oct-95				
				2	S	6	01-Jan-87		19-Jul-96				19-Jul-96	p42
				2	S	6	01-Jan-87		11-Jun-97	11-Jun-97				
				2	S	6	01-Jan-87		26-Aug-97	26-Aug-97		26-Aug-97	m-acr	
				2	S	6	01-Jan-87		28-May-98	28-May-98				
				2	S	6	01-Jan-87		21-Jul-99			21-Jul-99	m-acr	
	42	0608		1	S	6	01-Jan-87		16-Nov-89		16-Nov-89	16-Nov-89	m-jpccr	
				1	S	6	01-Jan-87		24-Jul-90		24-Jul-90	m-jpccr		
				1	S	6	01-Jan-87		03-Oct-91	03-Oct-91				
				1	S	6	01-Jan-87		04-Aug-92	04-Aug-92	04-Aug-92			
				1	S	6	01-Jan-87		06-Aug-92		06-Aug-92			
				2	S	6	01-Jan-87		23-Sep-92		23-Sep-92			
				2	S	6	01-Jan-87		24-Nov-92	24-Nov-92				
				2	S	6	01-Jan-87		26-Oct-93	26-Oct-93				
				2	S	6	01-Jan-87		13-Jun-94		13-Jun-94	m-acr		
				2	S	6	01-Jan-87		21-Jun-94	21-Jun-94				
				2	S	6	01-Jan-87		08-Aug-94				08-Aug-94	p42
				2	S	6	01-Jan-87		02-Nov-94	02-Nov-94				
				2	S	6	01-Jan-87		18-Oct-95	18-Oct-95				
				2	S	6	01-Jan-87		19-Jul-96				19-Jul-96	p42
				2	S	6	01-Jan-87		11-Jun-97	11-Jun-97				
				2	S	6	01-Jan-87		26-Aug-97	26-Aug-97		26-Aug-97	m-acr	
				2	S	6	01-Jan-87		28-May-98	28-May-98				
				2	S	6	01-Jan-87		21-Jul-99			21-Jul-99	m-acr	
	42	0608		1	S	6	01-Jan-87		16-Nov-89		16-Nov-89	16-Nov-89	m-jpccr	
				1	S	6	01-Jan-87		25-Jul-90		25-Jul-90	m-jpccr		
				1	S	6	01-Jan-87		03-Oct-91	03-Oct-91				

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Test Date	Distress Table	PASCO Test Date	Ta
274	42	0659	1	S	6	01-Jan-87	05-Aug-92	05-Aug-92						
			1	S	6	01-Jan-87	06-Aug-92		06-Aug-92					
			2	S	6	01-Jan-87	23-Sep-92		23-Sep-92					
			2	S	6	01-Jan-87	24-Nov-92	24-Nov-92						
			2	S	6	01-Jan-87	26-Oct-93	26-Oct-93						
			2	S	6	01-Jan-87	14-Jun-94				14-Jun-94	m-acr		
			2	S	6	01-Jan-87	21-Jun-94		21-Jun-94					
			2	S	6	01-Jan-87	08-Aug-94						08-Aug-94	p42
			2	S	6	01-Jan-87	02-Nov-94	02-Nov-94						
			2	S	6	01-Jan-87	18-Oct-95	18-Oct-95						
			2	S	6	01-Jan-87	18-Oct-95	18-Oct-95						
			2	S	6	01-Jan-87	19-Jul-96						19-Jul-96	p42
			2	S	6	01-Jan-87	11-Jun-97	11-Jun-97						
			2	S	6	01-Jan-87	26-Aug-97				26-Aug-97	m-acr		
			2	S	6	01-Jan-87	28-Aug-97		28-Aug-97					
			2	S	6	01-Jan-87	28-May-98	28-May-98						
			2	S	6	01-Jan-87	22-Jul-99				22-Jul-99	m-acr		
			1	S	6	01-Jan-87	24-Jul-90				24-Jul-90	m-jpccr		
			1	S	6	01-Jan-87	13-Aug-90	13-Aug-90						
			1	S	6	01-Jan-87	03-Oct-91	03-Oct-91						
			1	S	6	01-Jan-87	25-Oct-91							
			1	S	6	01-Jan-87	17-Nov-92		17-Nov-92					
			1	S	6	01-Jan-87	18-Nov-92		18-Nov-92					
			1	S	6	01-Jan-87	24-Nov-92	24-Nov-92						
			1	S	6	01-Jan-87	20-Oct-93		20-Oct-93					
			1	S	6	01-Jan-87	26-Oct-93	26-Oct-93						
			1	S	6	01-Jan-87	15-Jun-94			15-Jun-94	15-Jun-94	m-jpccr		
			1	S	6	01-Jan-87	16-Jun-94		16-Jun-94					
			1	S	6	01-Jan-87	08-Aug-94							
			1	S	6	01-Jan-87	03-Nov-94	03-Nov-94						

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
275	42	0660	1	S	6	01-Jan-87	17-Oct-95	17-Oct-95						
			1	S	6	01-Jan-87	19-Jul-96						19-Jul-96	p42
			1	S	6	01-Jan-87	11-Jun-97	11-Jun-97						
			1	S	6	01-Jan-87	27-Aug-97		27-Aug-97	27-Aug-97	27-Aug-97	m-jpccr		
			1	S	6	01-Jan-87	28-May-98	28-May-98						
			1	S	6	01-Jan-87	20-Jul-99			20-Jul-99	20-Jul-99	m-jpccr		
	42	0660	1	S	6	01-Jan-87	17-Aug-90				17-Aug-90	m-jpccr		
			1	S	6	01-Jan-87	03-Oct-91	03-Oct-91						
			1	S	6	01-Jan-87	03-Oct-91	03-Oct-91						
			1	S	6	01-Jan-87	05-Aug-92	05-Aug-92						
			1	S	6	01-Jan-87	07-Aug-92		07-Aug-92					
			2	S	6	01-Jan-87	24-Nov-92	24-Nov-92						
			2	S	6	01-Jan-87	14-Jun-94				14-Jun-94	m-acr		
			2	S	6	01-Jan-87	21-Jun-94		21-Jun-94					
			2	S	6	01-Jan-87	08-Aug-94						08-Aug-94	p42
			2	S	6	01-Jan-87	02-Nov-94	02-Nov-94						
			2	S	6	01-Jan-87	18-Oct-95	18-Oct-95						
			2	S	6	01-Jan-87	18-Oct-95	18-Oct-95						
			2	S	6	01-Jan-87	19-Jul-96						19-Jul-96	p42
			2	S	6	01-Jan-87	11-Jun-97	11-Jun-97						
			2	S	6	01-Jan-87	26-Aug-97				26-Aug-97	m-acr		
			2	S	6	01-Jan-87	28-Aug-97		28-Aug-97					
			2	S	6	01-Jan-87	28-May-98	28-May-98						
			2	S	6	01-Jan-87	22-Jul-99				22-Jul-99	m-acr		
	42	0661	1	S	6	01-Jan-87	04-Aug-92		04-Aug-92					
			1	S	6	01-Jan-87	05-Aug-92	05-Aug-92						
			1	S	6	01-Jan-87	07-Aug-92		07-Aug-92					
			2	S	6	01-Jan-87	24-Nov-92	24-Nov-92						
			2	S	6	01-Jan-87	14-Jun-94				14-Jun-94	m-acr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
276	42	0662		2	S	6	01-Jan-87		08-Aug-94				08-Aug-94	p42
				2	S	6	01-Jan-87		02-Nov-94	02-Nov-94				
				2	S	6	01-Jan-87		18-Oct-95	18-Oct-95				
				2	S	6	01-Jan-87		19-Jul-96				19-Jul-96	p42
				2	S	6	01-Jan-87		11-Jun-97	11-Jun-97				
				2	S	6	01-Jan-87		26-Aug-97	26-Aug-97				
				2	S	6	01-Jan-87		27-Aug-97					
				2	S	6	01-Jan-87		28-Aug-97		28-Aug-97	m-acr		
				2	S	6	01-Jan-87		28-May-98	28-May-98				
				2	S	6	01-Jan-87		22-Jul-99		22-Jul-99	m-acr		
	46	0600		1	S	6	01-Jan-87		05-Aug-92	05-Aug-92				
				1	S	6	01-Jan-87		05-Aug-92	05-Aug-92				
				1	S	6	01-Jan-87		06-Aug-92		06-Aug-92			
				2	S	6	01-Jan-87		23-Sep-92	23-Sep-92				
				2	S	6	01-Jan-87		24-Nov-92	24-Nov-92				
				2	S	6	01-Jan-87		14-Jun-94		14-Jun-94	m-acr		
				2	S	6	01-Jan-87		08-Aug-94				08-Aug-94	p42
				2	S	6	01-Jan-87		02-Nov-94	02-Nov-94				
				2	S	6	01-Jan-87		18-Oct-95	18-Oct-95				
				2	S	6	01-Jan-87		18-Oct-95	18-Oct-95				
				2	S	6	01-Jan-87		19-Jul-96				19-Jul-96	p42
				2	S	6	01-Jan-87		11-Jun-97	11-Jun-97				
				2	S	6	01-Jan-87		27-Aug-97	27-Aug-97				
				2	S	6	01-Jan-87		28-Aug-97		28-Aug-97	m-acr		
				2	S	6	01-Jan-87		28-May-98	28-May-98				
				2	S	6	01-Jan-87		22-Jul-99		22-Jul-99	m-acr		
				1	S	6	01-Jan-92							

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
46	0601													
		1	S	6	01-Jan-92		14-Apr-92	14-Apr-92						
		1	S	6	01-Jan-92		06-Oct-92		06-Oct-92					
		1	S	6	01-Jan-92		08-Oct-92			08-Oct-92	08-Oct-92	m-jpccr		
		1	S	6	01-Jan-92		12-May-93		12-May-93					
		1	S	6	01-Jan-92		13-Sep-93						13-Sep-93	p42-
		1	S	6	01-Jan-92		20-Oct-93	20-Oct-93						
		1	S	6	01-Jan-92		20-Oct-93	20-Oct-93						
		1	S	6	01-Jan-92		07-Jun-94		07-Jun-94	07-Jun-94	07-Jun-94	m-jpccr		
		1	S	6	01-Jan-92		18-Aug-94	18-Aug-94						
		1	S	6	01-Jan-92		09-Aug-95		09-Aug-95	09-Aug-95	09-Aug-95	m-jpccr		
		1	S	6	01-Jan-92		18-Jun-96						18-Jun-96	p42-
		1	S	6	01-Jan-92		10-Jul-97	10-Jul-97						
		1	S	6	01-Jan-92		25-Jun-98	25-Jun-98						
		1	S	6	01-Jan-92		07-Aug-98		07-Aug-98	07-Aug-98	07-Aug-98	m-jpccr		
		1	S	6	01-Jan-92		15-May-99	15-May-99						
46	0602													
		1	S	6	01-Jan-92		14-Apr-92	14-Apr-92						
		1	S	6	01-Jan-92		06-Oct-92		06-Oct-92	06-Oct-92				
		1	S	6	01-Jan-92		08-Oct-92			08-Oct-92	08-Oct-92	m-jpccr		
		1	S	6	01-Jan-92		12-May-93		12-May-93					
		1	S	6	01-Jan-92		13-Sep-93						13-Sep-93	p42-
		1	S	6	01-Jan-92		20-Oct-93	20-Oct-93						
		1	S	6	01-Jan-92		18-Aug-94	18-Aug-94						
		1	S	6	01-Jan-92		10-Aug-95		10-Aug-95	10-Aug-95	10-Aug-95	m-jpccr		
		1	S	6	01-Jan-92		18-Jun-96						18-Jun-96	p42-
		1	S	6	01-Jan-92		10-Jul-97	10-Jul-97						
		1	S	6	01-Jan-92		25-Jun-98	25-Jun-98						
		1	S	6	01-Jan-92		06-Aug-98		06-Aug-98	06-Aug-98	06-Aug-98	m-jpccr		
		1	S	6	01-Jan-92		15-May-99	15-May-99						
46	0603													

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Tal		
		1	S	6	01-Jan-92		14-Apr-92	14-Apr-92								
		2	S	6	01-Jan-92		09-Oct-92		09-Oct-92		09-Oct-92	m-acr				
		2	S	6	01-Jan-92		11-May-93		11-May-93							
		2	S	6	01-Jan-92		13-Sep-93							13-Sep-93	p42	
		2	S	6	01-Jan-92		20-Oct-93	20-Oct-93								
		2	S	6	01-Jan-92		18-Aug-94	18-Aug-94								
		2	S	6	01-Jan-92		09-Oct-94				09-Oct-94	m-acr				
		2	S	6	01-Jan-92		08-Aug-95		08-Aug-95		08-Aug-95	m-acr				
		2	S	6	01-Jan-92		15-Feb-96									
		2	S	6	01-Jan-92		18-Jun-96							18-Jun-96	p42	
		2	S	6	01-Jan-92		10-Jul-97	10-Jul-97								
		2	S	6	01-Jan-92		25-Jun-98	25-Jun-98								
		2	S	6	01-Jan-92		05-Aug-98		05-Aug-98		05-Aug-98	m-acr				
		2	S	6	01-Jan-92		15-May-99	15-May-99								
		46	0604													
		1	S	6	01-Jan-92		14-Apr-92	14-Apr-92								
		2	S	6	01-Jan-92		08-Oct-92		08-Oct-92							
		2	S	6	01-Jan-92		09-Oct-92				09-Oct-92	m-acr				
		2	S	6	01-Jan-92		11-May-93		11-May-93							
		2	S	6	01-Jan-92		13-Sep-93							13-Sep-93	p42	
		2	S	6	01-Jan-92		20-Oct-93	20-Oct-93								
		2	S	6	01-Jan-92		18-Aug-94	18-Aug-94								
		2	S	6	01-Jan-92		09-Aug-95		09-Aug-95		09-Aug-95	m-acr				
		2	S	6	01-Jan-92		18-Jun-96							18-Jun-96	p42	
		2	S	6	01-Jan-92		10-Jul-97	10-Jul-97								
		2	S	6	01-Jan-92		25-Jun-98	25-Jun-98								
		2	S	6	01-Jan-92		05-Aug-98		05-Aug-98		05-Aug-98	m-acr				
		2	S	6	01-Jan-92		15-May-99	15-May-99								
		46	0605													
				1	S	6	01-Jan-92		14-Apr-92	14-Apr-92						
1	S			6	01-Jan-92		08-Oct-92		08-Oct-92	08-Oct-92	08-Oct-92	m-jpccr				

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
279	46	0606	1	S	6	01-Jan-92	11-May-93		11-May-93					
			1	S	6	01-Jan-92	13-Sep-93						13-Sep-93	p42
			1	S	6	01-Jan-92	20-Oct-93	20-Oct-93						
			1	S	6	01-Jan-92	18-Aug-94	18-Aug-94						
			1	S	6	01-Jan-92	18-Aug-94	18-Aug-94						
			1	S	6	01-Jan-92	09-Aug-95		09-Aug-95	09-Aug-95	09-Aug-95	m-jpccr		
			1	S	6	01-Jan-92	18-Jun-96						18-Jun-96	p42
			1	S	6	01-Jan-92	10-Jul-97	10-Jul-97						
			1	S	6	01-Jan-92	25-Jun-98	25-Jun-98						
			1	S	6	01-Jan-92	06-Aug-98		06-Aug-98	06-Aug-98	06-Aug-98	m-jpccr		
			1	S	6	01-Jan-92	15-May-99	15-May-99						
	46	0607												
			1	S	6	01-Jan-92	14-Apr-92	14-Apr-92						
			2	S	6	01-Jan-92	07-Oct-92				07-Oct-92	m-acr		
			2	S	6	01-Jan-92	09-Oct-92		09-Oct-92					
			2	S	6	01-Jan-92	10-May-93		10-May-93					
			2	S	6	01-Jan-92	13-Sep-93						13-Sep-93	p42
			2	S	6	01-Jan-92	20-Oct-93	20-Oct-93						
			2	S	6	01-Jan-92	18-Aug-94	18-Aug-94						
			2	S	6	01-Jan-92	07-Aug-95				07-Aug-95	m-acr		
			2	S	6	01-Jan-92	08-Aug-95		08-Aug-95					
			2	S	6	01-Jan-92	16-Feb-96							
			2	S	6	01-Jan-92	18-Jun-96						18-Jun-96	p42
			2	S	6	01-Jan-92	10-Jul-97	10-Jul-97						
			2	S	6	01-Jan-92	25-Jun-98	25-Jun-98						
			2	S	6	01-Jan-92	05-Aug-98		05-Aug-98		05-Aug-98	m-acr		
			2	S	6	01-Jan-92	15-May-99	15-May-99						
	46	0607												
			1	S	6	01-Jan-92	14-Apr-92	14-Apr-92						
			1	S	6	01-Jan-92	29-Jul-92		29-Jul-92					
			2	S	6	01-Jan-92	07-Oct-92		07-Oct-92		07-Oct-92	m-acr		

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
280	46	0608												
			2	S	6	01-Jan-92			10-May-93		10-May-93			
			2	S	6	01-Jan-92			13-Sep-93				13-Sep-93	p42
			2	S	6	01-Jan-92			20-Oct-93	20-Oct-93				
			2	S	6	01-Jan-92			18-Aug-94	18-Aug-94				
			2	S	6	01-Jan-92			07-Aug-95		07-Aug-95	m-acr		
			2	S	6	01-Jan-92			08-Aug-95		08-Aug-95			
			2	S	6	01-Jan-92			16-Feb-96					
			2	S	6	01-Jan-92			18-Jun-96				18-Jun-96	p42
			2	S	6	01-Jan-92			10-Jul-97	10-Jul-97				
			2	S	6	01-Jan-92			25-Jun-98	25-Jun-98				
			2	S	6	01-Jan-92			04-Aug-98		04-Aug-98		04-Aug-98	m-acr
			2	S	6	01-Jan-92			15-May-99	15-May-99				
	46	0660												
			1	S	6	01-Jan-92			14-Apr-92	14-Apr-92				
			1	S	6	01-Jan-92			29-Jul-92		29-Jul-92			
			2	S	6	01-Jan-92			07-Oct-92		07-Oct-92	m-acr		
			2	S	6	01-Jan-92			10-May-93		10-May-93			
			2	S	6	01-Jan-92			13-Sep-93				13-Sep-93	p42
			2	S	6	01-Jan-92			20-Oct-93	20-Oct-93				
			2	S	6	01-Jan-92			18-Aug-94	18-Aug-94				
			2	S	6	01-Jan-92			07-Aug-95		07-Aug-95	m-acr		
			2	S	6	01-Jan-92			08-Aug-95		08-Aug-95			
			2	S	6	01-Jan-92			09-Aug-95		09-Aug-95	m-jpccr		
			2	S	6	01-Jan-92			16-Feb-96					
			2	S	6	01-Jan-92			18-Jun-96				18-Jun-96	p42
			2	S	6	01-Jan-92			10-Jul-97	10-Jul-97				
			2	S	6	01-Jan-92			25-Jun-98	25-Jun-98				
			2	S	6	01-Jan-92			04-Aug-98		04-Aug-98		04-Aug-98	m-acr
			2	S	6	01-Jan-92			15-May-99	15-May-99				
	46	0660												
			1	S	6	01-Jan-92			14-Apr-92	14-Apr-92				

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
281	46	0661	1	S	6	01-Jan-92	29-Jul-92		29-Jul-92					
			2	S	6	01-Jan-92	07-Oct-92		07-Oct-92		07-Oct-92	m-acr		
			2	S	6	01-Jan-92	10-May-93		10-May-93					
			2	S	6	01-Jan-92	13-Sep-93						13-Sep-93	p42
			2	S	6	01-Jan-92	20-Oct-93	20-Oct-93						
			2	S	6	01-Jan-92	18-Aug-94	18-Aug-94						
			2	S	6	01-Jan-92	07-Aug-95				07-Aug-95	m-acr		
			2	S	6	01-Jan-92	08-Aug-95		08-Aug-95					
			2	S	6	01-Jan-92	16-Feb-96							
			2	S	6	01-Jan-92	18-Jun-96						18-Jun-96	p42
			2	S	6	01-Jan-92	10-Jul-97	10-Jul-97						
			2	S	6	01-Jan-92	25-Jun-98	25-Jun-98						
			2	S	6	01-Jan-92	04-Aug-98		04-Aug-98		04-Aug-98	m-acr		
			2	S	6	01-Jan-92	15-May-99	15-May-99						
281	46	0662	1	S	6	01-Jan-92	14-Apr-92	14-Apr-92						
			2	S	6	01-Jan-92	07-Oct-92		07-Oct-92		07-Oct-92	m-acr		
			2	S	6	01-Jan-92	10-May-93		10-May-93					
			2	S	6	01-Jan-92	13-Sep-93						13-Sep-93	p42
			2	S	6	01-Jan-92	20-Oct-93	20-Oct-93						
			2	S	6	01-Jan-92	18-Aug-94	18-Aug-94						
			2	S	6	01-Jan-92	07-Aug-95				07-Aug-95	m-acr		
			2	S	6	01-Jan-92	08-Aug-95		08-Aug-95					
			2	S	6	01-Jan-92	16-Feb-96							
			2	S	6	01-Jan-92	18-Jun-96						18-Jun-96	p42
			2	S	6	01-Jan-92	10-Jul-97	10-Jul-97						
			2	S	6	01-Jan-92	25-Jun-98	25-Jun-98						
			2	S	6	01-Jan-92	05-Aug-98		05-Aug-98		05-Aug-98	m-acr		
			2	S	6	01-Jan-92	15-May-99	15-May-99						
			1	S	6	01-Jan-92	14-Apr-92	14-Apr-92						

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Ta
282	47	0600	1	S	6	01-Jan-92	29-Jul-92		29-Jul-92					
			2	S	6	01-Jan-92	07-Oct-92		07-Oct-92		07-Oct-92	m-acr		
			2	S	6	01-Jan-92	10-May-93		10-May-93					
			2	S	6	01-Jan-92	13-Sep-93						13-Sep-93	p42
			2	S	6	01-Jan-92	20-Oct-93	20-Oct-93						
			2	S	6	01-Jan-92	18-Aug-94	18-Aug-94						
			2	S	6	01-Jan-92	07-Aug-95				07-Aug-95	m-acr		
			2	S	6	01-Jan-92	08-Aug-95		08-Aug-95					
			2	S	6	01-Jan-92	16-Feb-96							
			2	S	6	01-Jan-92	18-Jun-96						18-Jun-96	p42
			2	S	6	01-Jan-92	10-Jul-97	10-Jul-97						
			2	S	6	01-Jan-92	25-Jun-98	25-Jun-98						
			2	S	6	01-Jan-92	04-Aug-98		04-Aug-98		04-Aug-98	m-acr		
			2	S	6	01-Jan-92	15-May-99	15-May-99						
282	47	0601	1	S	6	01-Jan-87								
			1	S	6	01-Jan-87	10-Jan-92							
			1	S	6	01-Jan-87	30-Jan-96	30-Jan-96						
			1	S	6	01-Jan-87	11-Mar-96			11-Mar-96	11-Mar-96	m-jpccr		
			1	S	6	01-Jan-87	21-Mar-96		21-Mar-96					
			1	S	6	01-Jan-87	28-Oct-96		28-Oct-96	28-Oct-96	28-Oct-96	m-jpccr		
			1	S	6	01-Jan-87	23-Nov-96							
			1	S	6	01-Jan-87	30-Jan-97	30-Jan-97						
			1	S	6	01-Jan-87	14-Jun-99				14-Jun-99	m-jpccr		
			1	S	6	01-Jan-87	03-Jul-99	03-Jul-99						
282	47	0602												
			1	S	6	01-Jan-87	10-Jan-92							
			1	S	6	01-Jan-87	30-Jan-96	30-Jan-96						
			1	S	6	01-Jan-87	11-Mar-96			11-Mar-96	11-Mar-96	m-jpccr		
			1	S	6	01-Jan-87	21-Mar-96		21-Mar-96					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Distress Table	PASCO Test Date	Ta
283	47	0603	1	S	6	01-Jan-87	28-Oct-96		28-Oct-96					
			1	S	6	01-Jan-87	29-Oct-96		29-Oct-96	29-Oct-96	29-Oct-96	m-jpccr		
			1	S	6	01-Jan-87	23-Nov-96							
			1	S	6	01-Jan-87	30-Jan-97	30-Jan-97						
			1	S	6	01-Jan-87	03-Jul-99	03-Jul-99						
	47	0604	1	S	6	01-Jan-87	10-Jan-92							
			1	S	6	01-Jan-87	30-Jan-96	30-Jan-96						
			1	S	6	01-Jan-87	12-Mar-96			12-Mar-96	12-Mar-96	m-jpccr		
			1	S	6	01-Jan-87	22-Mar-96		22-Mar-96					
			2	S	6	01-Jan-87	30-Oct-96		30-Oct-96		30-Oct-96	m-acr		
			2	S	6	01-Jan-87	23-Nov-96							
			2	S	6	01-Jan-87	30-Jan-97	30-Jan-97						
			2	S	6	01-Jan-87	15-Jun-99				15-Jun-99	m-acr		
			2	S	6	01-Jan-87	03-Jul-99	03-Jul-99						
	47	0605	1	S	6	01-Jan-87	10-Jan-92							
			1	S	6	01-Jan-87	31-Jan-96	31-Jan-96						
			1	S	6	01-Jan-87	12-Mar-96			12-Mar-96	12-Mar-96	m-jpccr		
			1	S	6	01-Jan-87	19-Mar-96		19-Mar-96					
			2	S	6	01-Jan-87	30-Oct-96		30-Oct-96		30-Oct-96	m-acr		
			2	S	6	01-Jan-87	31-Oct-96		31-Oct-96					
			2	S	6	01-Jan-87	23-Nov-96							
			2	S	6	01-Jan-87	30-Jan-97	30-Jan-97						
			2	S	6	01-Jan-87	15-Jun-99				15-Jun-99	m-acr		
			2	S	6	01-Jan-87	03-Jul-99	03-Jul-99						
	47	0605	1	S	6	01-Jan-87	10-Jan-92							
			1	S	6	01-Jan-87	30-Jan-96	30-Jan-96						
			1	S	6	01-Jan-87	12-Mar-96			12-Mar-96	12-Mar-96	m-jpccr		
			1	S	6	01-Jan-87	22-Mar-96		22-Mar-96					

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
284	47	0606	1	S	6	01-Jan-87	29-Oct-96		29-Oct-96	29-Oct-96	29-Oct-96	m-jpccr		
			1	S	6	01-Jan-87	30-Oct-96		30-Oct-96					
			1	S	6	01-Jan-87	23-Nov-96							
			1	S	6	01-Jan-87	30-Jan-97	30-Jan-97						
	47	0607	1	S	6	01-Jan-87	08-Oct-91	08-Oct-91						
			1	S	6	01-Jan-87	08-Oct-91	08-Oct-91						
			1	S	6	01-Jan-87	10-Jan-92							
			1	S	6	01-Jan-87	30-Jan-96	30-Jan-96						
			1	S	6	01-Jan-87	12-Mar-96			12-Mar-96	12-Mar-96	m-jpccr		
			1	S	6	01-Jan-87	22-Mar-96		22-Mar-96					
			2	S	6	01-Jan-87	30-Oct-96		30-Oct-96		30-Oct-96	m-acr		
			2	S	6	01-Jan-87	23-Nov-96							
			2	S	6	01-Jan-87	30-Jan-97	30-Jan-97						
			2	S	6	01-Jan-87	15-Jun-99				15-Jun-99	m-acr		
			2	S	6	01-Jan-87	03-Jul-99	03-Jul-99						
	47	0608	1	S	6	01-Jan-87	08-Oct-91	08-Oct-91						
			1	S	6	01-Jan-87	10-Jan-92							
			1	S	6	01-Jan-87	31-Jan-96	31-Jan-96						
			1	S	6	01-Jan-87	13-Mar-96			13-Mar-96	13-Mar-96	m-jpccr		
			1	S	6	01-Jan-87	20-Mar-96		20-Mar-96					
			1	S	6	01-Jan-87	23-Nov-96							
			2	S	6	01-Jan-87	01-May-96		01-May-96					
			2	S	6	01-Jan-87	31-Oct-96		31-Oct-96		31-Oct-96	m-acr		
			2	S	6	01-Jan-87	30-Jan-97	30-Jan-97						
			2	S	6	01-Jan-87	15-Jun-99				15-Jun-99	m-acr		
	47	0608	1	S	6	01-Jan-87	08-Oct-91	08-Oct-91						
			1	S	6	01-Jan-87	10-Jan-92							
			1	S	6	01-Jan-87	31-Jan-96	31-Jan-96						

Table 106. Summary of visits to the LTPP sites—continued.

State	SHRP ID	Const. No.	S/G	Exp. No.	Assign	Deassign	Visit Dates	Profile Test Date	Deflection Test Date	Faulting Test Date	Manual Distress Test Date	Table	PASCO Test Date	Ta
285	47	0661	1	S	6	01-Jan-87	13-Mar-96			13-Mar-96	13-Mar-96	m-jpccr		
			1	S	6	01-Jan-87	20-Mar-96		20-Mar-96					
			2	S	6	01-Jan-87	01-May-96		01-May-96					
			2	S	6	01-Jan-87	31-Oct-96		31-Oct-96		31-Oct-96	m-acr		
			2	S	6	01-Jan-87	23-Nov-96							
			2	S	6	01-Jan-87	30-Jan-97	30-Jan-97						
			2	S	6	01-Jan-87	15-Jun-99				15-Jun-99	m-acr		
			2	S	6	01-Jan-87	03-Jul-99	03-Jul-99						
	47	0662	1	S	6	01-Jan-87	13-Mar-96			13-Mar-96	13-Mar-96	m-jpccr		
			1	S	6	01-Jan-87	23-Mar-96		23-Mar-96					
			1	S	6	01-Jan-87	23-Nov-96							
			2	S	6	01-Jan-87	31-Oct-96		31-Oct-96		31-Oct-96	m-acr		
			2	S	6	01-Jan-87	30-Jan-97	30-Jan-97						
			2	S	6	01-Jan-87	15-Jun-99				15-Jun-99	m-acr		
			2	S	6	01-Jan-87	03-Jul-99	03-Jul-99						
			1	S	6	01-Jan-87	13-Mar-96			13-Mar-96	13-Mar-96	m-jpccr		
			1	S	6	01-Jan-87	23-Mar-96		23-Mar-96					
			1	S	6	01-Jan-87	23-Nov-96							
			2	S	6	01-Jan-87	31-Oct-96		31-Oct-96		31-Oct-96	m-acr		
			2	S	6	01-Jan-87	30-Jan-97	30-Jan-97						
			2	S	6	01-Jan-87	15-Jun-99				15-Jun-99	m-acr		
			2	S	6	01-Jan-87	03-Jul-99	03-Jul-99						

REFERENCES

1. *SHRP-LTPP Specific Pavement Studies: Five-Year Report*, Report No. SHRP-P-395, National Research Council, Washington, DC, 1994.
2. *Specific Pavement Studies Material Sampling and Testing Requirements for Experiment SPS-6*, Report No. SHRP-LTPP-OM-019, Federal Highway Administration, McLean, VA, January 1991.
3. *Data Collection Guide for Long-Term Pavement Performance Studies*, Federal Highway Administration, McLean, VA, May 1991.
4. LTPP Directive D-02: Quality Assurance of PASCO Products, Federal Highway Administration, McLean, VA, January 1991.
5. LTPP Directive D-05: Measurement Frequency and Priorities of Manual Distress Surveys, Federal Highway Administration, McLean, VA, March 1995.
6. LTPP Directive D-09: Policy on Manual Transverse Profile Measurements, Federal Highway Administration, McLean, VA, December 1996.
7. LTPP Directive FWD-01: File Naming Convention for Deflection Testing at Seasonal Monitoring Sites, Federal Highway Administration, McLean, VA, January 1993.
8. LTPP Directive FWD-02: Implementation of the Manual for FWD Testing in the LTPP Study Operational Field Guidelines, Version 2.0, Federal Highway Administration, McLean, VA, May 1993.
9. LTPP Directive FWD-03: Deflection Monitoring Frequency Priorities and Use of FWDs Owned by Other Agencies, Federal Highway Administration, McLean, VA, September 1993.
10. LTPP Directive FWD-05 (Draft): Special Provisions for Cold Weather FWD Testing, Federal Highway Administration, McLean, VA, February 1991.
11. LTPP Directive FWD-10: Deflection Monitoring Frequencies and Priorities, Federal Highway Administration, McLean, VA, September 1994.
12. LTPP Directive FWD-12: LTPP FWD Data Handling and Processing Procedures, Federal Highway Administration, McLean, VA, August 1991.
13. LTPP Directive P-01: Manual for Profile Measurement: Operational Field Guidelines, Report No. SHRP-P-378, Federal Highway Administration, McLean, VA, March 1994.
14. LTPP Directive P-02: Profile Monitoring Frequencies and Priorities, Federal Highway Administration, McLean, VA, September 1994.
15. LTPP Directive GO-20: Revised Friction Measurement Requirements, Federal Highway Administration, McLean, VA, March 1999.

16. LTPP Directive GO-21: LTPP Test Section Monitoring Adjustments, Federal Highway Administration, McLean, VA, October 1999.
17. *Guidelines for Nomination and Evaluation of Candidate Projects for Experiment SPS-6 Rehabilitation of Jointed Portland Cement Concrete Pavements*, Report No. SHRP-LTPP-OM-007, Federal Highway Administration, McLean, VA, November 1989.
18. *Specific Pavement Studies Construction Guidelines for Experiment SPS-6, Rehabilitation of Jointed Portland Cement Concrete Pavements*, Report No. SHRP-LTPP-OM-013, Federal Highway Administration, McLean, VA, July 1990.
19. Kalevela, S.A.; E.M.S. Kombe; and L.A. Scofield, *Correlation Study of the California Profilograph and the K.J. Law Profilometer*. Transportation Research Board 73rd Annual Meeting, Washington, DC, January 1994.