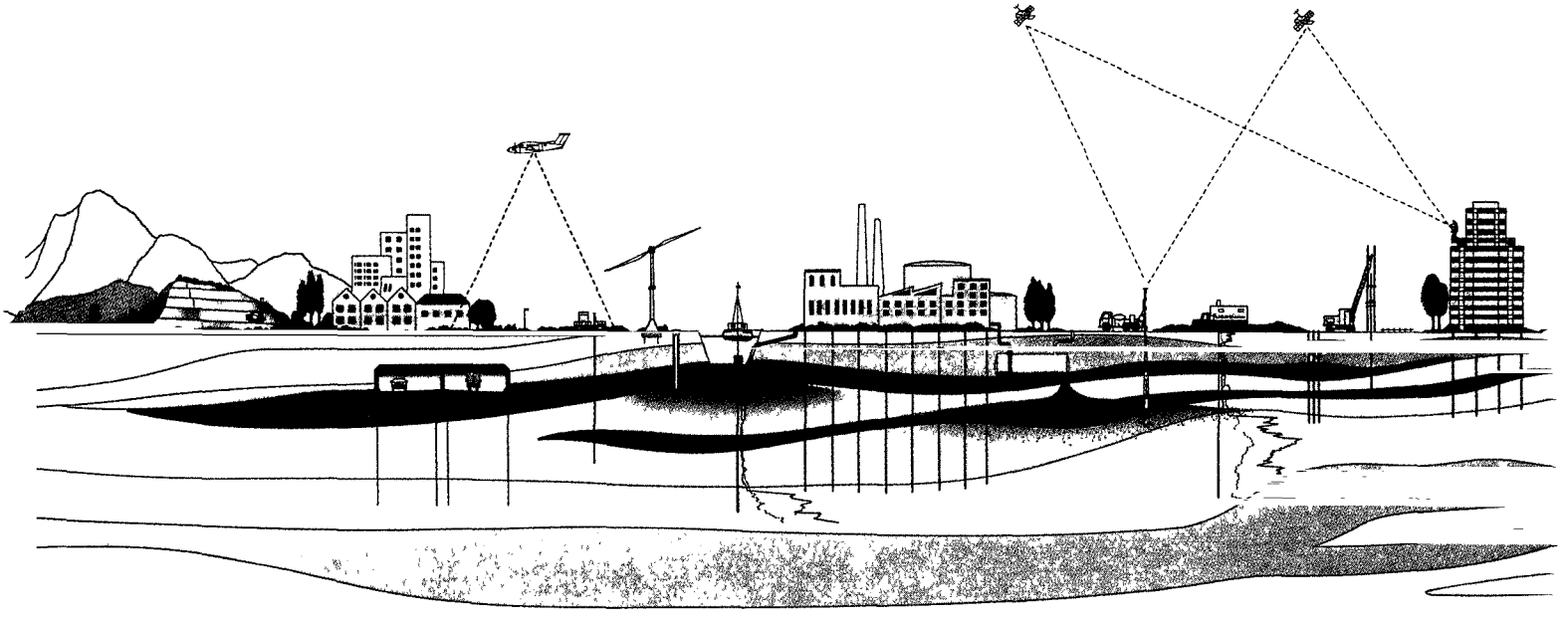
BRENT RAUHUT ENGINEERING, INC.

FINAL REPORT

SPS-1 PROJECT 4001
STRATEGIC STUDY OF STRUCTURAL FACTORS FOR FLEXIBLE PAVEMENTS
US-62 EASTBOUND - COMANCHE COUNTY, OKLAHOMA

FHWA/LTPP
SOUTHERN REGION COORDINATION OFFICE

August 1998



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FINAL REPORT - SPS-1 PROJECT 4001

STRATEGIC STUDY OF STRUCTURAL FACTORS FOR FLEXIBLE PAVEMENTS US-62, EASTBOUND COMANCHE COUNTY, OKLAHOMA

INTRODUCTION

The Strategic Highway Research Program (SHRP), in conjunction with the Federal Highway Administration (FHWA) developed the Long Term Pavement Performance (LTPP) program to study the various factors that affect pavement performance. These projects are referred to as Specific Pavement Studies (SPS), and are designed to provide information about varying pavement design, materials, and environmental effects on pavement performance.

The objective of the SPS-1 experiment is discussed below. This project is located in the eastbound lanes of US-62 west of Lawton, Oklahoma. The project was let for construction in July 1996, and construction began in November 1996. This report covers the site-selection, coordination, and monitoring activities for all phases of construction of a SPS-1 project.

Any detailed information not found in this report may be found in the LTPP data base on the Regional Information Management System (RIMS) at the Southern Region Coordination Office (SRCO), in Austin, Texas, and the National Information Management System (NIMS) at SAIC in Oak Ridge, Tennessee. Information pertaining to this project can also be found at the SRCO web site at www.ntrek.com/~srco.

SPS-1 General Experiment Design

The objective of the SPS-1 study is to enhance understanding of the strategic factors that influence the performance of flexible pavements. This SPS-1 project addresses factors including drainage, base type and thickness, and asphalt surface thickness as they relate to pavement performance. The experimental design for the SPS-1 experiment is shown in table 1. The SPS-1 project in Oklahoma was nominated to fulfill the requirements for the dry no-freeze climatic zone with fine-grained subgrade (Column "W"). This project includes 12 experiment test sections along with 1 supplemental test section selected by the Oklahoma Department of Transportation (Oklahoma DOT) to evaluate various layer thicknesses for further use in future flexible pavement construction. A detailed layout of each of the twelve sections is shown in table 2 and figure 1.

For additional information on the experimental design for the SPS-1 project, please refer to "Specific Pavement Studies Experiment Design and Research Plan for Experiment SPS-1, Strategic Study of Structural Factors for Flexible Pavements", dated February 1990.

Table 1. Experiment Design for SPS-1

PAVEMENT STRUCTURE COMBINATIONS				FACTORS FOR MOISTURE, TEMPERATURE, SUBGRADE TYPE AND LOCATION															
				WET								DRY							
				FREEZE				NO FREEZE				FREEZE				NO FREEZE			
				FINE		COARSE		FINE		COARSE		FINE		COARSE		FINE		COARSE	
DRAINAGE	BASE TYPE	TOTAL BASE THICK	SURF. THICK	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
NO	AGG	8"	4"		K1		M1		O1		Q1		S1		U1		W1	X1	
			7"	J1		L1		N1		P1		R1		T1		V1			Y1
		12"	4"	J2		L2		N2		P2		R2		T2		V2			Y2
			7"		K2		M2		O2		Q2		S2		U2		W2	X2	
	ATB	8"	4"	J3		L3		N3		P3		R3		T3		V3			Y3
			7"		K3		M3		O3		Q3		S3		U3		W3	X3	
		12"	4"		K4		M4		O4		Q4		S4		U4		W4	X4	
			7"	J4		L4		N4		P4		R4		T4		V4			Y4
	ATB / 4" AGG	8"	4"	J5		L5		N5		P5		R5		T5		V5			Y5
			7"		K5		M5		O5		Q5		S5		U5		W5	X5	
		12"	4"		K6		M6		O6		Q6		S6		U6		W6	X6	
			7"	J6		L6		N6		P6		R6		T6		V6			Y6
YES	PATB / AGG	8"	4"	J7		L7		N7		P7		R7		T7		V7			Y7
			7"		K7		M7		O7		Q7		S7		U7		W7	X7	
		12"	4"		K8		M8		O8		Q8		S8		U8		W8	X8	
			7"	J8		L8		N8		P8		R8		T8		V8			Y8
		16"	4"		K9		M9		O9		Q9		S9		U9		W9	X9	
			7"	J9		L9		N9		P9		R9		T9		V9			Y9
	ATB / PATB	8"	4"		K10		M10		O10		Q10		S10		U10		W10	X10	
			7"	J10		L10		N10		P10		R10		T10		V10			Y10
		12"	4"	J11		L11		N11		P11		R11		T11		V11			Y11
			7"		K11		M11		O11		Q11		S11		U11		W11	X11	
		16"	4"	J12		L12		N12		P12		R12		T12		V12			Y12
			7"		K12		M12		O12		Q12		S12		U12		W12	X12	

AGG = Dense-graded Untreated Aggregate Base
ATB = Dense-graded Asphalt Treated Base
PATB = 4" Thick Open-graded Permeable Asphalt-treated Drainage Layer Underneath ATB or Over AGG Base
4" AGG = 4" Thick Dense-graded Untreated Aggregate Base Layer Underneath ATB

Table 2. Test Section Layout

Section (Cell ID)	Cross Section	Begin Station	End Station
400160	8″ AC Surface	986	979
	4″ PATB		
	6″ DGAB		
400114 (W2)	7″ AC Surface	975	968
	12″ DGAB		
400118 (W6) W18	4″ AC Surface	948	941
	8″ ATB		
	4″ DGAB		
400116 (W4) W16	4″ AC Surface	940	933
	12″ ATB		
400115 (W3) W15	7″ AC Surface	932	925
	8″ ATB		
400117 (W5) W17	7″ AC Surface	923	916
	4″ ATB		
	4″ DGAB		
400113 (W1) W13	4″ AC Surface	912	905
	8″ DGAB		

Table 2. Test Section Layout (Continued)

Section (Cell ID)	Cross Section	Begin Station	End Station
400122 (W10)	4″ AC Surface	904	897
	4″ ATB		
	4″ PATB		
400119 (W7)	7″ AC Surface	882	875
	4″ PATB		
	4″ DGAB		
400120 (W8)	4″ AC Surface	871	864
	4″ PATB		
	8″ DGAB		
400121 (W9)	4″ AC Surface	858	851
	4″ PATB		
	12″ DGAB		
400123 (W11)	7″ AC Surface	848	841
	8″ ATB		
	4″ PATB		
400124 (W12)	7″ AC Surface	839	832
	12″ ATB		
	4″ PATB		

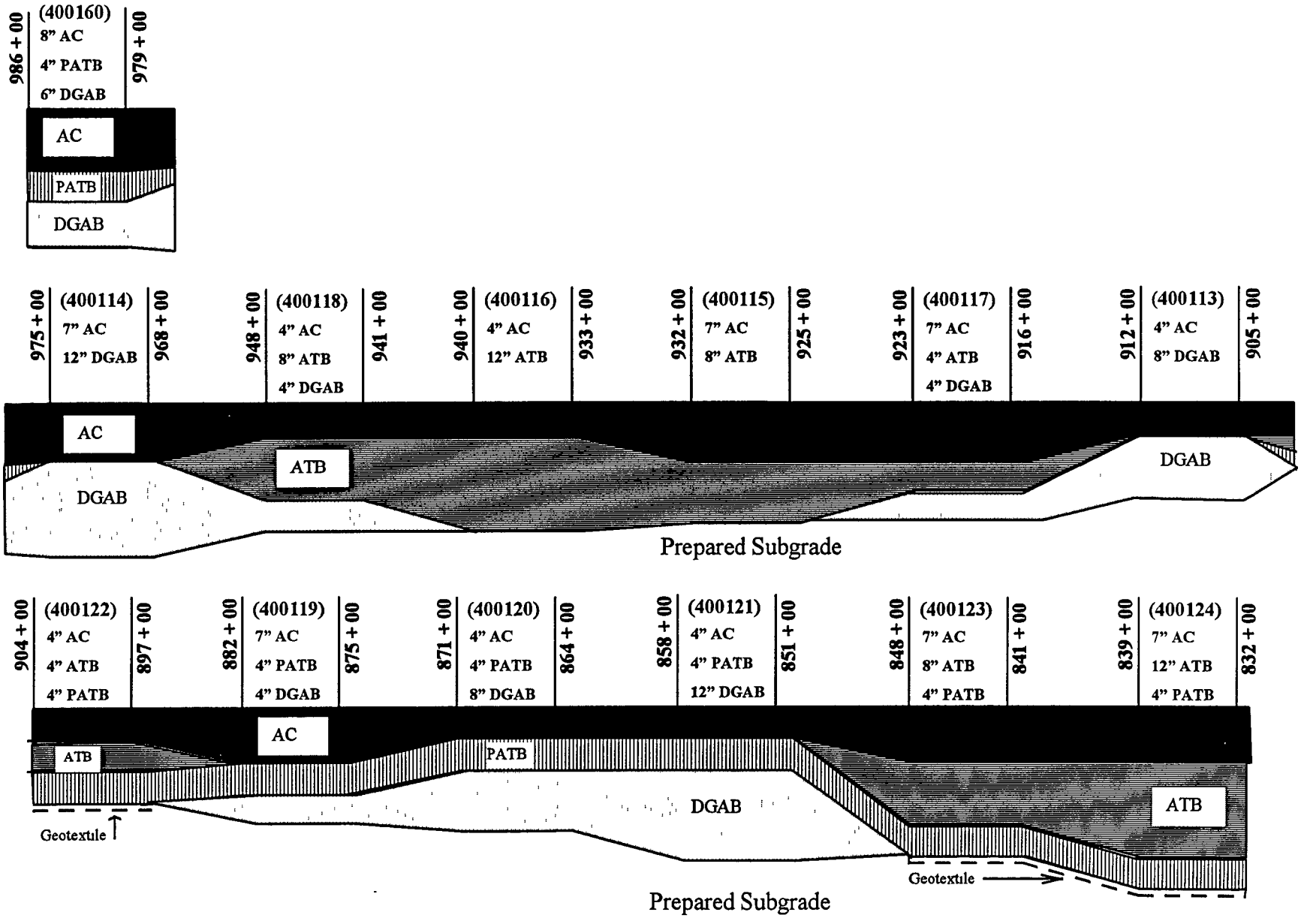


Figure 1. Layout of Test Sections

Selection/Nomination of US-62

The SPS-1 project on US-62 in Comanche County, Oklahoma was nominated on 5 June 1996. Appendix A includes the project nomination and information forms with pertinent correspondence. This project is a 4-lane divided highway with 12-foot wide lanes, 10-foot wide outside shoulders, and a 4-foot shoulder along the passing lane. The estimated traffic includes 13 percent heavy trucks, with an annual average daily traffic in two directions of 4,000 vehicles. The project was officially accepted for inclusion in this experiment by the FHWA in June 1996.

PRECONSTRUCTION MONITORING

The pre-bid conference was held Tuesday, 13 August 1996 with the Oklahoma DOT personnel and contractors. The preconstruction meeting for this project was held Tuesday, 5 November 1996. Material sampling was initiated Monday, 11 November 1996. A local lab firm was hired by the contractor to conduct the subgrade soil sampling (split-spoon sampling) and bulk samples, under the guidance of the SRCO. The subgrade consisted of silty and sandy clays throughout the site. Some areas contained large stones greater than 1 foot in diameter, which would explain the refusal at depths less than 20 feet.

No additional preconstruction monitoring of note was conducted.

CONSTRUCTION

In April 1997, trenching began along the edge of the roadway for placement of edge drains, according to the construction guidelines. The edge drain trench was dug with a Ditch-Witch vramere T600D. The edge drain pipe is a 4-inch diameter corrugated perforated plastic pipe, which will be surrounded with #57 rock. The lateral spacings for the edge drains are approximately 250-feet apart. Also in April, DGAB was placed in 4-inch lifts with a Blaw-Knox PF510 paver and compacted with a Hypac steel-wheel vibratory roller. Once the DGAB was compacted and nuclear density testing and bulk sampling was completed, trenching began on sections 19, 20 and 21 for the edge drains.

During the month of April the PATB was completely laid and compacted for the project site. This was done with the Hypac PF510 paver and compacted with a tandem steel-wheel roller applying two passes. The PATB contains 100 percent of #57 rock, which is approximately 1-inch in diameter with 2.5 percent AC20 oil. The geotextile fabric used for the edge drains has a rating of 7 mls. Within two days, ATB and AC binder was being laid to cover the surface of the PATB layer. The initial laydown machine used for the DGAB layer was a Cedar Rapids BSF531 paver, which broke down on 27 March 1997. This was replaced with the Blaw-Knox PF510 paver. The nuclear densities taken for the subgrade and DGAB layers were done with a Troxler 3440, calibrated on 8 February 1996.

The ATB was laid in 4-inch lifts with the same Blaw-Knox PF510 paver and compacted with one pass of a Hypac vibratory roller, three passes with a Ferguson pneumatic roller and a final pass with a static steel-wheel roller. Section 16 of this project received two 6-inch lifts of ATB. The nuclear densities were taken with a Troxler 3440, which was calibrated on 19

April 1997. Section 24 also received two 6-inch lifts of ATB. Densities between 92 and 96 percent were obtained on sections 16 and 24 with 6-inch lifts of ATB. The HMAC surface was paved with a surface and a binder course. The binder course varied from 2½-inch to 3-inch lifts with a final surface course of 1½ inches. These were laid using the Blaw-Knox PF510 paver and compacted with the Hypac vibratory roller, Ferguson pneumatic roller, and the Caterpillar static roller.

Specifications for this equipment can be found in the construction data forms included in appendix D. Final elevations were completed on the surface on 25 July 1997. The cross-profile plots and thickness information based on the elevation readings can be found in appendix B of this report.

On 28 May 1997, the automatic weather station (AWS) was installed adjacent to the site on the northbound side, midway between the projects. An existing weigh-in-motion (WIM) traffic data collector was also used for this site. This WIM is approximately 9 miles east of the new SPS site. There are four potential traffic generators between these locations: SH-115 into the wildlife refuge (estimated ADT of 900), exit and entrance ramps to a nearby subdivision, and three at-grade crossings. None of these routes have significant heavy truck volumes.

No other events or difficulties were observed during construction of this SPS-1 project. Table 3 provides the completion schedule.

POSTCONSTRUCTION MONITORING

Upon completion of construction of the SPS-1 project, monitoring of the pavement performance was initiated. This involved manual surveys, FWD testing, and profilometer testing. LTPP directives indicate that the manual surveys and profilometer testing need to be performed biennially. FWD testing is to be performed annually. The first set of profilometer testing was conducted on 19 November 1997 by Brent Rauhut Engineering (SRCO) (see appendix B). The first round of FWD testing was conducted on 1 December 1997 by Brent Rauhut Engineering (SRCO) (see appendix E). At this time, manual surveys and cross-profile measurements using the Dipstick® were performed. Profilometer measurements were taken in meters per kilometer are the results are included in table 4. The readings were taken for both the inside and outside wheelpaths. The average for each is provided, as well as an average for the project. This measurement is called the International Roughness Index (IRI), and is used widely by various agencies. It was noticed at this time that section 400115 had a milled patch from station 1+74 to 2+30, covering the entire outside lane and shoulder. The Oklahoma DOT was contacted about this event and it was discovered that this was done in an attempt to remove a slight bump in the road, to improve the ride quality. Photographs of this event and the construction of the SPS-1 project are located in appendix F.

Material Sampling and Testing

Postconstruction coring was completed on 14 May 1997. Specific samples and corresponding tests to be performed are designated in the Material Sampling and Testing Plan (appendix C).

Table 3. Completion Schedule

Activity Completed	Test Section												
	400113	400114	400115	400116	400117	400118	400119	400120	400121	400122	400123	400124	400160
Subgrade Sampling	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96
Subgrade Density	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96	Nov-96
Subgrade Elevation	Dec-96	Dec-96	Dec-96	Dec-96	Dec-96	Dec-96	Dec-96	Dec-96	Dec-96	Dec-96	Dec-96	Dec-96	Dec-96
DGAB Placement	Apr-97	Apr-97			Apr-97	Apr-97	Apr-97	Apr-97	Apr-97				Apr-97
DGAB Sampling	Apr-97	Apr-97			Apr-97	Apr-97	Apr-97	Apr-97	Apr-97				Apr-97
DGAB Density	Apr-97	Apr-97			Apr-97	Apr-97	Apr-97	Apr-97	Apr-97				Apr-97
DGAB Elevation	Apr-97	Apr-97			Apr-97	Apr-97	Apr-97	Apr-97	Apr-97				Apr-97
Edge Drain Trench							Apr-97	Apr-97	Apr-97	Apr-97	Apr-97	Apr-97	Apr-97
Edge Drain Placement							Apr-97	Apr-97	Apr-97	Apr-97	Apr-97	Apr-97	Apr-97
Geotextile Placement										Apr-97	Apr-97	Apr-97	
PATB Placement							Apr-97	Apr-97	Apr-97	Apr-97	Apr-97	Apr-97	Apr-97
PATB Sampling							Apr-97	Apr-97	Apr-97	Apr-97	Apr-97	Apr-97	Apr-97
PATB Elevation							Apr-97	Apr-97	Apr-97	Apr-97	Apr-97	Apr-97	Apr-97
ATB Placement			May-97	May-97	May-97	May-97				May-97	May-97	May-97	
ATB Sampling			May-97	May-97	May-97	May-97				May-97	May-97	May-97	
ATB Density			May-97	May-97	May-97	May-97				May-97	May-97	May-97	
ATB Elevation			May-97	May-97	May-97	May-97				May-97	May-97	May-97	
HMAC Placement	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97
HMAC Bulk Sampling	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97
HMAC Density	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97	May-97
HMAC Elevation	Jun-97	Jun-97	Jun-97	Jun-97	Jun-97	Jun-97	Jun-97	Jun-97	Jun-97	Jun-97	Jun-97	Jun-97	Jun-97

Table 4. Postconstruction Profile Readings
International Roughness Index (IRI) in m/km

Data Surveyed: 19 November 1997			
Section	**Left**	**Right**	**Average**
400113	1.120	1.008	1.064
400114	1.014	0.911	0.963
400115	1.116	1.137	1.127
400116	1.162	0.893	1.027
400117	1.141	0.944	1.042
400118	1.088	0.772	0.930
400119	0.890	0.790	0.840
400120	0.834	0.688	0.761
400121	0.973	0.818	0.895
400122	0.932	0.893	0.912
400123	0.897	0.645	0.771
400124	1.046	0.812	0.929
400160	1.101	1.307	1.204
Average	**1.024**	**0.894**	**0.959**

SUMMARY

Having completed the observations of the construction for this SPS-1 project located on US-62, west of Lawton, Oklahoma, it appears that this project will contribute significantly to the LTPP objectives by providing valuable information about the structural factors affecting flexible pavements. The efforts of the Oklahoma DOT, and their willingness to participate in this study, is greatly appreciated. Special thanks goes to Kathleen Toney, David Ooten, and Don Welch.

The SRCO will continue noting changes in the surface distress, surface profile, and structural capacity, and compare the data with other projects of this nature around the country, in an attempt to improve existing structural design methods.

Currently, monitoring efforts are scheduled and we will continue noting changes in the surface distress, surface profile, and structural capacity, and compare the data with other projects of this nature around the country in an attempt to improve existing structural design methods.

APPENDIX A

PROJECT NOMINATION FORMS AND OTHER CORRESPONDENCE

Brent Rauhut Engineering Inc.

24 May 1996

Mr. David Ooten
Engineering Manager, Research
Oklahoma Department of Transportation
200 N.E. 21st Street, Room 2A2
Oklahoma City, Oklahoma 73105-3204

Subject: Nomination of SPS Project

Dear David,

Enclosed are the nomination guidelines for Experiment SPS-1, "Strategic Study of Structural Factors for Flexible Pavements" and Experiment SPS-5, "Rehabilitation of Asphalt Concrete Pavements".

Please do not hesitate to call should you have any questions during the completion of the nomination forms. I will be certain to do everything in my power to get these nominations processed as quickly as possible to facilitate incorporation in the project you have underway. I look forward to hearing from you soon.

Sincerely,

Jerry F. Daleiden, P.E.
Project Engineer, SRCO

JFD:dmj

Enclosures: As stated.

c.w/o Enc: Morris Reinhardt, RE/SRCO
Mark Gardner, SRCO/File

8240 Mopac, Suite 220 • Austin, Texas 78759 • (512) 346-0870 • FAX (512) 346-8750

OKLAHOMA DEPARTMENT OF TRANSPORTATION
200 N. E. 21st Street
Oklahoma City, OK 73105-3204

May 30, 1996

Mr. Jerry F. Daleiden, P.E.
Project Engineer, SRCO
Brent Rauhut Engineering Inc.
8240 Mopac, Suite 220
Austin, Texas 78759

Dear Mr. Daleiden:

Subject: Nomination of SPS Project for SHRP LTPP Program

The Oklahoma Department of Transportation is requesting that the project NH-215(60) on U.S. 62 west of Lawton be considered for SPS-1 and SPS-5 sites in the SHRP LTPP study. The plans have been submitted and this project is scheduled to be let in July 1996. In the interest of time, we will send the required information as it is collected so that you may begin processing the nominations. A set of plans is enclosed for your review. If I may be of further assistance please contact myself or Ginger McGovern at (405) 521-2671.

Sincerely,

Jack D. Telford
Materials Engineer

JDT:GM

Enclosures

cc: File - Item 2155

AN EQUAL OPPORTUNITY EMPLOYER

Brent Rauhut Engineering Inc.

5 June 1996

Mr. Monte Symons
Pavement Performance Division - LTPP (HNR-40)
Federal Highway Administration
Turner-Fairbanks Highway Research Center
6300 Georgetown Pike, Room F-215
McLean, Virginia 22101

Subject: Nomination of SPS Projects from the Oklahoma DOT

Dear Monte,

The Oklahoma DOT has expressed an interest in constructing test sections for incorporation in the SPS-1 and SPS-5 experiments (see attached letter and nomination forms). It is proposed that these test sections be built side-by-side. They have an existing portion of US-62 just west of Cache, Oklahoma that has an existing two-lane undivided facility. The planned construction will widen this facility to a four-lane divided highway. The SPS-1 sections would be incorporated in the new construction and the SPS-5 sections would be incorporated in the rehabilitation of the existing facility.

Although we have not yet collected soil samples at this particular location, it is our understanding that the subgrade here is a sandy clay (based on the information provided by the state and materials sampling conducted previously at LTPP test sections in Altus, Oklahoma on US-62 to the west of this particular location, and near Lawton, Oklahoma on US-62 just east of this particular location). These sections would, of course, be in the dry no-freeze environmental zone. From review of the plans for upcoming construction and the plans of original construction of the two-lane undivided facility, we believe that ample space will be available to satisfactorily locate all of the test sections in the same vicinity, with comparable traffic and earthwork.

It should be noted that this project is scheduled to be let for construction in six weeks. With this in mind, it is being asked that this section be given your earliest possible consideration. We believe that we can assist the Oklahoma DOT in incorporating these test sections in this project, and believe that these will be very desirable test sections. However, we will need a fairly prompt response to bring these sections to fruition.

8240 Mopac, Suite 220 • Austin, Texas 78759 • (512) 346-0870 • FAX (512) 346-8750

Please feel free to contact me if you have any questions on the information provided, or if we can be of any further assistance in your review of these nominations. Thank you for your consideration.

Sincerely,

Jerry F. Daleiden, P.E.
Project Engineer, SRCO

JFD:dmj

Attachments: As stated.

c.w/Att: Ginger McGovern, OKDOT
John Stites, FHWA-OK Div.
John Miller, PCS/LAW
Morris Reinhardt, RE/SRCO

dj RECEIVED JUN - 4 1996

OKLAHOMA DEPARTMENT OF TRANSPORTATION
200 N. E. 21st Street
Oklahoma City, OK 73105-3204

NAME	INFO	ACTN	COPY
BR			
MG			
MR			
JD		✓	
File:			

May 30, 1996

Mr. Jerry F. Daleiden, P.E.
Project Engineer, SRCO
Brent Rauhut Engineering Inc.
8240 Mopac, Suite 220
Austin, Texas 78759

Dear Mr. Daleiden:

Subject: Nomination of SPS Project for SHRP LTPP Program

The Oklahoma Department of Transportation is requesting that the project NH-215(60) on U.S. 62 west of Lawton be considered for SPS-1 and SPS-5 sites in the SHRP LTPP study. The plans have been submitted and this project is scheduled to be let in July 1996. In the interest of time, we will send the required information as it is collected so that you may begin processing the nominations. A set of plans is enclosed for your review. If I may be of further assistance please contact myself or Ginger McGovern at (405) 521-2671.

Sincerely,

J. D. Telford

Jack D. Telford
Materials Engineer

JDT:GM

Enclosures

cc: File - Item 2155

AN EQUAL OPPORTUNITY EMPLOYER

Oklahoma Department of Transportation

DATE: April 19, 1996

TO: Roadway Design Engineer

FROM: Pavement Engineer

SUBJ: Pavement Design for Project Nh-215(58), J/P 04040(04), Comanche Co., US-62, west of Cache

---

ADT (Present)	=	4000
ADT (30 year Future)	=	13,250
ADT (Design)	=	6625
Design PI	=	28
Design Rigid ESALs*	=	
Design Flex. ESALs*	=	8,418,511
Design Resilient Mod.	=	14,628,061
% Heavy Trucks	=	13

On this day, a review was made on the subject project to establish a pavement design based on a final subgrade soil survey.

* A four-lane factor of 0.8 has been used in the calculations.

Tim M. Borg

Tim M. Borg, P.E.
Pavement Engineer

cc: Rosemarie Case, Engineering Manager
Division File

TMB:CCHAN623

FINAL PAVEMENT RECOMMENDATION
COMANCHE COUNTY
Project Number NH-215(58)
J/P 04040(04)
US-62

Description: West of Cache, new construction eastbound; overlay westbound.

This final pavement recommendation is made from a final subgrade soil survey.

The previous data indicate that the following depth of Asphalt Concrete (Section 411) or depth of Portland Cement Concrete (Section 414) will be required.

I. Flexible Pavement:	2" Type 'BH' AC 6" Type 'AH' AC 4" Open Graded Base 6" Aggregate Base 8" Lime Treated Subgrade
II. Rigid Pavement:	10" Dowel Jointed PCCP 4" Open Graded Base 6" Aggregate Base 8" Lime Treated Subgrade
III. Flexible Overlay:	2" Type 'BH' AC 1½" Type 'BH' AC Reinforcing Fabric

TMB

Tim M. Borg, P.E.
Pavement Engineer

cc: Rosemarie Case, Engineering Manager
Division File

TMB:COMAN624

1986 AASHTO Pavement Design

DARWin(tm) Pavement Design System

A Proprietary AASHTOWARE(tm)
Computer Software Product

Flexible Structural Design Module

NH-215(58), J/P 04040(04), COMANCHE CO.
US-62 , west of Cache, westward, EB lane

Flexible Structural Design Module Data

18-kip ESALs Over Initial Performance Period:	8,418,511
Initial Serviceability:	4.5
Terminal Serviceability:	2.5
Reliability Level (%):	90
Overall Standard Deviation:	.45
Roadbed Soil Resilient Modulus (PSI):	5,000
Stage Construction:	1
Calculated Design Structural Number:	5.27

Specified Layer Design

Layer	Material Description	Struct. Coef. (Ai)	Drain. Coef. (Mi)	Thickness (Di) (in)	Width (ft)	Calculated SN
1	Poly. Mod. Type 'B' AC	.44	1	2	36	.88
2	Type 'A' AC	.44	1	6	36	2.64
3	Open Graded Bit. Base	.12	1	4	36	.48
4	Aggregate Base	.22	1	6	36	1.32
5	Lime/Flyash Treat. Subg.	.12	1	8	36	.96
Total	-	-	-	26.00	-	6.28

Simple ESAL Calculation

Performance Period (years):	30
Two-Way Daily Traffic (ADT):	4,000
Percent Heavy Trucks (of ADT) FHWA Class 5 or Greater:	13
Number of Lanes In Design Direction:	2
Percent of All Trucks In Design Lane (%):	80
Percent Trucks In Design Direction (%):	55
Average Initial Truck Factor (ESALs/truck):	2.34
Annual Truck Factor Growth Rate (%):	0
Annual Truck Volume Growth Rate (%):	3
Growth:	Simple
Total Calculated Cumulative Esals:	8,418,511

SHEET A. SPS-1 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE OK SHRP SECTION NO _____

GENERAL PROJECT INFORMATION

PROJECT LOCATION

ROUTE NUMBER U.S. 62

ROUTE SIGNING [] Interstate [X] U.S. [] State [] County

Other _____

PROJECT LOCATION Start Milepost _____ End Milepost _____

Start Station _____ End Station _____

DIRECTION OF TRAVEL [] North B. [] South B. [] West B. [X] East B.

PROJECT LOCATION DESCRIPTION Approx. 0.5 miles west of S.H. 115 and approx. 6.0 miles east of S.H. 54.

COUNTY Comanche

HIGHWAY AGENCY DISTRICT NUMBER 7

SHRP ENVIRONMENTAL ZONE

[] WET FREEZE [] WET NO-FREEZE [] DRY FREEZE [X] DRY NO-FREEZE

SIGNIFICANT DATES

LATEST DATE OF APPROVAL NOTIFICATION FROM SHRP _____

CONTRACT LETTING DATE 7-96

ESTIMATED CONSTRUCTION START DATE 9-96

ESTIMATED DATE TEST SECTIONS OPENED TO TRAFFIC _____

ESTIMATED CONSTRUCTION COMPLETION DATE 6-97

PROJECT DESCRIPTION

PROJECT TYPE [] New Route [] Removal and Reconstruction [X] Parallel Roadway

Other Existing 2 lanes to become westbound lanes, 2 new eastbound lanes to be constructed parallel to existing lanes.

FACILITY [X] Divided [] Undivided NUMBER OF LANES (One Way) 2

DESIGN TRAFFIC DATA

ANNUAL AVERAGE DAILY TRAFFIC (TWO DIRECTIONS) 4000

% HEAVY TRUCKS AND COMBINATIONS (OF AADT) 13%

ESTIMATED 18K ESAL RATE IN STUDY LANE (1,000 ESAL/YR) 280,617

TOTAL DESIGN 18K ESAL APPLICATIONS IN DESIGN LANE 8,418,511

DESIGN PERIOD (Years) 30

SHEET B. SPS-1 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE OK SHRP SECTION NO _____

AGENCY'S PAVEMENT STRUCTURE DESIGN FOR SITE

LAYER[1] NO.	LAYER[2] DESCRIPTION CODE	MATERIAL TYPE[3] CLASS CODE	THICKNESS[4] (INCHES)	STRUCTURAL[5] COEFFICIENT
1	SUBGRADE (7)	5 2		5000 psi
2	0 7	4 2	8.0	0.12
3	0 5	2 3	6.0	0.22
4	0 5	4 7	4.0	0.12
5	0 4	0 1	6.0	0.44
6	0 3	0 1	2.0	0.44
7			.	0.
8			.	0.
9			.	0.

STRUCTURAL DESIGN METHOD [] 1972 AASHTO [X] 1986 AASHTO [] Modified AASHTO

Other _____

AASHTO DESIGN RELIABILITY FACTORS R_a 90 S_o .45

OUTSIDE SHOULDER TYPE

[] Turf [] Granular [X] Asphalt Concrete [] Surface Treatment

[] PCC [] Curb and Gutter Other _____

OUTSIDE SHOULDER WIDTH (Feet) 10.0

SUBSURFACE EDGE DRAINS [X] Yes [] No

NOTES

1. Layer 1 is the natural occurring subgrade soil. The pavement surface will have the largest assigned layer number.

2. Layer description codes:
   Surface Layer .... 03 Base Layer ..... 05 Subgrade 07
   Subsurface HMAC .. 04 Subbase Layer ..... 06 Embankment (Fill) 11

3. Refer to Tables 1 through 4 for material class codes.

4. If subgrade depth to a rigid layer is known, enter this depth for subgrade thickness, otherwise leave subgrade layer thickness blank.

5. Enter AASHTO structural layer coefficient value, as appropriately modified, used in pavement design or typical coefficient used by agency for this material. For the subgrade, enter either AASHTO soil support value or resilient modulus value (psi) used in design.

SHEET A. SPS-5 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE OK

PROJECT LOCATION

ROUTE NUMBER U.S. 62

ROUTE SIGNING [] Interstate [X] U.S. [] State [] County

Other _____

PROJECT LOCATION Start Milepost _____ End Milepost _____

Start Station _____ End Station _____

PROJECT LOCATION DESCRIPTION Approx. 0.5 miles west of S.H. 115 and approx. 6.0 miles east of S.H. 54

COUNTY Comanche

HIGHWAY AGENCY DISTRICT NUMBER 7

SHRP ENVIRONMENTAL ZONE

[] WET FREEZE [] WET NO-FREEZE [] DRY FREEZE [X] DRY NO-FREEZE

SIGNIFICANT DATES

LATEST DATE OF APPROVAL NOTIFICATION FROM SHRP _____

CONTRACT LETTING DATE 7-96

ESTIMATED CONSTRUCTION START DATE 9-96

PROJECT DESCRIPTION

YEAR OPENED TO TRAFFIC _____

NUMBER OF LANES (One Direction) 2

[X] Divided-when completed [] Undivided

OUTSIDE LANE WIDTH (Feet) 12.0

OUTSIDE SHOULDER TYPE

[] Turf [] Granular [X] Asphalt Concrete [] Surface Treatment

[] PCC [] Curb and Gutter Other _____

OUTSIDE SHOULDER WIDTH (Feet) 10.0

SUBSURFACE EDGE DRAINS [] Placed at initial construction [X] Not Used

[] Retrofitted Retrofit Date _____

ASSESSMENT OF PRESENT PAVEMENT CONDITION [X] Fair [] Poor

PREDOMINATE DISTRESSES

[] Fatigue Cracking [] Other Cracking [] Potholes/Patches [] Rutting

Comments _____

SHEET B. SPS-5 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE _____

PAVEMENT STRUCTURE LAYER DESCRIPTIONS

LAYER[1] NO.	LAYER[2] DESCRIPTION CODE	MATERIAL TYPE[3] CLASS CODE	THICKNESS[4] (INCHES)	STRUCTURAL[5] COEFFICIENT
1	SUBGRADE (7)	5 2		
2	0 6	4 2	.	0.
3	0 5	2 8	8.0	0.
4	0 4	0 1	3.0	0.
5	0 3	0 1	1.5	0.
6			.	0.
7			.	0.
8			.	0.
9			.	0.

NOTES

1. Layer 1 is the natural occurring subgrade soil. The existing surface will have the largest assigned layer number.

2. Layer description codes:

Overlay 01	Base Layer 05	Porous Friction Course . 09
Seal Coat 02	Subbase Layer 06	Surface Treatment 10
Original Surface . 03	Subgrade 07	Embankment (Fill) 11
Subsurface HMAC .. 04	Interlayer 08	

3. Refer to Tables 1 through 4 for material class codes.
4. If subgrade depth to a rigid layer is known, enter this depth for subgrade, otherwise leave blank for subgrade layer.
5. Enter AASHTO structural layer coefficient used in pavement design or typical coefficient used by agency for this material. For the subgrade, enter either AASHTO soil support value or estimated resilient modulus.

SHEET C. SPS-5 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE OK

TRAFFIC DATA

ANNUAL AVERAGE DAILY TRAFFIC (TWO DIRECTION)	4000
% HEAVY TRUCKS AND COMBINATIONS (OF AADT)	13%
COUNT YEAR OF AADT ESTIMATE	1994
TRAFFIC GROWTH RATE SINCE PROJECT OPENED TO TRAFFIC (%/YR)	
18K ESAL RATE IN PROPOSED STUDY LANE (1,000 ESAL/YR)	
YEAR OF ESAL RATE ESTIMATE	1994
ESTIMATED TOTAL 18K ESAL APPLICATIONS IN STUDY LANE[1]	

REHABILITATION INFORMATION[2]

PRIMARY CAUSE FOR REHABILITATION

OVERLAY	Thickness (Inches)	Material Type Class Code
Surface Course	2	01
Binder Course	1½	01

SURFACE PREPARATION PRIOR TO OVERLAY

[] Patching [] Crack Sealing [X] Milling Depth of Mill 1 inch

Other Fog Seal & Fabric Reinforcement

OTHER CONSTRUCTION ACTIVITIES TO BE PERFORMED DURING REHABILITATION

Remove 6' of the existing 10' left shoulder.

NOTES

1. Leave blank if estimate is not available.
2. This information concerns the planned rehabilitation work to be performed by the agency on the non-experimental portions of the project.

APPENDIX A

CANDIDATE PROJECT NOMINATION AND INFORMATION FORMS

FOR

SPS-1, STRATEGIC STUDY OF STRUCTURAL FACTORS

FOR FLEXIBLE PAVEMENTS

SHEET A. SPS-1 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE OK SHRP SECTION NO _____

GENERAL PROJECT INFORMATION

PROJECT LOCATION

ROUTE NUMBER U.S. 62

ROUTE SIGNING [] Interstate [X] U.S. [] State [] County

Other _____

PROJECT LOCATION Start Milepost _____ End Milepost _____

Start Station _____ End Station _____

DIRECTION OF TRAVEL [] North B. [] South B. [] West B. [X] East B.

PROJECT LOCATION DESCRIPTION Approx. 0.5 miles west of S.H. 115 and approx. 7.0 miles east of S.H. 54.

COUNTY Comanche

HIGHWAY AGENCY DISTRICT NUMBER 7

SHRP ENVIRONMENTAL ZONE

[] WET FREEZE [] WET NO-FREEZE [] DRY FREEZE [X] DRY NO-FREEZE

SIGNIFICANT DATES

LATEST DATE OF APPROVAL NOTIFICATION FROM SHRP _____

CONTRACT LETTING DATE 7-96

ESTIMATED CONSTRUCTION START DATE 9-96

ESTIMATED DATE TEST SECTIONS OPENED TO TRAFFIC _____

ESTIMATED CONSTRUCTION COMPLETION DATE 9-97

PROJECT DESCRIPTION

PROJECT TYPE [] New Route [] Removal and Reconstruction [X] Parallel Roadway

Other Existing 2 lanes to become westbound lanes, 2 new eastbound lanes to be constructed parallel to existing lanes.

FACILITY [X] Divided [] Undivided NUMBER OF LANES (One Way) 2

DESIGN TRAFFIC DATA

ANNUAL AVERAGE DAILY TRAFFIC (TWO DIRECTIONS) 4000

% HEAVY TRUCKS AND COMBINATIONS (OF AADT) 13%

ESTIMATED 18K ESAL RATE IN STUDY LANE (1,000 ESAL/YR) 280,617

TOTAL DESIGN 18K ESAL APPLICATIONS IN DESIGN LANE 8,418,511

DESIGN PERIOD (Years) 30

SHEET B. SPS-1 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE OK SHRP SECTION NO _____

AGENCY'S PAVEMENT STRUCTURE DESIGN FOR SITE

LAYER[1] NO.	LAYER[2] DESCRIPTION CODE	MATERIAL TYPE[3] CLASS CODE	THICKNESS[4] (INCHES)	STRUCTURAL[5] COEFFICIENT
1	SUBGRADE (7)	5 2		5000 psi
2	0 7	4 2	8.0	0.12
3	0 5	2 3	6.0	0.22
4	0 5	4 7	4.0	0.12
5	0 4	0 1	6.0	0.44
6	0 3	0 1	2.0	0.44
7				0.
8				0.
9				0.

STRUCTURAL DESIGN METHOD [] 1972 AASHTO [X] 1986 AASHTO [] Modified AASHTO

Other _____

AASHTO DESIGN RELIABILITY FACTORS R% 90 S_o .45

OUTSIDE SHOULDER TYPE

[] Turf [] Granular [X] Asphalt Concrete [] Surface Treatment

[] PCC [] Curb and Gutter Other _____

OUTSIDE SHOULDER WIDTH (Feet) 10.0

SUBSURFACE EDGE DRAINS [X] Yes [] No

NOTES

1. Layer 1 is the natural occurring subgrade soil. The pavement surface will have the largest assigned layer number.

2. Layer description codes:
   Surface Layer .... 03 Base Layer ..... 05 Subgrade 07
   Subsurface HMAC .. 04 Subbase Layer ..... 06 Embankment (Fill) 11

3. Refer to Tables 1 through 4 for material class codes.

4. If subgrade depth to a rigid layer is known, enter this depth for subgrade thickness, otherwise leave subgrade layer thickness blank.

5. Enter AASHTO structural layer coefficient value, as appropriately modified, used in pavement design or typical coefficient used by agency for this material. For the subgrade, enter either AASHTO soil support value or resilient modulus value (psi) used in design.

SHEET C. SPS-1 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE _____ SHRP SECTION NO _____

TEST SECTION LAYOUT

NUMBER OF TEST SECTIONS ENTIRELY ON: FILL _____ CUT _____

SHORTEST TRANSITION BETWEEN CONSECUTIVE TEST SECTIONS (Feet) _____

VERTICAL GRADE (Avg %) (+ upgrade; - downgrade) _____

HORIZONTAL CURVATURE (Degrees) [] Tangent _____#

COMMENTS ON DEVIATIONS FROM DESIRED SITE LOCATION CRITERIA _____

_____

_____

_____

_____

_____

_____

_____

OTHER SHRP TEST SECTIONS

DOES AGENCY DESIGN CONFORM TO GPS-1 OR GPS-2 PROJECT CRITERIA? [] YES [] NO

DISTANCE TO NEAREST GPS TEST SECTION ON SAME ROUTE (Miles) _____

TEST SECTION NUMBER OF NEAREST GPS SECTION _____

SUPPLEMENTAL TEST SECTIONS

IF SUPPLEMENTAL EXPERIMENTAL TEST SECTIONS ARE PROPOSED, COMPLETE THE FOLLOWING

TOTAL NUMBER OF SUPPLEMENTAL TEST SECTIONS _____

FACTORS TO BE INVESTIGATED _____

_____

_____

_____

_____

_____

_____

Brent Rauhut Engineering Inc.

7 August 1997

Mr. Monte Symons
Pavement Performance Division - LTPP
Federal Highway Administration
Turner-Fairbanks Highway Research Center
6300 Georgetown Pike, Room F-215
McLean, Virginia 22101

Subject: Updates to EXPERIMENT_SECTION Table

Dear Monte,

Attached is a Form 1 to add a supplemental section to the Oklahoma SPS-1 project. I did not attach the nomination forms for this project as all other sections of the project have already been added to the database. When the Form 1s for the other sections were sent in, I was not aware that a supplemental section had been planned for this project.

If you need further assistance in this matter, please let me know.

Sincerely,

Amy L. Simpson, P.E.
Research Engineer, SRCO

ALS:dmj

Attachment: As stated.

c.w/Att: Barbara Ostrom, FHWA/LTPP-PPD
Charlie Copeland, PCS/LAW
Rick Cale, SAIC
Mark Gardner, SRCO
Jerry Daleiden, SRCO
Peter Jordahl, SRCO
John Brunken, SRCO
Hank Usher, SRCO

8240 Movac, Suite 220 • Austin Texas 787[illegible] (512) 346-0870 • FAX (512) 346-8750

CHANGE REQUEST FOR FHWA/LTPP IMS CRITICAL TABLES

Requester .... [Amy Simpson] Region .... [Southern]

Date Submitted ..... [08/06/97]

STATE CODE ..... [40]

SHRP ID ..... [0160]

Type of Change Requested ..... [1]

1 - Add a section
2 - Change section status
3 - Change assign date
4 - Change experiment
5 - Delete section
6 - Other change

If adding a section, check that nomination forms are attached ..... [___]
Assign Date ..... [01/01/96]

If changing section status, proposed new status .. [___] O - Out of study
(Fill out comments below for explanation) R - Released
Deassign Date ..... [__ __ / __ __ / __ __]

If changing assignment date, proposed new date ... [__ __ / __ __ / __ __]
(Fill out comments below for explanation) old date ... [__ __ / __ __ / __ __]

If changing experiment, check that documentation is attached ..... [___]
Existing Experiment ..... [___]
Deassign Date ..... [__ __ / __ __ / __ __]
Proposed Experiment ..... [___]

If deleting a section, check that documentation is attached ..... [___]
(Fill out comments below for explanation)

If 'Other Change' is requested, check that documentation is attached. [___]
(Fill out comments below for explanation)

Comments:
All other sections of the project have already been added to the database.

Approved By: _____ Date: _____ (FHWA/LTPP)

_____ _____ (PCS/LAW)

IMS Form 1 Revised April 15, 1993

Brent Rauhut Engineering Inc.

(Please Call 512/346-0870 If You Have Any Trouble Receiving This Transmission Or If You Did Not Receive The Number Of Pages Shown Below.)

FAX TRANSMITTAL WITH MESSAGE

TO: MONTE SYMONS, FHWA/LTPP-PPD

INFO: JOHN MILLER, PCS/LAW

FROM: JERRY DALEIDEN
PROJECT ENGINEER, SRCO

DATE: 2 JULY 1996

TOTAL NO. OF PAGES: 2

MESSAGE: Subject: Weigh-in-Motion (WIM) Traffic Data Collected for SPS Site near Cache, Oklahoma

Monte -

As noted in the attached letter, the Oklahoma DOT would like to use an existing WIM location for collecting data for the SPS-1 and SPS-5 projects to be built next spring. In discussing this subject with John Miller, we could not identify any significant reason for opposing this request (considering the information provided in Mr. Telford's letter). John did suggested, however, that we check with you before responding to the Oklahoma DOT.

Please feel free to contact me should you have any questions or comments regarding the information provided.

JGery

Jerry

Attachment: As stated.

JFD:dmj

8240 Mopac, Suite 220 • Austin, Texas 78759 • (512) 346-0870 • FAX (512) 346-8750

RECEIVED JUN 1 6 1996

OKLAHOMA DEPARTMENT OF TRANSPORTATION
200 N. E. 21st Street
Oklahoma City, OK 73105-3204

MG
MR
JD ✓
File

June 19, 1996

Mr Jerry F Daleiden, P.E.
Project Engineer, SRCO
Brent Rauhut Engineering Inc.
8240 Mopac, Suite 220
Austin, Texas 78759

Dear Mr. Daleiden·

Subject: Weigh-In-Motion (WIM) Traffic Data Collector for SPS Site near Cache, OK

To fulfill the requirement for a WIM data collector for the new SPS site, ODOT would like to use the existing WIM at GPS Site No. 404162. The existing WIM is approximately nine miles east of the new SPS site. There are four potential traffic generators between these locations: SH 115 into the Wildlife Refuge (estimated ADT of 900), exit and entrance ramps to a nearby subdivision, and three at-grade crossings. None of these routes have significant heavy truck volumes. Since the existing WIM is in the eastbound direction only, we are planning to instrument the westbound lanes. Please let us know if this would be acceptable to you. If further information is needed, please call Ginger McGovern at (405) 521-2671

Sincerely,

Reynold H. Toney

For J D Telford, P.E
Materials and Research Engineer

JDT·GM·gm

cc· File - Item 2155

AN EQUAL OPPORTUNITY EMPLOYER

APPENDIX B

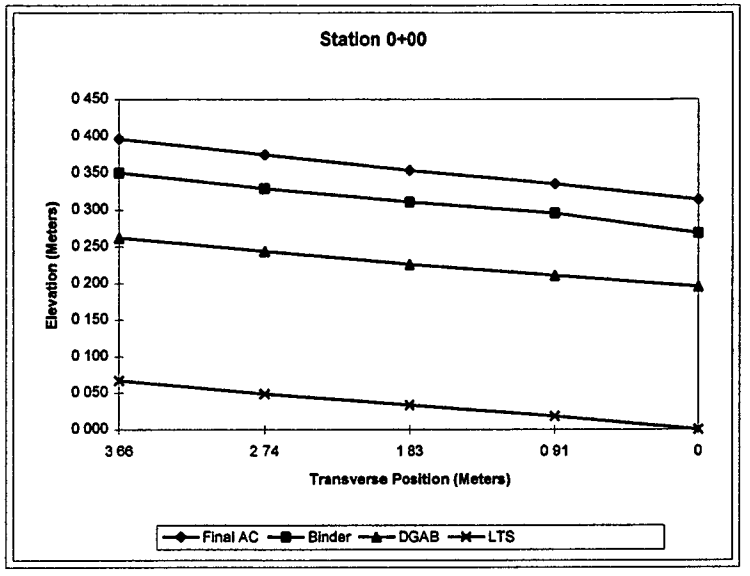
LAYER PROFILE RESULTS

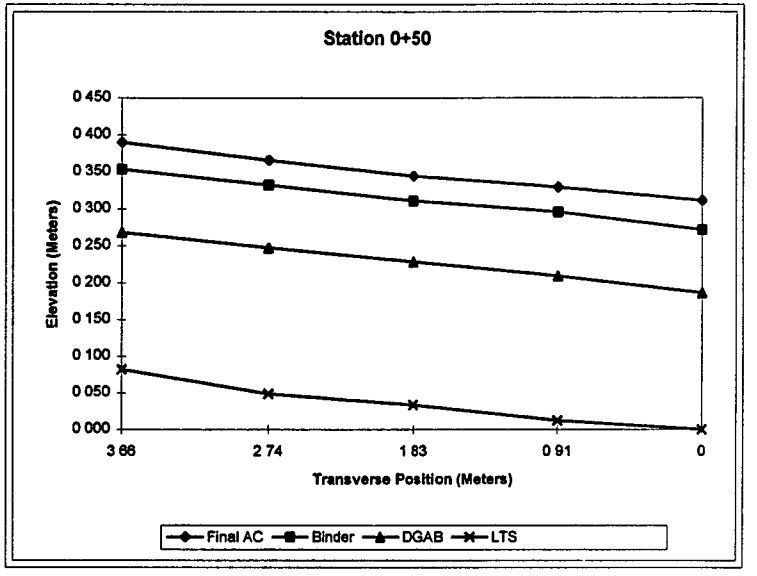
Oklahoma SPS-1 (400113)

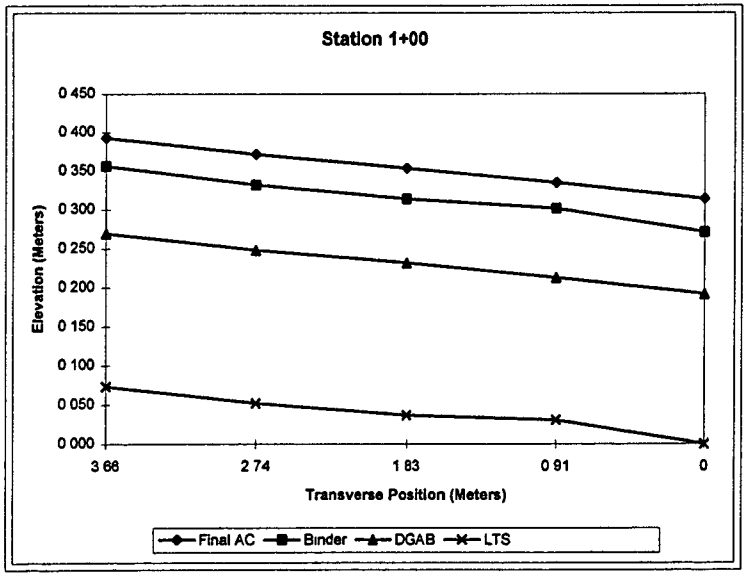
Transverse Offset	LAYERS	ELEVATION 0 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 0.91 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 1.83 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 2.74 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 3.66 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	DGAB THICKNESS Meters
0+00	Final AC	0.896	0.046	0.073	0.196	0.917	0.040	0.085	0.193	0.936	0.043	0.085	0.193	0.957	0.046	0.085	0.195	0.978	0.046	0.088	0.195
	Binder	0.850				0.878				0.893				0.911				0.933			
	DGAB	0.778				0.793				0.808				0.826				0.844			
	LTS	0.582				0.600				0.616				0.631				0.649			
0+50	Final AC	0.847	0.040	0.085	0.186	0.866	0.034	0.087	0.197	0.881	0.034	0.082	0.195	0.902	0.034	0.084	0.199	0.927	0.037	0.085	0.186
	Binder	0.808				0.832				0.847				0.869				0.890			
	DGAB	0.722				0.745				0.765				0.784				0.805			
	LTS	0.536				0.549				0.570				0.585				0.619			
1+00	Final AC	0.792	0.043	0.079	0.192	0.814	0.034	0.089	0.182	0.832	0.040	0.082	0.195	0.850	0.040	0.084	0.197	0.872	0.037	0.087	0.197
	Binder	0.750				0.780				0.792				0.811				0.835			
	DGAB	0.671				0.691				0.710				0.727				0.748			
	LTS	0.479				0.509				0.515				0.530				0.552			
1+50	Final AC	0.728	0.043	0.062	0.187	0.750	0.037	0.069	0.191	0.768	0.043	0.066	0.187	0.789	0.046	0.069	0.193	0.811	0.037	0.081	0.191
	Binder	0.686				0.713				0.725				0.744				0.774			
	DGAB	0.623				0.645				0.659				0.674				0.693			
	LTS	0.436				0.454				0.472				0.482				0.503			
2+00	Final AC	0.680	0.043	0.082	0.198	0.701	0.037	0.082	0.208	0.722	0.043	0.070	0.213	0.744	0.040	0.076	0.211	0.765	0.034	0.087	0.203
	Binder	0.637				0.664				0.680				0.704				0.732			
	DGAB	0.555				0.582				0.609				0.628				0.645			
	LTS	0.357				0.375				0.398				0.418				0.442			
2+50	Final AC	0.625	0.037	0.076	0.199	0.646	0.030	0.082	0.210	0.666	0.032	0.081	0.209	0.689	0.034	0.082	0.208	0.713	0.034	0.085	0.205
	Binder	0.588				0.616				0.634				0.655				0.680			
	DGAB	0.513				0.533				0.553				0.573				0.595			
	LTS	0.314				0.323				0.344				0.366				0.390			
3+00	Final AC	0.568	0.047	0.078	0.194	0.588	0.040	0.081	0.202	0.610	0.040	0.081	0.206	0.628	0.040	0.076	0.213	0.652	0.037	0.087	0.212
	Binder	0.521				0.549				0.570				0.588				0.616			
	DGAB	0.443				0.467				0.489				0.512				0.529			
	LTS	0.250				0.265				0.283				0.299				0.317			
3+50	Final AC	0.500	0.040	0.072	0.203	0.518	0.030	0.077	0.207	0.539	0.030	0.077	0.210	0.561	0.040	0.069	0.211	0.585	0.034	0.076	0.219
	Binder	0.460				0.488				0.509				0.521				0.552			
	DGAB	0.389				0.411				0.432				0.452				0.475			
	LTS	0.186				0.204				0.223				0.241				0.256			
4+00	Final AC	0.436	0.037	0.083	0.207	0.454	0.030	0.089	0.213	0.475	0.034	0.084	0.211	0.497	0.034	0.080	0.213	0.521	0.034	0.082	0.202
	Binder	0.399				0.424				0.442				0.463				0.488			
	DGAB	0.316				0.335				0.358				0.384				0.406			
	LTS	0.110				0.122				0.146				0.171				0.204			
4+50	Final AC	0.369	0.034	0.091	0.189	0.387	0.024	0.102	0.197	0.408	0.030	0.082	0.208	0.430	0.027	0.078	0.218	0.454	0.027	0.085	0.214
	Binder	0.335				0.363				0.378				0.402				0.427			
	DGAB	0.244				0.261				0.296				0.325				0.342			
	LTS	0.055				0.064				0.088				0.107				0.128			
5+00	Final AC	0.293	0.024	0.073	0.196	0.314	0.021	0.084	0.191	0.332	0.024	0.087	0.191	0.351	0.024	0.085	0.201	0.375	0.024	0.089	0.213
	Binder	0.268				0.293				0.308				0.326				0.351			
	DGAB	0.196				0.209				0.221				0.241				0.262			
	LTS	0.000				0.018				0.030				0.040				0.049			
	AVG		0.039	0.077	0.195		0.032	0.084	0.198		0.035	0.081	0.200		0.036	0.079	0.205		0.034	0.084	0.203
	MAX		0.047	0.091	0.207		0.040	0.102	0.213		0.043	0.087	0.211		0.046	0.085	0.218		0.046	0.089	0.219
	MIN		0.024	0.062	0.186		0.021	0.069	0.182		0.024	0.066	0.187		0.024	0.069	0.193		0.024	0.076	0.186
	STD		0.006	0.008	0.006		0.006	0.008	0.009		0.006	0.005	0.009		0.007	0.006	0.008		0.005	0.004	0.011

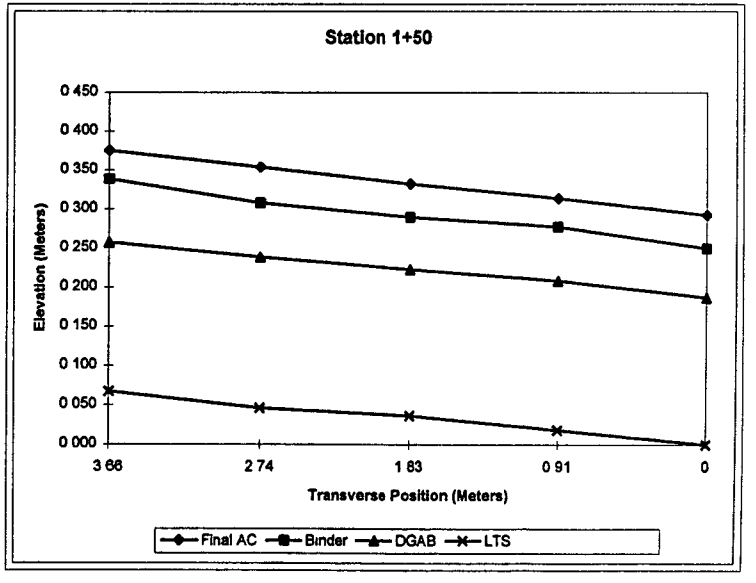
	Final AC	Binder	DGAB
SECTION AVG	0.036	0.081	0.201
SECTION MAX	0.047	0.102	0.219
SECTION MIN	0.021	0.062	0.182
SECTION STD	0.006	0.007	0.009

Oklahoma SPS-1 (400113)

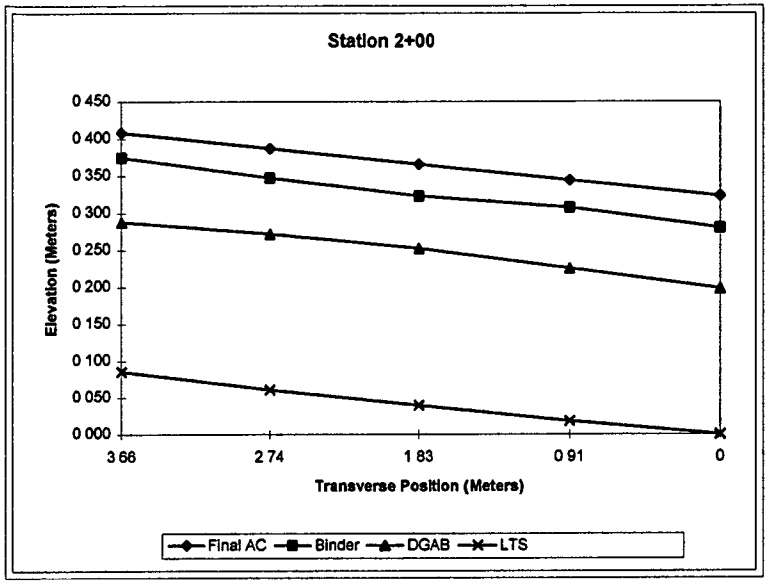


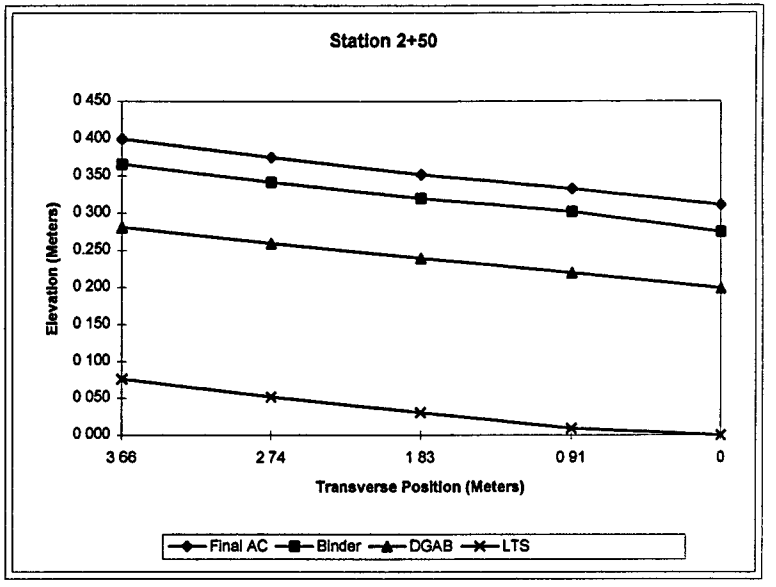


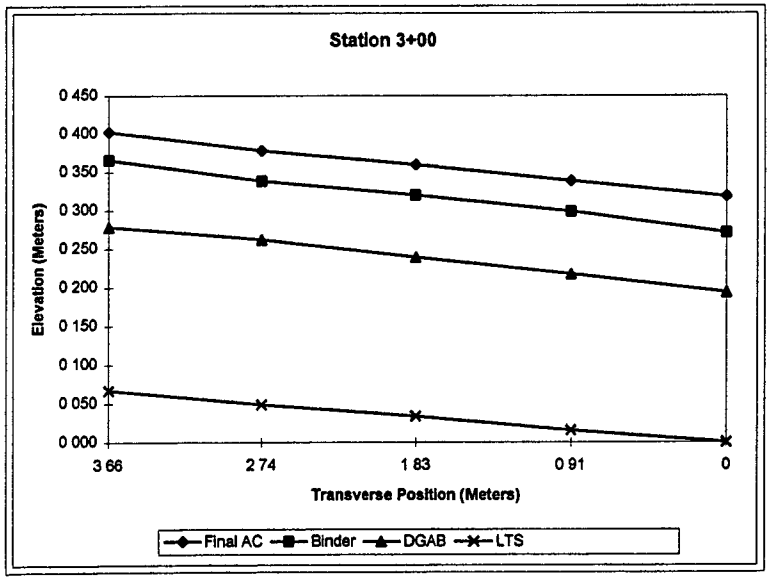


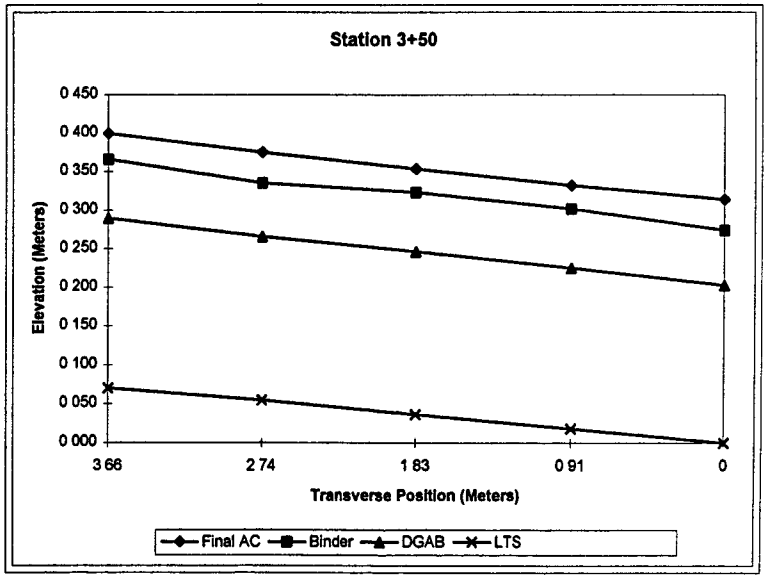


Oklahoma SPS-1 (400113)

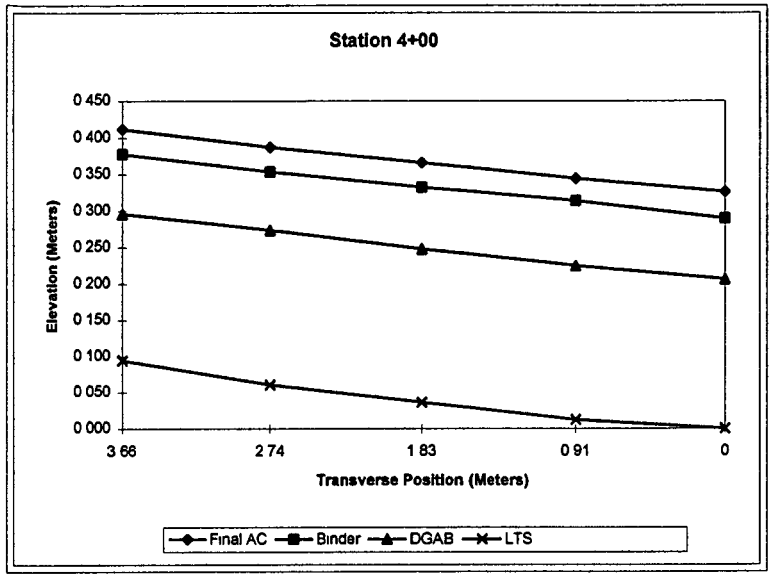


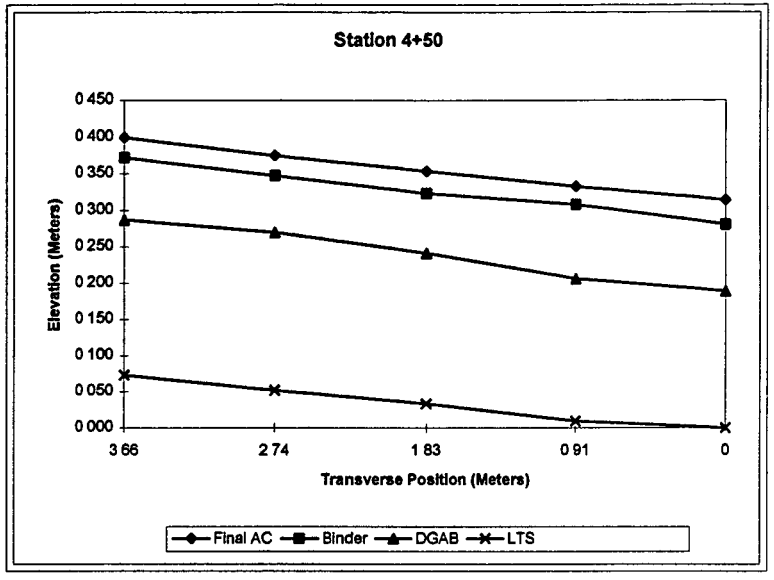


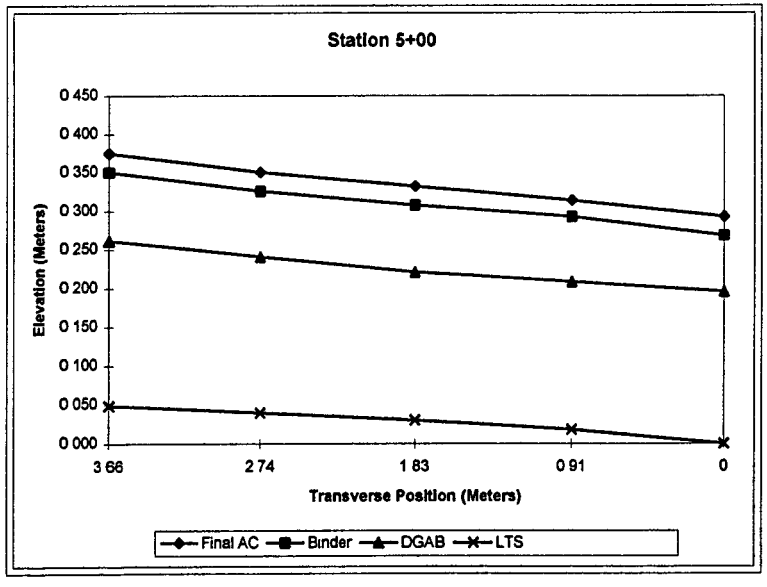




Oklahoma SPS-1 (400113)





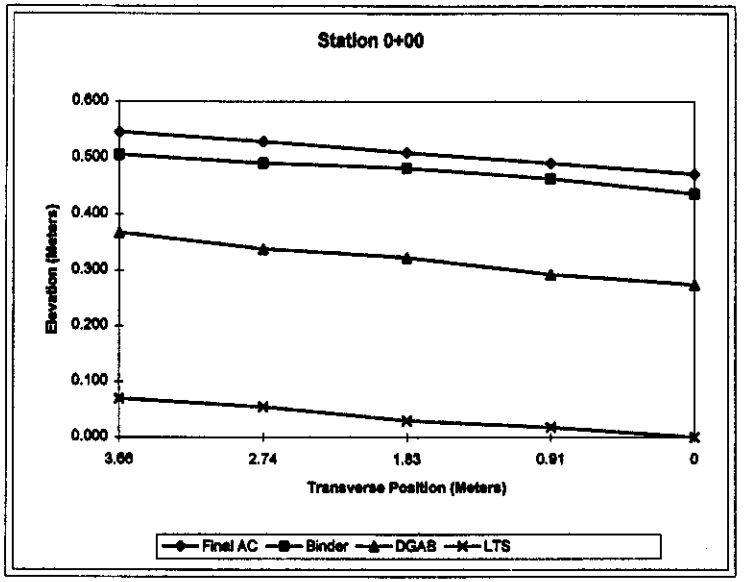


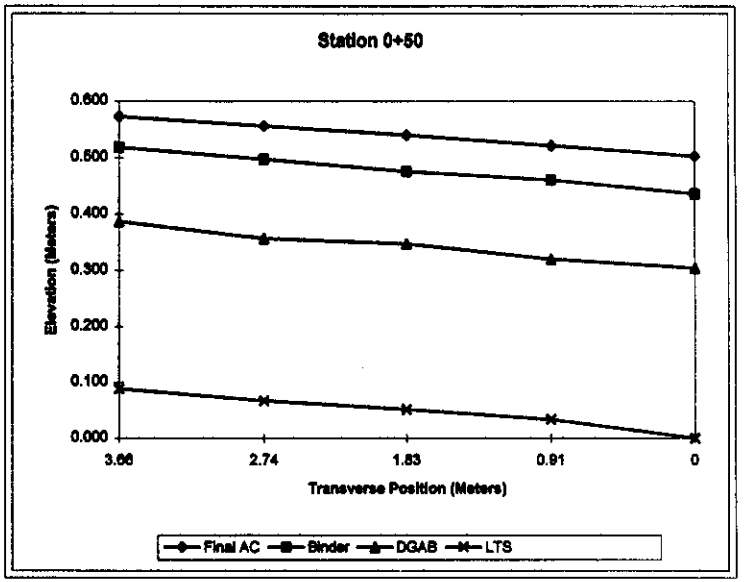
Oklahoma SPS-1 (400114)

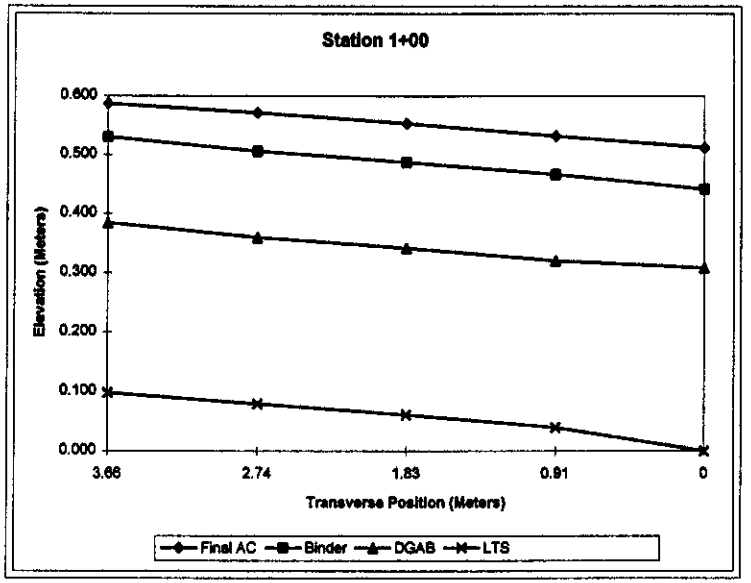
Transverse Offset	LAYERS	ELEVATION 0 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 0.91 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 1.83 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 2.74 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 3.66 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	DGAB THICKNESS Meters
0+00	Final AC	1 337	0 035	0 162	0 274	1 356	0 027	0 171	0 274	1 375	0 027	0 158	0 293	1 394	0 038	0 152	0 283	1 411	0 040	0 139	0 297
	Binder	1 301				1 329				1 347				1 356				1 372			
	DGAB	1 140				1 158				1 189				1 204				1 233			
	LTS	0 866				0 884				0 896				0 920				0 936			
0+50	Final AC	1 750	0 067	0 131	0 305	1 768	0 061	0 140	0 287	1 786	0 064	0 128	0 296	1 803	0 059	0 140	0 290	1 820	0 055	0 131	0 299
	Binder	1 682				1 707				1 722				1 743				1 765			
	DGAB	1 551				1 567				1 594				1 603				1 634			
	LTS	1 247				1 280				1 298				1 314				1 335			
1+00	Final AC	2 115	0 070	0 134	0 308	2 135	0 066	0 146	0 280	2 156	0 066	0 146	0 280	2 175	0 066	0 146	0 280	2 190	0 056	0 146	0 287
	Binder	2 045				2 070				2 091				2 109				2 134			
	DGAB	1 911				1 923				1 945				1 963				1 987			
	LTS	1 603				1 643				1 664				1 682				1 701			
1+50	Final AC	2 463	0 064	0 137	0 317	2 481	0 061	0 143	0 311	2 498	0 056	0 143	0 311	2 516	0 056	0 146	0 314	2 531	0 044	0 143	0 317
	Binder	2 399				2 420				2 441				2 460				2 487			
	DGAB	2 262				2 277				2 298				2 313				2 344			
	LTS	1 945				1 966				1 987				1 999				2 027			
2+00	Final AC	2 781	0 056	0 134	0 277	2 801	0 052	0 143	0 280	2 819	0 052	0 137	0 283	2 841	0 055	0 140	0 274	2 858	0 050	0 140	0 277
	Binder	2 725				2 749				2 768				2 786				2 807			
	DGAB	2 591				2 606				2 630				2 646				2 667			
	LTS	2 313				2 326				2 347				2 371				2 390			
2+50	Final AC	3 072	0 061	0 130	0 279	3 094	0 061	0 140	0 274	3 112	0 058	0 140	0 274	3 130	0 058	0 143	0 268	3 146	0 049	0 143	0 277
	Binder	3 011				3 033				3 054				3 072				3 097			
	DGAB	2 882				2 893				2 914				2 929				2 954			
	LTS	2 603				2 618				2 640				2 661				2 676			
3+00	Final AC	3 348	0 050	0 146	0 268	3 370	0 050	0 155	0 262	3 389	0 052	0 149	0 268	3 411	0 055	0 146	0 271	3 424	0 044	0 149	0 265
	Binder	3 298				3 319				3 338				3 356				3 380			
	DGAB	3 152				3 164				3 188				3 210				3 231			
	LTS	2 883				2 902				2 920				2 938				2 966			
3+50	Final AC	3 597	0 052	0 134	0 280	3 615	0 046	0 143	0 271	3 635	0 047	0 131	0 283	3 656	0 050	0 140	0 274	3 673	0 040	0 131	0 293
	Binder	3 545				3 569				3 587				3 606				3 633			
	DGAB	3 411				3 426				3 456				3 466				3 502			
	LTS	3 130				3 155				3 173				3 191				3 210			
4+00	Final AC	3 815	0 044	0 140	0 274	3 834	0 046	0 140	0 283	3 856	0 049	0 137	0 287	3 874	0 046	0 143	0 299	3 889	0 030	0 149	0 299
	Binder	3 770				3 789				3 807				3 828				3 859			
	DGAB	3 630				3 648				3 670				3 685				3 709			
	LTS	3 356				3 365				3 383				3 386				3 411			
4+50	Final AC	4 020	0 040	0 152	0 274	4 042	0 040	0 158	0 271	4 061	0 044	0 155	0 287	4 078	0 043	0 162	0 283	4 095	0 038	0 158	0 290
	Binder	3 981				4 002				4 017				4 036				4 057			
	DGAB	3 828				3 844				3 862				3 874				3 898			
	LTS	3 554				3 572				3 575				3 591				3 609			
5+00	Final AC	4 208	0 038	0 131	0 296	4 231	0 040	0 140	0 293	4 249	0 043	0 146	0 296	4 266	0 044	0 143	0 302	4 278	0 035	0 140	0 317
	Binder	4 170				4 191				4 206				4 221				4 243			
	DGAB	4 039				4 051				4 060				4 078				4 103			
	LTS	3 743				3 758				3 764				3 776				3 786			
	AVG		0 053	0.140	0 288		0 050	0 148	0 281		0 051	0 144	0 287		0 052	0 146	0 287		0 043	0 143	0 294
	MAX		0 070	0 162	0 317		0 066	0 171	0 311		0 066	0 158	0 311		0 066	0 162	0 314		0 056	0 158	0 317
	MIN		0 035	0 130	0 268		0 027	0 140	0 262		0 027	0 128	0 268		0 038	0 140	0 268		0 030	0 131	0 265
	STD		0 012	0 010	0 016		0 012	0 010	0 013		0 011	0 009	0 011		0 008	0 006	0 014		0 008	0 008	0 015

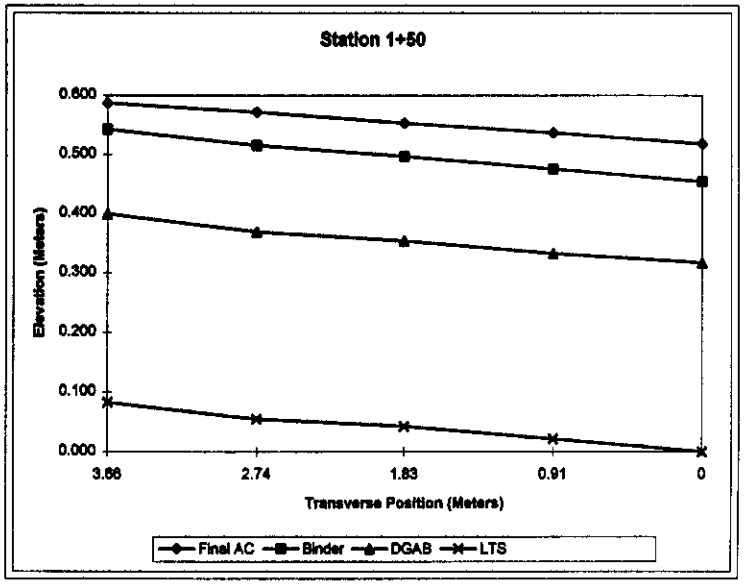
	Final AC	Binder	DGAB
SECTION AVG	0 050	0 144	0 286
SECTION MAX	0 070	0 171	0 317
SECTION MIN	0 027	0 128	0.262
SECTION STD	0 010	0 009	0 014

Oklahoma SPS-1 (400114)

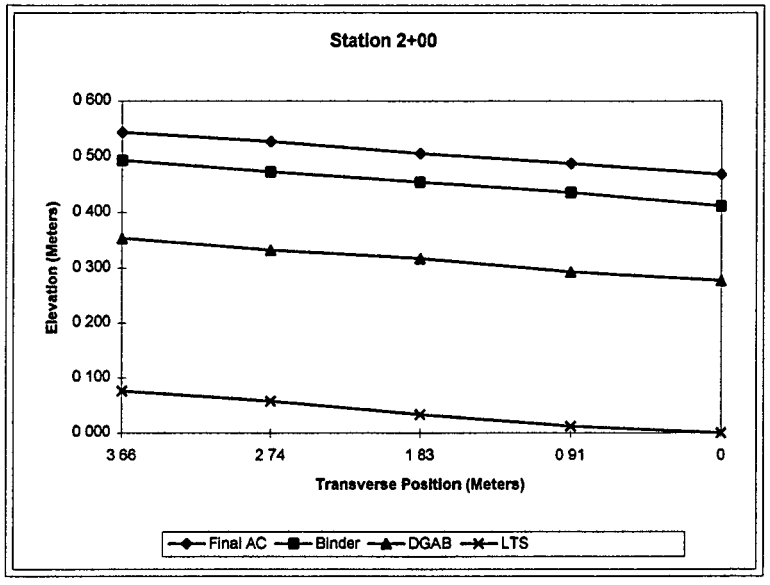


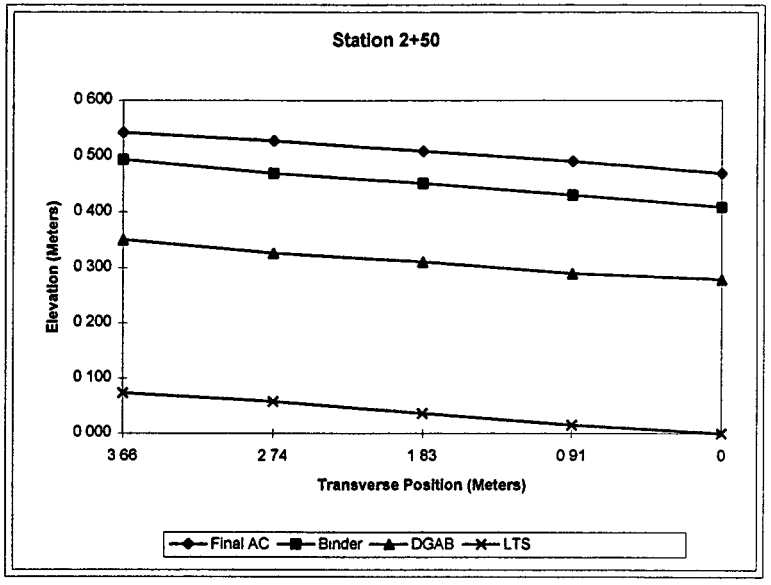


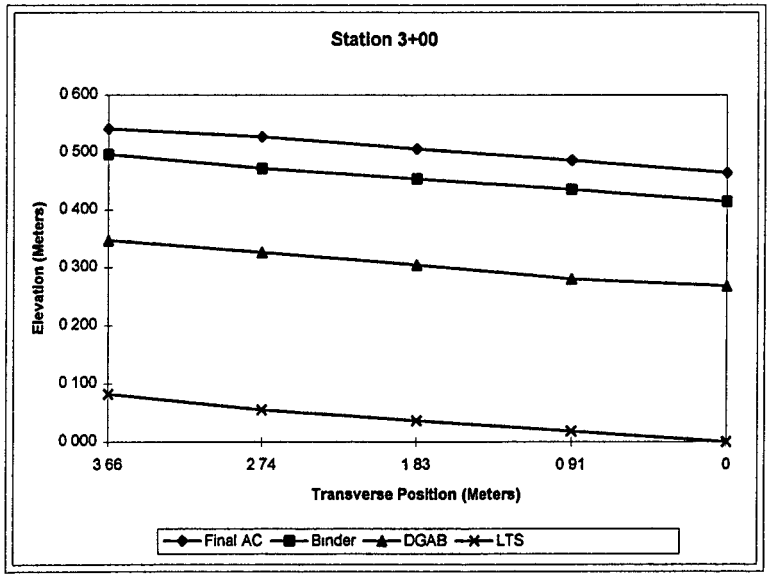


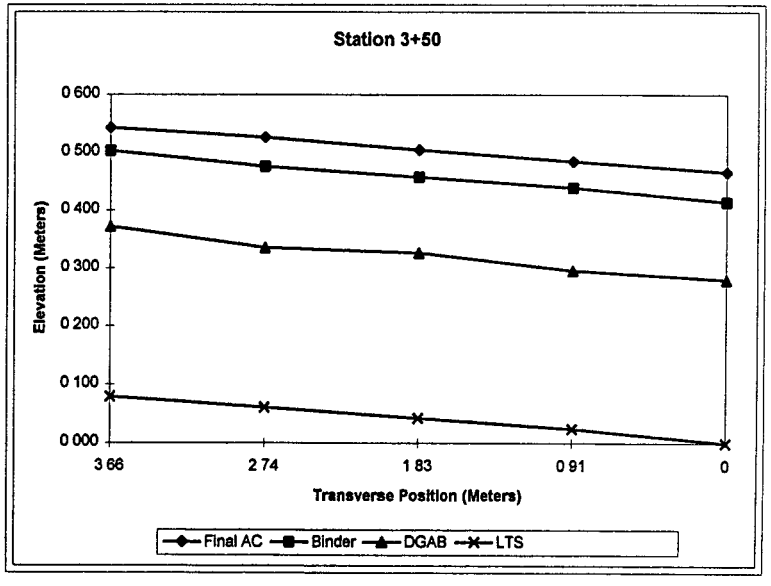


Oklahoma SPS-1 (400114)

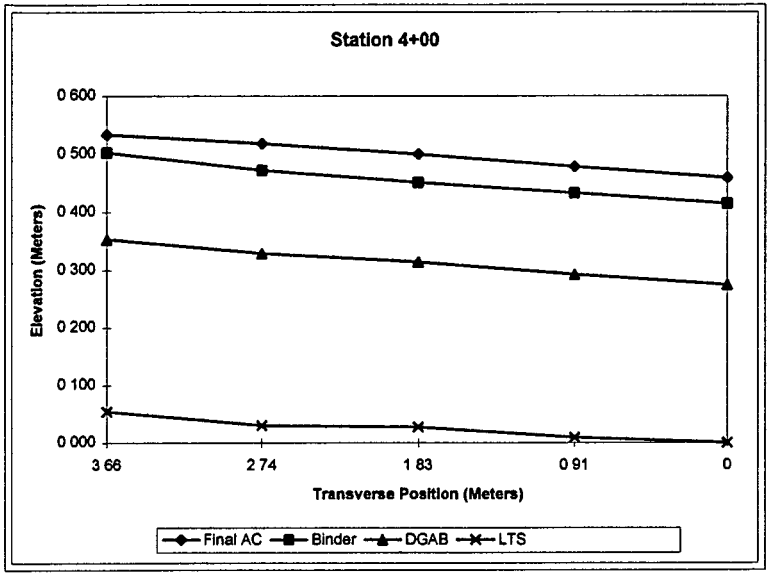


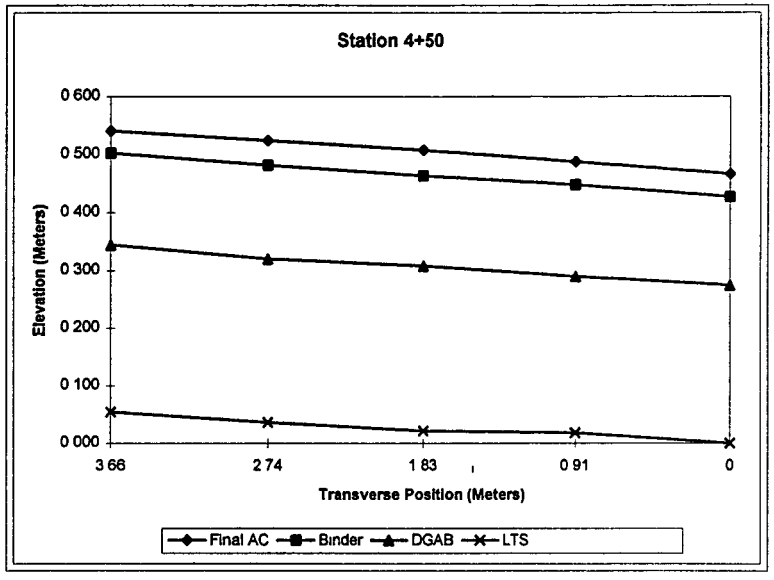


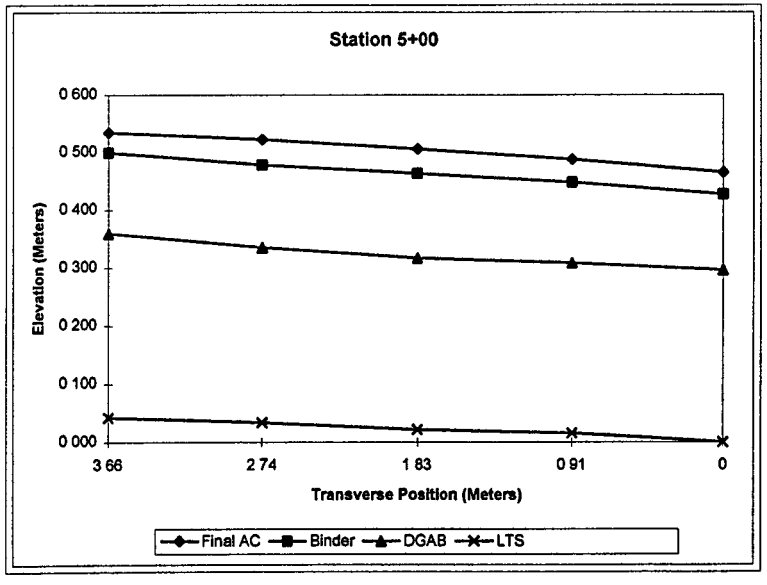




Oklahoma SPS-1 (400114)





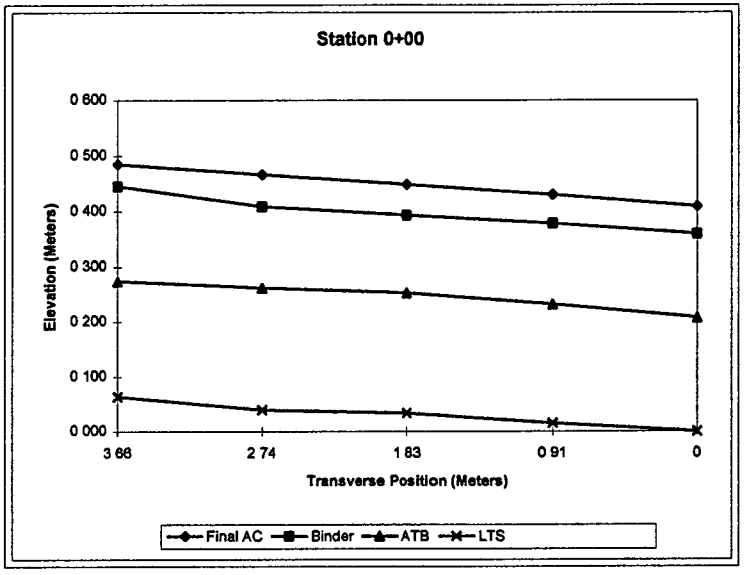


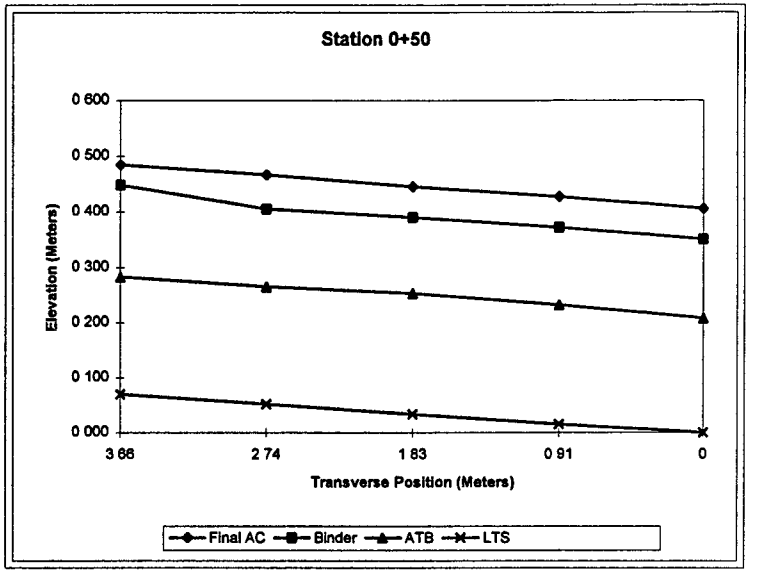
Oklahoma SPS-1 (400115)

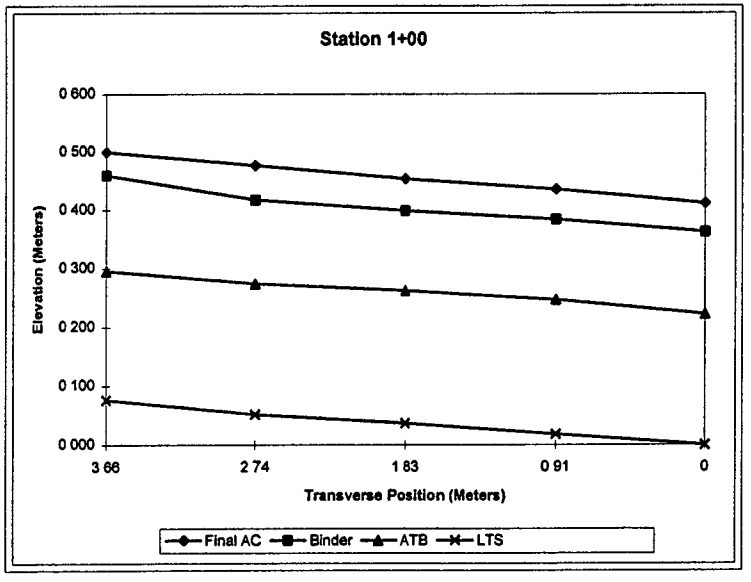
Transverse Offset	LAYERS	ELEVATION 0 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	ELEVATION 0.91 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	ELEVATION 1.83 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	ELEVATION 2.74 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	ELEVATION 3.66 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters
0+00	Final AC	2 277	0 049	0 152	0 207	2 298	0 052	0 146	0 216	2 316	0 055	0 140	0 219	2 335	0 058	0 146	0 223	2 353	0 040	0 171	0 210
	Binder	2 228				2 246				2 262				2 277				2 313			
	ATB	2 076				2 100				2 121				2 131				2 143			
	LTS	1 868				1 884				1 902				1 908				1 932			
0+50	Final AC	2 256	0 055	0 143	0 207	2 277	0 055	0 140	0 216	2 295	0 055	0 137	0 219	2 316	0 061	0 140	0 213	2 335	0 037	0 165	0 213
	Binder	2 201				2 222				2 240				2 256				2 298			
	ATB	2 057				2 082				2 103				2 115				2 134			
	LTS	1 850				1 865				1 884				1 902				1 920			
1+00	Final AC	2 225	0 049	0 140	0 223	2 249	0 052	0 137	0 229	2 268	0 055	0 137	0 226	2 291	0 059	0 143	0 223	2 313	0 040	0 165	0 219
	Binder	2 176				2 198				2 213				2 231				2 274			
	ATB	2 036				2 060				2 076				2 088				2 109			
	LTS	1 814				1 832				1 850				1 865				1 890			
1+50	Final AC	2 204	0 052	0 149	0 216	2 228	0 055	0 143	0 229	2 246	0 055	0 140	0 223	2 266	0 059	0 143	0 216	2 284	0 041	0 162	0 210
	Binder	2 152				2 173				2 192				2 207				2 243			
	ATB	2 003				2 030				2 051				2 063				2 082			
	LTS	1 786				1 801				1 829				1 847				1 871			
2+00	Final AC	2 195	0 049	0 162	0 223	2 213	0 058	0 149	0 219	2 228	0 052	0 149	0 216	2 243	0 052	0 149	0 213	2 268	0 040	0 158	0 213
	Binder	2 146				2 155				2 176				2 192				2 228			
	ATB	1 984				2 006				2 027				2 042				2 070			
	LTS	1 762				1 786				1 811				1 829				1 856			
2+50	Final AC	2 140	0 037	0 146	0 226	2 164	0 037	0 143	0 232	2 187	0 041	0 140	0 232	2 217	0 053	0 143	0 219	2 249	0 037	0 162	0 223
	Binder	2 103				2 128				2 146				2 164				2 213			
	ATB	1 957				1 984				2 006				2 021				2 051			
	LTS	1 731				1 753				1 774				1 801				1 829			
3+00	Final AC	2 128	0 046	0 146	0 226	2 147	0 044	0 143	0 229	2 170	0 049	0 143	0 229	2 195	0 052	0 152	0 219	2 220	0 047	0 149	0 229
	Binder	2 082				2 103				2 121				2 143				2 173			
	ATB	1 935				1 960				1 978				1 990				2 024			
	LTS	1 710				1 731				1 750				1 771				1 795			
3+50	Final AC	2 091	0 049	0 137	0 229	2 112	0 046	0 137	0 238	2 134	0 049	0 137	0 232	2 161	0 058	0 143	0 223	2 182	0 046	0 152	0 219
	Binder	2 042				2 067				2 085				2 103				2 137			
	ATB	1 905				1 929				1 948				1 960				1 984			
	LTS	1 676				1 692				1 716				1 737				1 765			
4+00	Final AC	2 070	0 058	0 134	0 219	2 091	0 052	0 140	0 226	2 114	0 056	0 140	0 223	2 140	0 064	0 146	0 216	2 158	0 052	0 152	0 219
	Binder	2 012				2 039				2 057				2 076				2 106			
	ATB	1 878				1 899				1 917				1 929				1 954			
	LTS	1 658				1 673				1 695				1 713				1 734			
4+50	Final AC	2 039	0 049	0 143	0 216	2 057	0 046	0 140	0 226	2 076	0 043	0 146	0 223	2 105	0 056	0 149	0 216	2 129	0 050	0 158	0 216
	Binder	1 990				2 012				2 033				2 048				2 079			
	ATB	1 847				1 871				1 887				1 899				1 920			
	LTS	1 631				1 646				1 664				1 682				1 704			
5+00	Final AC	2 012	0 052	0 140	0 235	2 030	0 046	0 140	0 241	2 051	0 049	0 143	0 226	2 079	0 061	0 140	0 226	2 100	0 049	0 149	0 229
	Binder	1 960				1 984				2 003				2 018				2 051			
	ATB	1 820				1 844				1 859				1 878				1 902			
	LTS	1 585				1 603				1 634				1 652				1 673			
	AVG		0 049	0 143	0 220		0 048	0 141	0 228		0 051	0 141	0 225		0 058	0 145	0 219		0 044	0 158	0 219
	MAX		0 058	0 152	0 235		0 055	0 146	0 241		0 056	0 146	0 232		0 064	0 152	0 226		0 052	0 171	0 229
	MIN		0 037	0 134	0 207		0 037	0 137	0 216		0 041	0 137	0 219		0 052	0 140	0 213		0 037	0 149	0 210
	STD		0 005	0 005	0 008		0 005	0 003	0 007		0 005	0 003	0 004		0 003	0 004	0 004		0 005	0 007	0 006

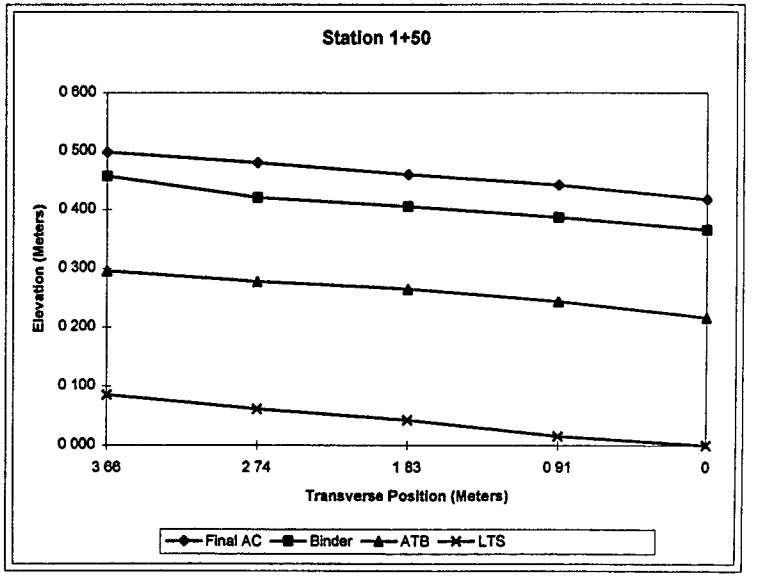
	Final AC	Binder	ATB
SECTION AVG	0 050	0 146	0 222
SECTION MAX	0 064	0 171	0.241
SECTION MIN	0 037	0 134	0.207
SECTION STD	0 007	0 008	0 007

Oklahoma SPS-1 (400115)

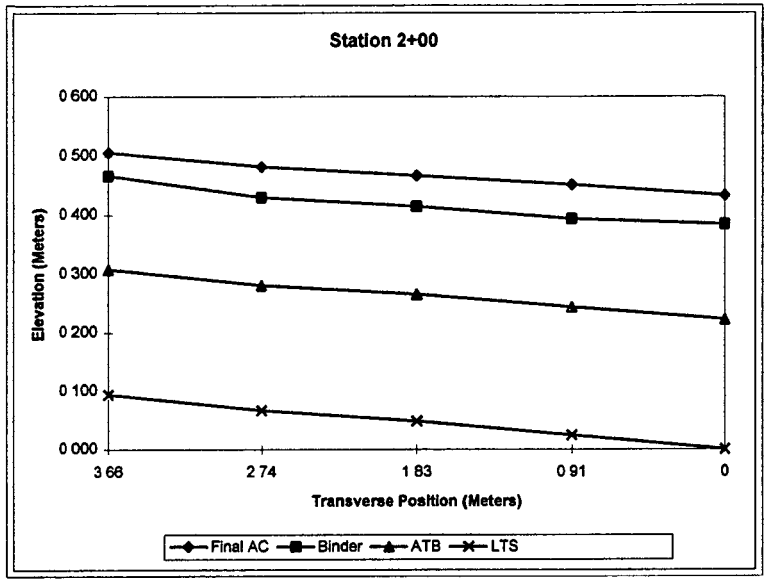


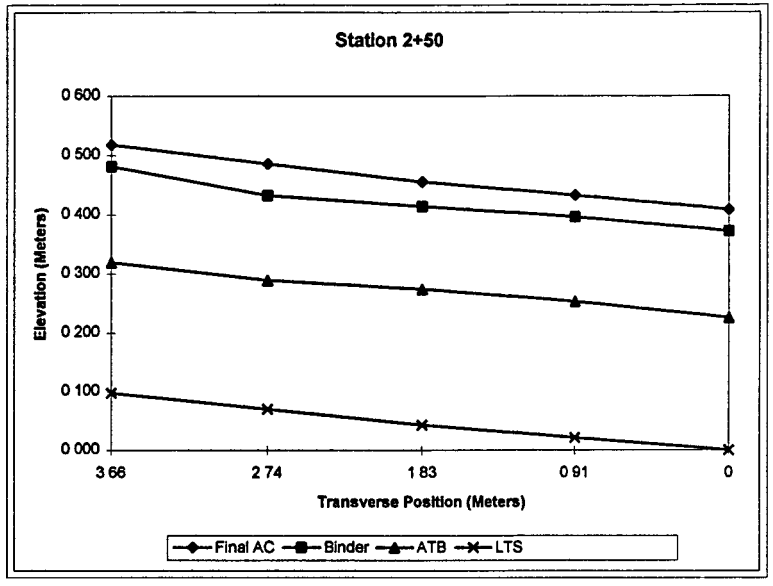


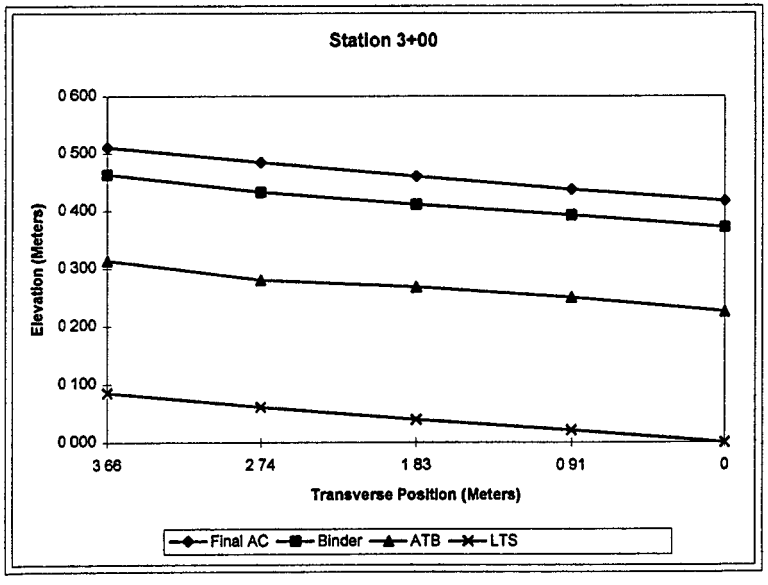


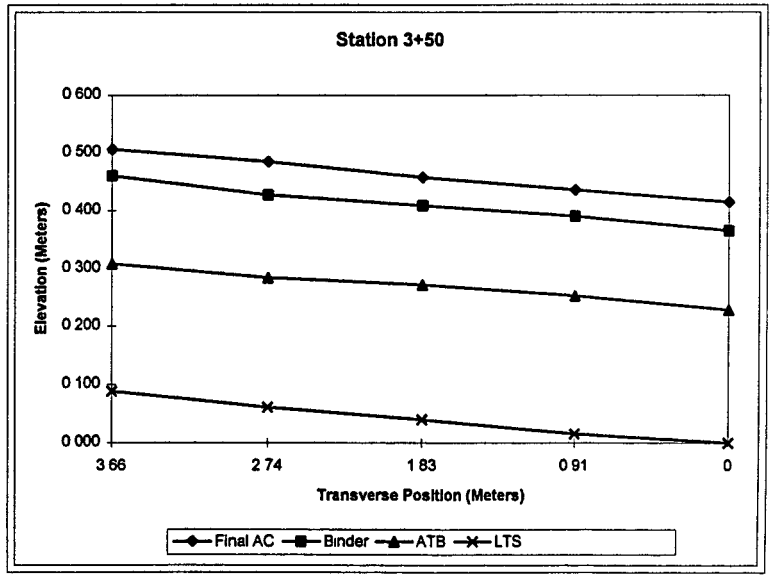


Oklahoma SPS-1 (400115)

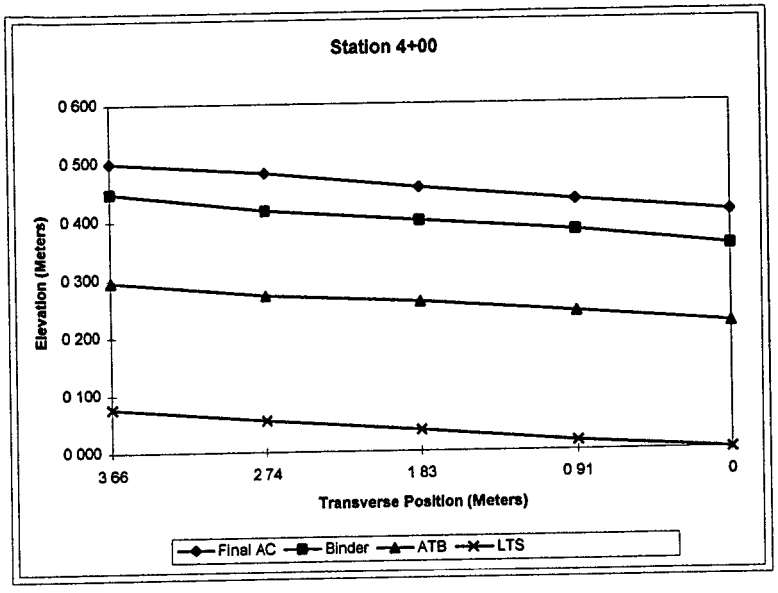


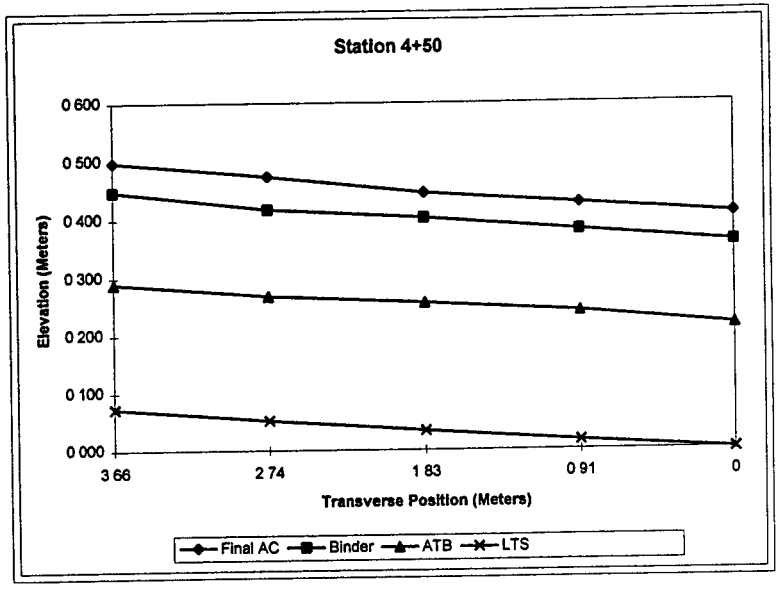


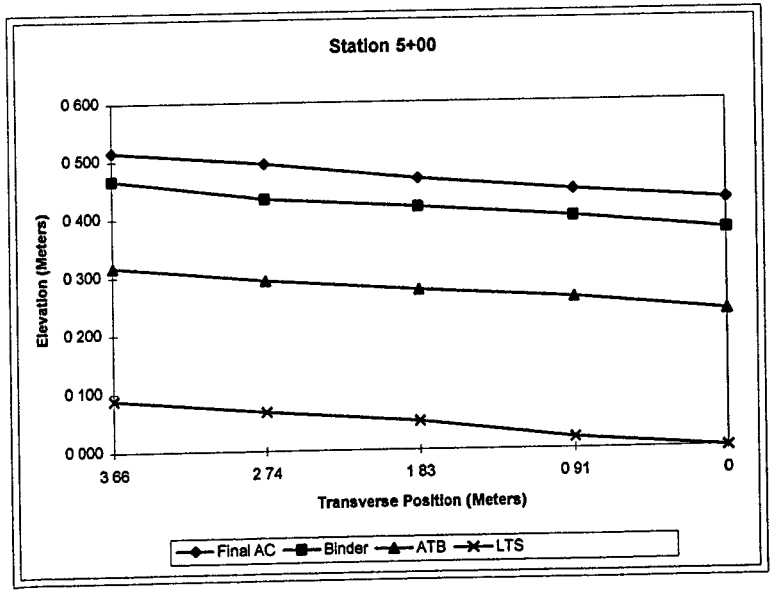




Oklahoma SPS-1 (400115)





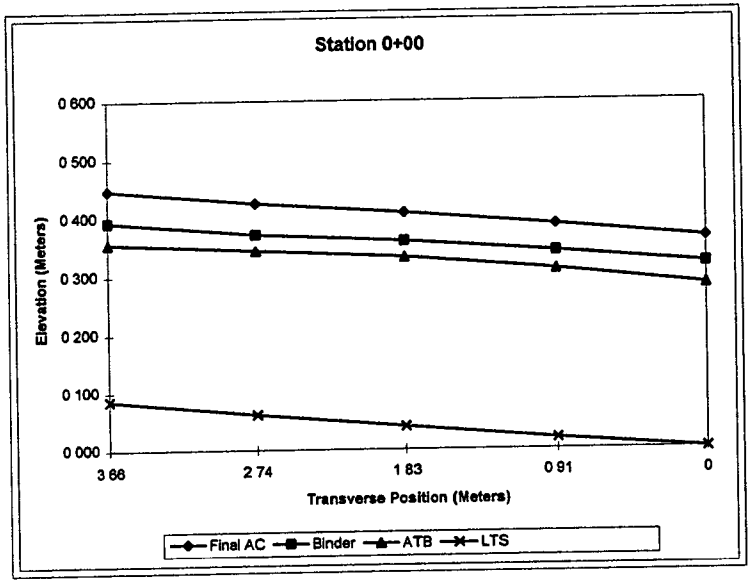


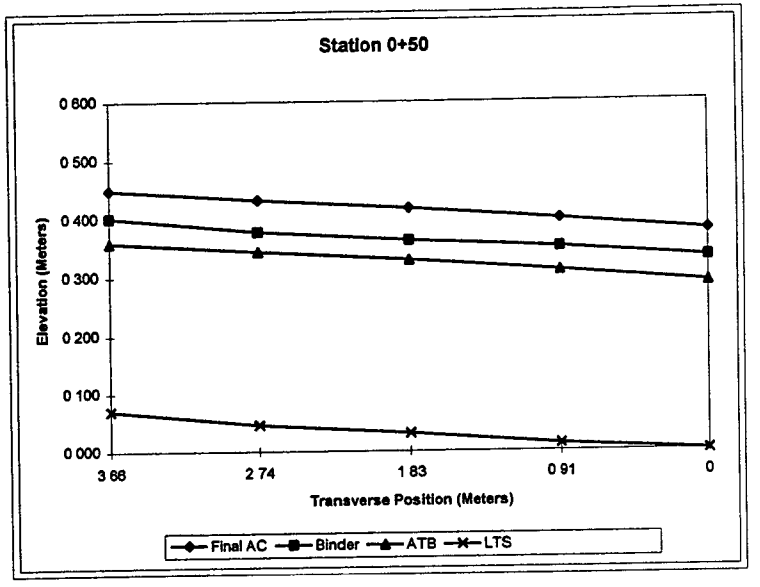
Oklahoma SPS-1 (400116)

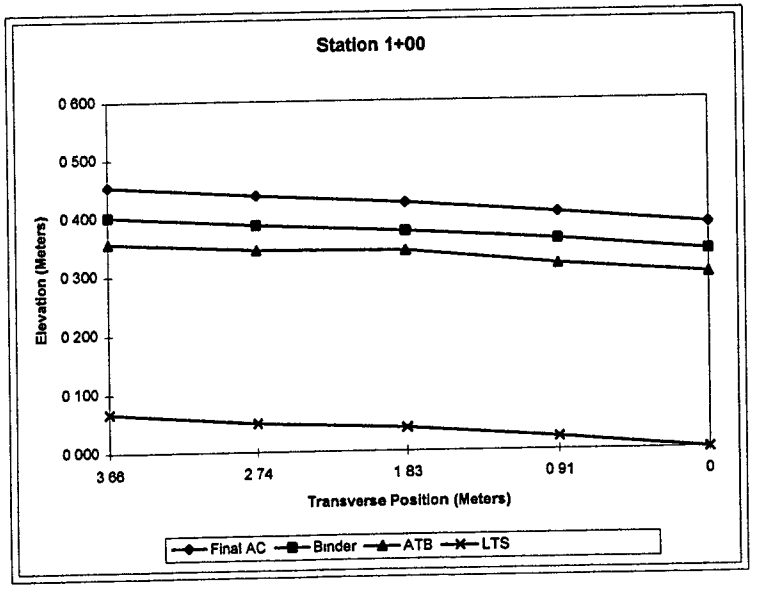
Transverse Offset	4 LAYERS	ELEVATION 0 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	ELEVATION 0.91 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	ELEVATION 1.83 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	ELEVATION 2.74 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	ELEVATION 3.66 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters
0+00	Final AC	1 614	0 044	0 037	0 283	1 637	0 046	0 030	0 293	1 658	0 049	0 027	0 293	1 675	0 053	0 027	0 283	1 698	0 055	0 037	0 271
	Binder	1 570				1 591				1 609				1 622				1 643			
	ATB	1 533				1 561				1 582				1 594				1 606			
	LTS	1 250				1 268				1 289				1 311				1 335			
0+50	Final AC	1 719	0 046	0 043	0 290	1 740	0 049	0 040	0 299	1 759	0 055	0 034	0 299	1 774	0 055	0 034	0 299	1 791	0 047	0 043	0 290
	Binder	1 673				1 692				1 704				1 719				1 743			
	ATB	1 631				1 652				1 670				1 686				1 701			
	LTS	1 341				1 353				1 372				1 387				1 411			
1+00	Final AC	1 814	0 046	0 040	0 299	1 835	0 046	0 043	0 296	1 853	0 049	0 034	0 302	1 867	0 050	0 043	0 296	1 884	0 052	0 046	0 290
	Binder	1 768				1 789				1 804				1 817				1 832			
	ATB	1 728				1 747				1 771				1 774				1 786			
	LTS	1 430				1 451				1 469				1 478				1 497			
1+50	Final AC	1 890	0 043	0 049	0 305	1 911	0 046	0 046	0 308	1 929	0 052	0 040	0 308	1 943	0 053	0 049	0 296	1 957	0 046	0 058	0 283
	Binder	1 847				1 865				1 878				1 890				1 911			
	ATB	1 798				1 820				1 838				1 841				1 853			
	LTS	1 494				1 512				1 530				1 545				1 570			
2+00	Final AC	1 951	0 046	0 046	0 302	1 972	0 046	0 046	0 314	1 992	0 047	0 046	0 314	2 006	0 049	0 049	0 308	2 019	0 044	0 055	0 293
	Binder	1 905				1 926				1 945				1 957				1 975			
	ATB	1 859				1 881				1 899				1 908				1 920			
	LTS	1 558				1 567				1 585				1 600				1 628			
2+50	Final AC	2 022	0 047	0 055	0 311	2 045	0 049	0 055	0 326	2 060	0 049	0 049	0 320	2 076	0 052	0 055	0 311	2 088	0 040	0 058	0 308
	Binder	1 975				1 996				2 012				2 024				2 048			
	ATB	1 920				1 942				1 963				1 969				1 990			
	LTS	1 609				1 615				1 643				1 658				1 682			
3+00	Final AC	2 085	0 046	0 055	0 326	2 109	0 049	0 052	0 332	2 126	0 050	0 052	0 329	2 140	0 049	0 058	0 314	2 155	0 046	0 064	0 302
	Binder	2 039				2 060				2 076				2 091				2 109			
	ATB	1 984				2 009				2 024				2 033				2 045			
	LTS	1 658				1 676				1 695				1 719				1 743			
3+50	Final AC	2 140	0 046	0 061	0 317	2 161	0 043	0 064	0 323	2 179	0 049	0 058	0 320	2 192	0 049	0 067	0 308	2 207	0 046	0 067	0 296
	Binder	2 094				2 118				2 131				2 143				2 161			
	ATB	2 033				2 054				2 073				2 076				2 094			
	LTS	1 716				1 731				1 753				1 768				1 798			
4+00	Final AC	2 188	0 043	0 070	0 314	2 207	0 043	0 067	0 317	2 225	0 043	0 064	0 323	2 239	0 044	0 073	0 314	2 249	0 037	0 070	0 317
	Binder	2 146				2 164				2 182				2 195				2 213			
	ATB	2 076				2 097				2 118				2 121				2 143			
	LTS	1 762				1 780				1 795				1 807				1 826			
4+50	Final AC	2 227	0 038	0 070	0 332	2 248	0 041	0 064	0 335	2 265	0 040	0 067	0 329	2 278	0 041	0 073	0 317	2 292	0 037	0 073	0 311
	Binder	2 188				2 207				2 225				2 237				2 256			
	ATB	2 118				2 143				2 158				2 164				2 182			
	LTS	1 786				1 807				1 829				1 847				1 871			
5+00	Final AC	2 252	0 040	0 070	0 326	2 274	0 043	0 067	0 326	2 292	0 043	0 067	0 323	2 304	0 040	0 073	0 317	2 321	0 038	0 076	0 305
	Binder	2 213				2 231				2 249				2 265				2 283			
	ATB	2 143				2 164				2 182				2 192				2 207			
	LTS	1 817				1 838				1 859				1 875				1 902			
	AVG		0 044	0 055	0 310		0 045	0 053	0 315		0 048	0 049	0 315		0 049	0 055	0 305		0 044	0 059	0 297
	MAX		0 047	0 070	0 332		0 049	0 067	0 335		0 055	0 067	0 329		0 055	0 073	0 317		0 055	0 076	0 317
	MIN		0 038	0 037	0 283		0 041	0 030	0 293		0 040	0 027	0 293		0 040	0 027	0 283		0 037	0 037	0 271
	STD		0 003	0 012	0 015		0 003	0 012	0 015		0 004	0 014	0 013		0 005	0 016	0 011		0 006	0 013	0 013

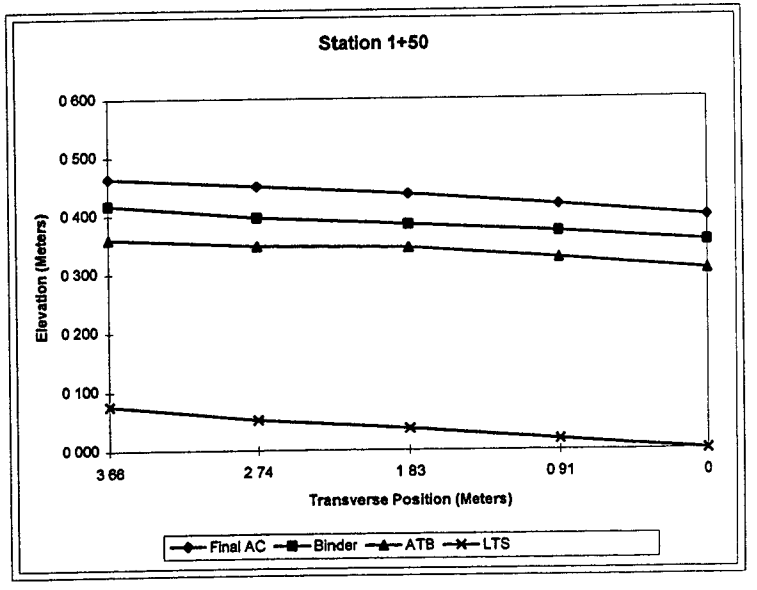
	Final AC	Binder	ATB
SECTION AVG	0 046	0 054	0 308
SECTION MAX	0 055	0 076	0 335
SECTION MIN	0 037	0 027	0.271
SECTION STD	0 005	0 013	0 015

Oklahoma SPS-1 (400116)

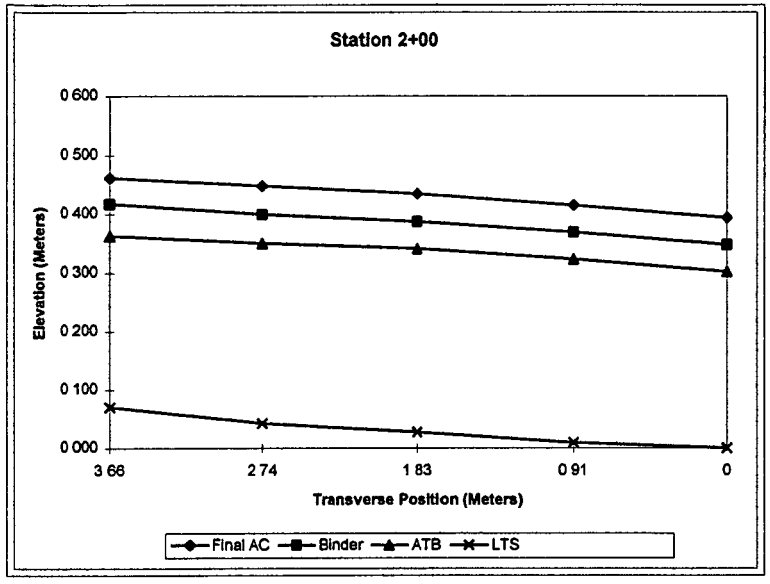


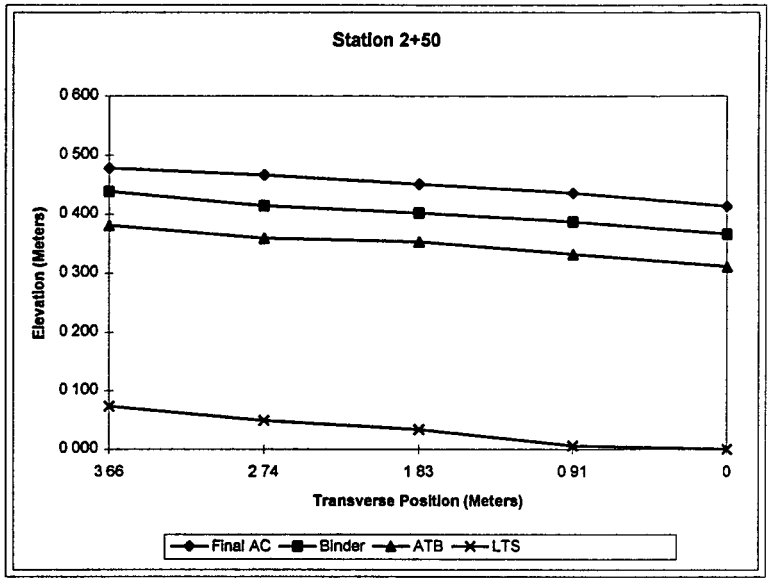


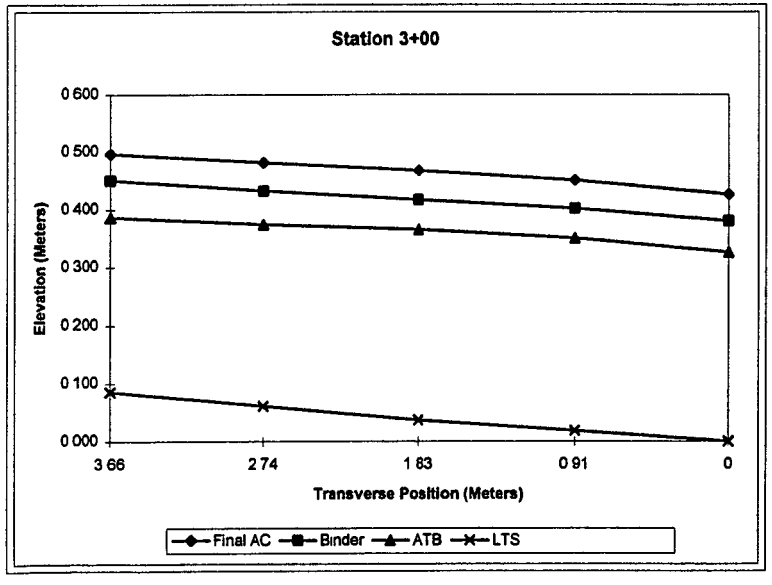


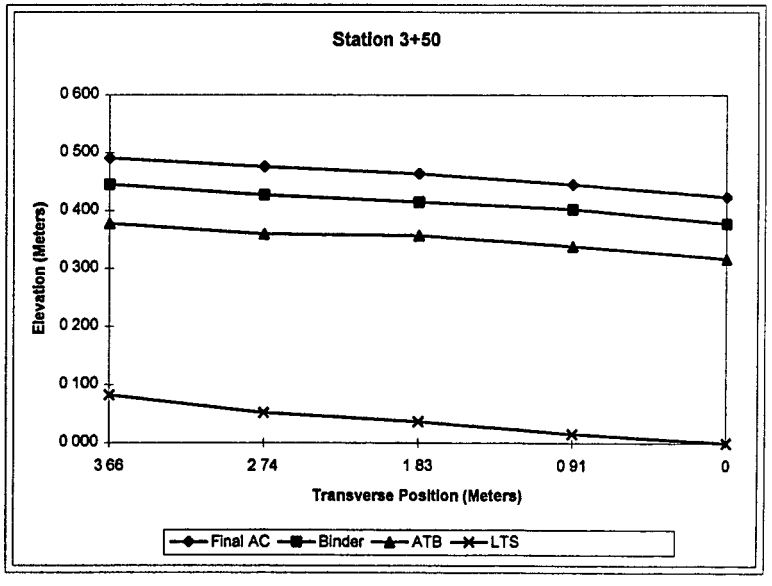


Oklahoma SPS-1 (400116)

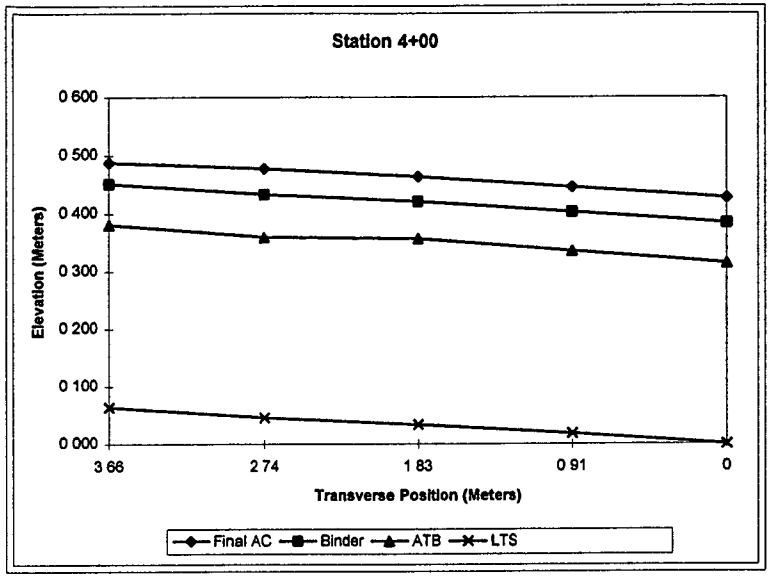


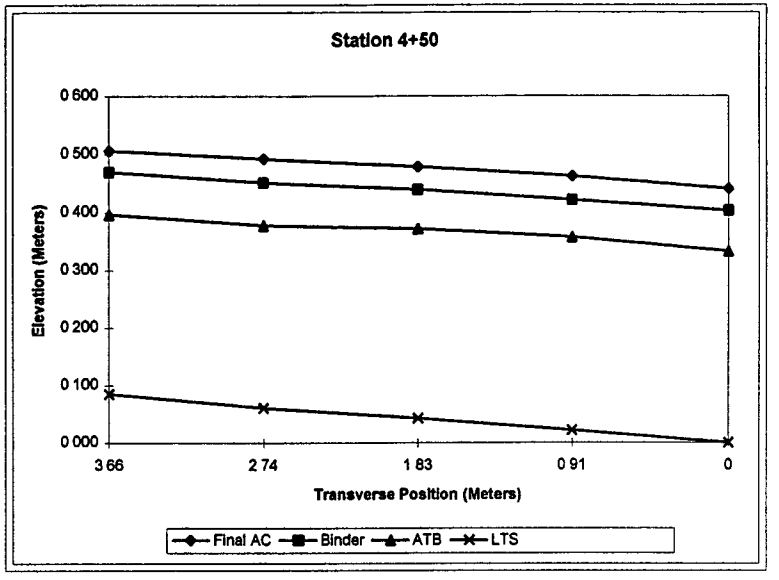


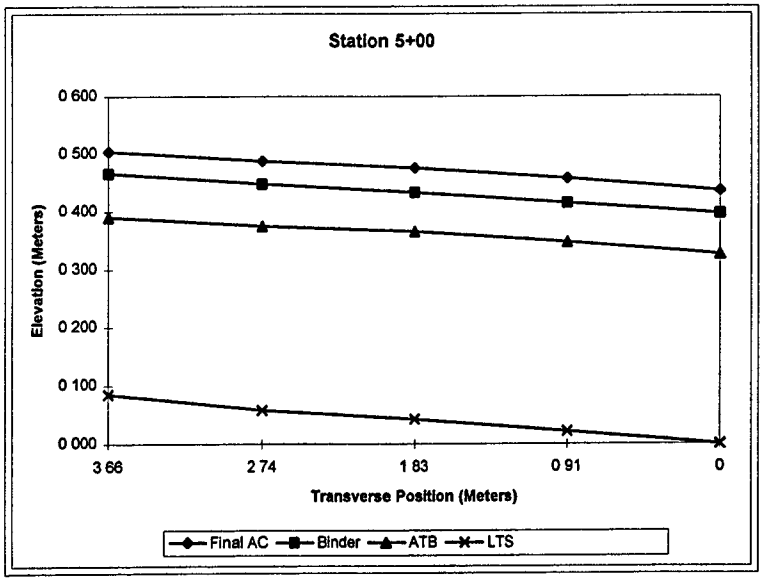




Oklahoma SPS-1 (400116)







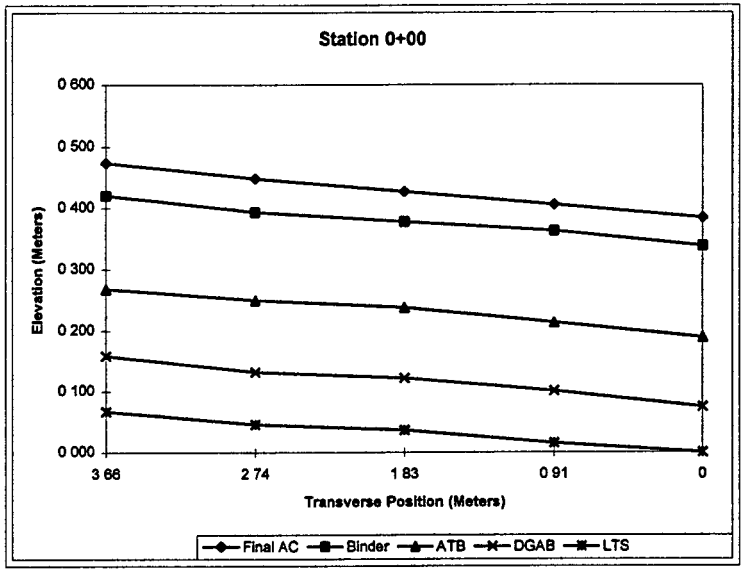
Oklahoma SPS-1 (400117)

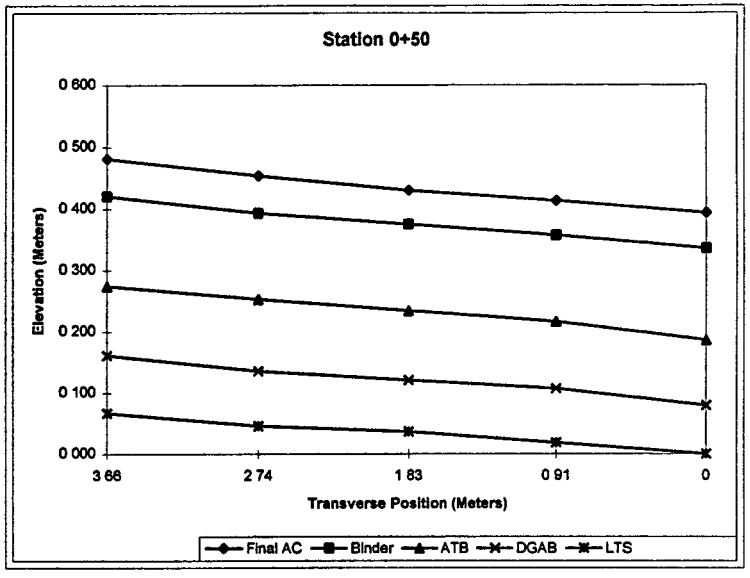
Transverse Offset	LAYERS	ELEVATION 0 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 0.91 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	DGAB THICKNESS Meters
0+00	Final AC	1 728	0 046	0 149	0 114	0 075	1 750	0 043	0 149	0 113	0 085
	Binder	1 682					1 707				
	ATB	1 533					1 558				
	DGAB	1 419					1 445				
	LTS	1 344					1 359				
0+50	Final AC	1 707	0 058	0 149	0 107	0 079	1 727	0 056	0 140	0 110	0 088
	Binder	1 649					1 670				
	ATB	1 500					1 530				
	DGAB	1 393					1 420				
	LTS	1 314					1 332				
1+00	Final AC	1 684	0 066	0 152	0 106	0 080	1 704	0 064	0 143	0 108	0 093
	Binder	1 618					1 640				
	ATB	1.466					1 497				
	DGAB	1 360					1 388				
	LTS	1 280					1 295				
1+50	Final AC	1 658	0 061	0 162	0 108	0 075	1 675	0 062	0 149	0 110	0 085
	Binder	1 597					1 612				
	ATB	1 436					1 463				
	DGAB	1 327					1 353				
	LTS	1 253					1 268				
2+00	Final AC	1 625	0 058	0 165	0 111	0 084	1 644	0 053	0 162	0 115	0 089
	Binder	1 567					1 591				
	ATB	1 402					1 430				
	DGAB	1 291					1 315				
	LTS	1 207					1 225				
2+50	Final AC	1 591	0 055	0 149	0 109	0 089	1 609	0 052	0 149	0 104	0 098
	Binder	1 536					1 558				
	ATB	1 387					1 408				
	DGAB	1 278					1 305				
	LTS	1 189					1 207				
3+00	Final AC	1 554	0 055	0 165	0 113	0 082	1 573	0 052	0 162	0 110	0 091
	Binder	1 500					1 521				
	ATB	1 335					1 359				
	DGAB	1 222					1 250				
	LTS	1 140					1 158				
3+50	Final AC	1 521	0 052	0 146	0 105	0 096	1 538	0 044	0 149	0 094	0 104
	Binder	1 469					1 494				
	ATB	1 323					1 344				
	DGAB	1 218					1 250				
	LTS	1 122					1 146				
4+00	Final AC	1 497	0 052	0 162	0 110	0 094	1 515	0 046	0 165	0 094	0 119
	Binder	1 445					1 469				
	ATB	1 283					1 305				
	DGAB	1 173					1 211				
	LTS	1 079					1 091				
4+50	Final AC	1 481	0 055	0 158	0 111	0 112	1 503	0 052	0 152	0 110	0 116
	Binder	1 426					1 451				
	ATB	1 268					1 298				
	DGAB	1 157					1 189				
	LTS	1 045					1 073				
5+00	Final AC	1.451	0 049	0 162	0 113	0 128	1 469	0 046	0 158	0 111	0 139
	Binder	1 402					1 423				
	ATB	1 241					1 265				
	DGAB	1 128					1 154				
	LTS	1 000					1 015				
	AVG		0 055	0 155	0 110	0 090		0 052	0 152	0 106	0 102
	MAX		0 066	0 165	0 114	0 128		0 064	0 165	0 113	0 139
	MIN		0 046	0 146	0 105	0 075		0 043	0 140	0 094	0 085
	STD		0 005	0 006	0 003	0 016		0 007	0 007	0 006	0 017

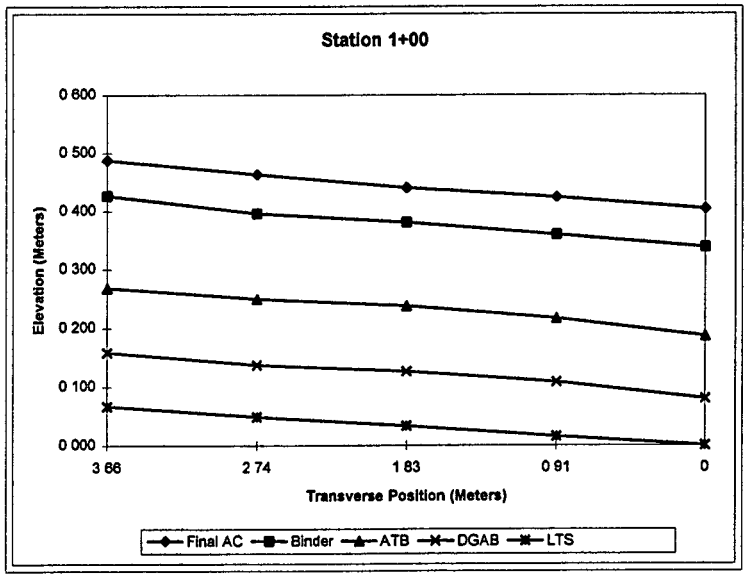
Transverse Offset	LAYERS	ELEVATION 1.83 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 2.74 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 3.66 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	DGAB THICKNESS Meters
0+00	Final AC	1 771	0 049	0 140	0 116	0 085	1 792	0 055	0 143	0 118	0 086	1 818	0 053	0 152	0 110	0 091
	Binder	1 722					1 737					1 765				
	ATB	1 582					1 594					1 612				
	DGAB	1 466					1.476					1 503				
	LTS	1 381					1 390					1 411				
0+50	Final AC	1 743	0 055	0.140	0 114	0 084	1 766	0 061	0 140	0 117	0 090	1 795	0 061	0 146	0 113	0 094
	Binder	1 689					1 707					1 734				
	ATB	1 548					1 567					1 588				
	DGAB	1 434					1.449					1.475				
	LTS	1 350					1 359					1 381				
1+00	Final AC	1 721	0 059	0 143	0 111	0 093	1 743	0 067	0 146	0 113	0 088	1 768	0 061	0 158	0 110	0 091
	Binder	1 661					1 676					1 707				
	ATB	1 518					1 530					1 548				
	DGAB	1 407					1.417					1 439				
	LTS	1 314					1 329					1 347				
1+50	Final AC	1 676	0 043	0 146	0 099	0 099	1 710	0 061	0 146	0 107	0 094	1 737	0 061	0 149	0 113	0 098
	Binder	1 634					1 649					1 676				
	ATB	1 487					1 503					1 527				
	DGAB	1 388					1 396					1 414				
	LTS	1 289					1 301					1 317				
2+00	Final AC	1 661	0 055	0 152	0 108	0 096	1 681	0 059	0 146	0 116	0 094	1 705	0 050	0 158	0 111	0 099
	Binder	1 606					1 622					1 655				
	ATB	1 454					1 475					1 497				
	DGAB	1 346					1 359					1 385				
	LTS	1 250					1 265					1 286				
2+50	Final AC	1 628	0 049	0 149	0 102	0 099	1 649	0 055	0 149	0 105	0 097	1 670	0 046	0 152	0 109	0 101
	Binder	1 579					1 594					1 625				
	ATB	1 430					1 445					1 472				
	DGAB	1 327					1 340					1 363				
	LTS	1 228					1 244					1 262				
3+00	Final AC	1 590	0 050	0 155	0 098	0 110	1 609	0 055	0 149	0 104	0 107	1 632	0 047	0 155	0 101	0 110
	Binder	1 539					1 554					1 585				
	ATB	1 384					1 405					1 430				
	DGAB	1 286					1 301					1 329				
	LTS	1 177					1 195					1 219				
3+50	Final AC	1 554	0 043	0 146	0 099	0 090	1 576	0 049	0 155	0 094	0 107	1 600	0 046	0 162	0 101	0 107
	Binder	1 512					1 527					1 554				
	ATB	1 366					1 372					1 393				
	DGAB	1 266					1 277					1 292				
	LTS	1 177					1 170					1 186				
4+00	Final AC	1 533	0 046	0 158	0 104	0 116	1 551	0 046	0 165	0 104	0 110	1 577	0 044	0 165	0 105	0 108
	Binder	1 487					1 506					1 533				
	ATB	1 329					1 341					1 369				
	DGAB	1 225					1 237					1 263				
	LTS	1 109					1 128					1 155				
4+50	Final AC	1 518	0 046	0 149	0 110	0 128	1 539	0 046	0 162	0 102	0 130	1 562	0 044	0 158	0 101	0 140
	Binder	1 472					1 494					1 518				
	ATB	1 323					1 332					1 359				
	DGAB	1 213					1 230					1 259				
	LTS	1 085					1 100					1 119				
5+00	Final AC	1 487	0 040	0 162	0 108	0 142	1 512	0 046	0 162	0 109	0 141	1 536	0 043	0 165	0 106	0 144
	Binder	1 448					1 466					1 494				
	ATB	1 286					1 305					1 329				
	DGAB	1 178					1 195					1 223				
	LTS	1 036					1 055					1 079				
	AVG		0 048	0 149	0 106	0 105		0 054	0 152	0 107	0 105		0 051	0 156	0 107	0 109
	MAX		0 059	0 162	0 116	0 142		0 067	0 165	0 118	0 141		0 061	0 165	0 113	0 144
	MIN		0 040	0 140	0 092	0 084		0 046	0 140	0 094	0 086		0 043	0 146	0 101	0 091
	STD		0 006	0 007	0 006	0 018		0 007	0 008	0 007	0 017		0 007	0 006	0 005	0 018

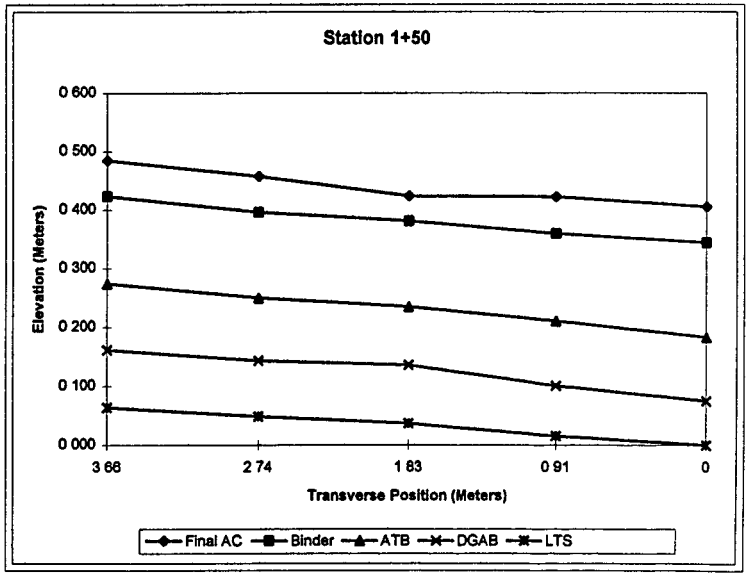
	Final AC	Binder	ATB	DGAB
SECTION AVG	0 052	0.153	0 109	0 101
SECTION MAX	0 067	0 165	0 118	0 144
SECTION MIN	0 040	0 140	0 094	0 075
SECTION STD	0 007	0 007	0 006	0 018

Oklahoma SPS-1 (400117)

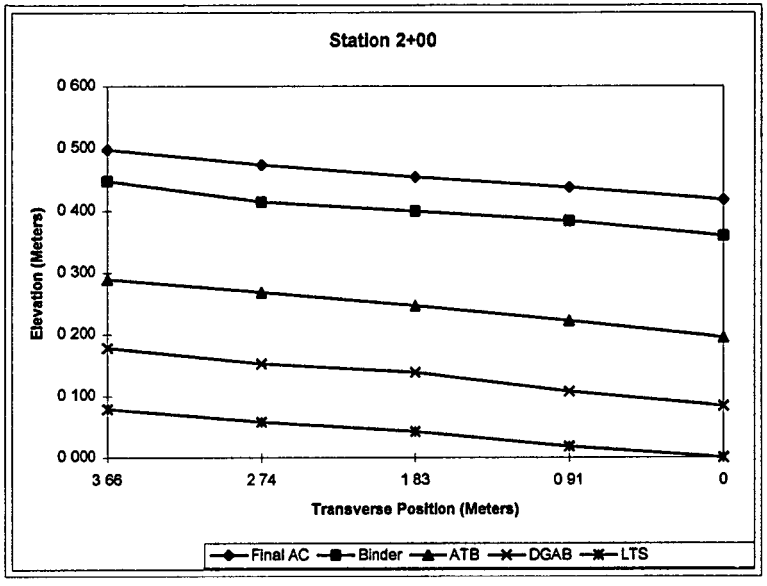


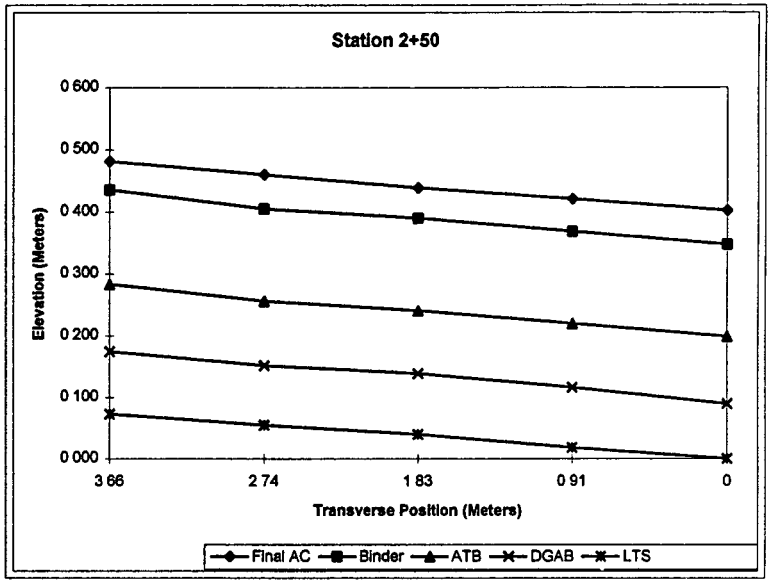


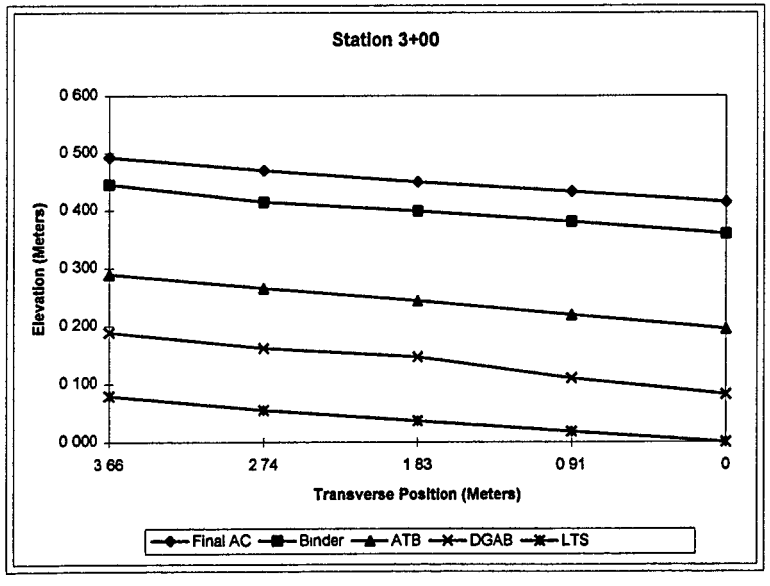


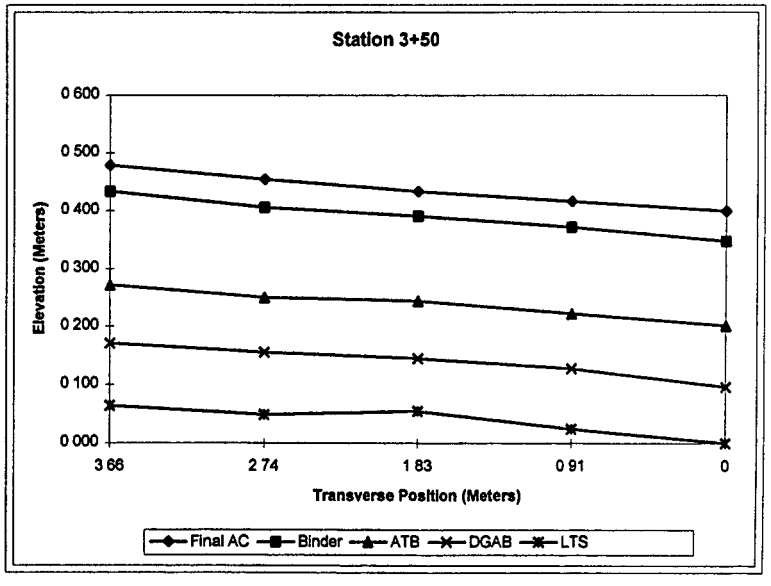


Oklahoma SPS-1 (400117)

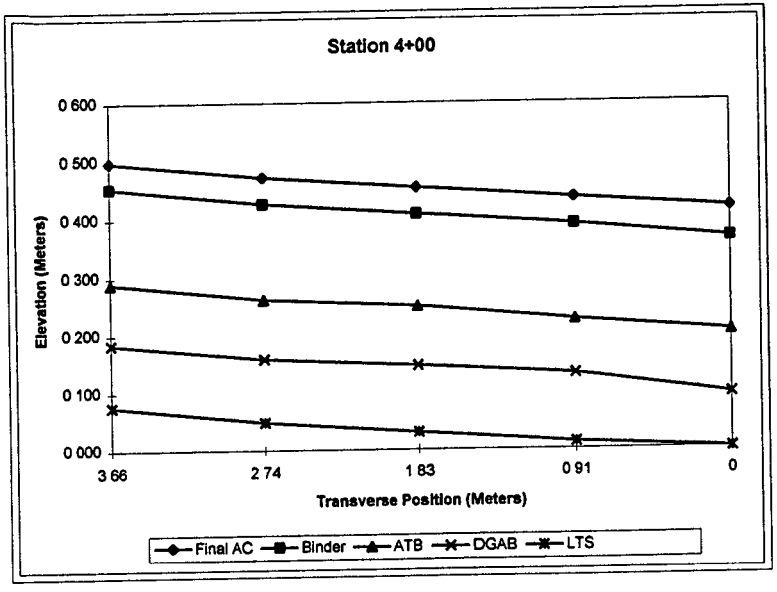


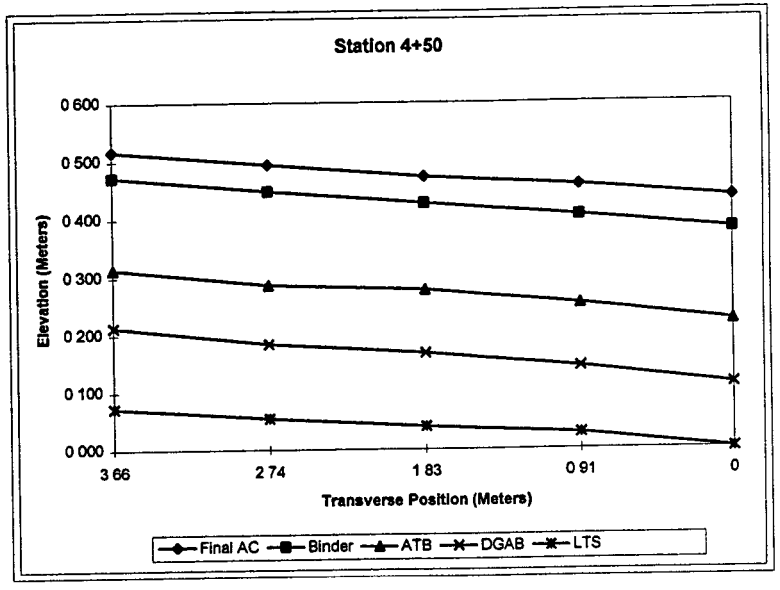


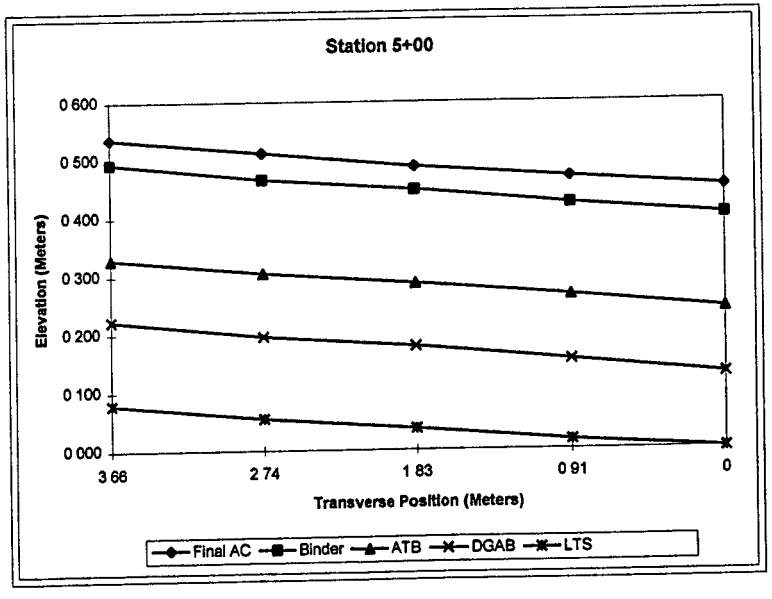




Oklahoma SPS-1 (400117)







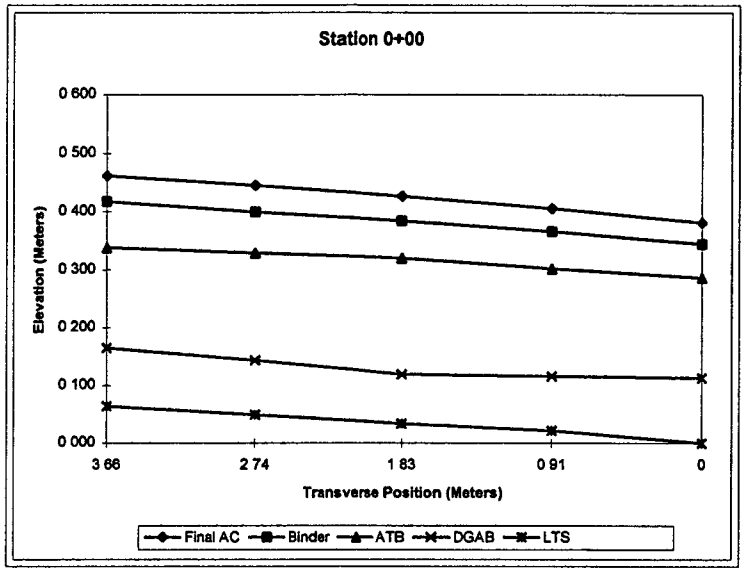
Oklahoma SPS-1 (400118)

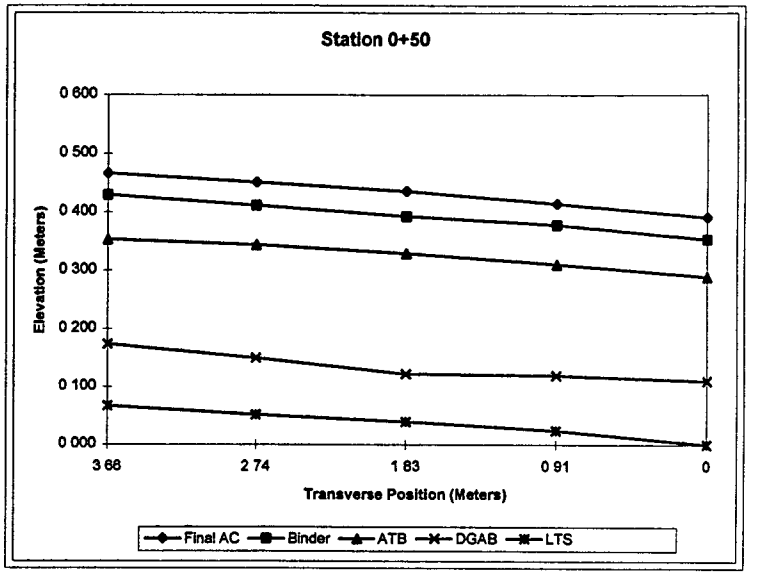
Transverse Offset	LAYERS	ELEVATION 0.0 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 0.91 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	DGAB THICKNESS Meters
0+00	Final AC	2 896	0 037	0 058	0 174	0 113	3 021	0 040	0 064	0 186	0 094
	Binder	2 860					2 981				
	ATB	2 902					2 917				
	DGAB	2 728					2 731				
	LTS	2 615					2 637				
0+50	Final AC	3 114	0 038	0 064	0 180	0 110	3 136	0 037	0 067	0 192	0 094
	Binder	3 075					3 100				
	ATB	3 011					3 033				
	DGAB	2 832					2 841				
	LTS	2 722					2 746				
1+00	Final AC	3 228	0 030	0 073	0 195	0 107	3 252	0 030	0 076	0 201	0 094
	Binder	3 197					3 222				
	ATB	3 124					3 146				
	DGAB	2 929					2 944				
	LTS	2 822					2 850				
1+50	Final AC	3 344	0 037	0 070	0 201	0 110	3 370	0 038	0 073	0 207	0 101
	Binder	3 307					3 331				
	ATB	3 237					3 258				
	DGAB	3 036					3 051				
	LTS	2 926					2 950				
2+00	Final AC	3 461	0 041	0 070	0 219	0 091	3 485	0 044	0 070	0 216	0 091
	Binder	3 420					3 441				
	ATB	3 350					3 371				
	DGAB	3 130					3 155				
	LTS	3 039					3 063				
2+50	Final AC	3 572	0 040	0 076	0 229	0 079	3 597	0 040	0 079	0 210	0 101
	Binder	3 533					3 557				
	ATB	3 456					3 478				
	DGAB	3 228					3 267				
	LTS	3 149					3 167				
3+00	Final AC	3 671	0 038	0 076	0 226	0 076	3 697	0 040	0 076	0 223	0 079
	Binder	3 633					3 658				
	ATB	3 557					3 581				
	DGAB	3 331					3 359				
	LTS	3 255					3 280				
3+50	Final AC	3 778	0 035	0 073	0 223	0 088	3 802	0 038	0 073	0 229	0 085
	Binder	3 743					3 764				
	ATB	3 670					3 691				
	DGAB	3 447					3 463				
	LTS	3 359					3 377				
4+00	Final AC	3 895	0 037	0 073	0 235	0 079	3 920	0 040	0 076	0 226	0 098
	Binder	3 859					3 880				
	ATB	3 786					3 804				
	DGAB	3 551					3 578				
	LTS	3 472					3.481				
4+50	Final AC	4 005	0 030	0 085	0 238	0 070	4 029	0 034	0 079	0 229	0 088
	Binder	3 975					3 996				
	ATB	3 889					3 917				
	DGAB	3 652					3 688				
	LTS	3 581					3 600				
5+00	Final AC	4 109	0 043	0 076	0 223	0 076	4 132	0 041	0 073	0 226	0 082
	Binder	4 066					4 090				
	ATB	3 990					4 017				
	DGAB	3 767					3 792				
	LTS	3 691					3 709				
	AVG		0 037	0 073	0.212	0 091		0 038	0 074	0.213	0 092
	MAX		0 043	0 085	0 238	0 113		0 041	0 079	0 229	0 101
	MIN		0 030	0 058	0 174	0 070		0 030	0 064	0 186	0 079
	STD		0 004	0 007	0 022	0 015		0 003	0 005	0 015	0 007

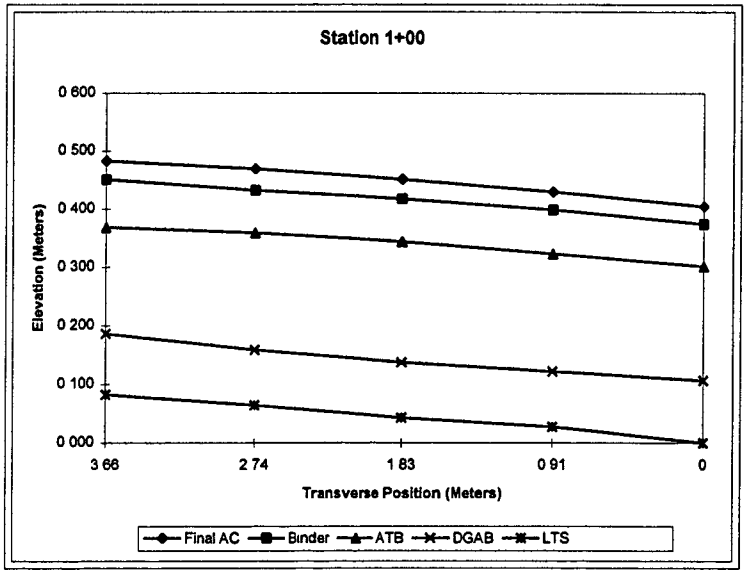
Transverse Offset	LAYERS	ELEVATION 1.83 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 2.74 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 3.66 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	DGAB THICKNESS Meters
0+00	Final AC	3 042	0 043	0 064	0 201	0 085	3 060	0 046	0 070	0 186	0 094	3 077	0 044	0 079	0 174	0 101
	Binder	2 999					3 014					3 033				
	ATB	2 935					2 944					2 954				
	DGAB	2 734					2,758					2 780				
	LTS	2 649					2 664					2 679				
0+50	Final AC	3 158	0 043	0 064	0 207	0 082	3.173	0 040	0 067	0 195	0 098	3 188	0 037	0 076	0 180	0 107
	Binder	3 115					3 133					3 152				
	ATB	3 051					3 066					3 075				
	DGAB	2 844					2 871					2 896				
	LTS	2 761					2 774					2 789				
1+00	Final AC	3 274	0 034	0 073	0 207	0 094	3 292	0 037	0 073	0 201	0 094	3 306	0 032	0 082	0 183	0 104
	Binder	3 240					3 255					3 274				
	ATB	3 167					3 182					3 191				
	DGAB	2 960					2 981					3 008				
	LTS	2 865					2 886					2 905				
1+50	Final AC	3 389	0 043	0 070	0 213	0 094	3 408	0 043	0 073	0 210	0 091	3 424	0 038	0 076	0 204	0 094
	Binder	3 347					3 365					3 386				
	ATB	3 277					3 292					3 310				
	DGAB	3 063					3 082					3 106				
	LTS	2 969					2 990					3 011				
2+00	Final AC	3 507	0 044	0 070	0 219	0 098	3 523	0 046	0 067	0 219	0 101	3 540	0 041	0 067	0 216	0 101
	Binder	3 463					3 478					3 499				
	ATB	3 392					3 411					3 432				
	DGAB	3 173					3 191					3 216				
	LTS	3 075					3 091					3 115				
2+50	Final AC	3 615	0 046	0 070	0 223	0 088	3 633	0 046	0 070	0 219	0 094	3 647	0 038	0 067	0 213	0 101
	Binder	3 569					3 587					3 609				
	ATB	3 499					3 517					3 542				
	DGAB	3 277					3 298					3 328				
	LTS	3 188					3 203					3 228				
3+00	Final AC	3 717	0 041	0 076	0 229	0 076	3 734	0 040	0 079	0 219	0 082	3 754	0 041	0 067	0 219	0 098
	Binder	3 676					3 694					3 712				
	ATB	3 600					3 615					3 645				
	DGAB	3 371					3 395					3 426				
	LTS	3 295					3 313					3 328				
3+50	Final AC	3 822	0 040	0 070	0 238	0 079	3 840	0 046	0 076	0 207	0 101	3 856	0 040	0 073	0 204	0 104
	Binder	3 783					3 795					3 816				
	ATB	3 712					3 719					3 743				
	DGAB	3 475					3 511					3 539				
	LTS	3 395					3 411					3 435				
4+00	Final AC	3 938	0 040	0 070	0 232	0 091	3 956	0 043	0 076	0 219	0 101	3 972	0 037	0 070	0 219	0 101
	Binder	3 898					3 914					3 935				
	ATB	3 828					3 837					3 865				
	DGAB	3 597					3 618					3 645				
	LTS	3 505					3 517					3 545				
4+50	Final AC	4 051	0 037	0 079	0 229	0 088	4 069	0 040	0 079	0 226	0 085	4 081	0 037	0 073	0 229	0 082
	Binder	4 014					4 029					4 045				
	ATB	3 935					3 950					3 972				
	DGAB	3 706					3 725					3 743				
	LTS	3 618					3 639					3 661				
5+00	Final AC	4 153	0 044	0 073	0 232	0 076	4 170	0 043	0 076	0 223	0 088	4 185	0 037	0 076	0 226	0 079
	Binder	4 109					4 127					4 148				
	ATB	4 036					4 051					4 072				
	DGAB	3 804					3 828					3 847				
	LTS	3 728					3 740					3 767				
	AVG		0 041	0 071	0.221	0 086		0 042	0 074	0.211	0 093		0 038	0 074	0 205	0 097
	MAX		0 046	0 079	0.238	0 094		0 046	0 079	0.226	0 101		0 044	0 082	0 229	0 107
	MIN		0 034	0 064	0.201	0 076		0 037	0 067	0 186	0 082		0 032	0 067	0 174	0 079
	STD		0 003	0 005	0 012	0 007		0 003	0 004	0 012	0 006		0 003	0 005	0 019	0 009

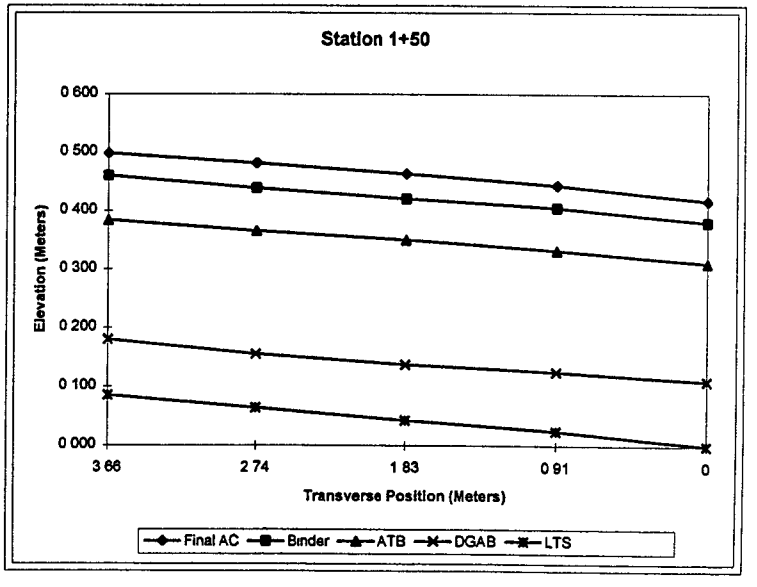
	Final AC	Binder	ATB	DGAB
SECTION AVG	0 039	0 073	0 213	0 092
SECTION MAX	0 046	0 085	0.238	0 113
SECTION MIN	0 030	0 058	0 174	0 070
SECTION STD	0 004	0 005	0 017	0 010

Oklahoma SPS-1 (400118)

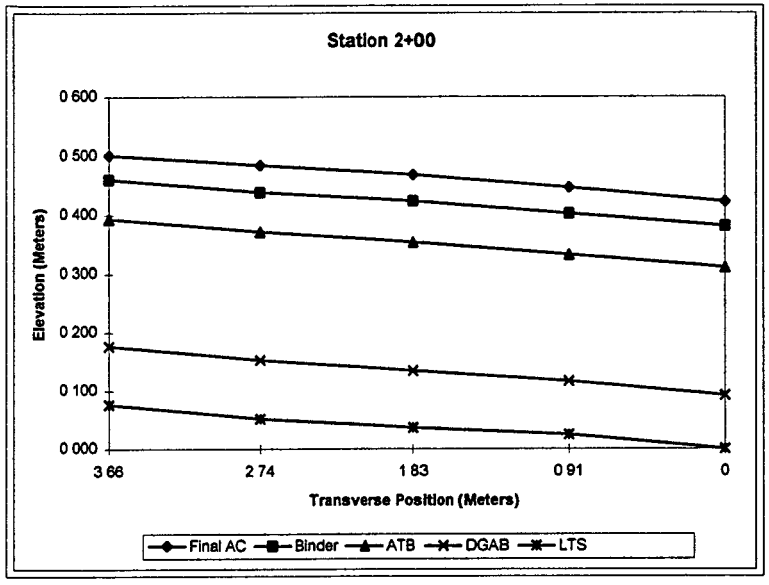


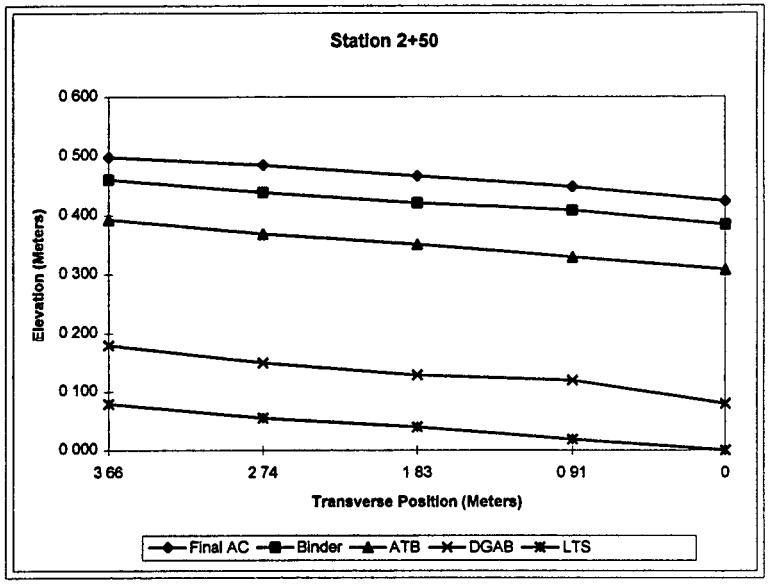


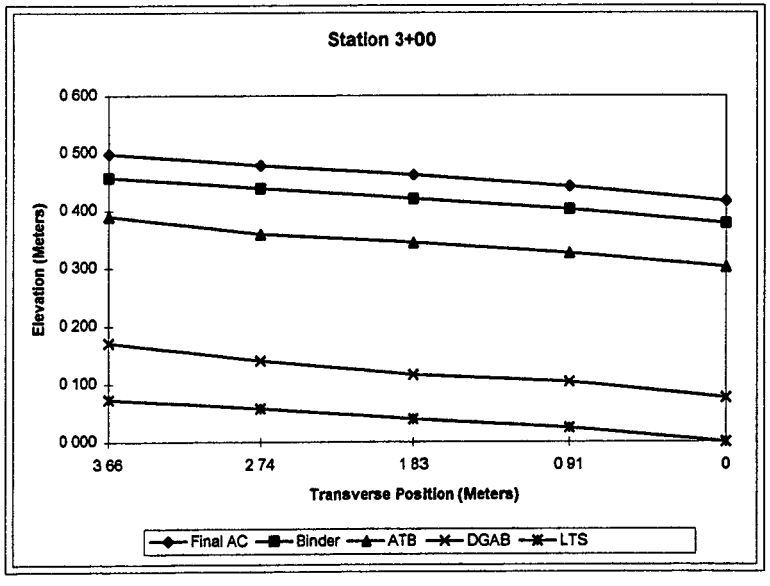


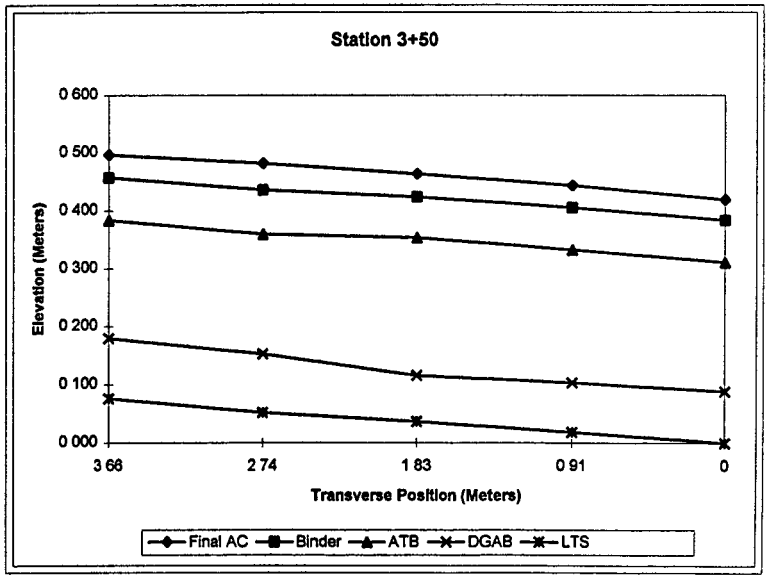


Oklahoma SPS-1 (400118)

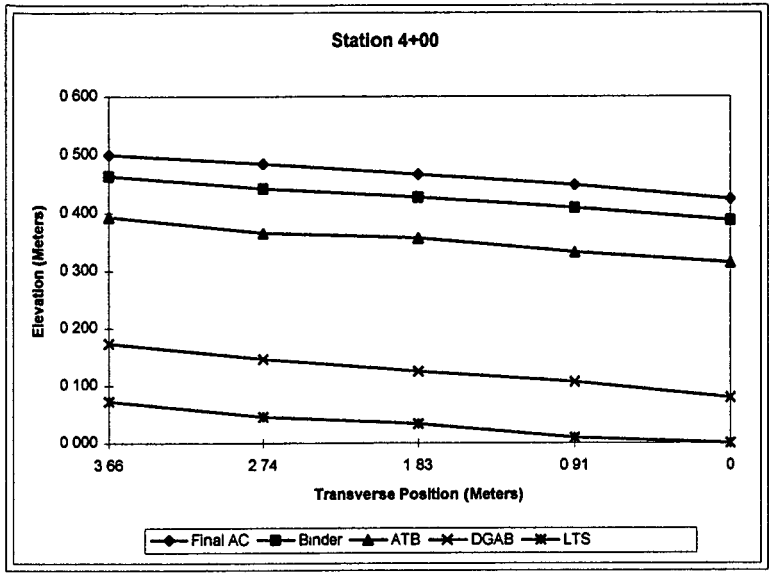


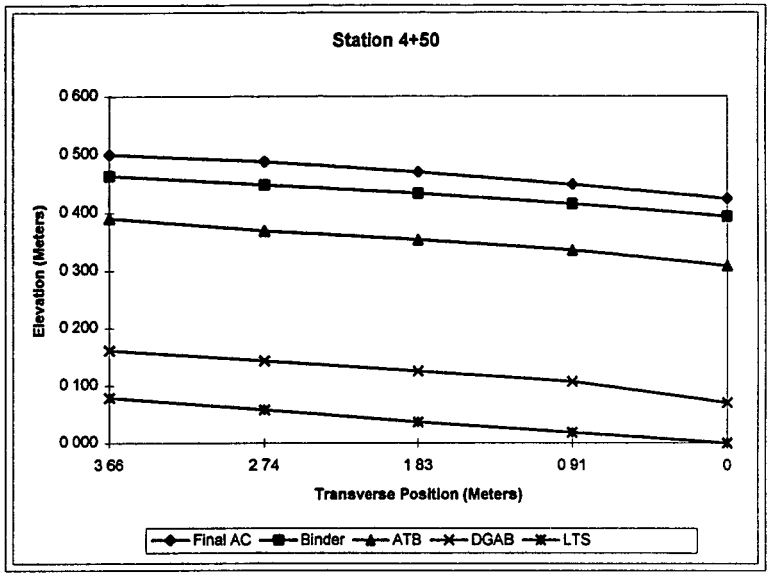


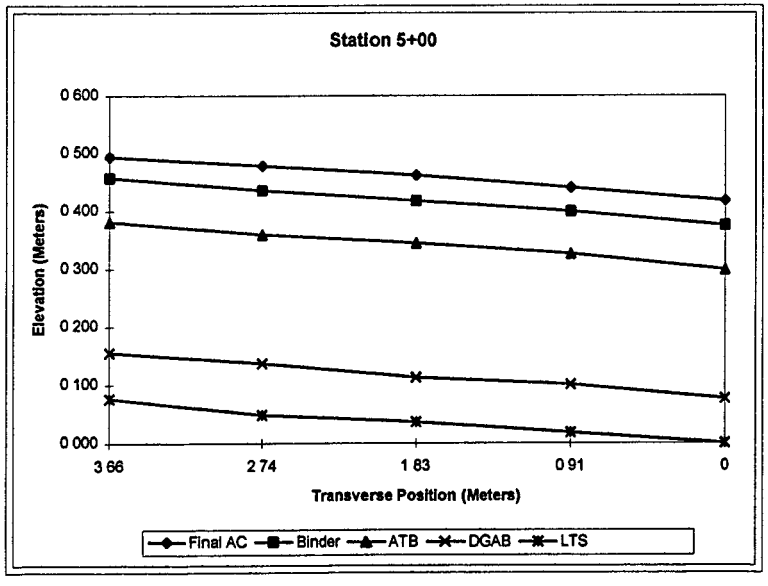




Oklahoma SPS-1 (400118)





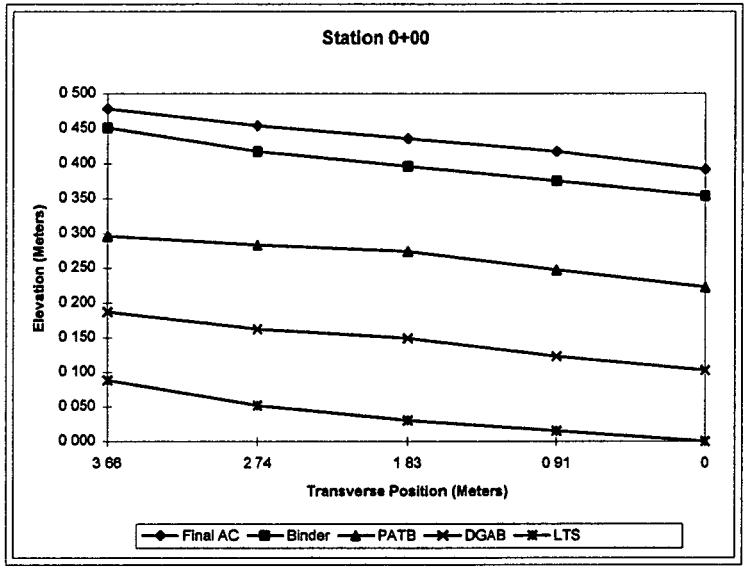


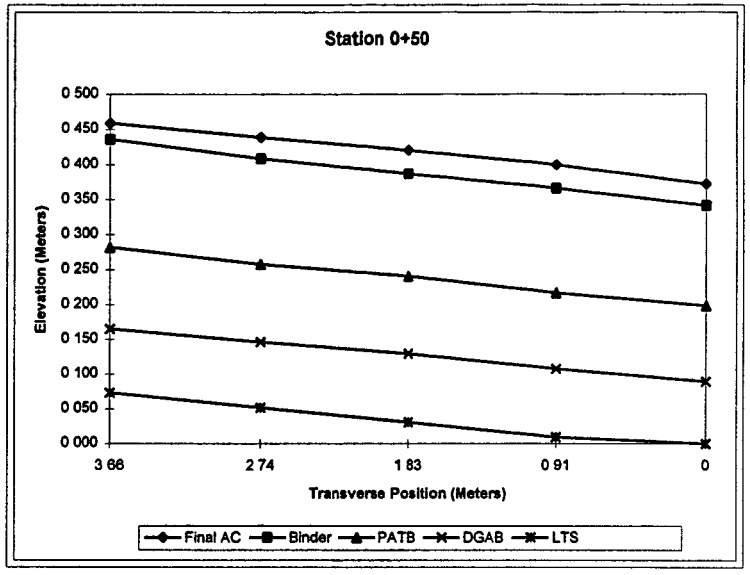
Oklahoma SPS-1 (400119)

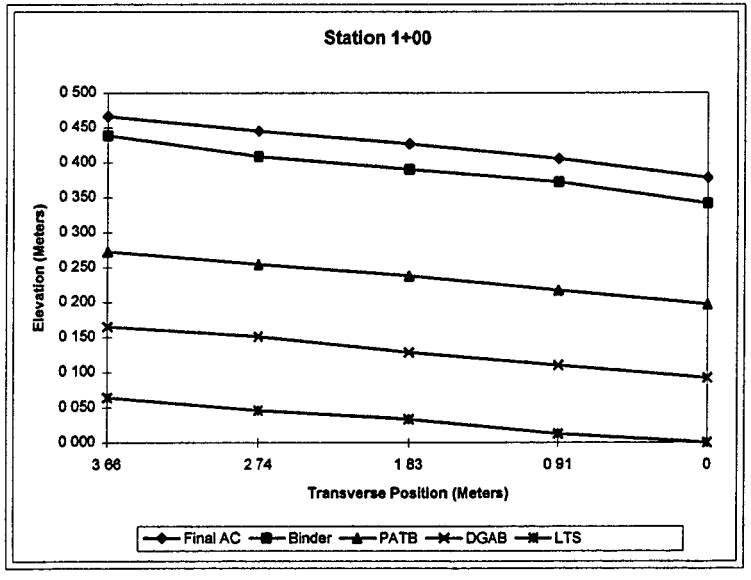
Transverse Offset	LAYERS	ELEVATION 0 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 0.91 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 1.83 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 2.74 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 3.66 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters
0+00	Final AC	3 772	0 038	0 131	0 119	0 103	3 798	0 043	0 127	0 125	0 108	3 816	0 040	0 122	0 125	0 119	3 834	0 037	0 134	0 121	0 111	3 859	0 027	0 155	0 109	0 099
	Binder	3 734					3 755					3 776					3 798					3 831				
	PATB	3 603					3 628					3 655					3 664					3 676				
	DGAB	3 483					3 503					3 529					3 543					3 568				
	LTS	3 380					3 395					3 411					3.432					3 469				
0+50	Final AC	3 581	0 030	0 143	0 109	0 089	3 609	0 034	0 149	0 109	0 098	3 630	0 034	0 147	0 111	0 099	3 648	0 030	0 151	0 111	0 094	3 668	0 023	0 154	0 117	0 092
	Binder	3 551					3 575					3 597					3 618					3 645				
	PATB	3 408					3 426					3 450					3 467					3 491				
	DGAB	3 299					3.317					3 339					3 356					3 375				
	LTS	3 210					3 219					3 240					3 261					3 283				
1+00	Final AC	3 402	0 037	0 145	0 105	0 092	3 429	0 034	0 155	0 107	0 098	3 450	0 037	0 152	0 109	0 095	3 469	0 037	0 154	0 104	0 105	3 490	0 027	0 166	0 108	0 101
	Binder	3 365					3 395					3 414					3.432					3 463				
	PATB	3 220					3 241					3 261					3 278					3 296				
	DGAB	3 116					3 133					3 152					3 174					3 169				
	LTS	3 024					3 036					3 057					3 069					3 088				
1+50	Final AC	3 237	0 037	0 133	0 108	0 104	3 264	0 040	0 155	0 095	0 100	3 286	0 040	0 154	0 099	0 098	3 304	0 037	0 153	0 108	0 099	3 322	0 030	0 159	0 109	0 104
	Binder	3 200					3 225					3 246					3 267					3 292				
	PATB	3 068					3 070					3 092					3 115					3 133				
	DGAB	2 960					2 975					2 993					3 007					3 024				
	LTS	2 856					2 874					2 895					2 908					2 920				
2+00	Final AC	3 060	0 055	0 146	0 100	0 098	3 088	0 058	0 147	0 100	0 104	3 109	0 055	0 148	0 092	0 116	3 127	0 052	0 145	0 102	0 116	3 146	0 046	0 149	0 099	0 117
	Binder	3 005					3 030					3 054					3 075					3 100				
	PATB	2 860					2 883					2 906					2 931					2 950				
	DGAB	2 759					2 783					2 814					2 829					2 851				
	LTS	2 661					2 679					2 697					2 713					2 734				
2+50	Final AC	2 874	0 037	0 163	0 099	0 101	2 902	0 034	0 169	0 102	0 104	2 923	0 037	0 164	0 098	0 113	2 941	0 027	0 171	0 105	0 111	2 963	0 027	0 169	0 107	0 114
	Binder	2 838					2 868					2 886					2 914					2 935				
	PATB	2 674					2 699					2 722					2 743					2 767				
	DGAB	2 576					2 597					2 624					2 638					2 659				
	LTS	2 475					2 493					2 512					2 527					2 545				
3+00	Final AC	2 690	0 032	0 163	0 094	0 112	2 719	0 034	0 168	0 098	0 113	2 740	0 034	0 166	0 098	0 117	2 760	0 029	0 167	0 106	0 116	2 781	0 026	0 170	0 104	0 119
	Binder	2 658					2 685					2 707					2 731					2 755				
	PATB	2 495					2 518					2 541					2 564					2 585				
	DGAB	2 401					2 420					2 443					2 457					2 481				
	LTS	2 289					2.307					2 326					2 341					2 362				
3+50	Final AC	2 521	0 037	0 173	0 092	0 110	2 548	0 034	0 180	0 096	0 111	2 566	0 030	0 177	0 087	0 123	2 588	0 030	0 176	0 095	0 125	2 608	0 023	0 180	0 101	0 125
	Binder	2 484					2 515					2 536					2 557					2 585				
	PATB	2 311					2 335					2 359					2 381					2 405				
	DGAB	2 219					2 239					2 272					2 286					2 304				
	LTS	2 109					2 128					2 149					2 161					2 179				
4+00	Final AC	2 339	0 029	0 178	0 090	0 107	2 365	0 027	0 186	0 097	0 104	2 385	0 029	0 182	0 092	0 116	2 405	0 027	0 179	0 101	0 116	2 426	0 021	0 183	0 101	0 119
	Binder	2 310					2 338					2 356					2 377					2 405				
	PATB	2 132					2 152					2 174					2 199					2 222				
	DGAB	2 042					2 055					2 082					2 097					2 121				
	LTS	1 935					1 951					1 966					1 981					2 003				
4+50	Final AC	2 160	0 029	0 182	0 097	0 101	2 185	0 027	0 185	0 098	0 107	2 205	0 026	0 183	0 093	0 114	2 225	0 027	0 176	0 097	0 119	2 243	0 021	0 182	0 098	0 119
	Binder	2 131					2 158					2 179					2 198					2 222				
	PATB	1 948					1 973					1 997					2 021					2 040				
	DGAB	1 851					1 875					1 903					1 924					1 942				
	LTS	1 750					1 768					1 789					1 804					1 823				
5+00	Final AC	1 974	0 026	0 180	0 094	0 091	2 006	0 030	0 187	0 094	0 107	2 024	0 027	0 187	0 091	0 114	2 042	0 030	0 181	0 099	0 113	2 063	0 021	0 187	0 102	0 116
	Binder	1 948					1 975					1 996					2 012					2 042				
	PATB	1 768					1 788					1 809					1 830					1 855				
	DGAB	1 673					1 695					1 718					1 731					1 753				
	LTS	1 582					1 588					1 603					1 618					1 637				
	AVG		0 035	0 159	0 101	0 101		0 034	0 166	0 102	0 105		0 033	0 163	0 100	0 111		0 031	0 164	0 105	0 111		0 025	0 171	0 105	0 111
	MAX		0 055	0 182	0 119	0 112		0 043	0 187	0 125	0 113		0 040	0 187	0 125	0 123		0 037	0 181	0 121	0 125		0 030	0 187	0 117	0 125
	MIN		0 026	0 131	0 090	0 089		0 027	0 127	0 094	0 098		0 026	0 122	0 087	0.095		0 027	0 134	0 095	0 094		0 021	0 154	0 098	0 092
	STD		0 007	0 019	0 009	0 007		0 005	0 018	0 009	0 005		0 005	0 019	0 011	0 009		0 004	0 015	0 007	0 009		0 003	0 012	0 005	0 010

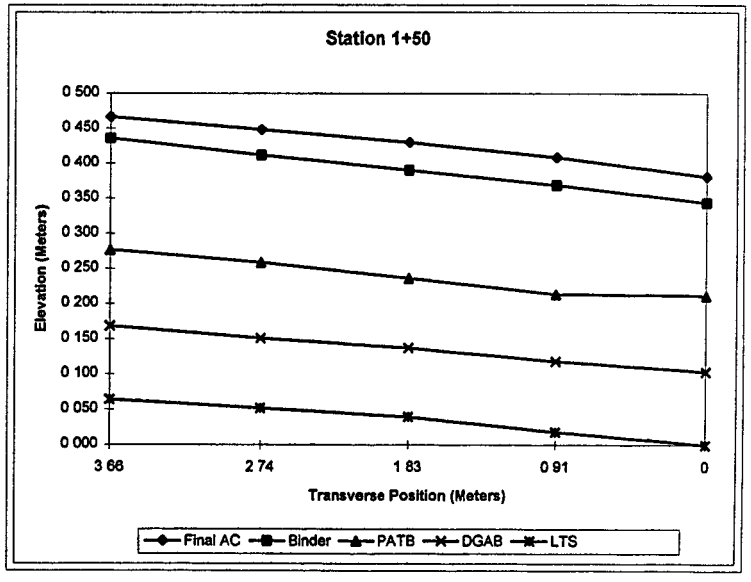
	Final AC	Binder	PATB	DGAB
SECTION AVG	0.033	0.163	0 102	0 108
SECTION MAX	0 055	0.187	0.125	0 125
SECTION MIN	0 021	0.122	0 087	0 089
SECTION STD	0 008	0 017	0 008	0 009

Oklahoma SPS-1 (400119)

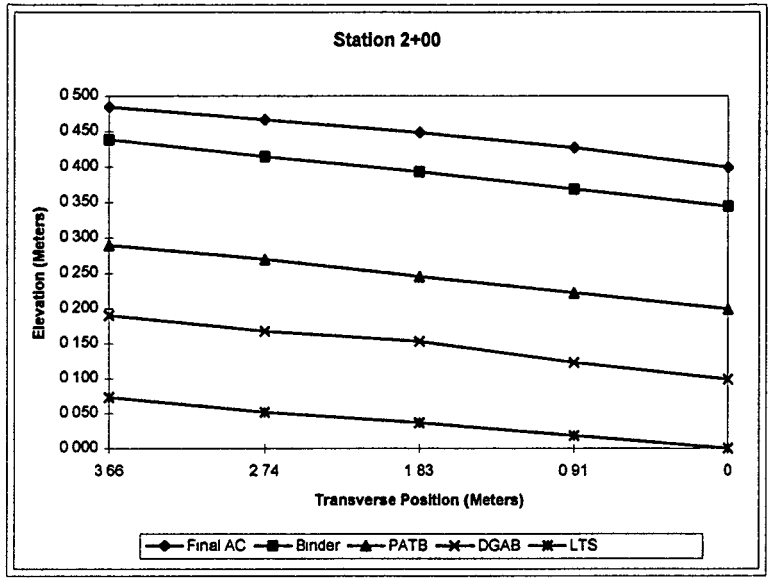


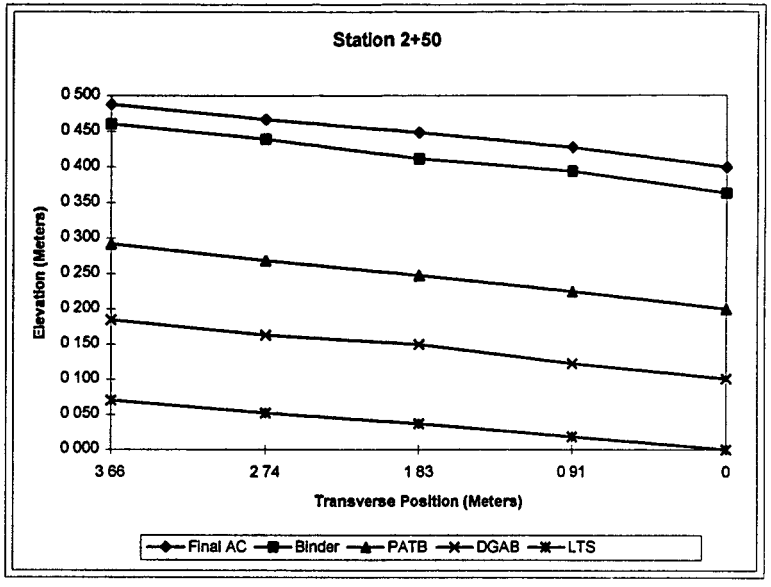


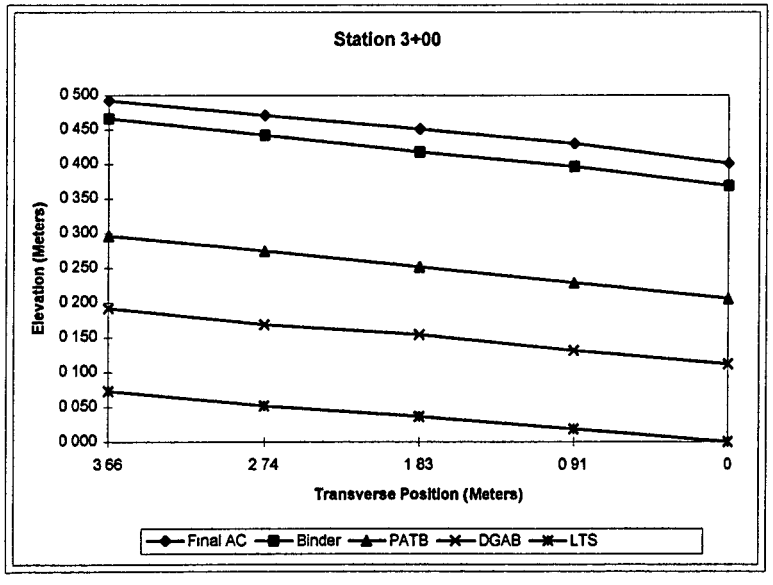


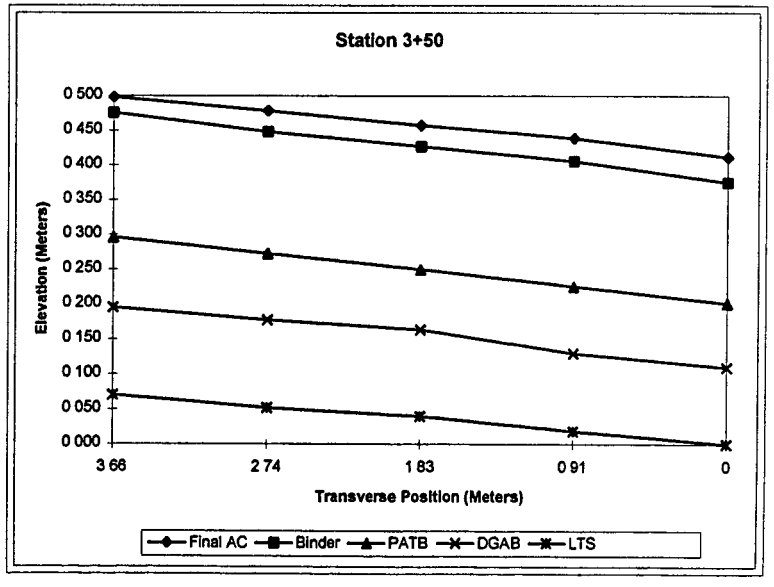


Oklahoma SPS-1 (400119)

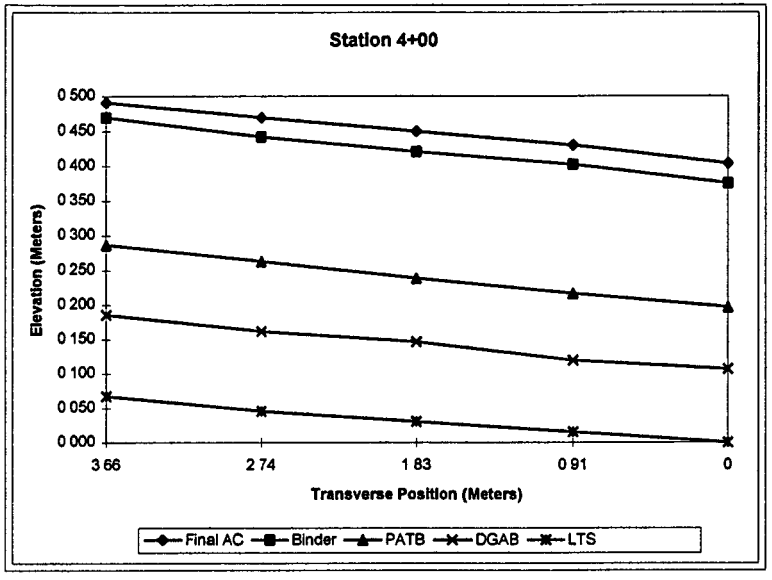


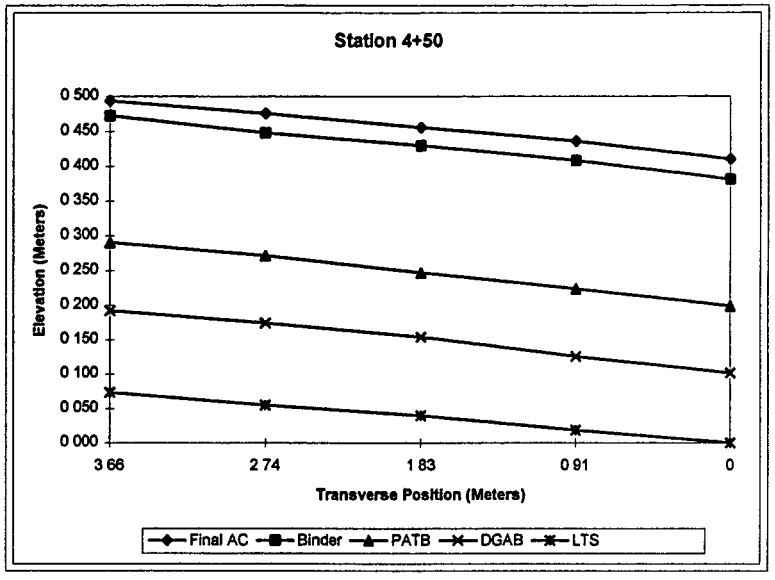


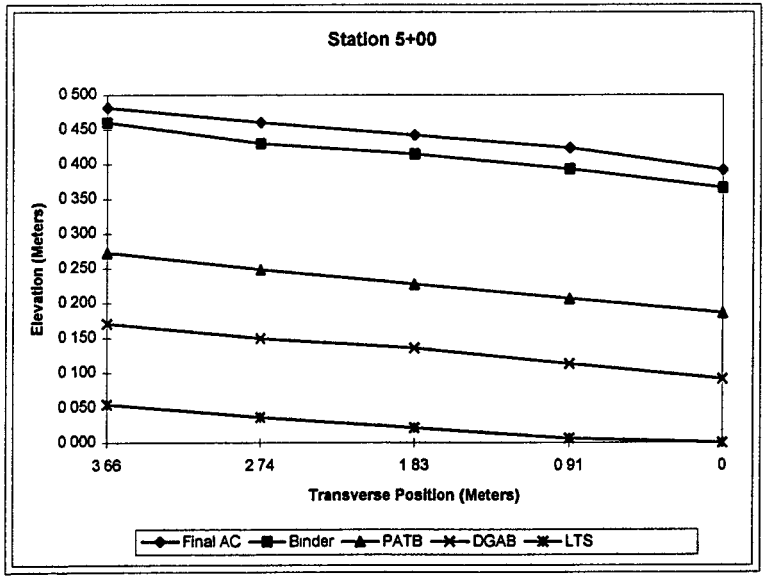




Oklahoma SPS-1 (400119)







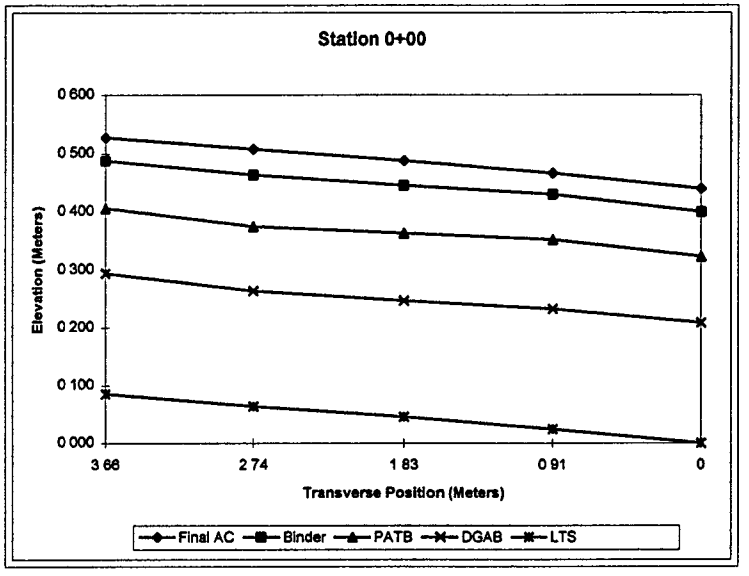
Oklahoma SPS-1 (400120)

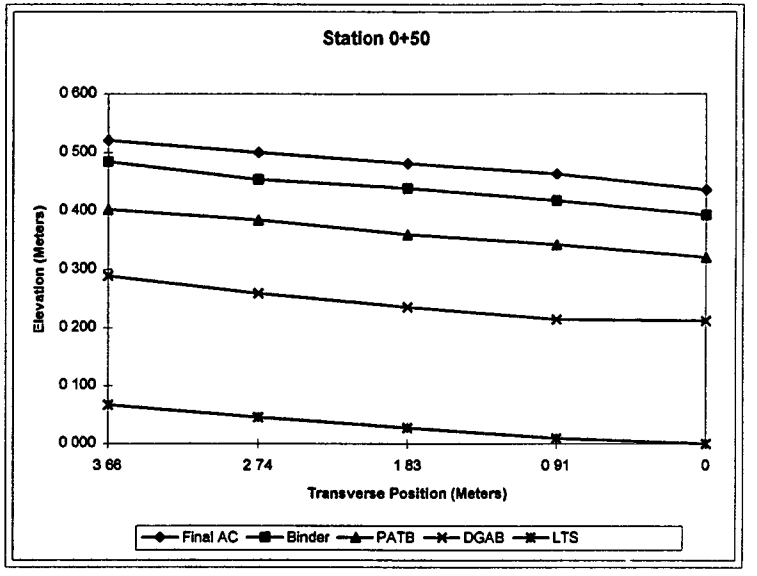
Transverse Offset	LAYERS	ELEVATION 0" Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 0.91 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters
0+00	Final AC	3 112	0 040	0 076	0 115	0 208	3 139	0 037	0 078	0 120	0 208
	Binder	3 072					3 103				
	PATB	2 996					3 025				
	DGAB	2 881					2.905				
	LTS	2 673					2.697				
0+50	Final AC	2 966	0 043	0 073	0 109	0 211	2 993	0 046	0 075	0 128	0 205
	Binder	2 923					2 947				
	PATB	2 850					2 872				
	DGAB	2 741					2 744				
	LTS	2 530					2 539				
1+00	Final AC	2 835	0 040	0 072	0 114	0 207	2 862	0 040	0 079	0 126	0 200
	Binder	2 795					2 822				
	PATB	2 723					2.743				
	DGAB	2 609					2.617				
	LTS	2 402					2 417				
1+50	Final AC	2 716	0 043	0 079	0 137	0 195	2 746	0 043	0 081	0 136	0 210
	Binder	2 673					2 704				
	PATB	2 594					2 623				
	DGAB	2 457					2 487				
	LTS	2 262					2 277				
2+00	Final AC	2 588	0 034	0 085	0 128	0 198	2 617	0 035	0 088	0 135	0 197
	Binder	2 554					2 582				
	PATB	2 469					2 493				
	DGAB	2 341					2 358				
	LTS	2 143					2 161				
2+50	Final AC	2 457	0 043	0 088	0 128	0 189	2 487	0 043	0 094	0 127	0 197
	Binder	2 414					2 444				
	PATB	2 326					2 351				
	DGAB	2 198					2 224				
	LTS	2 009					2 027				
3+00	Final AC	2 316	0 040	0 090	0 129	0 180	2 344	0 037	0 094	0 134	0 183
	Binder	2 277					2 307				
	PATB	2 187					2 213				
	DGAB	2 058					2 079				
	LTS	1 878					1 896				
3+50	Final AC	2 188	0 043	0 091	0 125	0 171	2 216	0 043	0 095	0 127	0 174
	Binder	2 146					2 173				
	PATB	2 055					2 078				
	DGAB	1 929					1 951				
	LTS	1 759					1 777				
4+00	Final AC	2 067	0 037	0 094	0 131	0 177	2 094	0 040	0 099	0 127	0 179
	Binder	2 030					2 054				
	PATB	1 936					1 955				
	DGAB	1 805					1 828				
	LTS	1 628					1 649				
4+50	Final AC	1 943	0 038	0 097	0 139	0 169	1 969	0 040	0 099	0 140	0 175
	Binder	1 905					1 929				
	PATB	1 808					1 830				
	DGAB	1 669					1 690				
	LTS	1 500					1 515				
5+00	Final AC	1 820	0 040	0 094	0 144	0 164	1 847	0 043	0 094	0 148	0 166
	Binder	1 780					1 804				
	PATB	1 686					1 710				
	DGAB	1 542					1 562				
	LTS	1 378					1 396				
	AVG		0 040	0 085	0 127	0 188		0 041	0 089	0 131	0 190
	MAX		0 043	0 097	0 144	0.211		0 046	0 099	0 148	0.210
	MIN		0 034	0 072	0 109	0 164		0 037	0 075	0 120	0 166
	STD		0 003	0 009	0 011	0 016		0 003	0 009	0 008	0 015

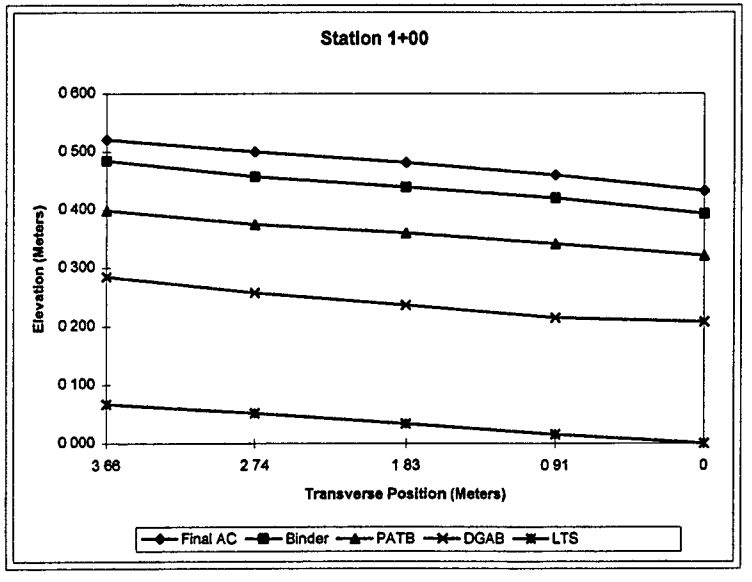
Transverse Offset	LAYERS	ELEVATION 1.83 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 2.74 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 3.66 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters
0+00	Final AC	3 161	0 043	0 082	0 116	0 201	3 181	0 044	0 088	0 111	0 200	3 200	0 040	0 082	0 112	0 209
	Binder	3 118					3 136					3 161				
	PATB	3 036					3 048					3 079				
	DGAB	2 920					2 937					2 967				
	LTS	2.719					2.737					2 758				
0+50	Final AC	3 011	0 043	0 079	0 125	0 208	3 030	0 046	0 069	0 126	0.213	3 051	0 037	0 082	0 113	0 223
	Binder	2 969					2 984					3 014				
	PATB	2 890					2 915					2 933				
	DGAB	2 765					2 789					2 819				
	LTS	2 557					2 576					2 597				
1+00	Final AC	2 883	0 043	0 079	0 124	0 203	2.902	0 043	0 082	0 117	0 206	2 923	0 037	0 085	0 114	0 218
	Binder	2 841					2.859					2 886				
	PATB	2 762					2 777					2 801				
	DGAB	2 638					2 659					2 687				
	LTS	2 435					2 454					2 469				
1+50	Final AC	2 765	0 043	0 078	0 133	0 216	2 786	0 049	0 079	0 122	0 229	2 807	0 040	0 084	0 117	0 241
	Binder	2 722					2 737					2 766				
	PATB	2 644					2 658					2 683				
	DGAB	2 512					2 536					2 566				
	LTS	2 295					2.307					2 326				
2+00	Final AC	2 637	0 037	0 085	0 131	0 201	2 658	0 040	0 091	0 121	0 206	2 679	0 034	0 092	0 126	0 212
	Binder	2 600					2 618					2 646				
	PATB	2 515					2 527					2 554				
	DGAB	2 384					2 406					2 428				
	LTS	2 182					2 201					2 216				
2+50	Final AC	2 505	0 040	0 090	0 128	0 206	2 525	0 044	0 088	0 125	0 205	2 547	0 035	0 091	0 126	0 213
	Binder	2 466					2.481					2 512				
	PATB	2 376					2 393					2 420				
	DGAB	2 248					2 268					2 295				
	LTS	2 042					2 063					2 082				
3+00	Final AC	2 365	0 040	0 092	0 127	0 189	2 384	0 040	0 094	0 119	0 195	2 406	0 038	0 091	0 123	0 201
	Binder	2 326					2 344					2 368				
	PATB	2 234					2 250					2 277				
	DGAB	2 106					2.131					2 154				
	LTS	1 917					1 935					1 954				
3+50	Final AC	2 236	0 041	0 091	0 126	0 184	2 256	0 043	0 093	0 123	0 189	2 277	0 037	0 095	0 123	0 197
	Binder	2 195					2 213					2 240				
	PATB	2 103					2 120					2 145				
	DGAB	1 977					1 996					2 022				
	LTS	1 792					1 807					1 826				
4+00	Final AC	2 114	0 038	0 100	0 119	0 192	2 134	0 040	0 103	0 112	0 194	2 152	0 030	0 098	0 124	0 202
	Binder	2 076					2 094					2 121				
	PATB	1 976					1 991					2 024				
	DGAB	1 857					1 879					1 900				
	LTS	1 664					1 686					1 698				
4+50	Final AC	1 987	0 040	0 100	0 136	0 178	2 009	0 040	0 107	0 128	0 180	2 030	0 037	0 106	0 128	0 189
	Binder	1 948					1 969					1 993				
	PATB	1 848					1 862					1 887				
	DGAB	1 711					1 734					1 759				
	LTS	1 533					1 554					1 570				
5+00	Final AC	1 865	0 046	0 096	0 137	0 169	1 882	0 041	0 110	0 126	0 166	1 902	0 037	0 111	0 126	0 177
	Binder	1 820					1 841					1 865				
	PATB	1 724					1 731					1 755				
	DGAB	1 586					1 605					1 628				
	LTS	1 417					1 439					1 451				
	AVG		0 041	0 089	0 127	0 195		0 043	0 091	0 121	0 198		0 037	0 093	0 121	0.207
	MAX		0 046	0 100	0 137	0.216		0 049	0 110	0 128	0 229		0 040	0 111	0 128	0.241
	MIN		0 038	0 078	0 116	0 169		0 040	0 069	0 111	0 166		0 030	0 082	0 112	0 177
	STD		0 002	0 008	0 006	0 014		0 003	0 012	0 006	0 017		0 002	0 009	0 006	0 017

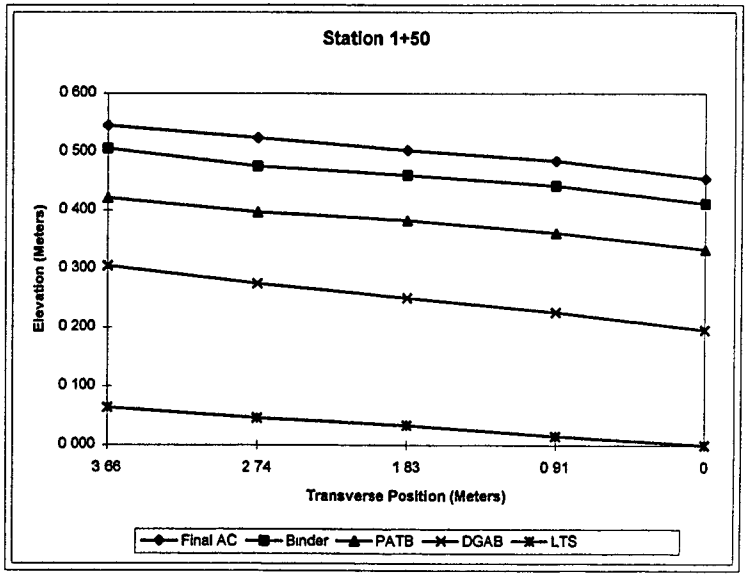
	Final AC	Binder	PATB	DGAB
SECTION AVG	0 040	0 089	0.126	0.196
SECTION MAX	0 049	0 111	0.148	0 241
SECTION MIN	0 030	0 069	0 109	0 164
SECTION STD	0 003	0 010	0 008	0 017

Oklahoma SPS-1 (400120)

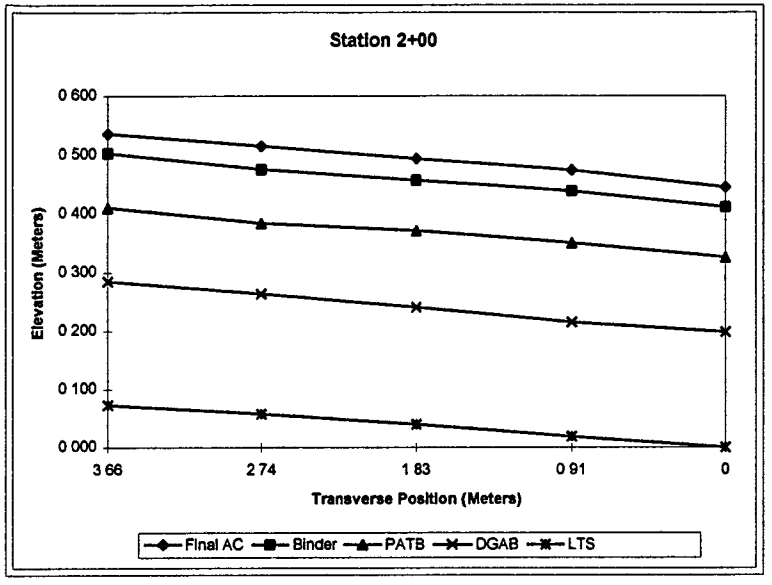


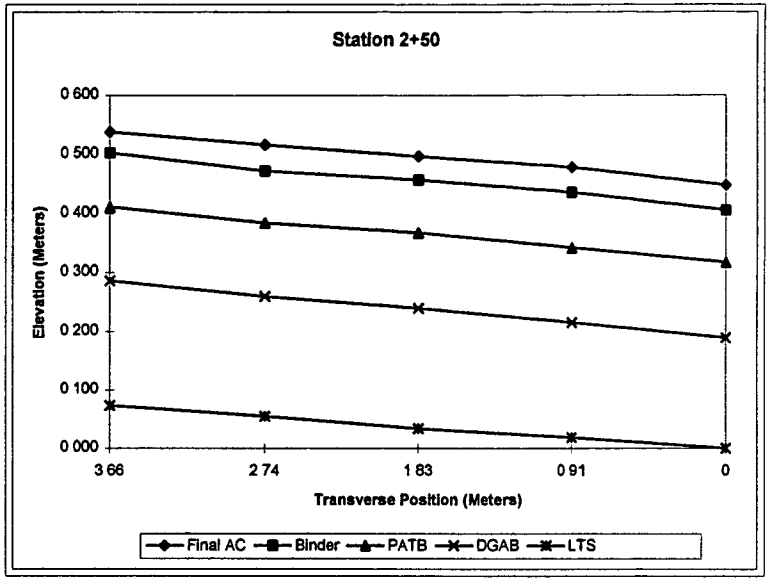


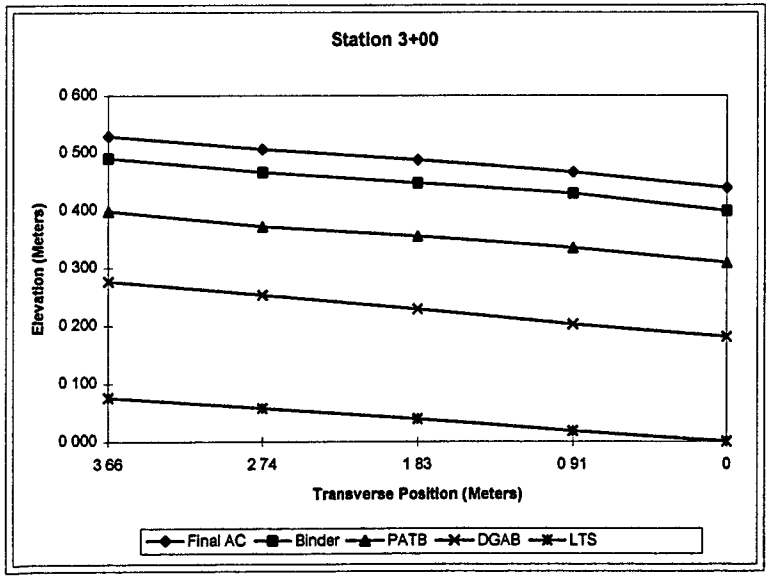


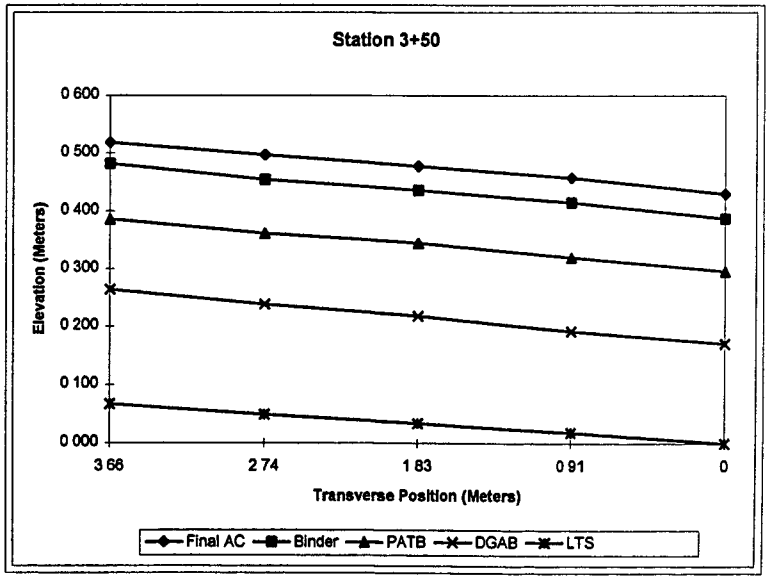


Oklahoma SPS-1 (400120)

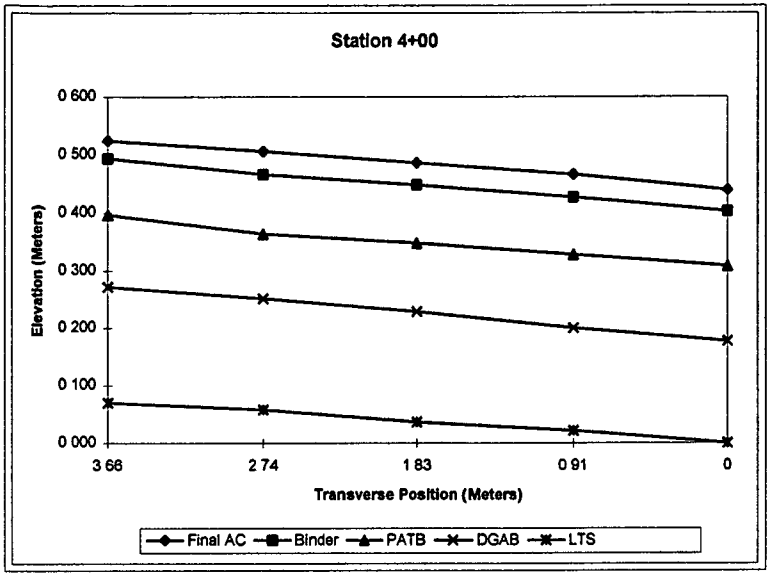


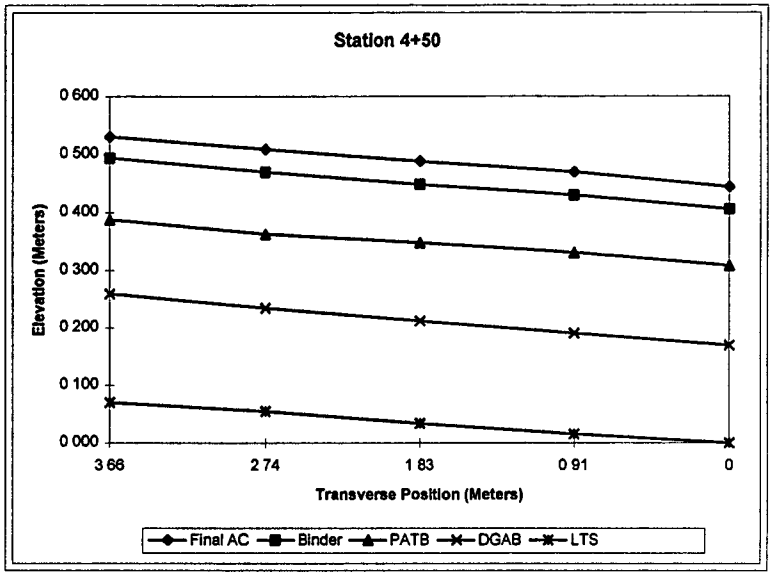


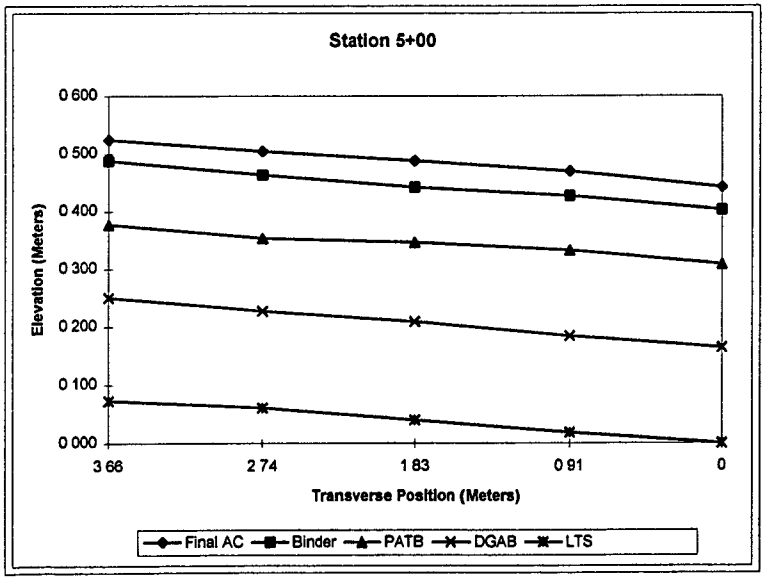




Oklahoma SPS-1 (400120)







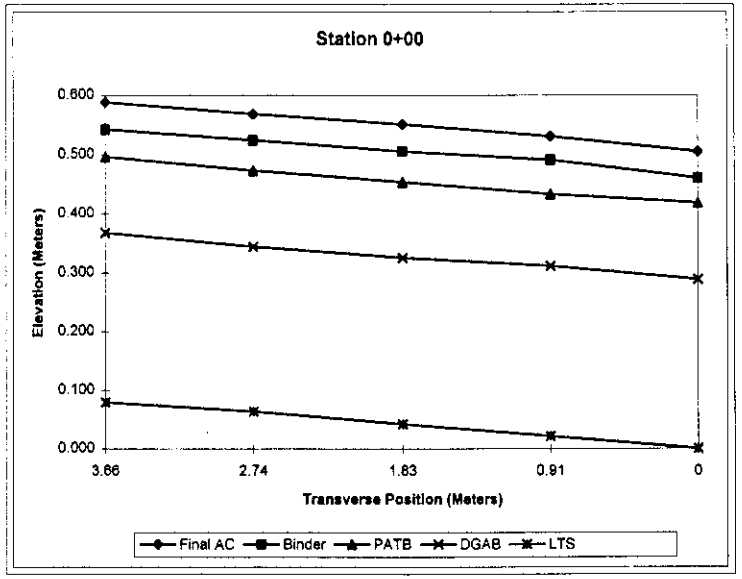
Oklahoma SPS-1 (400121)

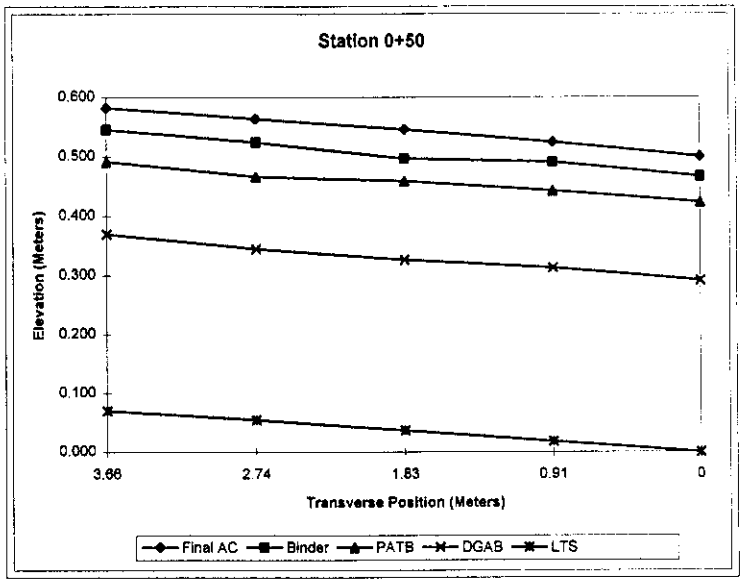
Transverse Offset	LAYERS	ELEVATION 0 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 0.61 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters
0+00	Final AC	2.854	0.044	0.042	0.130	0.288	2.880	0.040	0.058	0.122	0.290
	Binder	2.810					2.841				
	PATB	2.768					2.783				
	DGAB	2.638					2.661				
	LTS	2.350					2.371				
0+50	Final AC	2.728	0.034	0.043	0.132	0.291	2.752	0.034	0.048	0.130	0.294
	Binder	2.694					2.719				
	PATB	2.651					2.671				
	DGAB	2.519					2.541				
	LTS	2.228					2.248				
1+00	Final AC	2.598	0.035	0.046	0.124	0.296	2.624	0.037	0.056	0.123	0.290
	Binder	2.563					2.588				
	PATB	2.518					2.531				
	DGAB	2.393					2.408				
	LTS	2.097					2.118				
1+50	Final AC	2.484	0.040	0.053	0.123	0.296	2.509	0.037	0.062	0.120	0.293
	Binder	2.444					2.472				
	PATB	2.391					2.409				
	DGAB	2.268					2.289				
	LTS	1.972					1.996				
2+00	Final AC	2.355	0.041	0.048	0.131	0.293	2.380	0.040	0.062	0.121	0.289
	Binder	2.313					2.341				
	PATB	2.265					2.278				
	DGAB	2.134					2.157				
	LTS	1.841					1.868				
2+50	Final AC	2.225	0.034	0.057	0.129	0.280	2.252	0.034	0.065	0.127	0.284
	Binder	2.192					2.219				
	PATB	2.134					2.154				
	DGAB	2.006					2.028				
	LTS	1.725					1.743				
3+00	Final AC	2.091	0.037	0.057	0.126	0.280	2.117	0.035	0.063	0.124	0.279
	Binder	2.054					2.082				
	PATB	1.997					2.019				
	DGAB	1.871					1.894				
	LTS	1.591					1.615				
3+50	Final AC	1.961	0.038	0.064	0.120	0.285	1.987	0.040	0.066	0.116	0.293
	Binder	1.923					1.948				
	PATB	1.859					1.882				
	DGAB	1.739					1.765				
	LTS	1.454					1.472				
4+00	Final AC	1.814	0.037	0.055	0.121	0.275	1.839	0.035	0.063	0.119	0.281
	Binder	1.777					1.804				
	PATB	1.722					1.741				
	DGAB	1.601					1.622				
	LTS	1.326					1.341				
4+50	Final AC	1.676	0.035	0.065	0.121	0.274	1.702	0.032	0.070	0.117	0.282
	Binder	1.643					1.670				
	PATB	1.578					1.600				
	DGAB	1.457					1.483				
	LTS	1.183					1.201				
5+00	Final AC	1.530	0.040	0.067	0.122	0.247	1.553	0.038	0.070	0.116	0.258
	Binder	1.490					1.515				
	PATB	1.424					1.445				
	DGAB	1.302					1.328				
	LTS	1.055					1.070				
	AVG		0.038	0.055	0.125	0.282		0.038	0.062	0.122	0.284
	MAX		0.044	0.067	0.132	0.296		0.040	0.070	0.130	0.294
	MIN		0.034	0.042	0.120	0.247		0.032	0.048	0.116	0.258
	STD		0.003	0.009	0.004	0.013		0.002	0.006	0.004	0.010

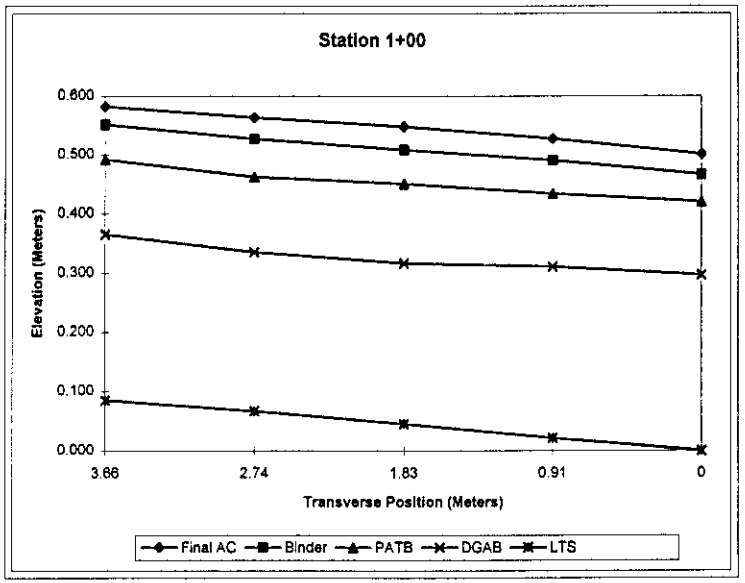
Transverse Offset	LAYERS	ELEVATION 1.83 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 2.74 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters	ELEVATION 3.66 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	PATB THICKNESS Meters	DGAB THICKNESS Meters
0+00	Final AC	2.902	0.046	0.052	0.128	0.283	2.918	0.044	0.051	0.129	0.280	2.938	0.046	0.046	0.129	0.289
	Binder	2.856					2.874					2.893				
	PATB	2.804					2.823					2.847				
	DGAB	2.676					2.694					2.718				
	LTS	2.393					2.414					2.429				
0+50	Final AC	2.774	0.049	0.038	0.133	0.290	2.792	0.040	0.058	0.122	0.290	2.810	0.037	0.054	0.122	0.289
	Binder	2.725					2.752					2.774				
	PATB	2.687					2.694					2.720				
	DGAB	2.554					2.573					2.598				
	LTS	2.265					2.283					2.298				
1+00	Final AC	2.646	0.040	0.058	0.134	0.271	2.661	0.037	0.064	0.128	0.268	2.679	0.030	0.059	0.126	0.280
	Binder	2.606					2.624					2.649				
	PATB	2.548					2.560					2.589				
	DGAB	2.414					2.432					2.463				
	LTS	2.143					2.164					2.182				
1+50	Final AC	2.530	0.037	0.062	0.128	0.285	2.547	0.041	0.060	0.123	0.286	2.566	0.037	0.057	0.126	0.293
	Binder	2.493					2.505					2.530				
	PATB	2.431					2.445					2.473				
	DGAB	2.303					2.322					2.347				
	LTS	2.018					2.036					2.054				
2+00	Final AC	2.402	0.040	0.059	0.129	0.284	2.417	0.040	0.066	0.119	0.285	2.435	0.037	0.064	0.122	0.287
	Binder	2.362					2.377					2.399				
	PATB	2.303					2.312					2.334				
	DGAB	2.174					2.193					2.213				
	LTS	1.890					1.908					1.926				
2+50	Final AC	2.274	0.037	0.067	0.129	0.280	2.291	0.038	0.071	0.121	0.281	2.310	0.034	0.076	0.116	0.283
	Binder	2.237					2.252					2.277				
	PATB	2.170					2.182					2.201				
	DGAB	2.042					2.061					2.085				
	LTS	1.762					1.780					1.801				
3+00	Final AC	2.138	0.041	0.060	0.131	0.272	2.155	0.040	0.071	0.120	0.269	2.170	0.034	0.060	0.126	0.280
	Binder	2.097					2.115					2.137				
	PATB	2.037					2.044					2.077				
	DGAB	1.906					1.924					1.950				
	LTS	1.634					1.655					1.670				
3+50	Final AC	2.007	0.038	0.060	0.125	0.296	2.024	0.037	0.064	0.121	0.294	2.042	0.030	0.064	0.121	0.300
	Binder	1.969					1.987					2.012				
	PATB	1.909					1.923					1.948				
	DGAB	1.783					1.802					1.827				
	LTS	1.487					1.509					1.527				
4+00	Final AC	1.862	0.040	0.066	0.124	0.280	1.881	0.040	0.073	0.117	0.270	1.896	0.034	0.073	0.110	0.287
	Binder	1.823					1.841					1.862				
	PATB	1.757					1.768					1.789				
	DGAB	1.633					1.651					1.678				
	LTS	1.353					1.361					1.393				
4+50	Final AC	1.724	0.035	0.063	0.129	0.280	1.740	0.034	0.072	0.119	0.275	1.759	0.030	0.077	0.114	0.279
	Binder	1.689					1.707					1.728				
	PATB	1.625					1.635					1.652				
	DGAB	1.497					1.515					1.538				
	LTS	1.216					1.241					1.259				
5+00	Final AC	1.576	0.040	0.072	0.120	0.254	1.594	0.040	0.073	0.117	0.251	1.609	0.030	0.076	0.118	0.261
	Binder	1.536					1.554					1.579				
	PATB	1.465					1.481					1.503				
	DGAB	1.345					1.364					1.385				
	LTS	1.091					1.113					1.125				
	AVG		0.040	0.060	0.128	0.279		0.039	0.068	0.122	0.276		0.034	0.064	0.121	0.285
	MAX		0.049	0.072	0.134	0.296		0.044	0.073	0.129	0.294		0.046	0.077	0.129	0.300
	MIN		0.035	0.038	0.120	0.254		0.034	0.061	0.117	0.251		0.030	0.046	0.110	0.261
	STD		0.004	0.009	0.004	0.011		0.003	0.007	0.004	0.012		0.004	0.010	0.006	0.011

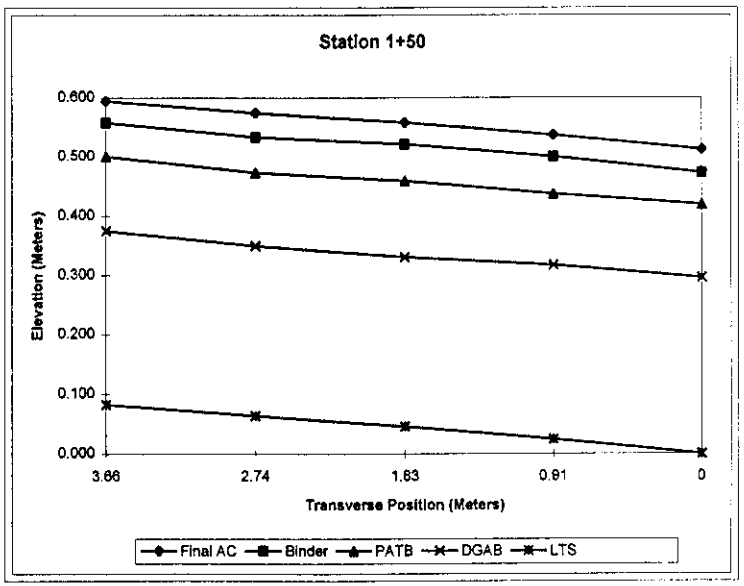
	Final AC	Binder	PATB	DGAB
SECTION AVG	0.037	0.061	0.123	0.282
SECTION MAX	0.049	0.077	0.134	0.300
SECTION MIN	0.030	0.038	0.110	0.247
SECTION STD	0.004	0.009	0.005	0.012

Oklahoma SPS-1 (400121)

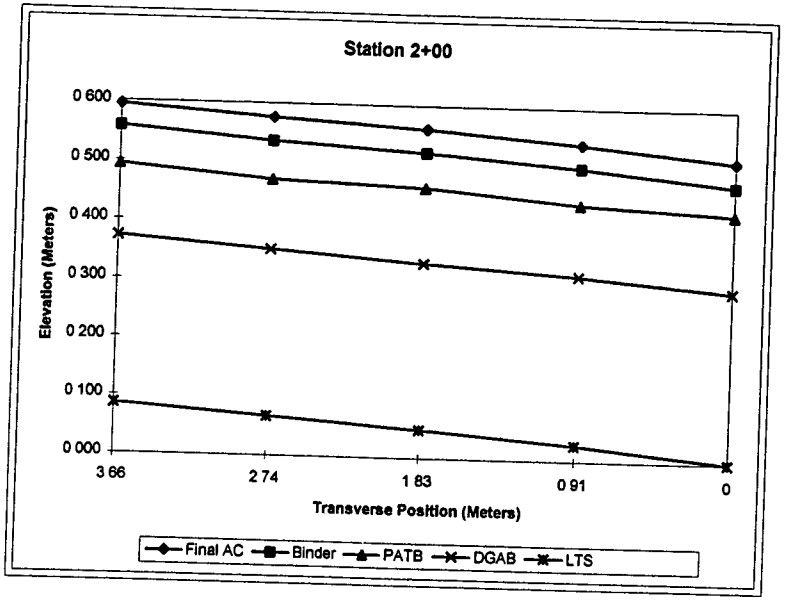


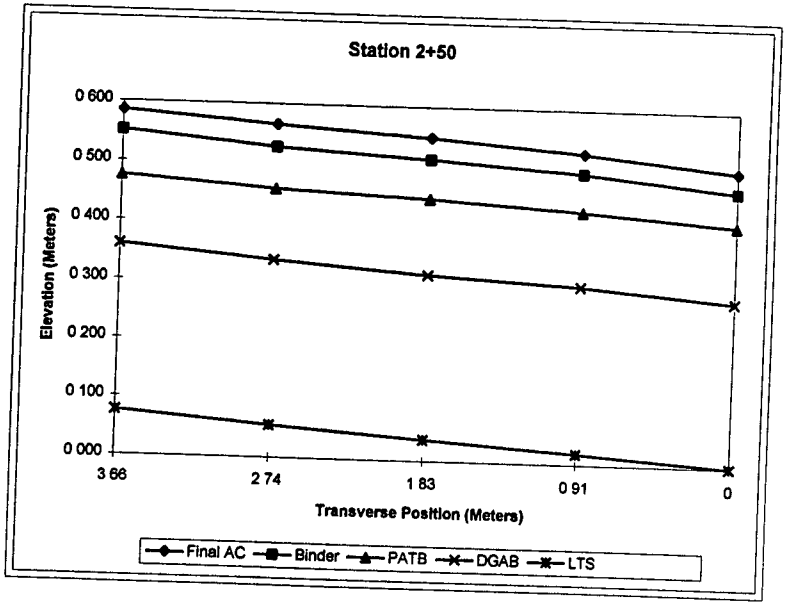


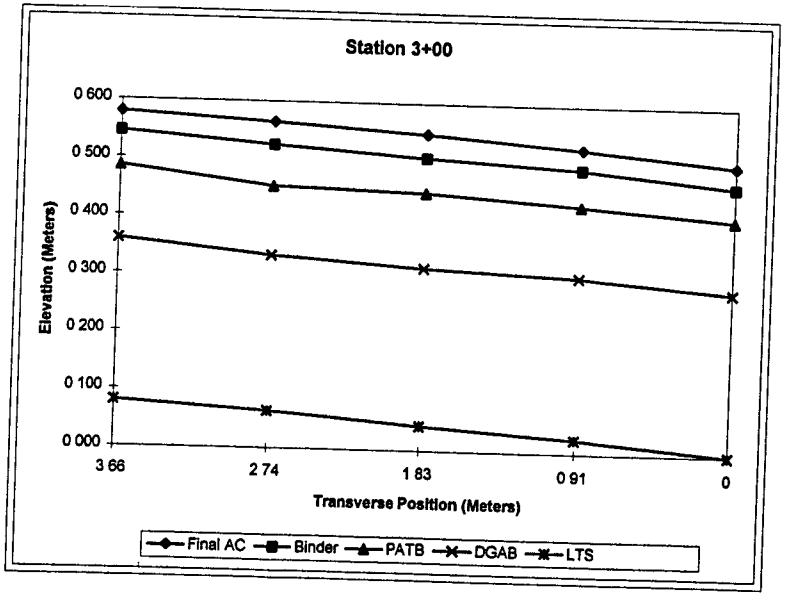


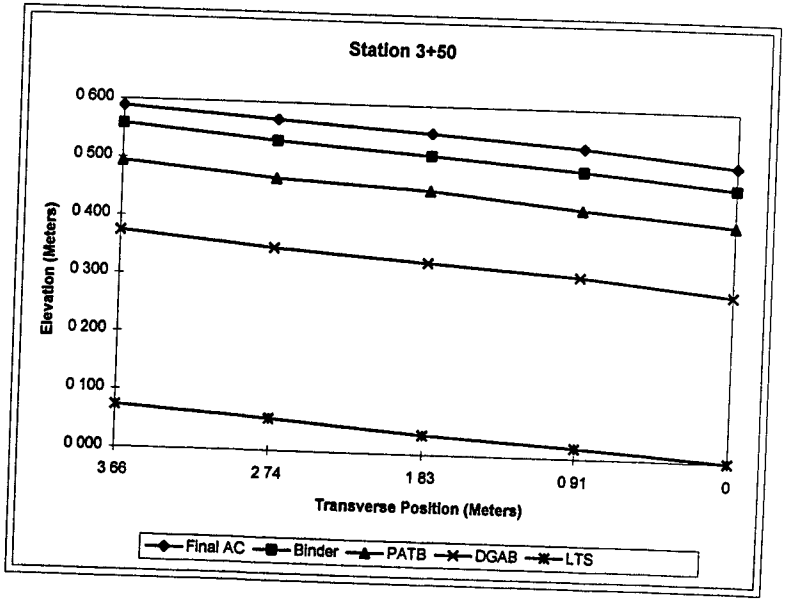


Oklahoma SPS-1 (400121)

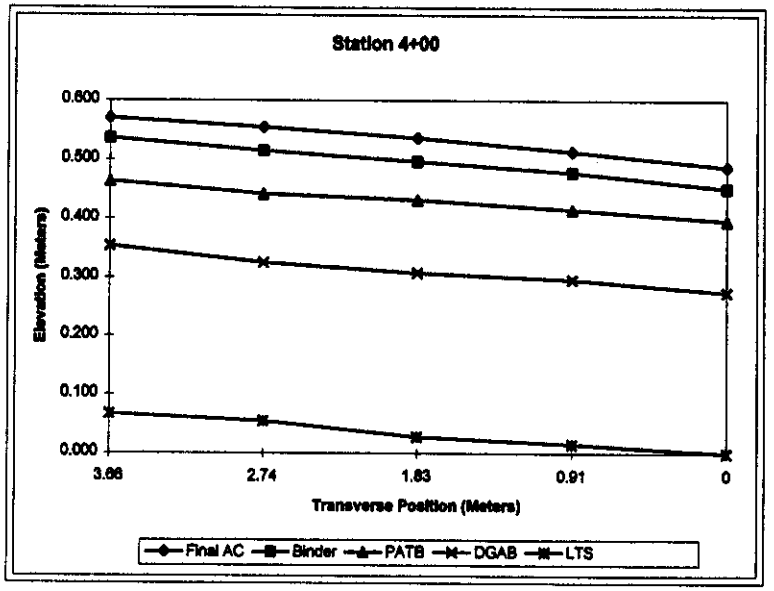


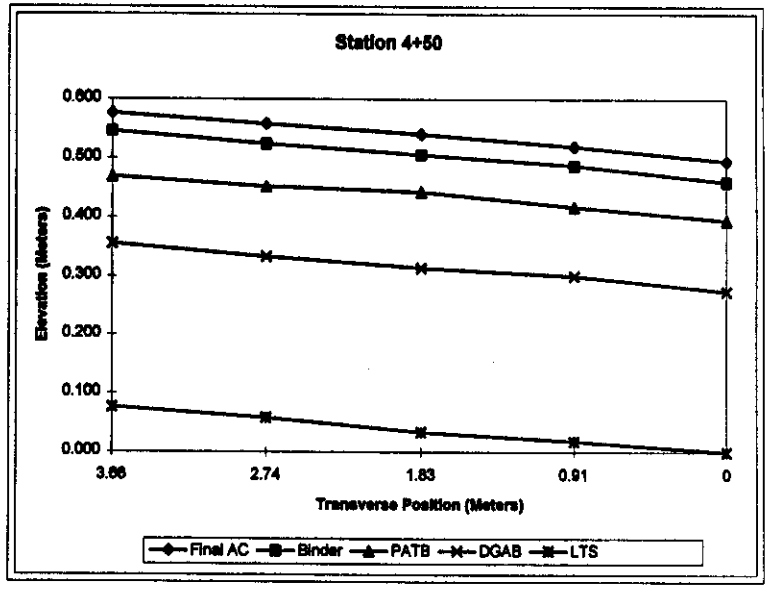


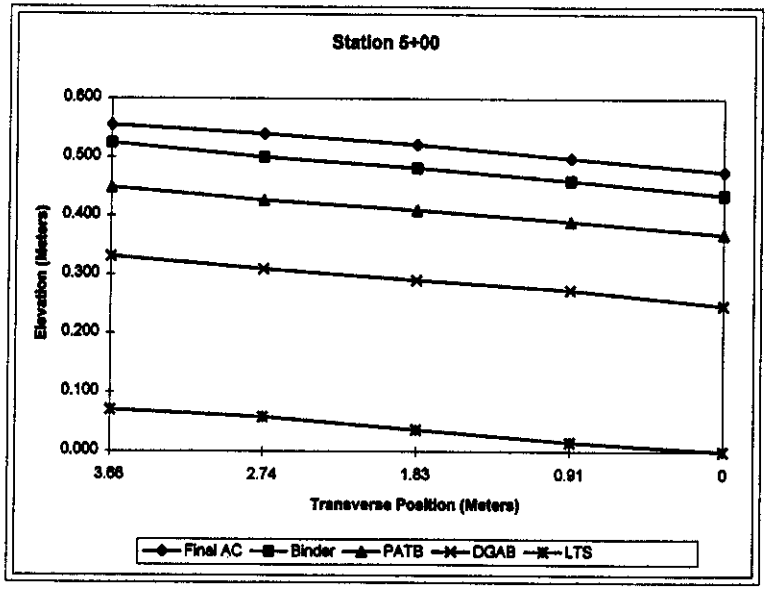




Oklahoma SPS-1 (400121)







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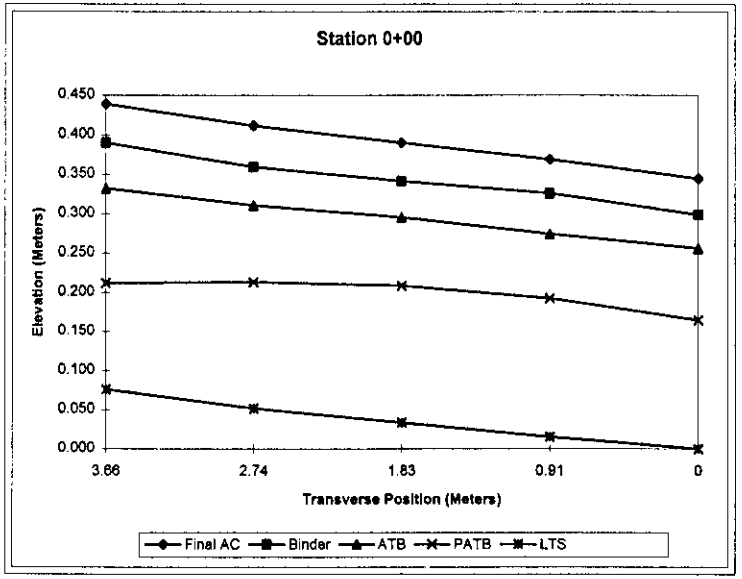
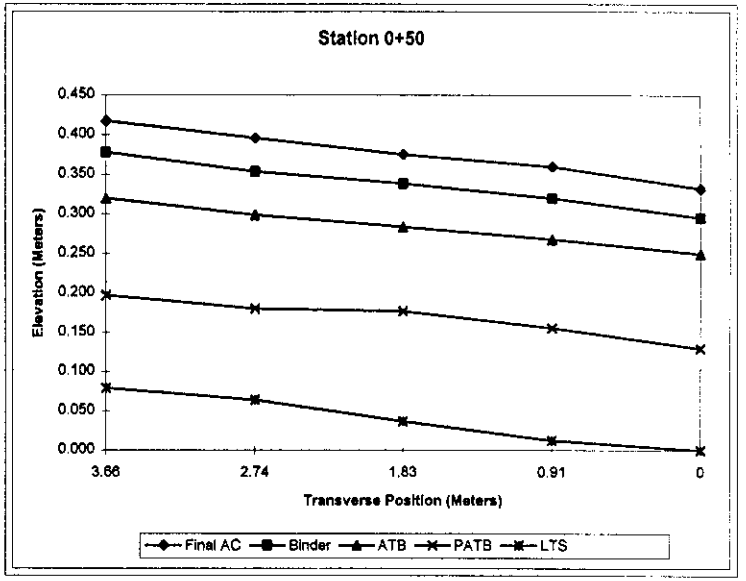
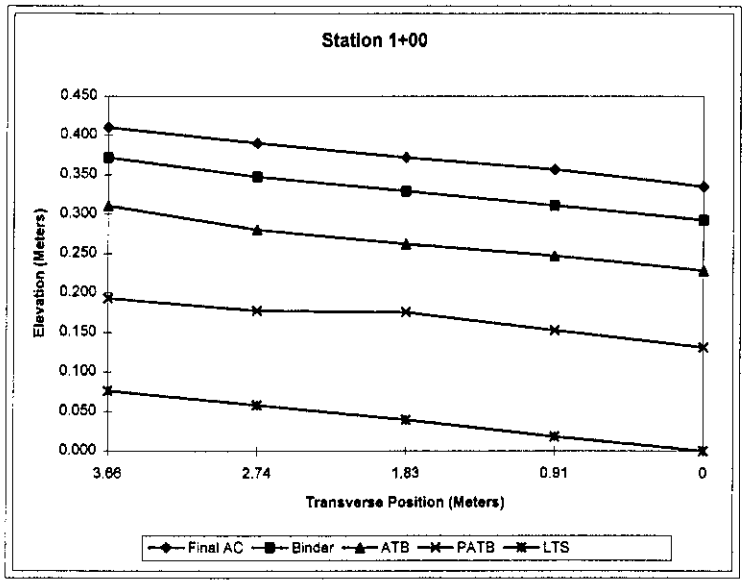
Transverse Offset	8 LAYERS	ELEVATION 0 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters	ELEVATION 0.31 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters	ELEVATION 1.83 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters	ELEVATION 2.74 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters	ELEVATION 3.66 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters
0+00	Final AC	2.923	0.046	0.043	0.091	0.165	2.947	0.043	0.052	0.082	0.177	2.969	0.049	0.046	0.087	0.175	2.990	0.052	0.049	0.098	0.162	3.016	0.049	0.058	0.120	0.136
	Binder	2.877					2.905					2.920					2.938					2.969				
	ATB	2.835					2.853					2.874					2.890					2.911				
	PATB	2.744					2.771					2.787					2.792					2.790				
	LTS	2.579					2.594					2.612					2.630					2.655				
0+50	Final AC	2.835	0.037	0.046	0.120	0.130	2.852	0.040	0.052	0.112	0.144	2.877	0.037	0.055	0.106	0.141	2.899	0.043	0.055	0.118	0.116	2.920	0.040	0.058	0.123	0.118
	Binder	2.798					2.822					2.841					2.856					2.880				
	ATB	2.752					2.771					2.786					2.801					2.822				
	PATB	2.632					2.656					2.679					2.663					2.700				
	LTS	2.502					2.515					2.539					2.566					2.582				
1+00	Final AC	2.781	0.043	0.064	0.088	0.131	2.783	0.046	0.064	0.094	0.134	2.798	0.043	0.067	0.087	0.136	2.815	0.043	0.067	0.103	0.119	2.836	0.038	0.061	0.118	0.117
	Binder	2.719					2.737					2.755					2.774					2.798				
	ATB	2.655					2.673					2.688					2.707					2.737				
	PATB	2.557					2.579					2.602					2.604					2.619				
	LTS	2.428					2.444					2.466					2.484					2.502				
1+50	Final AC	2.701	0.040	0.046	0.130	0.129	2.722	0.040	0.052	0.121	0.135	2.740	0.043	0.052	0.118	0.132	2.754	0.041	0.056	0.130	0.114	2.771	0.037	0.058	0.142	0.105
	Binder	2.661					2.682					2.697					2.713					2.734				
	ATB	2.615					2.630					2.646					2.655					2.676				
	PATB	2.485					2.509					2.527					2.525					2.534				
	LTS	2.358					2.374					2.396					2.411					2.429				
2+00	Final AC	2.624	0.046	0.058	0.118	0.129	2.646	0.043	0.058	0.116	0.137	2.664	0.049	0.061	0.110	0.137	2.679	0.049	0.067	0.125	0.110	2.697	0.037	0.070	0.125	0.110
	Binder	2.579					2.603					2.615					2.630					2.661				
	ATB	2.521					2.545					2.554					2.563					2.591				
	PATB	2.403					2.429					2.444					2.438					2.466				
	LTS	2.274					2.292					2.307					2.329					2.356				
2+50	Final AC	2.541	0.053	0.070	0.106	0.116	2.560	0.049	0.070	0.104	0.128	2.579	0.052	0.070	0.098	0.130	2.594	0.049	0.070	0.116	0.109	2.612	0.040	0.067	0.131	0.104
	Binder	2.487					2.512					2.527					2.545					2.573				
	ATB	2.417					2.441					2.457					2.475					2.505				
	PATB	2.311					2.338					2.358					2.359					2.374				
	LTS	2.195					2.210					2.228					2.249					2.271				
3+00	Final AC	2.454	0.043	0.070	0.106	0.113	2.480	0.047	0.067	0.105	0.124	2.499	0.052	0.067	0.097	0.128	2.512	0.049	0.070	0.113	0.103	2.530	0.040	0.070	0.134	0.086
	Binder	2.411					2.432					2.448					2.463					2.490				
	ATB	2.341					2.365					2.380					2.393					2.420				
	PATB	2.235					2.261					2.263					2.280					2.286				
	LTS	2.121					2.137					2.155					2.176					2.201				
3+50	Final AC	2.374	0.052	0.064	0.106	0.113	2.396	0.049	0.064	0.104	0.124	2.414	0.049	0.064	0.100	0.126	2.429	0.046	0.067	0.113	0.110	2.448	0.037	0.070	0.128	0.094
	Binder	2.323					2.347					2.365					2.384					2.411				
	ATB	2.259					2.283					2.301					2.316					2.341				
	PATB	2.152					2.178					2.201					2.204					2.213				
	LTS	2.039					2.054					2.076					2.094					2.118				
4+00	Final AC	2.282	0.052	0.067	0.098	0.117	2.320	0.055	0.067	0.088	0.124	2.338	0.055	0.064	0.088	0.123	2.356	0.055	0.070	0.110	0.094	2.371	0.040	0.073	0.125	0.085
	Binder	2.240					2.265					2.283					2.301					2.332				
	ATB	2.173					2.198					2.219					2.231					2.259				
	PATB	2.074					2.099					2.120					2.121					2.134				
	LTS	1.957					1.975					1.996					2.027					2.048				
4+50	Final AC	2.219	0.049	0.067	0.095	0.106	2.240	0.049	0.064	0.097	0.110	2.259	0.046	0.067	0.093	0.117	2.274	0.043	0.067	0.116	0.098	2.295	0.034	0.079	0.128	0.084
	Binder	2.170					2.192					2.213					2.231					2.262				
	ATB	2.103					2.128					2.146					2.164					2.182				
	PATB	2.008					2.030					2.053					2.048					2.056				
	LTS	1.902					1.920					1.936					1.951					1.972				
5+00	Final AC	2.146	0.058	0.067	0.101	0.109	2.164	0.052	0.067	0.102	0.115	2.185	0.055	0.064	0.104	0.119	2.201	0.064	0.052	0.121	0.098	2.222	0.037	0.079	0.127	0.086
	Binder	2.088					2.112					2.131					2.137					2.185				
	ATB	2.021					2.045					2.067					2.085					2.106				
	PATB	1.920					1.943					1.963					1.964					1.979				
	LTS	1.811					1.829					1.844					1.865					1.893				
	AVG		0.047	0.060	0.105	0.123		0.047	0.062	0.102	0.131		0.048	0.062	0.099	0.133		0.048	0.062	0.114	0.112		0.039	0.067	0.127	0.101
	MAX		0.058	0.070	0.130	0.165		0.055	0.070	0.121	0.177		0.055	0.070	0.118	0.175		0.064	0.070	0.130	0.162		0.049	0.079	0.142	0.136
	MIN		0.037	0.043	0.091	0.106		0.040	0.052	0.082	0.110		0.037	0.046	0.087	0.117		0.041	0.049	0.098	0.094		0.034	0.058	0.118	0.084
	STD		0.006	0.010	0.011	0.016		0.005	0.007	0.010	0.018		0.006	0.008	0.009	0.016		0.007	0.008	0.009	0.018		0.004	0.008	0.007	0.017

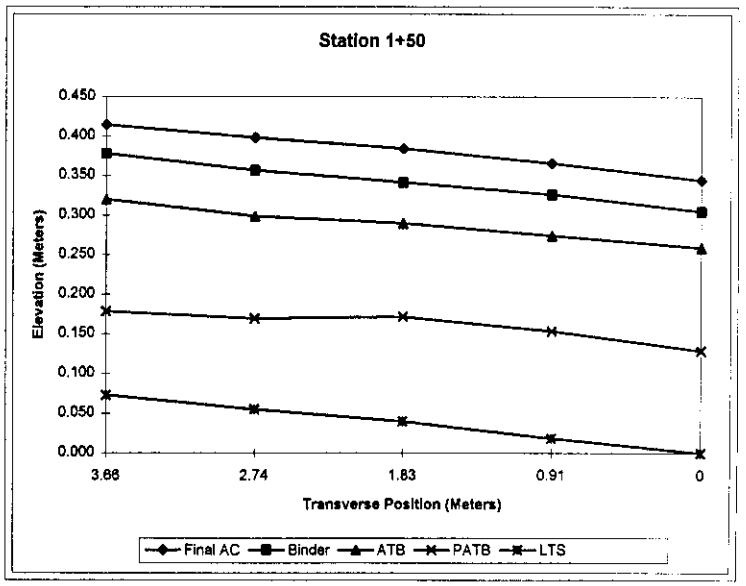
	Final AC	Binder	ATB	PATB
SECTION AVG	0.046	0.063	0.110	0.121
SECTION MAX	0.064	0.079	0.142	0.177
SECTION MIN	0.034	0.043	0.082	0.084
SECTION STD	0.006	0.006	0.014	0.020

Oklahoma SPS-1 (400122)









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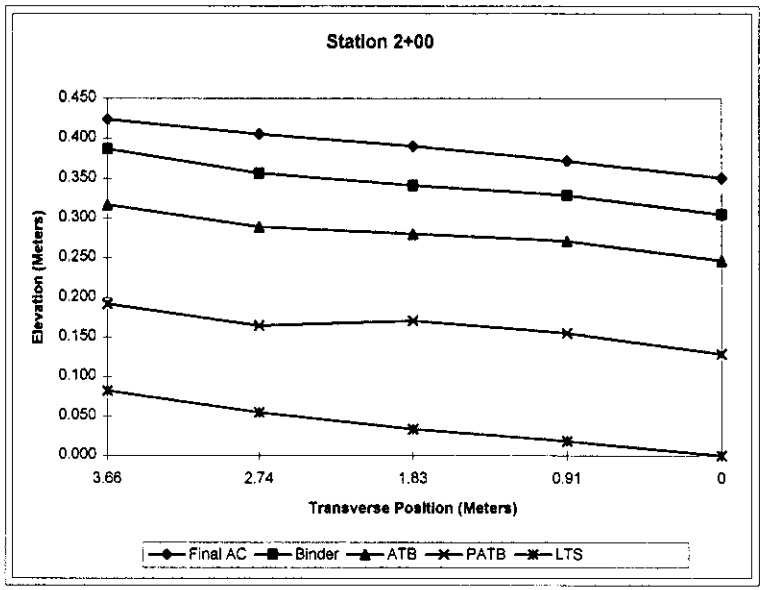
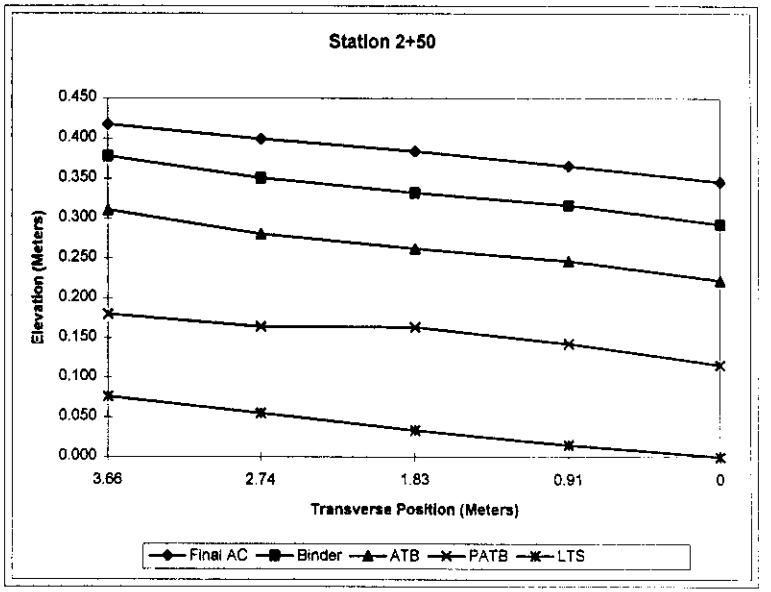
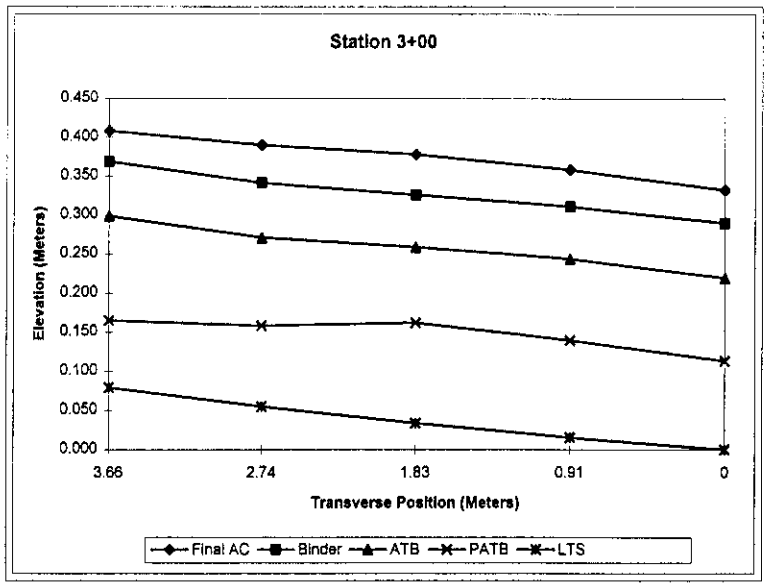
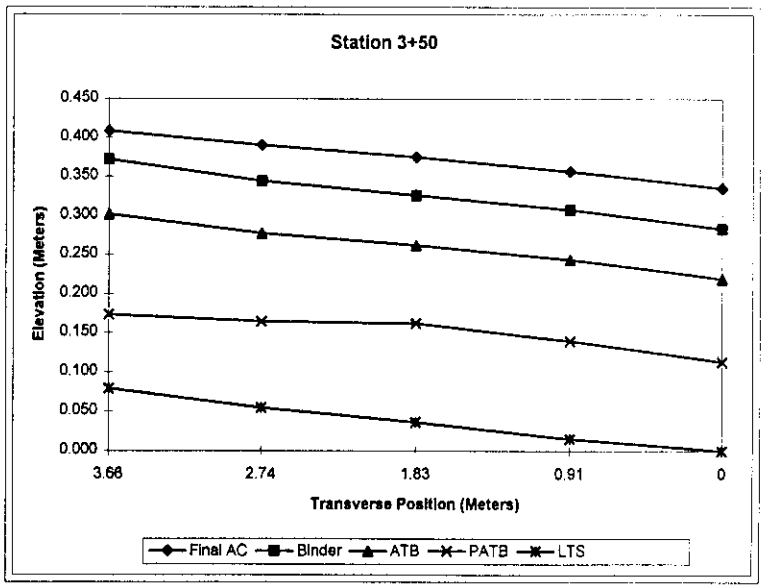
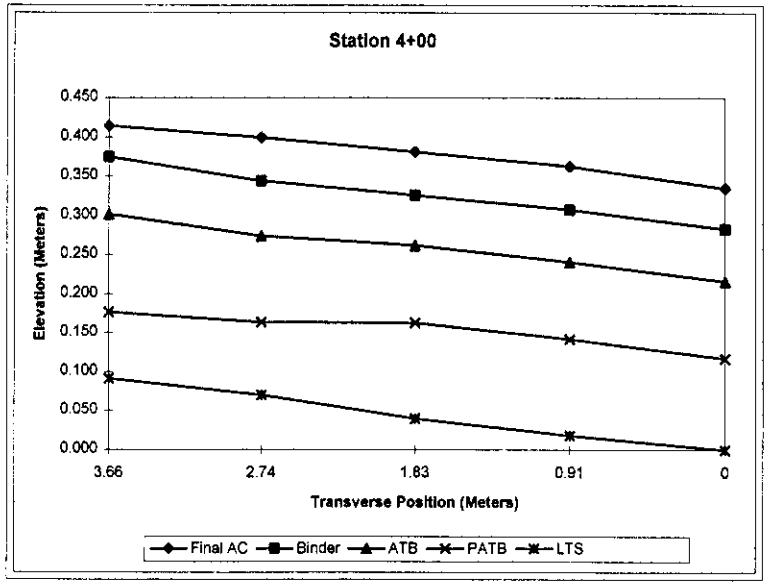


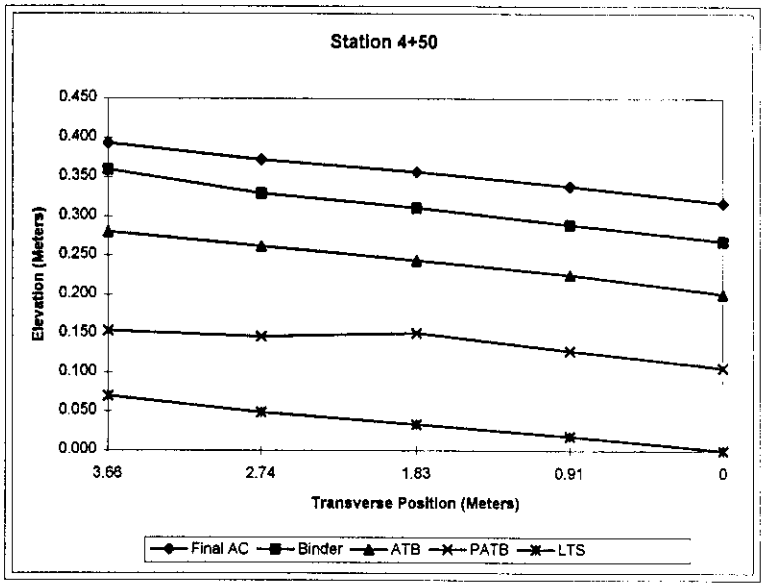


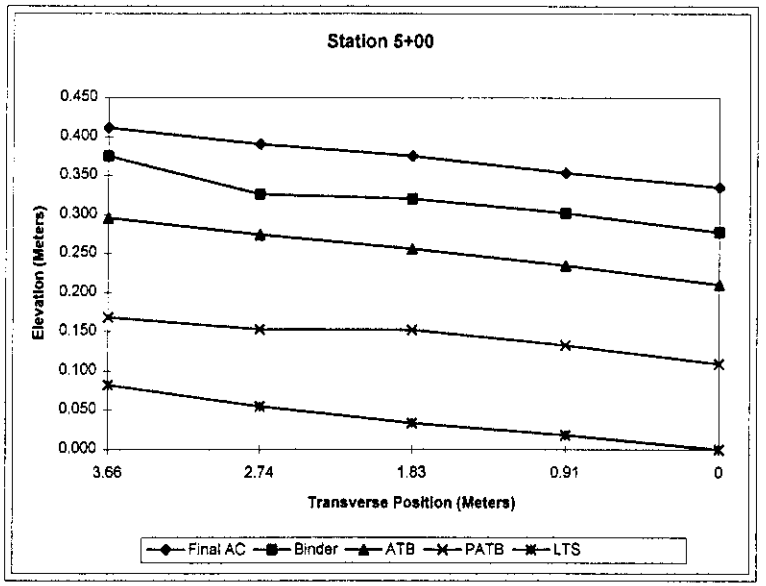




Oklahoma SPS-1 (400122)







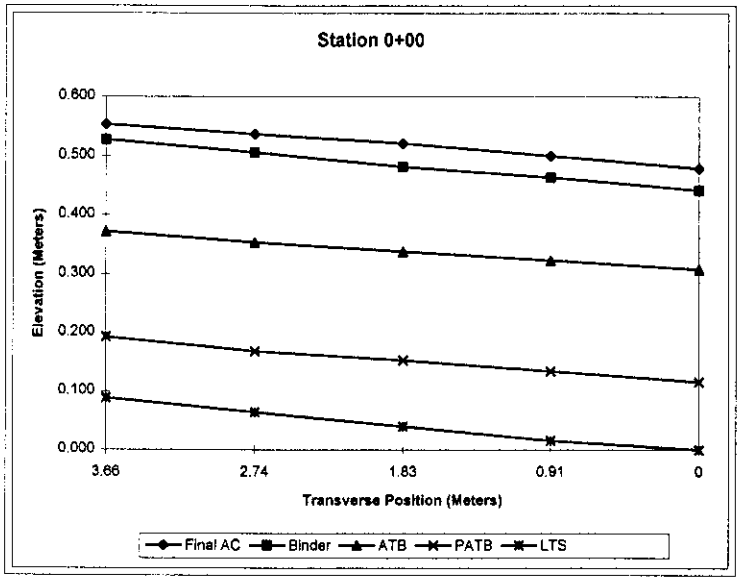
Oklahoma SPS-1 (400123)

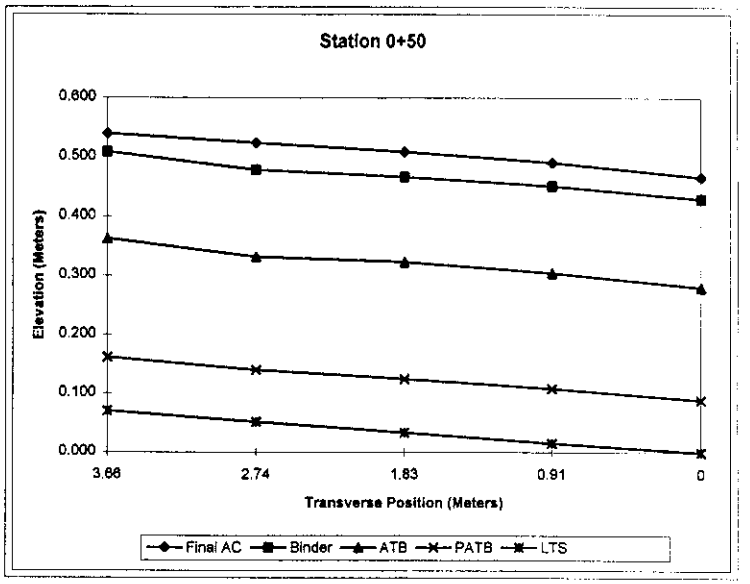
Transverse Offset	# LAYERS	ELEVATION 0 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters	ELEVATION 0.61 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters
0+00	Final AC	2.972	0.037	0.134	0.192	0.116	2.993	0.037	0.140	0.188	0.119
	Binder	2.935					2.957				
	ATB	2.801					2.816				
	PATB	2.609					2.627				
	LTS	2.493					2.509				
0+50	Final AC	2.789	0.037	0.148	0.191	0.088	2.813	0.040	0.146	0.187	0.093
	Binder	2.752					2.774				
	ATB	2.603					2.627				
	PATB	2.412					2.430				
	LTS	2.323					2.336				
1+00	Final AC	2.609	0.040	0.137	0.207	0.098	2.633	0.043	0.134	0.207	0.107
	Binder	2.569					2.591				
	ATB	2.432					2.457				
	PATB	2.225					2.250				
	LTS	2.128					2.143				
1+50	Final AC	2.457	0.043	0.131	0.198	0.104	2.480	0.038	0.137	0.196	0.100
	Binder	2.414					2.441				
	ATB	2.283					2.304				
	PATB	2.085					2.108				
	LTS	1.981					2.009				
2+00	Final AC	2.288	0.040	0.134	0.201	0.113	2.307	0.037	0.137	0.197	0.108
	Binder	2.248					2.271				
	ATB	2.112					2.134				
	PATB	1.911					1.936				
	LTS	1.798					1.829				
2+50	Final AC	2.102	0.038	0.137	0.201	0.110	2.124	0.040	0.134	0.204	0.107
	Binder	2.063					2.085				
	ATB	1.926					1.951				
	PATB	1.725					1.747				
	LTS	1.615					1.640				
3+00	Final AC	1.911	0.052	0.119	0.213	0.091	1.934	0.047	0.125	0.212	0.096
	Binder	1.859					1.887				
	ATB	1.740					1.762				
	PATB	1.527					1.550				
	LTS	1.436					1.454				
3+50	Final AC	1.740	0.043	0.131	0.212	0.086	1.763	0.041	0.131	0.215	0.092
	Binder	1.698					1.722				
	ATB	1.567					1.591				
	PATB	1.354					1.376				
	LTS	1.259					1.283				
4+00	Final AC	1.573	0.049	0.146	0.222	0.083	1.591	0.040	0.155	0.216	0.088
	Binder	1.524					1.551				
	ATB	1.378					1.398				
	PATB	1.156					1.180				
	LTS	1.073					1.081				
4+50	Final AC	1.393	0.043	0.149	0.216	0.085	1.414	0.040	0.146	0.222	0.077
	Binder	1.350					1.375				
	ATB	1.201					1.228				
	PATB	0.985					1.007				
	LTS	0.899					0.930				
5+00	Final AC	1.209	0.041	0.137	0.227	0.090	1.231	0.037	0.146	0.220	0.091
	Binder	1.167					1.195				
	ATB	1.030					1.049				
	PATB	0.803					0.829				
	LTS	0.713					0.738				
	AVG		0.042	0.137	0.208	0.098		0.040	0.140	0.208	0.097
	MAX		0.052	0.149	0.227	0.116		0.047	0.155	0.222	0.119
	MIN		0.037	0.119	0.191	0.083		0.037	0.125	0.189	0.077
	STD		0.005	0.009	0.012	0.011		0.003	0.009	0.011	0.011

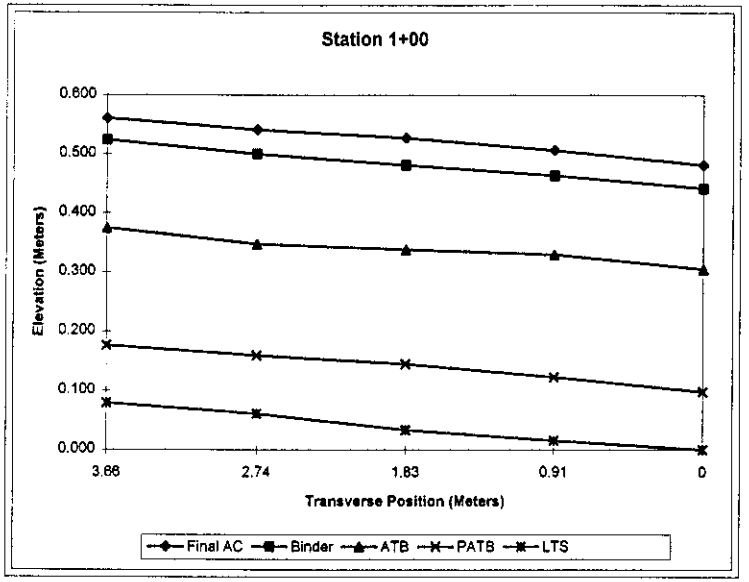
Transverse Offset	# LAYERS	ELEVATION 1.83 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters	ELEVATION 2.74 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters	ELEVATION 3.66 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters
0+00	Final AC	3.014	0.040	0.143	0.188	0.113	3.030	0.030	0.152	0.186	0.104	3.046	0.026	0.155	0.180	0.104
	Binder	2.975					2.999					3.021				
	ATB	2.832					2.847					2.865				
	PATB	2.646					2.661					2.686				
	LTS	2.533					2.557					2.582				
0+50	Final AC	2.832	0.043	0.143	0.196	0.091	2.847	0.046	0.146	0.192	0.088	2.862	0.030	0.146	0.201	0.091
	Binder	2.789					2.801					2.832				
	ATB	2.646					2.655					2.685				
	PATB	2.447					2.463					2.484				
	LTS	2.356					2.374					2.393				
1+00	Final AC	2.655	0.046	0.143	0.194	0.111	2.669	0.041	0.152	0.188	0.098	2.688	0.037	0.149	0.198	0.097
	Binder	2.609					2.627					2.652				
	ATB	2.466					2.475					2.502				
	PATB	2.272					2.287					2.304				
	LTS	2.161					2.188					2.207				
1+50	Final AC	2.499	0.040	0.134	0.194	0.108	2.515	0.037	0.137	0.194	0.105	2.534	0.029	0.143	0.204	0.104
	Binder	2.460					2.478					2.505				
	ATB	2.326					2.341					2.362				
	PATB	2.132					2.147					2.158				
	LTS	2.024					2.042					2.054				
2+00	Final AC	2.332	0.043	0.140	0.194	0.105	2.347	0.040	0.137	0.200	0.102	2.364	0.032	0.143	0.203	0.105
	Binder	2.289					2.307					2.332				
	ATB	2.149					2.170					2.188				
	PATB	1.955					1.971					1.986				
	LTS	1.850					1.868					1.881				
2+50	Final AC	2.144	0.041	0.137	0.198	0.104	2.161	0.043	0.143	0.190	0.103	2.176	0.030	0.143	0.201	0.107
	Binder	2.103					2.118					2.146				
	ATB	1.966					1.975					2.003				
	PATB	1.768					1.786					1.801				
	LTS	1.664					1.682					1.695				
3+00	Final AC	1.957	0.049	0.128	0.206	0.094	1.971	0.044	0.137	0.201	0.094	1.987	0.030	0.140	0.213	0.101
	Binder	1.908					1.926					1.957				
	ATB	1.780					1.789					1.817				
	PATB	1.572					1.588					1.604				
	LTS	1.476					1.494					1.503				
3+50	Final AC	1.785	0.044	0.137	0.204	0.094	1.798	0.037	0.140	0.205	0.094	1.817	0.034	0.137	0.214	0.094
	Binder	1.740					1.762					1.783				
	ATB	1.603					1.622					1.646				
	PATB	1.389					1.417					1.432				
	LTS	1.305					1.323					1.338				
4+00	Final AC	1.609	0.040	0.155	0.213	0.091	1.628	0.037	0.152	0.219	0.086	1.643	0.034	0.152	0.226	0.087
	Binder	1.570					1.591					1.609				
	ATB	1.414					1.436					1.457				
	PATB	1.201					1.219					1.230				
	LTS	1.109					1.131					1.143				
4+50	Final AC	1.433	0.037	0.146	0.221	0.081	1.457	0.049	0.143	0.219	0.083	1.468	0.038	0.143	0.219	0.089
	Binder	1.396					1.408					1.430				
	ATB	1.250					1.265					1.286				
	PATB	1.029					1.046					1.067				
	LTS	0.948					0.963					0.978				
5+00	Final AC	1.250	0.040	0.143	0.219	0.088	1.268	0.040	0.149	0.220	0.091	1.285	0.029	0.149	0.228	0.094
	Binder	1.210					1.228					1.256				
	ATB	1.067					1.079					1.106				
	PATB	0.847					0.859					0.878				
	LTS	0.750					0.768					0.783				
	AVG		0.042	0.141	0.203	0.089		0.040	0.145	0.201	0.095		0.032	0.146	0.209	0.097
	MAX		0.049	0.155	0.221	0.113		0.049	0.152	0.220	0.105		0.038	0.155	0.229	0.107
	MIN		0.037	0.128	0.186	0.081		0.030	0.137	0.186	0.083		0.026	0.137	0.180	0.087
	STD		0.003	0.007	0.011	0.010		0.005	0.006	0.013	0.007		0.004	0.005	0.014	0.006

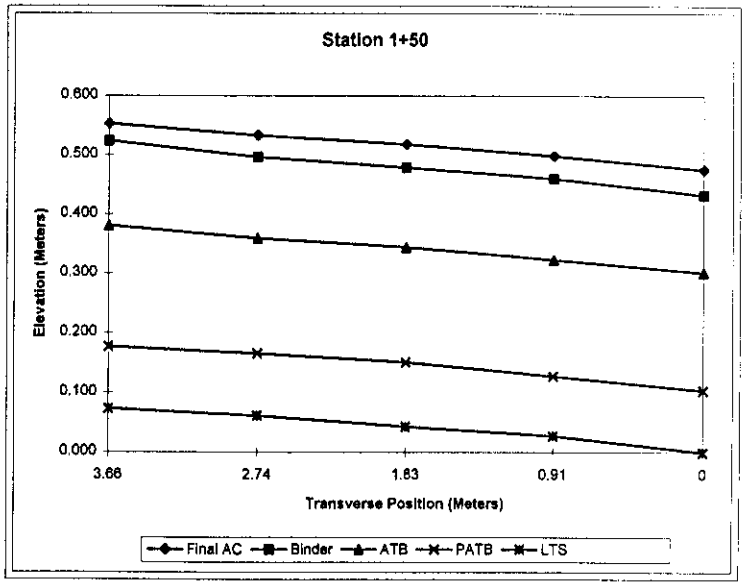
	Final AC	Binder	ATB	PATB
SECTION AVG	0.039	0.142	0.205	0.096
SECTION MAX	0.052	0.155	0.229	0.119
SECTION MIN	0.026	0.119	0.180	0.077
SECTION STD	0.005	0.006	0.012	0.009

Oklahoma SPS-1 (400123)

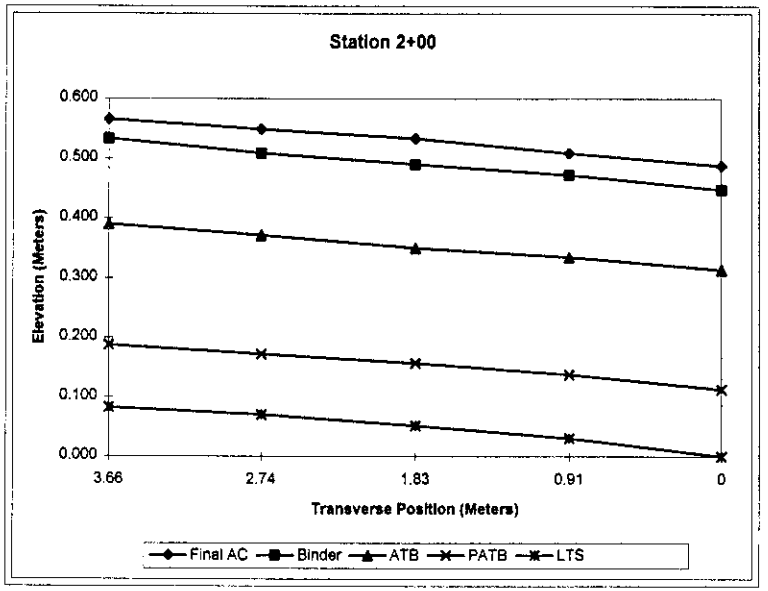


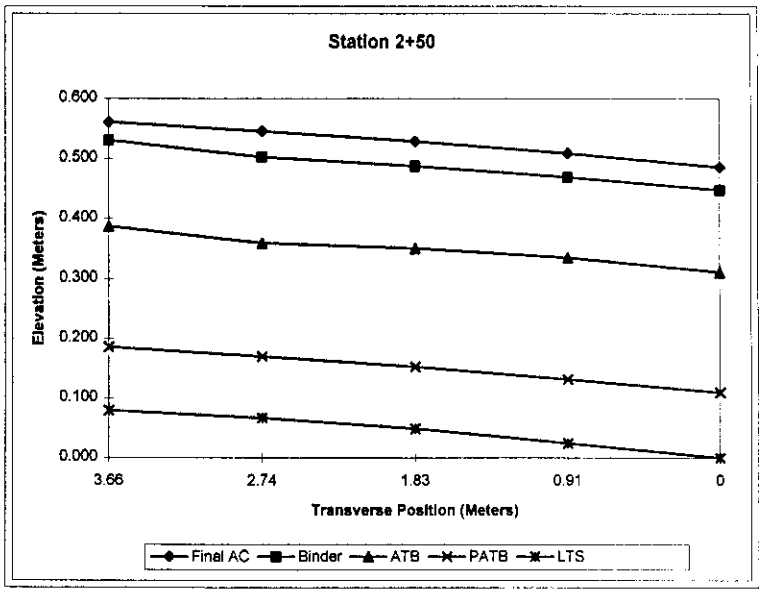


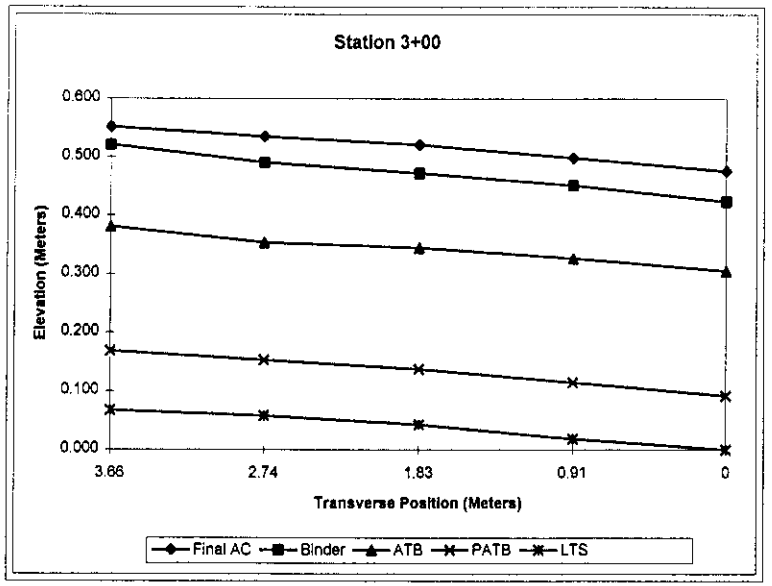


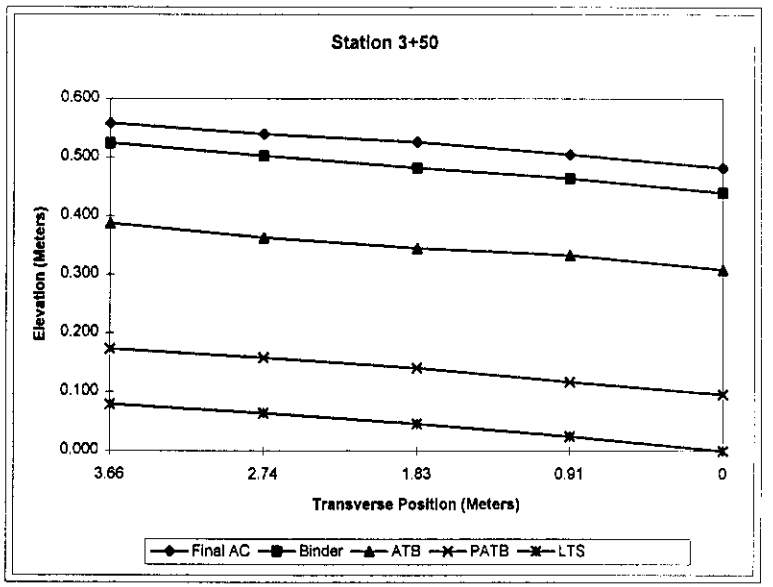


Oklahoma SPS-1 (400123)

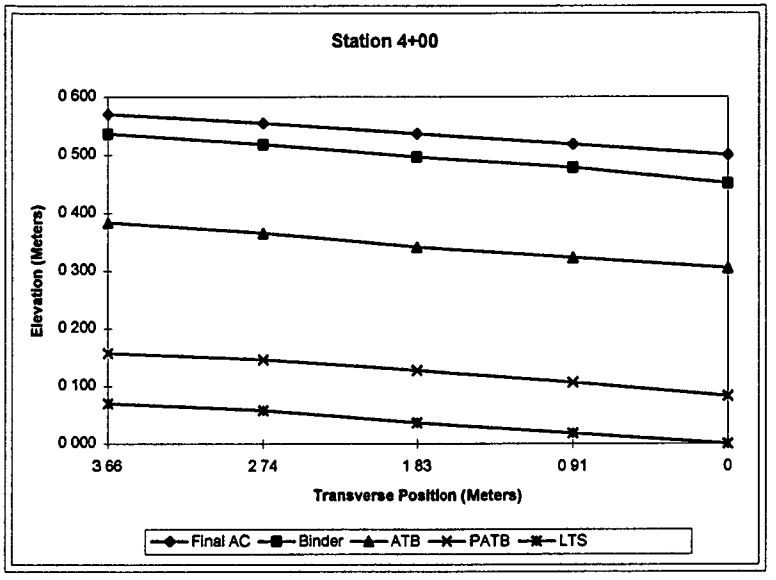


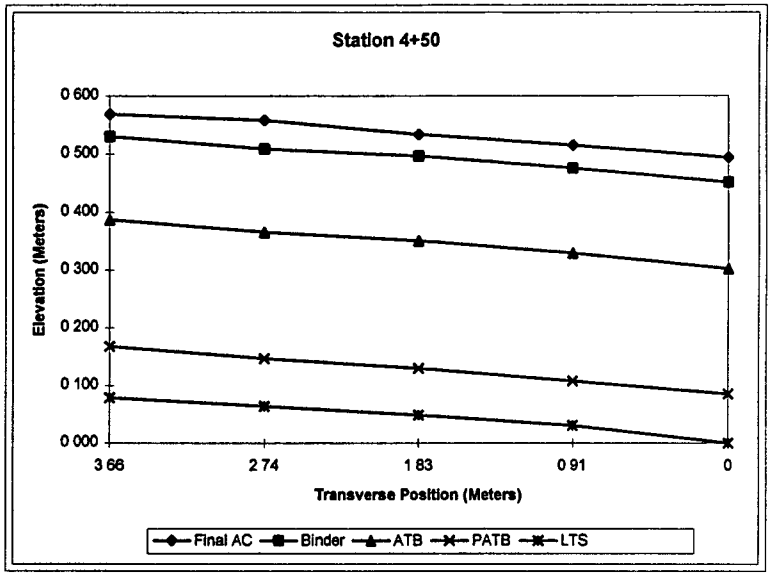


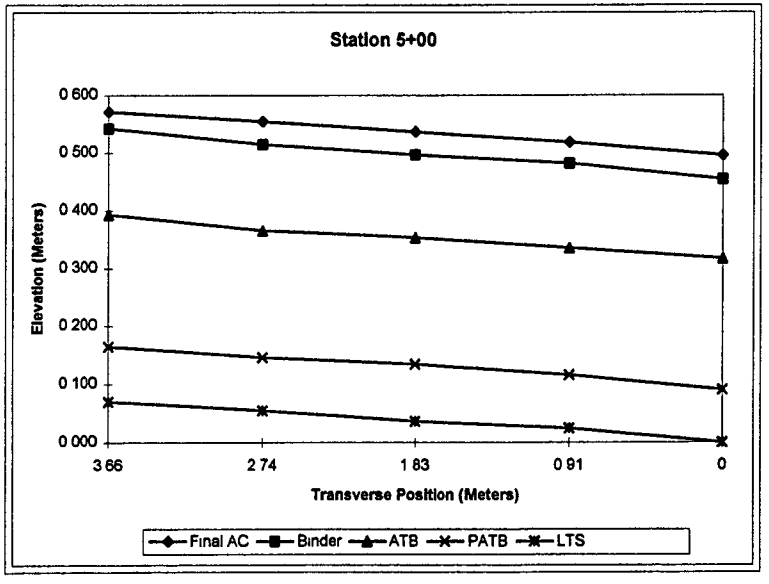




Oklahoma SPS-1 (400123)







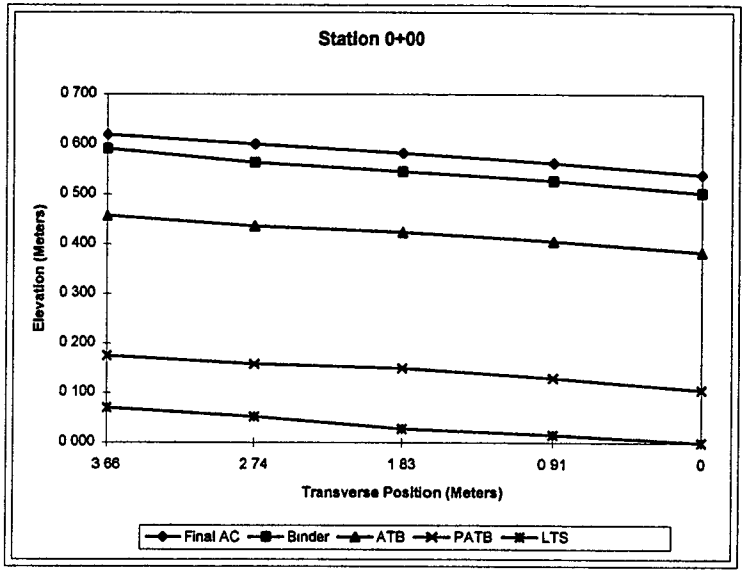
Oklahoma SPS-1 (400124)

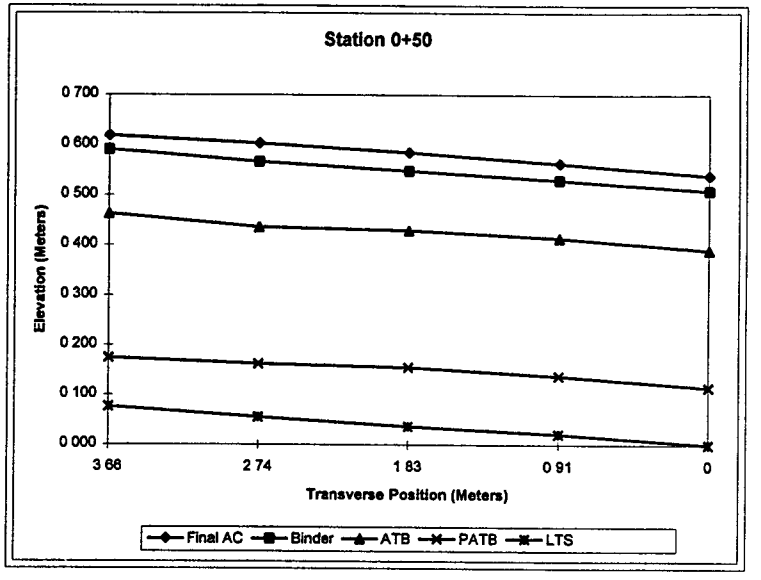
Transverse Offset	LAYERS	ELEVATION 0 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters	ELEVATION 0.91 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters
0+00	Final AC	2.871	0.037	0.119	0.278	0.106	2.894	0.035	0.122	0.276	0.114
	Binder	2.835					2.859				
	ATB	2.716					2.737				
	PATB	2.438					2.461				
	LTS	2.332					2.347				
0+50	Final AC	2.725	0.030	0.119	0.275	0.115	2.749	0.034	0.116	0.277	0.116
	Binder	2.694					2.716				
	ATB	2.576					2.600				
	PATB	2.300					2.323				
	LTS	2.185					2.207				
1+00	Final AC	2.594	0.040	0.122	0.268	0.122	2.618	0.040	0.125	0.276	0.115
	Binder	2.554					2.579				
	ATB	2.432					2.454				
	PATB	2.164					2.178				
	LTS	2.042					2.063				
1+50	Final AC	2.478	0.043	0.137	0.265	0.110	2.501	0.044	0.137	0.268	0.113
	Binder	2.435					2.457				
	ATB	2.298					2.320				
	PATB	2.033					2.051				
	LTS	1.923					1.939				
2+00	Final AC	2.385	0.050	0.125	0.260	0.104	2.408	0.052	0.125	0.280	0.108
	Binder	2.335					2.356				
	ATB	2.210					2.231				
	PATB	1.930					1.952				
	LTS	1.826					1.844				
2+50	Final AC	2.292	0.046	0.134	0.272	0.119	2.316	0.046	0.137	0.267	0.129
	Binder	2.246					2.271				
	ATB	2.112					2.134				
	PATB	1.841					1.867				
	LTS	1.722					1.737				
3+00	Final AC	2.213	0.046	0.137	0.272	0.118	2.236	0.050	0.131	0.272	0.127
	Binder	2.167					2.185				
	ATB	2.030					2.054				
	PATB	1.758					1.782				
	LTS	1.640					1.655				
3+50	Final AC	2.146	0.052	0.137	0.274	0.122	2.167	0.049	0.140	0.276	0.123
	Binder	2.094					2.118				
	ATB	1.957					1.978				
	PATB	1.682					1.702				
	LTS	1.561					1.579				
4+00	Final AC	2.092	0.053	0.146	0.267	0.108	2.114	0.056	0.140	0.265	0.113
	Binder	2.039					2.057				
	ATB	1.893					1.917				
	PATB	1.626					1.652				
	LTS	1.518					1.539				
4+50	Final AC	2.063	0.061	0.140	0.276	0.120	2.088	0.061	0.146	0.271	0.116
	Binder	2.003					2.027				
	ATB	1.862					1.881				
	PATB	1.586					1.610				
	LTS	1.466					1.494				
5+00	Final AC	2.042	0.058	0.140	0.280	0.116	2.070	0.067	0.140	0.277	0.123
	Binder	1.984					2.003				
	ATB	1.844					1.862				
	PATB	1.564					1.586				
	LTS	1.448					1.463				
	AVG		0.047	0.133	0.273	0.114		0.048	0.134	0.272	0.119
	MAX		0.061	0.146	0.280	0.122		0.067	0.146	0.277	0.129
	MIN		0.030	0.119	0.265	0.104		0.034	0.116	0.265	0.113
	STD		0.009	0.009	0.005	0.006		0.010	0.009	0.004	0.006

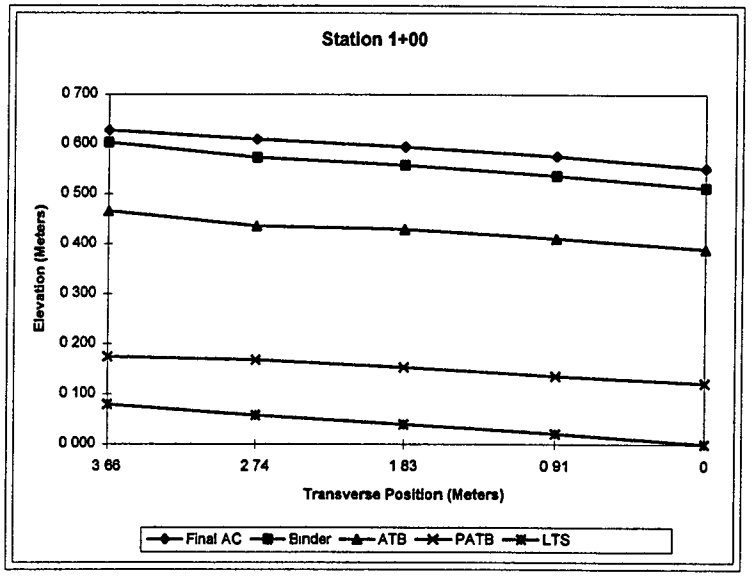
Transverse Offset	LAYERS	ELEVATION 1.83 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters	ELEVATION 2.74 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters	ELEVATION 3.66 Meters	Final AC THICKNESS Meters	Binder THICKNESS Meters	ATB THICKNESS Meters	PATB THICKNESS Meters
0+00	Final AC	2.914	0.037	0.122	0.274	0.123	2.932	0.037	0.128	0.276	0.106	2.950	0.027	0.134	0.283	0.105
	Binder	2.877					2.896					2.923				
	ATB	2.755					2.768					2.789				
	PATB	2.482					2.490					2.506				
	LTS	2.359					2.384					2.402				
0+50	Final AC	2.771	0.037	0.119	0.275	0.119	2.789	0.037	0.131	0.274	0.107	2.804	0.027	0.128	0.289	0.098
	Binder	2.734					2.752					2.777				
	ATB	2.615					2.621					2.649				
	PATB	2.341					2.347					2.360				
	LTS	2.222					2.240					2.262				
1+00	Final AC	2.637	0.037	0.128	0.277	0.113	2.652	0.037	0.137	0.268	0.110	2.670	0.024	0.137	0.292	0.095
	Binder	2.600					2.615					2.646				
	ATB	2.472					2.478					2.509				
	PATB	2.195					2.210					2.217				
	LTS	2.082					2.100					2.121				
1+50	Final AC	2.521	0.046	0.134	0.274	0.107	2.538	0.043	0.143	0.276	0.102	2.554	0.034	0.143	0.296	0.085
	Binder	2.475					2.493					2.521				
	ATB	2.341					2.350					2.377				
	PATB	2.067					2.074					2.082				
	LTS	1.960					1.972					1.996				
2+00	Final AC	2.426	0.049	0.128	0.280	0.110	2.444	0.052	0.137	0.278	0.097	2.460	0.027	0.149	0.293	0.094
	Binder	2.377					2.393					2.432				
	ATB	2.249					2.256					2.283				
	PATB	1.969					1.978					1.990				
	LTS	1.859					1.881					1.896				
2+50	Final AC	2.335	0.049	0.131	0.274	0.122	2.353	0.049	0.140	0.279	0.111	2.370	0.032	0.149	0.293	0.106
	Binder	2.286					2.304					2.338				
	ATB	2.155					2.164					2.188				
	PATB	1.881					1.885					1.896				
	LTS	1.759					1.774					1.789				
3+00	Final AC	2.254	0.044	0.140	0.274	0.119	2.274	0.046	0.149	0.277	0.107	2.292	0.030	0.152	0.294	0.099
	Binder	2.210					2.228					2.262				
	ATB	2.070					2.079					2.109				
	PATB	1.795					1.801					1.815				
	LTS	1.676					1.695					1.716				
3+50	Final AC	2.187	0.050	0.146	0.271	0.122	2.204	0.049	0.155	0.271	0.110	2.222	0.037	0.158	0.286	0.107
	Binder	2.137					2.155					2.185				
	ATB	1.990					1.999					2.027				
	PATB	1.719					1.729					1.741				
	LTS	1.597					1.616					1.634				
4+00	Final AC	2.135	0.056	0.146	0.268	0.107	2.150	0.050	0.155	0.276	0.093	2.167	0.043	0.149	0.297	0.084
	Binder	2.079					2.100					2.124				
	ATB	1.932					1.945					1.975				
	PATB	1.664					1.669					1.678				
	LTS	1.558					1.576					1.594				
4+50	Final AC	2.108	0.066	0.143	0.270	0.117	2.123	0.059	0.155	0.274	0.101	2.140	0.040	0.162	0.294	0.096
	Binder	2.042					2.063					2.100				
	ATB	1.899					1.908					1.939				
	PATB	1.629					1.634					1.645				
	LTS	1.512					1.533					1.548				
5+00	Final AC	2.089	0.069	0.143	0.276	0.120	2.106	0.067	0.155	0.277	0.104	2.124	0.049	0.155	0.303	0.102
	Binder	2.021					2.039					2.076				
	ATB	1.878					1.884					1.920				
	PATB	1.602					1.607					1.617				
	LTS	1.481					1.503					1.515				
	AVG		0.049	0.135	0.273	0.117		0.047	0.145	0.276	0.105		0.034	0.147	0.293	0.098
	MAX		0.069	0.146	0.277	0.123		0.067	0.155	0.279	0.111		0.049	0.162	0.303	0.107
	MIN		0.037	0.119	0.268	0.107		0.037	0.128	0.268	0.093		0.024	0.128	0.283	0.084
	STD		0.011	0.010	0.003	0.006		0.010	0.010	0.003	0.005		0.007	0.010	0.006	0.008

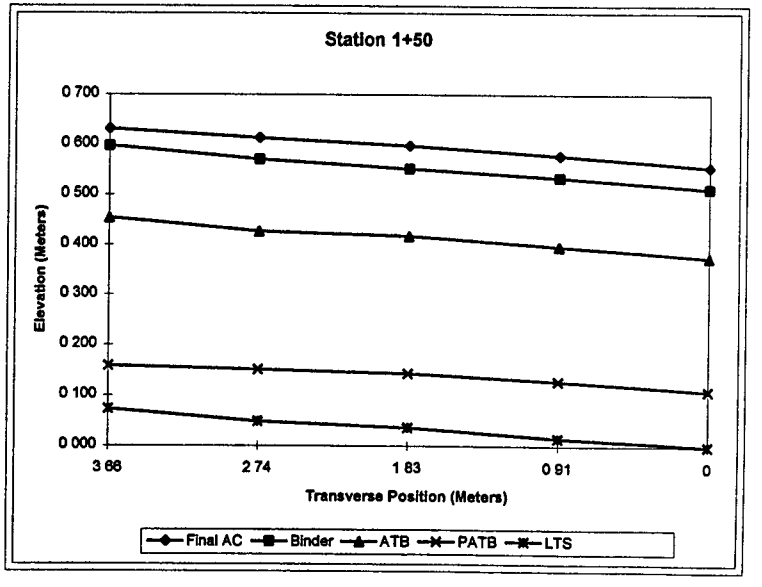
	Final AC	Binder	ATB	PATB
SECTION AVG	0.045	0.138	0.276	0.110
SECTION MAX	0.069	0.162	0.303	0.129
SECTION MIN	0.024	0.116	0.265	0.084
SECTION STD	0.011	0.011	0.009	0.010

Oklahoma SPS-1 (400124)

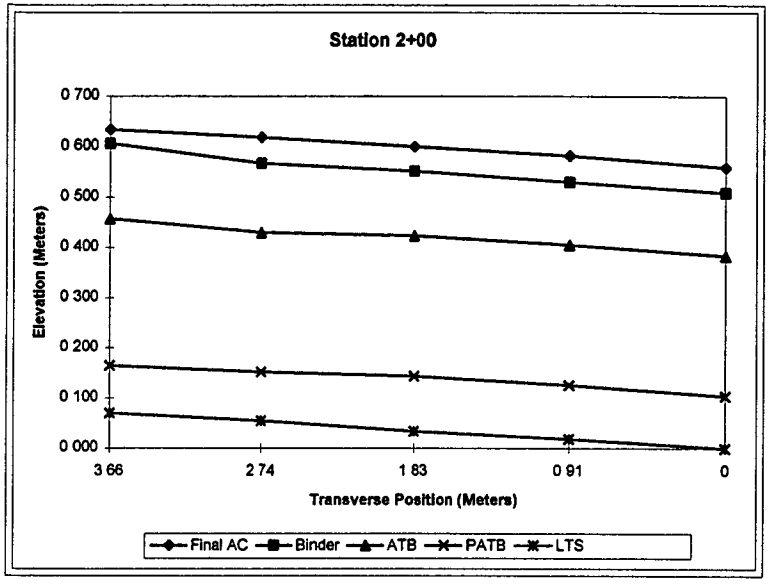


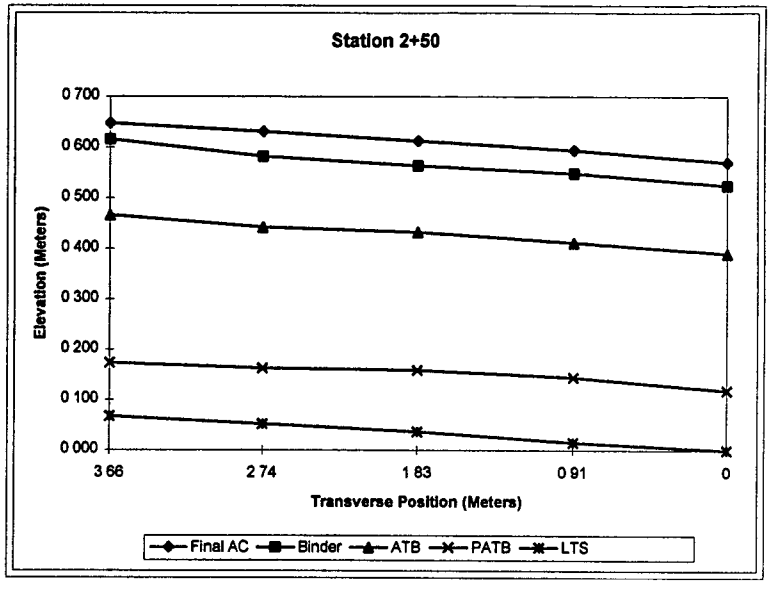


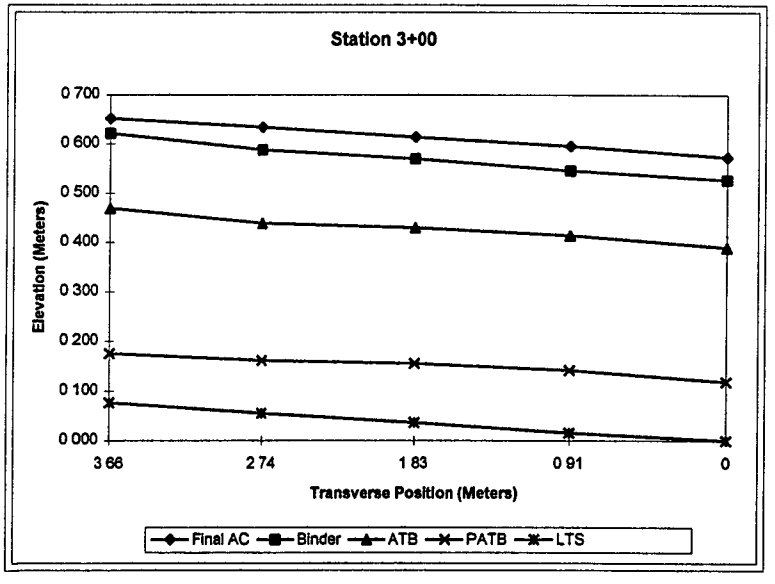


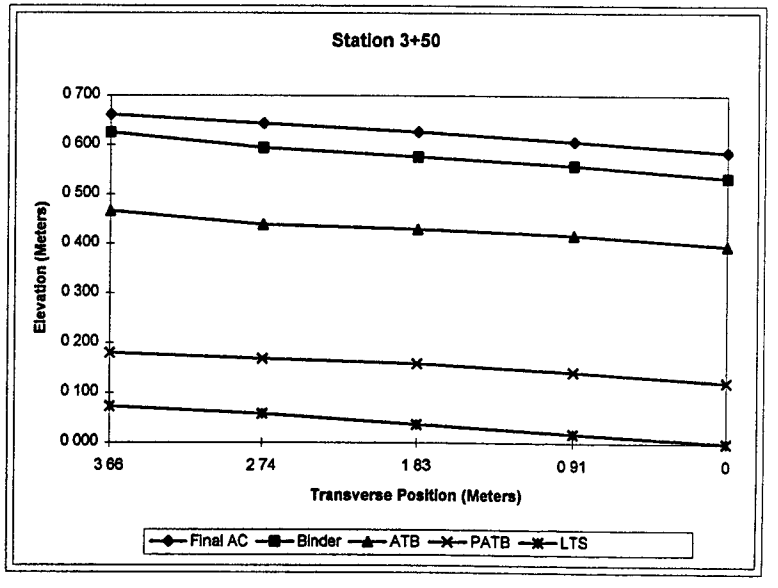


Oklahoma SPS-1 (400124)

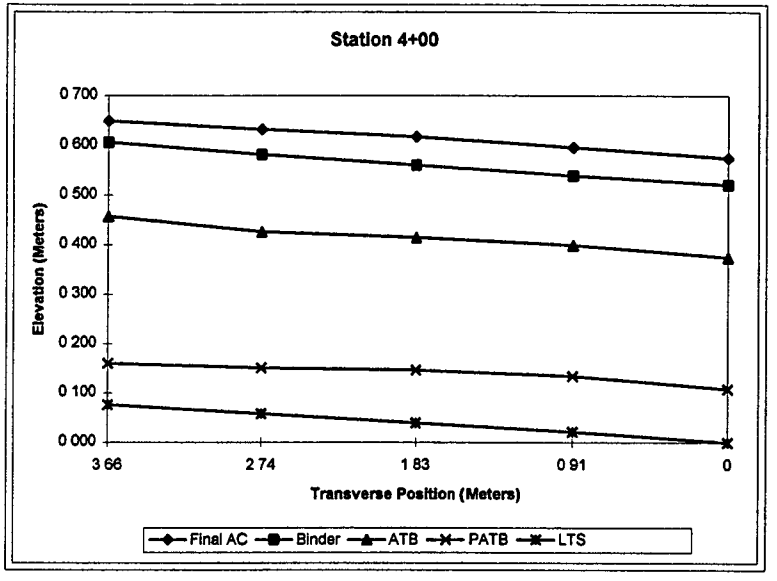


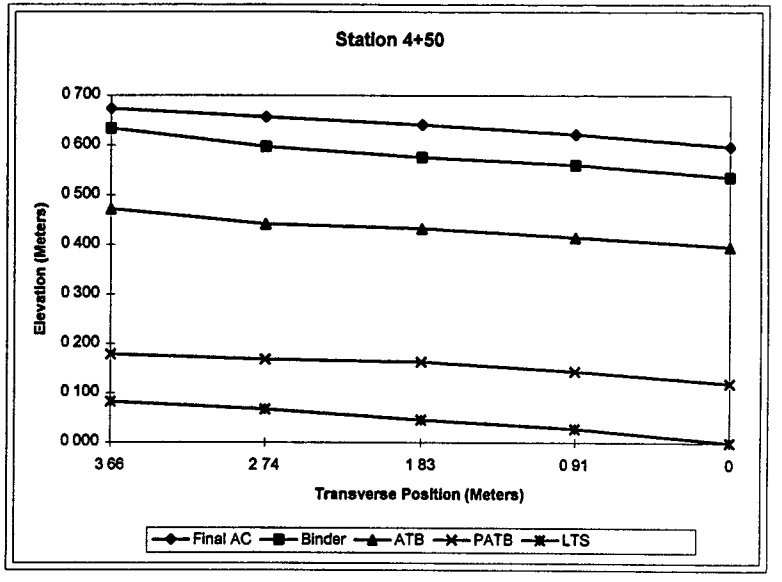


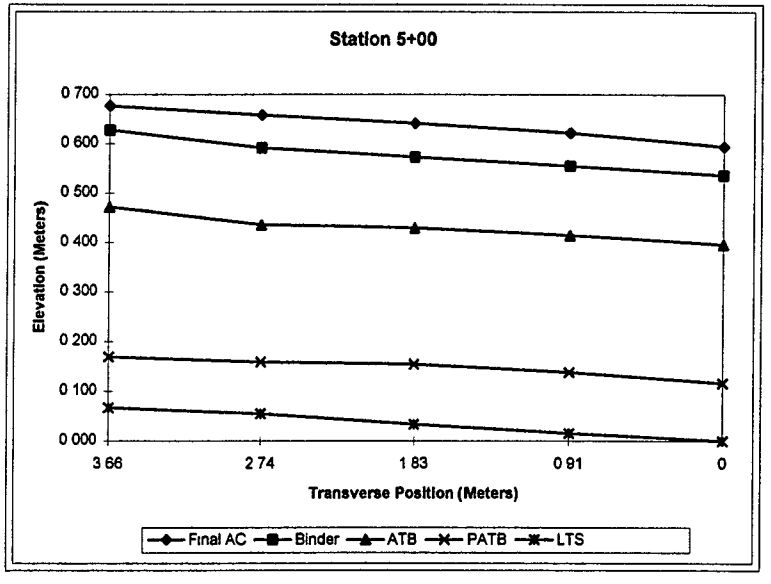




Oklahoma SPS-1 (400124)







APPENDIX C

MATERIAL SAMPLING AND FIELD TESTING PLAN

Brent Rauhut Engineering Inc.

2 August 1996

Mr. Glenn Adams
Project Manager
Law Engineering & Environmental Services, Inc.
396 Plasters Avenue, N.E.
Atlanta, Georgia 30324

Subject: Materials Sampling and Testing Plan for SPS-1 and SPS-5 Projects (4001 and 4005) in Oklahoma

Dear Glenn,

Enclosed are the Materials Sampling and Testing Plans for the SPS-1 and SPS-5 projects in Cache, Oklahoma. We plan to begin collection of samples in the very near future. We will coordinate with Ginger McGovern, the Oklahoma DOT Coordinator, to minimize the number of shipments made, so that we can hopefully improve the accountability of the samples collected. We will also send Ginger another copy of the schematics for the assembly of shipping crates (by copy of this letter). I believe Ginger's office was responsible for the preparation of these crates for shipment of the samples from the maintenance effectiveness test sections and should therefore be familiar with these requirements.

Please feel free to contact me should you have any questions regarding these plans, or the projects in general. Thank you for your assistance.

Sincerely,

Jerry F. Daleiden, P.E.
Project Engineer, SRCO

JFD:dmj

Enclosures: As stated.

c.w/Enc: Ginger McGovern, OKDOT
John Miller, PCS/LAW

c.w/o Enc: Aramis Lopez, FHWA/LTPP-PPD
Rod Soule, MRL/Nichols Cons.
Amy Simpson, SRCO
Morris Reinhardt, RE/SRCO
Mark Gardner, SRCO

8240 Mopac, Suite 220 • Austin, Texas 78759 • (512) 346-0870 • FAX (512) 346-8750

Brent Rauhut Engineering Inc.

12 July 1996

Ms. Ginger McGovern
Oklahoma Department of Transportation
200 N.E. 21st Street, Room 2A2
Oklahoma City, Oklahoma 73105-3204

Subject: Revised Materials Sampling and Testing Plans

Dear Ginger,

Enclosed are the revised Materials Sampling and Testing Plans incorporating the revisions and standard Oklahoma DOT sections per our discussions earlier this week.

Please let me know if we can be of any further assistance.

Sincerely,

Jerry F. Daleiden, P.E.
Project Engineer, SRCO

JFD:dmj

Enclosures: As stated.

c.w/Enc: Rosemarie Case, OKDOT
Tim Martin, SRCO

8240 Mopac, Suite 220 • Austin, Texas 78759 • (512) 346-0870 • FAX (512) 346-8750

MATERIAL SAMPLING
AND
TESTING PLAN

OKLAHOMA SPS-1 PROJECT 400100
US-62 EBL, COMANCHE COUNTY, OKLAHOMA

PREPARED BY:

BRENT RAUHUT ENGINEERING INC.
FHWA/LTPP SOUTHERN REGION COORDINATION OFFICE
8240 MOPAC, SUITE 220
AUSTIN, TEXAS 78759

REVISED JULY 1996

MATERIAL SAMPLING AND TESTING PLAN
OKLAHOMA SPS-1 PROJECT (400100), US-62 EBL
COMANCHE COUNTY, OKLAHOMA

INTRODUCTION

As part of their participation in the FHWA/LTPP studies, the State of Oklahoma has elected to construct an SPS-1 project to study the structural factors for flexible pavements. This project will consist of multiple test sections with similar details and materials along US-62, in the eastbound lane, in Comanche County, Oklahoma. It is the intent of this document to provide a complete plan for the material sampling, testing, and laboratory material testing that will occur as a part of this project.

This document has been prepared in accordance with guidelines provided by the Federal Highway Administration entitled "Specific Pavement Studies Material Sampling and Testing Requirements for Experiment SPS-1, Strategic Study of Structural Factors for Flexible Pavements, January 1994". Recognizing the apparent variability in the construction of roadway projects, the goal of this effort is to develop a sampling and testing plan for the project materials that will be consistent with other projects in this experiment, and therefore make the information obtained suitable for analysis.

The objective of the SPS-1 study is to more precisely determine the relative influence of strategic factors on the performance of flexible pavements. The factors addressed in this study include drainage, base type and thickness, and asphalt surface thickness. Oklahoma's involvement in the study will provide critical information in the dry, no freeze environmental zone, on a fine-grained subgrade soil. The data produced by this experiment will be used to evaluate existing design methods and performance equations. The interaction of the factors previously discussed will be determined in combination with the effect of environmental region and soil type. The effects of these factors will be studied under realistic performance conditions with significant materials and construction control. Herein lies the need for a sampling and testing plan, provided in the following pages.

This sampling and testing plan has been developed by Brent Rauhut Engineering, Inc. the Southern Region Coordination Office under contract to the Federal Highway Administration. If, during the construction activities, any questions arise regarding the sampling and/or testing to be conducted, one should first coordinate these questions with the Oklahoma Department of Transportation, who may refer them to the Southern Region Coordination Office.

This document has been prepared in three distinct parts, each covering a particular area of this rather formidable exercise. The three sections are:

A. General Layout Information

B. Materials Sampling and Testing

C. Laboratory Material Testing

The General Layout section provides tables and figures of the layout showing the twelve test sections along the roadway and the layer structure of each test section.

The Material Sampling and Testing section defines in detail all of the material samples to be obtained, testing to be performed in the field, and provides an itemized list showing where each sample is to be shipped for laboratory testing.

Finally, the Laboratory Material Testing section outlines the laboratory material test program to be conducted and provides tracking charts showing the testing to be performed on each sample of each material in each laboratory.

SECTION A

GENERAL LAYOUT INFORMATION

SECTION A

GENERAL LAYOUT INFORMATION

This section of the plan provides a description of the SPS-1 project in terms of the location of the test sections along the roadway. Table A-1 lists the test sections in order of increasing station, providing an indication of the cross-section of each test section. Table A-2 tracks the test sections from the beginning of the first section at Station 975 to the end of the last section at Station 832. This table indicates transition areas between sections and the variation of pavement layer materials within these transitions.

Finally, Figure A-1 depicts the layout of the test sections along the roadway and shows the variation of material type and layer thickness.

The referenced project stationing was provided by the Oklahoma DOT in the form of preliminary project plans. If there are significant changes in alignment or stationing, this plan should be reviewed closely to determine if revisions are warranted.

TABLE A-1. TEST SECTION LAYOUT

Section (WCell ID)	Cross Section	Begin Station	End Station
400160	8″ AC Surface	986	979
	4″ PATB		
	6″ DGAB		
400114 (W2)	7″ AC Surface	975	968
	12″ DGAB		
400118 (W6)	4″ AC Surface	948	941
	8″ ATB		
	4″ DGAB		
400116 (W4)	4″ AC Surface	940	933
	12″ ATB		
400115 (W3)	7″ AC Surface	932	925
	8″ ATB		
400117 (W5)	7″ AC Surface	923	916
	4″ ATB		
	4″ DGAB		
400113 (W1)	4″ AC Surface	912	905
	8″ DGAB		

TABLE A-1. TEST SECTION LAYOUT (Continued)

Section (WCell ID)	Cross Section	Begin Station	End Station
400122 (W10)	4″ AC Surface	904	897
	4″ ATB		
	4″ PATB		
400119 (W7)	7″ AC Surface	882	875
	4″ PATB		
	4″ DGAB		
400120 (W8)	4″ AC Surface	871	864
	4″ PATB		
	8″ DGAB		
400121 (W9)	4″ AC Surface	858	851
	4″ PATB		
	12″ DGAB		
400123 (W11)	7″ AC Surface	848	841
	8″ ATB		
	4″ PATB		
400124 (W12)	7″ AC Surface	839	832
	12″ ATB		
	4″ PATB		

TABLE A.2. ORDERING OF SECTIONS ALONG CENTER LINE STATIONING

Begin Sta.	End Sta.	Section ID	Thickness (In.)			
			AC Surface*	ATB	PATB	DGAB
986	979	400160	8	0	4	6
979	975	Transition	8-7	0	4-0	6-12
975	968	400114	7	0	0	12
968	948	Transition	7-4	0-8	0	12-4
948	941	400118	4	8	0	4
941	940	Transition	4	8-12	0	4-0
940	933	400116	4	12	0	0
933	932	Transition	4-7	12-8	0	0
932	925	400115	7	8	0	0
925	923	Transition	7	8-4	0	0-4
923	916	400117	7	4	0	4
916	912	Transition	7-4	4-0	0	4-8
912	905	400113	4	0	0	8
905	904	Transition	4	0-4	0-4	8-0
904	897	400122	4	4	4	0
897	882	Transition	4-7	4-0	4	0-4
882	875	400119	7	0	4	4
875	871	Transition	7-4	0	4	4-8
871	864	400120	4	0	4	8
864	858	Transition	4	0	4	8-12
858	851	400121	4	0	4	12
851	848	Transition	4-7	0-8	4	12-0
848	841	400123	7	8	4	0
841	839	Transition	7	8-12	4	0
839	832	400124	7	12	4	0

* Combined Binder and Wearing Course Thickness

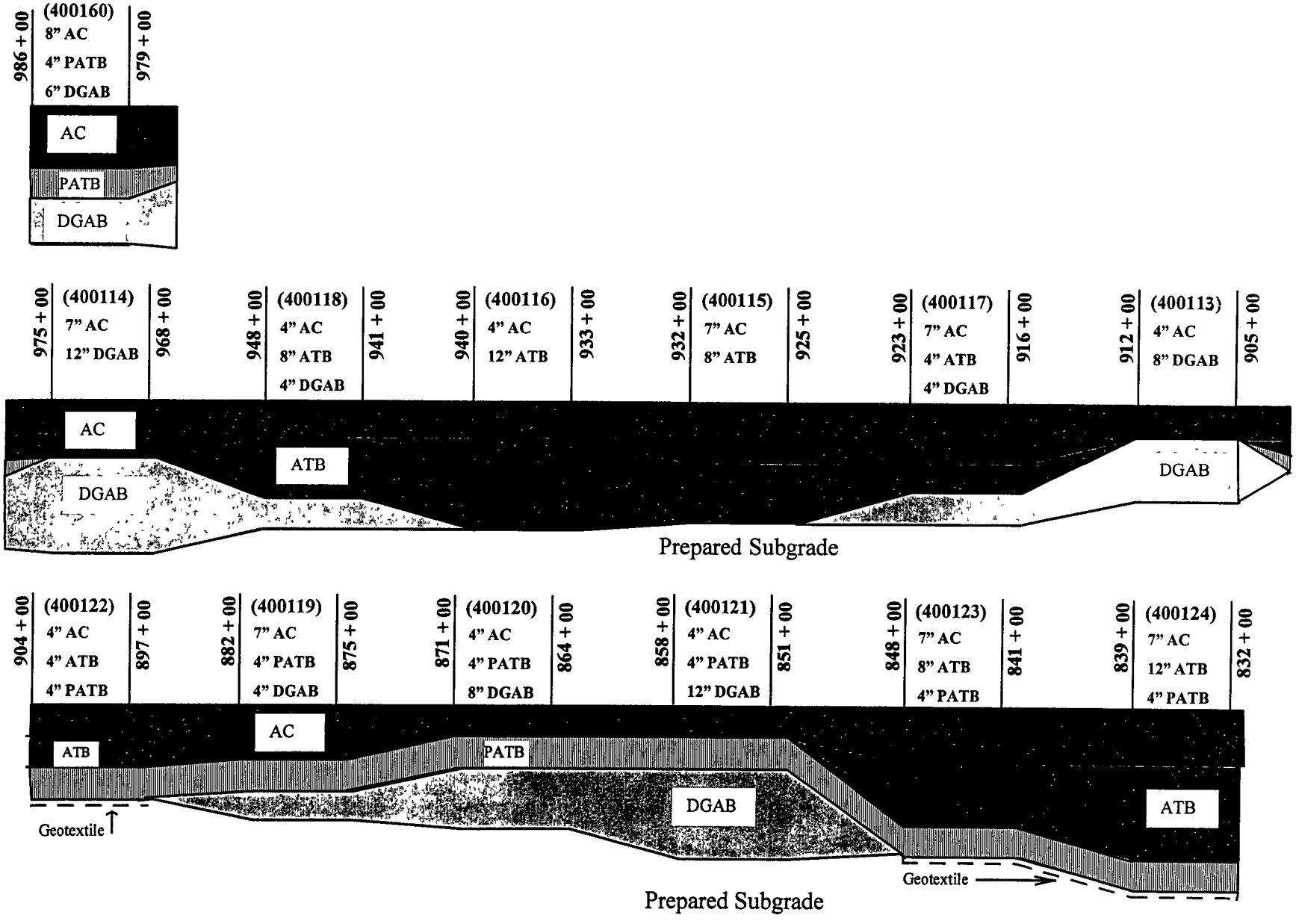


FIGURE A-1. LAYOUT OF TEST SECTIONS
OKLAHOMA SPS-1 (400100)

SECTION B

MATERIAL SAMPLING AND TESTING

SECTION B

MATERIAL SAMPLING AND TESTING

This section of the plan provides for the material sampling and testing activities that occur in the field. Tables B.1 and B.2 provide the scope of the material sampling and testing activities, respectively. Table B.3 describes special sampling needs for the Materials Reference Library and provides contact information to coordinate sample shipping arrangements.

Figures B.1 through B.18 show the locations and numbering scheme for the many samples and tests scheduled. Figures B.2 through B.5 show the sampling and testing to occur for each stage of the paving, while Figures B.6 through B.18 show all sampling and testing scheduled for each test section.

Finally, Tables B.4 and B.5 list samples to be shipped to the state laboratory (or their designee), and those samples to be shipped to the FHWA/LTPP testing contractor, respectively. Shipment of samples to the FHWA/LTPP testing contractor, LAW Engineering in Atlanta, Georgia, should be coordinated through the Southern Region Coordination Office.

TABLE B.1. SCOPE OF MATERIAL SAMPLING

Material And Sample Description	Nº. Of Samples	Sample Location
Asphalt Concrete		
Coring - 4" Diam. Cores	64	C1-C64
Bulk Sampling - ~~Surface~~ BINDER Mix (200 lb/sample)	3	B16,B17,B18-From Paver
Bulk Sampling - Asphalt Cement (5 gal/sample)	3	B19,B20,B21-From Plant
Asphalt Treated Base		
Coring - 4" Diam. Cores	34	C11-C30, C47-C60
Bulk Sampling (200 lb/sample)	3	B13,B14,B15-From Paver
Permeable Asphalt Treated Base		
Bulk Sampling (100 lb/sample)	3	B10,B11,B12-From Paver
Dense-Graded Aggregate Base		
Bulk Sampling (400 lb/sample)	3	B7,B8,B9
Moisture Content Samples	3	B7,B8,B9
Subgrade		
Thin-Walled Tubes (2 per hole)	36	A1-A18
Bulk Sampling (400 lb/sample)	6	B1-B6
Moisture Content Samples	6	B1-B6
Lime-Treated Subgrade Bulk Sampling (400 lb/sample)	6	B22-B27
Asphalt Concrete Bulk Sampling - Surface Mix	3	B28, B29, B30-From Paver

TABLE B.2. SCOPE OF FIELD TESTING

Material And Test Description	Nº. Of Tests	Location Designation
Asphalt Concrete In Situ Density (Nuclear Gauge)	36	T88-T123
Asphalt Treated Base In Situ Density (Nuclear Gauge)	21	T67-T87
Dense-Graded Aggregate Base In Situ Density, Moisture Content (Nuclear Gauge)	24	T43-T66
Subgrade In Situ Density, Moisture Content (Nuclear Gauge)	42	T1-T42
Shoulder Auger Probe	12	S1-S12
Lime-Treated Subgrade In Situ Density, Moisture Content	42	T124-T165

TABLE B.3. MATERIAL SAMPLING FOR THE MATERIALS REFERENCE LIBRARY (MRL)

Material And Sample Description	Nº. Of Samples	Sample Location
Asphalt Cement (5 Gallon Containers Each Type Used - Surface, ATB, PATB)	3	From Plant
Aggregate (55 Gallon Drum Each Blend - Surface, ATB)	1	From Plant
Finished Asphaltic Concrete Mix (5 Gallon Containers Each - Surface, ATB, PATB)	3	From Paver

Note: Containers for this sampling will be provided by the LTPP Materials Reference Library (MRL). Scheduling information including (1) date containers needed, (2) state agency contact name, and (3) shipping address and telephone number should be provided to the MRL Contractor as soon as it is feasible to do so. The contact name, address and telephone number for the MRL Contractor are as follows:

Mr. Rod Soule
Nichols Consulting Engineers, Chtd.
1885 So. Arlington Ave., Suite 111
Reno, Nevada 89509
(702) 329-4955

These samples should be labeled according to applicable guidelines provided elsewhere and shipped to the MRL Contractor upon completion of sampling activities.

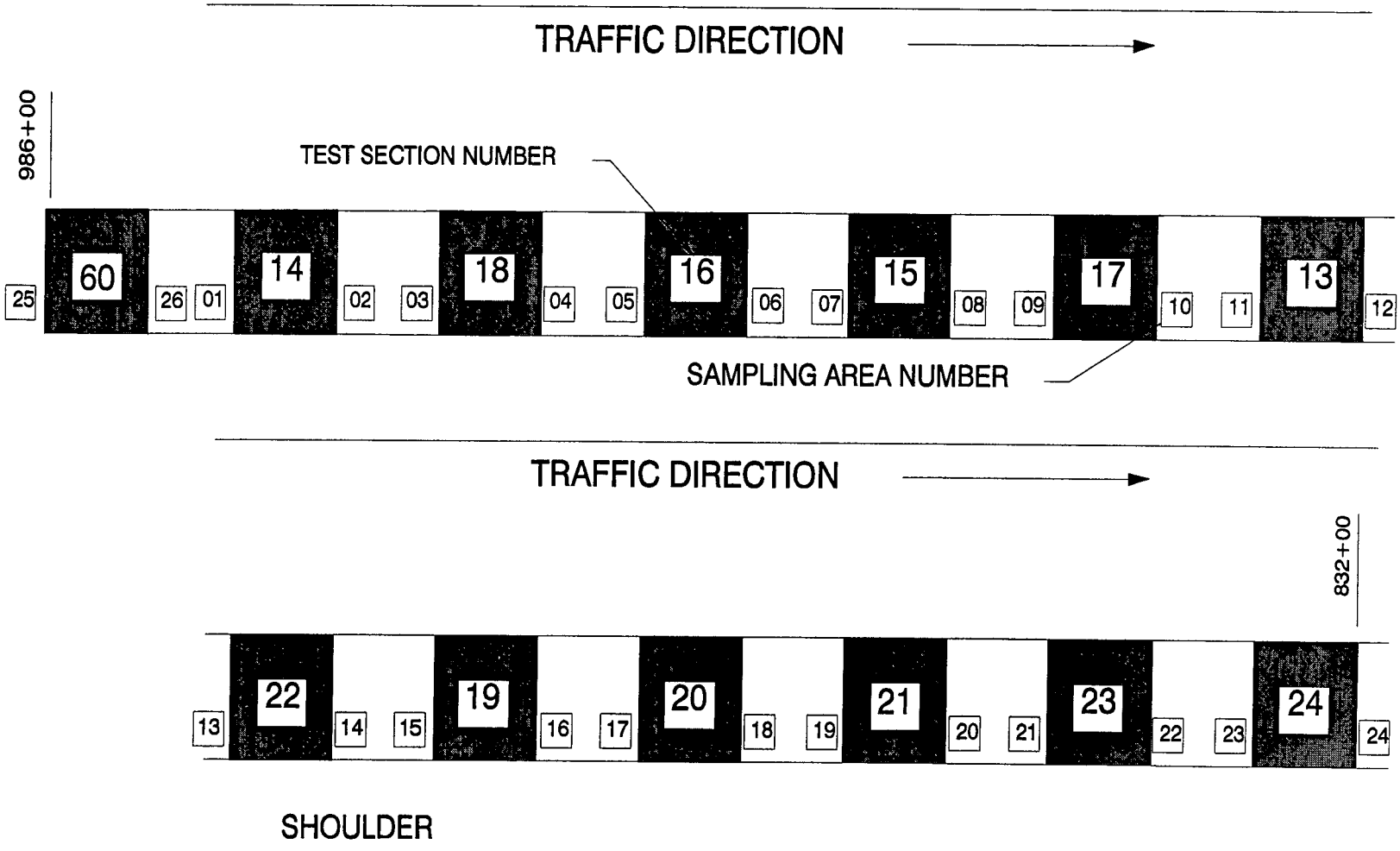
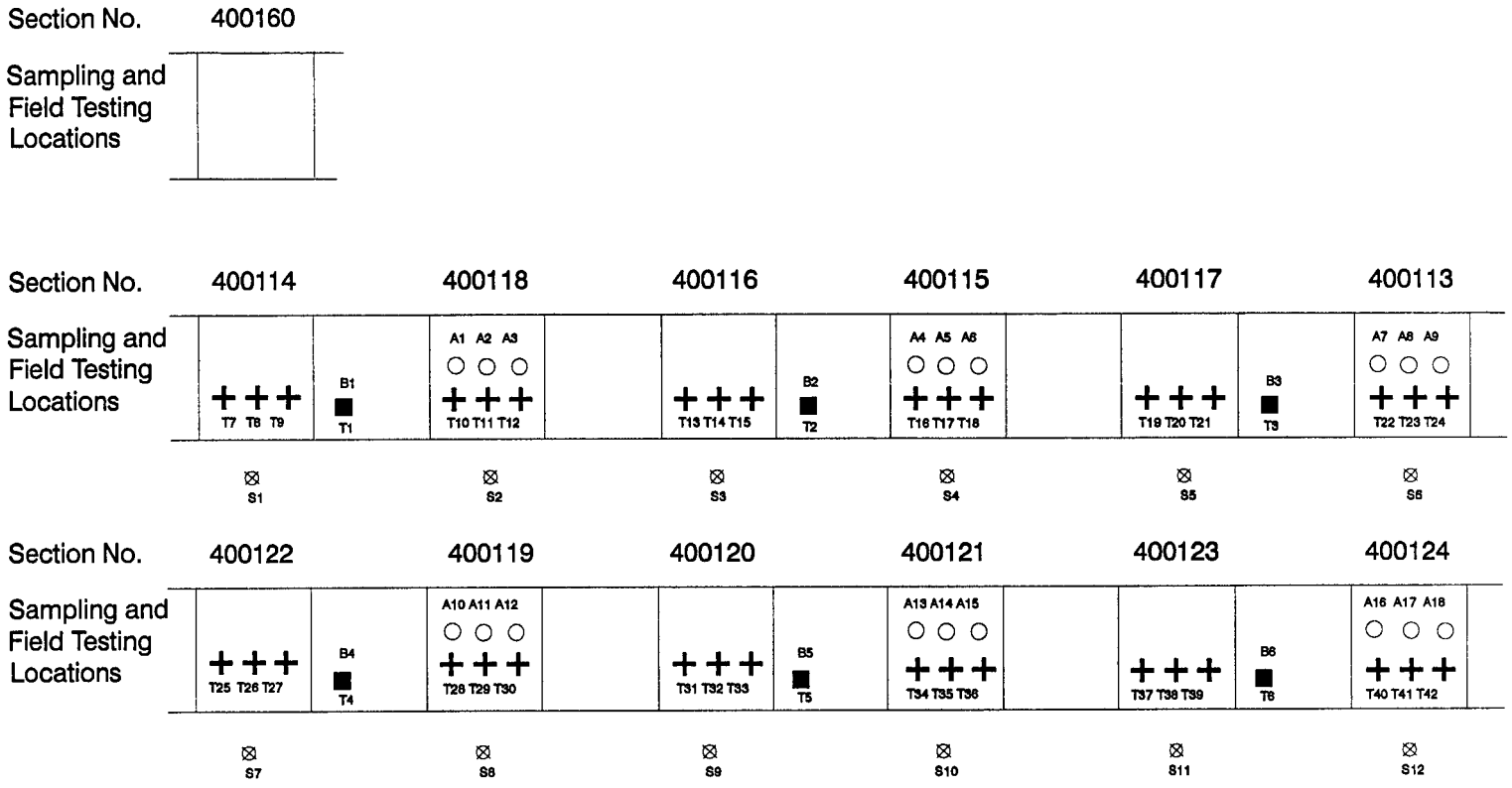


FIGURE B-1. SITE LAYOUT WITH SAMPLING AREAS OKLAHOMA SPS-1 (400100)



LEGEND

■ 2 X 2 bulk sampling location (B1 - B6)

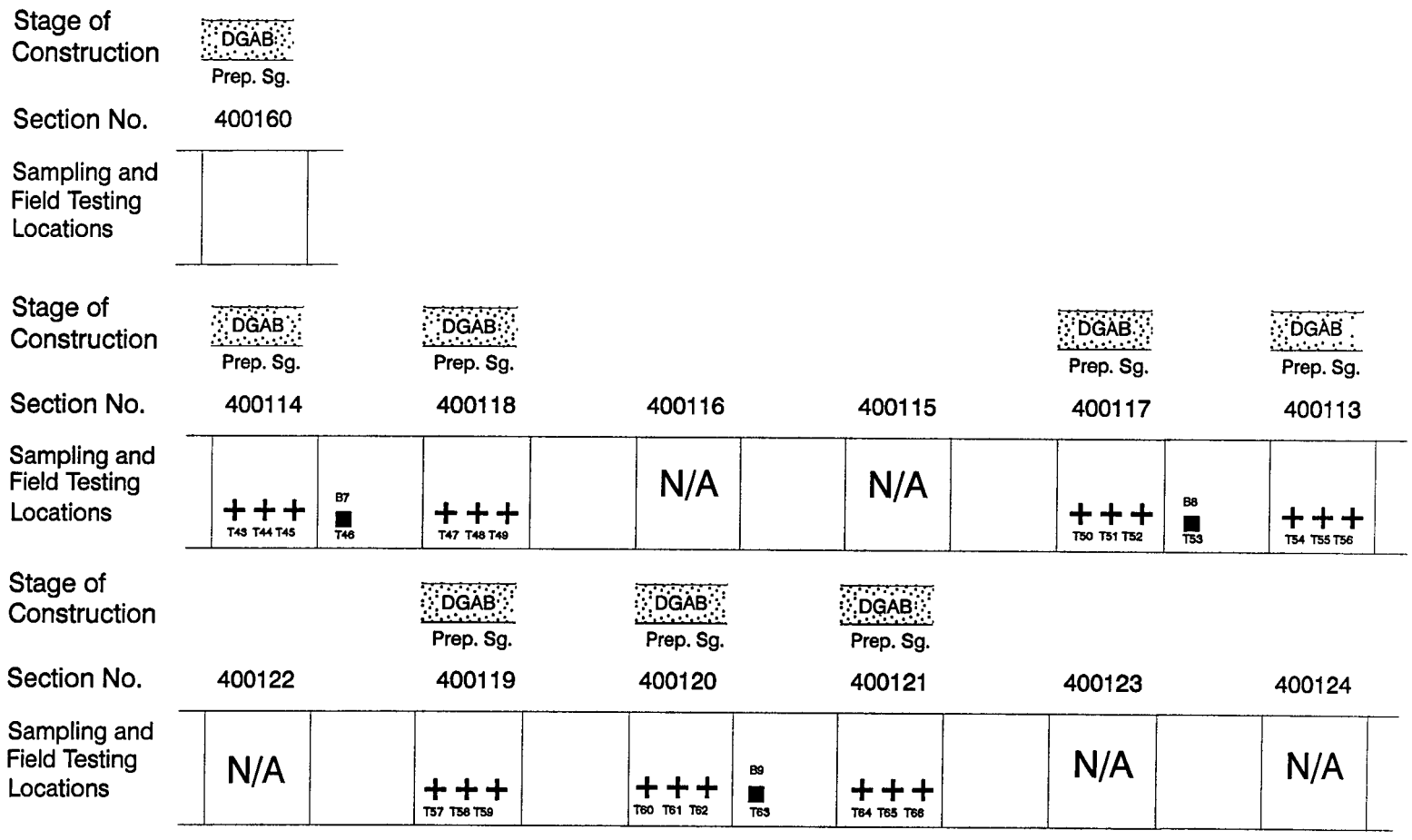
○ Shelby tube/splitspoon sampling to 4' below top of subgrade (A1 - A18).

⊠ Shoulder probe (S1 - S12)

+ Location of in situ density testing (T1 - T42)

Note: Nuclear density/moisture testing must be conducted at bulk sampling locations prior to excavation.

FIGURE B-2. SAMPLING AND TESTING LOCATIONS FOR SUBGRADE OKLAHOMA SPS-1 (400100)



LEGEND

+ Location of in situ density testing (T43 - T66)

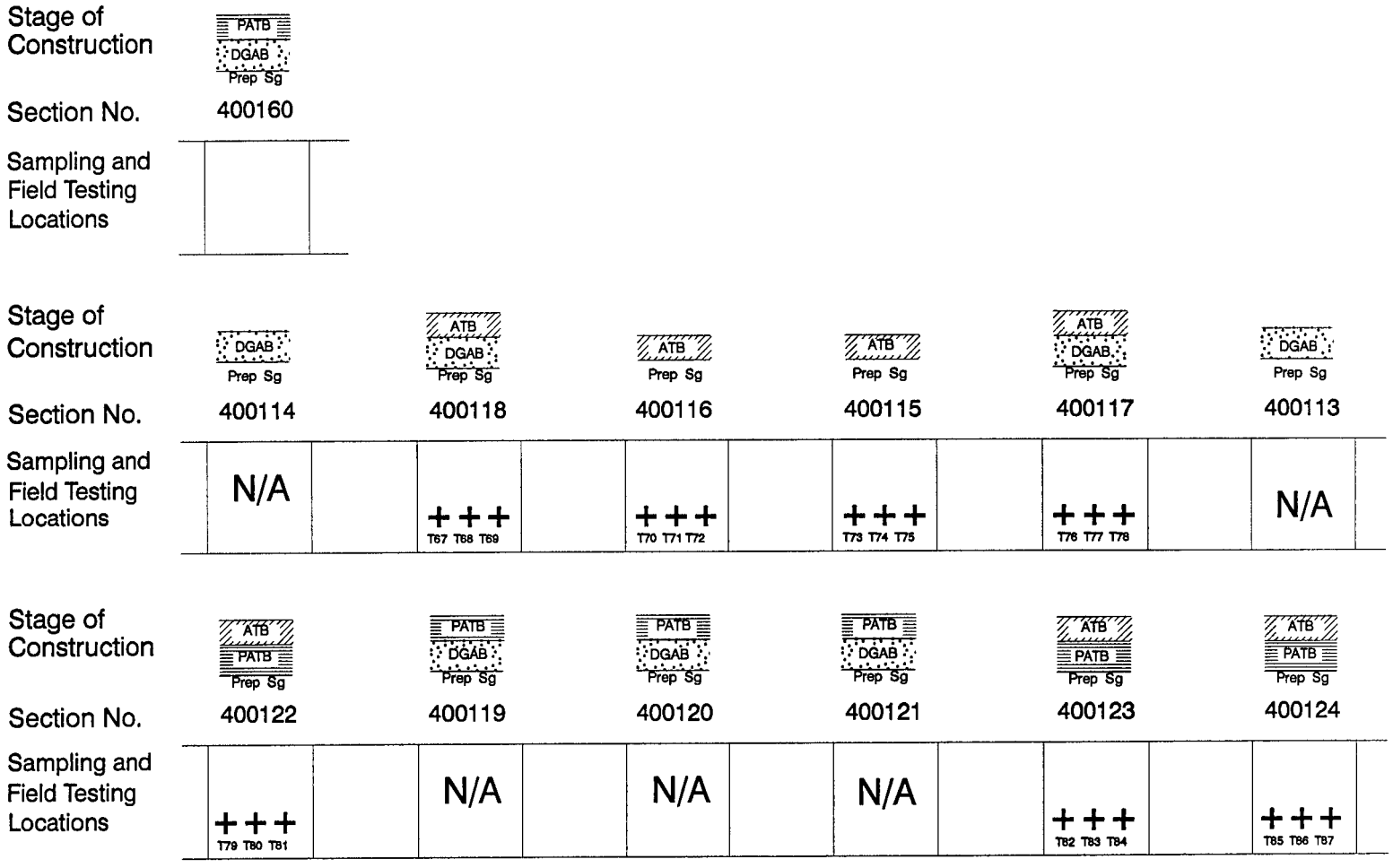
■ Location of bulk sampling of DGAB (B7 - B9)

Note: Nuclear density/moisture testing must be conducted at bulk sampling locations prior to excavation.

Prep. Sg. - Prepared Subgrade

DGAB - Dense Graded Aggregate Base

FIGURE B-3. SAMPLING AND TESTING LOCATIONS FOR DGAB OKLAHOMA SPS-1 (400100)

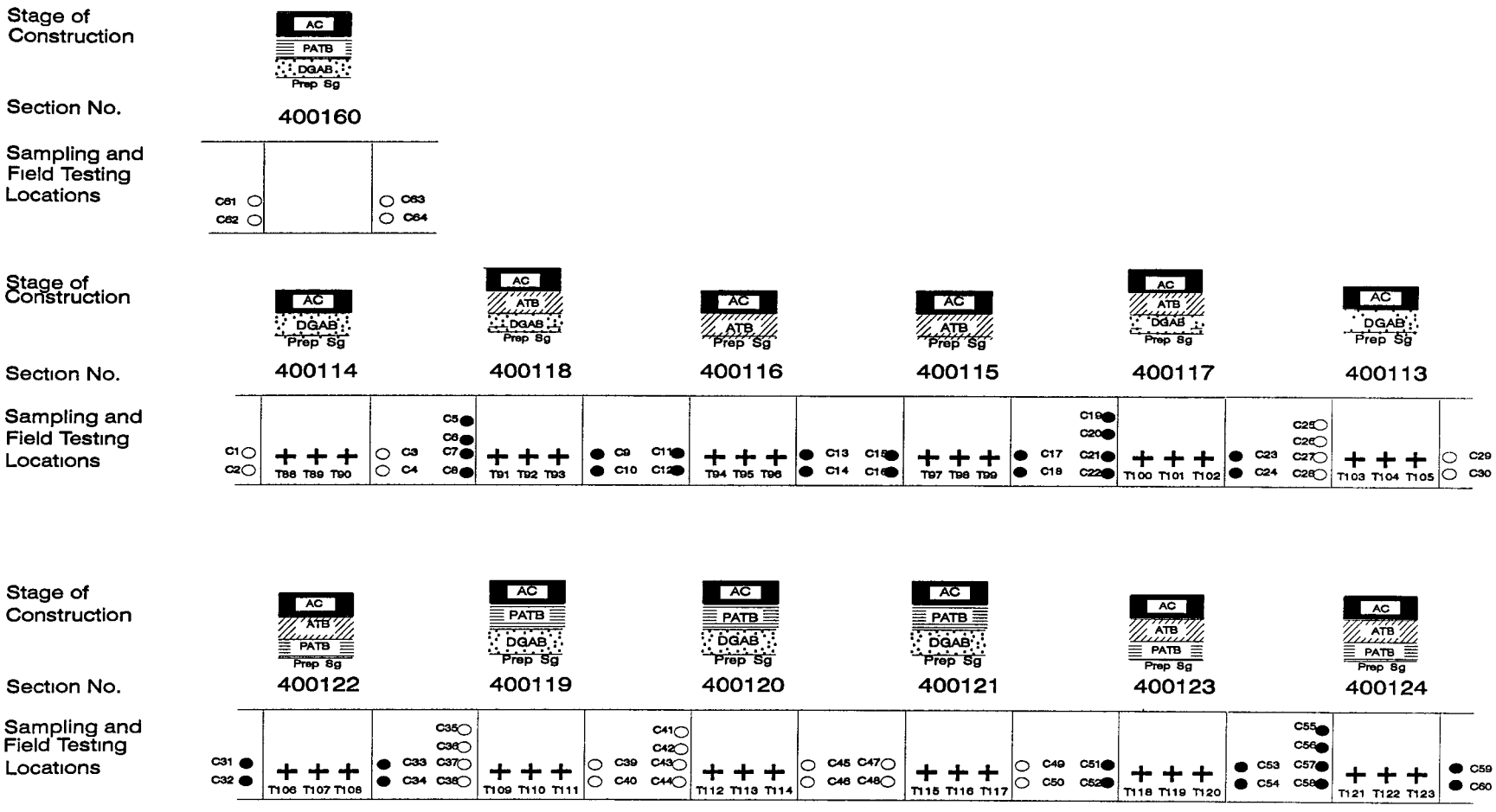


LEGEND

+ Location of in situ density testing (T67 - T87)

Prep. Sg. - Prepared Subgrade
PATB - Permeable Asphalt Treated Base
DGAB - Dense Graded Aggregate Base
ATB - Asphalt Treated Base

FIGURE B-4. SAMPLING AND TESTING LOCATIONS FOR ATB OKLAHOMA SPS-1 (400100)



LEGEND

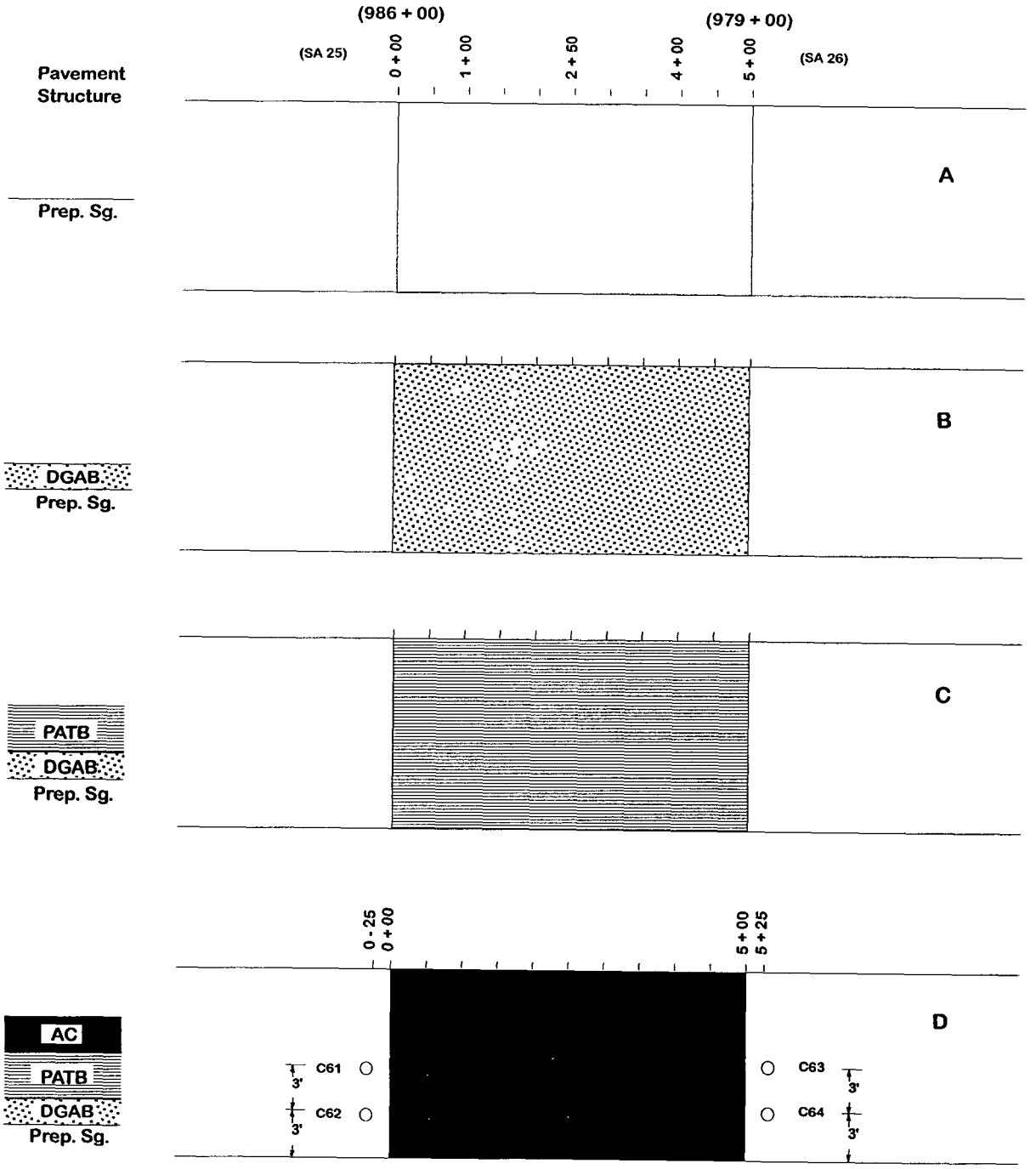
○ 4" OD Core of Asphalt Concrete Surface Only (C1 - C4, C25 - C30, C35-C50)

● 4" OD Core of Asphalt Concrete Surface and Treated Base (C5 - C24, C31 - C34, C51-C64)

+ Location of in situ density testing (T88 - T123)

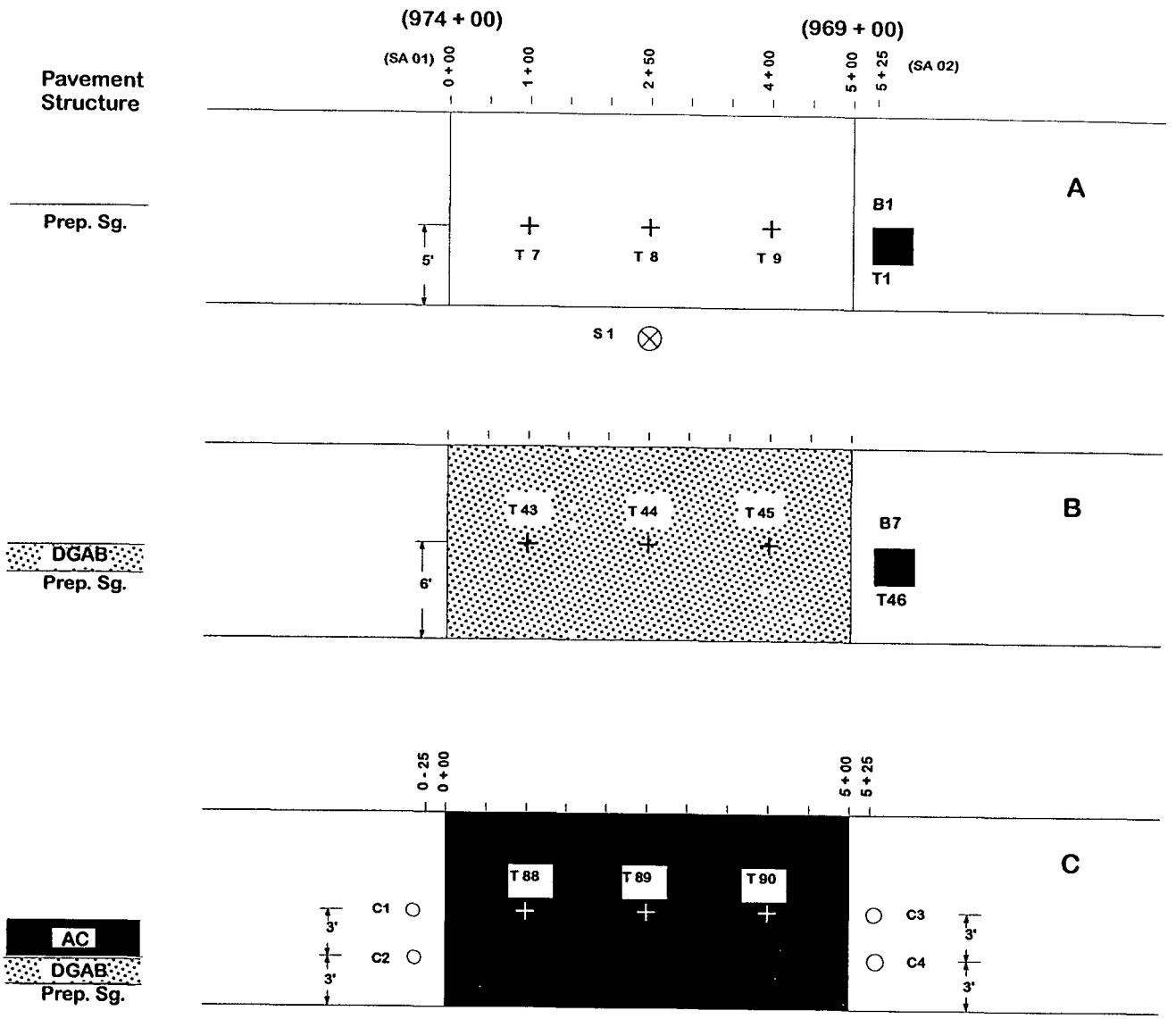
Prep. Sg. - Prepared Subgrade
PATB - Permeable Asphalt Treated Base
DGAB - Dense Graded Aggregate Base
ATB - Asphalt Treated Base
AC - Asphalt Concrete Surface

FIGURE B-5. SAMPLING AND TESTING LOCATIONS FOR AC SURFACE OKLAHOMA SPS-1 (400100)



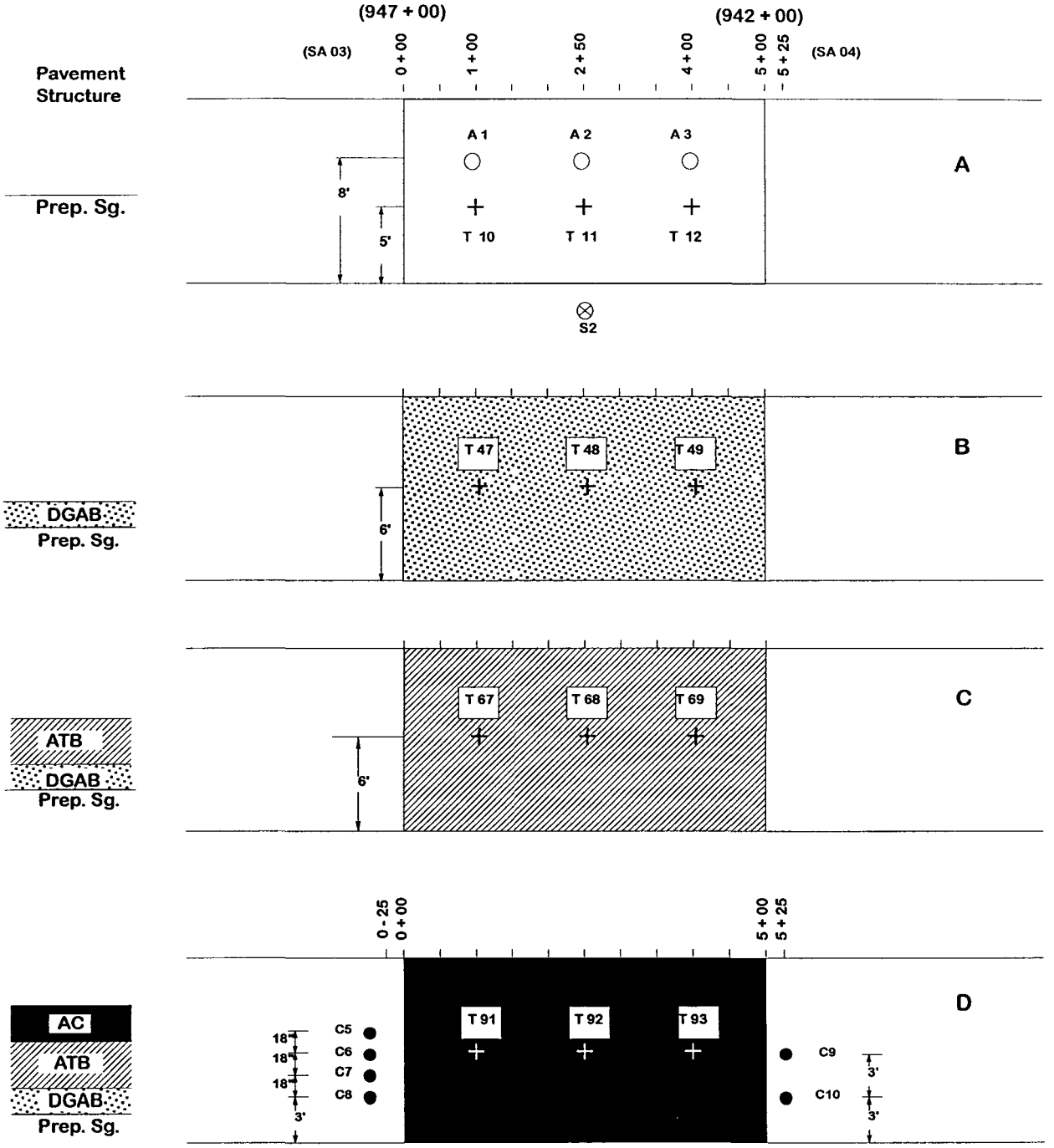
A Testing on prepared Subgrade (T28 - T30, A10- A12, S8)
B Testing on compacted DGAB (T57 - T59)
C No testing on compacted PATB
D Testing on finished AC Surface (T109 - T111)
Coring AC Surface only (C61 - C64)

FIGURE B-6. SAMPLING AND TESTING PLAN FOR TEST SECTION 400160 OKLAHOMA SPS-1 (400100)



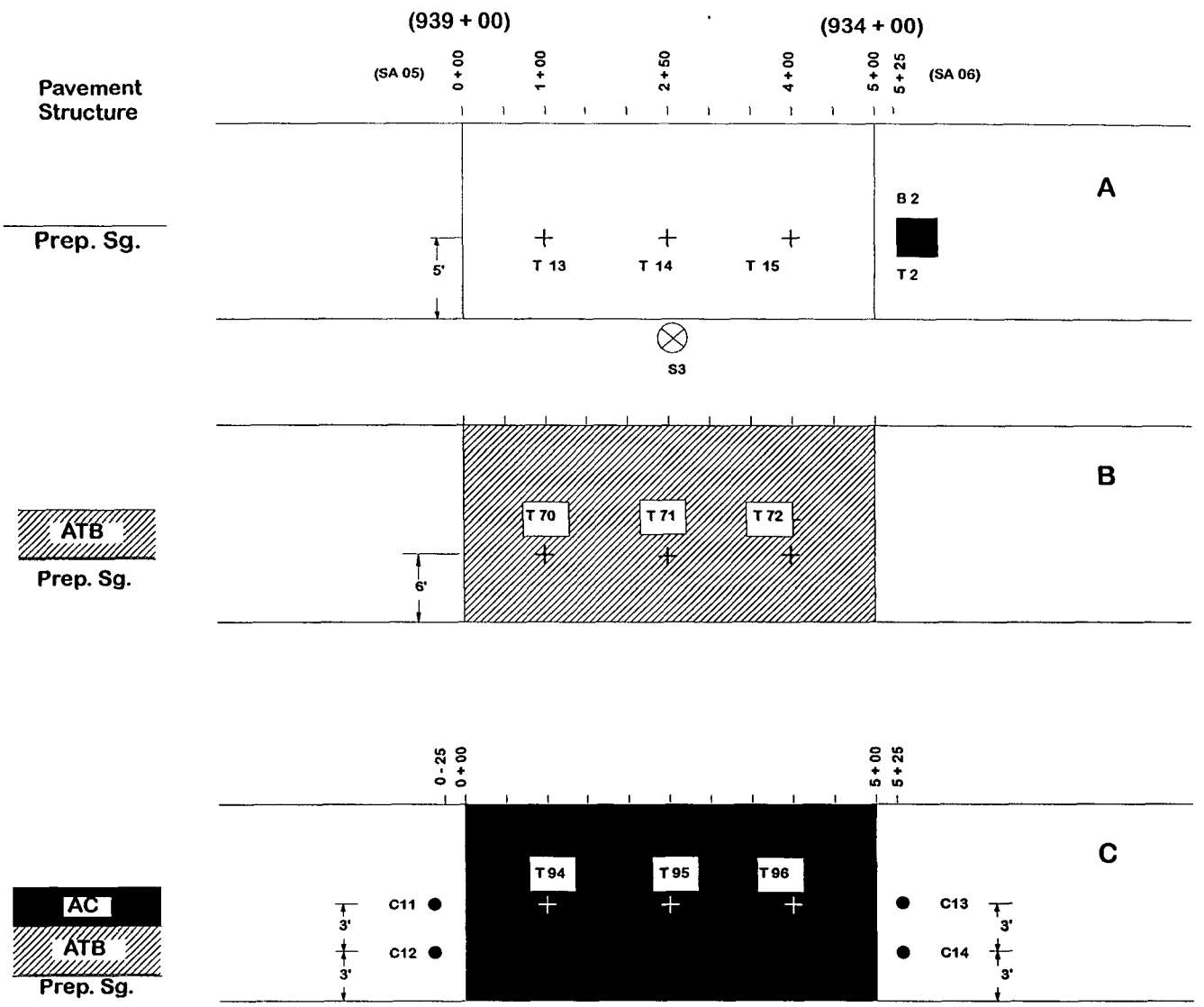
A Testing on prepared Subgrade (T1, T7 - T9, S1, B1)
B Testing on compacted DGAB (T43 - T46, B7)
C Testing on finished AC Surface (T88 - T90)
Coring AC Surface only (C1 - C4)

FIGURE B-7. SAMPLING AND TESTING PLAN FOR TEST SECTION 400114 OKLAHOMA SPS-1 (400100)



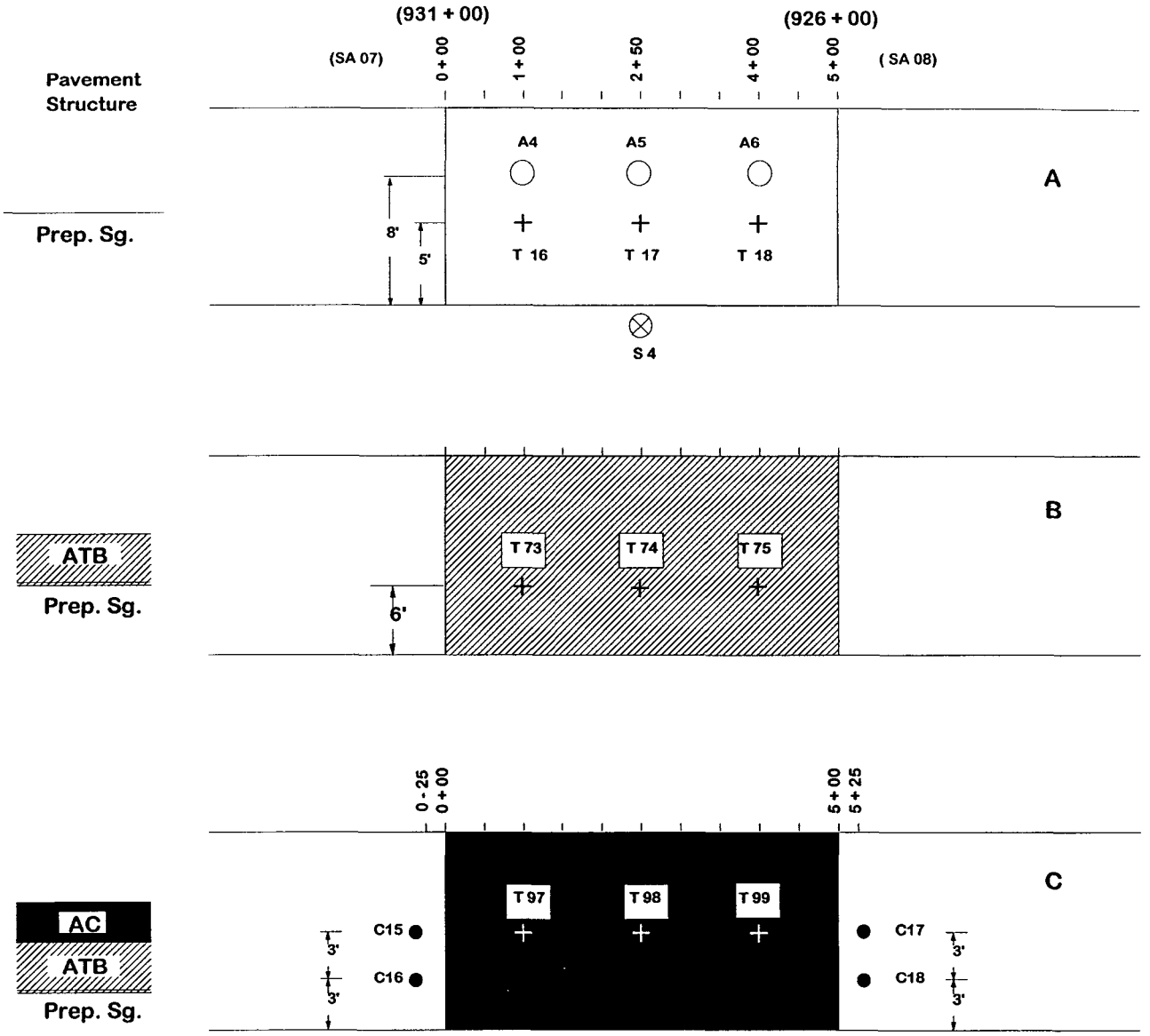
A Testing on prepared Subgrade (T10 - T12, A1 - A3, S2)
B Testing on compacted DGAB (T47 - T49)
C Testing on compacted ATB (T67 - T69)
D Testing on finished AC Surface (T91 - T93)
Coring AC Surface and bound layers (C5 - C10)

FIGURE B-8. SAMPLING AND TESTING PLAN FOR TEST SECTION 400118 OKLAHOMA SPS-1 (400100)



A Testing on prepared Subgrade (T2, T13 - T15, B2, S3)
B Testing on compacted ATB (T70 - T72)
C Testing on finished AC Surface (T94 - T96)
Coring AC Surface and bound layers (C11 - C14)

FIGURE B-9. SAMPLING AND TESTING PLAN FOR TEST SECTION 400116 OKLAHOMA SPS-1 (400100)



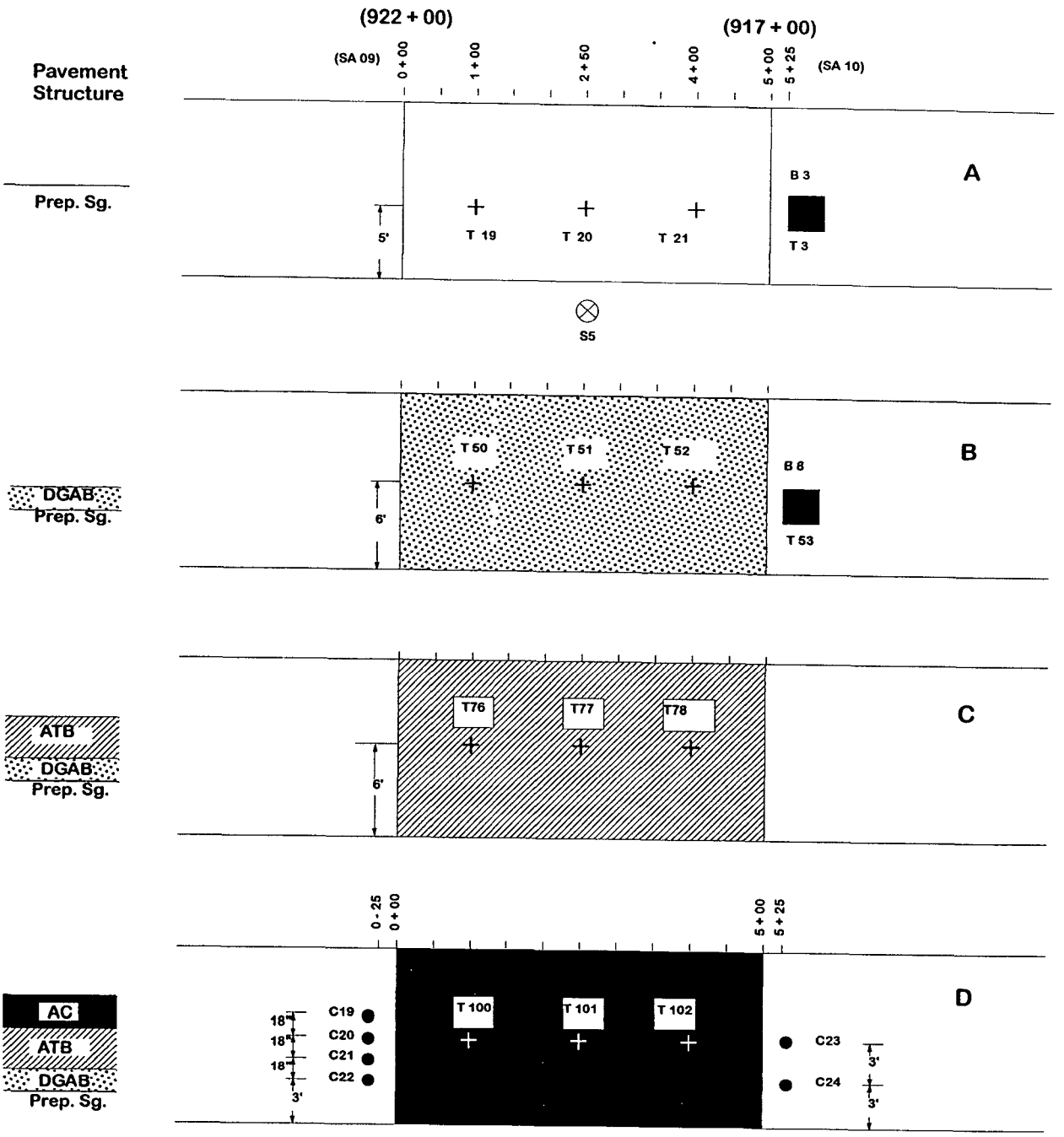
A Testing on prepared Subgrade (T16 - T18, A4 - A6, S4)

B Testing on compacted ATB (T73 - T75)

C Testing on finished AC Surgace (T97 - T99)

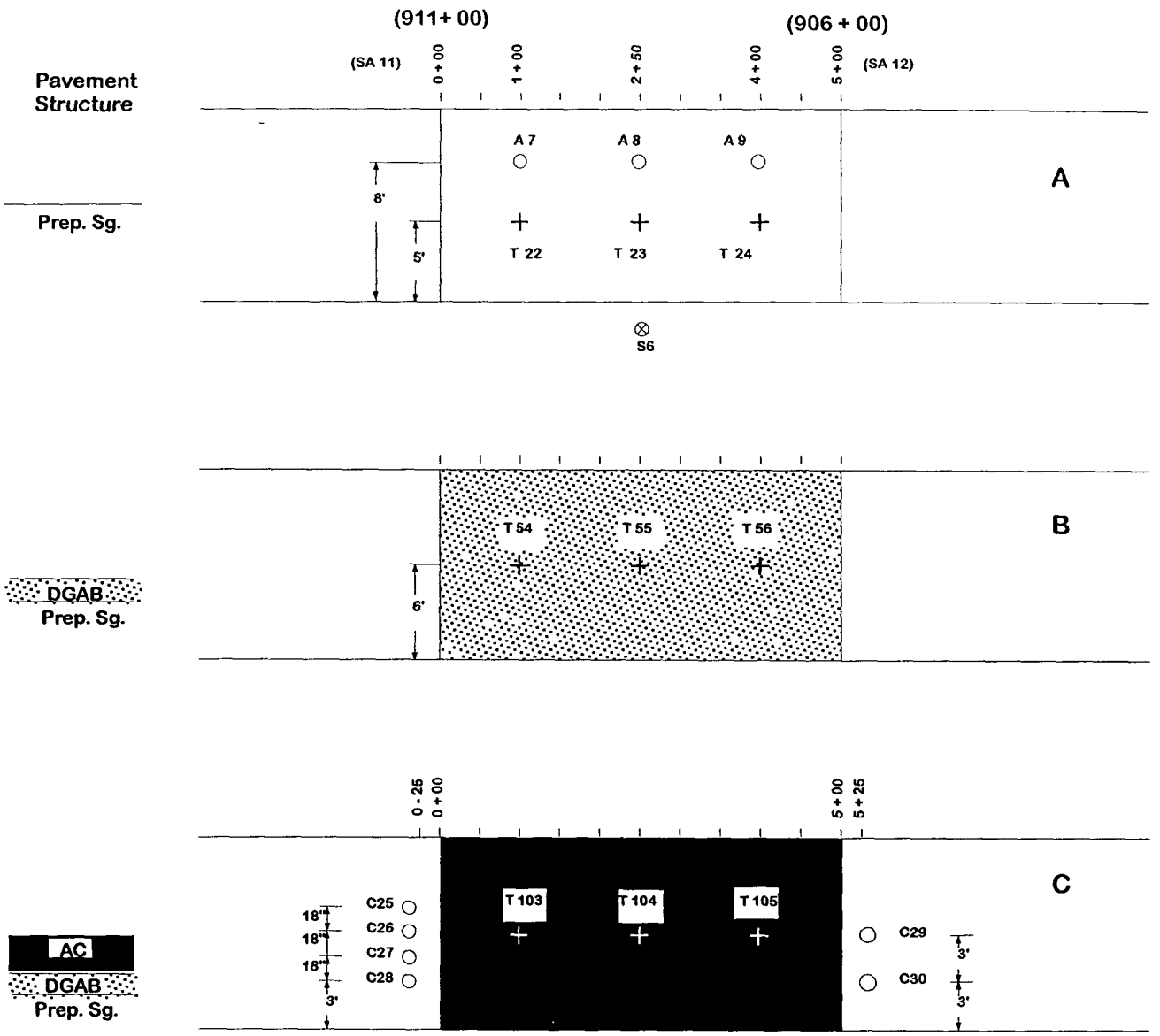
Coring AC Surface and bound layers (C15 - C18)

FIGURE B-10. SAMPLING AND TESTING PLAN FOR TEST SECTION 400115 OKLAHOMA SPS-1 (400100)



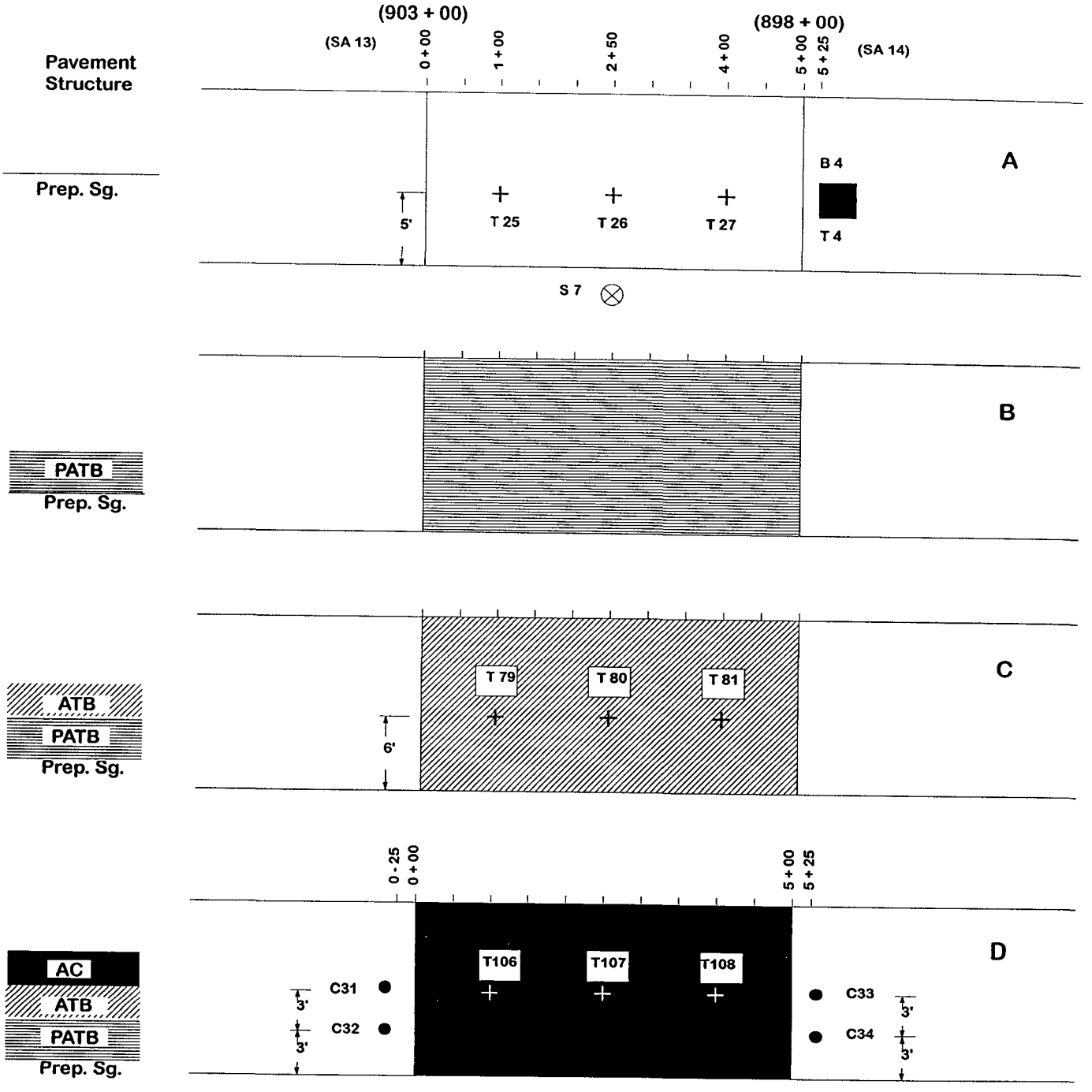
A Testing on prepared Subgrade (T3, T19 - T21, B3, S5)
B Testing on compacted DGAB (T50 - T53, B8)
C Testing on compacted ATB (T76 - T78)
D Testing on finished AC Surface (T100 - T102)
Coring AC Surface and bound layers (C19 - C24)

FIGURE B-11. SAMPLING AND TESTING PLAN FOR TEST SECTION 400117 OKLAHOMA SPS-1 (400100)



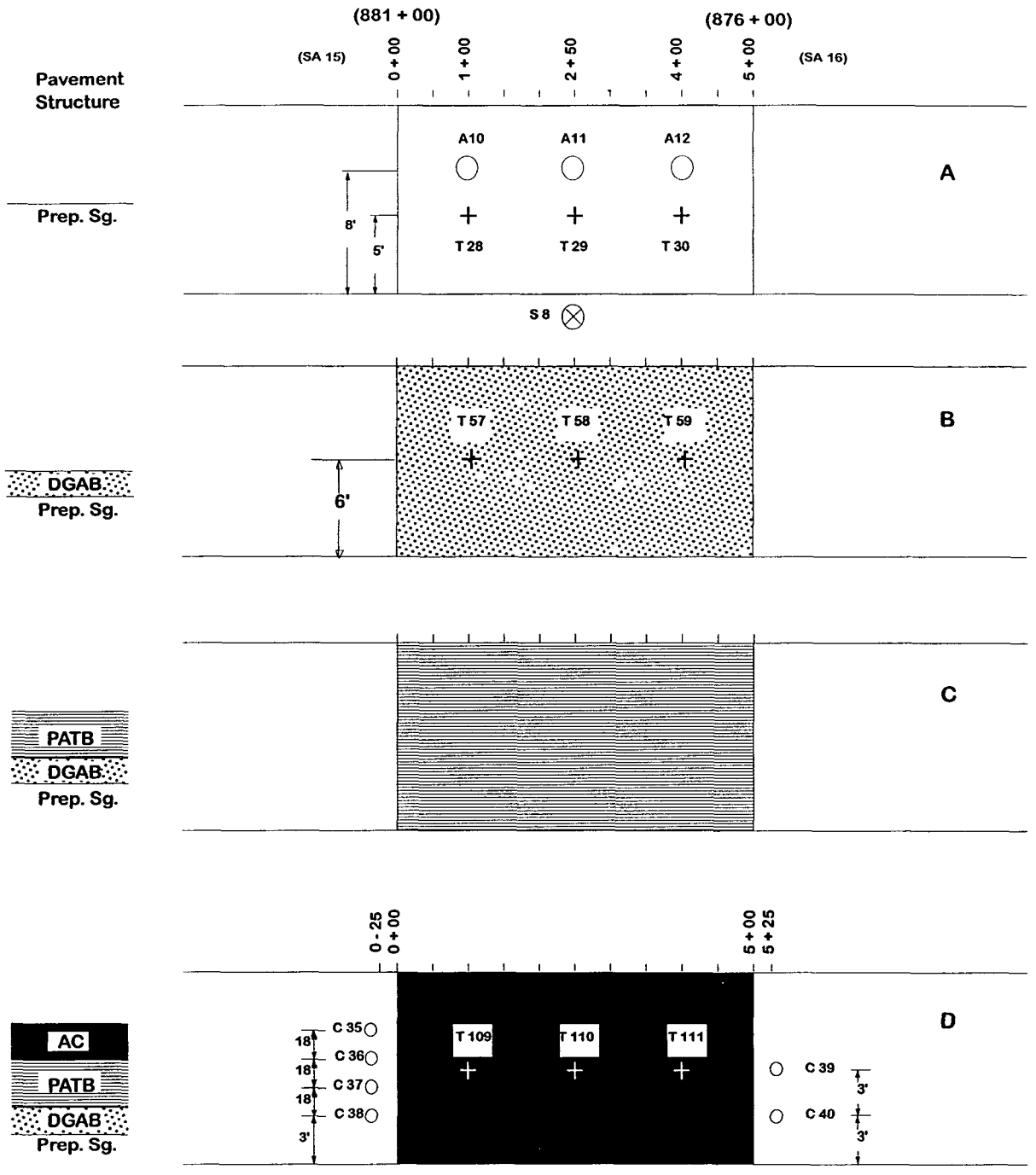
A Testing on prepared Subgrade (T22 - T24, A7 - A9, S6)
B Testing on compacted DGAB (T54 - T56)
C Testing on finished AC Surface (T103 - T105)
Coring AC Surface only (C25 - C30)

FIGURE B-12. SAMPLING AND TESTING PLAN FOR TEST SECTION 400113 OKLAHOMA SPS-1 (400100)



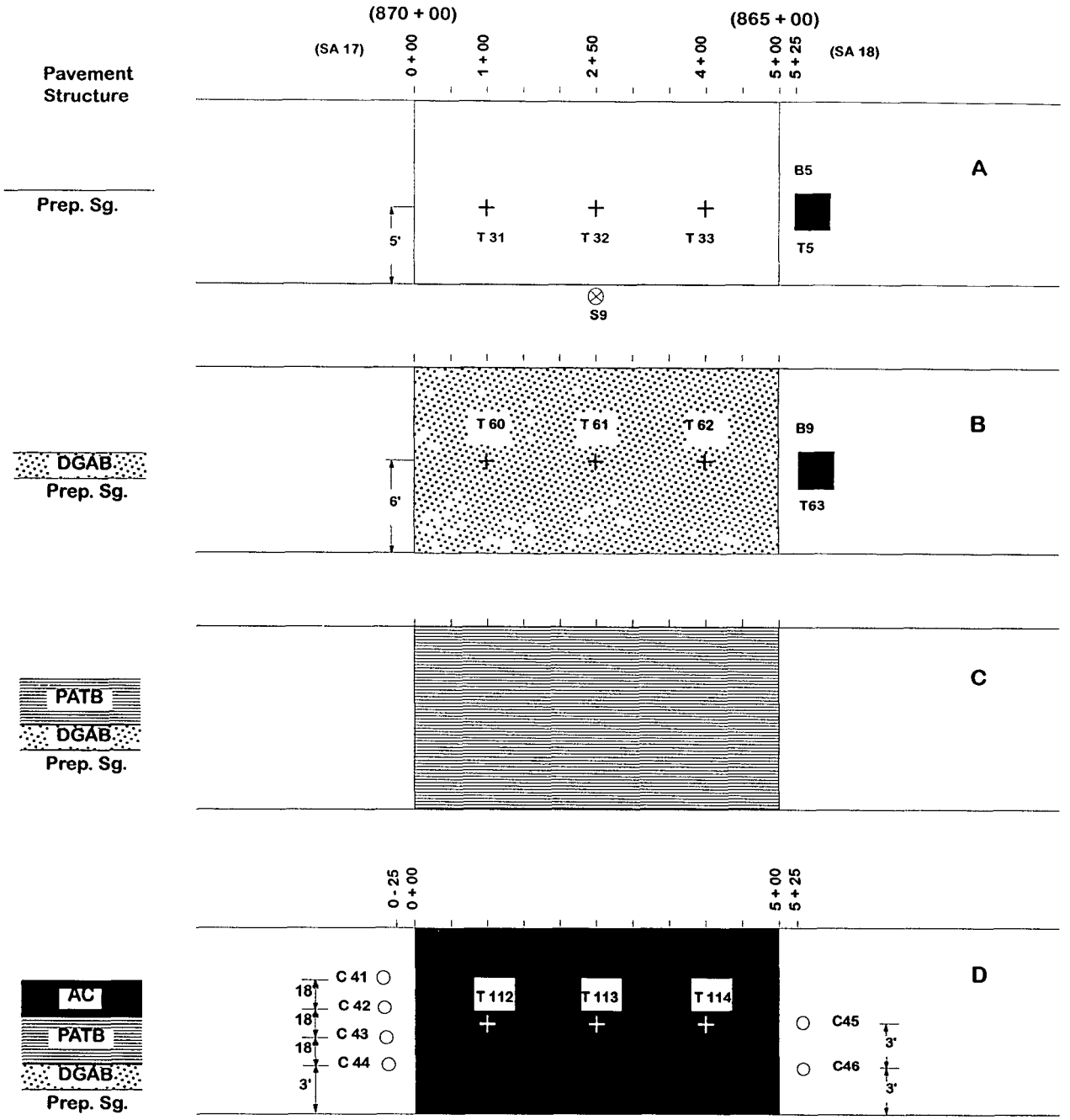
A Testing on prepared Subgrade (T4, T25 - T27, B4, S7)
B No testing on compacted PATB
C Testing on compacted ATB (T79 - T81)
D Testing on finished AC Surface (T106 - T108)
Coring AC Surface and bound layers (C31 - C34)

FIGURE B-13. SAMPLING AND TESTING PLAN FOR TEST SECTION 400122 OKLAHOMA SPS-1 (400100)



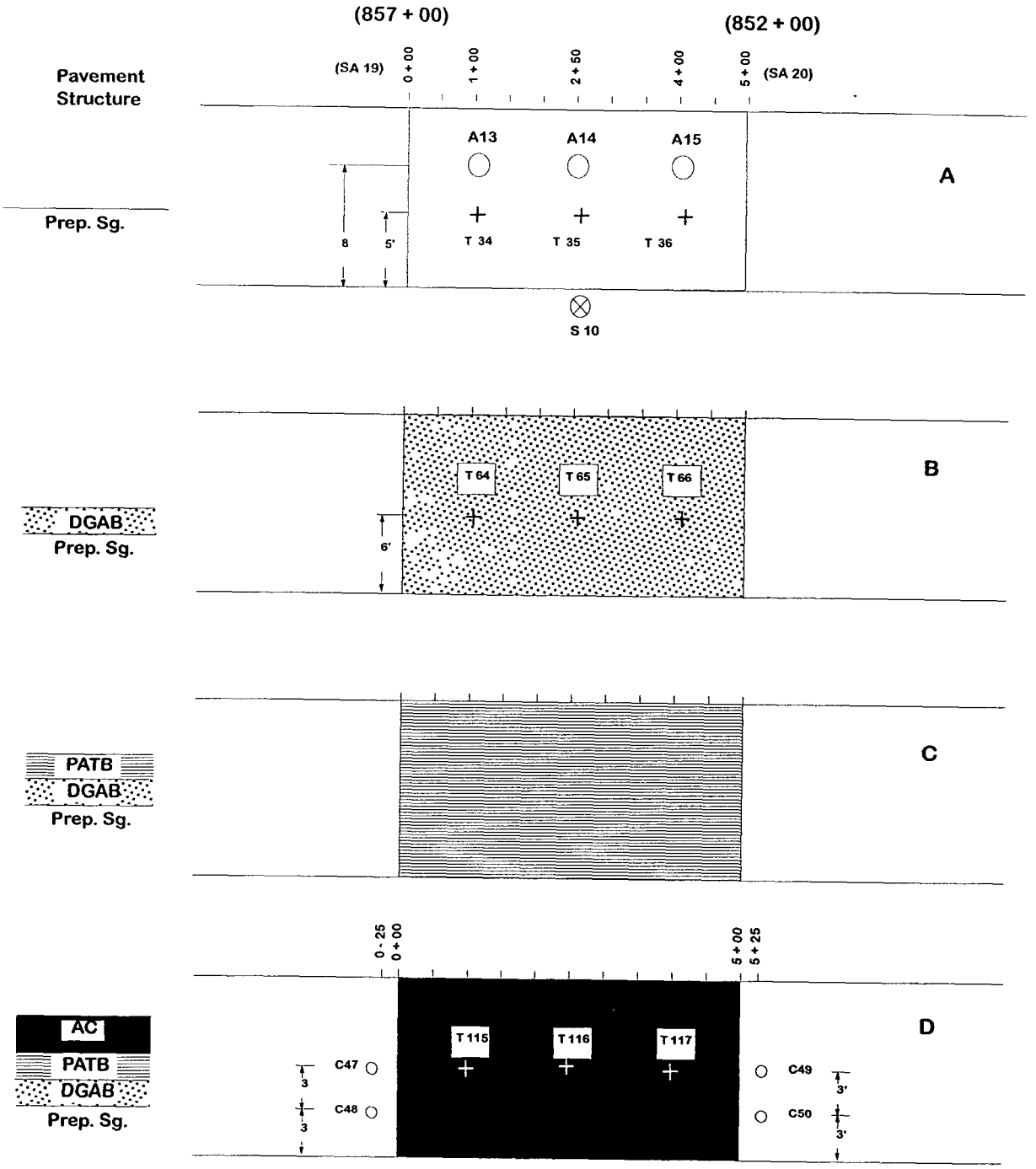
A Testing on prepared Subgrade (T28 - T30, A10- A12, S8)
B Testing on compacted DGAB (T57 - T59)
C No testing on compacted PATB
D Testing on finished AC Surface (T109 - T111)
Coring AC Surface only (C35 - C40)

FIGURE B-14. SAMPLING AND TESTING PLAN FOR TEST SECTION 400119 OKLAHOMA SPS-1 (400100)



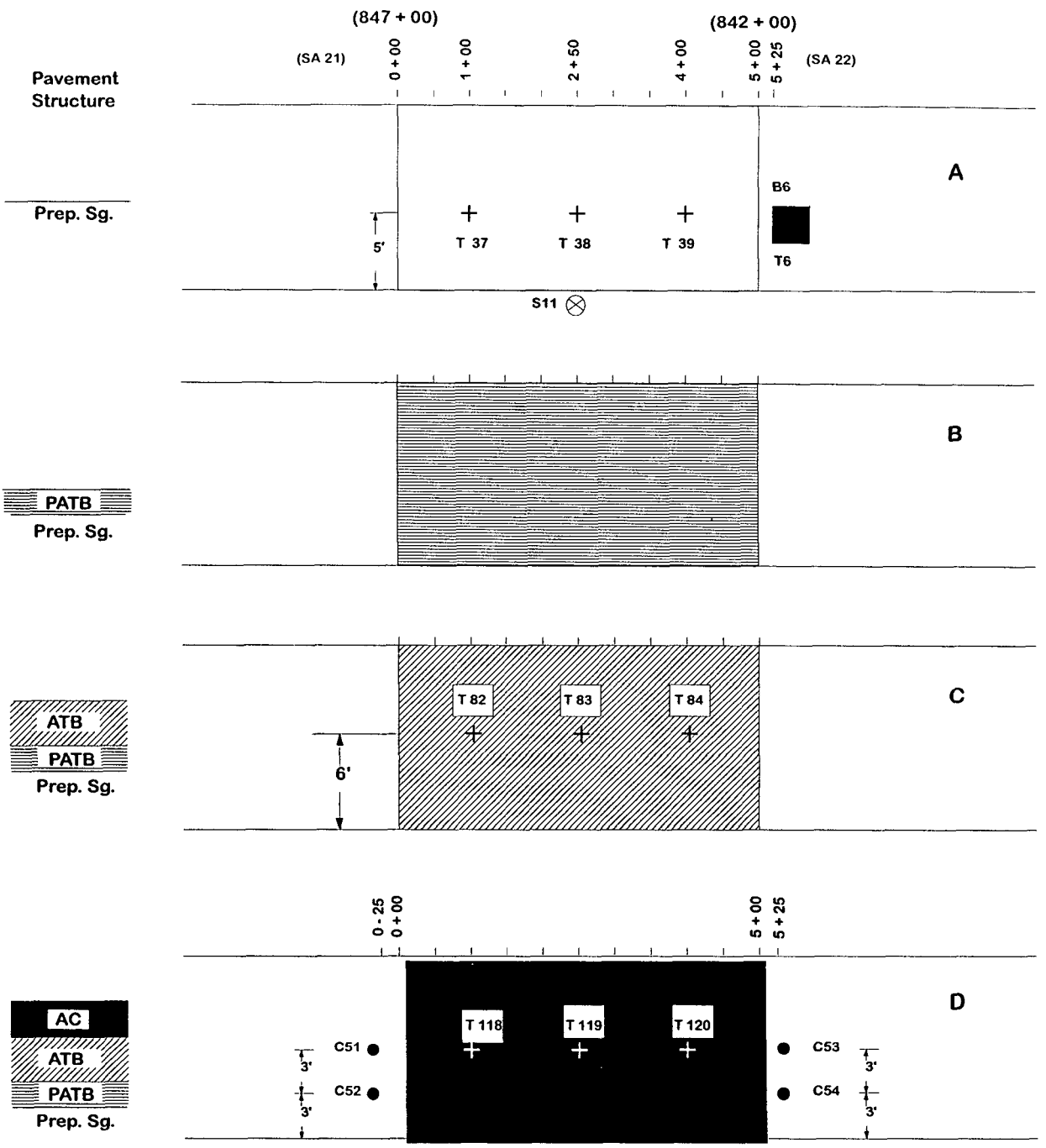
A Testing on prepared Subgrade (T5, T31 - T33, B5, S9)
B Testing on compacted DGAB (T60 - T63, B9)
C No testing on compacted PATB
D Testing on finished AC Surface (T112 - T114)
Coring AC Surface only (C41 - C46)

FIGURE B-15. SAMPLING AND TESTING PLAN FOR TEST SECTION 400120 OKLAHOMA SPS-1 (400100)



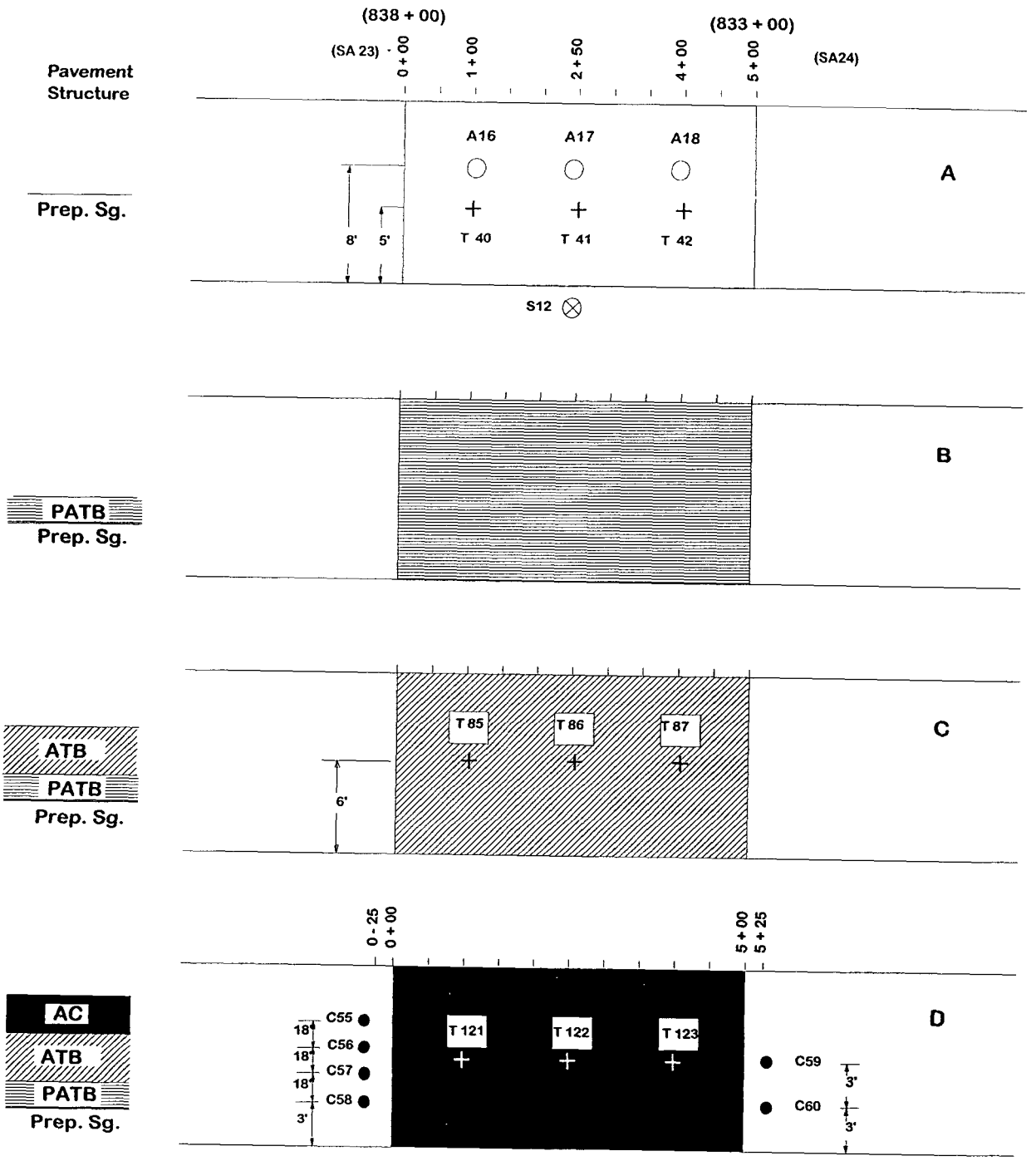
A Testing on prepared Subgrade (T34 - T36, A13 - A15, S10)
B Testing on compacted DGAB (T64 - T66)
C No testing on compacted PATB
D Testing on finished AC Surface (T115 - T117)
Coring AC Surface only (C47 - C50)

FIGURE B-16. SAMPLING AND TESTING PLAN FOR TEST SECTION 400121 OKLAHOMA SPS-1 (400100)



A Testing on prepared Subgrade (T6, T37 - T39, B6, S11)
B No testing on compacted PATB
C Testing on compacted ATB (T82 - T84)
D Testing on finished AC Surface (T118 - T120)
Coring AC Surface and bound layers (C51 - C54)

FIGURE B-17. SAMPLING AND TESTING PLAN FOR TEST SECTION 400123 OKLAHOMA SPS-1 (400100)



A Testing on prepared Subgrade (T40 - T42, A16 - A18, S12)
B No testing on compacted PATB
C Testing on compacted ATB(T85 - T87)
D Testing on finished AC Surface (T121 - T123)
Coring AC Surface and bound layers (C55 - C60)

FIGURE B-18. SAMPLING AND TESTING PLAN FOR TEST SECTION 400124 OKLAHOMA SPS-1 (400100)

TABLE B.4. SAMPLES TO BE SHIPPED TO THE STATE LABORATORY (OR THEIR DESIGNEE)

Sample Location	Sample Number	Lab Test Number	Type of Sample
Asphalt Concrete			
C1	CA01	1	102 mm (4 in.) Core
C2	CA02	1	102 mm (4 in.) Core
C3	CA03	2	102 mm (4 in.) Core
C4	CA04	2	102 mm (4 in.) Core
C9	CA09	2	102 mm (4 in.) Core
C10	CA10	2	102 mm (4 in.) Core
C11	CA11	1	102 mm (4 in.) Core
C12	CA12	1	102 mm (4 in.) Core
C14	CA14	2	102 mm (4 in.) Core
C16	CA16	1	102 mm (4 in.) Core
C17	CA17	2	102 mm (4 in.) Core
C18	CA18	2	102 mm (4 in.) Core
C23	CA23	2	102 mm (4 in.) Core
C24	CA24	2	102 mm (4 in.) Core
C29	CA29	2	102 mm (4 in.) Core
C30	CA30	2	102 mm (4 in.) Core
C31	CA31	1	102 mm (4 in.) Core
C32	CA32	1	102 mm (4 in.) Core
C34	CA34	2	102 mm (4 in.) Core
C39	CA39	2	102 mm (4 in.) Core
C40	CA40	2	102 mm (4 in.) Core
C45	CA45	2	102 mm (4 in.) Core
C46	CA46	2	102 mm (4 in.) Core
C47	CA47	1	102 mm (4 in.) Core
C48	CA48	1	102 mm (4 in.) Core

TABLE B.4. SAMPLES TO BE SHIPPED TO THE STATE LABORATORY (OR THEIR DESIGNEE) (Continued)

Sample Location	Sample Number	Lab Test Number	Type of Sample
C49	CA49	2	102 mm (4 in.) Core
C50	CA50	2	102 mm (4 in.) Core
C51	CA51	1	102 mm (4 in.) Core
C52	CA52	1	102 mm (4 in.) Core
C53	CA53	2	102 mm (4 in.) Core
C54	CA54	2	102 mm (4 in.) Core
C59	CA59	2	102 mm (4 in.) Core
C60	CA60	2	102 mm (4 in.) Core
C61	CA61	1	102 mm (4 in.) Core
C62	CA62	1	102 mm (4 in.) Core
C63	CA63	2	102 mm (4 in.) Core
C64	CA64	2	102 mm (4 in.) Core
~~B19~~ B16	BA01	3	91 kg (200 lb) bulk sample (BINDER)
~~B20~~ B17	BA02	3	91 kg (200 lb) bulk sample (BINDER)
~~B21~~ B18	BA03	3	91 kg (200 lb) bulk sample (BINDER)
~~B22~~ B19	BC04 1	3	19 l (5 gal) bulk sample of asphalt cement
~~B23~~ B20	BC05 2	3	19 l (5 gal) bulk sample of asphalt cement
~~B24~~ B21	BC06 3	3	19 l (5 gal) bulk sample of asphalt cement
(Additional @ Bottom)		**Asphalt Treated Base**	
C9	CT09	2	102 mm (4 in.) Core
C10	CT10	2	102 mm (4 in.) Core
C11	CT11	1	102 mm (4 in.) Core
C12	CT12	1	102 mm (4 in.) Core
C13	CT13	2	102 mm (4 in.) Core
C14	CT14	2	102 mm (4 in.) Core
C15	CT15	1	102 mm (4 in.) Core
B28	BA04	3	91 Kg (200 lb) Bulk Sample (Surface)
B29	BA05	3	"
B30	BA06	3	"

TABLE B.4. SAMPLES TO BE SHIPPED TO THE STATE LABORATORY (OR THEIR DESIGNEE) (Continued)

Sample Location	Sample Number	Lab Test Number	Type of Sample
C16	CT16	1	102 mm (4 in.) Core
C17	CT17	2	102 mm (4 in.) Core
C18	CT18	2	102 mm (4 in.) Core
C23	CT23	2	102 mm (4 in.) Core
C24	CT24	2	102 mm (4 in.) Core
C31	CT31	1	102 mm (4 in.) Core
C32	CT32	1	102 mm (4 in.) Core
C33	CT33	2	102 mm (4 in.) Core
C34	CT34	2	102 mm (4 in.) Core
C51	CT51	1	102 mm (4 in.) Core
C52	CT52	1	102 mm (4 in.) Core
C53	CT53	2	102 mm (4 in.) Core
C54	CT54	2	102 mm (4 in.) Core
C59	CT59	2	102 mm (4 in.) Core
C60	CT60	2	102 mm (4 in.) Core
B13	BT20	3	91 kg (200 lb) bulk sample
B14	BT21	3	91 kg (200 lb) bulk sample
B15	BT22	3	91 kg (200 lb) bulk sample
~~B16~~	~~BC01~~	~~3~~	~~19 l (5 gal) bulk sample of asphalt cement~~
~~B17~~	~~BC02~~	~~3~~	~~19 l (5 gal) bulk sample of asphalt cement~~
~~B18~~	~~BC03~~	~~3~~	~~19 l (5 gal) bulk sample of asphalt cement~~
Permeable Asphalt Treated Base			
B10	BT01	3	45 kg (100 lb) bulk sample
B11	BT02	3	45 kg (100 lb) bulk sample
B12	BT03	3	45 kg (100 lb) bulk sample

TABLE B.4. SAMPLES TO BE SHIPPED TO THE STATE LABORATORY (OR THEIR DESIGNEE) (Continued)

Sample Location	Sample Number	Lab Test Number	Type of Sample
Dense-Graded Aggregate Base			
B7	BG01	2	45 kg (100 lb) bulk sample
B8	BG02	2	45 kg (100 lb) bulk sample
B9	BG03	2	45 kg (100 lb) bulk sample
Subgrade			
B1	BS01	2	45 kg (100 lb) bulk sample
B2	BS02	2	45 kg (100 lb) bulk sample
B3	BS03	2	45 kg (100 lb) bulk sample
B4	BS04	2	45 kg (100 lb) bulk sample
B5	BS05	2	45 kg (100 lb) bulk sample
B6	BS06	2	45 kg (100 lb) bulk sample
A1	TS01, TS02	3	Thin-Wall Tube
A3	TS05, TS06	3	Thin-Wall Tube
A4	TS07, TS08	3	Thin-Wall Tube
A6	TS11, TS12	3	Thin-Wall Tube
A7	TS13, TS14	3	Thin-Wall Tube
A8	TS15, TS16	3	Thin-Wall Tube
A10	TS19, TS20	3	Thin-Wall Tube
A12	TS23, TS24	3	Thin-Wall Tube
A13	TS25, TS26	3	Thin-Wall Tube
A15	TS29, TS30	3	Thin-Wall Tube
A16	TS31, TS32	3	Thin-Wall Tube
A18	TS35, TS36	3	Thin-Wall Tube
B22	BT01	2	45 kg (100 lb) Bulk Sample (Lime-Treated Subgrade)
B23	BT02	2	"
B24	BT03	2	"
B25	BT04	2	"
B26	BT05	2	"
B27	BT06	2	"

TABLE B.5. SAMPLES TO BE SHIPPED TO THE FHWA-LTPP TESTING CONTRACTOR LABORATORY

Sample Location	Sample Number	Lab Test Number	Type of Sample
Asphalt Concrete			
C5	CA05	1	102 mm (4 in.) Core
C6	CA06	1	102 mm (4 in.) Core
C7	CA07	1	102 mm (4 in.) Core
C8	CA08	1	102 mm (4 in.) Core
C13	CA13	2	102 mm (4 in.) Core
C15	CA15	1	102 mm (4 in.) Core
C19	CA19	1	102 mm (4 in.) Core
C20	CA20	1	102 mm (4 in.) Core
C21	CA21	1	102 mm (4 in.) Core
C22	CA22	1	102 mm (4 in.) Core
C25	CA25	1	102 mm (4 in.) Core
C26	CA26	1	102 mm (4 in.) Core
C27	CA27	1	102 mm (4 in.) Core
C28	CA28	1	102 mm (4 in.) Core
C33	CA33	2	102 mm (4 in.) Core
C35	CA35	1	102 mm (4 in.) Core
C36	CA36	1	102 mm (4 in.) Core
C37	CA37	1	102 mm (4 in.) Core
C38	CA38	1	102 mm (4 in.) Core
C41	CA41	1	102 mm (4 in.) Core
C42	CA42	1	102 mm (4 in.) Core
C43	CA43	1	102 mm (4 in.) Core
C44	CA44	1	102 mm (4 in.) Core

TABLE B.5. SAMPLES TO BE SHIPPED TO THE FHWA-LTPP TESTING CONTRACTOR LABORATORY (Continued)

Sample Location	Sample Number	Lab Test Number	Type of Sample
C55	CA55	1	102 mm (4 in.) Core
C56	CA56	1	102 mm (4 in.) Core
C57	CA57	1	102 mm (4 in.) Core
C58	CA58	1	102 mm (4 in.) Core
Asphalt Treated Base			
C5	CT05	1	102 mm (4 in.) Core
C6	CT06	1	102 mm (4 in.) Core
C8	CT08	1	102 mm (4 in.) Core
C19	CT19	1	102 mm (4 in.) Core
C20	CT20	1	102 mm (4 in.) Core
C21	CT21	1	102 mm (4 in.) Core
C22	CT22	1	102 mm (4 in.) Core
C55	CT55	1	102 mm (4 in.) Core
C56	CT56	1	102 mm (4 in.) Core
C57	CT57	1	102 mm (4 in.) Core
C58	CT58	1	102 mm (4 in.) Core
Dense-Graded Aggregate Base			
B7	BG01	2	136 kg (300 lb) Bulk Sample
B8	BG02	2	136 kg (300 lb) Bulk Sample
B9	BG03	2	136 kg (300 lb) Bulk Sample
B7	MG01	2	Moisture Content Jar Sample
B8	MG02	2	Moisture Content Jar Sample
B9	MG03	2	Moisture Content Jar Sample

TABLE B.5. SAMPLES TO BE SHIPPED TO THE FHWA-LTPP TESTING CONTRACTOR LABORATORY (Continued)

Sample Location	Sample Number	Lab Test Number	Type of Sample
Subgrade \ Lime-treated Subgrade			
B1 \B22	BS01 \BT01	2 \2	136 kg (300 lb) Bulk Sample \ "
B2 \B23	BS02 \BT02	2 \2	136 kg (300 lb) Bulk Sample \ "
B3 \B24	BS03 \BT03	2 \2	136 kg (300 lb) Bulk Sample \ "
B4 \B25	BS04 \BT04	2 \2	136 kg (300 lb) Bulk Sample \ "
B5 \B26	BS05 \BT05	2 \2	136 kg (300 lb) Bulk Sample \ "
B6 \B27	BS06 \BT06	2 \2	136 kg (300 lb) Bulk Sample \ "
A2	TS03	3	Thin wall Tube Sample
A2	TS04	3	Thin wall Tube Sample
A5	TS09	3	Thin wall Tube Sample
A5	TS10	3	Thin wall Tube Sample
A9	TS17	3	Thin wall Tube Sample
A9	TS18	3	Thin wall Tube Sample
A11	TS21	3	Thin wall Tube Sample
A11	TS22	3	Thin wall Tube Sample
A14	TS27	3	Thin wall Tube Sample
A14	TS28	3	Thin wall Tube Sample
A17	TS33	3	Thin wall Tube Sample
A17	TS34	3	Thin wall Tube Sample
B1	MS01	2	Moisture Content Jar Sample
B2	MS02	2	Moisture Content Jar Sample
B3	MS03	2	Moisture Content Jar Sample
B4	MS04	2	Moisture Content Jar Sample
B5	MS05	2	Moisture Content Jar Sample
B6	MS06	2	Moisture Content Jar Sample

SECTION C

LABORATORY MATERIAL TESTING

SECTION C

LABORATORY MATERIAL TESTING

It is the intent of this section of the sampling and testing plan to provide an outline for the laboratory testing that is planned for the Oklahoma SPS-1 project. The previous section ended with lists of samples to be shipped to each of two laboratories; the state designated laboratory and the FHWA/LTPP contracted laboratory. In this section, the tests to be performed on each sample are listed.

Table C.1 provides a reference project layer numbering scheme. It is important that the two laboratories reference the same layer by number to ensure meaningful results.

Table C.2 provides a listing of the tests to be performed for each material type and pavement layer, and the associated laboratory testing protocol. It is imperative that the protocols listed be strictly followed during testing.

Tables C.3 through C.8 provide tracking tables for the state designated laboratory for each material type. These tables itemize the testing to occur on each sample and provide an indication of whether the sample is to be disposed of. Tables C.9 through C.14 provide similar information for the FHWA/LTPP contracted laboratory.

TABLE C.1. PROJECT LAYER NUMBERING

Layer Nº.	LTPP Description	Oklahoma Description
1	Subgrade	Subgrade
2	Dense Graded Aggregate Base (DGAB)	Aggregate Base - Type A (Item 303.06)
3	Permeable Asphalt Treated Base (PATB)	Open Graded Bituminous Base (OGBB) (Item 319.06)
4	Dense Graded Asphalt Treated Base (ATB)	Bituminous Base Coarse Aggregate Type (CABB) (Item 315.06(C))
5	Hot Mix Asphalt Concrete Binder Course	Asphaltic Concrete - Type AH (Item 411.06(AH))
6	Hot Mix Asphalt Concrete Surface Course	Asphaltic Concrete - Type BH (Item 411.06(BH))

TABLE C.2. SAMPLES TO BE USED FOR LABORATORY MATERIALS TESTING

Material Type and Properties	LTPP Designation	LTPP Protocol	Minimum Nº. of Tests per Layer	Sampling Location	Test Conducted by: State	FHWA
SUBGRADE \Lime-treated Subgrade						
Sieve Analysis	SS01	P51	6	B1-B6\B22-B27		X
Hydrometer to 0.001 mm	SS02	P42	6	B1-B6\ "		X
Atterberg Limits	SS03	P43	6	B1-B6\ "		X
Classification	SS04	P52	6	B1-B6\ "		X
(Visual-manual only on thin-wall tubes)			18	A1-A18	X	X
Moisture-Density Relations	SS05	P55	6	B1-B6\B22-B27		X
Resilient Modulus	SS07	P46	6	A2, A5, A9, A11, A14, A17		X
(If thin-wall tube is not available)			6	B1-B6\B22-B27		X
Unit Weight (If thin-wall tube is not available, test is not conducted)	SS08	P56	6	A1, A4, A8, A10, A13, A16	X	
Natural Moisture Content	SS09	P49	6	B1-B6\B22-B27		X
Unconfined Comp. Strength (If thin-wall tube is not available, test is not conducted)	SS10	P54	6	A1, A4, A8, A10, A13, A16	X	
Permeability	SS11	P57	3	A3, A7, A18	X	
Permeability	UG09	P48	6	B1-B6\B22-B27	X	
DENSE GRADED AGGREGATE BASE						
Particle Size Analysis	UG01	P41	3	B7-B9		X
Sieve Analysis (Washed)	UG02	P41	3	B7-B9		X
Atterberg Limits	UG04	P43	3	B7-B9		X
Moisture-Density Relations	UG05	P44	3	B7-B9		X
Resilient Modulus	UG07	P46	3	B7-B9		X
Classification	UG08	P47	3	B7-B9		X
Permeability	UG09	P48	3	B7-B9	X	
Natural Moisture Content	UG10	P49	3	B7-B9		X
PERMEABLE ASPHALT TREATED BASE						
Asphalt Content (Extraction)	AC04	P04	3	B10-B12 From Paver	X	
Extracted Aggregate:						
Gradation of Aggregate	AG04	P14	3	B10-B12 From Paver	X	

TABLE C.2. SAMPLES TO BE USED FOR LABORATORY MATERIALS TESTING (Continued)

Material Type and Properties	LTPP Designation	LTPP Protocol	Minimum №. of Tests per Layer	Sampling Location	Test Conducted by: State	FHWA
ASPHALT TREATED BASE						
Core Examination/Thickness	AC01	P01	34	C5-C24, C31-C34, C51-C60	X	X
Bulk Specific Gravity	AC02	P02	34	C5-C24, C31-C34, C51-C60	X	X
Maximum Specific Gravity	AC03	P03	3	B13-B15 From Paver	X	
Asphalt Content (Extraction)	AC04	P04	3	B13-B15 From Paver	X	
Moisture Susceptibility	AC05	P05	3	B13-B15 From Paver	X	
Resilient Modulus	AC07	P07	9	C5-C7, C19-C21, C55-C57		X
Tensile Strength	AC07	P07	12	C5-C8, C19-C22, C55-C58		X
Extracted Aggregate.						
Specific Gravity:						
Coarse Aggregate	AG01	P11	3	B13-B15 From Paver	X	
Fine Aggregate	AG02	P12	3	B13-B15 From Paver	X	
Gradation of Aggregate	AG04	P14	3	B13-B15 From Paver	X	
NAA Test for Fine Aggregate	AG05	P14A	3	B13-B15 From Paver	X	
Particle Shape						
Asphalt Cement·						
Abson Recovery	AE01	P21	3	B13-B15 From Paver	X	
Penetration at 25°C, 46°C (77°F, 115°F)	AE02	P22	3	B13-B15 From Paver	X	
Specific Gravity 16°C (60°F)	AE03	P23	3	B13-B15 From Paver	X	
Viscosity at 25°C (77°F)	AE04	P24	3	B13-B15 From Paver	X	
Viscosity at 60°C, 135°C (140°F, 275°F)	AE05	P25	3	B13-B15 From Paver	X	
Asphalt Cement (From Tanker or Plant):						
Penetration at 25°C, 46°C (77°F, 115°F)	AE02	P22	3	B16-B18 From Plant	X	
Specific Gravity 16°C (60°F)	AE03	P23	3	B16-B18 From Plant	X	
Viscosity at 25°C (77°F)	AE04	P24	3	B16-B18 From Plant	X	
Viscosity at 60°C, 135°C (140°F, 275°F)	AE05	P25	3	B16-B18 From Plant	X	

TABLE C.2. SAMPLES TO BE USED FOR LABORATORY MATERIALS TESTING (Continued)

Material Type and Properties	LTPP Designation	LTPP Protocol	Minimum Nº. of Tests per Layer	Sampling Location	Test Conducted by: State	FHWA
ASPHALTIC CONCRETE SURFACE AND BINDER						
Core Examination/Thickness	AC01	P01	64	C1-C64	X	X
Bulk Specific Gravity	AC02	P02	64	C1-C64	X	X
Maximum Specific Gravity	AC03	P03	3	B28-B30 ~~B19~~ 16-~~B21~~ 18 From Paver	X	
Asphalt Content (Extraction)	AC04	P04	3	" ~~B19~~ 16-~~B21~~ 18 From Paver	X	
Moisture Susceptibility	AC05	P05	3	" ~~B19~~ 16-~~B21~~ 18 From Paver	X	
Creep Compliance	AC06	P06	3	C13, C15, C33		X
Resilient Modulus	AC07	P07	18	C5-C7, C19-C21, C25-C27, C35-C37, C41-C43, C55-C57		X
Tensile Strength	AC07	P07	24	C5-C8, C19-C22, C25-C28, C35-C38, C41-C44, C55-C58		X
Extracted Aggregate:						
Specific Gravity:						
Coarse Aggregate	AG01	P11	3	B28-B30 ~~B19~~ 16-~~B21~~ 18 From Paver	X	
Fine Aggregate	AG02	P12	3	" ~~B19~~ 16-~~B21~~ 18 From Paver	X	
Gradation of Aggregate	AG04	P14	3	" ~~B19~~ 16-~~B21~~ 18 From Paver	X	
NAA Test for Fine Aggregate	AG05	P14A	3	" ~~B19~~ 16-~~B21~~ 18 From Paver	X	
Particle Shape						
Asphalt Cement:						
Abson Recovery	AE01	P21	3	B19-B21 From ~~Paver~~ Plant	X	
Penetration at 25°C, 46°C (77°F, 115°F)	AE02	P22	3	B19-B21 From ~~Paver~~ "	X	
Specific Gravity 16°C (60°F)	AE03	P23	3	B19-B21 From ~~Paver~~ "	X	
Viscosity at 25°C (77°F)	AE04	P24	3	B19-B21 From ~~Paver~~ "	X	
Viscosity at 60°C, 135°C (140°F, 275°F)	AE05	P25	3	B19-B21 From ~~Paver~~ "	X	
Asphalt Cement: (From Tanker or Plant)						
Penetration at 25°C, 46°C (77°F, 115°F)	AE02	P22	3	B28-B30 ~~B22~~ 19-~~B24~~ 21 From Plant	X	
Specific Gravity 16°C (60°F)	AE03	P23	3	" ~~B22~~ 19-~~B24~~ 21 From Plant	X	
Viscosity at 25°C (77°F)	AE04	P24	3	" ~~B22~~ 19-~~B24~~ 21 From Plant	X	
Viscosity at 60°C, 135°C (140°F, 275°F)	AE05	P25	3	" ~~B22~~ 19-~~B24~~ 21 From Plant	X	

TABLE C.3. TRACKING TABLE OF ASPHALTIC CONCRETE TESTING IN THE STATE LABORATORY (OR THEIR DESIGNEE)

Sample Location	Sample Number	Lab Test Number	Steps Involved in Laboratory Handling and Testing Sequence						
			Required Laboratory Tests Per Layer				Extra Sample	Sample Storage	Sample Disposed?
			First	Second	Third	Fourth			
C1	CA01	1	AC01/P01	AC02/P02			Yes	(a)	No
C2	CA02	1	AC01/P01	AC02/P02			Yes	(a)	No
C3	CA03	2	AC01/P01	AC02/P02			Yes	(a)	No
C4	CA04	2	AC01/P01	AC02/P02			Yes	(a)	No
C9	CA09	2	AC01/P01	AC02/P02			Yes	(a)	No
C10	CA10	2	AC01/P01	AC02/P02			Yes	(a)	No
C11	CA11	1	AC01/P01	AC02/P02			Yes	(a)	No
C12	CA12	1	AC01/P01	AC02/P02			Yes	(a)	No
C14	CA14	2	AC01/P01	AC02/P02			Yes	(a)	No
C16	CA16	1	AC01/P01	AC02/P02			Yes	(a)	No
C17	CA17	2	AC01/P01	AC02/P02			Yes	(a)	No
C18	CA18	2	AC01/P01	AC02/P02			Yes	(a)	No
C23	CA23	2	AC01/P01	AC02/P02			Yes	(a)	No
C24	CA24	2	AC01/P01	AC02/P02			Yes	(a)	No
C29	CA29	2	AC01/P01	AC02/P02			Yes	(a)	No
C30	CA30	2	AC01/P01	AC02/P02			Yes	(a)	No
C31	CA31	1	AC01/P01	AC02/P02			Yes	(a)	No
C32	CA32	1	AC01/P01	AC02/P02			Yes	(a)	No
C34	CA34	2	AC01/P01	AC02/P02			Yes	(a)	No
C39	CA39	2	AC01/P01	AC02/P02			Yes	(a)	No
C40	CA40	2	AC01/P01	AC02/P02			Yes	(a)	No
C45	CA45	2	AC01/P01	AC02/P02			Yes	(a)	No
C46	CA46	2	AC01/P01	AC02/P02			Yes	(a)	No
C47	CA47	1	AC01/P01	AC02/P02			Yes	(a)	No
C48	CA48	1	AC01/P01	AC02/P02			Yes	(a)	No
C49	CA49	2	AC01/P01	AC02/P02			Yes	(a)	No

TABLE C.3. TRACKING TABLE OF ASPHALTIC CONCRETE TESTING IN THE STATE LABORATORY (OR THEIR DESIGNEE) (Continued)

Sample Location	Sample Number	Lab Test Number	Steps Involved in Laboratory Handling and Testing Sequence						
			Required Laboratory Tests Per Layer				Extra Sample	Sample Storage	Sample Disposed?
			First	Second	Third	Fourth			
C50	CA50	2	AC01/P01	AC02/P02			Yes	(a)	No
C51	CA51	1	AC01/P01	AC02/P02			Yes	(a)	No
C52	CA52	1	AC01/P01	AC02/P02			Yes	(a)	No
C53	CA53	2	AC01/P01	AC02/P02			Yes	(a)	No
C54	CA54	2	AC01/P01	AC02/P02			Yes	(a)	No
C59	CA59	2	AC01/P01	AC02/P02			Yes	(a)	No
C60	CA60	2	AC01/P01	AC02/P02			Yes	(a)	No
C61	CA61	1	AC01/P01	AC02/P02			Yes	(a)	No
C62	CA62	1	AC01/P01	AC02/P02			Yes	(a)	No
C63	CA63	2	AC01/P01	AC02/P02			Yes	(a)	No
C64	CA64	2	AC01/P01	AC02/P02			Yes	(a)	No
B~~19~~ B28 16	BA01 BA04	3 \3	See Figure C.1				No	(a)	Yes
B~~20~~ B29 17	BA02 BA05	3 \3	See Figure C.1				No	(a)	Yes
B~~21~~ B30 18	BA03 BA06	3 \3	See Figure C.1				No	(a)	Yes
B22	BC04	3	AE02/P22	AE03/P23	AE04/P24	AE05/P25	No	(a)	Yes
B23	BC05	3	AE02/P22	AE03/P23	AE04/P24	AE05/P25	No	(a)	Yes
B24	BC06	3	AE02/P22	AE03/P23	AE04/P24	AE05/P25	No	(a)	Yes

Note: All of the core specimens noted herein shall be stored for possible future use. In the future, these specimens may be used to evaluate test procedures for the SUPERPAVE program.

TABLE C.4. TRACKING TABLE OF ASPHALT TREATED BASE TESTING IN THE STATE LABORATORY (OR THEIR DESIGNEE)

Sample Location	Sample Number	Lab Test Number	Steps Involved in Laboratory Handling and Testing Sequence						
			Required Laboratory Tests Per Layer				Extra Sample	Sample Storage	Sample Disposed?
			First	Second	Third	Fourth			
C9	CT09	2	AC01/P01	AC02/P02			Yes	(a)	No
C10	CT10	2	AC01/P01	AC02/P02			Yes	(a)	No
C11	CT11	1	AC01/P01	AC02/P02			Yes	(a)	No
C12	CT12	1	AC01/P01	AC02/P02			Yes	(a)	No
C14	CT14	2	AC01/P01	AC02/P02			Yes	(a)	No
C16	CT16	1	AC01/P01	AC02/P02			Yes	(a)	No
C17	CT17	2	AC01/P01	AC02/P02			Yes	(a)	No
C18	CT18	2	AC01/P01	AC02/P02			Yes	(a)	No
C23	CT23	2	AC01/P01	AC02/P02			Yes	(a)	No
C24	CT24	2	AC01/P01	AC02/P02			Yes	(a)	No
C31	CT31	1	AC01/P01	AC02/P02			Yes	(a)	No
C32	CT32	1	AC01/P01	AC02/P02			Yes	(a)	No
C34	CT34	2	AC01/P01	AC02/P02			Yes	(a)	No
C51	CT51	1	AC01/P01	AC02/P02			Yes	(a)	No
C52	CT52	1	AC01/P01	AC02/P02			Yes	(a)	No
C53	CT53	2	AC01/P01	AC02/P02			Yes	(a)	No
C54	CT54	2	AC01/P01	AC02/P02			Yes	(a)	No
C59	CT59	2	AC01/P01	AC02/P02			Yes	(a)	No
C60	CT60	2	AC01/P01	AC02/P02			Yes	(a)	No
B13	BT20	3	See Figure C.1				No	(a)	Yes
B14	BT21	3	See Figure C.1				No	(a)	Yes
B15	BT22	3	See Figure C.1				No	(a)	Yes
B16	BC01	3	AE02/P22	AE03/P23	AE04/P24	AE05/P25	No	(a)	Yes
B17	BC02	3	AE02/P22	AE03/P23	AE04/P24	AE05/P25	No	(a)	Yes
B18	BC03	3	AE02/P22	AE03/P23	AE04/P24	AE05/P25	No	(a)	Yes

TABLE C.5. TRACKING TABLE OF PERMEABLE ASPHALT TREATED BASE TESTING IN THE STATE LABORATORY (OR THEIR DESIGNEE)

Sample Location	Sample Number	Lab Test Number	Steps Involved in Laboratory Handling and Testing Sequence						
			Required Laboratory Tests Per Layer				Extra Sample	Sample Storage	Sample Disposed?
			First	Second	Third	Fourth			
B10	BT01	3	AC04/P04	AG04/P14			No	(a)	Yes
B11	BT02	3	AC04/P04	AG04/P14			No	(a)	Yes
B12	BT03	3	AC04/P04	AG04/P14			No	(a)	Yes

TABLE C.6. TRACKING TABLE OF DENSE GRADED AGGREGATEBASE TESTING IN THE STATE LABORATORY(OR THEIR DESIGNEE)

Sample Location	Sample Number	Lab Test Number	Steps Involved in Laboratory Handling and Testing Sequence						
			Required Laboratory Tests Per Layer				Extra Sample	Sample Storage	Sample Disposed?
			First	Second	Third	Fourth			
B7	BG01	2	UG09/P48				No	(b)	Yes
B8	BG02	2	UG09/P48				No	(b)	Yes
B9	BG03	2	UG09/P48				No	(b)	Yes

TABLE C.7. TRACKING TABLE OF SUBGRADE TESTING \Lime-Treated Subgrade IN THE STATE LABORATORY(OR THEIR DESIGNEE)

Sample Location	Sample Number	Lab Test Number	Steps Involved in Laboratory Handling and Testing Sequence						
			Required Laboratory Tests Per Layer				Extra Sample	Sample Storage	Sample Disposed?
			First	Second	Third	Fourth			
B1 \B22	BS01 \BT01	2 \2	No testing - samples stored				Yes	(b)	No
B2 \B23	BS02 \BT02	2 \2	No testing - samples stored				Yes	(b)	No
B3 \B24	BS03 \BT03	2 \2	No testing - samples stored				Yes	(b)	No
B4 \B25	BS04 \BT04	2 \2	No testing - samples stored				Yes	(b)	No
B5 \B26	BS05 \BT05	2 \2	No testing - samples stored				Yes	(b)	No
B6 \B27	BS06 \BT06	2 \2	No testing - samples stored				Yes	(b)	No
A1	TS01	3	SS04/P52	SS08/P56	SS10/P54		No	(c)	Yes
A3	TS05	3	SS04/P52	SS11/P57			No	(c)	Yes
A4	TS07	3	SS04/P52	SS08/P56	SS10/P54		No	(c)	Yes
A6	TS11	3	SS04/P52				No	(c)	Yes
A7	TS13	3	SS04/P52	SS11/P57			No	(c)	Yes
A8	TS15	3	SS04/P52	SS08/P56	SS10/P54		No	(c)	Yes
A10	TS19	3	SS04/P52	SS08/P56	SS10/P54		No	(c)	Yes
A12	TS23	3	SS04/P52				No	(c)	Yes
A13	TS25	3	SS04/P52	SS08/P56	SS10/P54		No	(c)	Yes
A15	TS29	3	SS04/P52				No	(c)	Yes
A16	TS31	3	SS04/P52	SS08/P56	SS10/P54		No	(c)	Yes
A18	TS35	3	SS04/P52	SS11/P57			No	(c)	Yes
A3	TS06	3					Yes	(c)	No
A4	TS08	3					Yes	(c)	No
A6	TS12	3					Yes	(c)	No
A7	TS14	3					Yes	(c)	No
A8	TS16	3					Yes	(c)	No
A10	TS20	3					Yes	(c)	No
A12	TS24	3					Yes	(c)	No
A13	TS26	3					Yes	(c)	No
A15	TS30	3					Yes	(c)	No
A16	TS32	3					Yes	(c)	No
A18	TS36	3					Yes	(c)	No

TABLE C.8. TRACKING TABLE OF ASPHALTIC CONCRETE TESTING IN THE FHWA-LTPP TESTING CONTRACTOR LABORATORY

Sample Location	Sample Number	Lab Test Number	Steps Involved in Laboratory Handling and Testing Sequence						
			Required Laboratory Tests Per Layer				Extra Sample	Sample Storage	Sample Disposed?
			First	Second	Third	Fourth			
C5	CA05	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C6	CA06	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C7	CA07	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C8	CA08	1	AC01/P01	AC02/P02		AC07/P07 (ITS)	No	(a)	Yes
C13	CA13	2	AC01/P01	AC02/P02	AC06/P06		No	(a)	Yes
C15	CA15	1	AC01/P01	AC02/P02	AC06/P06		No	(a)	Yes
C19	CA19	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C20	CA20	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C21	CA21	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C22	CA22	1	AC01/P01	AC02/P02		AC07/P07 (ITS)	No	(a)	Yes
C25	CA25	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C26	CA26	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C27	CA27	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C28	CA28	1	AC01/P01	AC02/P02		AC07/P07 (ITS)	No	(a)	Yes
C33	CA33	2	AC01/P01	AC02/P02	AC06/P06		No	(a)	Yes
C35	CA35	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C36	CA36	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C37	CA37	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C38	CA38	1	AC01/P01	AC02/P02		AC07/P07 (ITS)	No	(a)	Yes
C41	CA41	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C42	CA42	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C43	CA43	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C44	CA44	1	AC01/P01	AC02/P02		AC07/P07 (ITS)	No	(a)	Yes
C55	CA55	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C56	CA56	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C57	CA57	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C58	CA58	1	AC01/P01	AC02/P02		AC07/P07 (ITS)	No	(a)	Yes

TABLE C.9. TRACKING TABLE OF ASPHALT TREATED BASE TESTING IN THE FHWA-LTPP TESTING CONTRACTOR LABORATORY

Sample Location	Sample Number	Lab Test Number	Steps Involved in Laboratory Handling and Testing Sequence						
			Required Laboratory Tests Per Layer				Extra Sample	Sample Storage	Sample Disposed?
			First	Second	Third	Fourth			
C5	CT05	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C6	CT06	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C7	CT07	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C8	CT08	1	AC01/P01	AC02/P02		AC07/P07 (ITS)	No	(a)	Yes
C13	CT13	2	AC01/P01	AC02/P02			Yes	(a)	No
C15	CT15	1	AC01/P01	AC02/P02			Yes	(a)	No
C19	CT19	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C20	CT20	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C21	CT21	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C22	CT22	1	AC01/P01	AC02/P02		AC07/P07 (ITS)	No	(a)	Yes
C33	CT33	2	AC01/P01	AC02/P02			Yes	(a)	No
C55	CT55	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C56	CT56	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C57	CT57	1	AC01/P01	AC02/P02	AC07/P07	AC07/P07 (ITS)	No	(a)	Yes
C58	CT58	1	AC01/P01	AC02/P02		AC07/P07 (ITS)	No	(a)	Yes

TABLE C.10. TRACKING TABLE OF PERMEABLE ASPHALT TREATED BASE TESTING IN THE FHWA-LTPP TESTING CONTRACTOR LABORATORY

Sample Location	Sample Number	Lab Test Number	Steps Involved in Laboratory Handling and Testing Sequence						
			Required Laboratory Tests Per Layer (4)				Extra Sample	Sample Storage	Sample Disposed?
			First	Second	Third	Fourth			
No permeable asphalt treated base testing will be conducted by the FWHA-LTPP Testing Contractor									

TABLE C.11. TRACKING TABLE OF DENSE GRADED AGGREGATE BASE TESTING IN THE FHWA-LTPP TESTING CONTRACTOR LABORATORY

Sample Location	Sample No.	Lab Test No.	Steps Involved in Laboratory Handling and Testing Sequence								
			Required Laboratory Tests Per Layer						Extra Sample	Sample Storage	Sample Disposed ?
			First	Second	Third	Fourth	Fifth	Sixth			
B7	BG01	2	UG01/P41	UG02/P41	UG04/P43	UG08/P47	UG05/P44	UG07/P46	No	(b)	Yes
B8	BG02	2	UG01/P41	UG02/P41	UG04/P43	UG08/P47	UG05/P44	UG07/P46	No	(b)	Yes
B9	BG03	2	UG01/P41	UG02/P41	UG04/P43	UG08/P47	UG05/P44	UG07/P46	No	(b)	Yes
B7	MG01	2	UG10/P49						No	(b)	Yes
B8	MG02	2	UG10/P49						No	(b)	Yes
B9	MG03	2	UG10/P49						No	(b)	Yes

TABLE C.12. TRACKING TABLE OF SUBGRADE TESTING\Lime-Treated Subgrade IN THE FHWA-LTPP TESTING CONTRACTOR LABORATORY

Sample Location	Sample No.	Lab Test No.	Steps Involved in Laboratory Handling and Testing Sequence								
			Required Laboratory Tests Per Layer						Extra Sample	Sample Storage	Sample Disposed ?
			First	Second	Third	Fourth	Fifth	Sixth			
B1\B22	BT01 BS01\	2\2	SS01/P51	SS02/P42	SS03/P43	SS04/P52	SS05/P55		No	(b)	Yes
B2\B23	BT02 BS02\	2\2	SS01/P51	SS02/P42	SS03/P43	SS04/P52	SS05/P55		No	(b)	Yes
B3\B24	BT03 BS03\	2\2	SS01/P51	SS02/P42	SS03/P43	SS04/P52	SS05/P55		No	(b)	Yes
B4\B25	BT04 BS04\	2\2	SS01/P51	SS02/P42	SS03/P43	SS04/P52	SS05/P55		No	(b)	Yes
B5\B26	BT05 BS05\	2\2	SS01/P51	SS02/P42	SS03/P43	SS04/P52	SS05/P55		No	(b)	Yes
B6\B27	BT06 BS06\	2\2	SS01/P51	SS02/P42	SS03/P43	SS04/P52	SS05/P55		No	(b)	Yes
A2	TS03	3	SS04/P52	SS07/P46					No	(c)	Yes
A5	TS09	3	SS04/P52	SS07/P46					No	(c)	Yes
A9	TS17	3	SS04/P52	SS07/P46					No	(c)	Yes
A11	TS21	3	SS04/P52	SS07/P46					No	(c)	Yes
A14	TS27	3	SS04/P52	SS07/P46					No	(c)	Yes
A17	TS33	3	SS04/P52	SS07/P46					No	(c)	Yes
B1	MS01	2	SS09/P49	SS07/P46 *					No	(b)	Yes
B2	MS02	2	SS09/P49	SS07/P46 *					No	(b)	Yes
B3	MS03	2	SS09/P49	SS07/P46 *					No	(b)	Yes
B4	MS04	2	SS09/P49	SS07/P46 *					No	(b)	Yes
B5	MS05	2	SS09/P49	SS07/P46 *					No	(b)	Yes
B6	MS06	2	SS09/P49	SS07/P46 *					No	(b)	Yes
A2	TS04	3							Yes	(c)	No
A5	TS10	3							Yes	(c)	No
A9	TS18	3							Yes	(c)	No
A11	TS22	3							Yes	(c)	No
A14	TS28	3							Yes	(c)	No
A17	TS34	3							Yes	(c)	No

* **Note:** SS07/P46 testing for bulk subgrade samples only required when tube samples are not available or suitable for testing.

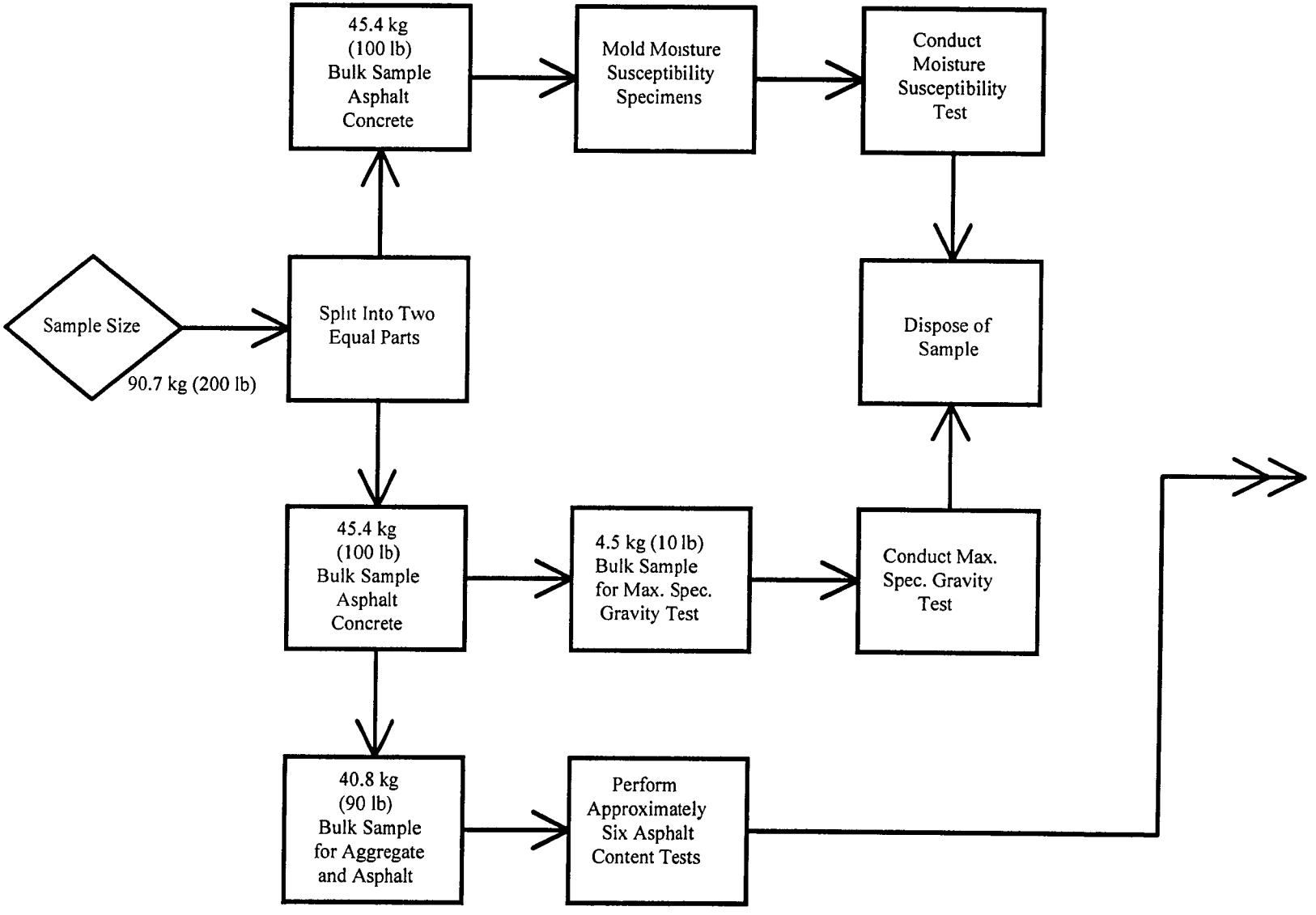


FIGURE C.1. FLOWCHART FOR ASPHALT CONCRETE BULK SAMPLES

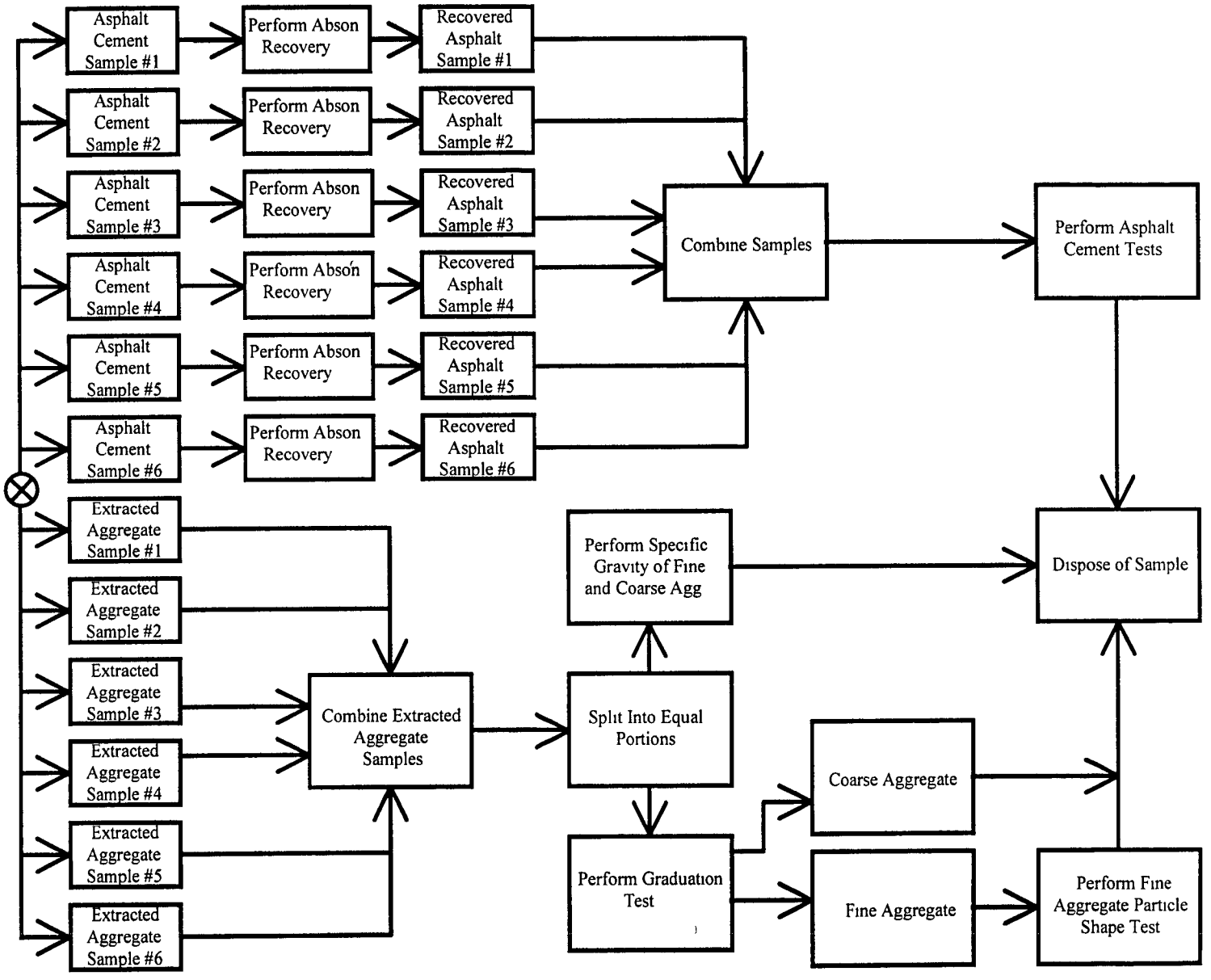


FIGURE C.1. FLOWCHART FOR ASPHALT CONCRETE BULK SAMPLES (Continued)

APPENDIX D

CONSTRUCTION DATA

Sub: July 11, 1996

SURVEY CONTROL DATA

1. HORIZONTAL CONTROL :

A. HORIZONTAL CONTROL FOR THIS SURVEY IS THE OKLAHOMA STATE DEPARTMENT OF TRANSPORTATION PLANE COORDINATE SYSTEM LAMBERT PROJECTION (SOUTH ZONE) ALL COORDINATES SHOWN ARE OKLAHOMA STATE DEPARTMENT OF TRANSPORTATION PLANE COORDINATES WHICH WERE DERIVED BY MULTIPLYING THE USC&GS OKLAHOMA PLANE COORDINATES BY THE COMBINED ADJUSTMENT FACTOR OF 1.00010 THE OKLAHOMA STATE DEPARTMENT OF TRANSPORTATION COORDINATE SYSTEM PLANE IS 2350 FEET ABOVE THE OKLAHOMA USC&GS PLANE.

B. ACCURACY - 1ST ORDER OR BETTER

2. BEARINGS :

THE BEARINGS SHOWN HEREIN OR HEREON ARE GRID BEARINGS DERIVED FROM THE USC&GS OKLAHOMA PLANE COORDINATE SYSTEM AND ARE NOT ASTRONOMICAL THE ANGLE OF VARIANCE BETWEEN GRID NORTH (GN) AND THE ASTRONOMICAL TRUE NORTH (TN) IS DEPICTED DIAGRAMMATICALLY

3. VERTICAL CONTROLS :

A. LEVEL DATUM IS MEAN SEA LEVEL (USC&GS)

B. ACCURACY - 2ND ORDER OR BETTER

DESIGN DATA	
ADT 1994	= 4,350
ADT 2014	= 7,850
DHV(ONE WAY)	518
X(DHV/ADT-TRD WAY)	= 12%
D	= 55%
T (% OF DHV)	= 13%
T (% ADT)	= 17%
T3 (% OF ADT)	= 13%
V	= 70 MPH

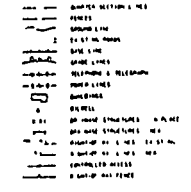
SCALES

PLAN 1" = 100'

PROFILE HOR 1" = 100'

VER 1" = 10'

LAYOUT MAP 1" = 5 280'



1986 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION GOVERN, APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, JANUARY 3, 1989 SUPPLEMENTAL SPECIFICATIONS TO THE 1988 STANDARD SPECIFICATIONS TO GOVERN OVER THE STANDARD SPECIFICATIONS.

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

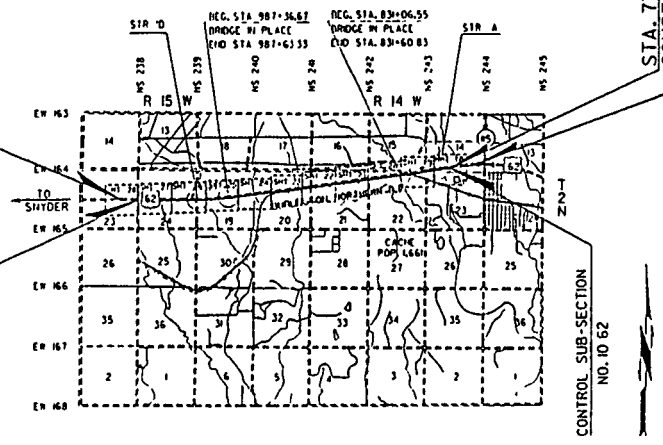
PLAN OF PROPOSED
STATE HIGHWAY
SURFACING PLANS
FEDERAL AID PROJECT NO. NH-215(60)
U.S. HIGHWAY NO. 62
COMANCHE COUNTY
STATE JOB NO. 04040(06)
CONTROL SECTION NO. 62-16-03

STA. 1080+00 END INCIDENTAL CONST.

STA. 1072+50.00 END FEDERAL AID PROJECT NO. NH-215(60) BEGIN INCIDENTAL CONST.

STA. 775+00.00 END INCIDENTAL CONST. BEG. FED. AID PROJ. NO. NH-215(60)

STA. 771+00.00 BEG. INCIDENTAL CONST.



ROADWAY LENGTH 29,064.78 FT. 5.504 MI.
BRIDGE LENGTH 0.00 FT. 0.000 MI.
PROJECT LENGTH 5.504 MI.

EQUATIONS : STA. 1016+43.83 BK. = STA 1016+43.31 FWD

BRIDGE EXCEPTION: STA 792+19.17 - STA 795+80.83 L=361.66
STA. 1018+53.98 - STA. 1021+77.32 L=323.34

INDEX OF SHEETS

1	Title Sheet
2-6	Typical Section
7	Transition Details
8 9	Summary of Pay Quantities (Roadway)
10 11	Summary of Pay Quantities (Traffic)
12 14	Summary Sheet
15	Drainage Area Map
16	Drainage Structure Design Record
17	Stormwater Pollution Prevention Plan
18	Culvert End Treatment Single Pipe Installation 6 to 1 Safety Slope
19	Details of Pavement Edge Drain
20 21	Rumble Strip
22-23	Erosion Control Detail Sheet
24	Grout Roll Extruder Terminal
25 26	Details of Drains At End of Bridge (Without Guardrail)
27	Automated Weather Station Details
28 38	Plan and Profile Sheet
39	Sign Summary Sheet
40 45	Signing and Striping Sheet
46-48	Cross Sections

THE FOLLOWING STANDARDS WILL BE REQUIRED FOR THIS PROJECT

SMD 1-22	TCD-10 5	RSD 1 25
SPI 2 3	TCD 15 0	RSD 3-11
PCES 2 2	TCD 19 0	WSD 6 5
SUEL 4 0	RDSD 1 2	MOD 1 3
GRH 2-7	GMS 1 22	MSD 1 17
GRAU 3 4	GMS 2 20	MSD 3 11
TCD-1 11	SSA-1A 1	MSD 5A 1
TCD-1A-1	SSP 1 1	SBS-1A 1
TCD-3-5	PM-1-16	SBS-2A-1
TCD-5-9	PM-3 10	FHTMP 3 2
TCD-6-6	PM-4 12	FHTCP 1 1
TCD 7 6	RMF 6 4	

PREPARED BY
OKLAHOMA DEPARTMENT OF TRANSPORTATION
RURAL DESIGN DIVISION

10 Apr 96 Rosemarie Lynn Case
DATE ROSEMARIE LYNN CASE
OKLA REG NO 15868

OKLAHOMA DEPARTMENT OF TRANSPORTATION
DATE APPROVED
BY
CHIEF ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED
BY
DIVISION ADMINISTRATOR

COMANCHE COUNTY

ENGINEERING MANAGER : R. CASE
PROJ ENGINEER : J.
CHECKED :

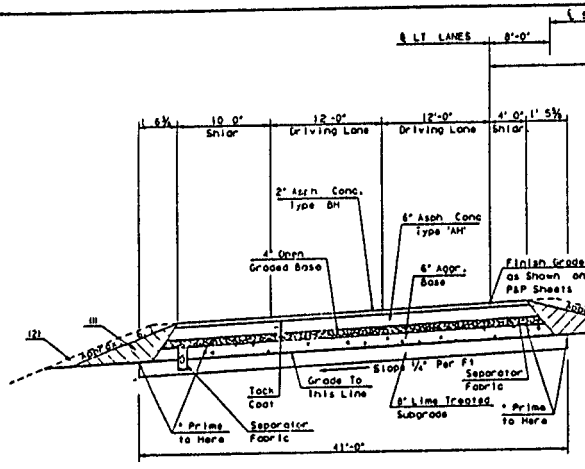
SQUAD SUPERVISOR : D.K. STOUT
SQUAD MEMBERS : S. PRICE

ASSISTANT : J. ARMSTRONG

SQUAD SUPER :

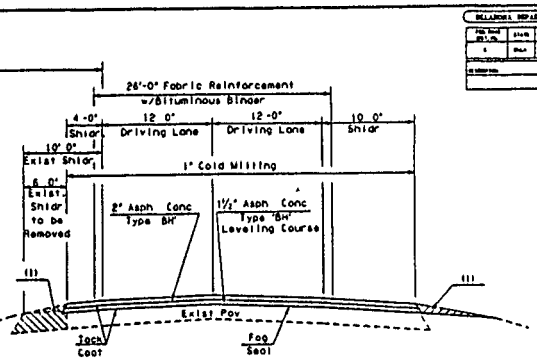
CASE / STOUT
P.E. NO. 04040 (01)

D.2

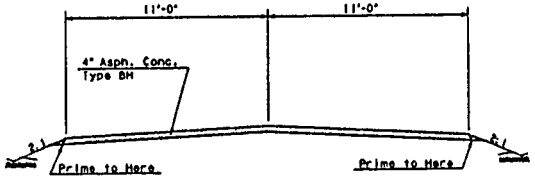


* Prime Coat to be Placed Immediately Following Lime Subgrade Modification to Retain Moisture for Chemical Reaction.

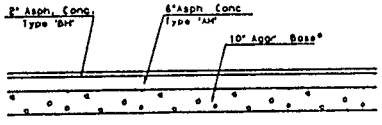
NEW CONSTRUCTION TYPICAL SECTION
EASTBOUND LANE
STA. 775+00.00 TO STA. 1072+50.00



OVERLAY TYPICAL SECTION
WESTBOUND LANE
STA. 830+00.00 TO STA. 949+00.00

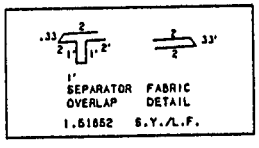


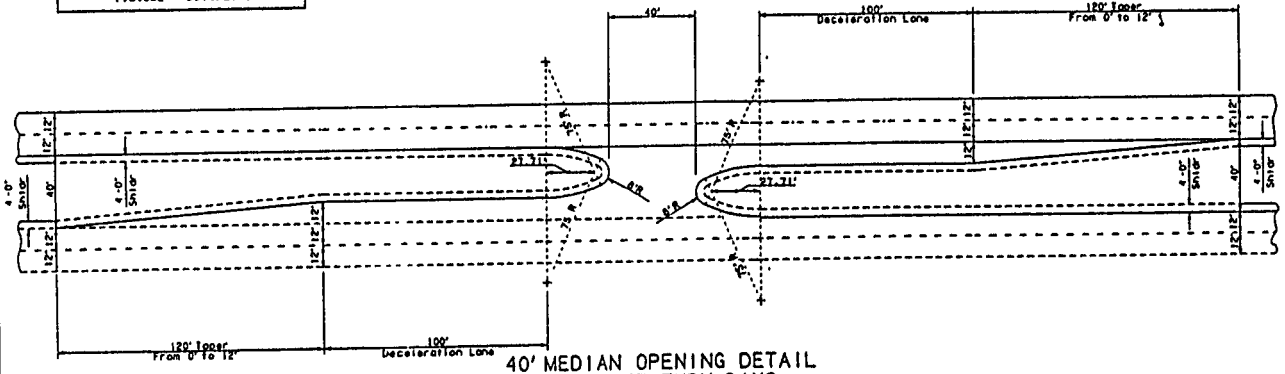
TYPICAL SECTION
COUNTY ROAD



MEDIAN OPENING TYPICAL

* Vary Depth of Agg. Base In SHRP Section to Match Grade of Adjoining Pavement





40' MEDIAN OPENING DETAIL
AND LEFT TURN BAYS

① BACKFILL NOTE:

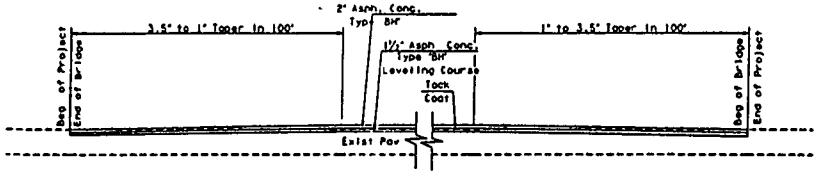
To Be Backfilled And Compacted As Part Of The Finishing Operations

② TOPSOIL NOTE:

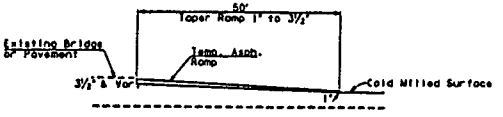
Topsoil Shall Be Spread Approx 5" Thick, First On Completed Backfill Areas And The Remainder On Other Priority Areas Located By The Engineer

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION DESIGN DIVISION
DRAWN		TYPICAL SECTION
CHECKED		
APPROVED		
SEAL	DR Stout	STATE JOB NO 04040(06) SHEET NO 2

Comanche Co.

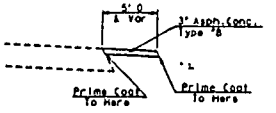


COLD MILLING TYPICAL SECTION
WESTBOUND LANE

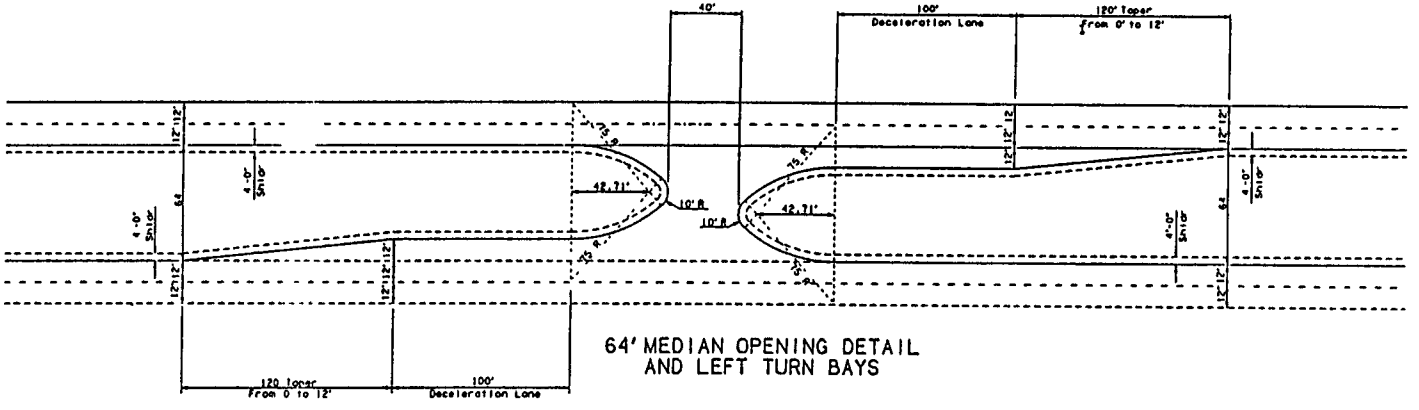


TEMP. ASPH. RAMP DETAIL

To Maintain the Safe Passage of Traffic, Place Temp Asph Ramps In a Manner Approved by the Engineer at all Locations Where a Height Change Greater than 1½ inches Will be Left Overnight. These Locations Include, but are not Limited to, the Beginning & End of the Project, Bridge and SHRP Control Section. Remove the Temp Ramps in a Manner Approved by the Engineer Before Placing the Permanent Asphalt



WIDENING FOR GUARD RAIL



64' MEDIAN OPENING DETAIL
AND LEFT TURN BAYS

EROSION CONTROL TYPICAL SECTION

1 - Mulch Sodding

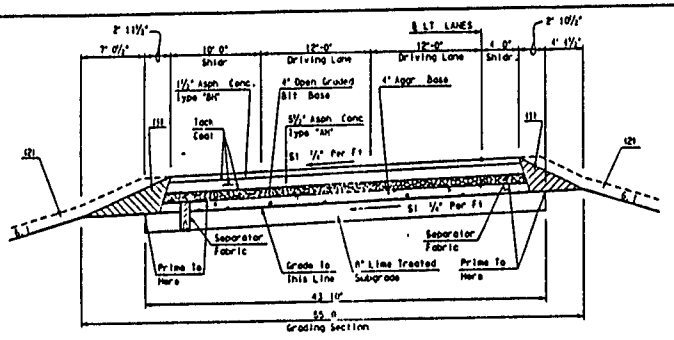
Vegetative Mulching shall be used as temporary erosion control protection.

DESIGN		
DRAWN		
CHECKED		
APPROVED		
SEAL	DR. Stout	

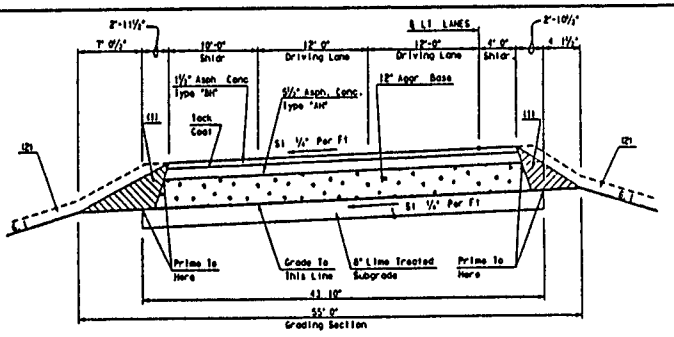
TYPICAL SECTION

STATE JOB NO. 0404010061 SHEET NO. 3

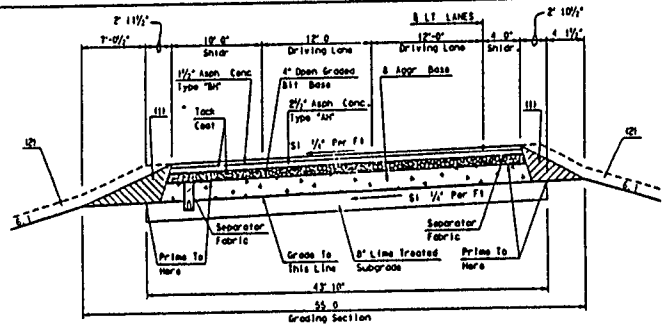
Comanche Co



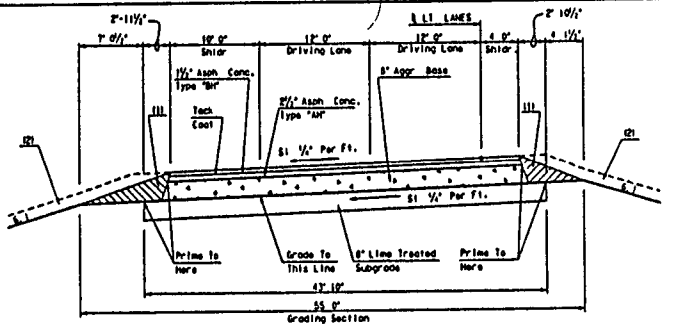
#19
STA. 875+00.00 TO STA. 894+00.00



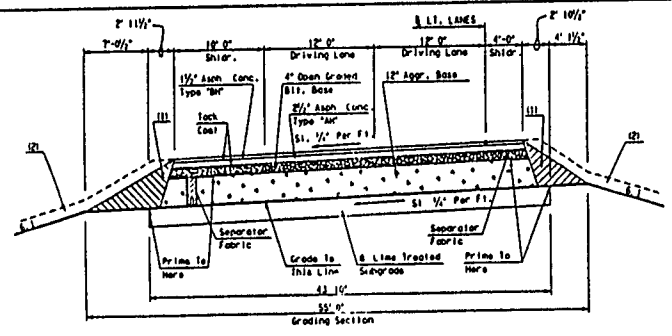
#14
STA. 950+00.00 TO STA. 975+00.00



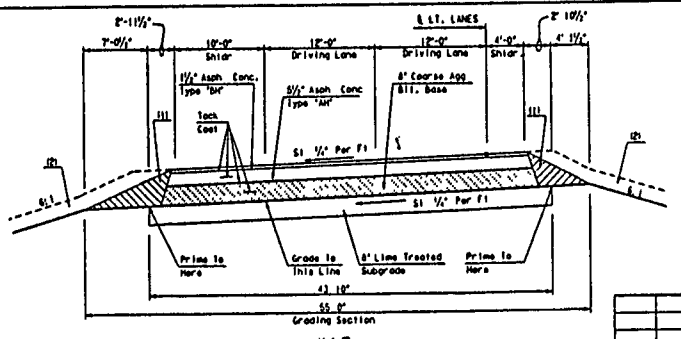
#20
STA. 864+00.00 TO STA. 871+00.00



#13
STA. 905+00.00 TO STA. 912+00.00



#21
STA. 851+00.00 TO STA. 858+00.00



#15
STA. 925+00.00 TO STA. 932+00.00

① BACKFILL NOTE:
To Be Backfilled And Compacted As Part Of The Finishing Operations

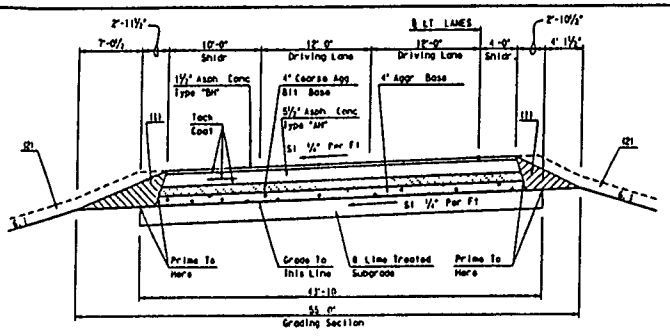
OKLAHOMA DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION

TYPICAL SECTION

STATE JOB NO 04040(061) SHEET NO 4

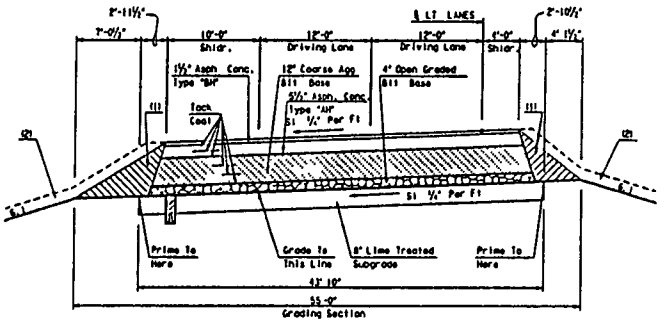
Comanche Co

APPROVED
SOLID DK Stout



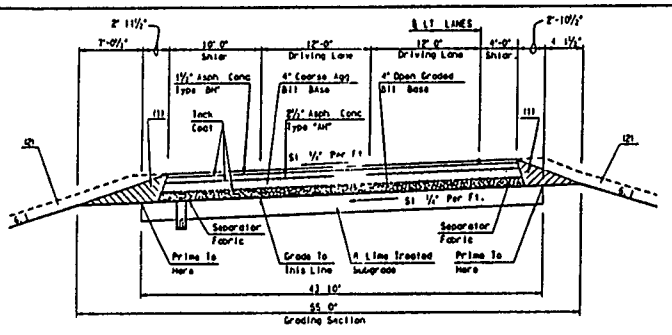
#17

STA. 916+00.00 TO STA. 923+00.00



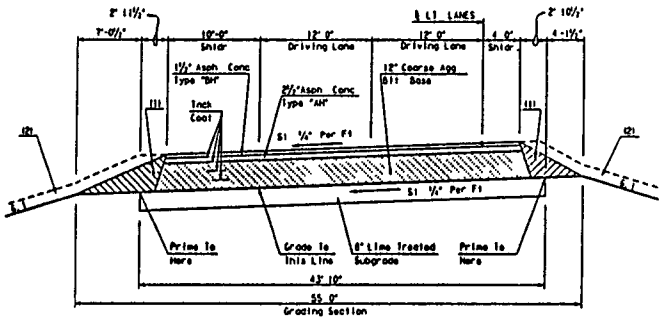
#24

STA. 832+00.00 TO STA. 839+00.00



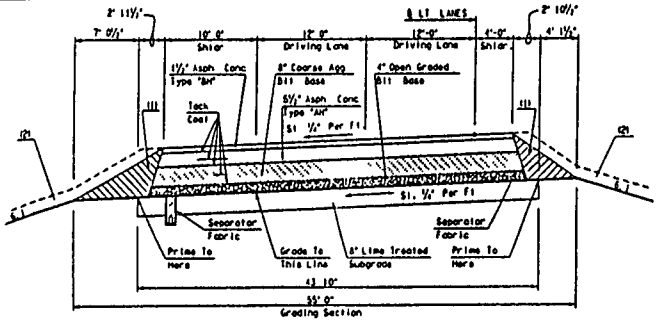
#22

STA. 897+00.00 TO STA. 904+00.00



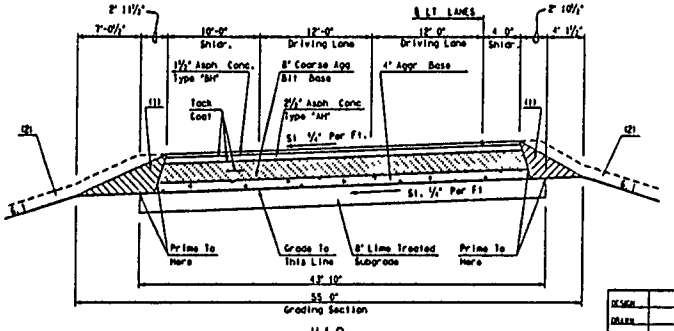
#16

STA. 933+00.00 TO STA. 940+00.00



#23

STA. 841+00.00 TO STA. 848+00.00



#18

STA. 941+00.00 TO STA. 948+00.00

OKLAHOMA DEPARTMENT OF TRANSPORTATION

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.			

(1) BACKFILL NOTE:

To Be Backfilled And Compacted As Part Of The Finishing Operations

DESIGN	
DRAWN	
CHECKED	
APPROVED	
SOLID	DF Stout

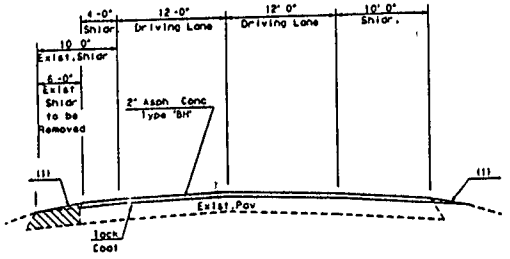
OKLAHOMA DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION

TYPICAL SECTION

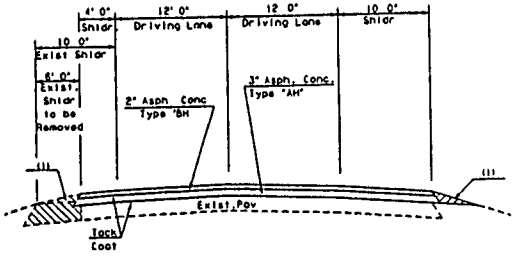
STATE JOB NO 0504040061 SHEET NO 5

Comanche Co

STA. 832+00 TO STA. 839+00 CONTROL SECTION
(NO OVERLAY)

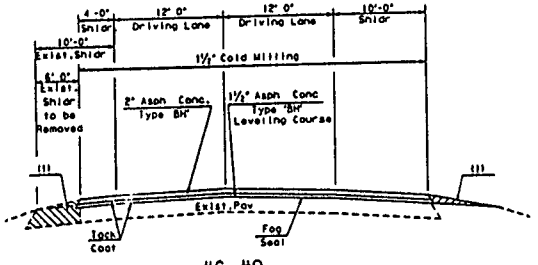


#2, #5
STA. 840+00.00 TO STA. 848+00.00 (RECYCLED AC)
STA. 941+00.00 TO STA. 948+00.00 (VIRGIN AC)

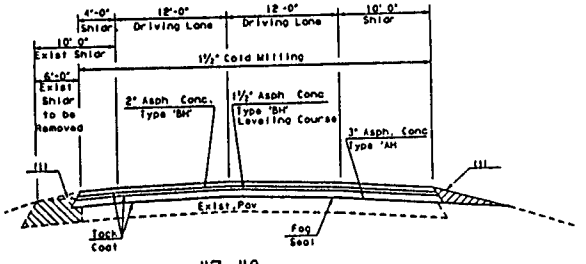


#3, #4
STA. 851+00.00 TO STA. 862+00.00 (RECYCLED AC)
STA. 924+00.00 TO STA. 939+00.00 (VIRGIN AC)

(1) BACKFILL NOTE:
To Be Backfilled And Compacted As Part Of The Finishing Operations

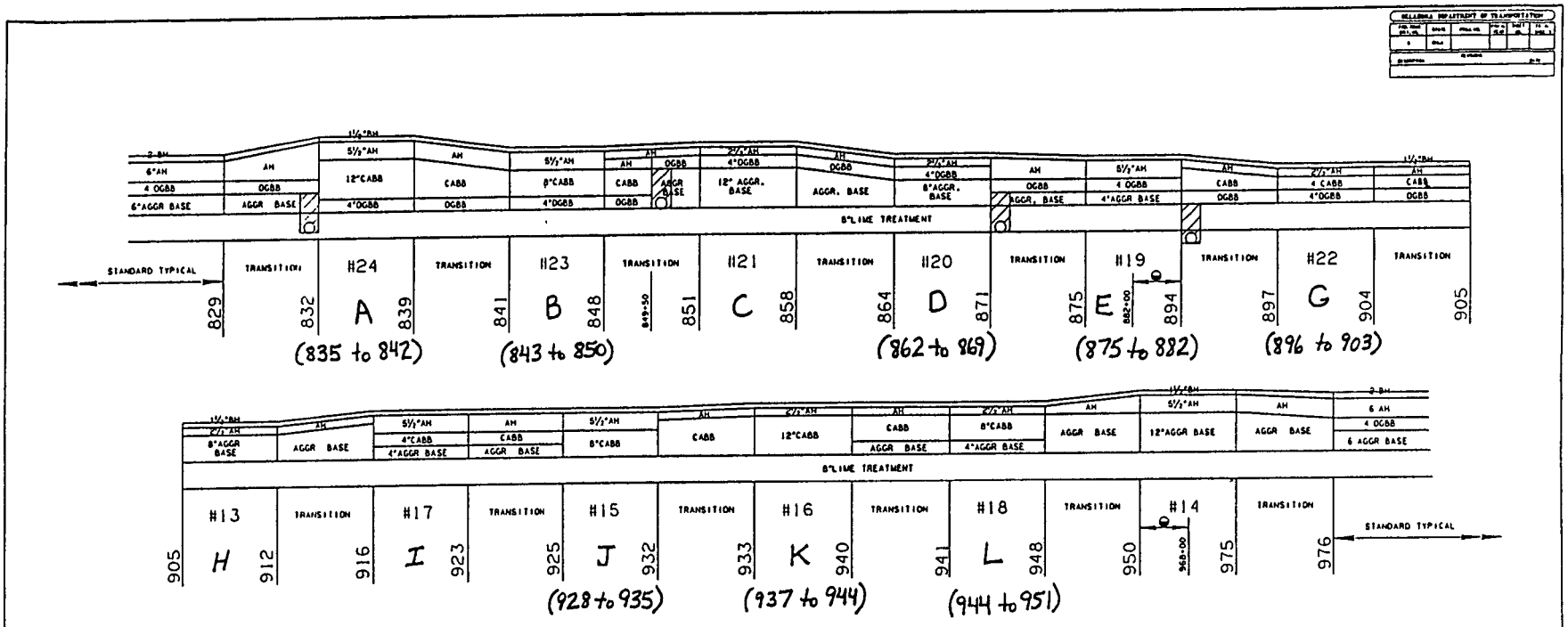


#6, #9
STA. 882+00.00 TO STA. 897+00.00 (EITHER VIRGIN OR RECYCLED AC)
STA. 897+00.00 TO STA. 914+00.00 (VIRGIN AC)
STA. 873+00.00 TO STA. 882+00.00 (RECYCLED AC)



#7, #8
STA. 864+00.00 TO STA. 871+00.00 (RECYCLED AC)
STA. 916+00.00 TO STA. 923+00.00 (VIRGIN AC)

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION DESIGN DIVISION
DRAWN		TYPICAL SECTION
CHECKED		STATE JOB NO 04040(06) SHEET NO 4
APPROVED		Comanche Co
SOUND	Dr Stout	



Typical Section Extends Beyond Test Section To Shorten Transition Length

Edge Drain
Cross Drain For Change In Typical

Contractor May Alter Transition Lifts With The Approval Of The Engineer

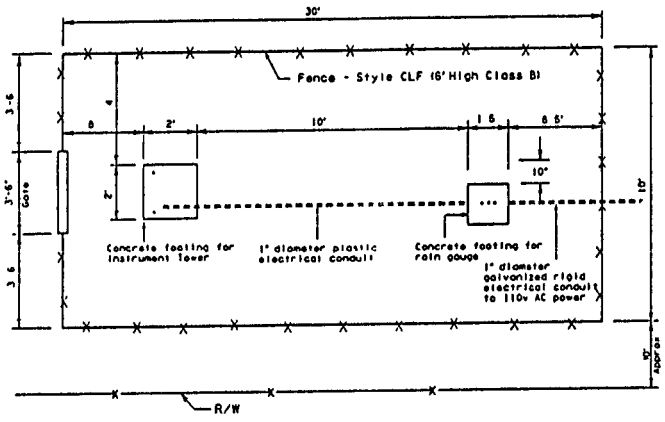
NOT TO SCALE

OKLAHOMA DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION

TRANSITION DETAILS

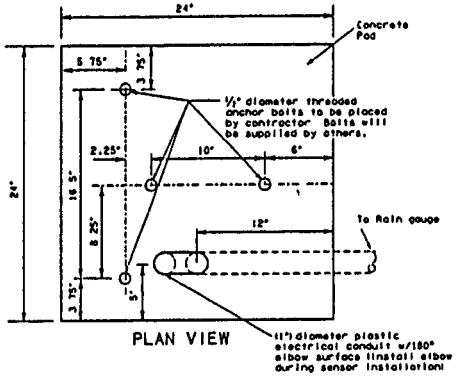
PROJECT NO J/P No 040401061 SHEET NO 7

COMANCHE CO

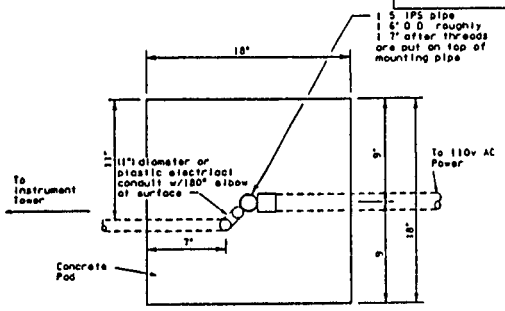


AUTOMATED WEATHER STATION SITE LAYOUT

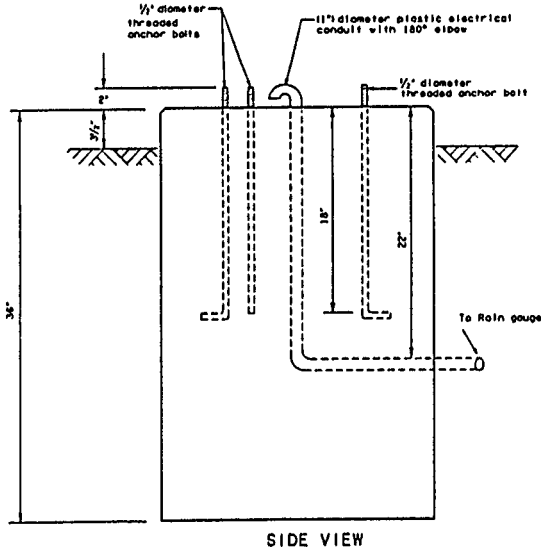
(LOCATION TO BE DETERMINED BY THE ENGINEER.)



PLAN VIEW

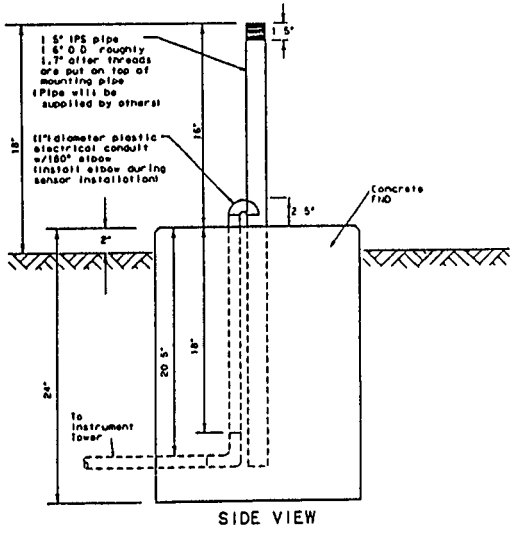


PLAN VIEW



SIDE VIEW

LAYOUT OF INSTRUMENT TOWER FOUNDATION



SIDE VIEW

LAYOUT OF RAIN GAUGE FOUNDATION

SUMMARY FOR AUTOMATED WEATHER STATION

CL "A" CONC	FOR CONTRACTORS INFORMATION CONDUIT (PVCHSCHD 40) AND IRON PIPE (1")	(1½")	(180° ELBOW)	1.5" IPS PIPE	CHAIN LINK SECURITY FENCE	PED GATE (PVC COAT) (SINGLE) (6'X3'-6")
C Y	LF	LF	EA	LF	LF	EA
.61	27	2	4	3	77	1

Materials wikbe approved by the engineer prior to use.

QUANTITY	MATERIALS SUPPLIED BY OTHERS
4	½" DIAMETER THREADED ANCHOR BOLTS
1	1.5" IPS PIPE

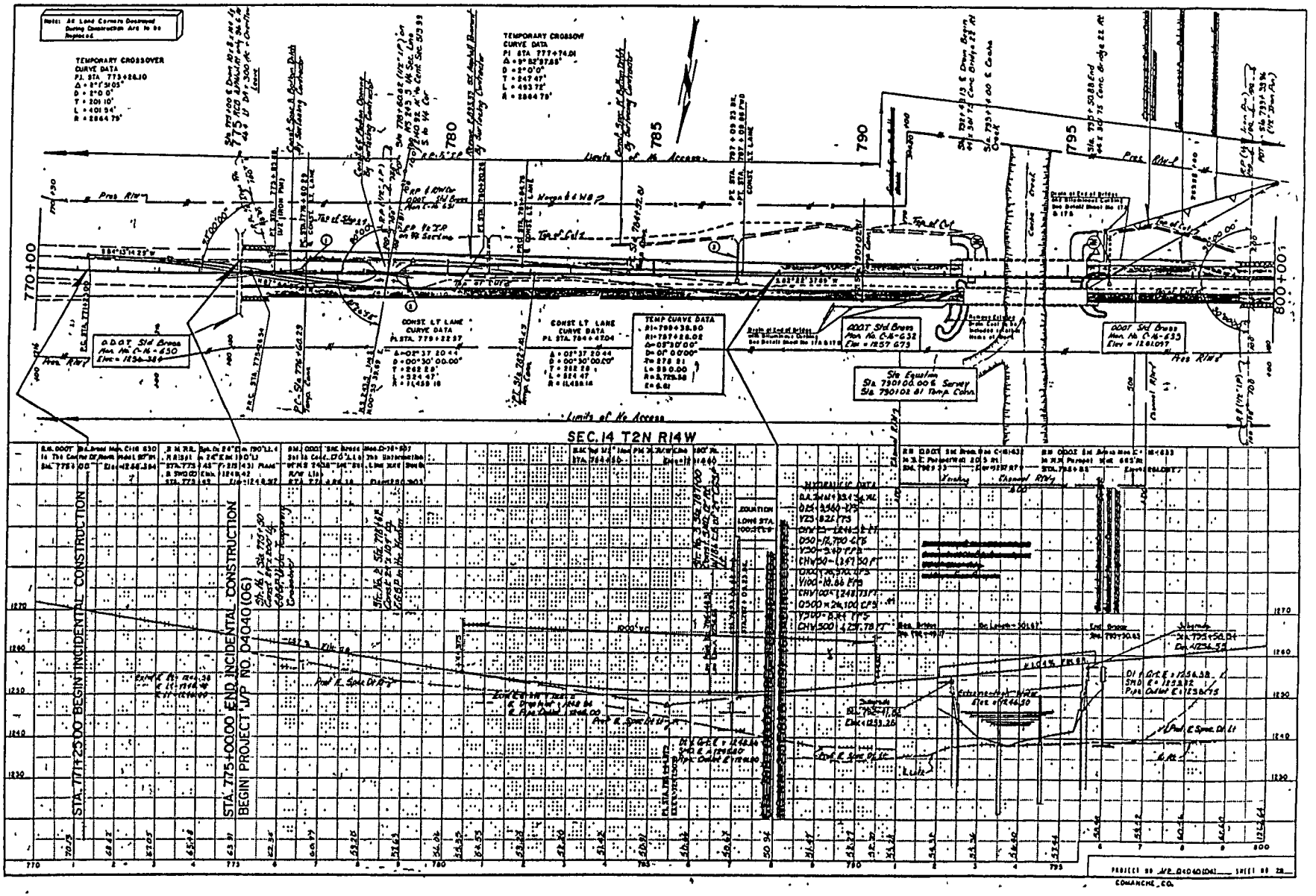
NOTE: ABOVE MATERIALS ALONG WITH A BOLT TEMPLATE PATTERN WILL BE PROVIDED BY BRENT RAINHUT ENGINEERING INC. CONTRACTOR SHALL CONTACT JERRY DALEIDEN P E AT (512) 346-0870 PRIOR TO CONSTRUCTION OF FOUNDATION

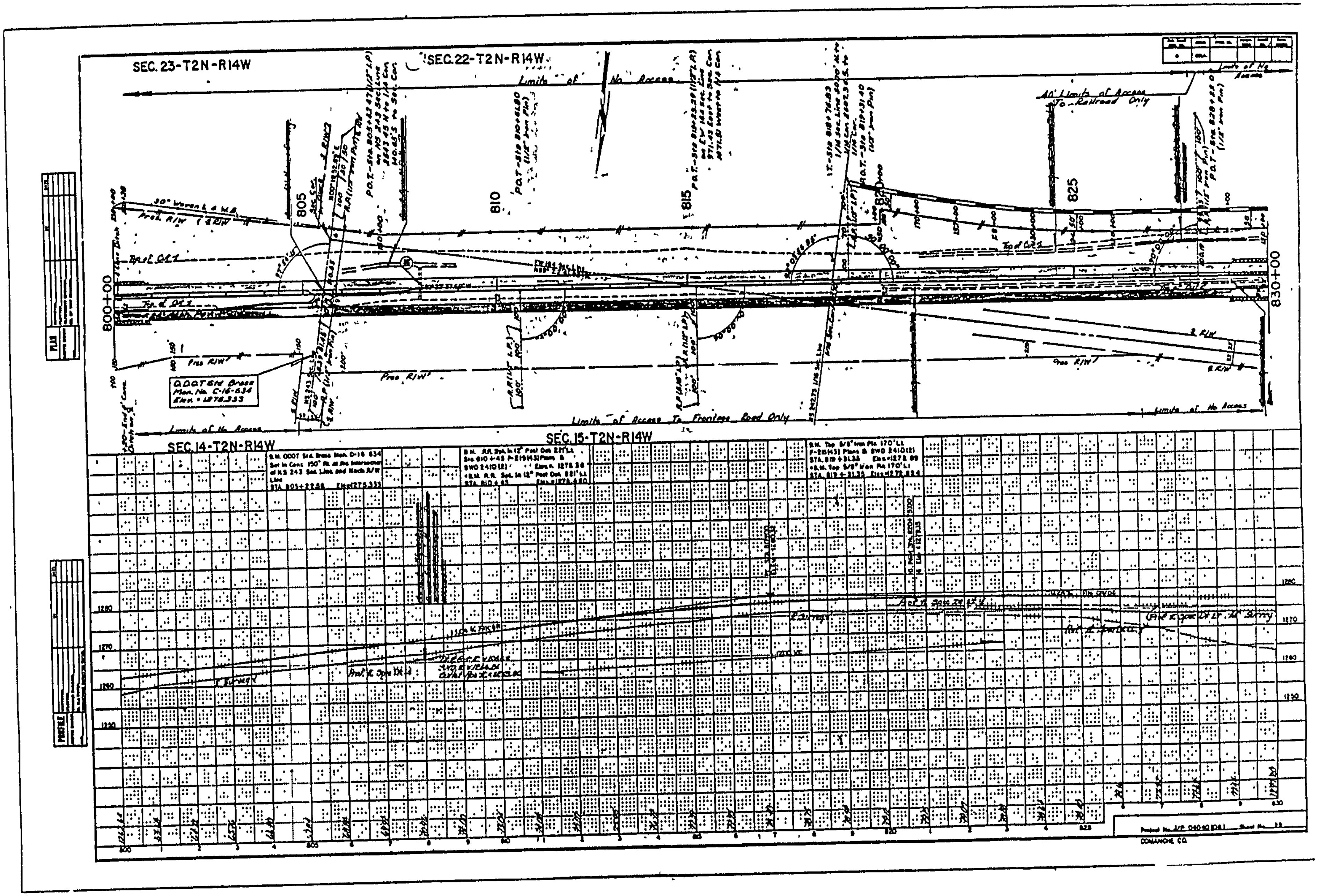
BASIS OF PAYMENT		
ITEM NO	ITEM	UNIT
932 17	Automated Weather Station	L Sum

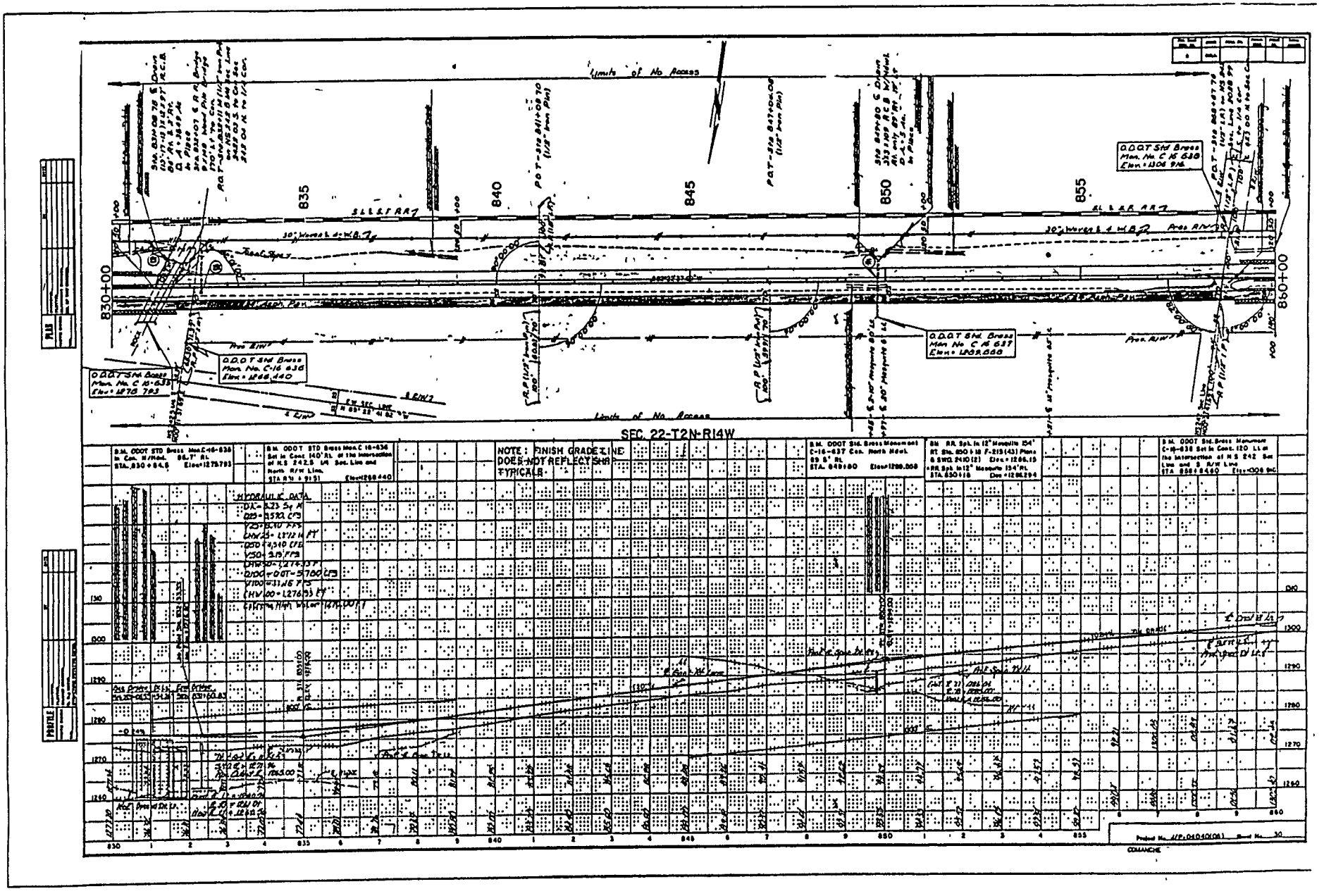
Price bid for Automated Weather Station shall be full compensation for furnishing all fence, footings, conduit, and all other materials, labor, equipment and incidentals to complete the work as specified

DESIGN		OKLAHOMA DEPARTMENT OF TRANSPORTATION DESIGN DIVISION
DRAWN		AUTOMATED WEATHER STATION DETAILS
CHECKED		
APPROVED		
SQUAD	D K STOUT	PROJECT NO J/P 04040(05), SHEET NO 23

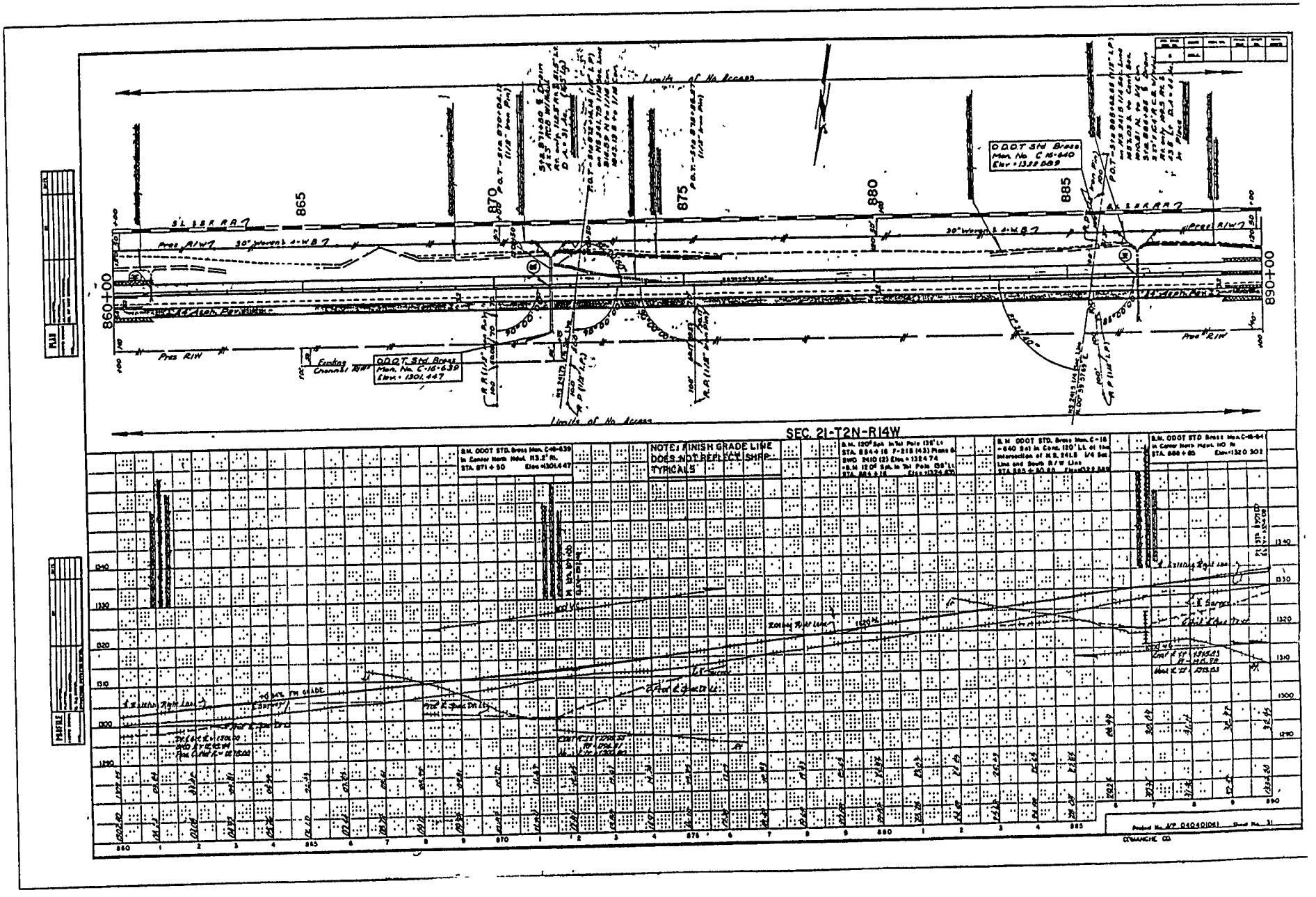
COMANCHE CO


TEMPORARY CROSSOVER CURVE DATA
TEMPORARY CROSSOVER CURVE DATA
CONST LT LANE CURVE DATA
CONST LT LANE CURVE DATA
TEMP CURVE DATA
Limits of No Access
SEC. 14 T2N R14W
STA. 771+25.00 BEGIN INCIDENTAL CONSTRUCTION
STA. 775+00.00 END INCIDENTAL CONSTRUCTION
BEGIN PROJECT L/P NO. D4040(06)
770+00
800+00
COMANCHE CO.

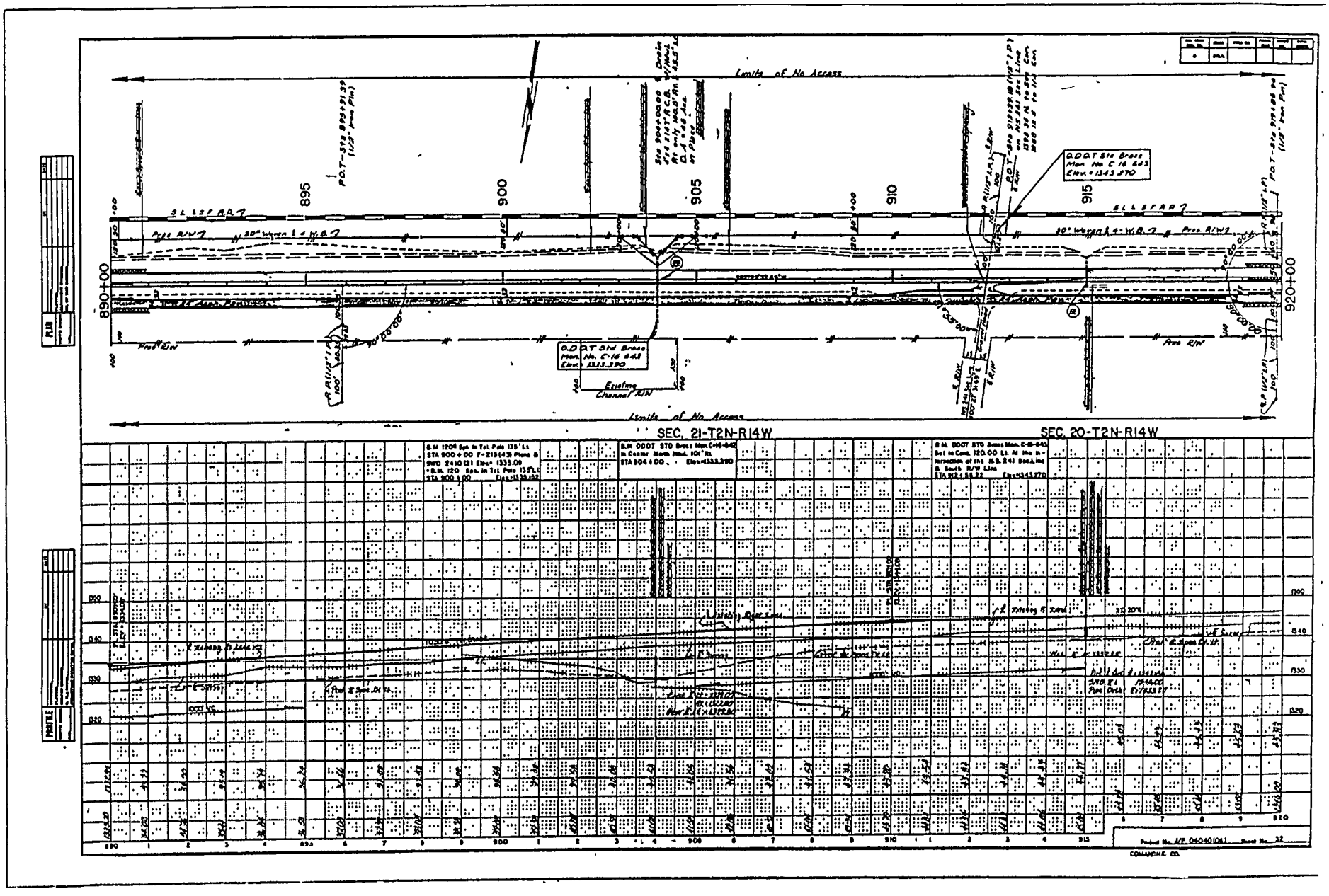

SEC. 23-T2N-R14W
SEC. 22-T2N-R14W
SEC. 14-T2N-R14W
SEC. 15-T2N-R14W
Limits of No Access
Limits of Access To Frontage Road Only
40' Limits of Access To Railroad Only
Limits of No Access
Pres. R/W
O.D.O.T. Std. Brass Mon. No. C-16-634 Elev. = 1275.333
800+00
805
810
815
825
830+00
PLAN
PROFILE
COMANCHE CO.

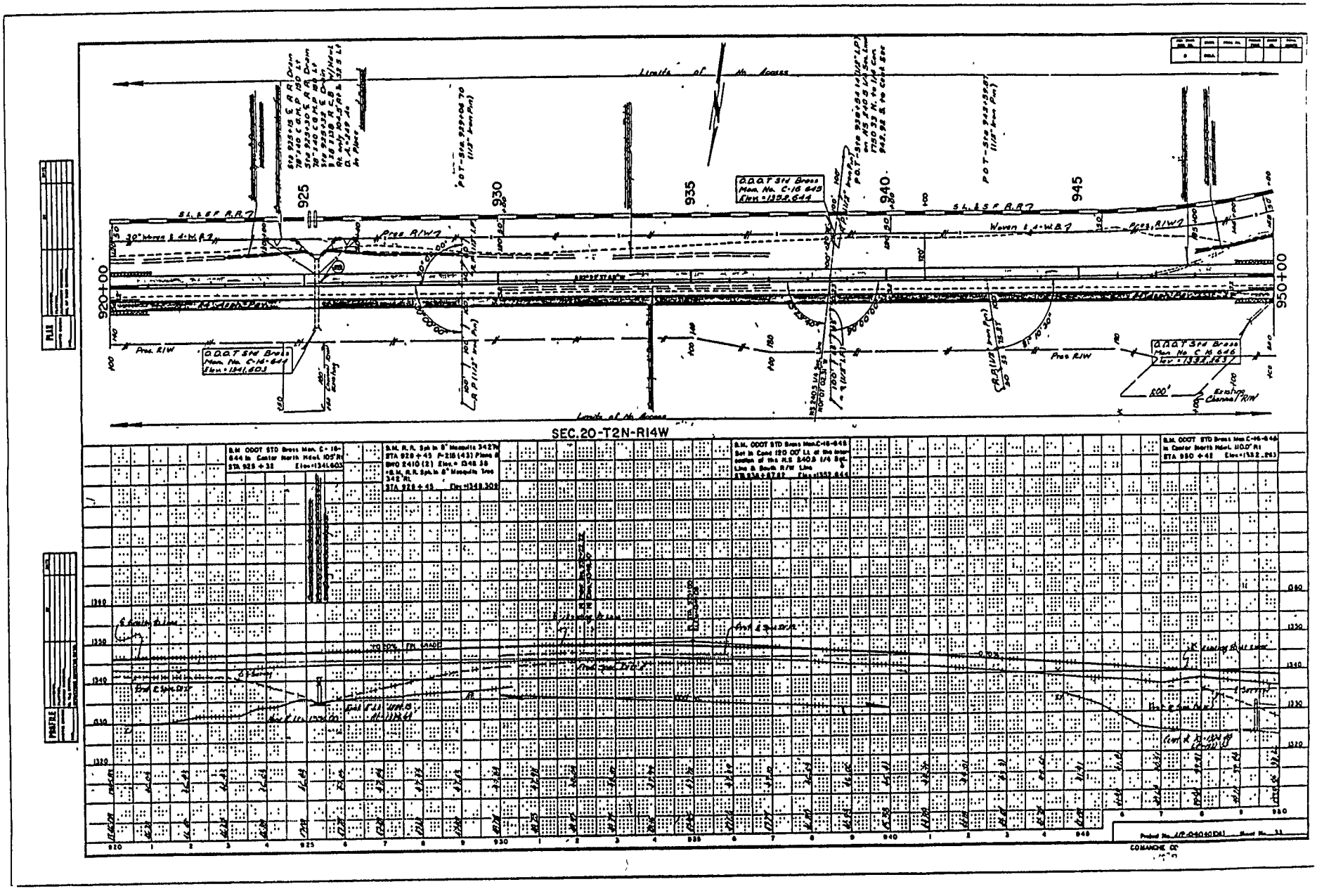


Limits of No Access
835
840
845
850
855
830+00
860+00
SEC. 22-T2N-R14W
NOTE: FINISH GRADE LINE DOES NOT REFLECT SHAP TYPICALS
HYDRAULIC DATA



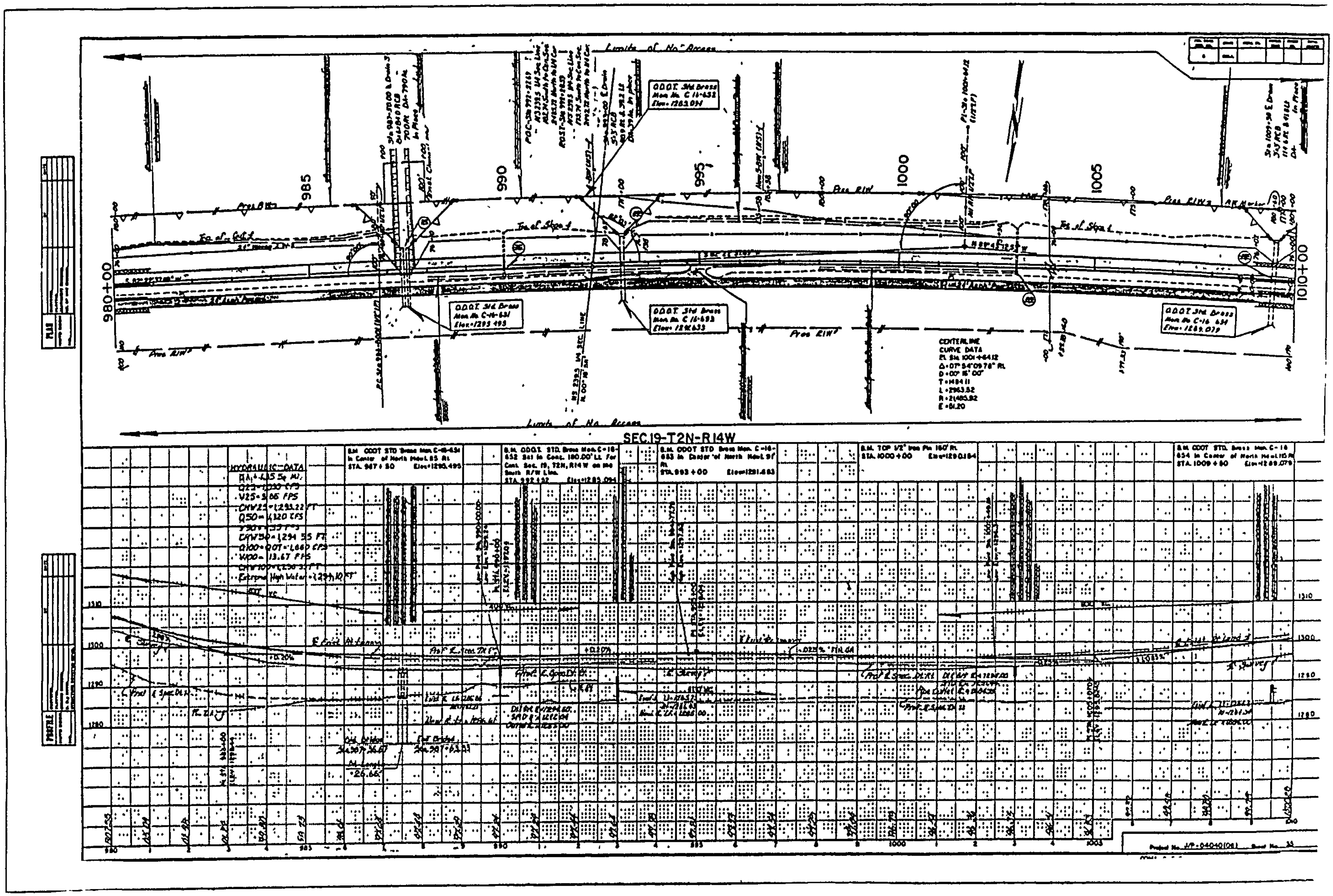
SEC. 21-T2N-R14W
Limits of No Access
860+00
890+00
865
870
875
880
885
O.D.O.T. Std. Brass Mon. No. C-16-639 Elev. = 1301.447
O.D.O.T. Std. Brass Mon. No. C-16-640 Elev. = 1322.589
NOTE: FINISH GRADE LINE DOES NOT REFLECT SHIP. TYPICALS
COMANCHE CO.

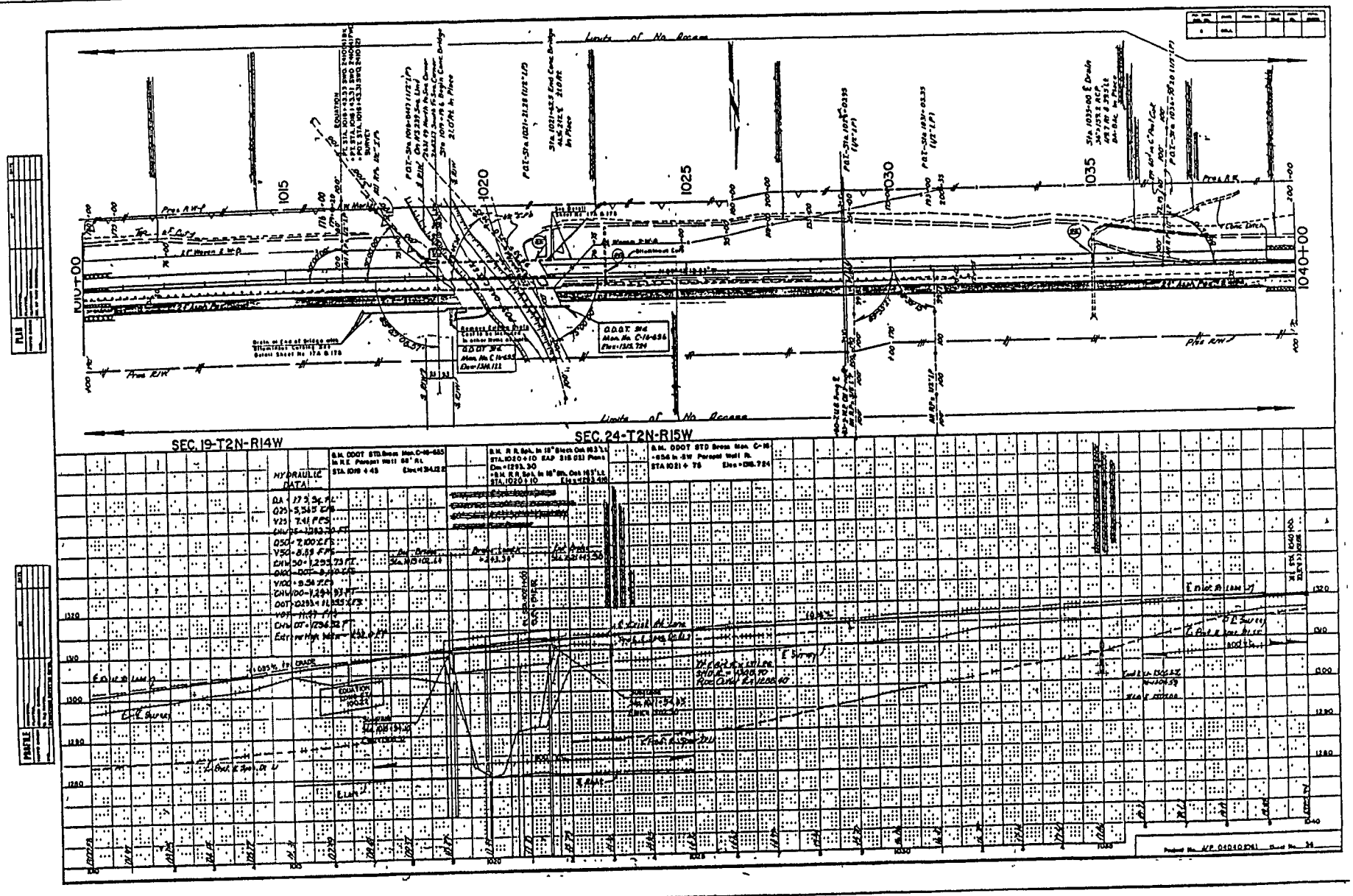

Limits of No Access
895
900
905
910
915
890+00
920+00
Free R/W
Existing Channel R/W
SEC. 21-T2N-R14W
SEC. 20-T2N-R14W
PLAN
PROFILE
COMANCHE CO.

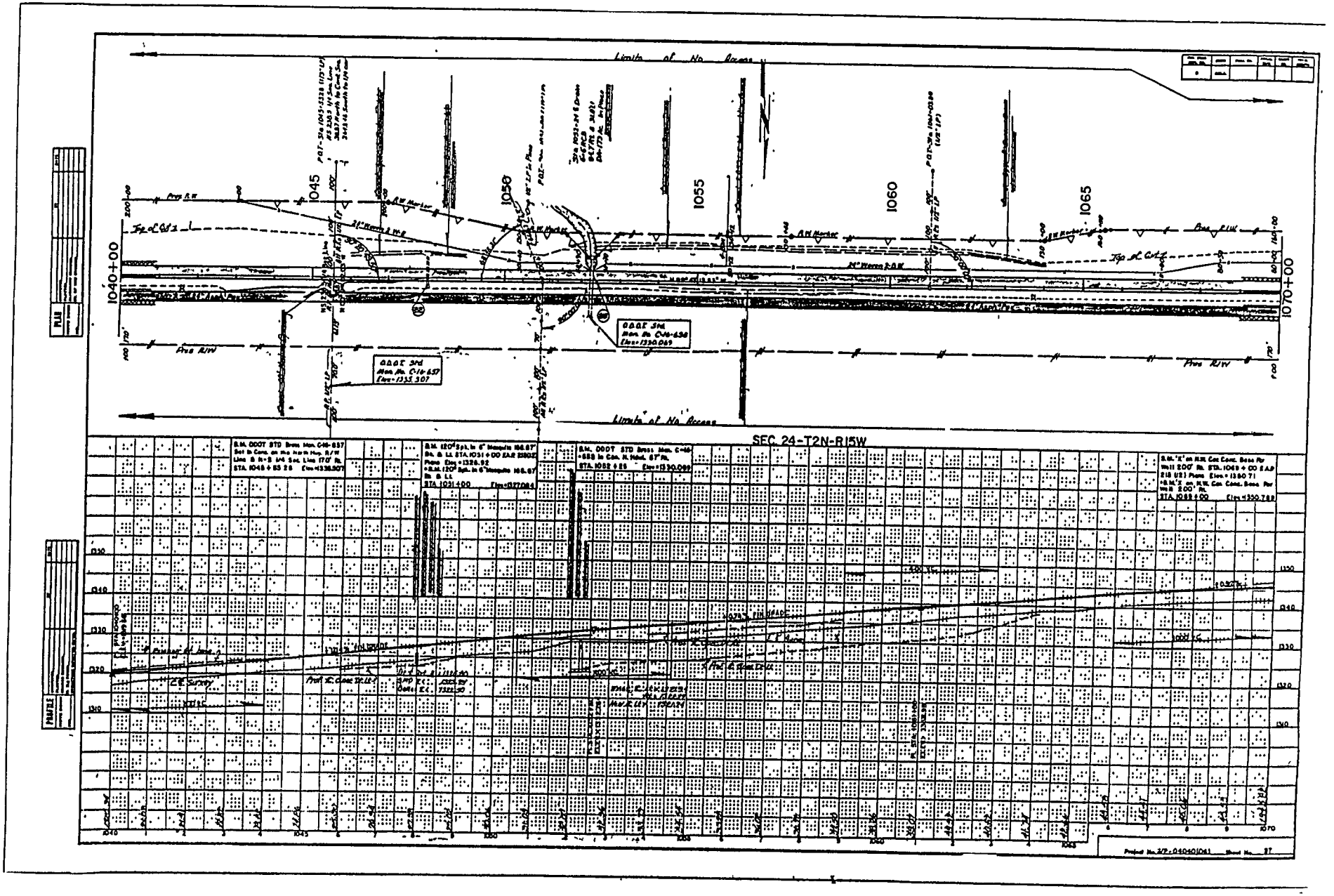


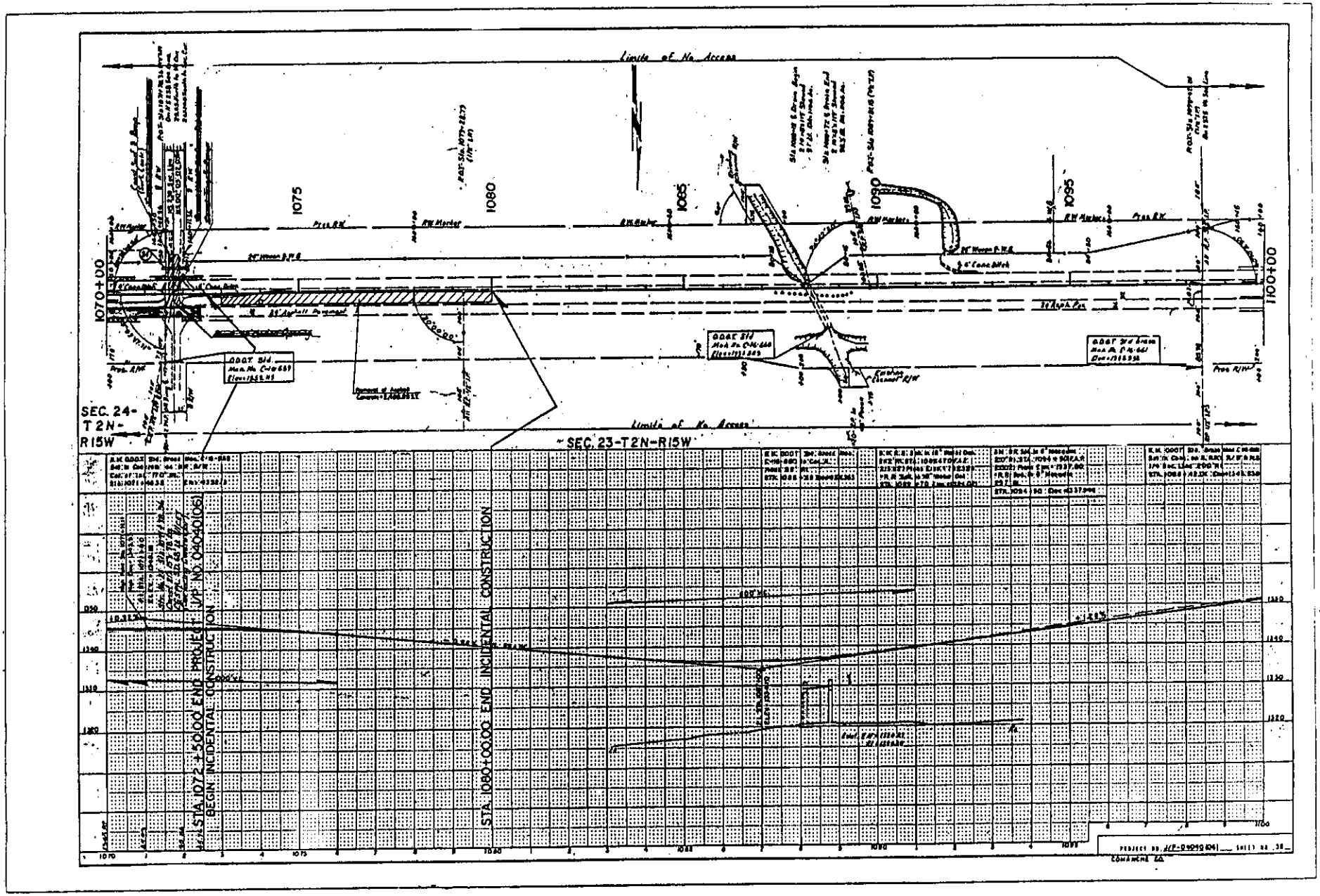
Limits of No Access
SEC.20-T2N-R14W
920+00
925
930
935
940
945
950+00
Pres. R/W
Woven & 4-W.B.
O.D.O.T Std Brass Mon. No. C-16-644 Elev.=1341.603
O.D.O.T Std Brass Mon. No. C-16-645 Elev.=1352.644
O.D.O.T Std Brass Mon. No. C-16-646 Elev.=1332.263
Existing Channel R/W
PROFILE

D.16


Limits of No Access
980+00
985
990
995
1000
1005
1010+00
CENTERLINE CURVE DATA
SEC.19-T2N-R14W
HYDRAULIC DATA
PLAN
PROFILE


Limits of No Access
1015
1020
1025
1030
1035
1040+00
SEC. 19-T2N-R14W
SEC. 24-T2N-R15W
HYDRAULIC DATA


Limits of No Access
1040+00
1045
1050
1055
1060
1065
1070+00
Pres R/W
Top of Cut
SEC. 24-T2N-R15W
PLAN
PROFILE


Limits of No Access
1070+00
1075
1080
1085
1090
1095
1100+00
SEC. 24-T2N-R15W
SEC. 23-T2N-R15W
STA. 1072+50.00 END PROJECT J/P NO. 04040(06)
BEGIN INCIDENTAL CONSTRUCTION
STA. 1080+00.00 END INCIDENTAL CONSTRUCTION

PLAN ESTIMATES

ITEM NO	APPROXIMATE STATION LOCATION	TYPE OF SIGN	TYPE OF POSTS	ESTIMATED POST LENGTHS (LINEAR FEET) A	B	C	*LATERAL CLEARANCE	POST SPACE	FTG DES NO	STRL CONC CU YD	REINF STEEL LBS	SIGN AREA SQUARE FEET SHEET	PANEL	OVERLAY	REMARKS
1 1775 75	(RT)	R5 1a	2 1/4 SQ	13.000								6.000			
2 1775 00	(RT)	R5 1	2 1/4 SQ	13.500								6.250			
3 1778 50	(MEDIAN)	R4 7	2 1/4 SQ	13.500								5.000			
4 1778 50	(MEDIAN)	R4 7	2 1/4 SQ	13.500								5.000			
5 1779 00	(LT)	R5 1	2 1/4 SQ	13.500								6.250			
6 1 92 00	(LT)	R5 1a	2 1/4 SQ	13.000								6.000			
7 1782 00	(RT)	ROUTE ASSEMBLY NO. 1	2 1/4 SQ	14.000								6.000			
8 1 92 00	(LT)	R2 (LTR)	2 1/4 SQ	13.500								5.000			
9 1 92 00	(LT)	ROUTE ASSEMBLY NO. 2	2 1/4 SQ	14.000								6.000			
10 1 92 00	(RT)	R2 (LTR)	2 1/4 SQ	13.500								5.000			
11 1 92 00	(RT)	OW (LL) EXISTING													
12 1 92 00	(RT)	OW (LR) EXISTING													
13 1 95 50	(LT)	OW (LL)	1 1/4 SQ	13.000								3.000			
14 1 95 50	(LT)	OW (LR)	1 1/4 SQ	13.000								3.000			
15 1 02 75	(RT)	R5 1a	2 1/4 SQ	13.000								6.000			
16 1 05 00	(RT)	R5 1	2 1/4 SQ	13.500								6.250			
17 1 05 75	(MEDIAN)	R4 7	2 1/4 SQ	13.500								5.000			
18 1 05 75	(MEDIAN)	R4 7	2 1/4 SQ	13.500								5.000			
19 1 06 00	(LT)	R5 1	2 1/4 SQ	13.500								6.250			
20 1 06 75	(LT)	R5 1a	2 1/4 SQ	13.000								6.000			
21 1 14 00	(RT)	R5 1a	2 1/4 SQ	13.000								6.000			
22 1 [illegible]	(RT)	R5 1	2 1/4 SQ	[illegible]								[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]								[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]								[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]								[illegible]			
[illegible]	(LT)	R5 1a	[illegible]	[illegible]								[illegible]			
27 1 [illegible]	(MEDIAN)	R5 1a	2 1/4 SQ	13.000								6.000			
28 1 11 80	(MEDIAN)	R5 1	2 1/4 SQ	13.500								6.250			
29 1 12 75	(MEDIAN)	R6 (LR)	2 1/4 SQ	12.000								3.000			
30 1 12 75	(RT)	R6 (LL)	2 1/4 SQ	12.000								3.000			
31 1 12 75	(LT)	R6 (LL)	2 1/4 SQ	12.000								3.000			
32 1 12 50	(RT)	R1 1, R6 (LL) & R6 (LR)	2 1/4 SQ	14.500								12.250			
33 1 12 50	(LT)	R6 (LL)	2 1/4 SQ	12.000								3.000			
34 1 12 70	(MEDIAN)	R1 2	2 1/4 SQ	13.500								3.500			
35 1 12 85	(MEDIAN)	R5 1	2 1/4 SQ	13.500								6.250			
36 1 16 75	(MEDIAN)	R5 1a	2 1/4 SQ	13.000								6.000			
37 1 61 00	(RT)	R5 1a	2 1/4 SQ	13.000								6.000			
38 1 65 75	(RT)	R5 1	2 1/4 SQ	13.500								6.250			
39 1 65 75	(MEDIAN)	R4 7	2 1/4 SQ	13.500								5.000			
40 1 65 75	(MEDIAN)	R4 7	2 1/4 SQ	13.500								5.000			
41 1 66 00	(LT)	R5 1	2 1/4 SQ	13.500								6.250			
42 1 66 50	(LT)	R5 1a	2 1/4 SQ	13.000								6.000			
43 1 92 75	(RT)	R5 1a	2 1/4 SQ	13.000								6.000			
44 1 96 50	(RT)	R5 1	2 1/4 SQ	13.500								6.250			
45 1 96 75	(MEDIAN)	R4 7	2 1/4 SQ	13.500								5.000			
46 1 96 75	(MEDIAN)	R4 7	2 1/4 SQ	13.500								5.000			
47 1 96 50	(LT)	R5 1	2 1/4 SQ	13.500								6.250			
48 1 97 75	(LT)	R5 1a	2 1/4 SQ	13.000								6.000			
49 1 01 00	(RT)	OW (LL) EXISTING													
50 1 01 00	(RT)	OW (LR) EXISTING													
51 1 02 00	(LT)	OW (LL)	1 1/4 SQ	13.000								3.000			
52 1 02 00	(LT)	OW (LR)	1 1/4 SQ	13.000								3.000			
53 1 02 00	(RT)	R5 1a	2 1/4 SQ	13.000								6.000			
54 1 04 00	(RT)	R5 1	2 1/4 SQ	13.500								6.250			
55 1 04 75	(MEDIAN)	R4 7	2 1/4 SQ	13.500								5.000			
56 1 04 75	(MEDIAN)	R4 7	2 1/4 SQ	13.500								5.000			
57 1 04 00	(LT)	R5 1	2 1/4 SQ	13.500								6.250			
58 1 04 75	(LT)	R5 1a	2 1/4 SQ	13.000								6.000			
59 1 06 00	(RT)	ROUTE ASSEMBLY NO. 1	2 1/4 SQ	14.000								6.000			
60 1 06 00	(LT)	R2 (LTR)	2 1/4 SQ	13.500								5.000			
61 1 04 00	(LT)	ROUTE ASSEMBLY NO. 2	2 1/4 SQ	14.000								6.000			
62 1 04 00	(RT)	R2 (LTR)	2 1/4 SQ	13.500								5.000			
63 1 08 00	(MEDIAN)	R5 1a	2 1/4 SQ	13.000								6.000			
64 1 07 50	(MEDIAN)	R5 1	2 1/4 SQ	13.500								6.250			
65 1 07 75	(MEDIAN)	R1 2 & R5 (LL)	2 1/4 SQ	14.500								6.500			
66 1 07 50	(RT)	R6 (LL)	2 1/4 SQ	12.000								3.000			
67 1 07 [illegible]	(LT)	R1 1, R6 (LL) & R6 (LR)	2 1/4 SQ	14.500								12.250			
68 1 07 75	(RT)	R1 1, R6 (LL) & R6 (LR)	2 1/4 SQ	14.500								12.250			
69 1 07 75	(LT)	R6 (LL)	2 1/4 SQ	12.000								3.000			
70 1 07 50	(MEDIAN)	R1 2 & R6 (LL)	2 1/4 SQ	14.500								6.500			
71 1 07 75	(MEDIAN)	R5 1	2 1/4 SQ	13.500								6.250			
72 1 [illegible] 50	(MEDIAN)	R5 1a	2 1/4 SQ	13.000								6.000			

DESIGNED	BDS	5 96	OKLAHOMA DEPARTMENT OF TRANSPORTATION
DRAWN	BDS	5 96	TRAFFIC ENGINEERING DIVISION
CHECKED	MAM	5 96	SIGN SUMMARY SHEET
APPROVED	MAS	4 96	
SIGNATURE			JOB NO 04210104 SHEET NO 39

* LATERAL CLEARANCE SHALL BE THE DISTANCE FROM THE EDGE OF THE SHOULDER TO THE EDGE OF THE SIGN. LATERAL CLEARANCE NOT SHOWN SHALL BE ACCORDING TO STANDARD DRAWING G W S -1-(LATEST REVISION)

REVISION | DATE

RECEIVED DEC - 1 1997

SPS-1 CONSTRUCTION DATA SHEET 1 PROJECT IDENTIFICATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [0 0]

*1. DATE OF DATA COLLECTION OR UPDATE (Month/Year) [4/97]

*2. STATE HIGHWAY AGENCY (SHA) DISTRICT NUMBER [0 7.]

*3. COUNTY OR PARISH Comanche [0 3 1.]

4. FUNCTIONAL CLASS (SEE TABLE A.2, APPENDIX A) [0 2.]

*5. ROUTE SIGNING (NUMERIC CODE) [2.]
Interstate... 1 U.S.... 2 State... 3
Other... 4

*6. ROUTE NUMBER [_ _ _ 6 2.]

7. TYPE OF PAVEMENT (01 for Granular Base, 02 for Treated Base) [0 2.]

8. NUMBER OF THROUGH LANES (ONE DIRECTION) [2.]

*9. DATE OF CONSTRUCTION COMPLETION (Month/Year) [07/97]

*10. DATE OPENED TO TRAFFIC (Month/Year) [06/97]

11. CONSTRUCTION COSTS PER LANE MILE (In $1000) [_ _ 2 6 0.]

12. DIRECTION OF TRAVEL [1.]
East Bound... 1 West Bound... 2 North Bound... 3
South Bound... 4

PROJECT STARTING POINT LOCATION

✓ *13. MILEPOINT [_ _ _._ _]

*14. ELEVATION [_ 1 3 0 0]

*15. LATITUDE [34° 38' 15.80"]

*16. LONGITUDE [_ 98° 39' 39.80"]

17. ADDITIONAL LOCATION INFORMATION (SIGNIFICANT LANDMARKS): [Approximately 0.5 miles west of SH 115 and approximately 7.0 miles east of SH 54]

18. HPMS SAMPLE NUMBER (HPMS ITEM 28) [_ _ _ _ _ _ _ _ _ _ _ _]

19. HPMS SECTION SUBDIVISION (HPMS ITEM 29) [_.]

PREPARER [signature] EMPLOYER BRE DATE 9/25/97

RECEIVED DEC - 1 1997

December 1995

ENTERED JUL 22 1997 J B

SPS-1 CONSTRUCTION DATA SHEET 3 REFERENCE PROJECT STATION TABLE	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [0 0]

ORDER	*1 TEST SECTION ID NO	REFERENCE PROJECT STATION NUMBER *2 START	*3 END	*4 CUT-FILL[1] TYPE
1	400160	0+00	5+00	2
2	400114	11+00	16+00	~~2~~ 1
3	400118	38+00	43+00	~~2~~ 1
4	400116	46+00	51+00	~~2~~ 1
5	400115	54+00	59+00	2
6	400117	63+00	68+00	~~2~~ 3
7	400113	74+00	79+00	2
8	400122	8~~1~~ 2+00	8~~6~~ 7+00	2
9	400119	10~~3~~ 4+00	10~~8~~ 9+00	2
10	400120	115+00	120+00	2
11	400121	12~~7~~ 8+00	13~~2~~ 3+00	~~2~~ 1
12	400123	138+00	143+00	~~2~~ 1
13	400124	147+00	152+00	2
14		+	+	
15		+	+	
16		+	+	
17		+	+	
18		+	+	
19		+	+	
20		+	+	

JM 9/25/97

*5 INTERSECTIONS BETWEEN TEST SECTION ON THE PROJECT

ROUTE	PROJECT STATION NO.	RAMPS EXIT	RAMPS ENT	INTERSECTION STOP	INTERSECTION SIGNAL	INTERSECTION UNSIG
	+					
	+					
	+					

Note 1. Indicate the type of subgrade construction the test section is located on:
Cut... 1 Fill... 2 At-Grade... 3 Cut, Fill, and At-Grade Combo... 4

If a section contains any combination of cut, fill and at-grade portions (code 4 above), enter the specific details of the cut, fill and at-grade locations on SPS-1 Construction Data Sheet 15.

PREPARER MRB EMPLOYER BRE DATE 7/21/97

SPS-1 CONSTRUCTION DATA SHEET 5 PLANT-MIXED ASPHALT BOUND LAYERS AGGREGATE PROPERTIES	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

*1. LAYER NUMBER (FROM SHEET 4) PATB [3]

	COMPOSITION OF COARSE AGGREGATE	TYPE	PERCENT
*2.	Crushed Stone... 1 Gravel... 2 Crushed Gravel... 3	[1]	[1 0 0.]
*3.	Crushed Slag... 4 Manufactured Lightweight... 5	[__]	[__ __ __.]
*4.	Other (Specify)... 6 _____	[__]	[__ __ __.]

	COMPOSITION OF FINE AGGREGATE	TYPE	PERCENT
*5.	Natural Sand... 1	[2]	[1 0 0.]
*6.	Crushed or Manufactured Sand (From Crushed Gravel or	[__]	[__ __ __.]
*7.	Stone... 2 Recycled Concrete... 3 Other (Specify)... 4 _____	[__]	[__ __ __.]

*8. TYPE OF MINERAL FILLER [__]
Stone Dust... 1 Hydrated Lime... 2 Portland Cement... 3
Fly Ash... 4
Other (Specify)... 5 _____

BULK SPECIFIC GRAVITIES:

*9. Coarse Aggregate (AASHTO T85 or ASTM C127) [__.__ __ __]

*10. Fine Aggregate (AASHTO T84 or ASTM C128) [__.__ __ __]

*11. Mineral Filler (AASHTO T100 or ASTM D854) [__.__ __ __]

*12. Aggregate Combination (Calculated) [__.__ __ __]

13. Effective Specific Gravity of Aggregate Combination (Calculated) [2.7 0 3]

AGGREGATE DURABILITY TEST RESULTS
(SEE DURABILITY TEST TYPE CODES, TABLE A.13)

	TYPE OF AGGREGATE	TYPE OF TEST	RESULTS
14.	Coarse	[0 4]	[__ 2 3.2 __ __]
15.	Coarse	[__ __]	[__ __ __.__ __ __]
16.	Coarse	[__ __]	[__ __ __.__ __ __]
17.	Coarse and Fine - Combined	[__ __]	[__ __ __.__ __ __]

18. POLISH VALUE OF COARSE AGGREGATES
SURFACE LAYER ONLY (AASHTO T279, ASTM D3319) __ __.

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 6 PLANT-MIXED ASPHALT BOUND LAYERS ASPHALT CEMENT PROPERTIES	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

*1. LAYER NUMBER (FROM SHEET 4) PATB [3]

*2. ASPHALT GRADE (SEE ASPHALT CODE SHEET, TABLE A.16) [0 4]
(IF OTHER, SPECIFY) AC-20

*3. SOURCE (SEE SUPPLY CODE SHEET, TABLE A.14) [5 2]
(IF OTHER, SPECIFY) Refinery in Wynnewood, OK

4. SPECIFIC GRAVITY OF ASPHALT CEMENT [1.0 0 6]
(AASHTO T228)

GENERAL ASPHALT CEMENT PROPERTIES (If available from supplier)

5. VISCOSITY OF ASPHALT AT 140°F (POISES) [_ _ 2 1 2 8.]
(AASHTO T202)

6. VISCOSITY OF ASPHALT AT 275°F (CENTISTOKES) [_ 4 6 3._ _]
(AASHTO T202)

7. PENETRATION AT 77°F (AASHTO T49) (TENTHS OF A MM) [_ _ _ _.]
(100 g., 5 sec.)

ASPHALT MODIFIERS (SEE TYPE CODE, A.15)

		TYPE	QUANTITY (%)
8.	MODIFIER #1 None Used	[_ _]	[_ _.]
9.	MODIFIER #2 (IF OTHER, SPECIFY)	[_ _]	[_ _.]

10. DUCTILITY AT 77°F (CM) [_ _ _.]
(AASHTO T51)

11. DUCTILITY AT 39.2°F (CM) [_ _ _.]
(AASHTO T51)

12. TEST RATE FOR DUCTILITY MEASUREMENT [_ _ _.]
AT 39.2°f (CM/MIN)

13. PENETRATION AT 39.2°F (AASHTO T49) (TENTHS OF A MM) [_ _ _.]
(200 g., 60 sec.)

14. RING AND BALL SOFTENING POINT (AASHTO T53) (°F) [_ _ _.]

NOTE: If emulsified or cutback asphalt was used, enter "N" in the spaces for "Original Asphalt Cement Properties".

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 7 PLANT-MIXED ASPHALT BOUND LAYERS MIXTURE PROPERTIES	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

PATB

*1. LAYER NUMBER (FROM SHEET 4) [3]

*2. TYPE OF SAMPLES [1]
SAMPLES COMPACTED IN LABORATORY... 1
SAMPLES TAKEN FROM TEST SECTION... 2

*3. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (AASHTO T209 OR ASTM D2041) [__.__ __ __]

BULK SPECIFIC GRAVITY (ASTM D1188)

*4. MEAN [__.__ __ __] NUMBER OF TESTS [__ __.]

5. MINIMUM [__.__ __ __] MAXIMUM [__.__ __ __]

6. STD. DEV. [__.__ __ __]

ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)

*7. MEAN [2.5 __ __] NUMBER OF SAMPLES [__ __.]

8. MINIMUM [__.__ __ __] MAXIMUM [__.__ __ __]

9. STD. DEV. [__.__ __ __]

PERCENT AIR VOIDS

*10. MEAN [__.__ __ __] NUMBER OF SAMPLES [__ __.]

11. MINIMUM [__.__ __ __] MAXIMUM [__.__ __ __]

12. STD. DEV. [__.__ __ __]

*13. VOIDS IN MINERAL AGGREGATE (PERCENT) [__ __.__]

*14. EFFECTIVE ASPHALT CONTENT (PERCENT) [__ __.__]

*15. MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559) [__ __ __.__]

*16. NUMBER OF BLOWS [__ __]

*17. MARSHALL FLOW (HUNDREDTHS OF AN INCH) (AASHTO T245 OR ASTM D1559) [__ __ __ __.]

*18. HVEEM STABILITY (AASHTO T246 OR ASTM D1561) [__ __ __.]

*19. HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM 1561) [__ __ __ __.]

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 8 PLANT-MIXED ASPHALT BOUND LAYERS MIXTURE PROPERTIES (CONTINUED)	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

*1. LAYER NUMBER (FROM SHEET 4) PATB [3]

*2. TYPE OF SAMPLES [1]
SAMPLES COMPACTED IN LABORATORY... 1
SAMPLES TAKEN FROM TEST SECTION... 2

*3. TYPE ASPHALT PLANT [2]

BATCH PLANT... 1 DRUM MIX PLANT... 2

OTHER (SPECIFY)... 3 _____

*4. TYPE OF ANTISTRIPPING AGENT USED [__ __]
(SEE TYPE CODES, TABLE A.21)
OTHER (SPECIFY) None Used

*5. AMOUNT OF ANTISTRIPPING AGENT USED LIQUID OR SOLID CODE [__]

*6. (If liquid, enter code 1, and amount as percent of asphalt cement weight. If solid, enter code 2 and amount as percent of aggregate weight.) [__ __.__]

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 5 PLANT-MIXED ASPHALT BOUND LAYERS AGGREGATE PROPERTIES	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

*1. LAYER NUMBER (FROM SHEET 4) ATB [4]

	TYPE	PERCENT
COMPOSITION OF COARSE AGGREGATE		
*2. Crushed Stone... 1 Gravel... 2 Crushed Gravel... 3	[1]	[1 0 0.]
*3. Crushed Slag... 4 Manufactured Lightweight... 5	[__]	[__ __ __.]
*4. Other (Specify)... 6 _____	[__]	[__ __ __.]
COMPOSITION OF FINE AGGREGATE	TYPE	PERCENT
*5. Natural Sand... 1	[2]	[1 0 0.]
*6. Crushed or Manufactured Sand (From Crushed Gravel or	[__]	[__ __ __.]
*7. Stone... 2 Recycled Concrete... 3 Other (Specify)... 4 _____	[__]	[__ __ __.]

*8. TYPE OF MINERAL FILLER None [__]
Stone Dust... 1 Hydrated Lime... 2 Portland Cement... 3
Fly Ash... 4
Other (Specify)... 5 _____

BULK SPECIFIC GRAVITIES:

*9. Coarse Aggregate (AASHTO T85 or ASTM C127)	[__.__ __ __]
*10. Fine Aggregate (AASHTO T84 or ASTM C128)	[__.__ __ __]
*11. Mineral Filler (AASHTO T100 or ASTM D854)	[__.__ __ __]
*12. Aggregate Combination (Calculated)	[__.__ __ __]
13. Effective Specific Gravity of Aggregate Combination (Calculated)	[2.6 2 5]

AGGREGATE DURABILITY TEST RESULTS
(SEE DURABILITY TEST TYPE CODES, TABLE A.13)

TYPE OF AGGREGATE	TYPE OF TEST	RESULTS
14. Coarse	[0 4]	[__ 2 5.6 __ __]
15. Coarse	[__ __]	[__ __ __.__ __ __]
16. Coarse	[__ __]	[__ __ __.__ __ __]
17. Coarse and Fine - Combined	[__ __]	[__ __ __.__ __ __]

18. POLISH VALUE OF COARSE AGGREGATES __ __.
SURFACE LAYER ONLY (AASHTO T279, ASTM D3319)

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 6 PLANT-MIXED ASPHALT BOUND LAYERS ASPHALT CEMENT PROPERTIES	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

*1. LAYER NUMBER (FROM SHEET 4) ATB [4]

*2. ASPHALT GRADE (SEE ASPHALT CODE SHEET, TABLE A.16) [0 4]
(IF OTHER, SPECIFY) AC-20

*3. SOURCE (SEE SUPPLY CODE SHEET, TABLE A.14) [5 2]
(IF OTHER, SPECIFY) Refinery in Wynnewood, OK

4. SPECIFIC GRAVITY OF ASPHALT CEMENT [1.0 0 6]
(AASHTO T228)

GENERAL ASPHALT CEMENT PROPERTIES (If available from supplier)

5. VISCOSITY OF ASPHALT AT 140°F (POISES) [_ _ 2 1 2 8.]
(AASHTO T202)

6. VISCOSITY OF ASPHALT AT 275°F (CENTISTOKES) [_ 4 6 3._ _]
(AASHTO T202)

7. PENETRATION AT 77°F (AASHTO T49) (TENTHS OF A MM) [_ _ _ _.]
(100 g., 5 sec.)

ASPHALT MODIFIERS (SEE TYPE CODE, A.15)

		TYPE	QUANTITY (%)
8.	MODIFIER #1 None Used	[_ _]	[_ _.]
9.	MODIFIER #2 (IF OTHER, SPECIFY)	[_ _]	[_ _.]

10. DUCTILITY AT 77°F (CM) [_ _ _.]
(AASHTO T51)

11. DUCTILITY AT 39.2°F (CM) [_ _ _.]
(AASHTO T51)

12. TEST RATE FOR DUCTILITY MEASUREMENT AT 39.2°F (CM/MIN) [_ _ _.]

13. PENETRATION AT 39.2°F (AASHTO T49) (TENTHS OF A MM) [_ _ _.]
(200 g., 60 sec.)

14. RING AND BALL SOFTENING POINT (AASHTO T53) (°F) [_ _ _.]

NOTE: If emulsified or cutback asphalt was used, enter "N" in the spaces for "Original Asphalt Cement Properties".

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 7 PLANT-MIXED ASPHALT BOUND LAYERS MIXTURE PROPERTIES	* STATE CODE [4 0] * SPS PROJECT CODE [0 L] * TEST SECTION NO. [X X]

ATB

*1. LAYER NUMBER (FROM SHEET 4) [4]

*2. TYPE OF SAMPLES [1]
SAMPLES COMPACTED IN LABORATORY... 1
SAMPLES TAKEN FROM TEST SECTION... 2

*3. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (AASHTO T209 OR ASTM D2041) [2.457]

BULK SPECIFIC GRAVITY (ASTM D1188)

*4. MEAN [2.335] NUMBER OF TESTS [__ __.]

5. MINIMUM [__.__ __ __] MAXIMUM [__.__ __ __]

6. STD. DEV. [__.__ __ __]

ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)

*7. MEAN [4.2 __ __] NUMBER OF SAMPLES [__ __.]

8. MINIMUM [__.__ __ __] MAXIMUM [__.__ __ __]

9. STD. DEV. [__.__ __ __]

PERCENT AIR VOIDS

*10. MEAN [3.5 __ __] NUMBER OF SAMPLES [__ __.]

11. MINIMUM [__.__ __ __] MAXIMUM [__.__ __ __]

12. STD. DEV. [__.__ __ __]

*13. VOIDS IN MINERAL AGGREGATE (PERCENT) [14.6]

*14. EFFECTIVE ASPHALT CONTENT (PERCENT) [__ __.__]

*15. MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559) [__ __ __.__]

*16. NUMBER OF BLOWS [__ __]

*17. MARSHALL FLOW (HUNDREDTHS OF AN INCH) (AASHTO T245 OR ASTM D1559) [__ __ __ __.]

*18. HVEEM STABILITY (AASHTO T246 OR ASTM D1561) [__ 50.]

*19. HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM 1561) [__ __ __ __.]

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 8 PLANT-MIXED ASPHALT BOUND LAYERS MIXTURE PROPERTIES (CONTINUED)	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

*1. LAYER NUMBER (FROM SHEET 4) ATB [4]

*2. TYPE OF SAMPLES [1]
SAMPLES COMPACTED IN LABORATORY... 1
SAMPLES TAKEN FROM TEST SECTION... 2

*3. TYPE ASPHALT PLANT [2]

BATCH PLANT... 1 DRUM MIX PLANT... 2

OTHER (SPECIFY)... 3 _____

*4. TYPE OF ANTISTRIPPING AGENT USED [__ __]
(SEE TYPE CODES, TABLE A.21)
OTHER (SPECIFY) None Used

*5. AMOUNT OF ANTISTRIPPING AGENT USED LIQUID OR SOLID CODE [__]

*6. (If liquid, enter code 1, and amount as percent of asphalt cement weight. If solid, enter code 2 and amount as percent of aggregate weight.) [__ __.__]

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 5 PLANT-MIXED ASPHALT BOUND LAYERS AGGREGATE PROPERTIES	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

*1. LAYER NUMBER (FROM SHEET 4) AC-Binder [5]

	TYPE	PERCENT
COMPOSITION OF COARSE AGGREGATE		
*2. Crushed Stone... 1 Gravel... 2 Crushed Gravel... 3	[1]	[1 0 0.]
*3. Crushed Slag... 4 Manufactured Lightweight... 5	[__]	[__ __ __.]
*4. Other (Specify)... 6 _____	[__]	[__ __ __.]
COMPOSITION OF FINE AGGREGATE	TYPE	PERCENT
*5. Natural Sand... 1	[1]	[__ 2 9.]
*6. Crushed or Manufactured Sand (From Crushed Gravel or Stone... 2 Recycled Concrete... 3	[2]	[__ 7 1.]
*7. Other (Specify)... 4 _____	[__]	[__ __ __.]

*8. TYPE OF MINERAL FILLER [__]
Stone Dust... 1 Hydrated Lime... 2 Portland Cement... 3
Fly Ash... 4
Other (Specify)... 5 None Used

BULK SPECIFIC GRAVITIES:

*9. Coarse Aggregate (AASHTO T85 or ASTM C127)	[__.__ __ __]
*10. Fine Aggregate (AASHTO T84 or ASTM C128)	[__.__ __ __]
*11. Mineral Filler (AASHTO T100 or ASTM D854)	[__.__ __ __]
*12. Aggregate Combination (Calculated)	[__.__ __ __]
13. Effective Specific Gravity of Aggregate Combination (Calculated)	[2.6 6 4]

AGGREGATE DURABILITY TEST RESULTS
(SEE DURABILITY TEST TYPE CODES, TABLE A.13)

TYPE OF AGGREGATE	TYPE OF TEST	RESULTS
14. Coarse	[0 4]	[__ 2 4.1 __ __]
15. Coarse	[__ __]	[__ __ __.__ __ __]
16. Coarse	[__ __]	[__ __ __.__ __ __]
17. Coarse and Fine - Combined	[__ __]	[__ __ __.__ __ __]

18. POLISH VALUE OF COARSE AGGREGATES SURFACE LAYER ONLY (AASHTO T279, ASTM D3319) __ __.

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 6 PLANT-MIXED ASPHALT BOUND LAYERS ASPHALT CEMENT PROPERTIES	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

*1. LAYER NUMBER (FROM SHEET 4) AC-Binder [5]

*2. ASPHALT GRADE (SEE ASPHALT CODE SHEET, TABLE A.16) AC-20 [0 4]
(IF OTHER, SPECIFY) _____

*3. SOURCE (SEE SUPPLY CODE SHEET, TABLE A.14) [5 2]
(IF OTHER, SPECIFY) Refinery in Wynnewood, OK

4. SPECIFIC GRAVITY OF ASPHALT CEMENT [1.0 0 6]
(AASHTO T228)

GENERAL ASPHALT CEMENT PROPERTIES (If available from supplier)

5. VISCOSITY OF ASPHALT AT 140°F (POISES) [_ _ 2 1 2 8.]
(AASHTO T202)

6. VISCOSITY OF ASPHALT AT 275°F (CENTISTOKES) [_ 4 6 3._ _]
(AASHTO T202)

7. PENETRATION AT 77°F (AASHTO T49) (TENTHS OF A MM) [_ _ _ _.]
(100 g., 5 sec.)

ASPHALT MODIFIERS (SEE TYPE CODE, A.15)

		TYPE	QUANTITY (%)
8.	MODIFIER #1 None Used	[_ _]	[_ _.]
9.	MODIFIER #2 (IF OTHER, SPECIFY) _____	[_ _]	[_ _.]

10. DUCTILITY AT 77°F (CM) [_ _ _.]
(AASHTO T51)

11. DUCTILITY AT 39.2°F (CM) [_ _ _.]
(AASHTO T51)

12. TEST RATE FOR DUCTILITY MEASUREMENT AT 39.2°F (CM/MIN) [_ _ _.]

13. PENETRATION AT 39.2°F (AASHTO T49) (TENTHS OF A MM) [_ _ _.]
(200 g., 60 sec.)

14. RING AND BALL SOFTENING POINT (AASHTO T53) (°F) [_ _ _.]

NOTE: If emulsified or cutback asphalt was used, enter "N" in the spaces for "Original Asphalt Cement Properties".

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 7 PLANT-MIXED ASPHALT BOUND LAYERS MIXTURE PROPERTIES	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

AC-Binder

*1. LAYER NUMBER (FROM SHEET 4) [5]

*2. TYPE OF SAMPLES [1]
SAMPLES COMPACTED IN LABORATORY... 1
SAMPLES TAKEN FROM TEST SECTION... 2

*3. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (AASHTO T209 OR ASTM D2041) [2.5 2 0]

BULK SPECIFIC GRAVITY (ASTM D1188)

*4. MEAN [2.3 9 8] NUMBER OF TESTS [_ _.]

5. MINIMUM [_._ _ _] MAXIMUM [_._ _ _]

6. STD. DEV. [_._ _ _]

ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)

*7. MEAN [3.4 _ _] NUMBER OF SAMPLES [_ _.]

8. MINIMUM [_._ _ _] MAXIMUM [_._ _ _]

9. STD. DEV. [_._ _ _]

PERCENT AIR VOIDS

*10. MEAN [_._ _ _] NUMBER OF SAMPLES [_ _.]

11. MINIMUM [_._ _ _] MAXIMUM [_._ _ _]

12. STD. DEV. [_._ _ _]

*13. VOIDS IN MINERAL AGGREGATE (PERCENT) [1 3.1]

*14. EFFECTIVE ASPHALT CONTENT (PERCENT) [_ _._]

*15. MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559) [_ _ _._]

*16. NUMBER OF BLOWS [_ _]

*17. MARSHALL FLOW (HUNDREDTHS OF AN INCH) (AASHTO T245 OR ASTM D1559) [_ _ _ _.]

*18. HVEEM STABILITY (AASHTO T246 OR ASTM D1561) [_ 4 4.]

*19. HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM 1561) [_ _ _ _.]

PREPARER Timothy F. Martin EMPLOYER BAE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 8 PLANT-MIXED ASPHALT BOUND LAYERS MIXTURE PROPERTIES (CONTINUED)	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

*1. LAYER NUMBER (FROM SHEET 4) AC-Binder [5]

*2. TYPE OF SAMPLES [1]
SAMPLES COMPACTED IN LABORATORY... 1
SAMPLES TAKEN FROM TEST SECTION... 2

*3. TYPE ASPHALT PLANT [2]

BATCH PLANT... 1 DRUM MIX PLANT... 2

OTHER (SPECIFY)... 3 _____

*4. TYPE OF ANTISTRIPPING AGENT USED [__ __]
(SEE TYPE CODES, TABLE A.21)
OTHER (SPECIFY) None Used

*5. AMOUNT OF ANTISTRIPPING AGENT USED LIQUID OR SOLID CODE [__]

*6. (If liquid, enter code 1, and amount as percent of asphalt cement weight. If solid, enter code 2 and amount as percent of aggregate weight.) [__ __.__]

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 5 PLANT-MIXED ASPHALT BOUND LAYERS AGGREGATE PROPERTIES	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

*1. LAYER NUMBER (FROM SHEET 4) AC- Surface [6]

		TYPE	PERCENT
	COMPOSITION OF COARSE AGGREGATE		
*2.	Crushed Stone... 1 Gravel... 2 Crushed Gravel... 3	[1]	[1 0 0.]
*3.	Crushed Slag... 4 Manufactured Lightweight... 5	[__]	[__ __ __.]
*4.	Other (Specify)... 6 _____	[__]	[__ __ __.]
	COMPOSITION OF FINE AGGREGATE	TYPE	PERCENT
*5.	Natural Sand... 1	[1]	[__ 2 2.]
*6.	Crushed or Manufactured Sand (From Crushed Gravel or	[2]	[__ 7 8.]
*7.	Stone... 2 Recycled Concrete... 3 Other (Specify)... 4 _____	[__]	[__ __ __.]

*8. TYPE OF MINERAL FILLER [__]
Stone Dust... 1 Hydrated Lime... 2 Portland Cement... 3
Fly Ash... 4
Other (Specify)... 5 None Used

BULK SPECIFIC GRAVITIES:

*9.	Coarse Aggregate (AASHTO T85 or ASTM C127)	[__.__ __ __]
*10.	Fine Aggregate (AASHTO T84 or ASTM C128)	[__.__ __ __]
*11.	Mineral Filler (AASHTO T100 or ASTM D854)	[__.__ __ __]
*12.	Aggregate Combination (Calculated)	[__.__ __ __]
13.	Effective Specific Gravity of Aggregate Combination (Calculated)	[2.6 5 7]

AGGREGATE DURABILITY TEST RESULTS
(SEE DURABILITY TEST TYPE CODES, TABLE A.13)

	TYPE OF AGGREGATE	TYPE OF TEST	RESULTS
14.	Coarse	[0 4]	[__ 2 4.3 __ __]
15.	Coarse	[__ __]	[__ __ __.__ __ __]
16.	Coarse	[__ __]	[__ __ __.__ __ __]
17.	Coarse and Fine - Combined	[__ __]	[__ __ __.__ __ __]

18. POLISH VALUE OF COARSE AGGREGATES __ __.
SURFACE LAYER ONLY (AASHTO T279, ASTM D3319)

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 6 PLANT-MIXED ASPHALT BOUND LAYERS ASPHALT CEMENT PROPERTIES	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

*1. LAYER NUMBER (FROM SHEET 4) AC - Surface [6]

*2. ASPHALT GRADE (SEE ASPHALT CODE SHEET, TABLE A.16) [0 4]
(IF OTHER, SPECIFY) AC-20

*3. SOURCE (SEE SUPPLY CODE SHEET, TABLE A.14) [5 2]
(IF OTHER, SPECIFY) _____

4. SPECIFIC GRAVITY OF ASPHALT CEMENT [1.0 0 6]
(AASHTO T228)

GENERAL ASPHALT CEMENT PROPERTIES (If available from supplier)

5. VISCOSITY OF ASPHALT AT 140°F (POISES) [_ _ 2 1 2 8.]
(AASHTO T202)

6. VISCOSITY OF ASPHALT AT 275°F (CENTISTOKES) [_ 4 6 3._ _]
(AASHTO T202)

7. PENETRATION AT 77°F (AASHTO T49) (TENTHS OF A MM) [_ _ _ _.]
(100 g., 5 sec.)

ASPHALT MODIFIERS (SEE TYPE CODE, A.15)

		TYPE	QUANTITY (%)
8.	MODIFIER #1 None Used	[_ _]	[_ _.]
9.	MODIFIER #2 (IF OTHER, SPECIFY) _____	[_ _]	[_ _.]

10. DUCTILITY AT 77°F (CM) [_ _ _.]
(AASHTO T51)

11. DUCTILITY AT 39.2°F (CM) [_ _ _.]
(AASHTO T51)

12. TEST RATE FOR DUCTILITY MEASUREMENT AT 39.2°F (CM/MIN) [_ _ _.]

13. PENETRATION AT 39.2°F (AASHTO T49) (TENTHS OF A MM) [_ _ _.]
(200 g., 60 sec.)

14. RING AND BALL SOFTENING POINT (AASHTO T53) (°F) [_ _ _.]

NOTE: If emulsified or cutback asphalt was used, enter "N" in the spaces for "Original Asphalt Cement Properties".

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 7 PLANT-MIXED ASPHALT BOUND LAYERS MIXTURE PROPERTIES	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

AC-Surface

*1. LAYER NUMBER (FROM SHEET 4) [6]

*2. TYPE OF SAMPLES [1]
SAMPLES COMPACTED IN LABORATORY... 1
SAMPLES TAKEN FROM TEST SECTION... 2

*3. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (AASHTO T209 OR ASTM D2041) [2.470]

BULK SPECIFIC GRAVITY (ASTM D1188)

*4. MEAN [2.346] NUMBER OF TESTS [__ __.]

5. MINIMUM [__.__ __ __] MAXIMUM [__.__ __ __]

6. STD. DEV. [__.__ __ __]

ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)

*7. MEAN [4.6 __ __] NUMBER OF SAMPLES [__ __.]

8. MINIMUM [__.__ __ __] MAXIMUM [__.__ __ __]

9. STD. DEV. [__.__ __ __]

PERCENT AIR VOIDS

*10. MEAN [__.__ __ __] NUMBER OF SAMPLES [__ __.]

11. MINIMUM [__.__ __ __] MAXIMUM [__.__ __ __]

12. STD. DEV. [__.__ __ __]

*13. VOIDS IN MINERAL AGGREGATE (PERCENT) [15.7]

*14. EFFECTIVE ASPHALT CONTENT (PERCENT) [__ __.__]

*15. MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559) [__ __ __.__]

*16. NUMBER OF BLOWS [__ __]

*17. MARSHALL FLOW (HUNDREDTHS OF AN INCH) (AASHTO T245 OR ASTM D1559) [__ __ __ __.]

*18. HVEEM STABILITY (AASHTO T246 OR ASTM D1561) [41.]

*19. HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM 1561) [__ __ __ __.]

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 8 PLANT-MIXED ASPHALT BOUND LAYERS MIXTURE PROPERTIES (CONTINUED)	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [X X]

*1. LAYER NUMBER (FROM SHEET 4) AC-Surface [6]

*2. TYPE OF SAMPLES [1]
SAMPLES COMPACTED IN LABORATORY... 1
SAMPLES TAKEN FROM TEST SECTION... 2

*3. TYPE ASPHALT PLANT [2]

BATCH PLANT... 1 DRUM MIX PLANT... 2

OTHER (SPECIFY)... 3 _____

*4. TYPE OF ANTISTRIPPING AGENT USED [__ __]
(SEE TYPE CODES, TABLE A.21)
OTHER (SPECIFY) None Used

*5. AMOUNT OF ANTISTRIPPING AGENT USED LIQUID OR SOLID CODE [__]

*6. (If liquid, enter code 1, and amount as percent of asphalt cement weight. If solid, enter code 2 and amount as percent of aggregate weight.) [__ __.__]

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

RECEIVED DEC - 1 1997

December 1995

SPS-1 CONSTRUCTION DATA SHEET 2 GEOMETRIC, SHOULDER AND DRAINAGE INFORMATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 3]

*1. LANE WIDTH (FEET) [1 2.]

2. MONITORING SITE LANE NUMBER [1.]
(LANE 1 IS OUTSIDE LANE, NEXT TO SHOULDER
LANE 2 IS NEXT TO LANE 1, ETC.)

*3. SUBSURFACE DRAINAGE LOCATION [3.]
Continuous Along Test Section... 1 Intermittent... 2 None... 3

*4. SUBSURFACE DRAINAGE TYPE [1.]
No Subsurface Drainage... 1 Longitudinal Drains... 2
Transverse Drains... 3 Drainage Blanket... 4 Well System... 5
Drainage Blanket with Longitudinal Drains... 6
Other (Specify)... 7 _____

SHOULDER DATA	INSIDE SHOULDER	OUTSIDE SHOULDER
*5. SURFACE TYPE Turf... 1 Granular.... 2 Asphalt Concrete... 3 Concrete... 4 Surface Treatment... 5 Other (Specify)... 6 _____	[3.]	[3.]
*6. TOTAL WIDTH (FEET)	[4.]	[1 0.]
*7. PAVED WIDTH (FEET)	[4.]	[1 0.]
8. SHOULDER BASE TYPE (CODES-TABLE A.6)	[2 3.]	[2 3.]
9. SURFACE THICKNESS (INCHES)	[4.0]	[4.0]
10. SHOULDER BASE THICKNESS (INCHES)	[7.9]	[7.9]
11. DIAMETER OF LONGITUDINAL DRAINPIPES (INCHES) N/A		[.]
12. SPACING OF LATERALS (FEET) N/A		[.]

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 4 LAYER DESCRIPTIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 3]

	*1 LAYER NUMBER	*2 LAYER DESCRIPTION	*3 MATERIAL TYPE CLASS	*4 LAYER THICKNESSES (Inches)			
				AVERAGE	MINIMUM	MAXIMUM	STD. DEV.
	1	SUBGRADE(7)	[5 2]				
DGAB	2	[0 6]	[2 3]	[7.9]	7.2	8.6	0.4
B Inter	3	[0 4]	[0 1]	[3.2]	2.5	4.0	0.3
surface	4	[0 3]	[0 1]	[1.4]	0.8	1.9	0.2
	5	[ ]	[ ]	[.]	.	.	.
	6	[ ]	[ ]	[.]	.	.	.
	7	[ ]	[ ]	[.]	.	.	.
	8	[ ]	[ ]	[.]	.	.	.
	9	[ ]	[ ]	[.]	.	.	.
	10	[ ]	[ ]	[.]	.	.	.
	11	[ ]	[ ]	[.]	.	.	.
	12	[ ]	[ ]	[.]	.	.	.
	13	[ ]	[ ]	[.]	.	.	.
	14	[ ]	[ ]	[.]	.	.	.
	15	[ ]	[ ]	[.]	.	.	.

*5 DEPTH BELOW SURFACE TO "RIGID" LAYER (FEET) [.]
(Rock, Stone, Dense Shale)

NOTES:

1. Layer 1 is the subgrade soil, the highest numbered layer is the pavement surface.

2. Layer description codes:

Overlay.....01	Base Layer.....05	Porous Friction Course..09
Seal/Tack Coat.....02	Subbase Layer.....06	Surface Treatment.....10
Original Surface.....03	Subgrade.....07	Embankment (Fill).....11
HMAC Layer (Subsurface).04	Interlayer.....08	

3. The material type classification codes are presented in Tables A.5, A.6, A.7 and A.8 of the Data Collection Guide for Long Term Pavement Performance Studies, dated January 17, 1990.

4. Enter the average thickness of each layer and the minimum, maximum and standard deviation of the thickness measurements, if known.

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 9 PLANT-MIXED ASPHALT BOUND LAYERS PLACEMENT DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 3]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 3-2 0-9 7]

*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]

*3 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Shears-Aztec	[3]	[5]	[3]	[4]	[ ]
Plant 2	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]
Plant 3	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]

Plant Type: Batch..... 1 Drum Mix.... 2 Other...3 Specify _____

4. MANUFACTURER OF ASPHALT CONCRETE PAVER Blaw-Knox

5. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER PF 510

6. SINGLE PASS LAYDOWN WIDTH (Feet) [1 9.0]

7. ATB PLACEMENT LIFTS
   Layer Number [ ]
   Nominal First Lift Placement Thickness (Inches) [.]
   Nominal Second Lift Placement Thickness (Inches) [.]
   Nominal Third Lift Placement Thickness (Inches) [.]
   Nominal Fourth Lift Placement Thickness (Inches) [.]
8. PATB PLACEMENT LIFTS
   Layer Number [ ]
   Nominal First Lift Placement Thickness (Inches) [.]
   Nominal Second Lift Placement Thickness (Inches) [.]
9. AC BINDER COURSE LIFT
   Layer Number [3]
   Nominal First Lift Placement Thickness (Inches) [3.0]
   Nominal Second Lift Placement Thickness (Inches) [.]
10. AC SURFACE COURSE LIFT
   Layer Number [4]
   Nominal First Lift Placement Thickness (Inches) [2.0]
   Nominal Second Lift Placement Thickness (Inches) [.]
11. SURFACE FRICTION COURSE (If Placed)
   Layer Number [ ]
   Nominal Placement Thickness (Inches) [.]
12. TEST SECTION STATION OF TRANSVERSE JOINTS (within test section)
   Binder Course [+]
   Surface Course [+]
   Surface Friction Course [+]
13. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
   Between lanes.. 1 Within lane.. 2
   (specify offset from O/S feet) [1 2.0]

14. SIGNIFICANT EVENTS DURING CONSTRUCTION (disruptions, rain, equip. problems, etc.) _____

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 3]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 2-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-2 3-9 7]
*3. LAYER NUMBER AC-Binder [3]

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__

Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	_ 1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	_ _ _ _.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 3.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 8 5.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	2.5	_.__	_.__	_.__
31	Curing Period (Days)	_ 4.0	_ _.__	_ _.__	_ _.__

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 3]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5 - 2 7 - 9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5 - 3 0 - 9 7]
*3. LAYER NUMBER AC-Surface [4]

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__				
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 2.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	1.5	_.__	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _.__	_ _.__

PREPARER [signature] EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 11 PLANT-MIXED ASPHALT BOUND LAYERS DENSITY AND PROFILE DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 3]

1. NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	ATB	Binder Course	Surface Course	Surface Friction Layer
Measurement Method (A, B, C)[1]	__	__	A	__
Number of Measurements	__ __	__ __	1 2	__ __
Average (pcf)	__ __ __.__	__ __ __.__	1 4 3.6	__ __ __.__
Maximum (pcf)	__ __ __.__	__ __ __.__	1 4 7.7	__ __ __.__
Minimum (pcf)	__ __ __.__	__ __ __.__	1 3 9.4	__ __ __.__
Standard Deviation (pcf)	__ __ __.__	__ __ __.__	__ 2.3	__ __ __.__
Layer Number	__ __	__ __	0 4	__ __

[1]Measurement Method Backscatter... A Direct Transmission... B Air Gap... C

2. MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler
3. NUCLEAR DENSITY GAUGE MODEL NUMBER 3440
4. NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 16133
5. NUCLEAR GAUGE COUNT RATE FOR STANDARDIZATION __ __ __ __ __
6. PROFILOGRAPH MEASUREMENTS

   Profilograph Type California... 1 Rainhart... 2 1
   Profile Index (Inches/Mile) __ __
   Interpretation Method Manual.. 1 Mechanical.. 2 Computer.. 3 __
   Height of Blanking Band (Inches) __.__ __
   Cutoff Height (Inches) __.__ __

7. SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) Yes

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 3]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
0+00	0	7.7			4.7	
	36	7.6			4.9	
	72	7.6			5.0	
	108	7.7			5.2	
	144	7.7			5.3	
0+50	0	7.3			4.9	
	36	7.7			4.7	
	72	7.7			4.6	
	108	7.8			4.6	
	144	7.3			4.8	
1+00	0	7.6			4.8	
	36	7.2			4.8	
	72	7.7			4.8	
	108	7.7			4.9	
	144	7.7			4.9	
1+50	0	7.4			4.1	
	36	7.5			4.1	
	72	7.3			4.3	
	108	7.6			4.5	
	144	7.5			4.6	
2+00	0	7.8			4.9	
	36	8.2			4.7	
	72	8.4			4.5	
	108	8.3			4.5	
	144	8.0			4.7	
2+50	0	7.8			4.4	
	36	8.3			4.4	
	72	8.2			4.4	
	108	8.2			4.5	
	144	8.1			4.7	
3+00	0	7.6			4.9	
	36	8.0			4.8	
	72	8.1			4.7	
	108	8.4			4.6	
	144	8.3			4.9	
LAYER NUMBER[1]		02			03	

[1] from Sheet 4

+04

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 3]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
3+50	0	8.0			4.4	
	36	8.1			4.2	
	72	8.3			4.2	
	108	8.3			4.3	
	144	8.6			4.3	
4+00	0	8.1			4.7	
	36	8.4			4.7	
	72	8.3			4.6	
	108	8.4			4.5	
	144	7.9			4.5	
4+50	0	7.4			4.9	
	36	7.8			5.0	
	72	8.2			4.4	
	108	8.6			4.1	
	144	8.4			4.4	
5+00	0	7.7			3.8	
	36	7.5			4.1	
	72	7.5			4.4	
	108	7.9			4.3	
	144	8.4			4.5	
+00						
+00						
+00						
LAYER NUMBER[1]		02			03	

[1] from Sheet 4

+04

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 13 UNBOUND AGGREGATE BASE MATERIAL PLACEMENT	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 3]

*1. UNBOUND BASE MATERIAL PLACEMENT BEGAN (Month-Day-Year) [0 3-2 4-9 7]

*2. UNBOUND BASE MATERIAL PLACEMENT COMPLETED (Month-Day-Year) [0 4-1 1-9 7]

*3. LAYER NUMBER (From Sheet 4) [2]

PRIMARY COMPACTION EQUIPMENT

*4. CODE TYPE [2]

COMPACTION TYPE CODES
Pneumatic - Tired... 1 Steel Wheel Tandem... 2 Single Drum Vibr.... 3
Double Drum Vibr.... 4
Other (Specify)... 5 _____

*5. GROSS WEIGHT (TONS) [1 2.0]

*6. LIFT THICKNESSES
Nominal First Lift Placement Thickness (inches) [0 4]
Nominal Second Lift Placement Thickness (inches) [0 4]
Nominal Third Lift Placement Thickness (inches) [ ]
Nominal Fourth Lift Placement Thickness (inches) [ ]

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

7. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) _____

PREPARER [signature] EMPLOYER ERE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 14 SUBGRADE PREPARATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 3]

*1. SUBGRADE PREPARATION BEGAN (Month-Day-Year) [1 1-1 1-9 6]

*2. SUBGRADE PREPARATION COMPLETED (Month-Day-Year) [1 2-0 6-9 6]

PRIMARY COMPACTION EQUIPMENT

*3. CODE TYPE [6]

COMPACTION EQUIPMENT TYPE CODES
Sheepsfoot... 1 Pneumatic Tired... 2 Steel Wheel Tandem... 3
Single Drum Vibr.... 4 Double Drum Vibr.... 5
Other (Specify)... 6 Sheepsfoot + Pneumatic

*4. GROSS WEIGHT (TONS) [_ _._]

	TYPE	PERCENT
*5. STABILIZING AGENT 1	[2]	[_ 5.0]
*6. STABILIZING AGENT 2	[_]	[_ _._]

STABILIZING AGENT TYPE CODES Quicklime
Portland Cement... 1 Lime... 2 Fly Ash, Class C... 3
Fly Ash, Class N... 4
Other (Specify)... 5 _____

*7. TYPICAL LIFT THICKNESS (INCHES) [_ 8]
(For Fill Sections Only)

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

8. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) none

PREPARER [signature] EMPLOYER BRE DATE 3-17-97

SPS-1 CONSTRUCTION DATA SHEET 15 CUT-FILL SECTION LOCATIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 3]

ORDER	*1 CUT-FILL TYPE[1]	TEST SECTION STATION NUMBER	
		*2 START	*3 END
1	2	0 + 0 0	5 + 0 0
2		+	+
3		+	+
4		+	+
5		+	+
6		+	+
7		+	+
8		+	+
9		+	+
10		+	+

NOTES:

1. Indicate the type of subgrade construction with one of the following:

   Cut... 1 Fill... 2 At-Grade... 3

2. Use one line for each cut, fill or at-grade zone present within the section boundaries.

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

SPS-1 CONSTRUCTION DATA SHEET 16 SUBGRADE EXCAVATION AND BACKFILLING SKETCH	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 3]

No sketch
SEE Construction Plans

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

RECEIVED DEC - 1 1997

December 1995

SPS-1 CONSTRUCTION DATA SHEET 2 GEOMETRIC, SHOULDER AND DRAINAGE INFORMATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 4]

*1. LANE WIDTH (FEET) [1 2.]

2. MONITORING SITE LANE NUMBER [1.]
(LANE 1 IS OUTSIDE LANE, NEXT TO SHOULDER
LANE 2 IS NEXT TO LANE 1, ETC.)

*3. SUBSURFACE DRAINAGE LOCATION [3.]
Continuous Along Test Section... 1 Intermittent... 2 None... 3

*4. SUBSURFACE DRAINAGE TYPE [1.]
No Subsurface Drainage... 1 Longitudinal Drains... 2
Transverse Drains... 3 Drainage Blanket... 4 Well System... 5
Drainage Blanket with Longitudinal Drains... 6
Other (Specify)... 7 _____

SHOULDER DATA	INSIDE SHOULDER	OUTSIDE SHOULDER
*5. SURFACE TYPE Turf... 1 Granular.... 2 Asphalt Concrete... 3 Concrete... 4 Surface Treatment... 5 Other (Specify)... 6 _____	[3.]	[3.]
*6. TOTAL WIDTH (FEET)	[4.]	[10.]
*7. PAVED WIDTH (FEET)	[4.]	[10.]
8. SHOULDER BASE TYPE (CODES-TABLE A.6)	[23]	[23]
9. SURFACE THICKNESS (INCHES)	[7.0]	[7.0]
10. SHOULDER BASE THICKNESS (INCHES)	[11.3]	[11.3]
11. DIAMETER OF LONGITUDINAL DRAINPIPES (INCHES)		[ ]
12. SPACING OF LATERALS (FEET)		[ ] N/A

8 + 10 info. is for DGAB,
See Note on Sect. 22

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 4 LAYER DESCRIPTIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 4]

	*1 LAYER NUMBER	*2 LAYER DESCRIPTION	*3 MATERIAL TYPE CLASS	*4 LAYER THICKNESSES (Inches)			
				AVERAGE	MINIMUM	MAXIMUM	STD. DEV.
DGAB	1	SUBGRADE(7)	[5 9]				
Binder	2	[0 6]	[2 3]	[11.3]	10.3	12.5	0.6
Surface	3	[0 4]	[0 1]	[5.7]	5.0	6.7	0.4
	4	[0 3]	[0 1]	[2.0]	1.1	2.8	0.4
	5	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	6	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	7	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	8	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	9	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	10	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	11	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	12	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	13	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	14	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	15	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._

*5 DEPTH BELOW SURFACE TO "RIGID" LAYER (FEET) [__ __ . __]
(Rock, Stone, Dense Shale)

NOTES:

1. Layer 1 is the subgrade soil, the highest numbered layer is the pavement surface.

2. Layer description codes:

Overlay.....01	Base Layer.....05	Porous Friction Course..09
Seal/Tack Coat.....02	Subbase Layer.....06	Surface Treatment.....10
Original Surface.....03	Subgrade.....07	Embankment (Fill).....11
HMAC Layer (Subsurface).04	Interlayer.....08	

3. The material type classification codes are presented in Tables A.5, A.6, A.7 and A.8 of the Data Collection Guide for Long Term Pavement Performance Studies, dated January 17, 1990.

4. Enter the average thickness of each layer and the minimum, maximum and standard deviation of the thickness measurements, if known.

PREPARER Timothy J. Marks EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 9 PLANT-MIXED ASPHALT BOUND LAYERS PLACEMENT DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 4]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 3-2 0-9 7]

*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]

*3 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name Azfec	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Shears ~~Azfec~~	[3]	[5]	[3]	[4]	[ ]
Plant 2	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]
Plant 3	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]

Plant Type: Batch..... 1 Drum Mix.... 2 Other...3 Specify_____

4. MANUFACTURER OF ASPHALT CONCRETE PAVER Blawknox

5. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER PF 510

6. SINGLE PASS LAYDOWN WIDTH (Feet) [1 9.0]

7. ATB PLACEMENT LIFTS
   - Layer Number [ ]
   - Nominal First Lift Placement Thickness (Inches) [.]
   - Nominal Second Lift Placement Thickness (Inches) [.]
   - Nominal Third Lift Placement Thickness (Inches) [.]
   - Nominal Fourth Lift Placement Thickness (Inches) [.]

   N/A

8. PATB PLACEMENT LIFTS
   - Layer Number [ ]
   - Nominal First Lift Placement Thickness (Inches) [.]
   - Nominal Second Lift Placement Thickness (Inches) [.]

   N/A

9. AC BINDER COURSE LIFT
   - Layer Number [3]
   - Nominal First Lift Placement Thickness (Inches) [3.5]
   - Nominal Second Lift Placement Thickness (Inches) [3.0]

10. AC SURFACE COURSE LIFT
    - Layer Number [4]
    - Nominal First Lift Placement Thickness (Inches) [2.0]
    - Nominal Second Lift Placement Thickness (Inches) [.]

11. SURFACE FRICTION COURSE (If Placed)
    - Layer Number [ ]
    - Nominal Placement Thickness (Inches) [.]

12. TEST SECTION STATION OF TRANSVERSE JOINTS (within test section)
    - Binder Course [+]
    - Surface Course [+]
    - Surface Friction Course [+]

13. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
    Between lanes.. 1 Within lane.. 2
    (specify offset from O/S feet) [1 2.0]

14. SIGNIFICANT EVENTS DURING CONSTRUCTION (disruptions, rain, equip. problems, etc.)_____

PREPARER Timothy J Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 4]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 2-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-2 3-9 7]
*3. LAYER NUMBER AC-Binder [3]

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _._

Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _._				
8	C	Steel-Whl Tandem	_ _._				
9	D	Steel-Whl Tandem	_ _._				
10	E	Pneumatic-Tired	1 3.0	1 2 0.			
11	F	Pneumatic-Tired	_ _._	_ _ _ _.			
12	G	Pneumatic-Tired	_ _._	_ _ _ _.			
13	H	Pneumatic-Tired	_ _._	.			
14	I	Single-Drum Vibr.	_ _._		_ _ _ _.	.__ __ __	__ __.__
15	J	Single-Drum Vibr.	_ _._		_ _ _ _.	.__ __ __	__ __.__
16	K	Single-Drum Vibr.	_ _._		_ _ _ _.	.__ __ __	__ __.__
17	L	Single-Drum Vibr.	_ _._		_ _ _ _.	.__ __ __	__ __.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 __	__ __.__
19	N	Double-Drum Vibr.	_ _._		_ _ _ _.	.__ __ __	__ __.__
20	O	Double-Drum Vibr.	_ _._		_ _ _ _.	.__ __ __	__ __.__
21	P	Double-Drum Vibr.	_ _._		_ _ _ _.	.__ __ __	__ __.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	M	_	_
24	Coverages	_ 1.	_ 1.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	E	_	_
26	Coverages	_ 3.	_ 2.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	A	_	_
28	Coverages	_ 1.	_ 1.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ 9 0.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	3.0	2.5	_.__	_.__
31	Curing Period (Days)	_ 4.0	_ 2.0	_ _.__	_ _.__

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 4]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [05-27-97]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [05-30-97]
*3. LAYER NUMBER AC - Surface [4]

*4. MIXING TEMPERATURE (°F) [305.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 290.
Minimum..... ___.
Standard Deviation... __.__
Number of Tests ..... __.
Maximum..... ___.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	12.0				
7	B	Steel-Whl Tandem	__.__				
8	C	Steel-Whl Tandem	__.__				
9	D	Steel-Whl Tandem	__.__				
10	E	Pneumatic-Tired	18.0	120.			
11	F	Pneumatic-Tired	__.__	___.			
12	G	Pneumatic-Tired	__.__	___.			
13	H	Pneumatic-Tired	__.__	___.			
14	I	Single-Drum Vibr.	__.__		____.	.___	__.__
15	J	Single-Drum Vibr.	__.__		____.	.___	__.__
16	K	Single-Drum Vibr.	__.__		____.	.___	__.__
17	L	Single-Drum Vibr.	__.__		____.	.___	__.__
18	M	Double-Drum Vibr.	1 P.2		3200.	.02	__.__
19	N	Double-Drum Vibr.	__.__		____.	.___	__.__
20	O	Double-Drum Vibr.	__.__		____.	.___	__.__
21	P	Double-Drum Vibr.	__.__		____.	.___	__.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	__	__	__
24	Coverages	1.	__.	__.	__.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	__	__	__
26	Coverages	2.	__.	__.	__.
	FINAL				
27	Roller Code (A-Q)	A	__	__	__
28	Coverages	1.	__.	__.	__.
29	Air Temperature (°F)	90.	___.	___.	___.
30	Compacted Thickness (In)	1.5	__.__	__.__	__.__
31	Curing Period (Days)	__.__	__.__	__.__	__.__

PREPARER Timothy J. Mista EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 11 PLANT-MIXED ASPHALT BOUND LAYERS DENSITY AND PROFILE DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 9]

1. NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	ATB	Binder Course	Surface Course	Surface Friction Layer
Measurement Method (A, B, C)[1]	__	__	A	__
Number of Measurements	__ __	__ __	1 2	__ __
Average (pcf)	__ __ __.__	__ __ __.__	1 4 5 .3	__ __ __.__
Maximum (pcf)	__ __ __.__	__ __ __.__	1 4 9 .3	__ __ __.__
Minimum (pcf)	__ __ __.__	__ __ __.__	1 4 1 .6	__ __ __.__
Standard Deviation (pcf)	__ __ __.__	__ __ __.__	__ 3 .1	__ __ __.__
Layer Number	__ __	__ __	0 4	__ __

[1]Measurement Method Backscatter... A Direct Transmission... B Air Gap... C

2. MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

3. NUCLEAR DENSITY GAUGE MODEL NUMBER 3440

4. NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 16133

5. NUCLEAR GAUGE COUNT RATE FOR STANDARDIZATION __ __ __ __ __

6. PROFILOGRAPH MEASUREMENTS

Profilograph Type California... 1 Rainhart... 2 1
Profile Index (Inches/Mile) __ __
Interpretation Method Manual.. 1 Mechanical.. 2 Computer.. 3 __
Height of Blanking Band (Inches) __.__ __
Cutoff Height (Inches) __.__ __

7. SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) Yes

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 4]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
0+00	0	10.8			7.7	
	36	10.8			7.9	
	72	11.5			7.6	
	108	11.2			7.9	
	144	11.7			7.3	
0+50	0	12.0			7.8	
	36	11.3			7.9	
	72	11.6			7.6	
	108	11.4			7.9	
	144	11.8			7.3	
1+00	0	12.1			8.0	
	36	11.0			8.3	
	72	11.0			8.3	
	108	11.0			8.3	
	144	11.3			8.0	
1+50	0	12.5			7.9	
	36	12.2			8.0	
	72	12.2			7.9	
	108	12.4			8.0	
	144	12.5			7.4	
2+00	0	10.9			7.5	
	36	11.0			7.7	
	72	11.2			7.4	
	108	10.8			7.7	
	144	10.9			7.5	
2+50	0	11.0			7.5	
	36	10.8			7.9	
	72	10.8			7.8	
	108	10.6			7.9	
	144	10.9			7.6	
3+00	0	10.6			7.7	
	36	10.3			7.1	
	72	10.6			7.9	
	108	10.7			7.9	
	144	10.4			7.6	
LAYER NUMBER[1]		02			03	

[1] from Sheet 4

+04

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 4]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
3+50	0	11.0			7.3	
	36	10.7			7.4	
	72	11.2			7.0	
	108	10.8			7.5	
	144	11.5			6.7	
4+00	0	10.8			7.3	
	36	11.2			7.3	
	72	11.3			7.3	
	108	11.8			7.4	
	144	11.8			7.1	
4+50	0	10.8			7.6	
	36	10.7			7.8	
	72	11.3			7.9	
	108	11.2			8.0	
	144	11.4			7.7	
5+00	0	11.6			6.7	
	36	11.5			7.1	
	72	11.6			7.4	
	108	11.9			7.4	
	144	12.5			6.9	
+						
+						
+						
LAYER NUMBER[1]		02			03	

[1] from Sheet 4

+04

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 13 UNBOUND AGGREGATE BASE MATERIAL PLACEMENT	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 4]

*1. UNBOUND BASE MATERIAL PLACEMENT BEGAN (Month-Day-Year) [0 3-2 4-9 7]

*2. UNBOUND BASE MATERIAL PLACEMENT COMPLETED (Month-Day-Year) [0 4-1 1-9 7]

*3. LAYER NUMBER (From Sheet 4) [2]

PRIMARY COMPACTION EQUIPMENT

*4. CODE TYPE [2]

COMPACTION TYPE CODES
Pneumatic - Tired... 1 Steel Wheel Tandem... 2 Single Drum Vibr.... 3
Double Drum Vibr.... 4
Other (Specify)... 5 _____

*5. GROSS WEIGHT (TONS) [1 2.0]

*6. LIFT THICKNESSES
Nominal First Lift Placement Thickness (inches) [0 6]
Nominal Second Lift Placement Thickness (inches) [0 6]
Nominal Third Lift Placement Thickness (inches) [ ]
Nominal Fourth Lift Placement Thickness (inches) [ ]

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

7. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) _____

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 14 SUBGRADE PREPARATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 4]

*1. SUBGRADE PREPARATION BEGAN (Month-Day-Year) [1 1-1 1-9 6]

*2. SUBGRADE PREPARATION COMPLETED (Month-Day-Year) [1 2-0 6-9 6]

PRIMARY COMPACTION EQUIPMENT

*3. CODE TYPE [6]

COMPACTION EQUIPMENT TYPE CODES
Sheepsfoot... 1 Pneumatic Tired... 2 Steel Wheel Tandem... 3
Single Drum Vibr.... 4 Double Drum Vibr.... 5
Other (Specify)... 6 Sheeps foot + Pneumatic

*4. GROSS WEIGHT (TONS) [__ __.__]

	TYPE	PERCENT
*5. STABILIZING AGENT 1	[2]	[__ 5.0]
*6. STABILIZING AGENT 2	[__]	[__ __.__]

STABILIZING AGENT TYPE CODES Quick lime
Portland Cement... 1 Lime... 2 Fly Ash, Class C... 3
Fly Ash, Class N... 4
Other (Specify)... 5 _____

*7. TYPICAL LIFT THICKNESS (INCHES) [__ __]
(For Fill Sections Only)

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

8. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) None

PREPARER [signature] EMPLOYER BRE DATE 3/17/97

SPS-1 CONSTRUCTION DATA SHEET 15 CUT-FILL SECTION LOCATIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 4]

ORDER	*1 CUT-FILL TYPE[1]	TEST SECTION STATION NUMBER	
		*2 START	*3 END
1	1	0 + 0 0	5 + 0 0
2		+	+
3		+	+
4		+	+
5		+	+
6		+	+
7		+	+
8		+	+
9		+	+
10		+	+

NOTES:

1. Indicate the type of subgrade construction with one of the following:

   Cut... 1 Fill... 2 At-Grade... 3

2. Use one line for each cut, fill or at-grade zone present within the section boundaries.

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

SPS-1 CONSTRUCTION DATA SHEET 16 SUBGRADE EXCAVATION AND BACKFILLING SKETCH	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 4]

No sketch
SEE Constr. Plans

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

RECEIVED DEC - 1 1997

December 1995

SPS-1 CONSTRUCTION DATA SHEET 2 GEOMETRIC, SHOULDER AND DRAINAGE INFORMATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 2]

*1. LANE WIDTH (FEET) [1 2.]

2. MONITORING SITE LANE NUMBER [1.]
(LANE 1 IS OUTSIDE LANE, NEXT TO SHOULDER
LANE 2 IS NEXT TO LANE 1, ETC.)

*3. SUBSURFACE DRAINAGE LOCATION [3.]
Continuous Along Test Section... 1 Intermittent... 2 None... 3

*4. SUBSURFACE DRAINAGE TYPE [1.]
No Subsurface Drainage... 1 Longitudinal Drains... 2
Transverse Drains... 3 Drainage Blanket... 4 Well System... 5
Drainage Blanket with Longitudinal Drains... 6
Other (Specify)... 7 _____

SHOULDER DATA	INSIDE SHOULDER	OUTSIDE SHOULDER
*5. SURFACE TYPE Turf... 1 Granular.... 2 Asphalt Concrete... 3 Concrete... 4 Surface Treatment... 5 Other (Specify)... 6 _____	[3.]	[3.]
*6. TOTAL WIDTH (FEET)	[4.]	[10.]
*7. PAVED WIDTH (FEET)	[4.]	[10.]
8. SHOULDER BASE TYPE (CODES-TABLE A.6)	[28.]	[28.]
9. SURFACE THICKNESS (INCHES)	[7.0]	[7.0]
10. SHOULDER BASE THICKNESS (INCHES)	[8.7]	[8.7]
11. DIAMETER OF LONGITUDINAL DRAINPIPES (INCHES)		[N/A]
12. SPACING OF LATERALS (FEET)		[N/A]

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 4 LAYER DESCRIPTIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 5]

	*1 LAYER NUMBER	*2 LAYER DESCRIPTION	*3 MATERIAL TYPE CLASS	*4 LAYER THICKNESSES (Inches)			
				AVERAGE	MINIMUM	MAXIMUM	STD. DEV.
	1	SUBGRADE(7)	[5 2]				
ATB Binder Surface	2	[0 5]	[2 8]	[8.7]	8.2	9.5	0.3
	3	[0 4]	[0 1]	[5.8]	5.3	6.7	0.3
	4	[0 3]	[0 1]	[2.0]	1.4	2.5	0.3
	5	[ ]	[ ]	[.]	.	.	.
	6	[ ]	[ ]	[.]	.	.	.
	7	[ ]	[ ]	[.]	.	.	.
	8	[ ]	[ ]	[.]	.	.	.
	9	[ ]	[ ]	[.]	.	.	.
	10	[ ]	[ ]	[.]	.	.	.
	11	[ ]	[ ]	[.]	.	.	.
	12	[ ]	[ ]	[.]	.	.	.
	13	[ ]	[ ]	[.]	.	.	.
	14	[ ]	[ ]	[.]	.	.	.
	15	[ ]	[ ]	[.]	.	.	.

*5 DEPTH BELOW SURFACE TO "RIGID" LAYER (FEET) [.]
(Rock, Stone, Dense Shale)

NOTES:

1. Layer 1 is the subgrade soil, the highest numbered layer is the pavement surface.

2. Layer description codes:

Overlay.....01	Base Layer.....05	Porous Friction Course..09
Seal/Tack Coat.....02	Subbase Layer.....06	Surface Treatment.....10
Original Surface.....03	Subgrade.....07	Embankment (Fill).....11
HMAC Layer (Subsurface).04	Interlayer.....08	

3. The material type classification codes are presented in Tables A.5, A.6, A.7 and A.8 of the Data Collection Guide for Long Term Pavement Performance Studies, dated January 17, 1990.

4. Enter the average thickness of each layer and the minimum, maximum and standard deviation of the thickness measurements, if known.

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 9 PLANT-MIXED ASPHALT BOUND LAYERS PLACEMENT DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 5]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 3-2 0-9 7]

*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]

*3 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Shears – Aztec	[3]	[5]	[2]	[3]	[4]
Plant 2	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]
Plant 3	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]

Plant Type: Batch..... 1 Drum Mix.... 2 Other...3 Specify_____

4. MANUFACTURER OF ASPHALT CONCRETE PAVER Blaw-Knox

5. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER PF510

6. SINGLE PASS LAYDOWN WIDTH (Feet) [1 9.0]

7. ATB PLACEMENT LIFTS
   - Layer Number [2]
   - Nominal First Lift Placement Thickness (Inches) [3.5]
   - Nominal Second Lift Placement Thickness (Inches) [3.0]
   - Nominal Third Lift Placement Thickness (Inches) [3.0]
   - Nominal Fourth Lift Placement Thickness (Inches) [.]

8. PATB PLACEMENT LIFTS
   - Layer Number [ ]
   - Nominal First Lift Placement Thickness (Inches) [.]
   - Nominal Second Lift Placement Thickness (Inches) [.]

9. AC BINDER COURSE LIFT
   - Layer Number [3]
   - Nominal First Lift Placement Thickness (Inches) [3.0]
   - Nominal Second Lift Placement Thickness (Inches) [3.0]

10. AC SURFACE COURSE LIFT
    - Layer Number [4]
    - Nominal First Lift Placement Thickness (Inches) [2.0]
    - Nominal Second Lift Placement Thickness (Inches) [.]

11. SURFACE FRICTION COURSE (If Placed)
    - Layer Number [ ]
    - Nominal Placement Thickness (Inches) [.]

12. TEST SECTION STATION OF TRANSVERSE JOINTS (within test section)
    - Binder Course [+]
    - Surface Course [+]
    - Surface Friction Course [+]

13. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
    - Between lanes.. 1 Within lane.. 2
    - (specify offset from O/S feet) [1 2.0]

14. SIGNIFICANT EVENTS DURING CONSTRUCTION (disruptions, rain, equip. problems, etc.)_____

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 5]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 4-3 0-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-0 8-9 7]
*3. LAYER NUMBER [2]

ATB

Plant gumming up @ lower temps

*4. MIXING TEMPERATURE (°F) [3 4 0.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 3 2 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__

Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	M	M	_
24	Coverages	_ 1.	_ 1.	_ 1.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	E	E	_
26	Coverages	_ 3.	_ 3.	_ 3.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	A	A	_
28	Coverages	_ 1.	_ 1.	_ 1.	_ _.
29	Air Temperature (°F)	_ _ _.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	3.0	2.5	2.5	_.__
31	Curing Period (Days)	_ 1.0	_ 1.0	_ _.__	_ _.__

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 5]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 2-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-2 3-9 7]
*3. LAYER NUMBER [3]
AC-Binder

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	_ _ _ _.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	M		_
24	Coverages	_ 1.	_ 1.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	E	_	_
26	Coverages	_ 3.	_ 3.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	A	_	_
28	Coverages	_ 1.	_ 1.	_ _.	_ _.
29	Air Temperature (°F)	_ _.	_ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	2.5	2.5	_.__	_.__
31	Curing Period (Days)	_ 1.0	_ 4.0	_ _.__	_ _.__

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 5]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-2 7-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]
*3. LAYER NUMBER AC-Surface [4]

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__				
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 2.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 8 5.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	2.0	_.__	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _.__	_ _.__

PREPARER Timothy J Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 11 PLANT-MIXED ASPHALT BOUND LAYERS DENSITY AND PROFILE DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 5]

1. NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	ATB	Binder Course	Surface Course	Surface Friction Layer
Measurement Method (A, B, C)[1]	A		A	
Number of Measurements	1 2		1 2	
Average (pcf)	141.0		144.4	
Maximum (pcf)	153.5		146.9	
Minimum (pcf)	131.8		140.7	
Standard Deviation (pcf)	8.2		2.9	
Layer Number	0 2		0 4	

[1]Measurement Method Backscatter... A Direct Transmission... B Air Gap... C

2. MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler
3. NUCLEAR DENSITY GAUGE MODEL NUMBER 3440
4. NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 16133
5. NUCLEAR GAUGE COUNT RATE FOR STANDARDIZATION
6. PROFILOGRAPH MEASUREMENTS

Profilograph Type California... 1 Rainhart... 2 1
Profile Index (Inches/Mile)
Interpretation Method Manual.. 1 Mechanical.. 2 Computer.. 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

7. SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) Yes

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 5]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
0+00	0			8.2	7.9	
	36			8.5	7.8	
	72			8.6	7.7	
	108			8.8	8.0	
	144			8.3	8.3	
0+50	0			8.2	7.8	
	36			8.5	7.7	
	72			8.6	7.6	
	108			8.4	7.9	
	144			8.4	7.9	
1+00	0			8.8	7.4	
	36			9.0	7.4	
	72			8.9	7.6	
	108			8.8	8.0	
	144			8.6	8.0	
1+50	0			8.5	7.9	
	36			9.0	7.8	
	72			8.8	7.7	
	108			8.5	8.0	
	144			8.3	8.0	
2+00	0			8.8	8.3	
	36			8.6	8.2	
	72			8.5	7.9	
	108			8.4	7.9	
	144			8.4	7.8	
2+50	0			8.9	7.2	
	36			9.1	7.1	
	72			9.1	7.1	
	108			8.6	7.7	
	144			8.8	7.8	
3+00	0			8.9	7.6	
	36			9.0	7.4	
	72			9.0	7.6	
	108			8.6	8.0	
	144			9.0	7.7	
LAYER NUMBER[1]				02	03	

[1] from Sheet 4

+04

PREPARER Timothy J Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 5]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
3+50	0			9.0	7.3	
	36			9.4	7.2	
	72			9.1	7.3	
	108			8.8	7.9	
	144			8.6	7.8	
4+00	0			8.6	7.6	
	36			8.9	7.6	
	72			8.8	7.7	
	108			8.5	8.3	
	144			8.6	8.0	
4+50	0			8.5	7.6	
	36			8.9	7.3	
	72			8.8	7.4	
	108			8.5	8.1	
	144			8.5	8.2	
5+00	0			9.2	7.6	
	36			9.5	7.3	
	72			8.9	7.6	
	108			8.9	7.9	
	144			9.0	7.8	
+						
+						
+						
LAYER NUMBER[1]				0 2	0 3	

[1] from Sheet 4

+04

PREPARER Timothy J Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 14 SUBGRADE PREPARATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 5]

*1. SUBGRADE PREPARATION BEGAN (Month-Day-Year) [1 1-1 1-9 6]

*2. SUBGRADE PREPARATION COMPLETED (Month-Day-Year) [1 2-0 6-9 6]

PRIMARY COMPACTION EQUIPMENT

*3. CODE TYPE [6]

COMPACTION EQUIPMENT TYPE CODES
Sheepsfoot... 1 Pneumatic Tired... 2 Steel Wheel Tandem... 3
Single Drum Vibr.... 4 Double Drum Vibr.... 5
Other (Specify)... 6 Sheepsfoot + Pneumatic

*4. GROSS WEIGHT (TONS) [_ _._]

	TYPE	PERCENT
*5. STABILIZING AGENT 1	[2]	[_ 5.0]
*6. STABILIZING AGENT 2	[_]	[_ _._]

STABILIZING AGENT TYPE CODES Quicklime
Portland Cement... 1 Lime... 2 Fly Ash, Class C... 3
Fly Ash, Class N... 4
Other (Specify)... 5 _____

*7. TYPICAL LIFT THICKNESS (INCHES) [_ 8]
(For Fill Sections Only)

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

8. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) None

PREPARER [signature] EMPLOYER BRE DATE 3-17-97

SPS-1 CONSTRUCTION DATA SHEET 15 CUT-FILL SECTION LOCATIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 5]

ORDER	*1 CUT-FILL TYPE[1]	TEST SECTION STATION NUMBER	
		*2 START	*3 END
1	2	0 + 0 0	5 + 0 0
2		+	+
3		+	+
4		+	+
5		+	+
6		+	+
7		+	+
8		+	+
9		+	+
10		+	+

NOTES:

1. Indicate the type of subgrade construction with one of the following:

   Cut... 1 Fill... 2 At-Grade... 3

2. Use one line for each cut, fill or at-grade zone present within the section boundaries.

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

SPS-1 CONSTRUCTION DATA SHEET 16 SUBGRADE EXCAVATION AND BACKFILLING SKETCH	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 5]

See Const. Plans.

PREPARER Timothy J Mark EMPLOYER BRE DATE 10/23/97

RECEIVED DEC - 1 1997

December 1995

SPS-1 CONSTRUCTION DATA SHEET 2 GEOMETRIC, SHOULDER AND DRAINAGE INFORMATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 6]

*1. LANE WIDTH (FEET) [1 2.]

2. MONITORING SITE LANE NUMBER [1.]
(LANE 1 IS OUTSIDE LANE, NEXT TO SHOULDER
LANE 2 IS NEXT TO LANE 1, ETC.)

*3. SUBSURFACE DRAINAGE LOCATION [3.]
Continuous Along Test Section... 1 Intermittent... 2 None... 3

*4. SUBSURFACE DRAINAGE TYPE [1.]
No Subsurface Drainage... 1 Longitudinal Drains... 2
Transverse Drains... 3 Drainage Blanket... 4 Well System... 5
Drainage Blanket with Longitudinal Drains... 6
Other (Specify)... 7 _____

SHOULDER DATA	INSIDE SHOULDER	OUTSIDE SHOULDER
*5. SURFACE TYPE Turf... 1 Granular.... 2 Asphalt Concrete... 3 Concrete... 4 Surface Treatment... 5 Other (Specify)... 6 _____	[3.]	[3.]
*6. TOTAL WIDTH (FEET)	[4.]	[1 0.]
*7. PAVED WIDTH (FEET)	[4.]	[1 0.]
8. SHOULDER BASE TYPE (CODES-TABLE A.6)	[2 8.]	[2 8.]
9. SURFACE THICKNESS (INCHES)	[4.0]	[4.0]
10. SHOULDER BASE THICKNESS (INCHES)	[1 2.0]	[1 2.0]
11. DIAMETER OF LONGITUDINAL DRAINPIPES (INCHES)		[N/A]
12. SPACING OF LATERALS (FEET)		[N/A]

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 4 LAYER DESCRIPTIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 6]

	*1 LAYER NUMBER	*2 LAYER DESCRIPTION	*3 MATERIAL TYPE CLASS	*4 LAYER THICKNESSES (Inches)			
				AVERAGE	MINIMUM	MAXIMUM	STD. DEV.
	1	SUBGRADE(7)	[5 7]				
ATB Binder surface	2	[0 5]	[2 8]	[12.0]	6.1	13.2	1.0
	3	[0 4]	[0 1]	[2.1]	1.1	3.0	0.5
	4	[0 3]	[0 1]	[1.8]	1.4	2.2	0.2
	5	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	6	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	7	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	8	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	9	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	10	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	11	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	12	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	13	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	14	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	15	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._

*5 DEPTH BELOW SURFACE TO "RIGID" LAYER (FEET) [__ __ . __]
(Rock, Stone, Dense Shale)

NOTES:

1. Layer 1 is the subgrade soil, the highest numbered layer is the pavement surface.

2. Layer description codes:

Overlay.....01	Base Layer.....05	Porous Friction Course..09
Seal/Tack Coat.....02	Subbase Layer.....06	Surface Treatment.....10
Original Surface.....03	Subgrade.....07	Embankment (Fill).....11
HMAC Layer (Subsurface).04	Interlayer.....08	

3. The material type classification codes are presented in Tables A.5, A.6, A.7 and A.8 of the Data Collection Guide for Long Term Pavement Performance Studies, dated January 17, 1990.

4. Enter the average thickness of each layer and the minimum, maximum and standard deviation of the thickness measurements, if known.

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 9 PLANT-MIXED ASPHALT BOUND LAYERS PLACEMENT DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 6]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 3-2 0-9 7]

*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]

*3 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers
Plant 1	[2]	Shears - Aztec	[3]	[5]	[2] [3] [4]
Plant 2	[ ]		[ ]	[ ]	[ ] [ ] [ ]
Plant 3	[ ]		[ ]	[ ]	[ ] [ ] [ ]

Plant Type: Batch..... 1 Drum Mix.... 2 Other...3 Specify ____

4. MANUFACTURER OF ASPHALT CONCRETE PAVER Blaw Knox

5. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER PF510

6. SINGLE PASS LAYDOWN WIDTH (Feet) [1 9.0]

7. ATB PLACEMENT LIFTS
   - Layer Number [2]
   - Nominal First Lift Placement Thickness (Inches) [7.0]
   - Nominal Second Lift Placement Thickness (Inches) [7.0]
   - Nominal Third Lift Placement Thickness (Inches) [.]
   - Nominal Fourth Lift Placement Thickness (Inches) [.]

8. PATB PLACEMENT LIFTS
   - Layer Number [ ]
   - Nominal First Lift Placement Thickness (Inches) [.]
   - Nominal Second Lift Placement Thickness (Inches) [.]

9. AC BINDER COURSE LIFT
   - Layer Number [3]
   - Nominal First Lift Placement Thickness (Inches) [3.0]
   - Nominal Second Lift Placement Thickness (Inches) [.]

10. AC SURFACE COURSE LIFT
    - Layer Number [4]
    - Nominal First Lift Placement Thickness (Inches) [1.0]
    - Nominal Second Lift Placement Thickness (Inches) [.]

11. SURFACE FRICTION COURSE (If Placed)
    - Layer Number [ ]
    - Nominal Placement Thickness (Inches) [.]

12. TEST SECTION STATION OF TRANSVERSE JOINTS (within test section)
    - Binder Course [+]
    - Surface Course [+]
    - Surface Friction Course [+]

13. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
    Between lanes.. 1 Within lane.. 2
    (specify offset from O/S feet) [1 2.0]

14. SIGNIFICANT EVENTS DURING CONSTRUCTION (disruptions, rain, equip. problems, etc.) ____

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 6]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 4-3 0-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-0 8-9 7]
*3. LAYER NUMBER [2]
ATB

Plant was gunning up @ lower temp's.

*4. MIXING TEMPERATURE (°F) [3 4 0.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 3 2 0.
Minimum..... _ _ _.
Standard Deviation... _ _.
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _._				
8	C	Steel-Whl Tandem	_ _._				
9	D	Steel-Whl Tandem	_ _._				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _._	_ _ _ _.			
12	G	Pneumatic-Tired	_ _._	_ _ _ _.			
13	H	Pneumatic-Tired	_ _._	.			
14	I	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
15	J	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
16	K	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
17	L	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	. 0 2 _	_ _._
19	N	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
20	O	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
21	P	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	M	_	←
24	Coverages	_ 2.	_ 2.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	E	_	_
26	Coverages	_ 4.	_ 4.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	A	_	_
28	Coverages	_ 1.	_ 1.	_ _.	_ _.
29	Air Temperature (°F)	_ 7 5.	_ 7 5.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	6.0	6.0	_._	_._
31	Curing Period (Days)	_ 1.0	_ 4.0	_ _._	_ _._

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 6]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 2-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-2 3-9 7]
*3. LAYER NUMBER AC-Binder [3]

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__

Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	_ 1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__				
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	. 0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 3.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 8 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	2.5	_.__	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _.__	_ _.__

PREPARER [signature] EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 6]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-2 7-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]
*3. LAYER NUMBER AC-Surface [4]

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _._				
8	C	Steel-Whl Tandem	_ _._				
9	D	Steel-Whl Tandem	_ _._				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _.._	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.._	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.._				
14	I	Single-Drum Vibr.	_ _.._		_ _ _ _.	. _ _ _	_ _.._
15	J	Single-Drum Vibr.	_ _.._		_ _ _ _.	. _ _ _	_ _.._
16	K	Single-Drum Vibr.	_ _.._		_ _ _ _.	. _ _ _	_ _.._
17	L	Single-Drum Vibr.	_ _.._		_ _ _ _.	. _ _ _	_ _.._
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	. 0 2 _	_ _.._
19	N	Double-Drum Vibr.	_ _.._		_ _ _ _.	. _ _ _	_ _.._
20	O	Double-Drum Vibr.	_ _.._		_ _ _ _.	. _ _ _	_ _.._
21	P	Double-Drum Vibr.	_ _.._		_ _ _ _.	. _ _ _	_ _.._
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 2.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 8 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	1.5	_.._	_.._	_.._
31	Curing Period (Days)	_ _.._	_ _ _	_ _.._	_ _.._

PREPARER [signature] EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 11 PLANT-MIXED ASPHALT BOUND LAYERS DENSITY AND PROFILE DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 6]

1. NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	ATB	Binder Course	Surface Course	Surface Friction Layer
Measurement Method (A, B, C)[1]	A		A	
Number of Measurements	12		12	
Average (pcf)	144.8		140.8	
Maximum (pcf)	152.5		145.6	
Minimum (pcf)	137.7		138.4	
Standard Deviation (pcf)	4.7		1.9	
Layer Number	02		04	

[1]Measurement Method Backscatter... A Direct Transmission... B Air Gap... C

2. MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler
3. NUCLEAR DENSITY GAUGE MODEL NUMBER 3440
4. NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 16133
5. NUCLEAR GAUGE COUNT RATE FOR STANDARDIZATION
6. PROFILOGRAPH MEASUREMENTS

Profilograph Type California... 1 Rainhart... 2 1
Profile Index (Inches/Mile)
Interpretation Method Manual.. 1 Mechanical.. 2 Computer.. 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

7. SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) Yes

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 6]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
0+00	0			1.2	3.2	
	36			1.5	3.0	
	72			1.5	3.0	
	108			1.2	3.2	
	144			1.7	3.6	
0+50	0			1.4	3.5	
	36			1.8	4.5	
	72			1.8	3.5	
	108			1.8	3.5	
	144			1.4	3.5	
1+00	0			1.8	3.4	
	36			1.6	3.5	
	72			1.9	3.2	
	108			1.6	3.7	
	144			1.4	3.8	
1+50	0			1.2.0	3.6	
	36			1.2.1	3.6	
	72			1.2.1	3.6	
	108			1.1.6	4.0	
	144			1.1.2	4.1	
2+00	0			1.1.9	3.6	
	36			1.2.4	3.6	
	72			1.2.4	3.6	
	108			1.2.1	3.8	
	144			1.1.5	3.9	
2+50	0			1.2.2	4.0	
	36			1.2.8	4.1	
	72			1.2.6	3.8	
	108			1.2.2	4.2	
	144			1.2.1	3.8	
3+00	0			1.2.8	4.0	
	36			1.3.1	4.0	
	72			1.3.0	4.0	
	108			1.2.4	4.2	
	144			1.1.9	4.3	
LAYER NUMBER[1]				02	03	

[1] from Sheet 4

+04

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 6]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
3+50	0			12.5	4.2	
	36			12.7	4.2	
	72			12.6	4.2	
	108			12.1	4.6	
	144			11.6	4.4	
4+00	0			12.4	4.4	
	36			12.5	4.3	
	72			12.7	4.2	
	108			12.4	4.6	
	144			12.5	4.2	
4+50	0			13.1	4.3	
	36			13.2	4.1	
	72			13.0	4.2	
	108			12.5	4.5	
	144			12.2	4.3	
5+00	0			12.8	4.3	
	36			12.8	4.3	
	72			12.7	4.3	
	108			12.5	4.4	
	144			12.0	4.5	
+						
+						
+						
LAYER NUMBER[1]				02	03	

[1] from Sheet 4

+04

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 14 SUBGRADE PREPARATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 6]

*1. SUBGRADE PREPARATION BEGAN (Month-Day-Year) [1 1-1 1-9 6]

*2. SUBGRADE PREPARATION COMPLETED (Month-Day-Year) [1 2-0 6-9 6]

PRIMARY COMPACTION EQUIPMENT

*3. CODE TYPE [6]

COMPACTION EQUIPMENT TYPE CODES
Sheepsfoot... 1 Pneumatic Tired... 2 Steel Wheel Tandem... 3
Single Drum Vibr.... 4 Double Drum Vibr.... 5
Other (Specify)... 6 Sheepsfoot + Pneumatic

*4. GROSS WEIGHT (TONS) [_ _._]

	TYPE	PERCENT
*5. STABILIZING AGENT 1	[2]	[_ 5.0]
*6. STABILIZING AGENT 2	[_]	[_ _._]

STABILIZING AGENT TYPE CODES Quicklime
Portland Cement... 1 Lime... 2 Fly Ash, Class C... 3
Fly Ash, Class N... 4
Other (Specify)... 5 _____

*7. TYPICAL LIFT THICKNESS (INCHES) [_ _]
(For Fill Sections Only)

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

8. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) None

PREPARER [signature] EMPLOYER BRE DATE 3-17-97

SPS-1 CONSTRUCTION DATA SHEET 15 CUT-FILL SECTION LOCATIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 L]

ORDER	*1 CUT-FILL TYPE[1]	TEST SECTION STATION NUMBER	
		*2 START	*3 END
1	1	0 + 0 0	5 + 0 0
2		+	+
3		+	+
4		+	
5		+	+
6		+	+
7		+	+
8		+	+
9		+	+
10		+	+

NOTES:

1. Indicate the type of subgrade construction with one of the following:

   Cut... 1 Fill... 2 At-Grade... 3

2. Use one line for each cut, fill or at-grade zone present within the section boundaries.

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

SPS-1 CONSTRUCTION DATA SHEET 16 SUBGRADE EXCAVATION AND BACKFILLING SKETCH	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 6]

No sketch

SEE Construction Plans

PREPARER [illegible] EMPLOYER BRE DATE 5-21-97

RECEIVED DEC - 1 1997 December 1995

SPS-1 CONSTRUCTION DATA SHEET 2 GEOMETRIC, SHOULDER AND DRAINAGE INFORMATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 7]

*1. LANE WIDTH (FEET) [1 2.]

2. MONITORING SITE LANE NUMBER [1.]
(LANE 1 IS OUTSIDE LANE, NEXT TO SHOULDER
LANE 2 IS NEXT TO LANE 1, ETC.)

*3. SUBSURFACE DRAINAGE LOCATION [3.]
Continuous Along Test Section... 1 Intermittent... 2 None... 3

*4. SUBSURFACE DRAINAGE TYPE [1.]
No Subsurface Drainage... 1 Longitudinal Drains... 2
Transverse Drains... 3 Drainage Blanket... 4 Well System... 5
Drainage Blanket with Longitudinal Drains... 6
Other (Specify)... 7 _____

SHOULDER DATA	INSIDE SHOULDER	OUTSIDE SHOULDER
*5. SURFACE TYPE Turf... 1 Granular.... 2 Asphalt Concrete... 3 Concrete... 4 Surface Treatment... 5 Other (Specify)... 6 _____	[3.]	[3.]
*6. TOTAL WIDTH (FEET)	[_ 4.]	[1 0.]
*7. PAVED WIDTH (FEET)	[_ 4.]	[1 0.]
8. SHOULDER BASE TYPE (CODES-TABLE A.6)	[2 8.]	[2 8.]
9. SURFACE THICKNESS (INCHES)	[_ 7.0]	[_ 7.0]
10. SHOULDER BASE THICKNESS (INCHES)	[_ 4.2]	[_ 4.2]
11. DIAMETER OF LONGITUDINAL DRAINPIPES (INCHES)		[_. _] N/A
12. SPACING OF LATERALS (FEET)		[_ _ _.]

See Note on sht. 2 of Sect. 22

(Info. is for ATB and not DGAB)

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 4 LAYER DESCRIPTIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 7]

*1 LAYER NUMBER	*2 LAYER DESCRIPTION	*3 MATERIAL TYPE CLASS	*4 LAYER THICKNESSES (Inches)			
			AVERAGE	MINIMUM	MAXIMUM	STD. DEV.
1	SUBGRADE(7)	[5 2]				
2	[0 6]	[2 3]	[4.0]	2.9	5.7	0.7
3	[0 5]	[2 8]	[4.2]	3.7	4.6	0.2
4	[0 4]	[0 1]	[6.0]	5.5	6.5	0.3
5	[0 3]	[0 1]	[2.1]	1.6	2.6	0.3
6	[ ]	[ ]	[.]	.	.	.
7	[ ]	[ ]	[.]	.	.	.
8	[ ]	[ ]	[.]	.	.	.
9	[ ]	[ ]	[.]	.	.	.
10	[ ]	[ ]	[.]	.	.	.
11	[ ]	[ ]	[.]	.	.	.
12	[ ]	[ ]	[.]	.	.	.
13	[ ]	[ ]	[.]	.	.	.
14	[ ]	[ ]	[.]	.	.	.
15	[ ]	[ ]	[.]	.	.	.

06AB
ATB
Binder
Surface

*5 DEPTH BELOW SURFACE TO "RIGID" LAYER (FEET) [.]
(Rock, Stone, Dense Shale)

NOTES:

1. Layer 1 is the subgrade soil, the highest numbered layer is the pavement surface.

2. Layer description codes:

Overlay.....01	Base Layer.....05	Porous Friction Course..09
Seal/Tack Coat.....02	Subbase Layer.....06	Surface Treatment.....10
Original Surface.....03	Subgrade.....07	Embankment (Fill).....11
HMAC Layer (Subsurface).04	Interlayer.....08	

3. The material type classification codes are presented in Tables A.5, A.6, A.7 and A.8 of the Data Collection Guide for Long Term Pavement Performance Studies, dated January 17, 1990.

4. Enter the average thickness of each layer and the minimum, maximum and standard deviation of the thickness measurements, if known.

PREPARER [signature] EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 9 PLANT-MIXED ASPHALT BOUND LAYERS PLACEMENT DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 7]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [03-20-97]

*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [05-30-97]

*3 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Shears-Aztec	[3]	[5]	[3]	[4]	[5]
Plant 2	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]
Plant 3	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]

Plant Type: Batch..... 1 Drum Mix.... 2 Other...3 Specify_____

4. MANUFACTURER OF ASPHALT CONCRETE PAVER Blaw-Knox

5. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER PF 510

6. SINGLE PASS LAYDOWN WIDTH (Feet) [19.0]

7. ATB PLACEMENT LIFTS
   - Layer Number [3]
   - Nominal First Lift Placement Thickness (Inches) [5.0]
   - Nominal Second Lift Placement Thickness (Inches) [.]
   - Nominal Third Lift Placement Thickness (Inches) [.]
   - Nominal Fourth Lift Placement Thickness (Inches) [.]

8. PATB PLACEMENT LIFTS
   - Layer Number [ ]
   - Nominal First Lift Placement Thickness (Inches) [.]
   - Nominal Second Lift Placement Thickness (Inches) [.]

9. AC BINDER COURSE LIFT
   - Layer Number [4]
   - Nominal First Lift Placement Thickness (Inches) [3.0]
   - Nominal Second Lift Placement Thickness (Inches) [3.0]

10. AC SURFACE COURSE LIFT
    - Layer Number [5]
    - Nominal First Lift Placement Thickness (Inches) [2.5]
    - Nominal Second Lift Placement Thickness (Inches) [.]

11. SURFACE FRICTION COURSE (If Placed)
    - Layer Number [ ]
    - Nominal Placement Thickness (Inches) [.]

12. TEST SECTION STATION OF TRANSVERSE JOINTS (within test section)
    - Binder Course [+]
    - Surface Course [+]
    - Surface Friction Course [+]

13. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
    - Between lanes.. 1 Within lane.. 2
    - (specify offset from O/S feet) [12.0]

14. SIGNIFICANT EVENTS DURING CONSTRUCTION (disruptions, rain, equip. problems, etc.)_____

PREPARER Timothy J Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 7]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 4 - 3 0 - 9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5 - 0 8 - 9 7]
*3. LAYER NUMBER [3]

*4. MIXING TEMPERATURE (°F) Plant gunned up @ lower temperature. ATB [3 4 0.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 3 2 0.
Minimum..... _ _ _.
Standard Deviation... _ _.
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _._				
8	C	Steel-Whl Tandem	_ _._				
9	D	Steel-Whl Tandem	_ _._				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _._	_ _ _ _.			
12	G	Pneumatic-Tired	_ _._	_ _ _ _.			
13	H	Pneumatic-Tired	_ _._	.			
14	I	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
15	J	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
16	K	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
17	L	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _._
19	N	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
20	O	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
21	P	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 2.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 4.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 6 5.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	4.0	_._	_._	_._
31	Curing Period (Days)	_ 4.0	_ _._	_ _._	_ _._

PREPARER Timothy J. Maslo EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 7]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 2-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-2 3-9 7]
*3. LAYER NUMBER AC-Binder [4]
*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _._				
8	C	Steel-Whl Tandem	_ _._				
9	D	Steel-Whl Tandem	_ _._				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _._	_ _ _ _.			
12	G	Pneumatic-Tired	_ _._	_ _ _ _.			
13	H	Pneumatic-Tired	_ _._	.			
14	I	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
15	J	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
16	K	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
17	L	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	. 0 2 _	_ _._
19	N	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
20	O	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
21	P	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	M	_	_
24	Coverages	_ 1.	_ 1.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	E	_	_
26	Coverages	_ 3.	_ 3.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	A	_	_
28	Coverages	_ 1.	_ 1.	_ _.	_ _.
29	Air Temperature (°F)	_ 8 5.	_ 8 5.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	2.5	2.5	_._	_._
31	Curing Period (Days)	_ 1.0	_ 4.0	_ _._	_ _._

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 7]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-2 7-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]
*3. LAYER NUMBER AC-Surface [5]

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	_ 1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	. 0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 2.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	2.0	_.__	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _.__	_ _.__

PREPARER Timothy J. Martin EMPLOYER ERE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 11 PLANT-MIXED ASPHALT BOUND LAYERS DENSITY AND PROFILE DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 7]

1. NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	ATB	Binder Course	Surface Course	Surface Friction Layer
Measurement Method (A, B, C)[1]	A	_	A	_
Number of Measurements	1 2	_ _	1 2	_ _
Average (pcf)	1 3 8.5	_ _ _._	1 4 4.6	_ _ _._
Maximum (pcf)	1 5 4.4	_ _ _._	1 4 7.1	_ _ _._
Minimum (pcf)	1 2 8.5	_ _ _._	1 3 9.8	_ _ _._
Standard Deviation (pcf)	_ _ 8.6	_ _ _._	_ _ 3.9	_ _ _._
Layer Number	0 3	_ _	0 5	_ _

[1]Measurement Method Backscatter... A Direct Transmission... B Air Gap... C

2. MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

3. NUCLEAR DENSITY GAUGE MODEL NUMBER 3440

4. NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 16133

5. NUCLEAR GAUGE COUNT RATE FOR STANDARDIZATION _ _ _ _ _

6. PROFILOGRAPH MEASUREMENTS

Profilograph Type California... 1 Rainhart... 2 1
Profile Index (Inches/Mile) _ _
Interpretation Method Manual.. 1 Mechanical.. 2 Computer.. 3 _
Height of Blanking Band (Inches) _._ _
Cutoff Height (Inches) _._ _

7. SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) Yes

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 7]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
0+00	0	2.9		4.5	7.7	
	36	3.4		4.4	7.6	
	72	3.4		4.6	7.4	
	108	3.4		4.6	7.8	
	144	3.6		4.3	8.1	
0+50	0	3.1		4.2	8.2	
	36	3.5		4.3	7.7	
	72	3.3		4.5	7.7	
	108	3.5		4.6	7.9	
	144	3.7		4.4	8.2	
1+00	0	3.1		4.2	8.6	
	36	3.7		4.3	8.2	
	72	3.7		4.4	8.0	
	108	3.5		4.4	8.4	
	144	3.6		4.3	8.6	
1+50	0	2.9		4.3	8.8	
	36	3.4		4.3	8.3	
	72	3.9		3.9	7.4	
	108	3.7		4.2	8.2	
	144	3.8		4.4	8.3	
2+00	0	3.3		4.4	8.8	
	36	3.5		4.5	8.5	
	72	3.8		4.3	8.2	
	108	3.7		4.6	8.1	
	144	3.9		4.4	8.2	
2+50	0	3.5		4.3	8.0	
	36	3.8		4.1	7.9	
	72	3.9		4.0	7.8	
	108	3.8		4.1	8.0	
	144	4.0		4.3	7.8	
3+00	0	3.2		4.4	8.6	
	36	3.6		4.3	8.4	
	72	4.3		3.8	8.1	
	108	4.2		4.1	8.0	
	144	4.3		4.0	8.0	
LAYER NUMBER[1]		02		03	04	

[1] from Sheet 4

+05

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 7]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
3+50	0	3.8		4.1	7.8	
	36	4.1		3.7	7.6	
	72	3.5		3.9	7.4	
	108	4.2		3.7	8.1	
	144	4.2		4.0	8.2	
4+00	0	3.7		4.3	8.4	
	36	4.7		3.7	8.3	
	72	4.6		4.1	8.0	
	108	4.3		4.1	8.3	
	144	4.3		4.1	8.2	
4+50	0	4.4		4.4	8.4	
	36	4.6		4.3	8.0	
	72	5.0		4.3	7.7	
	108	5.1		4.0	8.2	
	144	5.5		4.0	8.0	
5+00	0	5.0		4.4	8.3	
	36	5.5		4.4	8.0	
	72	5.6		4.3	7.9	
	108	5.5		4.3	8.2	
	144	5.7		4.2	8.2	
+__						
+__						
+__						
LAYER NUMBER[1]		02		03	04	

[1] from Sheet 4

+05

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 13 UNBOUND AGGREGATE BASE MATERIAL PLACEMENT	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 7]

*1. UNBOUND BASE MATERIAL PLACEMENT BEGAN (Month-Day-Year) [0 3-2 4-9 7]

*2. UNBOUND BASE MATERIAL PLACEMENT COMPLETED (Month-Day-Year) [0 4-1 1-9 7]

*3. LAYER NUMBER (From Sheet 4) [2]

PRIMARY COMPACTION EQUIPMENT

*4. CODE TYPE [2]

COMPACTION TYPE CODES
Pneumatic - Tired... 1 Steel Wheel Tandem... 2 Single Drum Vibr.... 3
Double Drum Vibr.... 4
Other (Specify)... 5 _____

*5. GROSS WEIGHT (TONS) [1 2.0]

*6. LIFT THICKNESSES
Nominal First Lift Placement Thickness (inches) [0 4]
Nominal Second Lift Placement Thickness (inches) [ ]
Nominal Third Lift Placement Thickness (inches) [ ]
Nominal Fourth Lift Placement Thickness (inches) [ ]

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

7. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) _____

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 14 SUBGRADE PREPARATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 7]

*1. SUBGRADE PREPARATION BEGAN (Month-Day-Year) [1 1-1 1-9 6]

*2. SUBGRADE PREPARATION COMPLETED (Month-Day-Year) [1 2-0 6-9 6]

PRIMARY COMPACTION EQUIPMENT

*3. CODE TYPE [6]

COMPACTION EQUIPMENT TYPE CODES
Sheepsfoot... 1 Pneumatic Tired... 2 Steel Wheel Tandem... 3
Single Drum Vibr.... 4 Double Drum Vibr.... 5
Other (Specify)... 6 Sheepsfoot + Pneumatic

*4. GROSS WEIGHT (TONS) [_ _._]

	TYPE	PERCENT
*5. STABILIZING AGENT 1	[2]	[_ 5.0]
*6. STABILIZING AGENT 2	[_]	[_ _._]

STABILIZING AGENT TYPE CODES quicklime
Portland Cement... 1 Lime... 2 Fly Ash, Class C... 3
Fly Ash, Class N... 4
Other (Specify)... 5 _____

*7. TYPICAL LIFT THICKNESS (INCHES) [_ _]
(For Fill Sections Only)

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

8. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) None

PREPARER [signature] EMPLOYER BRE DATE 3-17-97

SPS-1 CONSTRUCTION DATA SHEET 15 CUT-FILL SECTION LOCATIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 7]

ORDER	*1 CUT-FILL TYPE[1]	TEST SECTION STATION NUMBER	
		*2 START	*3 END
1	3	0 + 0 0	5 + 0 0
2		+	+
3		+	+
4		+	+
5		+	+
6		+	+
7		+	+
8		+	+
9		+	+
10		+	+

NOTES:

1. Indicate the type of subgrade construction with one of the following:

   Cut... 1 Fill... 2 At-Grade... 3

2. Use one line for each cut, fill or at-grade zone present within the section boundaries.

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

SPS-1 CONSTRUCTION DATA SHEET 16 SUBGRADE EXCAVATION AND BACKFILLING SKETCH	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 7]

No sketch

SEE Construction Plans.

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

RECEIVED DEC - 1 1997

December 1995

SPS-1 CONSTRUCTION DATA SHEET 2 GEOMETRIC, SHOULDER AND DRAINAGE INFORMATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 8]

*1. LANE WIDTH (FEET) [1 2.]

2. MONITORING SITE LANE NUMBER [1.]
(LANE 1 IS OUTSIDE LANE, NEXT TO SHOULDER
LANE 2 IS NEXT TO LANE 1, ETC.)

*3. SUBSURFACE DRAINAGE LOCATION [3.]
Continuous Along Test Section... 1 Intermittent... 2 None... 3

*4. SUBSURFACE DRAINAGE TYPE [1.]
No Subsurface Drainage... 1 Longitudinal Drains... 2
Transverse Drains... 3 Drainage Blanket... 4 Well System... 5
Drainage Blanket with Longitudinal Drains... 6
Other (Specify)... 7 _____

SHOULDER DATA	INSIDE SHOULDER	OUTSIDE SHOULDER
*5. SURFACE TYPE Turf... 1 Granular.... 2 Asphalt Concrete... 3 Concrete... 4 Surface Treatment... 5 Other (Specify)... 6 _____	[3.]	[3.]
*6. TOTAL WIDTH (FEET)	[4.]	[1 0.]
*7. PAVED WIDTH (FEET)	[4.]	[1 0.]
8. SHOULDER BASE TYPE (CODES-TABLE A.6)	[2 8.]	[2 8.]
9. SURFACE THICKNESS (INCHES)	[4.0]	[4.0]
10. SHOULDER BASE THICKNESS (INCHES)	[8.4]	[8.4]
11. DIAMETER OF LONGITUDINAL DRAINPIPES (INCHES)		[.]
12. SPACING OF LATERALS (FEET)		[.]

8 & 10 info. is for ~~DCA~~ ATB,
See Section 22 Note

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 4 LAYER DESCRIPTIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 8]

	*1 LAYER NUMBER	*2 LAYER DESCRIPTION	*3 MATERIAL TYPE CLASS	*4 LAYER THICKNESSES (Inches)			
				AVERAGE	MINIMUM	MAXIMUM	STD. DEV.
	1	SUBGRADE (7)	[5 2]				
DGAB	2	[0 6]	[2 3]	[3.6]	2.8	4.4	0.4
ATB	3	[0 5]	[2 8]	[8.4]	6.8	9.4	0.7
Binder	4	[0 4]	[0 1]	[2.9]	2.3	3.4	0.2
Surface	5	[0 3]	[0 1]	[1.6]	1.2	1.8	0.2
	6	[ ]	[ ]	[.]	.	.	.
	7	[ ]	[ ]	[.]	.	.	.
	8	[ ]	[ ]	[.]	.	.	.
	9	[ ]	[ ]	[.]	.	.	.
	10	[ ]	[ ]	[.]	.	.	.
	11	[ ]	[ ]	[.]	.	.	.
	12	[ ]	[ ]	[.]	.	.	.
	13	[ ]	[ ]	[.]	.	.	.
	14	[ ]	[ ]	[.]	.	.	.
	15	[ ]	[ ]	[.]	.	.	.

*5 DEPTH BELOW SURFACE TO "RIGID" LAYER (FEET) [.]
(Rock, Stone, Dense Shale)

NOTES:

1. Layer 1 is the subgrade soil, the highest numbered layer is the pavement surface.

2. Layer description codes:

Overlay.....01	Base Layer.....05	Porous Friction Course..09
Seal/Tack Coat.....02	Subbase Layer.....06	Surface Treatment.....10
Original Surface.....03	Subgrade.....07	Embankment (Fill).....11
HMAC Layer (Subsurface).04	Interlayer.....08	

3. The material type classification codes are presented in Tables A.5, A.6, A.7 and A.8 of the Data Collection Guide for Long Term Pavement Performance Studies, dated January 17, 1990.

4. Enter the average thickness of each layer and the minimum, maximum and standard deviation of the thickness measurements, if known.

PREPARER Timothy J. Clark EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 9 PLANT-MIXED ASPHALT BOUND LAYERS PLACEMENT DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 8]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 3 - 2 0 - 9 7]

*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5 - 3 0 - 9 7]

*3 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Shears-Azter	[3]	[5]	[3]	[4]	[5]
Plant 2	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]
Plant 3	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]

Plant Type: Batch..... 1 Drum Mix.... 2 Other...3 Specify _____

4. MANUFACTURER OF ASPHALT CONCRETE PAVER Blaw Knox

5. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER PF 510

6. SINGLE PASS LAYDOWN WIDTH (Feet) [1 9.0]

7. ATB PLACEMENT LIFTS
   - Layer Number [3]
   - Nominal First Lift Placement Thickness (Inches) [3.5]
   - Nominal Second Lift Placement Thickness (Inches) [3.5]
   - Nominal Third Lift Placement Thickness (Inches) [2.5]
   - Nominal Fourth Lift Placement Thickness (Inches) [.]

8. PATB PLACEMENT LIFTS
   - Layer Number [ ]
   - Nominal First Lift Placement Thickness (Inches) [.]
   - Nominal Second Lift Placement Thickness (Inches) [.]

9. AC BINDER COURSE LIFT
   - Layer Number [4]
   - Nominal First Lift Placement Thickness (Inches) [3.0]
   - Nominal Second Lift Placement Thickness (Inches) [.]

10. AC SURFACE COURSE LIFT
    - Layer Number [5]
    - Nominal First Lift Placement Thickness (Inches) [2.0]
    - Nominal Second Lift Placement Thickness (Inches) [.]

11. SURFACE FRICTION COURSE (If Placed)
    - Layer Number [ ]
    - Nominal Placement Thickness (Inches) [.]

12. TEST SECTION STATION OF TRANSVERSE JOINTS (within test section)
    - Binder Course [+]
    - Surface Course [+]
    - Surface Friction Course [+]

13. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
    - Between lanes.. 1 Within lane.. 2
    - (specify offset from O/S feet) [1 2.0]

14. SIGNIFICANT EVENTS DURING CONSTRUCTION (disruptions, rain, equip. problems, etc.) _____

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 8]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 4 3 0 - 9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5 - 0 8 - 9 7]
*3. LAYER NUMBER [3]

*4. MIXING TEMPERATURE (°F) [3 4 0.]

Problems w/ Plant gumming up @ lower temps.

ATB

5. LAYDOWN TEMPERATURES (°F)
Mean..... 3 2 0.
Minimum..... _ _ _.
Standard Deviation... _ _._

Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _._				
8	C	Steel-Whl Tandem	_ _._				
9	D	Steel-Whl Tandem	_ _._				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _._	_ _ _ _.			
12	G	Pneumatic-Tired	_ _._	_ _ _ _.			
13	H	Pneumatic-Tired	_ _._	.			
14	I	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
15	J	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
16	K	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
17	L	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	. 0 2 _	_ _._
19	N	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
20	O	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
21	P	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	M	M	_
24	Coverages	_ 1.	_ 1.	_ 1.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	E	E	_
26	Coverages	_ 3.	_ 3.	_ 2.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	A	A	_
28	Coverages	_ 1.	_ 1.	_ 1.	_ _.
29	Air Temperature (°F)	_ 6 0.	_ 6 0.	_ 6 0.	_ _ _.
30	Compacted Thickness (In)	3.0	3.0	2.0	_._
31	Curing Period (Days)	_ 1.0	_ 1.0	_ _._	_ _._

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 8]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 2-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-2 3-9 7]
*3. LAYER NUMBER [4]
AC-Binder

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__				
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 2.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	2.5	_.__	_.__	_.__
31	Curing Period (Days)	_ 4.0	_ _.__	_ _.__	_ _.__

PREPARER [signature] EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 8]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-2 7-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]
*3. LAYER NUMBER AC-Surface [5]

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	. 0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 2.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 8 5.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	1.5	_.__	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _ _	_ _.__

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 11 PLANT-MIXED ASPHALT BOUND LAYERS DENSITY AND PROFILE DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 8]

1. NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	ATB	Binder Course	Surface Course	Surface Friction Layer
Measurement Method (A, B, C)[1]	A		A	
Number of Measurements	12		12	
Average (pcf)	140.5		142.2	
Maximum (pcf)	146.2		147.4	
Minimum (pcf)	133.3		138.9	
Standard Deviation (pcf)	4.8		2.1	
Layer Number	03		05	

[1]Measurement Method Backscatter... A Direct Transmission... B Air Gap... C

2. MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

3. NUCLEAR DENSITY GAUGE MODEL NUMBER 3440

4. NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 16133

5. NUCLEAR GAUGE COUNT RATE FOR STANDARDIZATION

6. PROFILOGRAPH MEASUREMENTS

Profilograph Type California... 1 Rainhart... 2 1
Profile Index (Inches/Mile)
Interpretation Method Manual.. 1 Mechanical.. 2 Computer.. 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

7. SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) Yes

PREPARER Timothy J. Mistr EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
0+00	0	4.4		6.8	3.7	
	36	3.7		7.3	4.1	
	72	3.4		7.9	4.2	
	108	3.7		7.3	4.6	
	144	4.0		6.8	4.9	
0+50	0	4.3		7.1	4.0	
	36	3.7		7.6	4.1	
	72	3.2		8.2	4.2	
	108	3.8		7.7	4.2	
	144	4.2		7.1	4.4	
1+00	0	4.2		7.7	4.1	
	36	3.7		7.9	4.2	
	72	3.7		8.2	4.2	
	108	3.7		7.9	4.3	
	144	4.1		7.2	4.5	
1+50	0	4.3		7.9	4.2	
	36	4.0		8.2	4.4	
	72	3.7		8.4	4.4	
	108	3.6		8.3	4.6	
	144	3.7		8.0	4.5	
2+00	0	3.6		8.6	4.4	
	36	3.6		8.5	4.5	
	72	3.8		8.6	4.5	
	108	4.0		8.6	4.4	
	144	4.0		8.5	4.3	
2+50	0	3.1		9.0	4.6	
	36	4.0		8.3	4.7	
	72	3.5		8.8	4.6	
	108	3.7		8.6	4.6	
	144	4.0		8.4	4.1	
3+00	0	3.0		8.9	4.5	
	36	3.1		8.8	4.6	
	72	3.0		9.0	4.6	
	108	3.2		8.6	4.7	
	144	3.8		8.6	4.3	
LAYER NUMBER[1]		02		03	04	

[1] from Sheet 4

+05

PREPARER Timothy J Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
3+50	0	3.5		8.8	4.3	
	36	3.4		9.0	4.4	
	72	3.1		9.4	4.3	
	108	4.0		8.2	4.8	
	144	4.1		8.0	4.4	
4+00	0	3.1		9.2	4.3	
	36	3.8		8.9	4.6	
	72	3.6		9.1	4.3	
	108	4.0		8.6	4.7	
	144	4.0		8.6	4.2	
4+50	0	2.8		9.4	4.6	
	36	3.5		9.0	4.4	
	72	3.5		9.0	4.6	
	108	3.4		8.9	4.7	
	144	3.2		9.0	4.3	
5+00	0	3.0		8.8	4.7	
	36	3.2		8.9	4.5	
	72	3.0		9.1	4.6	
	108	3.5		8.8	4.7	
	144	3.1		8.9	4.4	
+__						
+__						
+__						
LAYER NUMBER[1]		02		03	04	

[1] from Sheet 4

+05

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 13 UNBOUND AGGREGATE BASE MATERIAL PLACEMENT	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 8]

*1. UNBOUND BASE MATERIAL PLACEMENT BEGAN (Month-Day-Year) [0 3-2 4-9 7]

*2. UNBOUND BASE MATERIAL PLACEMENT COMPLETED (Month-Day-Year) [0 4-1 1-9 7]

*3. LAYER NUMBER (From Sheet 4) [2]

PRIMARY COMPACTION EQUIPMENT

*4. CODE TYPE [2]

COMPACTION TYPE CODES
Pneumatic - Tired... 1 Steel Wheel Tandem... 2 Single Drum Vibr.... 3
Double Drum Vibr.... 4
Other (Specify)... 5 _____

*5. GROSS WEIGHT (TONS) [1 2.9]

*6. LIFT THICKNESSES
Nominal First Lift Placement Thickness (inches) [0 4]
Nominal Second Lift Placement Thickness (inches) [ ]
Nominal Third Lift Placement Thickness (inches) [ ]
Nominal Fourth Lift Placement Thickness (inches) [ ]

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

7. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) _____

PREPARER Timothy J Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 14 SUBGRADE PREPARATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 8]

*1. SUBGRADE PREPARATION BEGAN (Month-Day-Year) [1 1-1 1-9 6]

*2. SUBGRADE PREPARATION COMPLETED (Month-Day-Year) [1 2-0 6-9 6]

PRIMARY COMPACTION EQUIPMENT

*3. CODE TYPE [6]

COMPACTION EQUIPMENT TYPE CODES
Sheepsfoot... 1 Pneumatic Tired... 2 Steel Wheel Tandem... 3
Single Drum Vibr.... 4 Double Drum Vibr.... 5
Other (Specify)... 6 Sheepsfoot + Pneumatic

*4. GROSS WEIGHT (TONS) [__ __.__]

	TYPE	PERCENT
*5. STABILIZING AGENT 1	[2]	[__ 5.0]
*6. STABILIZING AGENT 2	[__]	[__ __.__]

STABILIZING AGENT TYPE CODES (Quicklime)
Portland Cement... 1 Lime... 2 Fly Ash, Class C... 3
Fly Ash, Class N... 4
Other (Specify)... 5 _____

*7. TYPICAL LIFT THICKNESS (INCHES) [__ __]
(For Fill Sections Only)

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

8. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) None

PREPARER [signature] EMPLOYER BRE DATE 3-17-97

SPS-1 CONSTRUCTION DATA SHEET 15 CUT-FILL SECTION LOCATIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 8]

ORDER	*1 CUT-FILL TYPE[1]	TEST SECTION STATION NUMBER	
		*2 START	*3 END
1	1	0 + 0 0	5 + 0 0
2		+	+
3		+	+
4		+	+
5		+	+
6		+	+
7		+	+
8		+	+
9		+	+
10		+	+

NOTES:

1. Indicate the type of subgrade construction with one of the following:

   Cut... 1 Fill... 2 At-Grade... 3

2. Use one line for each cut, fill or at-grade zone present within the section boundaries.

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

SPS-1 CONSTRUCTION DATA SHEET 16 SUBGRADE EXCAVATION AND BACKFILLING SKETCH	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 8]

No sketch

SEE Construction Plans

PREPARER Thomas W. Dawson EMPLOYER BRE DATE 5-21-97

December 1995

RECEIVED DEC - 1 1997

SPS-1 CONSTRUCTION DATA SHEET 2 GEOMETRIC, SHOULDER AND DRAINAGE INFORMATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 9]

*1. LANE WIDTH (FEET) [1 2.]

2. MONITORING SITE LANE NUMBER [1.]
(LANE 1 IS OUTSIDE LANE, NEXT TO SHOULDER
LANE 2 IS NEXT TO LANE 1, ETC.)

*3. SUBSURFACE DRAINAGE LOCATION [3.]
Continuous Along Test Section... 1 Intermittent... 2 None... 3

*4. SUBSURFACE DRAINAGE TYPE [1.]
No Subsurface Drainage... 1 Longitudinal Drains... 2
Transverse Drains... 3 Drainage Blanket... 4 Well System... 5
Drainage Blanket with Longitudinal Drains... 6
Other (Specify)... 7 _____

SHOULDER DATA	INSIDE SHOULDER	OUTSIDE SHOULDER
*5. SURFACE TYPE Turf... 1 Granular.... 2 Asphalt Concrete... 3 Concrete... 4 Surface Treatment... 5 Other (Specify)... 6 _____	[3.]	[3.]
*6. TOTAL WIDTH (FEET)	[0 4.]	[1 0.]
*7. PAVED WIDTH (FEET)	[4.]	[1 0.]
8. SHOULDER BASE TYPE (CODES-TABLE A.6)	[2 3.]	[2 3.]
9. SURFACE THICKNESS (INCHES)	[7. 0]	[7. 0]
10. SHOULDER BASE THICKNESS (INCHES)	[4. 3]	[4. 3]
11. DIAMETER OF LONGITUDINAL DRAINPIPES (INCHES)		[4. 0]
12. SPACING OF LATERALS (FEET)		[2 5 0.]

See note on Sect 22 for #8 + #10

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 4 LAYER DESCRIPTIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 9]

	*1 LAYER NUMBER	*2 LAYER DESCRIPTION	*3 MATERIAL TYPE CLASS	*4 LAYER THICKNESSES (Inches)			
				AVERAGE	MINIMUM	MAXIMUM	STD. DEV.
	1	SUBGRADE(7)	[5 2]				
D6AC	2	[0 6]	[2 3]	[_ _4.3]	_ _3.5	_ _4.9	_ _0.4
PATB	3	[0 5]	[3 1]	[_ _4.0]	_ _3.4	_ _4.9	_ _0.3
Binder	4	[0 4]	[0 1]	[_ _6.4]	_ _4.8	_ _7.4	_ _0.7
Surface	5	[0 3]	[0 1]	[_ _1.3]	_ _0.8	_ _2.2	_ _0.3
	6	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	7	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	8	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	9	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	10	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	11	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	12	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	13	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	14	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
	15	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._

*5 DEPTH BELOW SURFACE TO "RIGID" LAYER (FEET) [__ __ . __]
(Rock, Stone, Dense Shale)

NOTES:

1. Layer 1 is the subgrade soil, the highest numbered layer is the pavement surface.

2. Layer description codes:

Overlay.....01	Base Layer.....05	Porous Friction Course..09
Seal/Tack Coat.....02	Subbase Layer.....06	Surface Treatment.....10
Original Surface.....03	Subgrade.....07	Embankment (Fill).....11
HMAC Layer (Subsurface).04	Interlayer.....08	

3. The material type classification codes are presented in Tables A.5, A.6, A.7 and A.8 of the Data Collection Guide for Long Term Pavement Performance Studies, dated January 17, 1990.

4. Enter the average thickness of each layer and the minimum, maximum and standard deviation of the thickness measurements, if known.

PREPARER Timothy J Martin EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 9 PLANT-MIXED ASPHALT BOUND LAYERS PLACEMENT DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 9]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 3-2 0-9 7]

*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]

*3 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Shears - Azter	[3]	[5]	[3]	[4]	[5]
Plant 2	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]
Plant 3	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]

Plant Type: Batch..... 1 Drum Mix.... 2 Other...3 Specify_____

4. MANUFACTURER OF ASPHALT CONCRETE PAVER Blaw-Knox

5. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER PF 510

6. SINGLE PASS LAYDOWN WIDTH (Feet) [1 9.0]

7. ATB PLACEMENT LIFTS
   - Layer Number [ ]
   - Nominal First Lift Placement Thickness (Inches) [.]
   - Nominal Second Lift Placement Thickness (Inches) [.]
   - Nominal Third Lift Placement Thickness (Inches) [.]
   - Nominal Fourth Lift Placement Thickness (Inches) [.]

8. PATB PLACEMENT LIFTS
   - Layer Number [3]
   - Nominal First Lift Placement Thickness (Inches) [5.0]
   - Nominal Second Lift Placement Thickness (Inches) [.]

9. AC BINDER COURSE LIFT
   - Layer Number [4]
   - Nominal First Lift Placement Thickness (Inches) [3.5]
   - Nominal Second Lift Placement Thickness (Inches) [3.0]

10. AC SURFACE COURSE LIFT
    - Layer Number [5]
    - Nominal First Lift Placement Thickness (Inches) [2.0]
    - Nominal Second Lift Placement Thickness (Inches) [.]

11. SURFACE FRICTION COURSE (If Placed)
    - Layer Number [ ]
    - Nominal Placement Thickness (Inches) [.]

12. TEST SECTION STATION OF TRANSVERSE JOINTS (within test section)
    - Binder Course [+]
    - Surface Course [+]
    - Surface Friction Course [+]

13. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
    - Between lanes.. 1 Within lane.. 2
    - (specify offset from O/S feet) [1 2.0]

14. SIGNIFICANT EVENTS DURING CONSTRUCTION (disruptions, rain, equip. problems, etc.)_____

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 9]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 4-1 4-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 4-2 8-9 7]
*3. LAYER NUMBER [3] PATB

*4. MIXING TEMPERATURE (°F) [2 4 0.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 2 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__

Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 1.2				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	_ _.__	_ _ _ _.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
18	M	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	A	_	_	_
24	Coverages	_ 2.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	_	_	_	_
26	Coverages	_ _.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	_	_	_	_
28	Coverages	_ _.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 8 5.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	4.0	_.__	_.__	_.__
31	Curing Period (Days)	_ 7.0	_ _.__	_ _.__	_ _.__

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 9]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 2-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-2 3-9 7]
*3. LAYER NUMBER [4]
AC-Binder
*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	M	_	_
24	Coverages	_ 1.	_ 1.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	E	_	_
26	Coverages	_ 3.	_ 2.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	A	_	_
28	Coverages	_ 1.	_ 1.	_ _.	_ _.
29	Air Temperature (°F)	_ 8 5.	_ 9 0.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	3.0	2.5	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _.__	_ _.__

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 9]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-2 7-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]
*3. LAYER NUMBER AC-Surface [5]

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	_ 1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 2.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	1.5	_.__	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _.__	_ _.__

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 11 PLANT-MIXED ASPHALT BOUND LAYERS DENSITY AND PROFILE DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 9]

1. NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	ATB	Binder Course	Surface Course	Surface Friction Layer
Measurement Method (A, B, C)[1]	__	__	A	__
Number of Measurements	__ __	__ __	1 2	__ __
Average (pcf)	__ __ __.__	__ __ __.__	1 4 0.8	__ __ __.__
Maximum (pcf)	__ __ __.__	__ __ __.__	1 4 4.7	__ __ __.__
Minimum (pcf)	__ __ __.__	__ __ __.__	1 3 4.6	__ __ __.__
Standard Deviation (pcf)	__ __ __.__	__ __ __.__	__ 3.0	__ __ __.__
Layer Number	__ __	__ __	0 5	__ __

[1]Measurement Method Backscatter... A Direct Transmission... B Air Gap... C

2. MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler
3. NUCLEAR DENSITY GAUGE MODEL NUMBER 3440
4. NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 16133
5. NUCLEAR GAUGE COUNT RATE FOR STANDARDIZATION __ __ __ __ __
6. PROFILOGRAPH MEASUREMENTS

Profilograph Type California... 1 Rainhart... 2 1
Profile Index (Inches/Mile) __ __
Interpretation Method Manual.. 1 Mechanical.. 2 Computer.. 3 __
Height of Blanking Band (Inches) __.__ __
Cutoff Height (Inches) __.__ __

7. SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) Yes

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 9]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
0+00	0	4.1	4.7		6.7	
	36	4.2	4.9		6.7	
	72	4.7	4.9		6.4	
	108	4.4	4.8		6.7	
	144	3.9	4.3		7.2	
0+50	0	3.5	4.3		6.8	
	36	3.9	4.3		7.2	
	72	3.9	4.4		7.1	
	108	3.7	4.4		7.1	
	144	3.6	4.5		7.0	
1+00	0	3.6	4.1		7.1	
	36	3.8	4.2		7.4	
	72	3.7	4.3		7.4	
	108	4.1	4.1		7.5	
	144	4.0	4.2		7.6	
1+50	0	4.1	4.3		6.7	
	36	3.9	3.7		7.7	
	72	3.8	3.9		7.6	
	108	3.9	4.2		7.5	
	144	4.1	4.3		7.5	
2+00	0	3.9	3.9		7.9	
	36	4.1	3.9		8.1	
	72	4.6	3.6		8.0	
	108	4.6	4.0		7.7	
	144	4.6	3.9		7.7	
2+50	0	4.0	3.9		7.9	
	36	4.1	4.0		8.0	
	72	4.4	3.9		7.9	
	108	4.4	4.1		7.8	
	144	4.5	4.2		7.7	
3+00	0	4.4	3.7		7.7	
	36	4.4	3.8		7.9	
	72	4.6	3.8		7.9	
	108	4.6	4.2		7.7	
	144	4.7	4.1		7.7	
LAYER NUMBER[1]		02	03		04 +05	

[1] from Sheet 4

PREPARER Timothy J Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 9]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
3+50	0	4.3	3.6		8.3	
	36	4.4	3.8		8.4	
	72	4.9	3.4		8.2	
	108	4.9	3.8		8.1	
	144	4.9	4.0		8.0	
4+00	0	4.2	3.5		8.2	
	36	4.1	3.8		8.4	
	72	4.6	3.6		8.3	
	108	4.6	4.0		8.1	
	144	4.7	4.0		8.0	
4+50	0	4.0	3.8		8.3	
	36	4.2	3.9		8.4	
	72	4.5	3.7		8.2	
	108	4.7	3.8		8.0	
	144	4.7	3.9		8.0	
5+00	0	3.6	3.7		8.1	
	36	4.2	3.7		8.6	
	72	4.5	3.6		8.5	
	108	4.4	3.9		8.3	
	144	4.6	4.0		8.2	
+_						
+_						
+_						
LAYER NUMBER[1]		02	03		04 +05	

[1] from Sheet 4

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 13 UNBOUND AGGREGATE BASE MATERIAL PLACEMENT	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 9]

*1. UNBOUND BASE MATERIAL PLACEMENT BEGAN (Month-Day-Year) [0 3 - 2 4 - 9 7]

*2. UNBOUND BASE MATERIAL PLACEMENT COMPLETED (Month-Day-Year) [0 4 - 1 1 - 9 7]

*3. LAYER NUMBER (From Sheet 4) [2]

PRIMARY COMPACTION EQUIPMENT

*4. CODE TYPE [2]

COMPACTION TYPE CODES
Pneumatic - Tired... 1 Steel Wheel Tandem... 2 Single Drum Vibr.... 3
Double Drum Vibr.... 4
Other (Specify)... 5 _____

*5. GROSS WEIGHT (TONS) [1 2.0]

*6. LIFT THICKNESSES
Nominal First Lift Placement Thickness (inches) [0 4]
Nominal Second Lift Placement Thickness (inches) [ ]
Nominal Third Lift Placement Thickness (inches) [ ]
Nominal Fourth Lift Placement Thickness (inches) [ ]

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

7. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) _____

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 14 SUBGRADE PREPARATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 9]

*1. SUBGRADE PREPARATION BEGAN (Month-Day-Year) [1 1-1 1-9 6]

*2. SUBGRADE PREPARATION COMPLETED (Month-Day-Year) [1 2-0 6-9 6]

PRIMARY COMPACTION EQUIPMENT

*3. CODE TYPE [6]

COMPACTION EQUIPMENT TYPE CODES
Sheepsfoot... 1 Pneumatic Tired... 2 Steel Wheel Tandem... 3
Single Drum Vibr.... 4 Double Drum Vibr.... 5
Other (Specify)... 6 Sheepsfoot + Pneumatic

*4. GROSS WEIGHT (TONS) [_ _._]

	TYPE	PERCENT
*5. STABILIZING AGENT 1	[2]	[_ 5.0]
*6. STABILIZING AGENT 2	[_]	[_ _._]

STABILIZING AGENT TYPE CODES Quicklime
Portland Cement... 1 Lime... 2 Fly Ash, Class C... 3
Fly Ash, Class N... 4
Other (Specify)... 5 _____

*7. TYPICAL LIFT THICKNESS (INCHES) [_ 8]
(For Fill Sections Only)

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

8. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) None

PREPARER [signature] EMPLOYER BRE DATE 3-17-97

SPS-1 CONSTRUCTION DATA SHEET 15 CUT-FILL SECTION LOCATIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 9]

ORDER	*1 CUT-FILL TYPE[1]	TEST SECTION STATION NUMBER	
		*2 START	*3 END
1	2	0 + 0 0	5 + 0 0
2		+	+
3		+	+
4		+	+
5		+	+
6		+	+
7		+	+
8		+	+
9		+	+
10		+	+

NOTES:

1. Indicate the type of subgrade construction with one of the following:

   Cut... 1 Fill... 2 At-Grade... 3

2. Use one line for each cut, fill or at-grade zone present within the section boundaries.

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

SPS-1 CONSTRUCTION DATA SHEET 16 SUBGRADE EXCAVATION AND BACKFILLING SKETCH	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [1 9]

No Sketch
SEE Construction Plans

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

December 1995

RECEIVED DEC - 1 1997

SPS-1 CONSTRUCTION DATA SHEET 2 GEOMETRIC, SHOULDER AND DRAINAGE INFORMATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 0]

*1. LANE WIDTH (FEET) [1 2.]

2. MONITORING SITE LANE NUMBER [1.]
(LANE 1 IS OUTSIDE LANE, NEXT TO SHOULDER
LANE 2 IS NEXT TO LANE 1, ETC.)

*3. SUBSURFACE DRAINAGE LOCATION [3.]
Continuous Along Test Section... 1 Intermittent... 2 None... 3

*4. SUBSURFACE DRAINAGE TYPE [1.]
No Subsurface Drainage... 1 Longitudinal Drains... 2
Transverse Drains... 3 Drainage Blanket... 4 Well System... 5
Drainage Blanket with Longitudinal Drains... 6
Other (Specify)... 7 _____

	SHOULDER DATA	INSIDE SHOULDER	OUTSIDE SHOULDER
*5.	SURFACE TYPE Turf... 1 Granular.... 2 Asphalt Concrete... 3 Concrete... 4 Surface Treatment... 5 Other (Specify)... 6 _____	[3.]	[3.]
*6.	TOTAL WIDTH (FEET)	[4.]	[1 0.]
*7.	PAVED WIDTH (FEET)	[4.]	[1 0.]
8	SHOULDER BASE TYPE (CODES-TABLE A.6)	[2 3.]	[2 3.]
9.	SURFACE THICKNESS (INCHES)	[4.0]	[4.0]
10.	SHOULDER BASE THICKNESS (INCHES)	[4.0]	[4.0]
11.	DIAMETER OF LONGITUDINAL DRAINPIPES (INCHES)		[4.0]
12.	SPACING OF LATERALS (FEET)		[2 5 0.]

See note for #8 + #10 in Section 22

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 4 LAYER DESCRIPTIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 0]

	*1 LAYER NUMBER	*2 LAYER DESCRIPTION	*3 MATERIAL TYPE CLASS	*4 LAYER THICKNESSES (Inches)			
				AVERAGE	MINIMUM	MAXIMUM	STD. DEV.
	1	SUBGRADE(7)	[5 7]				
DGAB	2	[0 6]	[2 3]	[7.7]	6.5	9.5	0.7
PATB	3	[0 5]	[3 1]	[5.0]	4.3	5.8	0.3
Binder	4	[0 4]	[0 1]	[3.5]	2.7	4.4	0.4
Surface	5	[0 3]	[0 1]	[1.6]	1.2	1.9	0.1
	6	[ ]	[ ]	[.]	.	.	.
	7	[ ]	[ ]	[.]	.	.	.
	8	[ ]	[ ]	[.]	.	.	.
	9	[ ]	[ ]	[.]	.	.	.
	10	[ ]	[ ]	[.]	.	.	.
	11	[ ]	[ ]	[.]	.	.	.
	12	[ ]	[ ]	[.]	.	.	.
	13	[ ]	[ ]	[.]	.	.	.
	14	[ ]	[ ]	[.]	.	.	.
	15	[ ]	[ ]	[.]	.	.	.

*5 DEPTH BELOW SURFACE TO "RIGID" LAYER (FEET) (Rock, Stone, Dense Shale) [.]

NOTES:

1. Layer 1 is the subgrade soil, the highest numbered layer is the pavement surface.

2. Layer description codes:

Overlay.....01	Base Layer.....05	Porous Friction Course..09
Seal/Tack Coat.....02	Subbase Layer.....06	Surface Treatment.....10
Original Surface.....03	Subgrade.....07	Embankment (Fill).....11
HMAC Layer (Subsurface).04	Interlayer.....08	

3. The material type classification codes are presented in Tables A.5, A.6, A.7 and A.8 of the Data Collection Guide for Long Term Pavement Performance Studies, dated January 17, 1990.

4. Enter the average thickness of each layer and the minimum, maximum and standard deviation of the thickness measurements, if known.

PREPARER [signature] EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 9 PLANT-MIXED ASPHALT BOUND LAYERS PLACEMENT DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 0]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 3-2 0-9 7]

*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]

*3 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Shears - Aztec	[3]	[5]	[3]	[4]	[5]
Plant 2	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]
Plant 3	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]

Plant Type: Batch..... 1 Drum Mix.... 2 Other...3 Specify _____

4. MANUFACTURER OF ASPHALT CONCRETE PAVER Blaw-Knox

5. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER PF 510

6. SINGLE PASS LAYDOWN WIDTH (Feet) [1 9.0]

7. ATB PLACEMENT LIFTS
   - Layer Number [ ]
   - Nominal First Lift Placement Thickness (Inches) [.]
   - Nominal Second Lift Placement Thickness (Inches) [.]
   - Nominal Third Lift Placement Thickness (Inches) [.]
   - Nominal Fourth Lift Placement Thickness (Inches) [.]

8. PATB PLACEMENT LIFTS
   - Layer Number [3]
   - Nominal First Lift Placement Thickness (Inches) [5.0]
   - Nominal Second Lift Placement Thickness (Inches) [.]

9. AC BINDER COURSE LIFT
   - Layer Number [4]
   - Nominal First Lift Placement Thickness (Inches) [3.0]
   - Nominal Second Lift Placement Thickness (Inches) [.]

10. AC SURFACE COURSE LIFT
    - Layer Number [5]
    - Nominal First Lift Placement Thickness (Inches) [2.0]
    - Nominal Second Lift Placement Thickness (Inches) [.]

11. SURFACE FRICTION COURSE (If Placed)
    - Layer Number [ ]
    - Nominal Placement Thickness (Inches) [.]

12. TEST SECTION STATION OF TRANSVERSE JOINTS (within test section)
    - Binder Course [+]
    - Surface Course [+]
    - Surface Friction Course [+]

13. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
    - Between lanes.. 1 Within lane.. 2
    - (specify offset from O/S feet) [12.0]

14. SIGNIFICANT EVENTS DURING CONSTRUCTION (disruptions, rain, equip. problems, etc.) _____

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 0]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 4 - 1 4 - 9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 4 - 2 8 - 9 7]
*3. LAYER NUMBER [3] PATB

*4. MIXING TEMPERATURE (°F) [2 4 0.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 2 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 1.2				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	_ _.__	_ _ _ _.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
18	M	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	A	_	_	_
24	Coverages	_ 2.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	_	_	_	_
26	Coverages	_ _.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	_	_	_	_
28	Coverages	_ _.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 8 5.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	4.0	_.__	_.__	_.__
31	Curing Period (Days)	_ 7.0	_ _.__	_ _.__	_ _.__

PREPARER Dorothy J Merk EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 0]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 2-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-2 3-9 7]
*3. LAYER NUMBER [4]
*4. MIXING TEMPERATURE (°F) AC Binder [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _._				
8	C	Steel-Whl Tandem	_ _._				
9	D	Steel-Whl Tandem	_ _._				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _._	_ _ _ _.			
12	G	Pneumatic-Tired	_ _._	_ _ _ _.			
13	H	Pneumatic-Tired	_ _._	_ _ _ _.			
14	I	Single-Drum Vibr.	_ _._		_ _ _ _.	._ _ _	_ _._
15	J	Single-Drum Vibr.	_ _._		_ _ _ _.	._ _ _	_ _._
16	K	Single-Drum Vibr.	_ _._		_ _ _ _.	._ _ _	_ _._
17	L	Single-Drum Vibr.	_ _._		_ _ _ _.	._ _ _	_ _._
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _._
19	N	Double-Drum Vibr.	_ _._		_ _ _ _.	._ _ _	_ _._
20	O	Double-Drum Vibr.	_ _._		_ _ _ _.	._ _ _	_ _._
21	P	Double-Drum Vibr.	_ _._		_ _ _ _.	._ _ _	_ _._
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 2.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	2.5	_ _._	_ _._	_ _._
31	Curing Period (Days)	_ 4.0	_ _._	_ _._	_ _._

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 0]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-2 7-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]
*3. LAYER NUMBER AC-Surface [5]

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__

Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2 .0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8 .0	1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__				
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1 .2		3 2 0 0.	.0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 2.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	1.5	_.__	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _.__	_ _.__

PREPARER [signature] EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 11 PLANT-MIXED ASPHALT BOUND LAYERS DENSITY AND PROFILE DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 0]

1. NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	ATB	Binder Course	Surface Course	Surface Friction Layer
Measurement Method (A, B, C)[1]			A	
Number of Measurements			1 2	
Average (pcf)			143.0	
Maximum (pcf)			145.6	
Minimum (pcf)			140.6	
Standard Deviation (pcf)			1.8	
Layer Number			0 5	

[1]Measurement Method Backscatter... A Direct Transmission... B Air Gap... C

2. MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

3. NUCLEAR DENSITY GAUGE MODEL NUMBER 3440

4. NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 16133

5. NUCLEAR GAUGE COUNT RATE FOR STANDARDIZATION

6. PROFILOGRAPH MEASUREMENTS

Profilograph Type California... 1 Rainhart... 2 1
Profile Index (Inches/Mile)
Interpretation Method Manual.. 1 Mechanical.. 2 Computer.. 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

7. SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) Yes

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 0]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
0+00	0	8.2	4.5		4.6	
	36	8.2	4.7		4.5	
	72	7.9	4.6		4.9	
	108	7.9	4.4		5.2	
	144	8.2	4.4		4.8	
0+50	0	8.3	4.3		4.5	
	36	8.1	5.1		4.8	
	72	8.2	4.9		4.8	
	108	8.4	5.0		4.5	
	144	8.8	4.5		4.7	
1+00	0	8.2	4.5		4.4	
	36	7.9	5.0		4.7	
	72	8.0	4.9		4.8	
	108	8.1	4.6		4.9	
	144	8.6	4.5		4.8	
1+50	0	7.7	5.4		4.8	
	36	8.3	5.3		4.9	
	72	8.5	5.2		4.7	
	108	9.0	4.8		5.0	
	144	9.5	4.6		4.9	
2+00	0	7.8	5.0		4.7	
	36	7.8	5.3		4.8	
	72	7.9	5.2		4.8	
	108	8.1	4.8		5.1	
	144	8.3	5.0		4.9	
2+50	0	7.4	5.1		5.1	
	36	7.7	5.0		5.4	
	72	8.1	5.1		5.1	
	108	8.1	4.9		5.2	
	144	8.4	4.9		5.0	
3+00	0	7.1	5.1		5.1	
	36	7.2	5.3		5.2	
	72	7.5	5.0		5.2	
	108	7.7	4.7		5.3	
	144	7.9	4.8		5.1	
LAYER NUMBER[1]		02	03		04 +05	

[1] from Sheet 4

PREPARER Timothy J Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 0]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
3+50	0	6.7	4.9		5.3	
	36	6.8	5.0		5.4	
	72	7.3	5.0		5.2	
	108	7.4	4.8		5.4	
	144	7.7	4.8		5.2	
4+00	0	7.0	5.2		5.1	
	36	7.0	5.0		5.5	
	72	7.6	4.7		5.4	
	108	7.6	4.4		5.6	
	144	8.0	4.9		5.0	
4+50	0	6.7	5.5		5.3	
	36	6.9	5.5		5.5	
	72	7.0	5.4		5.5	
	108	7.1	5.1		5.8	
	144	7.5	5.1		5.6	
5+00	0	6.5	5.7		5.3	
	36	6.5	5.8		5.4	
	72	6.7	5.4		5.6	
	108	6.5	5.0		5.9	
	144	7.0	5.0		5.8	
+						
+						
+						
LAYER NUMBER[1]		02	03		04 +05	

[1] from Sheet 4

PREPARER Timothy J. Maitz EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 13 UNBOUND AGGREGATE BASE MATERIAL PLACEMENT	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 0]

*1. UNBOUND BASE MATERIAL PLACEMENT BEGAN (Month-Day-Year) [0 3-2 4-9 7]

*2. UNBOUND BASE MATERIAL PLACEMENT COMPLETED (Month-Day-Year) [0 4-1 1-9 7]

*3. LAYER NUMBER (From Sheet 4) [2]

PRIMARY COMPACTION EQUIPMENT

*4. CODE TYPE [2]

COMPACTION TYPE CODES
Pneumatic - Tired... 1 Steel Wheel Tandem... 2 Single Drum Vibr.... 3
Double Drum Vibr.... 4
Other (Specify)... 5 _____

*5. GROSS WEIGHT (TONS) [1 2.0]

*6. LIFT THICKNESSES
Nominal First Lift Placement Thickness (inches) [0 4]
Nominal Second Lift Placement Thickness (inches) [0 4]
Nominal Third Lift Placement Thickness (inches) [ ]
Nominal Fourth Lift Placement Thickness (inches) [ ]

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

7. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) _____

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 14 SUBGRADE PREPARATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 0]

*1. SUBGRADE PREPARATION BEGAN (Month-Day-Year) [1 1-1 1-9 6]

*2. SUBGRADE PREPARATION COMPLETED (Month-Day-Year) [1 2-0 6-9 6]

PRIMARY COMPACTION EQUIPMENT

*3. CODE TYPE [6]

COMPACTION EQUIPMENT TYPE CODES
Sheepsfoot... 1 Pneumatic Tired... 2 Steel Wheel Tandem... 3
Single Drum Vibr.... 4 Double Drum Vibr.... 5
Other (Specify)... 6 Sheepsfoot + Pneumatic

*4. GROSS WEIGHT (TONS) [_ _._]

	TYPE	PERCENT
*5. STABILIZING AGENT 1	[2]	[_ 5.0]
*6. STABILIZING AGENT 2	[_]	[_ _._]

STABILIZING AGENT TYPE CODES Quicklime
Portland Cement... 1 Lime... 2 Fly Ash, Class C... 3
Fly Ash, Class N... 4
Other (Specify)... 5 _____

*7. TYPICAL LIFT THICKNESS (INCHES) [_ 8]
(For Fill Sections Only)

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

8. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) None

PREPARER [signature] EMPLOYER BRE DATE 3-17-97

SPS-1 CONSTRUCTION DATA SHEET 15 CUT-FILL SECTION LOCATIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 0]

ORDER	*1 CUT-FILL TYPE[1]	TEST SECTION STATION NUMBER	
		*2 START	*3 END
1	2	0 + 0 0	5 + 0 0
2		+	+
3		+	+
4		+	+
5		+	+
6		+	+
7		+	+
8		+	+
9		+	+
10		+	+

NOTES:

1. Indicate the type of subgrade construction with one of the following:

   Cut... 1 Fill... 2 At-Grade... 3

2. Use one line for each cut, fill or at-grade zone present within the section boundaries.

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

SPS-1 CONSTRUCTION DATA SHEET 16 SUBGRADE EXCAVATION AND BACKFILLING SKETCH	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 0]

No Sketch
SEE Construction Plans

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

RECEIVED DEC - 1 1997

December 1995

SPS-1 CONSTRUCTION DATA SHEET 2 GEOMETRIC, SHOULDER AND DRAINAGE INFORMATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 1]

*1. LANE WIDTH (FEET) [1 2.]

2. MONITORING SITE LANE NUMBER [1.]
(LANE 1 IS OUTSIDE LANE, NEXT TO SHOULDER
LANE 2 IS NEXT TO LANE 1, ETC.)

*3. SUBSURFACE DRAINAGE LOCATION [3.]
Continuous Along Test Section... 1 Intermittent... 2 None... 3

*4. SUBSURFACE DRAINAGE TYPE [1.]
No Subsurface Drainage... 1 Longitudinal Drains... 2
Transverse Drains... 3 Drainage Blanket... 4 Well System... 5
Drainage Blanket with Longitudinal Drains... 6
Other (Specify)... 7 _____

SHOULDER DATA	INSIDE SHOULDER	OUTSIDE SHOULDER
*5. SURFACE TYPE Turf... 1 Granular.... 2 Asphalt Concrete... 3 Concrete... 4 Surface Treatment... 5 Other (Specify)... 6 _____	[3.]	[3.]
*6. TOTAL WIDTH (FEET)	[4.]	[10.]
*7. PAVED WIDTH (FEET)	[4.]	[10.]
8. SHOULDER BASE TYPE (CODES-TABLE A.6)	[23.]	[23.]
9. SURFACE THICKNESS (INCHES)	[4.0]	[4.0]
10. SHOULDER BASE THICKNESS (INCHES)	[4.0]	[4.0]
11. DIAMETER OF LONGITUDINAL DRAINPIPES (INCHES)		[4.0]
12. SPACING OF LATERALS (FEET)		[250.]

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 4 LAYER DESCRIPTIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 1]

	*1 LAYER NUMBER	*2 LAYER DESCRIPTION	*3 MATERIAL TYPE CLASS	*4 LAYER THICKNESSES (Inches)			
				AVERAGE	MINIMUM	MAXIMUM	STD. DEV.
	1	SUBGRADE(7)	[5 2]				
DGAB	2	[0 6]	[2 3]	[11.1]	9.7	11.8	0.5
PATB	3	[0 5]	[3 1]	[4.9]	4.3	5.3	0.2
Binder	4	[0 4]	[0 1]	[2.4]	1.5	3.0	0.4
Surface	5	[0 3]	[0 1]	[1.5]	1.2	1.9	0.2
	6	[ ]	[ ]	[.]	.	.	.
	7	[ ]	[ ]	[.]	.	.	.
	8	[ ]	[ ]	[.]	.	.	.
	9	[ ]	[ ]	[.]	.	.	.
	10	[ ]	[ ]	[.]	.	.	.
	11	[ ]	[ ]	[.]	.	.	.
	12	[ ]	[ ]	[.]	.	.	.
	13	[ ]	[ ]	[.]	.	.	.
	14	[ ]	[ ]	[.]	.	.	.
	15	[ ]	[ ]	[.]	.	.	.

*5 DEPTH BELOW SURFACE TO "RIGID" LAYER (FEET) [.]
(Rock, Stone, Dense Shale)

NOTES:

1. Layer 1 is the subgrade soil, the highest numbered layer is the pavement surface.

2. Layer description codes:

Overlay.....01	Base Layer.....05	Porous Friction Course..09
Seal/Tack Coat.....02	Subbase Layer.....06	Surface Treatment.....10
Original Surface.....03	Subgrade.....07	Embankment (Fill).....11
HMAC Layer (Subsurface).04	Interlayer.....08	

3. The material type classification codes are presented in Tables A.5, A.6, A.7 and A.8 of the Data Collection Guide for Long Term Pavement Performance Studies, dated January 17, 1990.

4. Enter the average thickness of each layer and the minimum, maximum and standard deviation of the thickness measurements, if known.

PREPARER Timothy J Martin EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 9 PLANT-MIXED ASPHALT BOUND LAYERS PLACEMENT DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 1]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 3-2 0-9 7]

*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]

*3 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Shears - Aztec	[3]	[5]	[3]	[4]	[5]
Plant 2	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]
Plant 3	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]

Plant Type: Batch..... 1 Drum Mix.... 2 Other...3 Specify _____

4. MANUFACTURER OF ASPHALT CONCRETE PAVER Blaw-Knox

5. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER PF 510

6. SINGLE PASS LAYDOWN WIDTH (Feet) [1 9.0]

7. ATB PLACEMENT LIFTS
   - Layer Number [ ]
   - Nominal First Lift Placement Thickness (Inches) [.]
   - Nominal Second Lift Placement Thickness (Inches) [.]
   - Nominal Third Lift Placement Thickness (Inches) [.]
   - Nominal Fourth Lift Placement Thickness (Inches) [.]

8. PATB PLACEMENT LIFTS
   - Layer Number [3]
   - Nominal First Lift Placement Thickness (Inches) [3.0]
   - Nominal Second Lift Placement Thickness (Inches) [.]

9. AC BINDER COURSE LIFT
   - Layer Number [4]
   - Nominal First Lift Placement Thickness (Inches) [3.0]
   - Nominal Second Lift Placement Thickness (Inches) [.]

10. AC SURFACE COURSE LIFT
    - Layer Number [5]
    - Nominal First Lift Placement Thickness (Inches) [2.0]
    - Nominal Second Lift Placement Thickness (Inches) [.]

11. SURFACE FRICTION COURSE (If Placed)
    - Layer Number [ ]
    - Nominal Placement Thickness (Inches) [.]

12. TEST SECTION STATION OF TRANSVERSE JOINTS (within test section)
    - Binder Course [+]
    - Surface Course [+]
    - Surface Friction Course [+]

13. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
    - Between lanes.. 1 Within lane.. 2
    - (specify offset from O/S feet) [1 2.0]

14. SIGNIFICANT EVENTS DURING CONSTRUCTION (disruptions, rain, equip. problems, etc.) _____

PREPARER Kenneth J Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 1]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 4 - 1 4 - 9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 4 - 2 8 - 9 7]
*3. LAYER NUMBER [3]
PATB

*4. MIXING TEMPERATURE (°F) [2 4 0.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 2 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__

Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 1.2				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	_ _.__	_ _ _ _.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	_ _ _ _.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	._ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	._ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	._ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	._ _ _	_ _.__
18	M	Double-Drum Vibr.	_ _.__		_ _ _ _.	._ _ _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	._ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	._ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	._ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	A	_	_	_
24	Coverages	_ 2.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	_	_	_	_
26	Coverages	_ _.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	_	_	_	_
28	Coverages	_ _.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 8 5.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	4.0	_.__	_.__	_.__
31	Curing Period (Days)	_ 7.0	_ _.__	_ _.__	_ _.__

PREPARER Timothy J Martin EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 1]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 2-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-2 3-9 7]
*3. LAYER NUMBER [4]
AC-Binder
*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _._				
8	C	Steel-Whl Tandem	_ _._				
9	D	Steel-Whl Tandem	_ _._				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _._	_ _ _ _.			
12	G	Pneumatic-Tired	_ _._	_ _ _ _.			
13	H	Pneumatic-Tired	_ _._	.			
14	I	Single-Drum Vibr.	_ _._		_ _ _ _.	.__ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _._		_ _ _ _.	.__ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _._		_ _ _ _.	.__ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _._		_ _ _ _.	.__ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 2.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	2.5	_.__	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _.__	_ _.__

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 1]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5 - 2 7 - 9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5 - 3 0 - 9 7]
*3. LAYER NUMBER AC-Surface [5]

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__				
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _.	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _.	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _.	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _.	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _.	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _.	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _.	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 2.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	1.5	_.__	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _.__	_ _.__

PREPARER Dorothy J. Martin EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 11 PLANT-MIXED ASPHALT BOUND LAYERS DENSITY AND PROFILE DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 1]

1. NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	ATB	Binder Course	Surface Course	Surface Friction Layer
Measurement Method (A, B, C)[1]			A	
Number of Measurements			1 2	
Average (pcf)			1 4 0.8	
Maximum (pcf)			1 4 4.3	
Minimum (pcf)			1 3 5.9	
Standard Deviation (pcf)			3.7	
Layer Number			0 5	

[1]Measurement Method Backscatter... A Direct Transmission... B Air Gap... C

2. MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler
3. NUCLEAR DENSITY GAUGE MODEL NUMBER 3440
4. NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 16133
5. NUCLEAR GAUGE COUNT RATE FOR STANDARDIZATION
6. PROFILOGRAPH MEASUREMENTS

Profilograph Type California... 1 Rainhart... 2 1
Profile Index (Inches/Mile)
Interpretation Method Manual.. 1 Mechanical.. 2 Computer.. 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

7. SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) Yes

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 1]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
0+00	0	11.3	5.1		3.4	
	36	11.4	4.8		3.8	
	72	11.1	5.1		3.8	
	108	11.0	5.1		3.8	
	144	11.4	5.1		3.6	
0+50	0	11.5	5.2		3.0	
	36	11.6	5.1		3.2	
	72	11.4	5.2		3.4	
	108	11.4	4.8		3.8	
	144	11.8	4.8		3.6	
1+00	0	11.7	4.9		3.2	
	36	11.4	4.9		3.7	
	72	10.7	5.3		3.8	
	108	10.6	5.0		4.0	
	144	11.0	5.0		3.5	
1+50	0	11.6	4.9		3.7	
	36	11.5	4.7		3.9	
	72	11.2	5.1		3.9	
	108	11.3	4.8		4.0	
	144	11.5	5.0		3.7	
2+00	0	11.5	5.2		3.5	
	36	11.4	4.8		4.0	
	72	11.2	5.1		3.9	
	108	11.2	4.7		4.1	
	144	11.3	4.8		4.0	
2+50	0	11.0	5.1		3.6	
	36	11.2	5.0		3.9	
	72	11.0	5.1		3.5	
	108	11.1	4.8		4.3	
	144	11.2	4.6		4.3	
3+00	0	11.0	5.0		3.7	
	36	11.0	4.9		3.8	
	72	10.7	5.2		4.0	
	108	10.6	4.7		4.4	
	144	11.0	5.0		3.7	
LAYER NUMBER[1]		02	03		04	

[1] from Sheet 4

+05

PREPARER Timothy J Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 1]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
3+50	0	11.2	4.7		4.0	
	36	11.5	4.6		4.2	
	72	11.7	4.9		3.9	
	108	11.6	4.8		4.0	
	144	11.8	4.8		3.7	
4+00	0	10.8	4.8		3.6	
	36	11.1	4.7		3.8	
	72	11.0	4.9		4.1	
	108	10.6	4.6		4.4	
	144	11.3	4.3		4.2	
4+50	0	10.8	4.8		3.9	
	36	11.1	4.6		4.0	
	72	11.0	5.1		3.8	
	108	10.8	4.7		4.2	
	144	11.0	4.5		4.2	
5+00	0	9.7	4.8		4.2	
	36	10.2	4.6		4.3	
	72	10.0	4.7		4.4	
	108	9.9	4.6		4.5	
	144	10.3	4.6		4.2	
+05						
+						
+						
+						
LAYER NUMBER[1]		02	03		04	

[1] from Sheet 4

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 13 UNBOUND AGGREGATE BASE MATERIAL PLACEMENT	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 1]

*1. UNBOUND BASE MATERIAL PLACEMENT BEGAN (Month-Day-Year) [0 3-2 4-9 7]

*2. UNBOUND BASE MATERIAL PLACEMENT COMPLETED (Month-Day-Year) [0 4-1 1-9 7]

*3. LAYER NUMBER (From Sheet 4) [2]

PRIMARY COMPACTION EQUIPMENT

*4. CODE TYPE [2]

COMPACTION TYPE CODES
Pneumatic - Tired... 1 Steel Wheel Tandem... 2 Single Drum Vibr.... 3
Double Drum Vibr.... 4
Other (Specify)... 5 _____

*5. GROSS WEIGHT (TONS) [1 2.0]

*6. LIFT THICKNESSES
Nominal First Lift Placement Thickness (inches) [0 6]
Nominal Second Lift Placement Thickness (inches) [0 6]
Nominal Third Lift Placement Thickness (inches) [ ]
Nominal Fourth Lift Placement Thickness (inches) [ ]

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

7. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) _____

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 14 SUBGRADE PREPARATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 1]

*1. SUBGRADE PREPARATION BEGAN (Month-Day-Year) [11-21-96]

*2. SUBGRADE PREPARATION COMPLETED (Month-Day-Year) [12-06-96]

PRIMARY COMPACTION EQUIPMENT

*3. CODE TYPE [6]

COMPACTION EQUIPMENT TYPE CODES
Sheepsfoot... 1 Pneumatic Tired... 2 Steel Wheel Tandem... 3
Single Drum Vibr.... 4 Double Drum Vibr.... 5
Other (Specify)... 6 Sheepsfoot + Pneumatic

*4. GROSS WEIGHT (TONS) [__ __.__]

	TYPE	PERCENT
*5. STABILIZING AGENT 1	[2]	[__ 5.0]
*6. STABILIZING AGENT 2	[__]	[__ __.__]

STABILIZING AGENT TYPE CODES Quicklime
Portland Cement... 1 Lime... 2 Fly Ash, Class C... 3
Fly Ash, Class N... 4
Other (Specify)... 5 _____

*7. TYPICAL LIFT THICKNESS (INCHES) [__ __]
(For Fill Sections Only)

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

8. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) None

PREPARER [signature] EMPLOYER BRE DATE 3-17-97

SPS-1 CONSTRUCTION DATA SHEET 15 CUT-FILL SECTION LOCATIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 1]

ORDER	*1 CUT-FILL TYPE[1]	TEST SECTION STATION NUMBER	
		*2 START	*3 END
1	1	0 + 0 0	5 + 0 0
2		+	+
3		+	+
4		+	+
5		+	+
6		+	+
7		+	+
8		+	+
9		+	+
10		+	+

NOTES:

1. Indicate the type of subgrade construction with one of the following:

   Cut... 1 Fill... 2 At-Grade... 3

2. Use one line for each cut, fill or at-grade zone present within the section boundaries.

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 16 SUBGRADE EXCAVATION AND BACKFILLING SKETCH	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 1]

No sketch
SEE Construction Plans

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

RECEIVED DEC - 1 1997

December 1995

SPS-1 CONSTRUCTION DATA SHEET 2 GEOMETRIC, SHOULDER AND DRAINAGE INFORMATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 2]

1. LANE WIDTH (FEET) [1 2.]

2. MONITORING SITE LANE NUMBER [1.]
(LANE 1 IS OUTSIDE LANE, NEXT TO SHOULDER
LANE 2 IS NEXT TO LANE 1, ETC.)

*3. SUBSURFACE DRAINAGE LOCATION [1.]
Continuous Along Test Section... 1 Intermittent... 2 None... 3

*4. SUBSURFACE DRAINAGE TYPE [2.]
No Subsurface Drainage... 1 Longitudinal Drains... 2
Transverse Drains... 3 Drainage Blanket... 4 Well System... 5
Drainage Blanket with Longitudinal Drains... 6
Other (Specify)... 7 _____

	SHOULDER DATA	INSIDE SHOULDER	OUTSIDE SHOULDER
*5.	SURFACE TYPE Turf... 1 Granular.... 2 Asphalt Concrete... 3 Concrete... 4 Surface Treatment... 5 Other (Specify)... 6 _____	[3]	[3]
*6.	TOTAL WIDTH (FEET)	[4.]	[1 0.]
*7.	PAVED WIDTH (FEET)	[4.]	[1 0.]
① 8.	SHOULDER BASE TYPE (CODES-TABLE A.6)	[2 8.]	[2 8.]
9.	SURFACE THICKNESS (INCHES)	[4.0]	[4.0]
① 10.	SHOULDER BASE THICKNESS (INCHES)	[4.3]	[4.3]
11.	DIAMETER OF LONGITUDINAL DRAINPIPES (INCHES)		[4.0]
12.	SPACING OF LATERALS (FEET)		[2 5 0.]

① As per conversation w/ Mark Gardner, we are listing the 1st base type beneath the HMAC layer, (excluding the PATB layer) Drainage layer not structural.

For instance, section #18, has 2 base layers.

HMAC
ATB
DGAB
Subgrade

ATB, DGAB → Both Base Layers.

So the blanks for lines # 8 + #10 contain ATB data.

PREPARER [signature] EMPLOYER BRE DATE 5-20-97

SPS-1 CONSTRUCTION DATA SHEET 4 LAYER DESCRIPTIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 2]

*1 LAYER NUMBER	*2 LAYER DESCRIPTION	*3 MATERIAL TYPE CLASS	*4 LAYER THICKNESSES (Inches)			
			AVERAGE	MINIMUM	MAXIMUM	STD. DEV.
1	SUBGRADE (7)	[5 2]				
2	[0 8]	[7 4]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
3	[0 6]	[3 1]	[_ _4.8]	_ _3.3	_ _7.0	_ _0.8
4	[0 5]	[2 8]	[_ _4.3]	_ _3.2	_ _5.6	_ _0.5
5	[0 4]	[0 1]	[_ _2.5]	_ _1.7	_ _3.1	_ _0.3
6	[0 3]	[0 1]	[_ _1.8]	_ _1.3	_ _2.5	_ _0.3
7	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
8	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
9	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
10	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
11	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
12	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
13	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
14	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
15	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._

*5 DEPTH BELOW SURFACE TO "RIGID" LAYER (FEET) (Rock, Stone, Dense Shale) [_ _ . _]

NOTES:

1. Layer 1 is the subgrade soil, the highest numbered layer is the pavement surface.

2. Layer description codes:

Overlay.....01	Base Layer.....05	Porous Friction Course..09
Seal/Tack Coat.....02	Subbase Layer.....06	Surface Treatment.....10
Original Surface.....03	Subgrade.....07	Embankment (Fill).....11
HMAC Layer (Subsurface).04	Interlayer.....08	

3. The material type classification codes are presented in Tables A.5, A.6, A.7 and A.8 of the Data Collection Guide for Long Term Pavement Performance Studies, dated January 17, 1990.

4. Enter the average thickness of each layer and the minimum, maximum and standard deviation of the thickness measurements, if known.

PREPARER Timothy J Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 9 PLANT-MIXED ASPHALT BOUND LAYERS PLACEMENT DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 2]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 3-2 0-9 7]

*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]

*3 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers
Plant 1	[2]	Shears-Aztec	[3]	[5]	[3] [4] [5] 6
Plant 2	[ ]		[ ]	[ ]	[ ] [ ] [ ]
Plant 3	[ ]		[ ]	[ ]	[ ] [ ] [ ]

Plant Type: Batch..... 1 Drum Mix.... 2 Other...3 Specify _____

4. MANUFACTURER OF ASPHALT CONCRETE PAVER Blaw-Knox

5. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER PF 510

6. SINGLE PASS LAYDOWN WIDTH (Feet) [1 9.0]

7. ATB PLACEMENT LIFTS
   - Layer Number [4]
   - Nominal First Lift Placement Thickness (Inches) [5.0]
   - Nominal Second Lift Placement Thickness (Inches) [.]
   - Nominal Third Lift Placement Thickness (Inches) [.]
   - Nominal Fourth Lift Placement Thickness (Inches) [.]

8. PATB PLACEMENT LIFTS
   - Layer Number [3]
   - Nominal First Lift Placement Thickness (Inches) [5.0]
   - Nominal Second Lift Placement Thickness (Inches) [.]

9. AC BINDER COURSE LIFT
   - Layer Number [5]
   - Nominal First Lift Placement Thickness (Inches) [3.0]
   - Nominal Second Lift Placement Thickness (Inches) [.]

10. AC SURFACE COURSE LIFT
    - Layer Number [6]
    - Nominal First Lift Placement Thickness (Inches) [2.0]
    - Nominal Second Lift Placement Thickness (Inches) [.]

11. SURFACE FRICTION COURSE (If Placed)
    - Layer Number [ ]
    - Nominal Placement Thickness (Inches) [.]

12. TEST SECTION STATION OF TRANSVERSE JOINTS (within test section)
    - Binder Course [+]
    - Surface Course [+]
    - Surface Friction Course [+]

13. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
    - Between lanes.. 1 Within lane.. 2
    - (specify offset from O/S feet) [12.0]

14. SIGNIFICANT EVENTS DURING CONSTRUCTION (disruptions, rain, equip. problems, etc.) _____

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 2]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 4 - 2 4 - 9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 4 - 3 0 - 9 7]
*3. LAYER NUMBER [3]

PATB

*4. MIXING TEMPERATURE (°F) [2 4 0.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 2 0.
Minimum..... _ _ _.
Standard Deviation... _ _.

Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 1.2				
7	B	Steel-Whl Tandem	_ _._				
8	C	Steel-Whl Tandem	_ _._				
9	D	Steel-Whl Tandem	_ _._				
10	E	Pneumatic-Tired	_ _._	_ _ _ _.			
11	F	Pneumatic-Tired	_ _._	_ _ _ _.			
12	G	Pneumatic-Tired	_ _._	_ _ _ _.			
13	H	Pneumatic-Tired	_ _._	.			
14	I	Single-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
15	J	Single-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
16	K	Single-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
17	L	Single-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
18	M	Double-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
19	N	Double-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
20	O	Double-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
21	P	Double-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	A	_	_	_
24	Coverages	_ 2.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	_	_	_	_
26	Coverages	_ _.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	_	_	_	_
28	Coverages	_ _.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	4.0	_._	_._	_._
31	Curing Period (Days)	_ 1.0	_ _._	_ _._	_ _._

PREPARER Timothy J Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 2]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 4 - 3 0 - 9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5 - 0 8 - 9 7]
*3. LAYER NUMBER [4]
ATB
Plant gummed up @ lower temperature
*4. MIXING TEMPERATURE (°F) [3 4 0.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 3 2 0.
Minimum..... _ _ _.
Standard Deviation... _ _.
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _._				
8	C	Steel-Whl Tandem	_ _._				
9	D	Steel-Whl Tandem	_ _._				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _._	_ _ _ _.			
12	G	Pneumatic-Tired	_ _._	_ _ _ _.			
13	H	Pneumatic-Tired	_ _._	_ _ _ _.			
14	I	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
15	J	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
16	K	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
17	L	Single-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	. 0 2 _	_ _._
19	N	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
20	O	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
21	P	Double-Drum Vibr.	_ _._		_ _ _ _.	. _ _ _	_ _._
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 3.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 6 5.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	4.0	_._	_._	_._
31	Curing Period (Days)	_ 4.0	_ _._	_ _._	_ _._

PREPARER [signature] EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 2]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 2-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-2 3-9 7]
*3. LAYER NUMBER AC - [5]
*4. MIXING TEMPERATURE (°F) Binder [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _._				
8	C	Steel-Whl Tandem	_ _._				
9	D	Steel-Whl Tandem	_ _._				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _._	_ _ _ _.			
12	G	Pneumatic-Tired	_ _._	_ _ _ _.			
13	H	Pneumatic-Tired	_ _._	.			
14	I	Single-Drum Vibr.	_ _._		_ _ _ _.	._ _ _	_ _._
15	J	Single-Drum Vibr.	_ _._		_ _ _ _.	._ _ _	_ _._
16	K	Single-Drum Vibr.	_ _._		_ _ _ _.	._ _ _	_ _._
17	L	Single-Drum Vibr.	_ _._		_ _ _ _.	._ _ _	_ _._
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _._
19	N	Double-Drum Vibr.	_ _._		_ _ _ _.	._ _ _	_ _._
20	O	Double-Drum Vibr.	_ _._		_ _ _ _.	._ _ _	_ _._
21	P	Double-Drum Vibr.	_ _._		_ _ _ _.	._ _ _	_ _._
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 3.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 8 5.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	2.5	_._	_._	_._
31	Curing Period (Days)	_ 4.0	_ _._	_ _._	_ _._

PREPARER [signature] EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 2]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-2 7-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]
*3. LAYER NUMBER [6] AC-Surface
*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	. _ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 2.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 8 5.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	1.5	_.__	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _.__	_ _.__

PREPARER [signature] EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 11 PLANT-MIXED ASPHALT BOUND LAYERS DENSITY AND PROFILE DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 2]

1. NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	ATB	Binder Course	Surface Course	Surface Friction Layer
Measurement Method (A, B, C)[1]	A		A	
Number of Measurements	12		12	
Average (pcf)	137.6		143.7	
Maximum (pcf)	153.3		147.1	
Minimum (pcf)	128.2		141.3	
Standard Deviation (pcf)	5.9		1.8	
Layer Number	04		06	

[1]Measurement Method Backscatter... A Direct Transmission... B Air Gap... C

2. MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler
3. NUCLEAR DENSITY GAUGE MODEL NUMBER 3440
4. NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 16133
5. NUCLEAR GAUGE COUNT RATE FOR STANDARDIZATION
6. PROFILOGRAPH MEASUREMENTS

Profilograph Type California... 1 Rainhart... 2 1
Profile Index (Inches/Mile)
Interpretation Method Manual.. 1 Mechanical.. 2 Computer.. 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

7. SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) Yes

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 2]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
0+00	0		6.5	3.6	3.5	
	36		7.0	3.2	3.7	
	72		6.9	3.4	3.7	
	108		6.4	3.8	4.0	
	144		5.3	4.7	4.2	
0+50	0		5.1	4.7	3.2	
	36		5.7	4.4	3.6	
	72		5.5	4.2	3.6	
	108		4.6	4.7	3.8	
	144		4.6	4.8	3.8	
1+00	0		5.2	3.8	4.2	
	36		5.3	3.7	4.3	
	72		5.4	3.4	4.3	
	108		4.7	4.1	4.3	
	144		4.6	4.6	3.9	
1+50	0		5.1	5.1	3.4	
	36		5.3	4.8	3.6	
	72		5.2	4.7	3.7	
	108		4.5	5.1	3.9	
	144		4.1	5.6	3.7	
2+00	0		5.1	4.6	4.1	
	36		5.4	4.6	4.0	
	72		5.4	4.3	4.3	
	108		4.3	4.9	4.6	
	144		4.3	4.9	4.2	
2+50	0		4.6	4.2	4.9	
	36		5.0	4.1	4.7	
	72		5.1	3.9	4.8	
	108		4.3	4.6	4.7	
	144		4.1	5.2	4.2	
3+00	0		4.5	4.2	4.4	
	36		4.9	4.1	4.5	
	72		5.1	3.8	4.7	
	108		4.1	4.5	4.7	
	144		3.4	5.3	4.3	
LAYER NUMBER[1]			03	04	05	

[1] from Sheet 4

+06

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 2]

LAYER THICKNESS MEASUREMENTS (Inches)

SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
3+50	0		4.5	4.2	4.6	
	36		4.9	4.1	4.4	
	72		4.9	3.9	4.4	
	108		4.3	4.4	4.4	
	144		3.7	5.1	4.2	
4+00	0		4.6	3.9	4.7	
	36		4.9	3.9	4.8	
	72		4.9	3.9	4.7	
	108		3.7	4.3	4.9	
	144		3.4	4.9	4.4	
4+50	0		4.2	3.7	4.6	
	36		4.3	3.8	4.4	
	72		4.6	3.7	4.4	
	108		3.8	4.6	4.3	
	144		3.3	5.0	4.4	
5+00	0		4.3	4.0	4.9	
	36		4.5	4.0	4.7	
	72		4.7	4.1	4.7	
	108		3.9	4.8	4.6	
	144		3.4	5.0	4.6	
+__						
+__						
+__						
LAYER NUMBER[1]			03	04	05	

[1] from Sheet 4

+06

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 14 SUBGRADE PREPARATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 2]

*1. SUBGRADE PREPARATION BEGAN (Month-Day-Year) [1 1-1 1-9 6]

*2. SUBGRADE PREPARATION COMPLETED (Month-Day-Year) [1 2-0 6-9 6]

PRIMARY COMPACTION EQUIPMENT

*3. CODE TYPE [6]

COMPACTION EQUIPMENT TYPE CODES
Sheepsfoot... 1 Pneumatic Tired... 2 Steel Wheel Tandem... 3
Single Drum Vibr.... 4 Double Drum Vibr.... 5
Other (Specify)... 6 Sheepsfoot + Pneumatic

*4. GROSS WEIGHT (TONS) [_ _._]

	TYPE	PERCENT
*5. STABILIZING AGENT 1	[2]	[_ 5.0]
*6. STABILIZING AGENT 2	[_]	[_ _._]

STABILIZING AGENT TYPE CODES Quicklime
Portland Cement... 1 Lime... 2 Fly Ash, Class C... 3
Fly Ash, Class N... 4
Other (Specify)... 5 _____

*7. TYPICAL LIFT THICKNESS (INCHES) [_ 8]
(For Fill Sections Only)

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

8. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) None

PREPARER [signature] EMPLOYER BRE DATE 3-17-97

SPS-1 CONSTRUCTION DATA SHEET 15 CUT-FILL SECTION LOCATIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 2]

ORDER	*1 CUT-FILL TYPE[1]	TEST SECTION STATION NUMBER	
		*2 START	*3 END
1	2	0 + 0 0	5 + 0 0
2		+	+
3		+	+
4		+	+
5		+	+
6		+	+
7		+	+
8		+	+
9		+	+
10		+	+

NOTES:

1. Indicate the type of subgrade construction with one of the following:

   Cut... 1 Fill... 2 At-Grade... 3

2. Use one line for each cut, fill or at-grade zone present within the section boundaries.

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

SPS-1 CONSTRUCTION DATA SHEET 16 SUBGRADE EXCAVATION AND BACKFILLING SKETCH	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 2]

No sketch
SEE Construction Data

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

RECEIVED DEC - 1 1997 December 1995

SPS-1 CONSTRUCTION DATA SHEET 2 GEOMETRIC, SHOULDER AND DRAINAGE INFORMATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 3]

*1. LANE WIDTH (FEET) [1 2.]

2. MONITORING SITE LANE NUMBER [1.]
(LANE 1 IS OUTSIDE LANE, NEXT TO SHOULDER
LANE 2 IS NEXT TO LANE 1, ETC.)

*3. SUBSURFACE DRAINAGE LOCATION [3.]
Continuous Along Test Section... 1 Intermittent... 2 None... 3

*4. SUBSURFACE DRAINAGE TYPE [1.]
No Subsurface Drainage... 1 Longitudinal Drains... 2
Transverse Drains... 3 Drainage Blanket... 4 Well System... 5
Drainage Blanket with Longitudinal Drains... 6
Other (Specify)... 7 _____

SHOULDER DATA	INSIDE SHOULDER	OUTSIDE SHOULDER
*5. SURFACE TYPE Turf... 1 Granular.... 2 Asphalt Concrete... 3 Concrete... 4 Surface Treatment... 5 Other (Specify)... 6 _____	[3.]	[3.]
*6. TOTAL WIDTH (FEET)	[4.]	[1 0.]
*7. PAVED WIDTH (FEET)	[4.]	[1 0.]
8. SHOULDER BASE TYPE (CODES-TABLE A.6)	[2 8.]	[2 8.]
9. SURFACE THICKNESS (INCHES)	[7. 0]	[7. 0]
10. SHOULDER BASE THICKNESS (INCHES)	[8. 1]	[8. 1]
11. DIAMETER OF LONGITUDINAL DRAINPIPES (INCHES)		[4. 0]
12. SPACING OF LATERALS (FEET)		[2 5 0.]

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 4 LAYER DESCRIPTIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 3]

*1 LAYER NUMBER	*2 LAYER DESCRIPTION	*3 MATERIAL TYPE CLASS	*4 LAYER THICKNESSES (Inches)			
			AVERAGE	MINIMUM	MAXIMUM	STD. DEV.
1	SUBGRADE(7)	[5 2]				
2	[0 8]	[7 4]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
3	[0 6]	[3 1]	[_ _3.8]	_ _3.0	_ _4.7	_ _0.4
4	[0 5]	[2 8]	[_ _8.1]	_ _7.1	_ _9.0	_ _0.5
5	[0 4]	[0 1]	[_ _5.6]	_ _4.7	_ _6.1	_ _0.3
6	[0 3]	[0 1]	[_ _1.5]	_ _1.0	_ _2.0	_ _0.2
7	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
8	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
9	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
10	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
11	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
12	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
13	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
14	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
15	[_ _]	[_ _]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._

*5 DEPTH BELOW SURFACE TO "RIGID" LAYER (FEET) [_ _ . _]
(Rock, Stone, Dense Shale)

NOTES:

1. Layer 1 is the subgrade soil, the highest numbered layer is the pavement surface.

2. Layer description codes:

Overlay.....01	Base Layer.....05	Porous Friction Course..09
Seal/Tack Coat.....02	Subbase Layer.....06	Surface Treatment.....10
Original Surface.....03	Subgrade.....07	Embankment (Fill).....11
HMAC Layer (Subsurface).04	Interlayer.....08	

3. The material type classification codes are presented in Tables A.5, A.6, A.7 and A.8 of the Data Collection Guide for Long Term Pavement Performance Studies, dated January 17, 1990.

4. Enter the average thickness of each layer and the minimum, maximum and standard deviation of the thickness measurements, if known.

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 9 PLANT-MIXED ASPHALT BOUND LAYERS PLACEMENT DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 3]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 3 - 2 0 - 9 7]

*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5 - 3 0 - 9 7]

*3 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers			
Plant 1	[2]	Shears - Aztec	[3]	[5]	[3]	[4]	[5]	6
Plant 2	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]	
Plant 3	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]	

Plant Type: Batch..... 1 Drum Mix.... 2 Other...3 Specify _____

4. MANUFACTURER OF ASPHALT CONCRETE PAVER Blaw-Knox

5. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER PF 510

6. SINGLE PASS LAYDOWN WIDTH (Feet) [1 9.0]

7. ATB PLACEMENT LIFTS
   - Layer Number [4]
   - Nominal First Lift Placement Thickness (Inches) [5.0]
   - Nominal Second Lift Placement Thickness (Inches) [5.0]
   - Nominal Third Lift Placement Thickness (Inches) [.]
   - Nominal Fourth Lift Placement Thickness (Inches) [.]

8. PATB PLACEMENT LIFTS
   - Layer Number [3]
   - Nominal First Lift Placement Thickness (Inches) [5.0]
   - Nominal Second Lift Placement Thickness (Inches) [.]

9. AC BINDER COURSE LIFT
   - Layer Number [5]
   - Nominal First Lift Placement Thickness (Inches) [3.0]
   - Nominal Second Lift Placement Thickness (Inches) [3.0]

10. AC SURFACE COURSE LIFT
    - Layer Number [6]
    - Nominal First Lift Placement Thickness (Inches) [2.0]
    - Nominal Second Lift Placement Thickness (Inches) [.]

11. SURFACE FRICTION COURSE (If Placed)
    - Layer Number [ ]
    - Nominal Placement Thickness (Inches) [.]

12. TEST SECTION STATION OF TRANSVERSE JOINTS (within test section)
    - Binder Course [+]
    - Surface Course [+]
    - Surface Friction Course [+]

13. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
    - Between lanes.. 1 Within lane.. 2
    - (specify offset from O/S feet) [12.0]

14. SIGNIFICANT EVENTS DURING CONSTRUCTION (disruptions, rain, equip. problems, etc.) _____

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 3]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 4 - 1 4 - 9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 4 - 2 8 - 9 7]
*3. LAYER NUMBER [3]
PATB

*4. MIXING TEMPERATURE (°F) [2 4 0.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 2 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 1.2				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	_ _.__	_ _ _ _.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
18	M	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	A	_	_	_
24	Coverages	_ 2.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	_	_	_	_
26	Coverages	_ _.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	_	_	_	_
28	Coverages	_ _.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	4.0	_.__	_.__	_.__
31	Curing Period (Days)	7.0	_ _.__	_ _.__	_ _.__

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 3]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 4-3 0-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-0 8-9 7]
*3. LAYER NUMBER [4]
ATB

*4. MIXING TEMPERATURE (°F) Plant gunned up @ lower temperature [3 4 0.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 3 2 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	_ _ _ _.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	M	_	_
24	Coverages	_ 2.	_ 2.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	E	_	_
26	Coverages	_ 3.	_ 3.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	A	_	_
28	Coverages	_ 1.	_ 1.	_ _.	_ _.
29	Air Temperature (°F)	_ 6 5.	_ 6 5.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	4.0	4.0	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _.__	_ _.__

PREPARER [signature] EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 3]

*1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 2-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-2 3-9 7]
*3. LAYER NUMBER [5]
AC-Binder

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__

Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8 0	_ 1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	_ _ _ _.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	M	_	_
24	Coverages	_ 1.	_ 1.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	E	_	_
26	Coverages	_ 3.	_ 3.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	A	_	_
28	Coverages	_ 1.	_ 1.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ 9 0.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	3.0	2.5	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _.__	_ _.__

PREPARER [signature] EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 3]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [05-27-97]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [05-30-97]
*3. LAYER NUMBER AC-Surface [6]

*4. MIXING TEMPERATURE (°F) [305.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 290.
Minimum..... ___.
Standard Deviation... __.__
Number of Tests ..... __.
Maximum..... ___.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	12.0				
7	B	Steel-Whl Tandem	__.__				
8	C	Steel-Whl Tandem	__.__				
9	D	Steel-Whl Tandem	__.__				
10	E	Pneumatic-Tired	18.0	120.			
11	F	Pneumatic-Tired	__.__	____.			
12	G	Pneumatic-Tired	__.__	____.			
13	H	Pneumatic-Tired	__.__				
14	I	Single-Drum Vibr.	__.__		____.	.___	__.__
15	J	Single-Drum Vibr.	__.__		____.	.___	__.__
16	K	Single-Drum Vibr.	__.__		____.	.___	__.__
17	L	Single-Drum Vibr.	__.__		____.	.___	__.__
18	M	Double-Drum Vibr.	11.2		3200.	.02	__.__
19	N	Double-Drum Vibr.	__.__		____.	.___	__.__
20	O	Double-Drum Vibr.	__.__		____.	.___	__.__
21	P	Double-Drum Vibr.	__.__		____.	.___	__.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	__	__	__
24	Coverages	__1.	__.__	__.__	__.__
	INTERMEDIATE				
25	Roller Code (A-Q)	E	__	__	__
26	Coverages	__2.	__.__	__.__	__.__
	FINAL				
27	Roller Code (A-Q)	A	__	__	__
28	Coverages	__1.	__.__	__.__	__.__
29	Air Temperature (°F)	__90.	___.	___.	___.
30	Compacted Thickness (In)	1.5	__.__	__.__	__.__
31	Curing Period (Days)	__.__	__.__	__.__	__.__

PREPARER [signature] EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 11 PLANT-MIXED ASPHALT BOUND LAYERS DENSITY AND PROFILE DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 3]

1. NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	ATB	Binder Course	Surface Course	Surface Friction Layer
Measurement Method (A, B, C)[1]	A		A	
Number of Measurements	12		12	
Average (pcf)	138.5		144.3	
Maximum (pcf)	154.9		149.0	
Minimum (pcf)	130.1		139.4	
Standard Deviation (pcf)	4.8		3.2	
Layer Number	04		06	

[1]Measurement Method Backscatter... A Direct Transmission... B Air Gap... C

2. MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler
3. NUCLEAR DENSITY GAUGE MODEL NUMBER 3440
4. NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 16133
5. NUCLEAR GAUGE COUNT RATE FOR STANDARDIZATION
6. PROFILOGRAPH MEASUREMENTS

Profilograph Type California... 1 Rainhart... 2 1
Profile Index (Inches/Mile)
Interpretation Method Manual.. 1 Mechanical.. 2 Computer.. 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

7. SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) Yes

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 3]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
0+00	0		4.6	7.6	6.7	
	36		4.7	7.4	7.0	
	72		4.4	7.3	7.2	
	108		4.1	7.3	7.2	
	144		4.1	7.1	7.1	
0+50	0		3.5	7.5	7.3	
	36		3.6	7.8	7.3	
	72		3.6	7.8	7.3	
	108		3.5	7.6	7.6	
	144		3.6	7.9	7.0	
1+00	0		3.9	8.1	7.0	
	36		4.2	8.1	7.0	
	72		4.4	7.6	7.4	
	108		3.9	7.4	7.6	
	144		3.8	7.8	7.3	
1+50	0		4.1	7.8	6.8	
	36		3.9	7.7	6.9	
	72		4.3	7.6	6.8	
	108		4.1	7.6	6.8	
	144		4.1	8.0	6.8	
2+00	0		4.4	7.9	6.8	
	36		4.2	7.8	6.8	
	72		4.1	7.6	7.2	
	108		4.0	7.9	7.0	
	144		4.1	8.0	6.9	
2+50	0		4.3	7.9	6.9	
	36		4.2	8.0	6.8	
	72		4.1	7.8	7.0	
	108		4.1	7.5	7.3	
	144		4.2	7.9	6.8	
3+00	0		3.6	8.4	6.7	
	36		3.8	8.3	6.8	
	72		3.7	8.2	7.0	
	108		3.7	7.9	7.1	
	144		4.0	8.4	6.7	
LAYER NUMBER[1]			03	04	05	

[1] from Sheet 4

+06

PREPARER Timothy J Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 3]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
3+50	0		3.8	8.4	6.8	
	36		3.6	8.5	6.8	
	72		3.7	8.0	7.1	
	108		3.7	8.1	7.0	
	144		3.7	8.4	6.7	
4+00	0		3.3	8.7	7.7	
	36		3.5	8.5	7.7	
	72		3.6	8.4	7.7	
	108		3.5	8.6	7.4	
	144		3.4	8.9	7.3	
4+50	0		3.4	8.5	7.6	
	36		3.0	8.7	7.3	
	72		3.2	8.7	7.2	
	108		3.3	8.6	7.6	
	144		3.5	8.6	7.1	
5+00	0		3.6	8.9	7.0	
	36		3.6	8.7	7.2	
	72		3.8	8.6	7.2	
	108		3.6	8.7	7.4	
	144		3.7	9.0	7.0	
+__						
+__						
+__						
LAYER NUMBER[1]			03	04	05	

[1] from Sheet 4

+06

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 14 SUBGRADE PREPARATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 3]

*1. SUBGRADE PREPARATION BEGAN (Month-Day-Year) [1 1-1 1-9 6]

*2. SUBGRADE PREPARATION COMPLETED (Month-Day-Year) [1 2-0 6-9 6]

PRIMARY COMPACTION EQUIPMENT

*3. CODE TYPE [6]

COMPACTION EQUIPMENT TYPE CODES
Sheepsfoot... 1 Pneumatic Tired... 2 Steel Wheel Tandem... 3
Single Drum Vibr.... 4 Double Drum Vibr.... 5
Other (Specify)... 6 Sheepsfoot + Pneumatic

*4. GROSS WEIGHT (TONS) [_ _._]

	TYPE	PERCENT
*5. STABILIZING AGENT 1	[2]	[_ 5.0]
*6. STABILIZING AGENT 2	[_]	[_ _._]

STABILIZING AGENT TYPE CODES Quick Lime
Portland Cement... 1 Lime... 2 Fly Ash, Class C... 3
Fly Ash, Class N... 4
Other (Specify)... 5 _____

*7. TYPICAL LIFT THICKNESS (INCHES) [_ _]
(For Fill Sections Only)

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

8. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) None

PREPARER [signature] EMPLOYER BRE DATE 3-17-97

SPS-1 CONSTRUCTION DATA SHEET 15 CUT-FILL SECTION LOCATIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 3]

ORDER	*1 CUT-FILL TYPE[1]	TEST SECTION STATION NUMBER	
		*2 START	*3 END
1	1	0 + 0 0	5 + 0 0
2		+	+
3		+	+
4		+	+
5		+	+
6		+	+
7		+	+
8		+	+
9		+	+
10		+	+

NOTES:

1. Indicate the type of subgrade construction with one of the following:

   Cut... 1 Fill... 2 At-Grade... 3

2. Use one line for each cut, fill or at-grade zone present within the section boundaries.

PREPARER Timothy J. Muchka EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 16 SUBGRADE EXCAVATION AND BACKFILLING SKETCH	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 3]

No sketch
SEE Construction Plans

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

RECEIVED DEC - 1 1997

SPS-1 CONSTRUCTION DATA SHEET 2 GEOMETRIC, SHOULDER AND DRAINAGE INFORMATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 4]

*1. LANE WIDTH (FEET) [1 2.]

2. MONITORING SITE LANE NUMBER [1.]
(LANE 1 IS OUTSIDE LANE, NEXT TO SHOULDER
LANE 2 IS NEXT TO LANE 1, ETC.)

*3. SUBSURFACE DRAINAGE LOCATION [3.]
Continuous Along Test Section... 1 Intermittent... 2 None... 3

*4. SUBSURFACE DRAINAGE TYPE [1.]
No Subsurface Drainage... 1 Longitudinal Drains... 2
Transverse Drains... 3 Drainage Blanket... 4 Well System... 5
Drainage Blanket with Longitudinal Drains... 6
Other (Specify)... 7 _____

SHOULDER DATA	INSIDE SHOULDER	OUTSIDE SHOULDER
*5. SURFACE TYPE Turf... 1 Granular.... 2 Asphalt Concrete... 3 Concrete... 4 Surface Treatment... 5 Other (Specify)... 6 _____	[3.]	[3.]
*6. TOTAL WIDTH (FEET)	[4.]	[1 0.]
*7. PAVED WIDTH (FEET)	[4.]	[1 0.]
8. SHOULDER BASE TYPE (CODES-TABLE A.6)	[2 8.]	[2 8.]
9. SURFACE THICKNESS (INCHES)	[7. 0]	[7. 0]
10. SHOULDER BASE THICKNESS (INCHES)	[1 0. 9]	[1 0. 9]
11. DIAMETER OF LONGITUDINAL DRAINPIPES (INCHES)		[4. 0]
12. SPACING OF LATERALS (FEET)		[2 5 0.]

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 4 LAYER DESCRIPTIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 4]

*1 LAYER NUMBER	*2 LAYER DESCRIPTION	*3 MATERIAL TYPE CLASS	*4 LAYER THICKNESSES (Inches)			
			AVERAGE	MINIMUM	MAXIMUM	STD. DEV.
1	SUBGRADE(7)	[5 2]				
2	[0 8]	[7 4]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
3	[0 6]	[3 1]	[_ _4.3]	_ _3.3	_ _5.1	_ _0.4
4	[0 5]	[2 8]	[_10.9]	_10.4	_11.9	_ _0.3
5	[0 4]	[0 1]	[_ _5.4]	_ _4.6	_ _6.4	_ _0.4
6	[0 3]	[0 1]	[_ _1.8]	_ _1.0	_ _2.7	_ _0.4
7	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
8	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
9	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
10	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
11	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
12	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
13	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
14	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._
15	[__ __]	[__ __]	[_ _ _._]	_ _ _._	_ _ _._	_ _ _._

*5 DEPTH BELOW SURFACE TO "RIGID" LAYER (FEET) [__ __ . __]
(Rock, Stone, Dense Shale)

NOTES:

1. Layer 1 is the subgrade soil, the highest numbered layer is the pavement surface.

2. Layer description codes:

Overlay.....01	Base Layer.....05	Porous Friction Course..09
Seal/Tack Coat.....02	Subbase Layer.....06	Surface Treatment.....10
Original Surface.....03	Subgrade.....07	Embankment (Fill).....11
HMAC Layer (Subsurface).04	Interlayer.....08	

3. The material type classification codes are presented in Tables A.5, A.6, A.7 and A.8 of the Data Collection Guide for Long Term Pavement Performance Studies, dated January 17, 1990.

4. Enter the average thickness of each layer and the minimum, maximum and standard deviation of the thickness measurements, if known.

PREPARER Timothy J. Kirk EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 9 PLANT-MIXED ASPHALT BOUND LAYERS PLACEMENT DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 4]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 3-2 0-9 7]

*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]

*3 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers
Plant 1	[2]	Shears-Aztec	[3]	[5]	[3] [4] [5] 6
Plant 2	[ ]		[ ]	[ ]	[ ] [ ] [ ]
Plant 3	[ ]		[ ]	[ ]	[ ] [ ] [ ]

Plant Type: Batch..... 1 Drum Mix.... 2 Other...3 Specify _____

4. MANUFACTURER OF ASPHALT CONCRETE PAVER Blaw-Knox

5. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER PF 510

6. SINGLE PASS LAYDOWN WIDTH (Feet) [1 9.0]

7. ATB PLACEMENT LIFTS
   - Layer Number [4]
   - Nominal First Lift Placement Thickness (Inches) [6.5]
   - Nominal Second Lift Placement Thickness (Inches) [6.5]
   - Nominal Third Lift Placement Thickness (Inches) [.]
   - Nominal Fourth Lift Placement Thickness (Inches) [.]

8. PATB PLACEMENT LIFTS
   - Layer Number [3]
   - Nominal First Lift Placement Thickness (Inches) [5.0]
   - Nominal Second Lift Placement Thickness (Inches) [.]

9. AC BINDER COURSE LIFT
   - Layer Number [5]
   - Nominal First Lift Placement Thickness (Inches) [3.5]
   - Nominal Second Lift Placement Thickness (Inches) [3.0]

10. AC SURFACE COURSE LIFT
    - Layer Number [6]
    - Nominal First Lift Placement Thickness (Inches) [2.0]
    - Nominal Second Lift Placement Thickness (Inches) [.]

11. SURFACE FRICTION COURSE (If Placed)
    - Layer Number [ ]
    - Nominal Placement Thickness (Inches) [.]

12. TEST SECTION STATION OF TRANSVERSE JOINTS (within test section)
    - Binder Course [+]
    - Surface Course [+]
    - Surface Friction Course [+]

13. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
    - Between lanes.. 1 Within lane.. 2
    - (specify offset from O/S feet) [1 2.0]

14. SIGNIFICANT EVENTS DURING CONSTRUCTION (disruptions, rain, equip. problems, etc.) _____

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 4]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 4 - 1 4 - 9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 4 - 2 8 - 9 7]
*3. LAYER NUMBER PATB [3]

*4. MIXING TEMPERATURE (°F) [2 4 0.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 2 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 1.2				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	_ _.__	_ _ _ _.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
18	M	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	A	_	_	_
24	Coverages	_ 2.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	_	_	_	_
26	Coverages	_ _.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	_	_	_	_
28	Coverages	_ _.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	4.0	_.__	_.__	_.__
31	Curing Period (Days)	_ 1.0	_ _.__	_ _.__	_ _.__

PREPARER [signature] EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 4]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 4 - 3 0 - 9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5 - 0 8 - 9 7]
*3. LAYER NUMBER [4] ATB
*4. MIXING TEMPERATURE (°F) [3 4 0.] Plant jammed up @ lower temperature

5. LAYDOWN TEMPERATURES (°F)
Mean..... 3 2 0.
Minimum..... _ _ _.
Standard Deviation... _ _.
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _._				
8	C	Steel-Whl Tandem	_ _._				
9	D	Steel-Whl Tandem	_ _._				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _._	_ _ _ _.			
12	G	Pneumatic-Tired	_ _._	_ _ _ _.			
13	H	Pneumatic-Tired	_ _._	.			
14	I	Single-Drum Vibr.	_ _._		_ _ _ _.	.0 _ _	_ _.0
15	J	Single-Drum Vibr.	_ _._		_ _ _ _.	.0 _ _	_ _.0
16	K	Single-Drum Vibr.	_ _._		_ _ _ _.	.0 _ _	_ _.0
17	L	Single-Drum Vibr.	_ _.0		_ _ _ _.	.0 _ _	_ _.0
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _.0
19	N	Double-Drum Vibr.	_ _.0		_ _ _ _.	.0 _ _	_ _.0
20	O	Double-Drum Vibr.	_ _.0		_ _ _ _.	.0 _ _	_ _.0
21	P	Double-Drum Vibr.	_ _.0		_ _ _ _.	.0 _ _	_ _.0
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	M	_	_
24	Coverages	_ 2.	_ 2.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	E	_	_
26	Coverages	_ 3.	_ 3.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	A	_	_
28	Coverages	_ 1.	_ 1.	_ _.	_ _.
29	Air Temperature (°F)	_ 6 5.	_ 6 5.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	6.0	6.0	_.0	_.0
31	Curing Period (Days)	_ _.0	_ _.0	_ _.0	_ _.0

PREPARER [signature] EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 4]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 2-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-2 3-9 7]
*3. LAYER NUMBER [5]
AC - Binder
*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	M	_	_
24	Coverages	_ 1.	_ 1.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	E	_	_
26	Coverages	_ 3.	_ 2.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	A	_	_
28	Coverages	_ 1.	_ 1.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ 9 0.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	3.0	2.5	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _.__	_ _.__

PREPARER [signature] EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 4]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-2 7-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]
*3. LAYER NUMBER AC-Surface [6]

*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _._				
8	C	Steel-Whl Tandem	_ _._				
9	D	Steel-Whl Tandem	_ _._				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _._	_ _ _ _.			
12	G	Pneumatic-Tired	_ _._	_ _ _ _.			
13	H	Pneumatic-Tired	_ _._				
14	I	Single-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
15	J	Single-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
16	K	Single-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
17	L	Single-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	.0 2 _	_ _._
19	N	Double-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
20	O	Double-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
21	P	Double-Drum Vibr.	_ _._		_ _ _ _.	_ _ _	_ _._
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 2.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	1.5	_._	_._	_._
31	Curing Period (Days)	_ _._	_ _._	_ _._	_ _._

PREPARER [signature] EMPLOYER BRE DATE 10/24/97

SPS-1 CONSTRUCTION DATA SHEET 11 PLANT-MIXED ASPHALT BOUND LAYERS DENSITY AND PROFILE DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 4]

1. NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	ATB	Binder Course	Surface Course	Surface Friction Layer
Measurement Method (A, B, C)[1]	A		A	
Number of Measurements	12		12	
Average (pcf)	141.1		142.2	
Maximum (pcf)	148.2		145.0	
Minimum (pcf)	134.6		139.6	
Standard Deviation (pcf)	5.6		1.9	
Layer Number	04		06	

[1]Measurement Method Backscatter... A Direct Transmission... B Air Gap... C

2. MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

3. NUCLEAR DENSITY GAUGE MODEL NUMBER 3440

4. NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 16133

5. NUCLEAR GAUGE COUNT RATE FOR STANDARDIZATION

6. PROFILOGRAPH MEASUREMENTS

Profilograph Type California... 1 Rainhart... 2 1
Profile Index (Inches/Mile)
Interpretation Method Manual.. 1 Mechanical.. 2 Computer.. 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

7. SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) Yes

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 4]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
0+00	0	— — . —	4.2	10.9	6.1	— — . —
	36	— — . —	4.5	10.9	6.2	— — . —
	72	— — . —	4.8	10.8	6.2	— — . —
	108	— — . —	4.2	10.9	6.5	— — . —
	144	— — . —	4.1	11.1	6.4	— — . —
0+50	0	— — . —	4.5	10.8	5.9	— — . —
	36	— — . —	4.6	10.9	5.9	— — . —
	72	— — . —	4.7	10.8	6.1	— — . —
	108	— — . —	4.2	10.8	6.6	— — . —
	144	— — . —	3.9	11.4	6.1	— — . —
1+00	0	— — . —	4.8	10.6	6.4	— — . —
	36	— — . —	4.5	10.8	6.5	— — . —
	72	— — . —	4.5	10.9	6.5	— — . —
	108	— — . —	4.3	10.6	6.8	— — . —
	144	— — . —	3.7	11.5	6.4	— — . —
1+50	0	— — . —	4.3	10.4	7.1	— — . —
	36	— — . —	4.4	10.6	7.1	— — . —
	72	— — . —	4.2	10.8	7.1	— — . —
	108	— — . —	4.0	10.8	7.3	— — . —
	144	— — . —	3.4	11.6	7.0	— — . —
2+00	0	— — . —	4.1	11.0	6.9	— — . —
	36	— — . —	4.2	11.0	7.0	— — . —
	72	— — . —	4.3	11.0	7.0	— — . —
	108	— — . —	3.8	10.9	7.4	— — . —
	144	— — . —	3.7	11.5	7.0	— — . —
2+50	0	— — . —	4.7	10.7	7.1	— — . —
	36	— — . —	5.1	10.5	7.2	— — . —
	72	— — . —	4.8	10.8	7.1	— — . —
	108	— — . —	4.4	11.0	7.4	— — . —
	144	— — . —	4.2	11.5	7.1	— — . —
3+00	0	— — . —	4.7	10.7	7.2	— — . —
	36	— — . —	5.0	10.7	7.1	— — . —
	72	— — . —	4.7	10.8	7.3	— — . —
	108	— — . —	4.2	10.9	7.7	— — . —
	144	— — . —	3.9	11.6	7.2	— — . —
LAYER NUMBER[1]		— —	03	04	05 +06	— —

[1] from Sheet 4

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 4]

LAYER THICKNESS MEASUREMENTS (Inches)

SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
3+50	0		4.8	10.8	7.4	
	36		4.9	10.9	7.4	
	72		4.8	10.7	7.8	
	108		4.3	10.7	8.0	
	144		4.2	11.3	7.7	
4+00	0		4.3	10.5	7.9	
	36		4.5	10.4	7.7	
	72		4.2	10.6	8.0	
	108		3.7	10.9	8.1	
	144		3.3	11.7	7.6	
4+50	0		4.7	10.9	7.9	
	36		4.6	10.7	8.2	
	72		4.6	10.6	8.2	
	108		4.0	10.8	8.5	
	144		3.8	11.6	7.9	
5+00	0		4.6	11.0	7.8	
	36		4.8	10.9	8.2	
	72		4.7	10.9	8.3	
	108		4.1	10.9	8.8	
	144		4.0	11.9	8.0	
__+__						
__+__						
__+__						
LAYER NUMBER[1]			03	04	05 +06	

[1] from Sheet 4

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 14 SUBGRADE PREPARATION	* STATE CODE [4 0] * SPS PROJECT CODE [6 1] * TEST SECTION NO. [2 4]

*1. SUBGRADE PREPARATION BEGAN (Month-Day-Year) [11-11-96]

*2. SUBGRADE PREPARATION COMPLETED (Month-Day-Year) [12-06-96]

PRIMARY COMPACTION EQUIPMENT

*3. CODE TYPE [6]

COMPACTION EQUIPMENT TYPE CODES
Sheepsfoot... 1 Pneumatic Tired... 2 Steel Wheel Tandem... 3
Single Drum Vibr.... 4 Double Drum Vibr.... 5
Other (Specify)... 6 Sheepsfoot + Pneumatic

*4. GROSS WEIGHT (TONS) [__ __.__]

	TYPE	PERCENT
*5. STABILIZING AGENT 1	[2]	[__ 5.0]
*6. STABILIZING AGENT 2	[__]	[__ __.__]

STABILIZING AGENT TYPE CODES Quicklime
Portland Cement... 1 Lime... 2 Fly Ash, Class C... 3
Fly Ash, Class N... 4
Other (Specify)... 5 _____

*7. TYPICAL LIFT THICKNESS (INCHES) [__ 8]
(For Fill Sections Only)

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

8. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) None

PREPARER [signature] EMPLOYER BRE DATE 3-17-97

SPS-1 CONSTRUCTION DATA SHEET 15 CUT-FILL SECTION LOCATIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 7] * TEST SECTION NO. [2 4]

ORDER	*1 CUT-FILL TYPE[1]	TEST SECTION STATION NUMBER	
		*2 START	*3 END
1	2	0 + 0 0	5 +0 0
2		+	+
3		+	+
4		+	+
5		+	+
6		+	+
7		+	+
8		+	+
9		+	+
10		+	+

NOTES:

1. Indicate the type of subgrade construction with one of the following:

   Cut... 1 Fill... 2 At-Grade... 3

2. Use one line for each cut, fill or at-grade zone present within the section boundaries.

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 16 SUBGRADE EXCAVATION AND BACKFILLING SKETCH	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [2 4]

No Sketch
SEE Construction Plans

PREPARER [signature] EMPLOYER BRF DATE 5-21-97

RECEIVED DEC - 1 1997

December 1995

SPS-1 CONSTRUCTION DATA SHEET 2 GEOMETRIC, SHOULDER AND DRAINAGE INFORMATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [6 0]

*1. LANE WIDTH (FEET) [1 2.]

2. MONITORING SITE LANE NUMBER [1.]
(LANE 1 IS OUTSIDE LANE, NEXT TO SHOULDER
LANE 2 IS NEXT TO LANE 1, ETC.)

*3. SUBSURFACE DRAINAGE LOCATION [1.]
Continuous Along Test Section... 1 Intermittent... 2 None... 3

*4. SUBSURFACE DRAINAGE TYPE [2]
No Subsurface Drainage... 1 Longitudinal Drains... 2
Transverse Drains... 3 Drainage Blanket... 4 Well System... 5
Drainage Blanket with Longitudinal Drains... 6
Other (Specify)... 7 ~~Longitudinal Drains and Transverse Drains as specified in~~

SHOULDER DATA	INSIDE SHOULDER	OUTSIDE SHOULDER
*5. SURFACE TYPE Turf... 1 Granular.... 2 Asphalt Concrete... 3 Concrete... 4 Surface Treatment... 5 Other (Specify)... 6 _____	3 [3.]	3 [3.]
*6. TOTAL WIDTH (FEET)	[4.]	[1 0.]
*7. PAVED WIDTH (FEET)	[4.]	[1 0.]
8. SHOULDER BASE TYPE (CODES-TABLE A.6)	[2 3.]	[2 3.]
9. SURFACE THICKNESS (INCHES)	[8.0]	[8.0]
10. SHOULDER BASE THICKNESS (INCHES)	[4 0]	[4.0]
11. DIAMETER OF LONGITUDINAL DRAINPIPES (INCHES)		[4.0]
12. SPACING OF LATERALS (FEET)		[2 5 0.]

PREPARER [signature] EMPLOYER BRE DATE 4-25-97

SPS-1 CONSTRUCTION DATA SHEET 4 LAYER DESCRIPTIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [6 0]

	*1 LAYER NUMBER	*2 LAYER DESCRIPTION	*3 MATERIAL TYPE CLASS	*4 LAYER THICKNESSES (Inches)			
				AVERAGE	MINIMUM	MAXIMUM	STD. DEV.
	1	SUBGRADE(7)	[5 2]				
DGAB	2	[0 6]	[2 3]	[5.4]	2.8	7.0	1.0
PATB	3	[0 5]	[3 1]	[Over	Laid	Before	Elev./
Binder	4	[0 4]	[0 1]	[.]	.	.	.
Surface	5	[0 3]	[0 1]	[.]	.	.	.
	6	[ ]	[ ]	[.]	.	.	.
	7	[ ]	[ ]	[.]	.	.	.
	8	[ ]	[ ]	[.]	.	.	.
	9	[ ]	[ ]	[.]	.	.	.
	10	[ ]	[ ]	[.]	.	.	.
	11	[ ]	[ ]	[.]	.	.	.
	12	[ ]	[ ]	[.]	.	.	.
	13	[ ]	[ ]	[.]	.	.	.
	14	[ ]	[ ]	[.]	.	.	.
	15	[ ]	[ ]	[.]	.	.	.

ZWA. 5/19/97

Readings were taken.

*5 DEPTH BELOW SURFACE TO "RIGID" LAYER (FEET) [.]
(Rock, Stone, Dense Shale)

NOTES:

1. Layer 1 is the subgrade soil, the highest numbered layer is the pavement surface.

2. Layer description codes:

Overlay.....01	Base Layer.....05	Porous Friction Course..09
Seal/Tack Coat.....02	Subbase Layer.....06	Surface Treatment.....10
Original Surface.....03	Subgrade.....07	Embankment (Fill).....11
HMAC Layer (Subsurface).04	Interlayer.....08	

3. The material type classification codes are presented in Tables A.5, A.6, A.7 and A.8 of the Data Collection Guide for Long Term Pavement Performance Studies, dated January 17, 1990.

4. Enter the average thickness of each layer and the minimum, maximum and standard deviation of the thickness measurements, if known.

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/22/97

SPS-1 CONSTRUCTION DATA SHEET 9 PLANT-MIXED ASPHALT BOUND LAYERS PLACEMENT DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [6 0]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [3-20-97]

*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [05-30-97]

*3 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers
Plant 1	[1]	Shears	[3]	[5]	[3] [4] [5]
Plant 2	[ ]		[ ]	[ ]	[ ] [ ] [ ]
Plant 3	[ ]		[ ]	[ ]	[ ] [ ] [ ]

Plant Type: Batch..... 1 Drum Mix.... 2 Other...3 Specify

4. MANUFACTURER OF ASPHALT CONCRETE PAVER Blaw-Knox

5. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER PF510

6. SINGLE PASS LAYDOWN WIDTH (Feet) [19.0]

7. ATB PLACEMENT LIFTS
   Layer Number [ ]
   Nominal First Lift Placement Thickness (Inches) [ ]
   Nominal Second Lift Placement Thickness (Inches) [ ]
   Nominal Third Lift Placement Thickness (Inches) [ ]
   Nominal Fourth Lift Placement Thickness (Inches) [ ]
8. PATB PLACEMENT LIFTS
   Layer Number [3]
   Nominal First Lift Placement Thickness (Inches) [4.5]
   Nominal Second Lift Placement Thickness (Inches) [ ]
9. AC BINDER COURSE LIFT
   Layer Number [4]
   Nominal First Lift Placement Thickness (Inches) [3.5]
   Nominal Second Lift Placement Thickness (Inches) [3.5]
10. AC SURFACE COURSE LIFT
   Layer Number [5]
   Nominal First Lift Placement Thickness (Inches) [2.5]
   Nominal Second Lift Placement Thickness (Inches) [ ]
11. SURFACE FRICTION COURSE (If Placed)
   Layer Number [ ]
   Nominal Placement Thickness (Inches) [ ]
12. TEST SECTION STATION OF TRANSVERSE JOINTS (within test section)
   Binder Course [+]
   Surface Course [+]
   Surface Friction Course [+]
13. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
   Between lanes.. 1 Within lane.. 2
   (specify offset from O/S feet) [12.0]

14. SIGNIFICANT EVENTS DURING CONSTRUCTION (disruptions, rain, equip. problems, etc.) Ferguson Paver used in DGAB for Sections 60, 18, + 1st lift of section 13 until A tire went flat. From here out - Blaw-Knox Paver Used.

PREPARER [signature] EMPLOYER BRE DATE 9/26/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [6 0]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 4 - 2 4 - 9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 4 - 3 0 - 9 7]
*3. LAYER NUMBER [ ]

*4. MIXING TEMPERATURE (°F) PATB [2 4 0.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 2 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 1.2				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	_ _.__	_ _ _ _.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__	.			
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
18	M	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	.__ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	A	_	_	_
24	Coverages	_ 2.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	_	_	_	_
26	Coverages	_ _.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	_	_	_	_
28	Coverages	_ _.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 9 0.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	4.0	_.__	_.__	_.__
31	Curing Period (Days)	_ 1.0	_ _.__	_ _.__	_ _.__

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/22/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [6 0]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [05-12-97]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [05-23-97]
*3. LAYER NUMBER AC-Binder [4]

*4. MIXING TEMPERATURE (°F) [305.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 290.
Minimum..... ___.
Standard Deviation... __.__
Number of Tests ..... __.
Maximum..... ___.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	12.0				
7	B	Steel-Whl Tandem	__.__				
8	C	Steel-Whl Tandem	__.__				
9	D	Steel-Whl Tandem	__.__				
10	E	Pneumatic-Tired	180	120.			
11	F	Pneumatic-Tired	__.__	___.			
12	G	Pneumatic-Tired	__.__	___.			
13	H	Pneumatic-Tired	__.__	___.			
14	I	Single-Drum Vibr.	__.__		___.	.___	__.__
15	J	Single-Drum Vibr.	__.__		___.	.___	__.__
16	K	Single-Drum Vibr.	__.__		___.	.___	__.__
17	L	Single-Drum Vibr.	__.__		___.	.___	__.__
18	M	Double-Drum Vibr.	11.2		3200.	.02	__.__
19	N	Double-Drum Vibr.	__.__		___.	.___	__.__
20	O	Double-Drum Vibr.	__.__		___.	.___	__.__
21	P	Double-Drum Vibr.	__.__		___.	.___	__.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	M		
24	Coverages	1.	1.	__.	__.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	E		
26	Coverages	3.	3.	__.	__.
	FINAL				
27	Roller Code (A-Q)	A	A		
28	Coverages	1.	1.	__.	__.
29	Air Temperature (°F)	85.	85.	___.	___.
30	Compacted Thickness (In)	3.5	3.0	__.__	__.__
31	Curing Period (Days)	40	20	__.__	__.__

PREPARER Timothy J. Martin EMPLOYER BRE DATE 10/22/97

SPS-1 CONSTRUCTION DATA SHEET 10 PLANT-MIXED ASPHALT BOUND LAYERS COMPACTION DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [6 0]

*1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-2 7-9 7]
*2. DATE PAVING OPERATIONS COMPLETED (Month-Day-Year) [0 5-3 0-9 7]
*3. LAYER NUMBER [5]
AC-Surface
*4. MIXING TEMPERATURE (°F) [3 0 5.]

5. LAYDOWN TEMPERATURES (°F)
Mean..... 2 9 0.
Minimum..... _ _ _.
Standard Deviation... _ _.__
Number of Tests ..... _ _.
Maximum..... _ _ _.

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press. (psi)	Frequency (Vibr./Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	1 2.0				
7	B	Steel-Whl Tandem	_ _.__				
8	C	Steel-Whl Tandem	_ _.__				
9	D	Steel-Whl Tandem	_ _.__				
10	E	Pneumatic-Tired	1 8.0	1 2 0.			
11	F	Pneumatic-Tired	_ _.__	_ _ _ _.			
12	G	Pneumatic-Tired	_ _.__	_ _ _ _.			
13	H	Pneumatic-Tired	_ _.__				
14	I	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
15	J	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
16	K	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
17	L	Single-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
18	M	Double-Drum Vibr.	1 1.2		3 2 0 0.	0 2 _	_ _.__
19	N	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
20	O	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
21	P	Double-Drum Vibr.	_ _.__		_ _ _ _.	_ _ _	_ _.__
22	Q	Other					

	COMPACTION DATA	First Lift	Second Lift	Third Lift	Fourth Lift
	BREAKDOWN				
23	Roller Code (A-Q)	M	_	_	_
24	Coverages	_ 1.	_ _.	_ _.	_ _.
	INTERMEDIATE				
25	Roller Code (A-Q)	E	_	_	_
26	Coverages	_ 2.	_ _.	_ _.	_ _.
	FINAL				
27	Roller Code (A-Q)	A	_	_	_
28	Coverages	_ 1.	_ _.	_ _.	_ _.
29	Air Temperature (°F)	_ 8 5.	_ _ _.	_ _ _.	_ _ _.
30	Compacted Thickness (In)	1.5	_.__	_.__	_.__
31	Curing Period (Days)	_ _.__	_ _.__	_ _.__	_ _.__

PREPARER [signature] EMPLOYER BRE DATE 10/23/97

SPS-1 CONSTRUCTION DATA SHEET 11 PLANT-MIXED ASPHALT BOUND LAYERS DENSITY AND PROFILE DATA	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [6 0]

1. NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	ATB	Binder Course	Surface Course	Surface Friction Layer
Measurement Method (A, B, C)[1]		A	A	
Number of Measurements	N/A		NOT AVAILABLE	
Average (pcf)				
Maximum (pcf)				
Minimum (pcf)				
Standard Deviation (pcf)				
Layer Number		0 4	0 5	

[1]Measurement Method Backscatter... A Direct Transmission... B Air Gap... C

2. MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler
3. NUCLEAR DENSITY GAUGE MODEL NUMBER 3440
4. NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 16133
5. NUCLEAR GAUGE COUNT RATE FOR STANDARDIZATION
6. PROFILOGRAPH MEASUREMENTS

Profilograph Type California... 1 Rainhart... 2 1
Profile Index (Inches/Mile)
Interpretation Method Manual.. 1 Mechanical.. 2 Computer.. 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

7. SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) Yes

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [6 0]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	DGAB DENSE GRADED AGGREGATE BASE	PATB PERMEABLE ASPHALT TREATED BASE	ATB DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
0+00	0	6.5				
	36	6.5				
	72	6.5				
	108	6.2				
	144	6.4				
0+50	0	7.0				
	36	6.4				
	72	6.0				
	108	5.6				
	144	5.5				
1+00	0	6.1				
	36	5.8				
	72	5.8				
	108	5.6				
	144	5.6				
1+50	0	5.6				
	36	5.6				
	72	5.0				
	108	4.9				
	144	5.4				
2+00	0	6.0				
	36	5.8				
	72	5.5				
	108	5.4				
	144	5.4				
2+50	0	6.6				
	36	6.1				
	72	6.0				
	108	6.0				
	144	6.0				
3+00	0	6.1				
	36	5.6				
	72	5.4				
	108	5.3				
	144	5.8				
LAYER NUMBER[1]		2	3	N/A		

[1] from Sheet 4

Un obtained

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

SPS-1 CONSTRUCTION DATA SHEET 12 LAYER THICKNESS MEASUREMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [6 0]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	DENSE GRADED AGGREGATE BASE	PERMEABLE ASPHALT TREATED BASE	DENSE GRADED ASPHALT TREATED BASE	SURFACE AND BINDER	SURFACE FRICTION LAYER
3+50	0	5.8				
	36	6.0				
	72	5.6				
	108	5.6				
	144	5.9				
4+00	0	5.3				
	36	5.0				
	72	5.2				
	108	5.3				
	144	5.5				
4+50	0	3.5				
	36	3.4				
	72	3.0				
	108	2.8				
	144	3.2				
5+00	0	3.6				
	36	3.5				
	72	3.8				
	108	3.7				
	144	3.6				
+						
+						
+						
LAYER NUMBER[1]		2	3 (unobtained)	N/A	5. (4+5)	

[1] from Sheet 4

PREPARER Timothy J. Martin EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 13 UNBOUND AGGREGATE BASE MATERIAL PLACEMENT	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [6 0]

*1. UNBOUND BASE MATERIAL PLACEMENT BEGAN (Month-Day-Year) [0 3-2 4-9 7]

*2. UNBOUND BASE MATERIAL PLACEMENT COMPLETED (Month-Day-Year) [0 4-1 1-9 7]

*3. LAYER NUMBER (From Sheet 4) [2]

PRIMARY COMPACTION EQUIPMENT

*4. CODE TYPE [2]

COMPACTION TYPE CODES
Pneumatic - Tired... 1 Steel Wheel Tandem... 2 Single Drum Vibr.... 3
Double Drum Vibr.... 4
Other (Specify)... 5 Double Drum Static

*5. GROSS WEIGHT (TONS) [1 2.0]

*6. LIFT THICKNESSES
Nominal First Lift Placement Thickness (inches) [6]
Nominal Second Lift Placement Thickness (inches) [ ]
Nominal Third Lift Placement Thickness (inches) [ ]
Nominal Fourth Lift Placement Thickness (inches) [ ]

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

7. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) _____

PREPARER [signature] EMPLOYER BRE DATE 9/30/97

SPS-1 CONSTRUCTION DATA SHEET 14 SUBGRADE PREPARATION	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [6 0]

*1. SUBGRADE PREPARATION BEGAN (Month-Day-Year) [1 1-1 1-9 6]

*2. SUBGRADE PREPARATION COMPLETED (Month-Day-Year) [1 2-0 6-9 6]

PRIMARY COMPACTION EQUIPMENT

*3. CODE TYPE ~~1/2~~ [6]

COMPACTION EQUIPMENT TYPE CODES
Sheepsfoot...(1) Pneumatic Tired...(2) Steel Wheel Tandem... 3
Single Drum Vibr.... 4 Double Drum Vibr.... 5
Other (Specify)... 6 Both Sheepsfoot + Pneumatic

*4. GROSS WEIGHT (TONS) ~~2 Doesn't Know~~ On Pneumatic = 18 tons [1 8.0]

		TYPE	PERCENT
*5.	STABILIZING AGENT 1 Calcium Oxide (Quicklime) 5%	[2]	[5.0]
*6.	STABILIZING AGENT 2 CAO	[__]	[__.__]

STABILIZING AGENT TYPE CODES
Portland Cement... 1 Lime...(2) Fly Ash, Class C... 3
Fly Ash, Class N... 4
Other (Specify)... 5 _____

*7. TYPICAL LIFT THICKNESS (INCHES) 8in [8]
(For Fill Sections Only)

DENSITY DATA IS RECORDED ON SAMPLING DATA SHEET 8-1

8. SIGNIFICANT EVENTS DURING CONSTRUCTION (DISRUPTIONS, RAIN, EQUIPMENT PROBLEMS, ETC.) No problems

PREPARER [signature] EMPLOYER BRE DATE 3-17-97

SPS-1 CONSTRUCTION DATA SHEET 15 CUT-FILL SECTION LOCATIONS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [6 0]

ORDER	*1 CUT-FILL TYPE[1]	TEST SECTION STATION NUMBER	
		*2 START	*3 END
1	2	0 + 0 0	5 + 0 0
2		+	+
3		+	+
4		+	+
5		+	+
6		+	+
7		+	+
8		+	+
9		+	+
10		+	+

NOTES:

1. Indicate the type of subgrade construction with one of the following:

   Cut... 1 Fill... 2 At-Grade... 3

2. Use one line for each cut, fill or at-grade zone present within the section boundaries.

PREPARER Lane W. Duncan EMPLOYER BRE DATE 5-21-97

SPS-1 CONSTRUCTION DATA SHEET 16 SUBGRADE EXCAVATION AND BACKFILLING SKETCH	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [6 0]

No sketch
SEE Construction Plans

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

SPS-1 CONSTRUCTION DATA SHEET 17 MISCELLANEOUS CONSTRUCTION NOTES AND COMMENTS	* STATE CODE [4 0] * SPS PROJECT CODE [0 1] * TEST SECTION NO. [6 0]

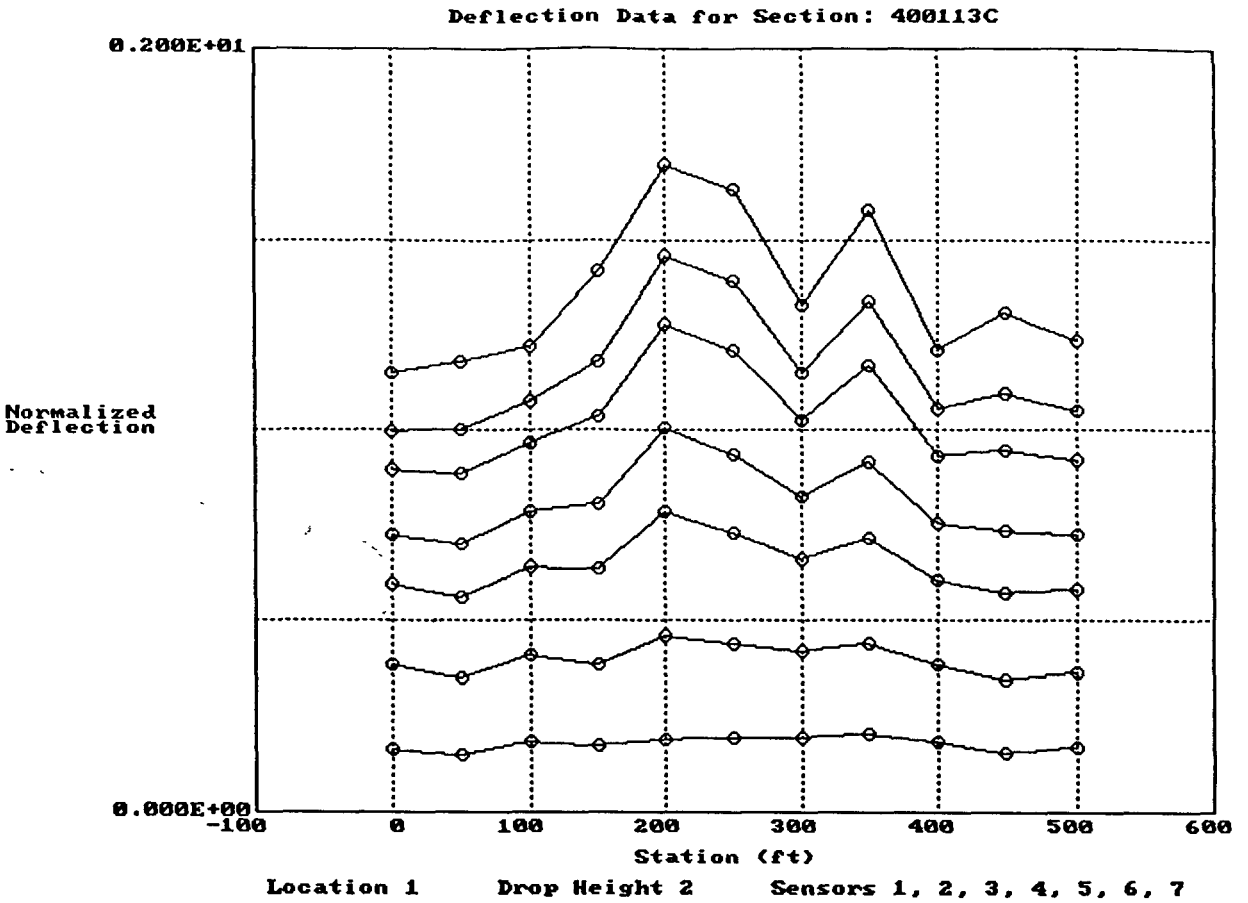
Provide any miscellaneous comments and notes concerning construction operations which may have an influence on the ultimate performance of the test sections or which may cause undesired performance differences to occur between test sections. Also include any quality control measurements or data for which space is not provided on other forms. Provide an indication of the basis for such measurements, such as an ASTM, AASHTO, or Agency standard test designation.

DGAB Laydown was done during very windy conditions (40mph). This may effect moisture and or precision of rod + level shots.

PREPARER [signature] EMPLOYER BRE DATE 5-21-97

APPENDIX E

POSTCONSTRUCTION DEFLECTION DATA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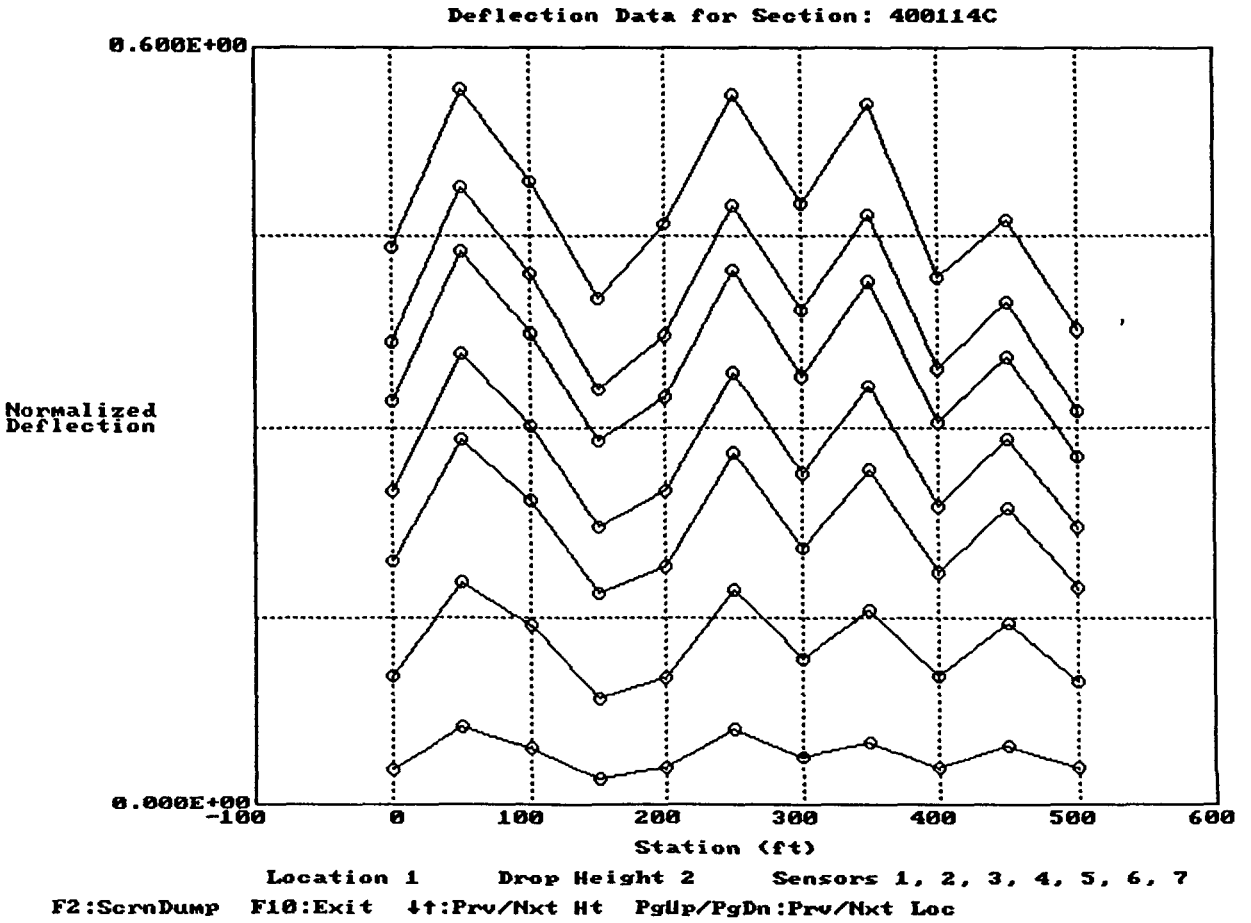
Normalized Deflection
0.000E+00
-100
0
100
200
300
400
500
600
Station (ft)
Location 1 Drop Height 2 Sensors 1, 2, 3, 4, 5, 6, 7
F2:ScrnDump F10:Exit ↓↑:Prv/Nxt Ht PgUp/PgDn:Prv/Nxt Loc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Normalized Deflection
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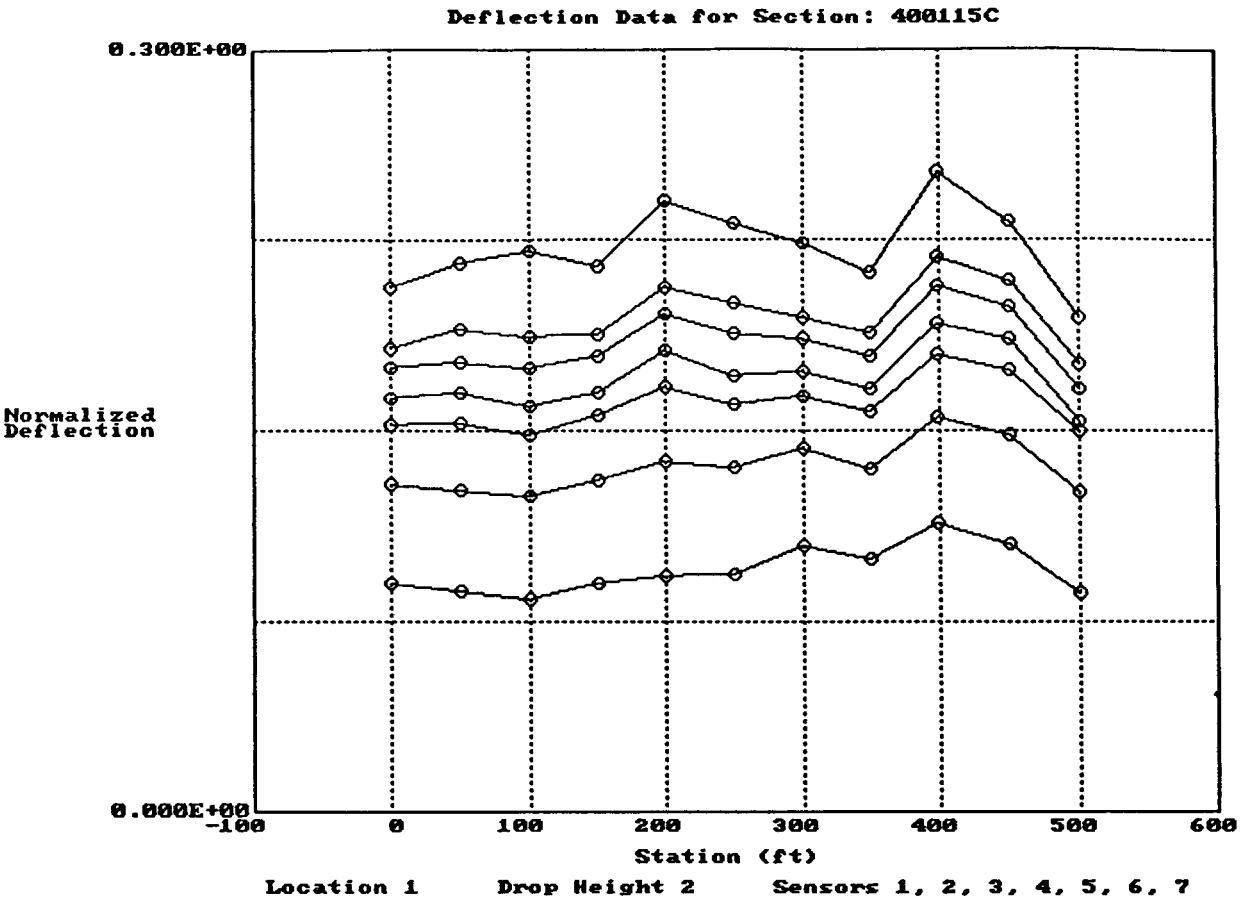
-100
0
100
200
300
400
500
600
Station (ft)
Location 1 Drop Height 2 Sensors 1, 2, 3, 4, 5, 6, 7
F2:ScrnDump F10:Exit ↓↑:Prv/Nxt Ht PgUp/PgDn:Prv/Nxt Loc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Normalized Deflection
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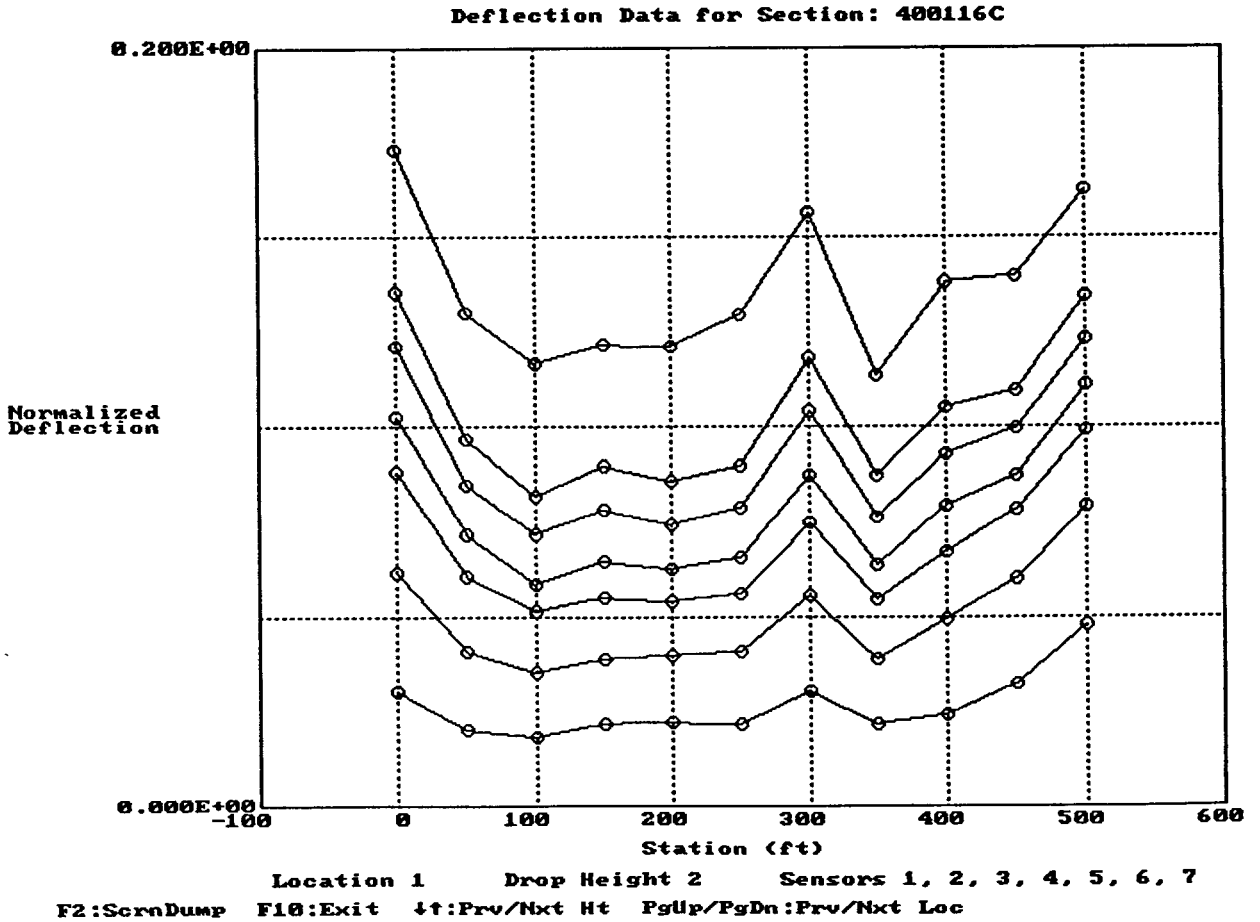
-100
0
100
200
300
400
500
600
Station (ft)
Location 1 Drop Height 2 Sensors 1, 2, 3, 4, 5, 6, 7
F2:ScrnDump F10:Exit ↓↑:Prv/Nxt Ht PgUp/PgDn:Prv/Nxt Loc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Normalized Deflection
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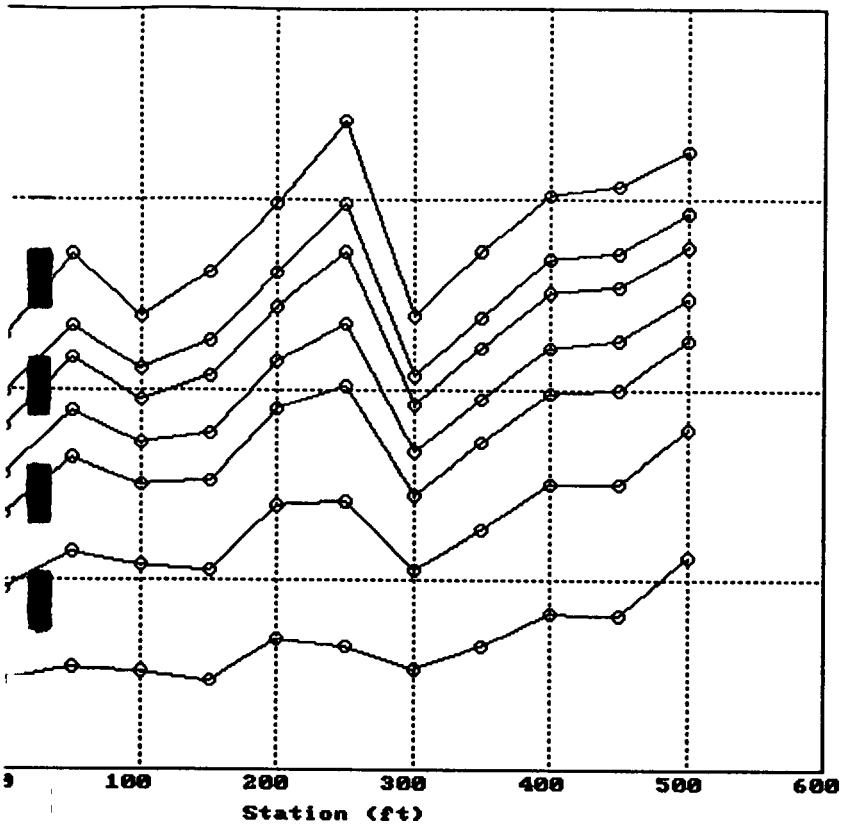
-100
0
100
200
300
400
500
600
Station (ft)
Location 1 Drop Height 2 Sensors 1, 2, 3, 4, 5, 6, 7
F2:ScrnDump F10:Exit ↓↑:Prv/Nxt Ht PgUp/PgDn:Prv/Nxt Loc

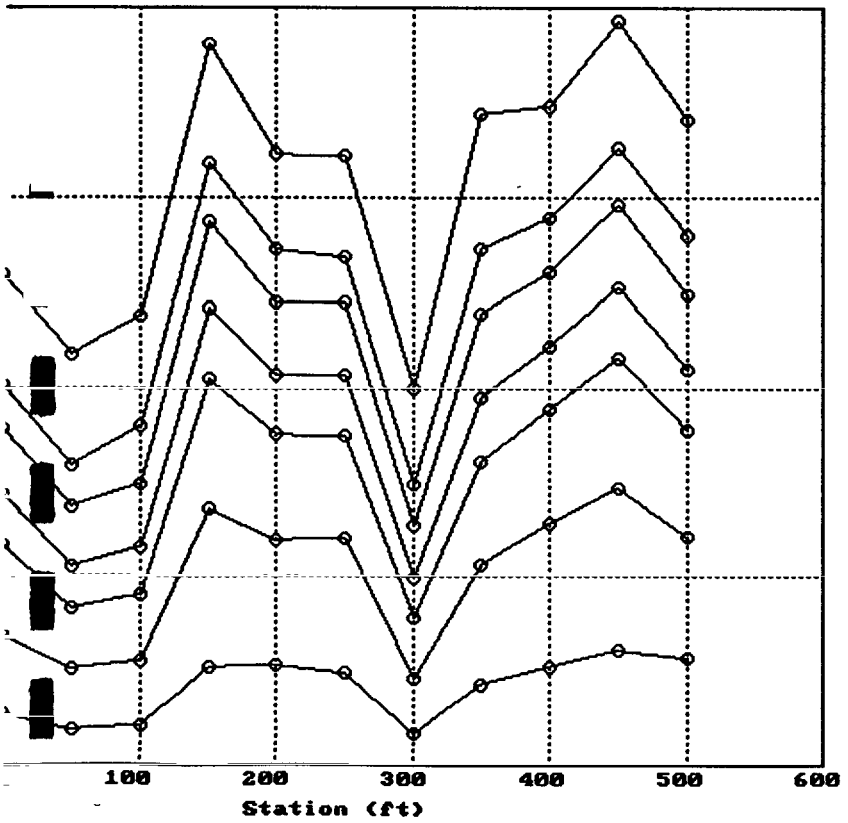
Deflection Data for Section: 400117C



1 Drop Height 2 Sensors 1, 2, 3, 4, 5, 6, 7

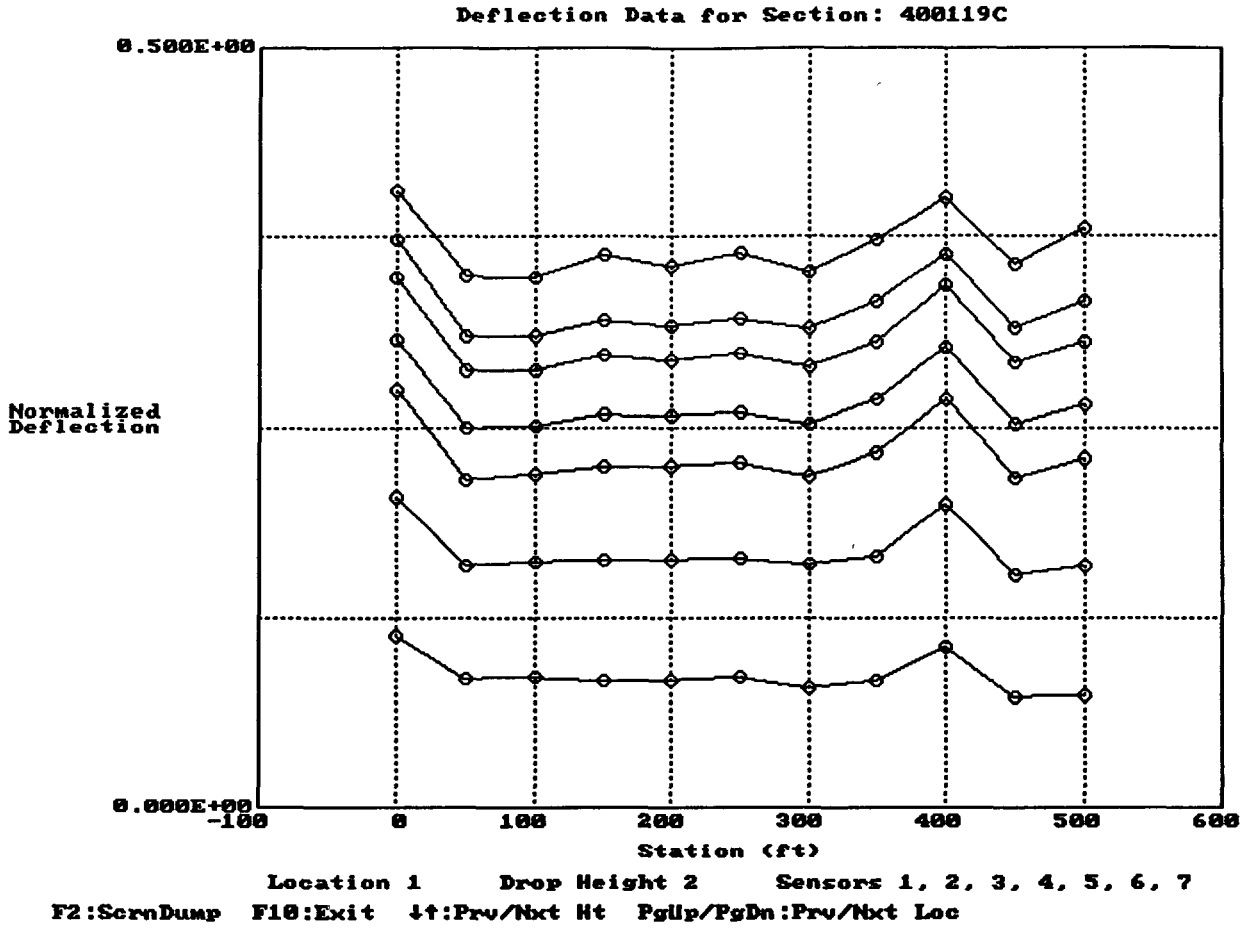
↓↑:Prv/Nxt Ht PgUp/PgDn:Prv/Nxt Loc

Deflection Data for Section: 400118C



1 Drop Height 2 Sensors 1, 2, 3, 4, 5, 6, 7

↓↑:Prv/Nxt Ht PgUp/PgDn:Prv/Nxt Loc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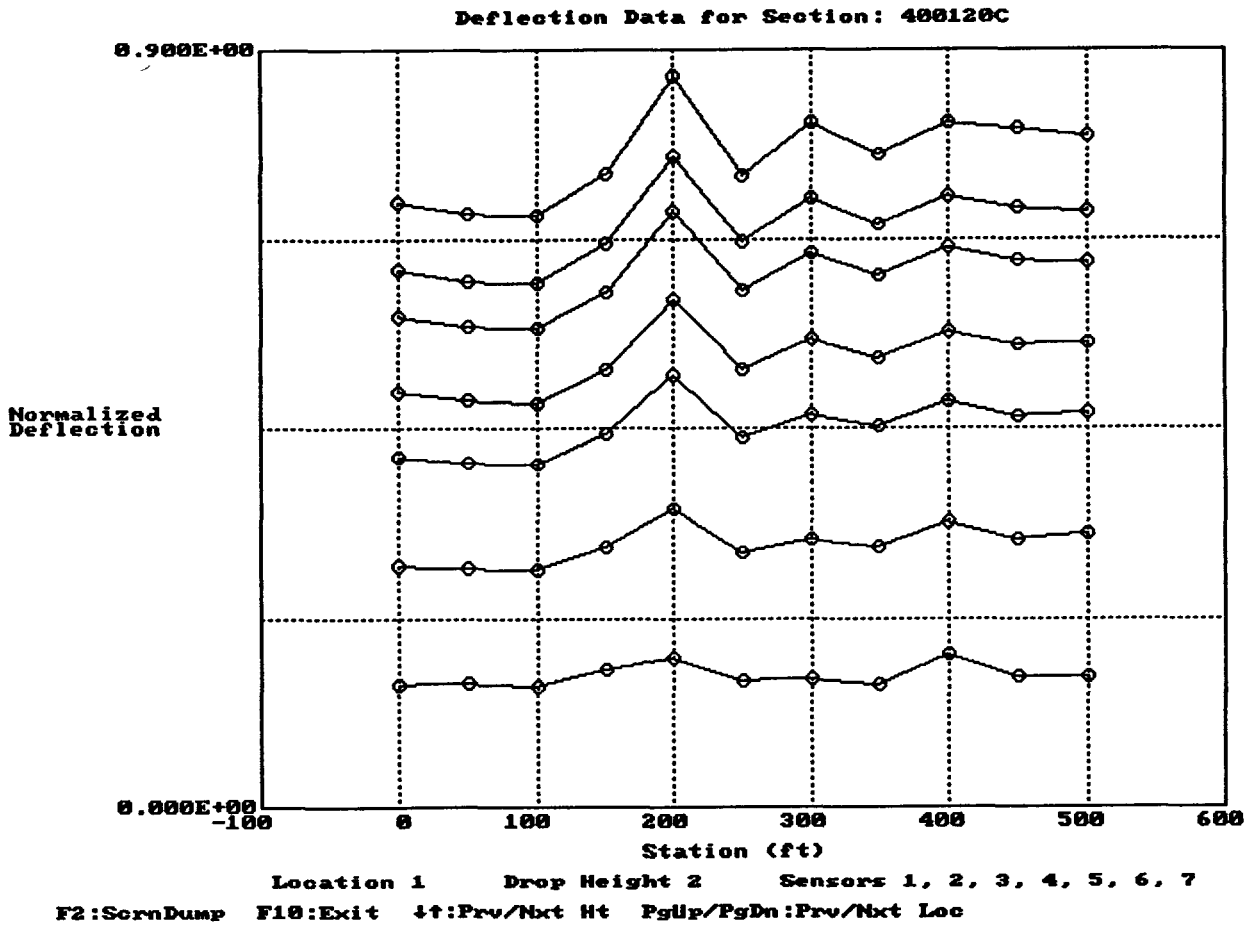
Normalized Deflection
0.000E+00
-100
0
100
200
300
400
500
600
Station (ft)
Location 1 Drop Height 2 Sensors 1, 2, 3, 4, 5, 6, 7
F2:ScrnDump F10:Exit ↓↑:Prv/Nxt Ht PgUp/PgDn:Prv/Nxt Loc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Normalized Deflection
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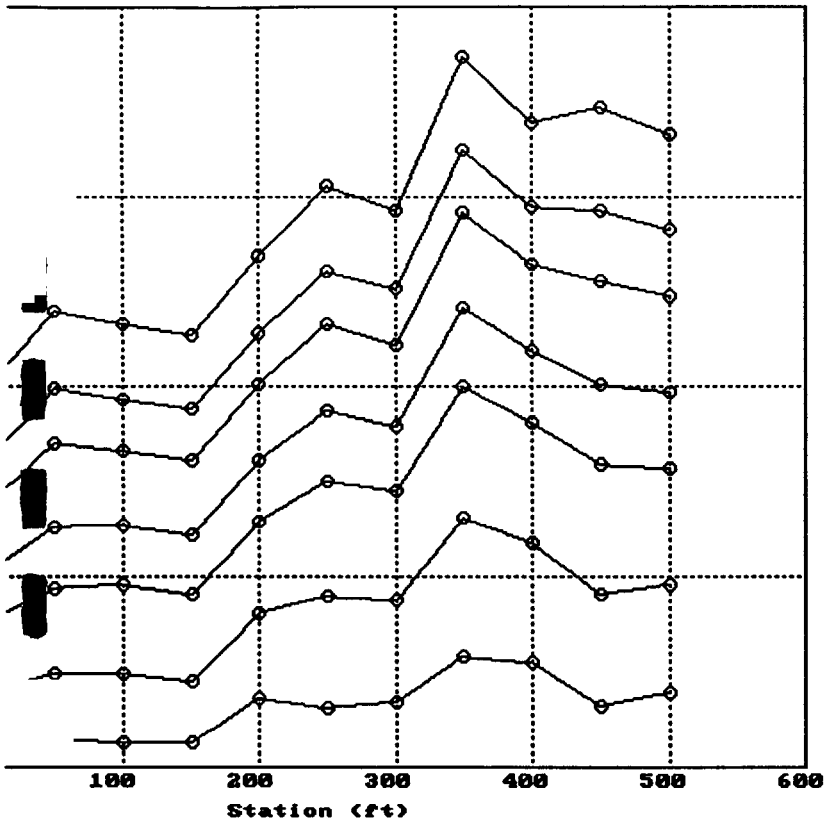
-100
0
100
200
300
400
500
600
Station (ft)
Location 1 Drop Height 2 Sensors 1, 2, 3, 4, 5, 6, 7
F2:ScrnDump F10:Exit ↓↑:Prv/Nxt Ht PgUp/PgDn:Prv/Nxt Loc

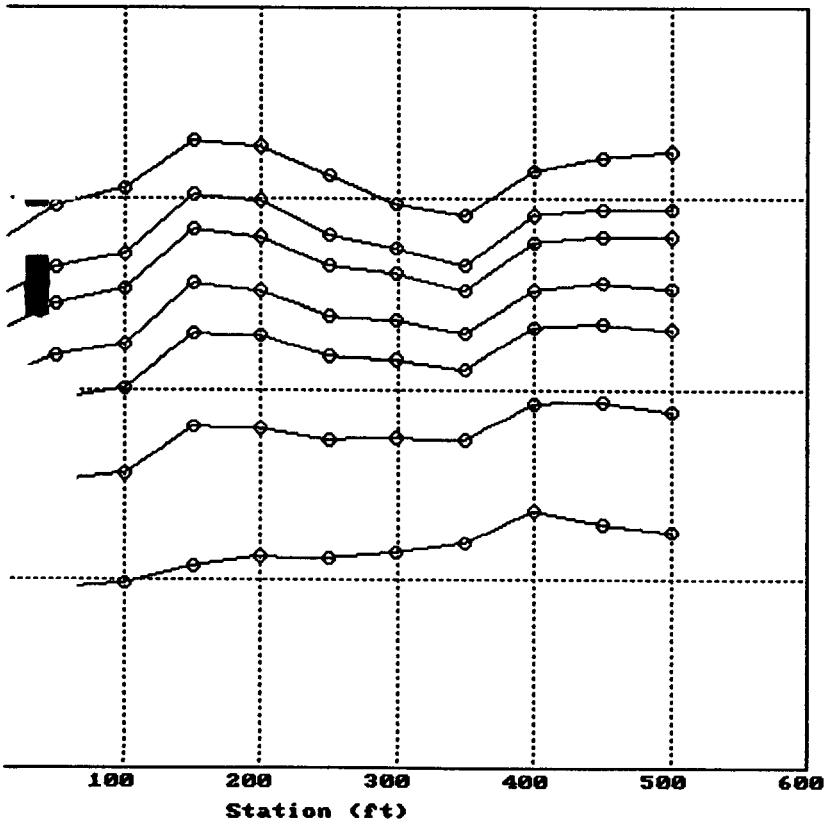
Deflection Data for Section: 400121C



Drop Height 2 Sensors 1, 2, 3, 4, 5, 6, 7

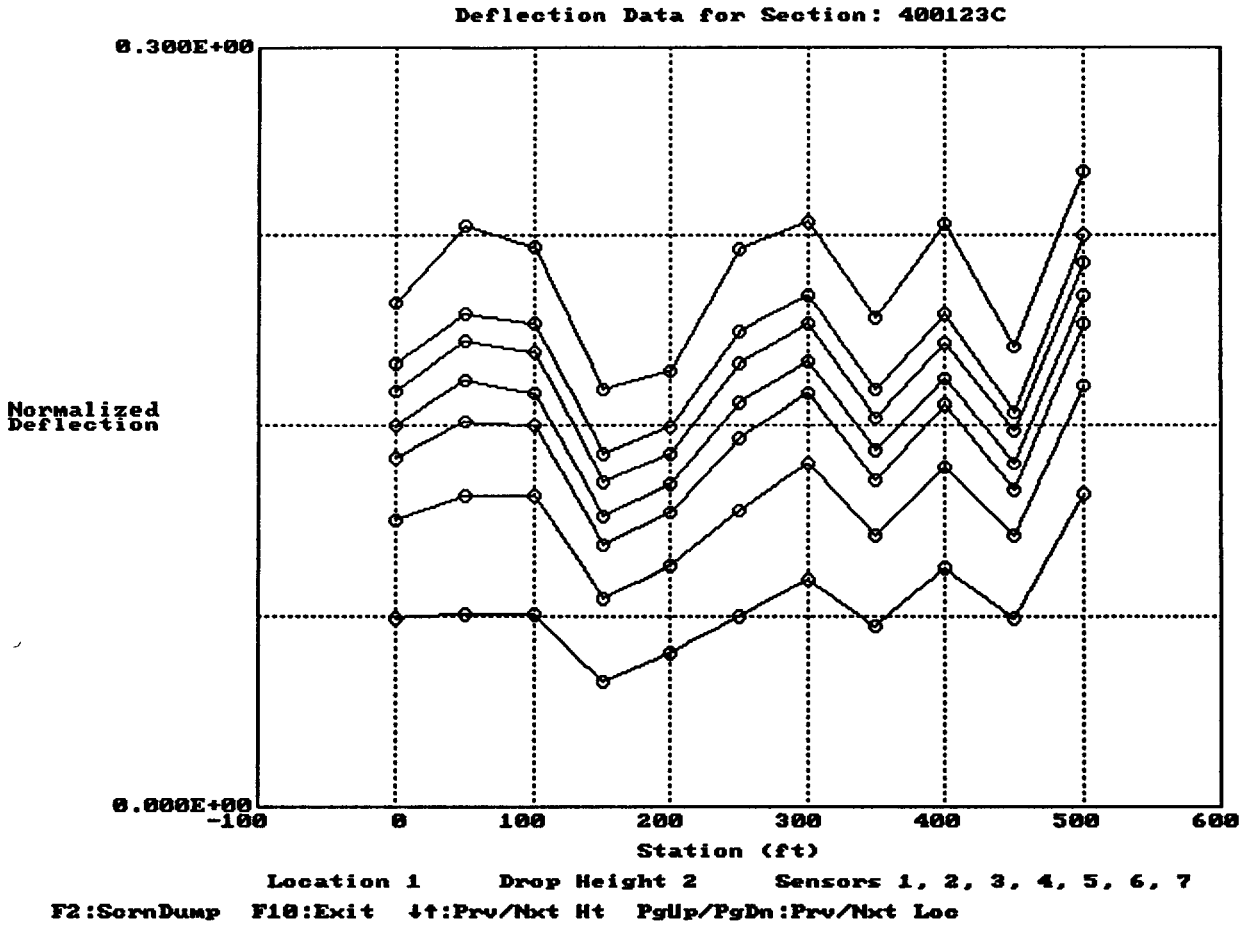
↑:Prv/Nxt Ht PgUp/PgDn:Prv/Nxt Loc

Deflection Data for Section: 400122C



Drop Height 2 Sensors 1, 2, 3, 4, 5, 6, 7

↑:Prv/Nxt Ht PgUp/PgDn:Prv/Nxt Loc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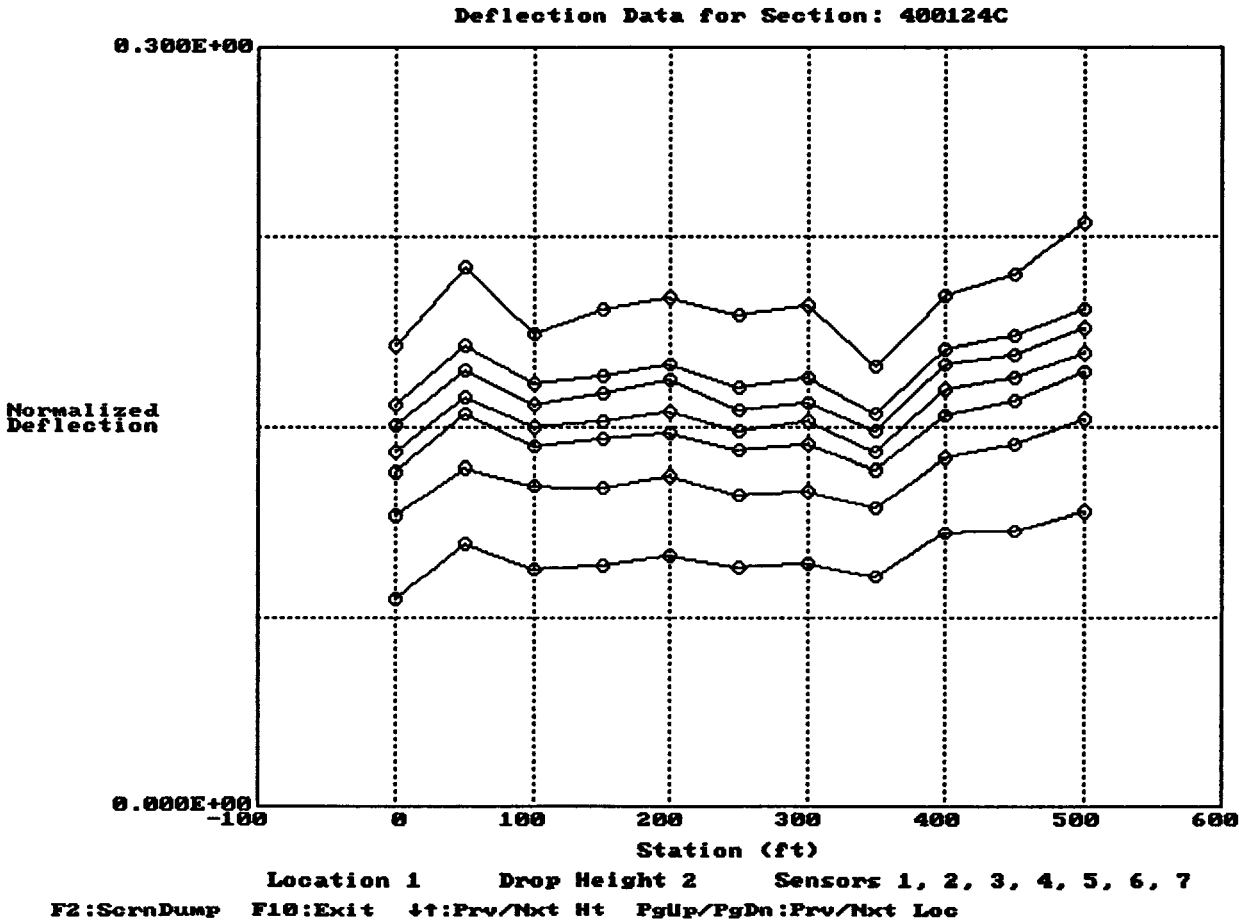
Normalized Deflection
-100
0
100
200
300
400
500
600
Station (ft)
Location 1 Drop Height 2 Sensors 1, 2, 3, 4, 5, 6, 7
F2:ScrnDump F10:Exit ↓↑:Prv/Nxt Ht PgUp/PgDn:Prv/Nxt Loc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Normalized Deflection
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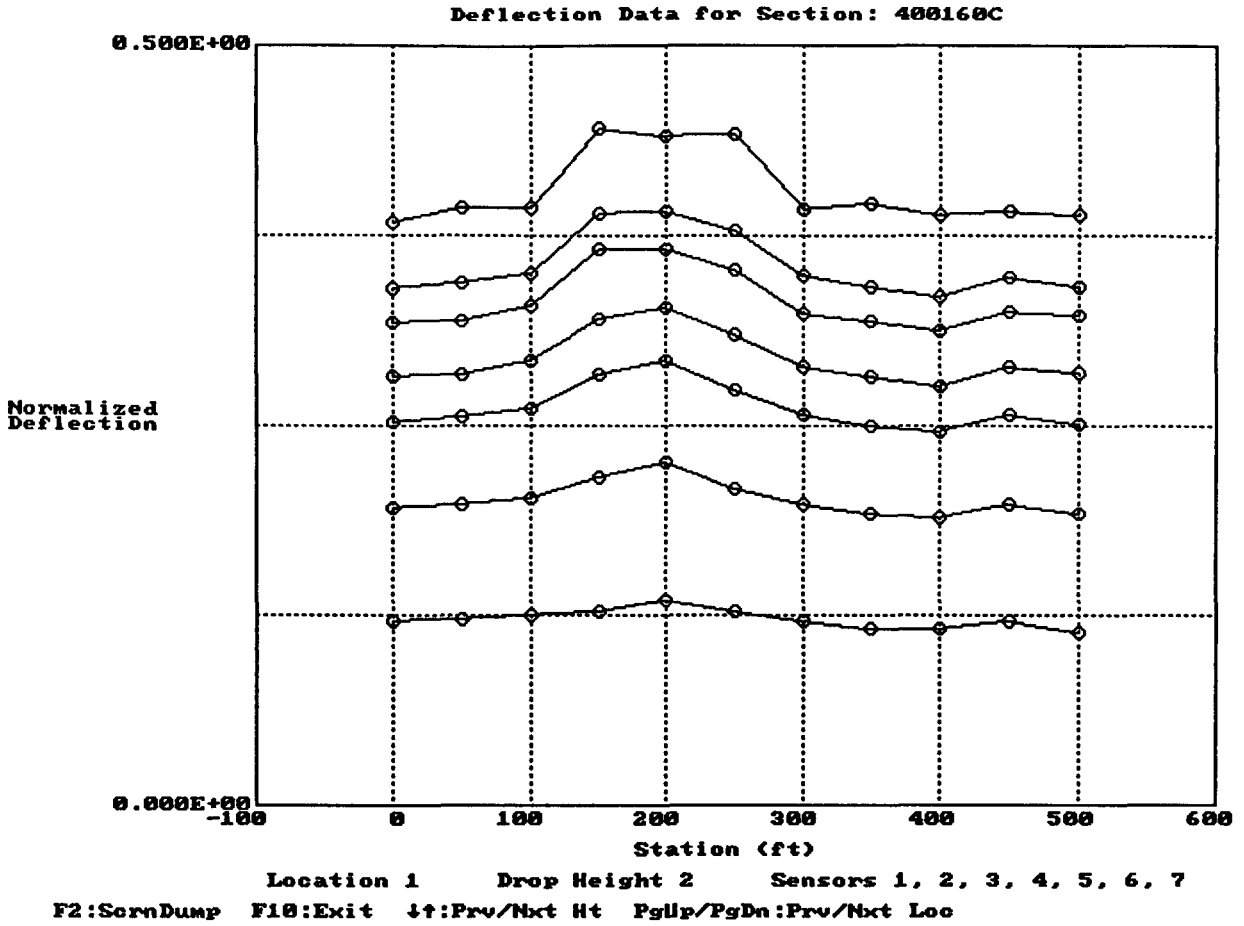
100
200
300
400
500
600
Station (ft)
Location 1 Drop Height 2 Sensors 1, 2, 3, 4, 5, 6, 7
F2:ScrnDump F10:Exit ↓↑:Prv/Nxt Ht PgUp/PgDn:Prv/Nxt Loc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0.000E+00
Normalized Deflection
-100
0
100
200
300
400
500
600
Station (ft)
Location 1 Drop Height 2 Sensors 1, 2, 3, 4, 5, 6, 7
F2:ScrnDump F10:Exit ↓↑:Prv/Nxt Ht PgUp/PgDn:Prv/Nxt Loc

APPENDIX F

PHOTOGRAPHS

		Page №.
1	Subgrade Surface	F.2
2	Shoulder Probe	F.2
3	Nuclear Density Measurement	F.3
4	Placement of DGAB	F.3
5	Compaction of DGAB	F.4
6	Longitudinal Trench in Subgrade for Edge Drain	F.4
7	Lateral Trench in DGAB	F.5
8	Hot-Mix Samples for Testing	F.5
9	PATB Surface	F.6
10	Compaction of ATB	F.6
11	Placement/Laydown of HMAC	F.7
12	Hot-Mix Plant	F.7

Photo 1. Subgrade Surface

Photo 2. Shoulder Probe

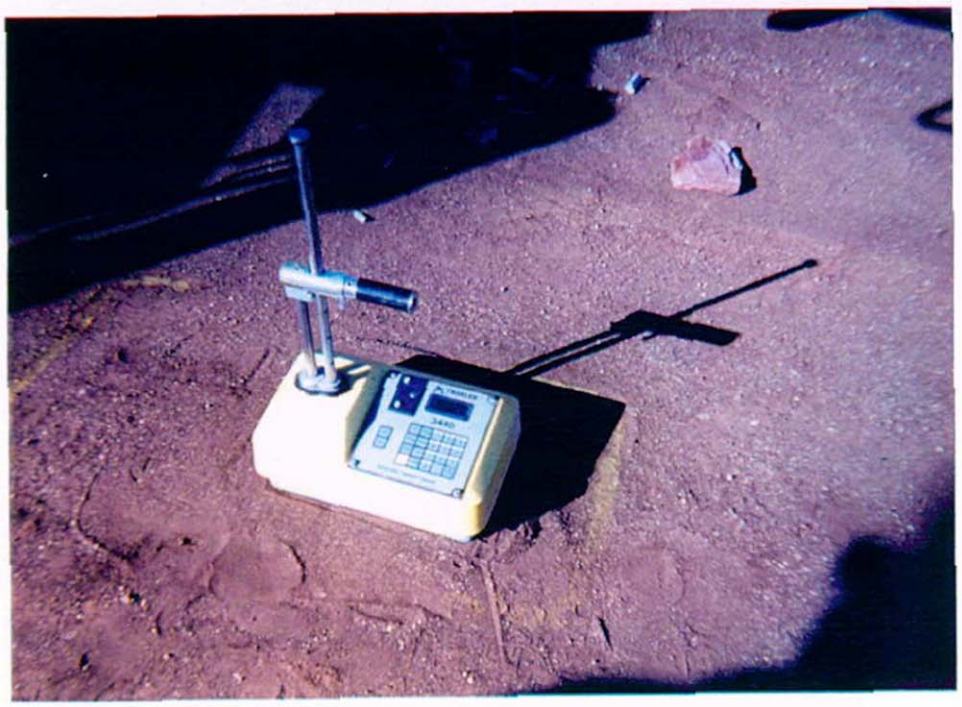

Photo 3. Nuclear Density Measurement

Photo 4. Placement of DGAB

Photo 5. Compaction of DGAB

Photo 6. Longitudinal Trench in Subgrade for Edge Drain

Photo 7. Lateral Trench in DGAB

Photo 8. Hot-Mix Samples for Testing

Photo 9. PATB Surface

Photo 10. Compaction of ATB

Photo 11. Placement/Laydown of HMAC

Photo 12. Hot-Mix Plant