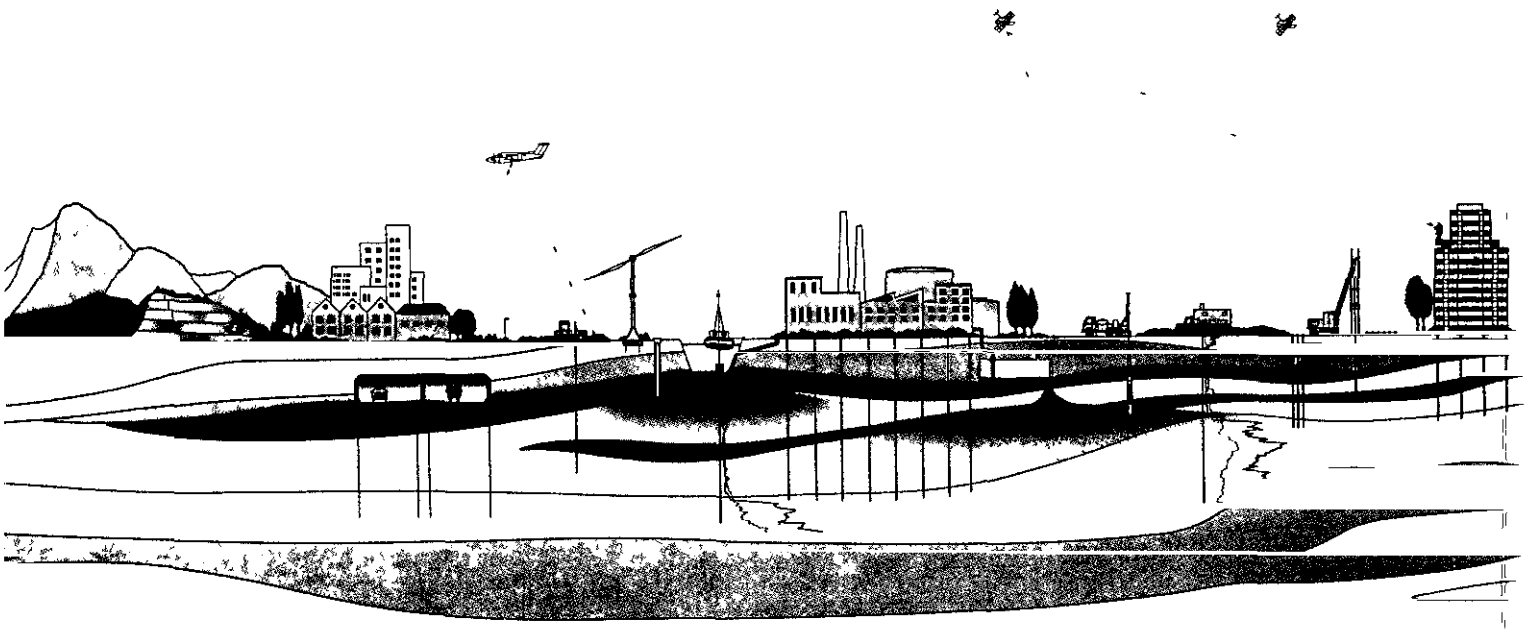
FUGRO-BRE, INC.

FINAL REPORT

SPS-6 PROJECT 0106
REHABILITATION OF JOINTED
PORTLAND CEMENT CONCRETE PAVEMENTS
I-59 SOUTHBOUND - ETOWAH COUNTY, ALABAMA

FHWA/LTPP
SOUTHERN REGION COORDINATION OFFICE

May 1999



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FINAL REPORT - SPS-6 PROJECT 0106

REHABILITATION OF JOINTED PORTLAND CEMENT CONCRETE PAVEMENTS I-59, SOUTHBOUND ETOWAH COUNTY, ALABAMA

INTRODUCTION

In 1987, Congress authorized funding for the Strategic Highway Research Program (SHRP) SHRP's purpose was to conduct focused research in the areas of asphalt, concrete, pavement performance, structures, and highway operations In 1992, funding for SHRP ended An extension of SHRP, the Long Term Pavement Performance (LTPP) program continued to be funded through the Intermodal Surface Transportation Efficiency Act (ISTEA) Operation of the LTPP program was transferred to the Federal Highway Administration (FHWA) in June of 1992

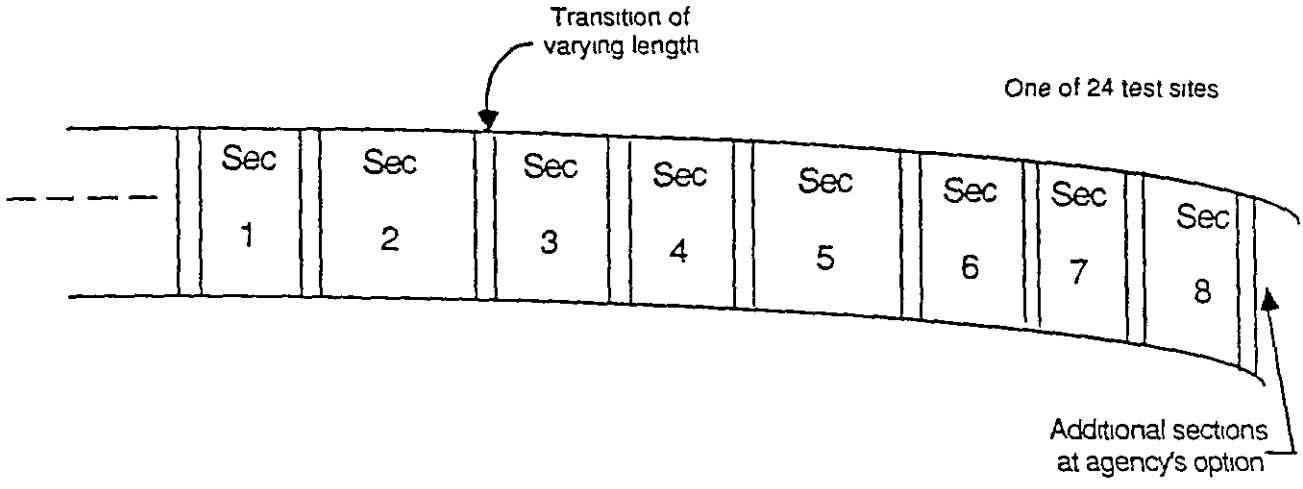
As part of the LTPP studies, sections of highway are being selected for Specific Pavement Studies (SPS) SPS sites have been incorporated into new and rehabilitation projects throughout the nation This report signifies the inclusion and construction of an SPS-6 site located on I-59 in Etowah County, Alabama

SPS-6 General Experiment Design

The SPS-6 experiment was designed to help highway agencies determine the best way to treat existing jointed concrete pavements Agencies today must determine which rehabilitation procedures work best under which circumstances, and the most appropriate time to apply such rehabilitation treatments Since the existing pavements have various levels of deterioration, one must carefully consider all the possible rehabilitation treatments and, at the same time, keep in mind the limited funding for such projects Therefore, the objective of the SPS-6 is to improve the performance prediction capabilities for jointed plain concrete (JPC) and jointed reinforced concrete (JRC) pavement by determining the additional pavement life that can be expected from the application of a variety of rehabilitation methods

Methods for restoration of concrete pavements vary in extent Examples of such methods include diamond grinding, subsealing, full-depth repair, partial-depth spall repair, restoration of load transfer, resealing of transverse joints, resealing of longitudinal lane/shoulder joints, pressure relief joints, retrofit tied PCC concrete shoulders, and longitudinal subdrains Asphalt concrete overlays may also be applied if necessary Figure 1 demonstrates a typical SPS-6 layout As can be seen in figure 1, the highway agency is encouraged to include extra test sections within the SPS-6 project to evaluate local practices and/or other innovative features

In addition to monitoring rehabilitation methods, other site related factors are recorded for future data analysis Such data includes environmental (climatic) factors, existing pavement condition and type of pavement, subgrade soil, traffic volume and traffic load Table 1 depicts this information in tabular form



SPS-6 SECTION	JC PAVEMENT PREPARATION	OTHER TREATMENTS	OVERLAY THICKNESS
1	Routine Maintenance		0
2	Minimum Restoration		0
3	Minimum Restoration		4-inch
4	Minimum Restoration	Saw and seal joints in AC	4-inch
5	Maximum Restoration (CPR)		0
6	Maximum Restoration (CPR)		4-inch
7	Crack/Break and Seat		4-inch
8	Crack/Break and Seat		8-inch

Figure 1. Illustrative Test Section Layout for SPS-6, Rehabilitation of Jointed Portland Cement Concrete Pavements

Table 1. Experimental Design for SPS-6, Rehabilitation of Jointed Portland Cement Concrete Pavements

Rehabilitation Procedures \ Factors for Moisture, Temperature, Pavement Type, and Pavement Condition		WET FREEZE				WET, NO FREEZE				DRY FREEZE				DRY, NO FREEZE	
		JPCP		JRCP		JPCP		JRCP		JPCP		JRCP		JPCP	
		FAIR	POOR	FAIR	POOR	FAIR	POOR	FAIR	POOR	FAIR	POOR	FAIR	POOR	FAIR	POOR
PREPARATION	OVERLAY THICKNESS														
Routine Maintenance (Control)	0	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	x	x	x	x
Minimum Restoration	0	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	x	x	x	x
	4"	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	x	x	x	x
	4" *	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	x	x	x	x
Maximum Restoration (CPR)	0	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	x	x	x	x
	4"	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	x	x	x	x
Crack/Break and Seat	4"	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	x	x	x	x
	8"	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	x	x	x	x

* with saw AC overlay joints above JCP joints and seal

Subgrade Soil: Fine
Traffic: >200 KESAL/Year

Each "x" designates a test section.

Selection/Nomination of I-59, Southbound

This project was first offered for consideration by the State of Alabama in April 1996 After reviewing the details provided by the state on this project, and preparation of a tentative layout of the test sections, the project was officially nominated in June 1996 Appendix A contains the nomination forms which provide specific information on the project location, significant dates, traffic information and the state agency's structural pavement design for the SPS-6 project

PRECONSTRUCTION MONITORING

On 23 February 1995, Jerry Daleiden of the Southern Region Coordination Office (SRCO) traveled to the project site nominated for an SPS-6 project in Alabama Accompanying Jerry was Lynn Wolfe and Johnny House both of whom represented the Alabama Department of Transportation (ALDOT) Also attending was Bill Van Luchene of the FHWA-Alabama Division After reviewing the site location for the SPS-6, each party agreed that the south-bound lanes would be preferred over the northbound lanes for the project location since the northbound lanes were set in a small side slope Therefore, the SPS-6 project was located on the outside southbound lane of I-59, approximately 17 miles north of Gadsden, Alabama Located in Etowah County, the project is close to milepost 197 with a kilometer marking of 317 being adjacent to the project in the southbound lanes

I-59 was initially constructed on a sandy clay subgrade with 6 inches of aggregate base and 10 inches of jointed plain concrete Joints were measured to be spaced (on average) 20-feet apart from one another The jointed plain concrete pavement (JPCP) was in fair to good condition and only exhibited minor slab faulting and a few transverse cracks ALDOT gave the highway a friction number of 51 and an average distress rating of 84 4 Upon completion of a manual distress survey by the SRCO, slab-faulting measurements ranged between 4 and 8 mm Lane-to-shoulder drop-off readings measured between 25 and 40 mm The centerline joint and the transverse joints were fairly well sealed The outside longitudinal joint had been sealed but was in need of replacement as was the adjacent 8 feet of HMAC shoulder The manual distress survey also revealed that the existing cracks in the pavement had been routed and sealed Photos of the JPCP existing previous to any rehabilitation can be found in appendix G It should be noted that there are no exits or entrance ramps located within the project limits Also, the traffic is very uniform and at last count had 35% of heavy truck traffic

Originally the ALDOT wanted to include a state supplemental test section within the SPS-6 project limits The extra test section was to be a 4-inch hot mix asphalt concrete (HMAC) overlay on rubblized JPCP Eventually the ALDOT elected to include two more state supplemental test sections One supplemental test section would have an 8-inch HMAC overlay and the other would consist of a 9 5-inch HMAC overlay, both of which would be placed on rubblized JPCP

A preconstruction conference for the SPS-6 project was held on 18 November 1997 Attending were representatives from the SRCO, ALDOT, and the prime contractor for the project A list of the attendees can be found in appendix A This meeting was held to make

ure everyone knew the objectives of the SPS-6 project and what it would take to meet those objectives The meeting was a success and everyone came away with a renewed appreciation or open and consistent communication between all parties present

On 07 December 1997, Zane Dunnam and Jon Peacock of the SRCO visited the site location of the SPS-6 project During this visit, the SRCO personnel established the exact location of each test section and the project limits by placing paint marks on the pavement The paint marks would serve as temporary markings until further project activities could occur

On 28 January 1998, Dale Frameli of the SRCO completed the initial longitudinal profile testing for each test section Table 2 shows the resulting measurements taken in both wheel paths The values are displayed as an International Roughness Index (IRI), and in the order is measured on site The IRI measurements are in meters per kilometer (m/km) While Mr Frameli was at the project site, he used a hand-held Global Positioning System (GPS) receiver to ascertain the project's latitude and longitude The latitude reading was N 34° 08′ 31 6″ and the longitude reading was W 99° 12′ 14 4″ The receiver used was a Garmin brand Model 75

Table 2. Profile Readings

International Roughness Index (IRI) Values (m/km) (Preconstruction)			
Section ID	Left Wheel Path IRI	Right Wheel Path IRI	Average IRI
010601	3 078	2 702	2 890
010602	2 790	2 596	2 693
010605	3 073	2 880	2 977
010607	2 596	2 330	2 414
010608	2 380	2 254	2 317
010663	1 744	1 778	1 761
010662	1 824	1 964	1 894
010661	2 324	2 395	2 359
010606	2 276	2 317	2 296
010604	1 615	1 937	1 776
010603	1 581	1 843	1 712

On 05 February 1998, Zane Dunnam, Matt Duke and Gary Wright of the SRCO visited the SPS-6 project site During this visit the initial round of preconstruction distress surveys were

completed for each test section Also at this time the Falling Weight Deflectometer (FWD) testing was initiated and completed for preconstruction monitoring activities

On 04 March 1998, Zane Dunnam and Matt Duke revisited the SPS-6 project site in order to witness the contractor install the edge drain as called for in the SPS-6 project plans While the contractor was preparing for edge drain installation, the SRCO personnel placed wooden stakes in the right-of-way at the beginning and ending of each test section The stakes were offset in the right-of-way as a secondary precaution in case the paint marks (placed in February) were lost due to construction events

Once traffic-control had been properly established, the contractor began installing the edge drain on the inside lane of the southbound lanes This was done by first making a pass along the shoulder with a Caterpillar blade The contractor then milled the HMAC shoulder using a Caterpillar milling machine (Model PR-450) Once the shoulder had been milled, a ditch 26 inches in depth was trenched alongside the concrete pavement The machine used for trenching was the same one that fed a geo-composite drainage material into the ditch Photos of this process can be found in appendix G The drainage material used for an edge drain was not a pipe but a 1" x 18" filter mat The geo-composite drainage mat has a permeability of 20 cm/sec or 567 feet per day After the drainage mat had been placed, the distance from the top of the mat to the top of the concrete pavement measured 8 inches A sketch of how the drainage mat was positioned beside the concrete pavement can be found in appendix A The perforated plastic pipes used as laterals to tie into the drainage mat were 6 feet in length and 4 inches in diameter Lateral spacing between each pipe averaged 730 feet A sketch showing the approximate location of each lateral can also be found in appendix A Eventually, the same dirt that came out of the trench was compacted on top of the edge drain After compaction was completed, a 3-inch thick HMAC cap was placed on top of the compacted dirt The edge drain for the outside lane was installed in the same fashion but was completed mid-March

On 24 March 1998, the same SRCO personnel returned to the SPS-6 project to help with the preconstruction material sampling Sampling included coring of the JPCP, augering the outside shoulder for subgrade strata changes, and bulk sampling of the subgrade and base material At this time, the SRCO personnel also used a rod and level to obtain a relative elevation and cross-profile for each test section This process was to be repeated on each test section anytime the structure of the pavement was changed, i e either by milling or by an HMAC overlay

On 30 March 1998, Robin Belt from the SRCO arrived on site to test for joint load-transfer efficiency Each transverse joint within test sections 010605 and 010606 was tested using the FWD Upon completion of testing, only one transverse joint failed in each of the two test sections The location of the two failed joints can be found on Sheet 3 in appendix F in the respective sections for 010605 and 010606 Results for the other transverse joints can be obtained by contacting the SRCO

On 07 April 1998, Zane Dunnam returned to the SPS-6 project to help with the remaining preconstruction sampling and testing Also on site was the subcontractor Grout Inc who initiated full-depth patching as determined by the ALDOT Since the Material Sampling and

Testing Plan (MST Plan) called for two test pits, the test pits were located in the areas where full-depth patching was to occur These test pits allowed for in-situ nuclear density testing as well as the remaining bulk sampling of the base and subgrade material The location of these test pits can be found in the amended MST Plan found in appendix B Two days later, all remaining preconstruction sampling had been obtained and accounted for as per the requirements found in the MST Plan

CONSTRUCTION MONITORING

Construction of the SPS-6 began on 04 May 1998 Zane Dunnam and Jon Peacock were on site to witness a guillotine-type crack and break machine (Antigo Badger Model BB8600) begin the crack, break and seat process as required for test sections 010607 and 010608 The machine dropped a 12,000-lb load at a height of 6 feet every 18 inches This caused longitudinal cracking down the center of the lane Transverse cracking was not visible where the load hit the pavement In order to guarantee full-depth cracking was occurring, cores were taken at arbitrary places throughout the test sections Coring on top of the marks left by the 12,000-lb load confirmed that the 10-inch thick pavement was cracked full-depth Upon further inspection of each core, it could be seen that a minute crack began at the top of the core and propagated downward, increasing in width and severity Specifications for the crack and break machine can be found in appendix A

Other work initiated this day was the rubblization process for the state supplemental test sections 010661, 010662, and 010663 A Badger Breaker machine (Model MHB) was utilized to accomplish the rubblization The multiple-hammer machine had twelve hammers spaced 15 inches apart from one another Each hammer was dropped at different times with different loadings The loads were dropped every 5 inches longitudinally down each test section Following the rubblization, an Ingersoll-Rand 30-ton vibratory steel roller (Model SD-150D) made two passes over each test section After the roller completed its second pass, the rubble was reduced in size from 8 inches down to approximately 3 inches in diameter It should be noted that in this report one pass made by a roller is considered to be up and back It should also be noted that approximately 2 feet of test section 010661 did not get rubblized This was due to the rubblization process starting at station 4+98 (and moving in a northerly direction) instead of outside the 50-foot sampling area adjacent to the test section Photos of the rubblization and crack, break and seat process can be found in appendix G Specifications for the rubblization machine can be found in appendix A

After the crack, break and seat, and rubblization were completed, the SRCO personnel took rod and level measurements on each test section that was rubblized or had crack, break and seat Robin Belt arrived on site and retrieved FWD measurements on the crack, break and seat test sections FWD testing was attempted on one of the rubblized sections, but as per figure 2, the readings proved to be out of the normal range for LTPP specifications It should be noted that FWD testing on the rubblized material is not required by the SPS-6 construction guidelines

On 12 May 1998, the contractor broomed and tack coated the JPCP starting 400 feet before station 0+00 of test section 010608 In a southbound direction, the contractor began paving with a Barber Green asphalt-paving machine Test sections 010608, 010663, and 010662

12:09 980505 19.

File: CLOSED
Road: US 59 SB. ETOWAH CO.
Subsection: 0106~~00~~63

FWD S/N : 8002-059
Operator ID : ROBIN BELT

Stationing...: Feet

Diameter of Plate: 11.8
Deflector distances : 8 12 18 24 36 60

"FLEX" BASIN TEST
Sequence: CCC111122223334444

Stn: 719 Lane:F3 Temp: J/C Air: 79 PvT: 100 12.43

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7	
	C	91.5	10027	94.25	0.23	12.48	19 90	31.39	16.19	14.67	Off Range'
	C	95 9	10503	117 80	16.03	15 93	49.02	25.87	8 87	5.98	Off Range'
	C	96 3	10551	129.00	22.03	21 06	41 67	129.00	10.54	5.56	Off Range'
(*)	1	50.0	5474	70.30V	12.88V	12.17V	9.88V	14.62V	2.19V	0.64	
(*)	1	49.5	5426	65.70	12.05	11.46	9 39	12.35V	2.05V	0.60	
(*)	1	50.0	5478	65.27V	11.63V	11.12V	9 34	12.31V	1 26V	0.69	
(*)	1	50.2	5502	64.50V	11.44V	10.95V	9.29V	12.34V	1.09V	0.57	
(*)	2	74.3	8140	96.59V	14 48V	13 83V	11 56V	21 15V	2 52V	1 18V	Off Range'
(*)	2	74 7	8183	99.04	15.43	14.37V	12 48	24.39	3 08	1.57V	Off Range'
(*)	2	73.9	8100	100 72V	15.78V	15.32V	13.18V	25.75V	4.08V	4.28V	Off Range'
(*)	2	74.1	8120	98.90	16.03V	15 21V	12 69V	25.28V	2 71V	1.71V	Off Range'
(*)	3	96.2	10535	118 96V	18.63	17 33V	15 06V	36.14V	4.16V	5.77V	Off Range'
(*)	3	96.7	10599	128 71V	18.32V	17.33V	15 11V	41.65V	4 13	1.98V	Off Range'
(*)	3	95.9	10289	128 45V	18.92V	18.70V	16.41V	16.65V	3 90	1.47V	Off Range'
(*)	3	96 8	10603	128 52	19 15	18.39V	15 76	12 19V	3.76V	1.69V	Off Range'
(*)	4	121.9	13356	112.22V	21.31V	19.19V	16.58V	0.01V	7.84V	5.26	Off Range'
(*)	4	120.4	13189	95.82V	21.87V	19.84V	17.17V	1.78V	12.28V	5 87V	Off Range'
(*)	4	121 2	13284	95 35V	19.83V	17.60V	15 93V	19.49V	12.89V	4.92V	Off Range'
(*)	4	119 9	13141	95.77V	18 81V	18 25V	12 00V	22.03V	10 50V	5.06V	Off Range'

Readings indicate Rubblized PCC is being packed down
FWD's range limit is 80 00

Figure 2. FWD Measurements on Rubblized Test Section 010663

received two lifts of a lower binder HMAC Each lift was laid at an approximate rate of 117 kg per square meter The first lift measured 2¾-inches thick This lower binder mix contained asphalt cement oil with a performance grade (PG) specification of 67-22 This oilwas absent of any polymer additives Although the original mix design called for a PG 64-22, the shipping papers confirmed that the asphalt cement was rated as a PG 67-22 and came from Hunt Oil Refineries located in Tuscaloosa, Alabama Since the asphalt cement has a higher design parameter (67 vs 64), it should perform better than the asphalt cement called for in the project plans This means that the asphalt is expected to perform well when the pavement temperature is in the range of 67°C and -22°C

In test section 010608, a temperature of 292°F was taken behind the paver Compaction efforts were completed using two 10-ton double drum steel rollers The first roller made three vibratory passes while the second roller made three static passes It should be noted that compaction efforts for the entire project followed these procedures for compaction

As the paver neared the first rubblized test section 010663, a 10-ton vibratory roller made three passes on that test section Haul trucks loaded with HMAC then lined up in a staggered formation on top of the rubblized material Harold Hansard, Project Engineer for ALDOT, figured the haul trucks, weighing approximately 24-26 tons, would actually do a better job of seating the rubblized material than a 50-ton rubber-tired proof roller available on the site Therefore the three passes made by the vibratory roller and the haul trucks backing up to the paver served as the seating process for the rubblized test sections It should be noted that the rubblized test sections did not receive a tack coat previous to overlay

As the asphalt paver traversed the state supplemental sections, it was noticed that the paver was using in-line skis rather than having the skis ride on the smooth outside shoulder This sometimes caused the skis to glide in an uneven manner The rubblized material would also occasionally show up in the freshly laid HMAC The rocks would then have to be picked out of the HMAC mat and the voids filled in

The HMAC was typically being placed at a 2% slope, which is ¼-inch per foot The paver was also laying the HMAC at a width of 12 feet On test section 010663, HMAC temperatures were measured at two different locations to be 285°F and 330°F From station 2+80 to station 3+00, the lift thickness increased to 2 inches thicker than the 3¼-inch lift being laid After the error was detected, the excess HMAC was raked off to match the typical lift thickness being placed Also, since the HMAC was being placed over rubblized material, it was difficult for the paving operator to gauge the exact thickness of the mat The steel rod used to check the lift thickness would sometimes penetrate into the rubblized material This would give a false indication of the lift thickness being higher than it really was

On the following day the contractor began placing the second lift of the lower binder inside test section 010607 near station 5+00 Although this action will not have a detrimental result on test section 010607, the cores sampled from the adjacent sampling area should have a thicker binder layer than as called for in the paving plans Upon producing the last of lower binder HMAC, the plant shut down in order to change to the upper binder HMAC mix design The plant discontinued to operate successfully for some time because the plant did not adequately increase the mixing temperature of the upper binder HMAC The increase in

mixing temperature was necessary in order to accommodate the added polymers required for the upper binder mix design The polymer enhanced asphalt cement oil was a PG 76-22 The same grade of asphalt cement oil would later be used in the surface HMAC mix design as well It should be noted that the test sections that received only a 4-inch overlay did not receive any lower binder HMAC The binder for the test section receiving 4-inch overlays had polymer enhanced asphalt cement

Throughout the course of constructing the SPS-6, the asphalt plant would periodically shut down for various reasons Due to the lag in HMAC production, paving had to cease and cold joints were created Table 3 is a summary of all the cold joints created including their location per HMAC overlay Although some cold joints were to be expected, it would have been preferable to have the cold joints fall outside of the test sections and within the sampling or transitional areas

Table 3. Cold Joints per HMAC Overlay

Section Nº	HMAC Layer	Station Nº
010604	Binder	4+30
010606	Surface	1+90
010607	Binder	2+50
010607	Binder	3+40
010663	2nd Lift Lower Binder	0+70

The subcontractor was also on site this day to do the grinding or milling of the concrete test sections 010602 and 010605 The subcontractor used a diesel-powered Caterpillar machine to mill the test sections The subcontractor started in the sampling area adjacent to test section 010605 and milled in a northerly direction in the outside lane Each pass made by the milling machine was 37¼ inches wide The average amount milled from test section 010605 was 0 31 inches Due to traffic-control limitations, rod and level measurements for test section 010602 were not taken on the original JPCP Therefore the amount milled from test section 010602 was unable to be calculated Traffic-control limitations also kept the subcontractor from milling the entire outside lane in one setup Thus, the milling efforts took the better part of a week to complete

The ALDOT used a profilograph to profile test sections 010602 and 010605 for ride quality Each test section was profiled in both wheel paths and in the direction of traffic flow The maximum reading allowed was 72 05 mm The actual reading for the inside wheel path was 35 56 mm and 29 2 mm for the outside wheel path The profilograph was not used on any of the HMAC sections

Paving operations discontinued on 14 May 1998 just past the state supplemental test section 010661 It was apparent that the paving foreman started his taper at approximately station 3+35 in the state supplemental test section 010661 The 3-inch lift was tapered down to the

existing JPCP at station 5+75 Upon completion of the taper, the paving foreman was reminded that tapers within test sections were unwanted for reasons of lift thickness consistency

On 23 June 1998, the contractor resumed construction activities for the SPS-6 He began by milling the taper located in state supplemental test section 010661 back to station 5+00 This operation was completed using a GEHL machine (Model 5635) This machine used an accessory rotor saw that had carbide-tipped teeth Photos of this operation can be found in appendix G Once the asphalt taper was milled down to the existing JPCP, the contractor resumed paving with binder HMAC It should be noted that a different HMAC production plant was being used at this time Although different in location, both asphalt plants (used during the construction of the SPS-6) were manufactured by the same company and were both drum-style plants Both plants were located approximately the same distance from the project and the haul times were estimated to be similar as well Table 4 illustrates which asphalt plant was used for HMAC production during the placement of each HMAC layer

Table 4. Asphalt Plants Used for HMAC Production

Section Nº	Turkey Town Plant	Glencoe Plant
010603		Binder Layer and Surface Layer
010604		Binder Layer and Surface Layer
010606		Binder Layer and Surface Layer
010607	Binder Layer	Surface Layer
010608	Binder Layer	Surface Layer
010661	Binder Layer	Surface Layer
010662	Binder Layer	Surface Layer
010663	Binder Layer	Surface Layer

It should also be noted that when the contractor resumed paving, he did so with a RoadTec Paving machine instead of the Barber-Greene paving machine used earlier The contractor used the RoadTec for a couple of days then switched again to a new Caterpillar paver (Model AP-1055B) The contractor used the new Caterpillar paver for the remainder of the SPS-6 project

On 26 June 1998, the contractor began paving the surface layer starting at the north end of the project It was at this time that the contractor realized that the concrete transverse joints located in test section 010604 were not marked for sawing and sealing Since the transverse joints were already overlaid with binder HMAC, the contractor began to look for the

transverse joints by using a pickaxe After the contractor realized that he was digging in test section 010606 at station 4+95, he moved to test section 010604 In order to find the first transverse joint within the test section, he decided to core a 4-inch core into the binder HMAC After finding the first transverse joint, the contractor then measured 20-feet to where the next joint should have been located The contractor supposedly found the next joint by repeatedly hammering a screwdriver into the binder HMAC The contractor continued to use the hammer and screwdriver method to locate the transverse joints The contractor discontinued the search for transverse joints at station 3+35 By the end of this day, the contractor completed paving the surface HMAC on the SPS-6 project

On 01 July 1998, the contractor resumed the search for transverse joints in test section 010604 After all 25 transverse joints had been located in the HMAC, a subcontractor sawed and sealed each transverse joint The joints were sealed with a hot-poured sealant that was black in color Only three transverse joints were located in the sampling area adjacent to station 0+00 and not one transverse joint was located in the sampling area adjacent to 5+00 of test section 010604

The subcontractor also sawed and sealed all the concrete transverse joints in test section 010605 It should be noted that this process was marked to begin in test section 010602 at station 9+94 The transverse joints in test section 010602 only received partial sawing and sealing For the two concrete sections, the subcontractor used a silicone base sealant that was grey in color

On final note, the contractor had initially placed large metal signs near the beginning and ending of each test section Since the placement of these signs was previous to the actual location and marking of each test section, the metal signs were typically not close to the test section markings established by SRCO personnel This caused a few deviations along the way One was the taper that began in the state supplemental test section 010661 The second deviation occurred when there was an interruption in locating the transverse joints in test section 010604 The third deviation was marking station 9+94 of test section 010602 for sawing and sealing of the transverse joints These deviations were minor in consequence and should not adversely affect the SPS-6 project in any way

POSTCONSTRUCTION MONITORING

Postconstruction activities consisted of coring the test sections that received HMAC overlays, permanently marking each test section with tape and paint, shipping all of the materials sampled to their respective laboratories, and manual distress surveys The cores sampled were in good condition, and the manual distress surveys showed no signs of distress There were no cracks to be sealed in test section 010602 or 010605 No maintenance work was done in the control test section 010601 A measurement of 0 mm was recorded for both slab faulting and lane to shoulder drop-off for each of the concrete test sections

Other activities completed after construction included the final deflection testing by the FWD for each test section, load-transfer efficiency testing on the new transverse joints that replaced

the failed transverse joints, and a final longitudinal profile by the SRCO profilometer Finally, official LTPP project signs will be placed adjacent to each test section These signs will denote the name of the project and the specific number for each test section

CROSS-PROFILES OF HMAC OVERLAYS

Appendix C is a compilation of graphs and tables representing the cross-profile and HMAC overlay thicknesses for each test section located within the SPS-6 project Rod and level data obtained on each structural layer was used in the creation of each graph and table When viewing the plots on each graph, keep in mind the scale of the Y-axis Besides being in meters, the Y-axis has been auto-scaled by computer software in order to show a greater degree of separation between the plots

The graphs for test section 010601 in appendix C show the cross-profile of the original concrete pavement Since the first section was deemed the control section, no HMAC was placed upon this test section As can be seen from the graphs, the cross-profile was typically flat from the edge stripe to the centerline throughout the test section This flat profile was typical for the existing concrete pavement within the other SPS-6 test sections as well One item worthy of note is the slightly elevated cross-slope found on some of the test sections Due to some test sections being located on a slightly super-elevated horizontal curve and also for drainage reasons, some of the flat cross-profiles have a slightly elevated cross-slope

Test sections 010602 and 010605 are each 1,000 feet in length Each test section was milled using equipment made by Caterpillar This milling not only took out all surface cracks and blemishes, but also corrected for slab faulting Since construction sequences led to unsuccessful attempts to obtain rod and level data on the original concrete pavement (before milling) for section 010602, only section 010605 has data that shows the amount of concrete lost during milling activities The graphs and tables in appendix C for test section 010602 show only the cross-profile after milling procedures were completed

Graphs located in appendix C for test sections 010603, 010604, and 010606 demonstrate the cross-profile and layer thicknesses for binder and surface HMAC layers placed upon the original concrete pavement The plots are fairly consistent and need no further explanation

The remaining graphs in appendix C differ slightly in composition and visual representation Test sections 010607 and 010608 both had the crack, break and seat process applied previous to any HMAC overlay This crack, break and seat procedure was also measured using the rod and level A broken dash line represents the crack, break and seat plot For the most part, the broken dash line is below the original PCC plot, indicating that the crack, break and seat process actually lowered the existing test section slightly in elevation

Similarly, graphs for the state supplemental sections, 010661, 010662, and 010663, differ in the fact that they were rubblized previous to HMAC overlay The rubblized layer was again measured using the rod and level The rubblized plots are represented by a dotted line After reviewing the graphs, one may notice that the dotted line routinely crosses above and below the original PCC plot One possibility for this variation could be attributed to the fact that the rod was placed on top of a rock or in a depressed area This coupled with the adjusted scale

used on the Y-axis may have caused a perception of a larger deviation in the data points than there actually was For state supplemental test sections 010662 and 010663 the rubblized plots typically are found to be above the original PCC plots This can probably be attributed to the de-compaction of the concrete via the rubblization process The rubblized material would be expected to have more interlocking of surface edges occurring This would cause a fluffing of the rubblized material and also cause the rubblized plots to be above the original PCC plots

Test section 010661 contradicted the other two rubblized test sections by showing the rubblized plot to be below the original PCC plot This could possibly be attributed to a more successful compaction process Since this test section was the last of the three rubblized test sections to be overlaid, the haul trucks loaded with HMAC traveled across this test section multiple times in order to get to the other rubblized test sections Therefore an increase in compaction or seating efforts could have occurred in this manner

HMAC OVERLAY THICKNESSES

Information similar to that found in appendix C can be found in a different format in appendix D Appendix D offers statistical information regarding the layer thickness for each structural layer Appendix D also offers in tabular form a summary of the total HMAC overlay actually placed This summary of total HMAC thickness can be compared to the planned total thickness as called for on page 11 of the MST Plan found in appendix B of this report Appendix D is also in English units whereas appendix C uses the international system of units Furthermore, appendix D provides the actual rod and level shots on each test section Although an arbitrary benchmark was selected as a control point, by looking at the actual rod and level data one can see the difference in elevation changes from beginning to end for each test section

For the test sections that received the crack, break and seat or rubblization, the binder HMAC overlay and total HMAC overlay were compared to both the existing (original) JPCP and the JPCP after the crack, break and seat or rubblization process This served as a check to insure that the data presented had some validation As can be seen by the statistics for test sections 010607 and 010608, the amount of binder HMAC and total HMAC placed was found to be greater when compared to the crack, break and seat data than the existing JPCP data This increase in HMAC is to be expected since the cross-profiles for these test sections located in appendix C also show the crack, break and seat plot to be below the original JPCP plot Likewise, when the amount of HMAC was compared to the rubblized data and the existing JPCP data, the results agreed with the plots found in appendix C

COMPACTION DATA

Appendix E has also been included with this report for quick reference of the compaction data The compaction data is tabulated for the nuclear density tests taken from the HMAC overlays As a whole, the compaction values were reasonably consistent throughout the project Not only were they consistent for each HMAC structural layer, but they were reasonable in value too The polymer enhanced binder layer placed on each test section

averaged between 147 7 and 151 2 lb/ft³ The surface layer placed on each test section averaged between 138 3 and 142 5 lb/ft³ The fact that the compaction efforts for this project were consistent and reasonable in value should play a positive role in future analyses

SUMMARY

In summary, an LTPP SPS-6 project was successfully constructed in the southbound lanes of I-59 in Etowah County, Alabama The project consists of 11 test sections Each test section concentrated on different methods of rehabilitation for concrete pavements Samples of concrete, subgrade, base, and HMAC were successfully obtained for laboratory analysis Appendix C contains graphs that show the results of rod and level measurements taken on each pavement layer that has been milled or has received an HMAC overlay Appendix D contains similar data but presents the results in table format Appendix E provides statistics on compaction data obtained on each HMAC layer

Having completed the construction and initial monitoring of the SPS-6 project, it appears that the test sections within the project will contribute significantly to the evaluation of rehabilitation methods for jointed plain concrete pavements The test sections will continue to be monitored for surface distress, surface profile, and structural capacity The results from the monitoring efforts will be compared against other similar projects throughout the country This comparison will ultimately result in an increased knowledge and understanding of which rehabilitation procedures work best for jointed plain concrete pavements This project would not have been possible without the support of the ALDOT In particular, much of the credit is due to the help of Lynn Wolfe from the state office of Planning and Research, and Harold Hansard of the Third Division - District 3 office

APPENDIX A

SITE NOMINATION FORMS
AND
OTHER PERTINENT INFORMATION

dj

RECEIVED FEB 17 1995

NAME	INFO	CONTROL	
BR	✓		
MG	✓		
MR	✓		
WB		✓	✓
File			

FOB JAMES JR
GOVERNOR

ALABAMA
DEPARTMENT OF TRANSPORTATION
BUREAU OF RESEARCH AND DEVELOPMENT
1409 COLISEUM BOULEVARD
MONTGOMERY AL 36130-3050
Phone (334) 242 6541
FAX (334) 264-2042

February 10, 1995

Mr Morris C Reinhardt
LTPP Regional Engineer
LTPP Southern Region
8240 N MoPac, Suite 250
Austin, Texas 78759

Re SPS-6, "Rehabilitation of Jointed Portland Concrete Pavement" Project Nomination

Dear Morris

Attached is the "SPS-6 Candidate Project Nomination and Information Form" for the nomination of a section of I-59 (MP 194 8 to MP 198 8 in Etowah County) as a test section for the SHRP LTPP SPS-6 experiment This section has been previously mentioned as a potential site for this experiment A meeting has been scheduled with Mr Mark Sargent of the SRCO to make an on-site review of this site with representatives from the FHWA Division office, from the Department's Division office, and from our Research and Development bureau on Thursday, February 23rd, 1995

If additional information is required, please advise

Very truly yours,

Larry Lockett

Larry Lockett
Research and Development Engineer

LL/RLW
Attachments

cc Mr Joe D Wilkerson, FHWA-AL
Mr James D Brown, ALDOT
Mr J F Caraway, ALDOT
Mr J F Horsley, ALDOT
Mr Mark Sargent, Southern Regional Coordination Office
File

SHEET A SPS - 6 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE ALABAMA

PROJECT LOCATION

ROUTE NUMBER I-59

ROUTE SIGNING (X) Interstate ( ) U S ( ) State ( ) County

Other _____

PROJECT LOCATION Start Milepost 194 8 End Milepost 198 8

Start Station _____ End Station _____

PROJECT LOCATION DESCRIPTION Duck Springs to the Dekalb County Line

(SBL MP ~~195~~ 1 to 197 2)

195.7

COUNTY Etowah

HIGHWAY AGENCY DISTRICT NUMBER Third Division

SHRP ENVIRONMENTAL ZONE

( ) WET FREEZE (X) WET NO-FREEZE ( ) DRY FREEZE ( ) DRY NO-FREEZE

SIGNIFICANT DATES

LATEST DATE OF APPROVAL NOTIFICATION FROM SHRP April 1, 1995

CONTRACT LETTING DATE November 3, 1995

ESTIMATED CONSTRUCTION START DATE February 1996

PROJECT DESCRIPTION

YEAR OPENED TO TRAFFIC 1966

NUMBER OF LANES (One Direction) 2

(X) Divided ( ) Undivided

OUTSIDE LANE WIDTH (Feet) 12'

OUTSIDE SHOULDER TYPE

( ) Turf ( ) Granular (X) Asphalt Concrete ( ) Surface Treatment

( ) PCC ( ) Tied PCC ( ) Curb and Gutter Other _____

OUTSIDE SHOULDER WIDTH (Feet) 8'

SUBSUFACE EDGE DRAINS ( ) Placed at initial construction (X) Not Used

( ) Retrofitted Retrofit Date _____

ASSESSMENT OF PRESENT PAVEMENT CONDITION (X) Fair ( ) Poor

PREDOMINATE DISTRESSES

( ) D Cracking (X) Other Cracking (X) Faulting ( ) Pumping ( ) Joint Failure

Comments Distresses are minimal Pavement is in fair to good condtion Faulting is in the medium seventy range PSI is 2 88 Friction number = 51, Avg Distress Rating= 84 4

SHEET B SPS - 6 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE ALABAMA

PAVEMENT STRUCTURE DETAILS

PCC PAVEMENT TYPE (X) Jointed Plain ( ) Jointed Reinforced

JOINT SPACING (Feet) 20'

JOINTS (X) Perpendicular ( ) Skewed ( ) Doweled ( ) Other Load Transfer

PCC FLEXURAL STRENGTH (Psi) _____

MODULUS OF SUBGRADE REACTION (k) _____

PAVEMENT STRUCTURE LAYER DESCRIPTIONS

LAYER[1] NO		LAYER[2] DESCRIPTION CODE		MATERIAL TYPE[3] CLASS CODE		THICKNESS[4] (INCHES)		
1	SANDY CLAY	Subgrade (7)		5	2			
2	AGG BASE	0	5	2	3		6	0
3	JPCP	0	3	0	4	1	0	0
4								
5								
6								
7								
8								
9								

NOTES

1 Layer 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

SHEET C SPS - 6 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE ALABAMA

TRAFFIC DATA

ANNUAL AVERAGE DAILY TRAFFIC (TWO DIRECTION)	10,230
% HEAVY TRUCKS AND COMBINATIONS (OF AADT)	35 %
COUNT YEAR OF AADT ESTIMATE	1993
TRAFFIC GROWTH RATE SINCE PROJECT OPENED TO TRAFFIC (%/YR)	UNK
18K ESAL RATE IN PROPOSED STUDY LANE (1,000 ESAL/YR)	~~600,000~~ 600
YEAR OF ESAL RATE ESTIMATE	1993
ESTIMATED TOTAL 18K ESAL APPLICATIONS IN STUDY LANE[1]	

REHABILITATION INFORMATION[2]

PRIMARY CAUSE FOR REHABILITATION Joint faulting, spalling minor cracking, and joint repair

OVERLAY	Thickness (Inches)	Material Type Class Code
Surface Course	None	
Binder Course	None	

Saw and Seal above joints? ( ) Yes ( ) No

SURFACE PREPARATION PRIOR TO OVERLAY

( ) Joint Sealing ( ) Crack Sealing ( ) Undersealing ( ) Crack & Seat

( ) Patching ( ) Joint Replacement % Joints Replaced _____

Other _____

OTHER CONSTRUCTION ACTIVITIES TO BE PERFORMED DURING REHABILITATION

Minor spall repair joint and cracking sealing, install edge drains, grind outside lane and shoulders

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

SHEET D SPS - 6 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE ALABAMA

TEST SECTION LAYOUT

NUMBER OF TEST SECTIONS ENTIRELY ON FILL 8 CUT _____

SHORTEST TRANSITION BETWEEN CONSECUTIVE TEST SECTIONS (Feet) 100

COMMENTS ON DEVIATIONS FROM DESIRED SITE LOCATION CRITERIA

None

OTHER SHRP TEST SECTIONS

DOES PROJECT CONFORM TO GPS-3 OR GPS-4 PROJECT CRITERIA? (X) YES ( ) NO

DOES AGENCY APPLIED TREATMENT QUALIFY FOR GPS-7B? ( ) YES (X) NO

IS PROJECT SUITABLE FOR SPS-4 TEST SECTIONS? ( ) YES (X) NO

IS AGENCY INTERESTED IN USE OF PROJECT AS SPS-4 SITE? ( ) YES (X) NO

DISTANCE TO NEAREST GPS TEST SECTION ON SAME ROUTE (Miles) 57

NEAREST GPS TEST SECTION NUMBER 01 3028

SUPPLEMENTAL TEST SECTIONS

IF SUPPLEMENTAL EXPERIMENTAL TEST SECTIONS ARE PROPOSED, COMPLETE THE FOLLOWING TOTAL NUMBER OF SUPPLEMENTAL TEST SECTIONS 3

FACTORS TO BE INVESTIGATED Rubblize with 9.5" Overlay
Rubblize with 8.0" Overlay
Rubblize with 4.0" Overlay

Table 1 **Pavement surface material type classification codes.**

MATERIAL TYPE	CODE
Hot Mixed, Hot Laid, Asphalt Concrete, Dense Graded	01
Hot Mixed, Hot Laid, Asphalt Concrete, Open Graded (Porous Friction Course)	02
Sand Asphalt	03
Jointed Plain Portland Cement Concrete	04
Jointed Reinforced Portland Cement Concrete	05
Continuously Reinforced Portland Cement Concrete	06
Prestressed Portland Cement Concrete	07
Fiber Reinforced Portland Cement Concrete	08
Plant Mix, Cold Laid, Emulsified Asphalt Material	09
Plant Mix, Cold Laid, Cutback Asphalt Material	10
Single Surface Treatment	11
Double Surface Treatment	12
Hot Recycled, Central Plant Mix, Asphalt Concrete	13
Central Plant Mix, Cold Laid, Recycled Asphalt Concrete	14
Mixed-in -Place, Cold Laid, Recycled Asphalt Concrete	15
Heater Scarification/Recompaction, Recycled Asphalt Concrete	16
Jointed Plain Recycled Portland Cement Concrete	17
Jointed Reinforced Recycled Portland Cement Concrete	18
Other	20

Table 2 Base and subbase material type classification cod

MATERIAL TYPE	CODE
No Base (Pavement Directly on Subgrade)	21
Uncrushed Gravel	22
Crushed Stone, Gravel or Slag	23
Sand	24
Soil-Aggregate Mixture, Predominately Fine-Grained Soil	25
Soil-Aggregate Mixture, Predominately Coarse-Grained Soil	26
Soil Cement	27
BITUMINOUS BOUND BASE OR SUBBASE MATERIALS	
Dense Graded, Hot Laid, Central Plant Mix	28
Dense Graded, Cold Laid, Central Plant Mix	29
Dense Graded, Cold Laid, Mixed-in-Place	30
Open Graded, Hot Laid, Central Plant Mix	31
Open Graded, Cold Laid, Central Plant Mix	32
Open Graded, Cold Laid, Mixed-in-Place	33
Recycled Asphalt Concrete, Plant Mix, Hot Laid	34
Recycled Asphalt Concrete, Plant Mix, Cold Laid	35
Recycled Asphalt Concrete, Mixed-in-Place	36
Sand Asphalt	46
Cement Aggregate Mixture	37
Lean Concrete (< 3 sacks/CY)	38
Recycled Portland Cement Concrete	39
Sand-Shell Mixture	40
Limerock, Caliche (Soft Carbonate Rock)	41
Lime-Treated Subgrade Soil	42
Cement Treated Subgrade Soil	43
Pozzolanic-Aggregate Mixture	44

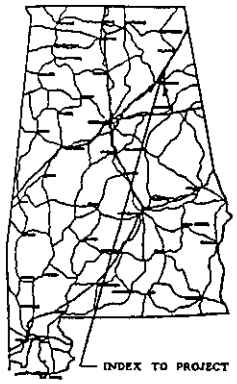
Table 3 **Subgrade soil description codes.**

MATERIAL TYPE	CODE
FINE-GRAINED SUBGRADE SOILS	
Clay (Liquid Limit > 50)	51
Sandy Clay	52
Silty Clay	53
Silt	54
Sandy Silt	55
Clayey Silt	56
COARSE-GRAINED SOILS	
Sand	57
Poorly Graded Sand	58
Silty Sand	59
Clayey Sand	60
Gravel	61
Poorly Graded Gravel	62
Clayey Gravel	63
Shale	64
Rock	65

Table 4 **Material type classification codes for thin seals and interlayers.**

MATERIAL TYPE	CODE
Chip Seal Coat	71
Slurry Seal Coat	72
Fog Seal Coat	73
Woven Geotextile	74
Nonwoven Geotextile	75
Stress Absorbing Membrane Interlayer	77
Dense Graded Asphalt Concrete Interlayer	78
Aggregate Interlayer	79
Open Graded Asphalt Concrete Interlayer	80
Chip Seal with Modified Binder (Excluding Crumb Rubber)	81
Sand Seal	82
Asphalt Rubber Seal Coat (Stress Absorbing Membrane)	83
Sand Asphalt	84
Other	85

SEE SHEET NO. 1A FOR INDEX TO SHEETS.



(CULVERT)

BRIDGES
NONE

EQUATIONS AND EXCEPTIONS
NONE

FHWA REGION	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TO TOT
4	AL	IM 59 2(105)	1997	1	1

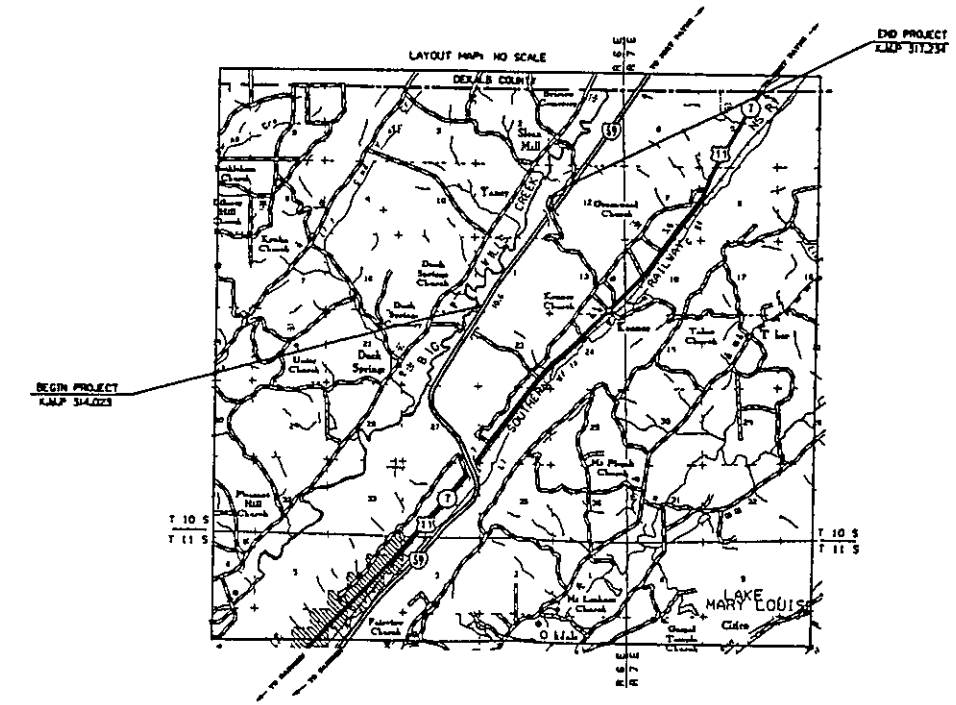
ALABAMA
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED PROJECT
PROJECT NO IM-59-2(105)
I-59 FROM Kmp 314 023 TO Kmp 317 234 (SOUTHBOUND RDWY)
ETOWAH COUNTY
CONCRETE PAVEMENT REHABILITATION

PRELIMINARY PROJECT NO. IM 59 2(105)
CODE NO. 4301 1A 059 002 105 148 2

DESIGN DESIGNATION	
ADT ( )	
ADT ( )	
E	N/A
D	
TDHV	
TADT	
V (DESIGN SPEED)	
MIN STOPPING SIGHT DIST (FT)	

NOTE: THESE PLANS HAVE BEEN PREPARED TO CONFORM WITH ALABAMA HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS DATED 1991.



ALL DIMENSIONS ARE SHOWN IN METERS UNLESS OTHERWISE INDICATED.

ALABAMA
DEPARTMENT OF TRANSPORTATION
SUBMITTED FOR APPROVAL
CHIEF ENGINEER, BUREAU
CHIEF ENGINEER
APPROVED
TRANSPORTATION SELECTOR

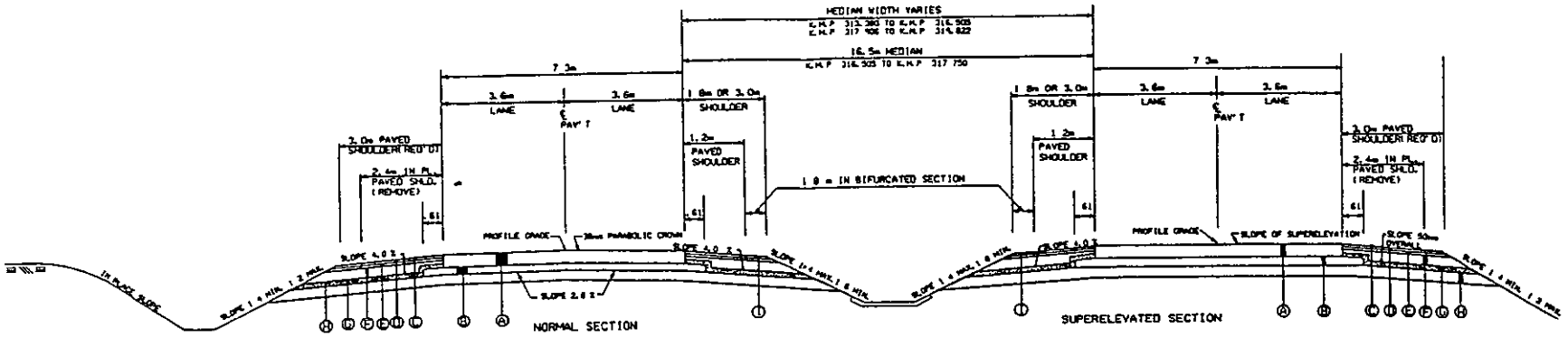
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR DATE

CONTACT

	METER	KILOMETER
TOTAL STATIONING OF PROJECT	3211 0	
EQUATIONS AND EXCEPTIONS		
NET LENGTH OF PROJECT	3211 0	3.211
NET LENGTH OF BRIDGES	0 0	0.000
NET LENGTH OF ROADWAYS	3211 0	3.211

FHWA REGION	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	AL	IM 59 2(105)	1997	2	10

TYPICAL SECTION
PROJECT NO. IM-59-2(105)
ETOWAH COUNTY



IN PLACE TYPICAL FROM K M P 313 379 - K.M P 319.755

(M.P 194 80 - M.P 198 78)

IN-PLACE LEGENDS

FOR INFORMATION PURPOSES ONLY

- (A) JOINTED PLAIN CEMENT CONCRETE PAVEMENT 254 mm THICK
- (B) SELECTED AGGREGATE SUBBASE 152mm THICK
- (C) PLANT MIX (APPROX. 19 mm THICK)
- (D) BITUMINOUS TREATMENT AKD (APPROX. 25mm THICK)
- (E) DENSE GRADED AGGREGATE BASE COURSE (CRUSHED AGGREGATE) 127mm THICK
- (F) AGGREGATE SURFACING 203 mm THICK
- (G) DRAINAGE PLANE MATERIAL 76 mm THICK
- (H) IMPROVED SUBGRADE 305 mm THICK
- (I) LOAMY TOPSOIL 127mm THICK (IN BIFURCATED SECTION ONLY) (INSIDE SHLDR. 1 2 mm WIDE)

NOT TO SCALE

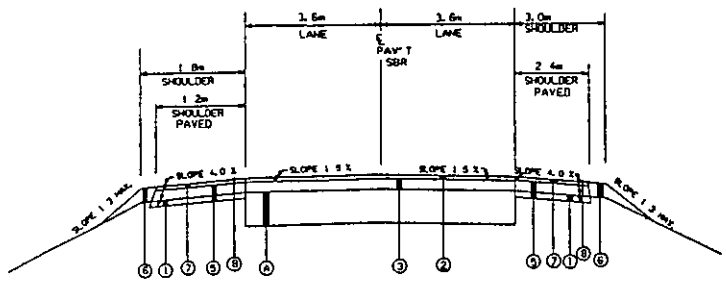
ALDOT METRIC

DIMENSIONS ARE SHOWN IN METERS UNLESS OTHERWISE INDICATED.

FHWA REGION	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	AL	IM 59 2(105)	1997	2 A	10

TYPICAL SECTION
PROJECT NO. IM-59-2(105)
ETOWAH COUNTY

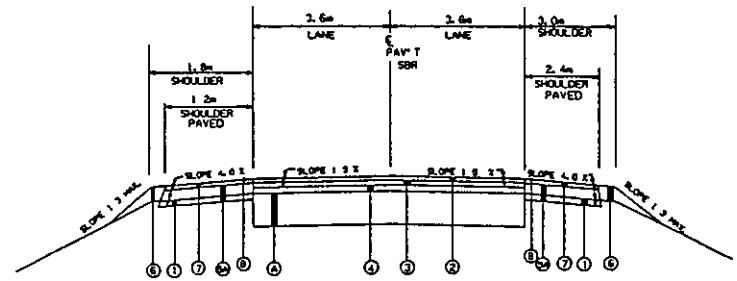
PROJECT NOTES
201
203
204



TYPICAL SECTION FOR 100 mm ASPHALT OVERLAY SECTIONS

K.m.p. 316.269 K.m.p. 315.950
K.m.p. 314.984 K.m.p. 314.662
K.m.p. 314.662 K.m.p. 314.501
K.m.p. 314.501 K.m.p. 314.184
K.m.p. 314.184 K.m.p. 314.023

(1) REQUIRED ITEM NO. 408A-002 PLANING EXISTING PAVEMENT (APPROX. 19 mm THICK)(3.6m WIDE)
(2) REQUIRED ITEM NO. 429A 281 IMPROVED BITUMINOUS CONCRETE WEARING SURFACE LAYER, 19.0 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE E (APPROX. 80 kg/m²)(7.2 m WIDE)
(3) REQUIRED ITEM NO. 429B 281 IMPROVED BITUMINOUS CONCRETE UPPER BINDER LAYER, 25 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE E (APPROX. 155 kg/m²)(7.2m WIDE)
REQUIRED ITEM NO. 429B 241 IMPROVED BITUMINOUS CONCRETE BINDER LAYER, 25 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE C (APPROX. 200 kg/m²)(3.6m WIDE)
QUIRED ITEM NO. 650A 000 TOPSOIL
QUIRED ITEM NO. 429A 241 IMPROVED BITUMINOUS CONCRETE WEARING SURFACE LAYER, 19.0 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE C (APPROX. 80 kg/m²)(3.6m WIDE)
QUIRED ITEM NO. 428A-000 SCORING BITUMINOUS PAVEMENT SURFACE(3.6m WIDE)
(A) IN PLACE JOINTED PLAIN CONCRETE (APPROX 254 mm THICK)



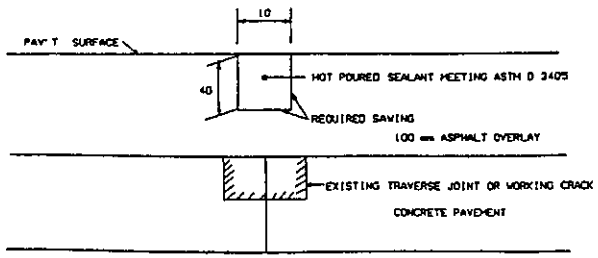
TYPICAL SECTION FOR 200 mm ASPHALT OVERLAY SECTIONS

K.m.p. 315.950 K.m.p. 315.628
K.m.p. 315.306 K.m.p. 314.984

(1) REQUIRED ITEM NO. 408A 002 PLANING EXISTING PAVEMENT (APPROX. 19 mm THICK)(3.6m WIDE)
(2) REQUIRED ITEM NO. 429A 281 IMPROVED BITUMINOUS CONCRETE WEARING SURFACE LAYER, 19.0 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE E (APPROX. 80 kg/m²)(7.2 m WIDE)
(3) REQUIRED ITEM NO. 429B 281 IMPROVED BITUMINOUS CONCRETE UPPER BINDER LAYER, 25 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE E (APPROX. 155 kg/m²)(7.2m WIDE)
(4) REQUIRED ITEM NO. 429B 301 IMPROVED BITUMINOUS CONCRETE BINDER LAYER, 25 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE E (APPROX. 240 kg/m²)(7.2 m WIDE)
(5A) REQUIRED ITEM NO. 429B 241 IMPROVED BITUMINOUS CONCRETE BINDER LAYER, 25 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE C (APPROX. 440 kg/m²)(3.6 m WIDE)
(6) REQUIRED ITEM NO. 650A 000 TOPSOIL
(7) REQUIRED ITEM NO. 429A 241 IMPROVED BITUMINOUS CONCRETE WEARING SURFACE LAYER, 19.0 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE C (APPROX. 80 kg/m²)(3.6 m WIDE)
(8) REQUIRED ITEM NO. 428A-000 SCORING BITUMINOUS PAVEMENT SURFACE(3.6 m WIDE)
(A) IN PLACE JOINTED PLAIN CONCRETE (APPROX. 254 mm THICK)

SECTION 010604

JOINT DETAIL FOR TRAVERSE ASPHALT JOINTS



* SEE SHEET 10 FOR PAVEMENT EDGE DRAIN LOCATION AND TYPICAL

SEE SHTS. 2C AND 2E FOR ADDITIONAL INFORMATION.

NOT TO SCALE

ALDOT METRIC

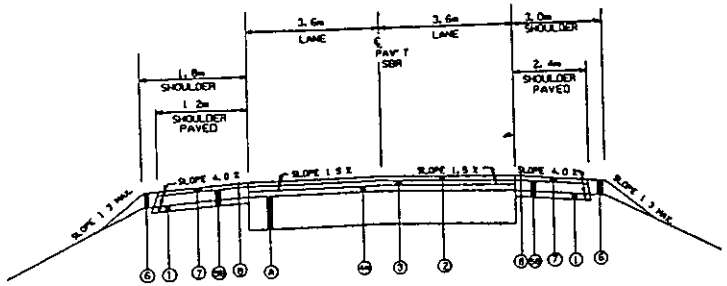
ALL DIMENSIONS ARE SHOWN IN METERS UNLESS OTHERWISE INDICATED.

FHWA REGNO	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOT SHEET
4	AL	IM 59 2(105)	1997	2 8	10

TYPICAL SECTION
PROJECT NO. IM-59-2(105)
ETOWAH COUNTY

PROJECT NOTES

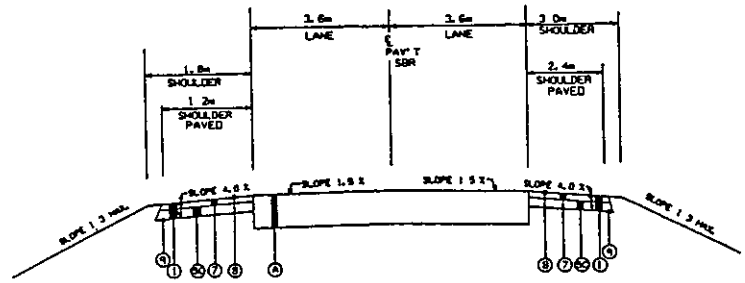
201
202
203
204



TYPICAL SECTION FOR AASHTO DESIGN - SECTION 010663

K.m.p. 315.628 K.m.p. 315.306

1. REQUIRED ITEM NO. 408A 002 PLANING EXISTING PAVEMENT (APPROX. 19 mm THICK)(3.6m WIDE)
2. REQUIRED ITEM NO. 429A 281 IMPROVED BITUMINOUS CONCRETE WEARING SURFACE LAYER, 19.0 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE E (APPROX. 80 kg/m²)(7.2 m WIDE)
3. REQUIRED ITEM NO. 429B 281 IMPROVED BITUMINOUS CONCRETE UPPER BINDER LAYER, 25 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE E (APPROX. 155 kg/m²)(7.2 m WIDE)
4A. REQUIRED ITEM NO. 429B 301 IMPROVED BITUMINOUS CONCRETE BINDER LAYER, 25 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE E (APPROX. 340 kg/m²)(7.2 m WIDE)
5B. REQUIRED ITEM NO. 429B 241 IMPROVED BITUMINOUS CONCRETE BINDER LAYER, 25 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE C (APPROX. 545 kg/m²)(3.6 m WIDE)
6. REQUIRED ITEM NO. 650A 000 TOPSOIL
7. REQUIRED ITEM NO. 429A 241 IMPROVED BITUMINOUS CONCRETE WEARING SURFACE LAYER, 19.0 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE C (APPROX. 80 kg/m²)(3.6m WIDE)
9. REQUIRED ITEM NO. 428A 000 SCORING BITUMINOUS PAVEMENT SURFACE(3.6 m WIDE)
A. IN PLACE JOINTED PLAIN CONCRETE (APPROX. 254 mm THICK)



TYPICAL SECTION FOR CONCRETE REHABILITATION SECTIONS WITH NO OVERLAY

K.m.p. 317.234 - K.m.p. 317.073 (GRINDING)
K.m.p. 317.073 K.m.p. 316.751 (GRINDING)
K.m.p. 316.751 K.m.p. 316.268 (GRINDING)

1. REQUIRED ITEM NO. 408A 014 PLANING EXISTING PAVEMENT (APPROX. 100 mm THICK)(3.6 m WIDE)
7. REQUIRED ITEM NO. 429A 241 IMPROVED BITUMINOUS CONCRETE WEARING SURFACE LAYER, 19.0 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE C (APPROX. 80 kg/m²)(3.6 m WIDE)
5C. REQUIRED ITEM NO. 429B 241 IMPROVED BITUMINOUS CONCRETE BINDER LAYER, 25 mm MAXIMUM AGGREGATE SIZE MIX ESAL RANGE C (APPROX 160 kg/m²)(3.6 m WIDE)
8. REQUIRED ITEM NO. 428A 000 SCORING BITUMINOUS PAVEMENT SURFACE(3.6 m WIDE)
9. REQUIRED ITEM NO. 401A-000 BITUMINOUS TREATMENT (3.6 m WIDE)
A. IN PLACE JOINTED PLAIN CONCRETE (APPROX. 254 mm THICK)

* SEE SHEET 10 FOR PAVEMENT EDGE DRAIN LOCATION AND TYPICAL.

SEE SHTS. 2C AND 2E FOR ADDITIONAL INFORMATION.

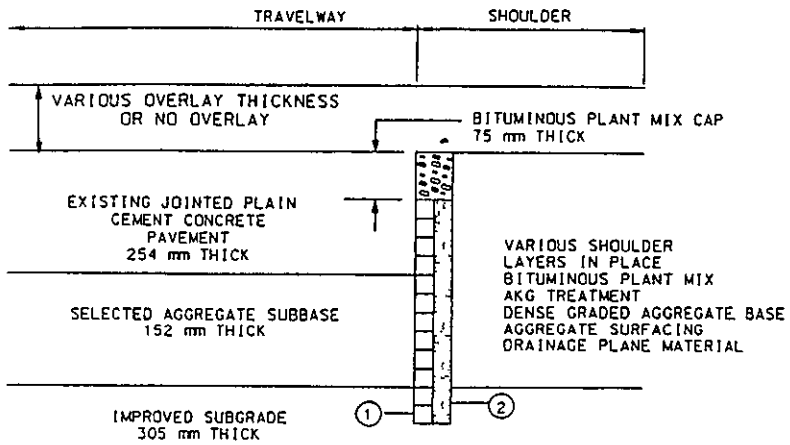
NOT TO SCALE

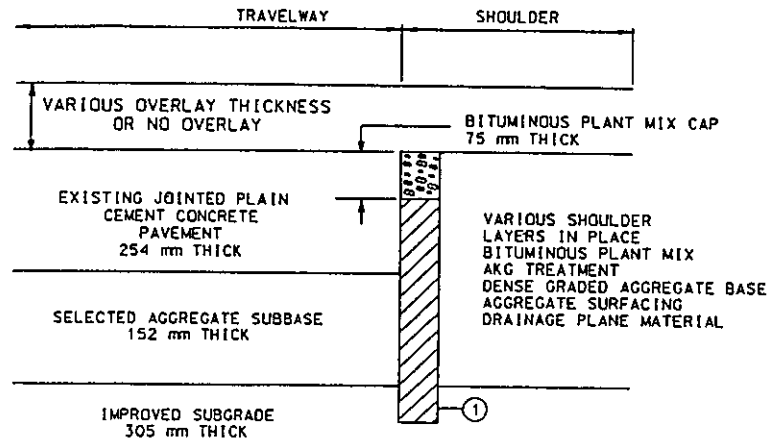
ALDOT METRIC

ALL DIMENSIONS ARE SHOWN IN METRIC

FEDERAL AID NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	AL	[illegible]	1997	10	10

PROJECT DETAIL
FOR PAVEMENT EDGE DRAIN SYSTEM
FROM K M P. 316.751 TO 314.501





NOTE PLACE PAVEMENT EDGE DRAIN PRIOR TO OVERLAY ON CONCRETE PAVEMENT

PREFABRICATED DRAINAGE MAT PAVEMENT EDGE DRAIN SYSTEM
TRENCH WIDTH 90 mm MINIMUM
125 mm MAXIMUM
TRENCH DEPTH 450 mm (AS MEASURED FROM BOTTOM OF CAP)

(1) PREFABRICATED DRAINAGE MAT

(2) TRENCH BACKFILL MATERIAL (MUST PASS 50 mm SIEVE)

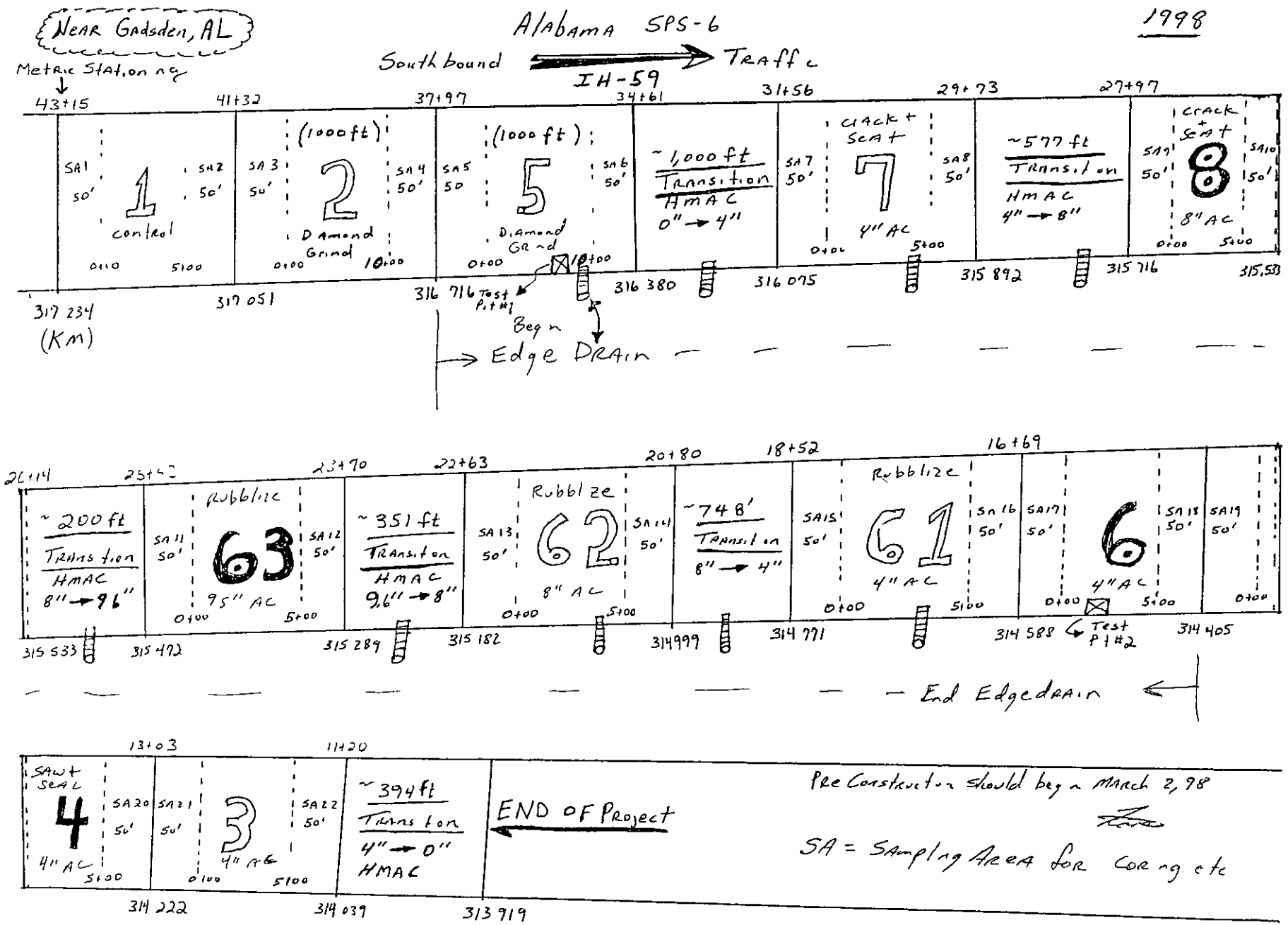
(1) AGGREGATE FILLED PAVEMENT EDGE DRAIN SYSTEM
TRENCH WIDTH 300 mm
TRENCH DEPTH 450 mm (AS MEASURED FROM BOTTOM OF CAP)

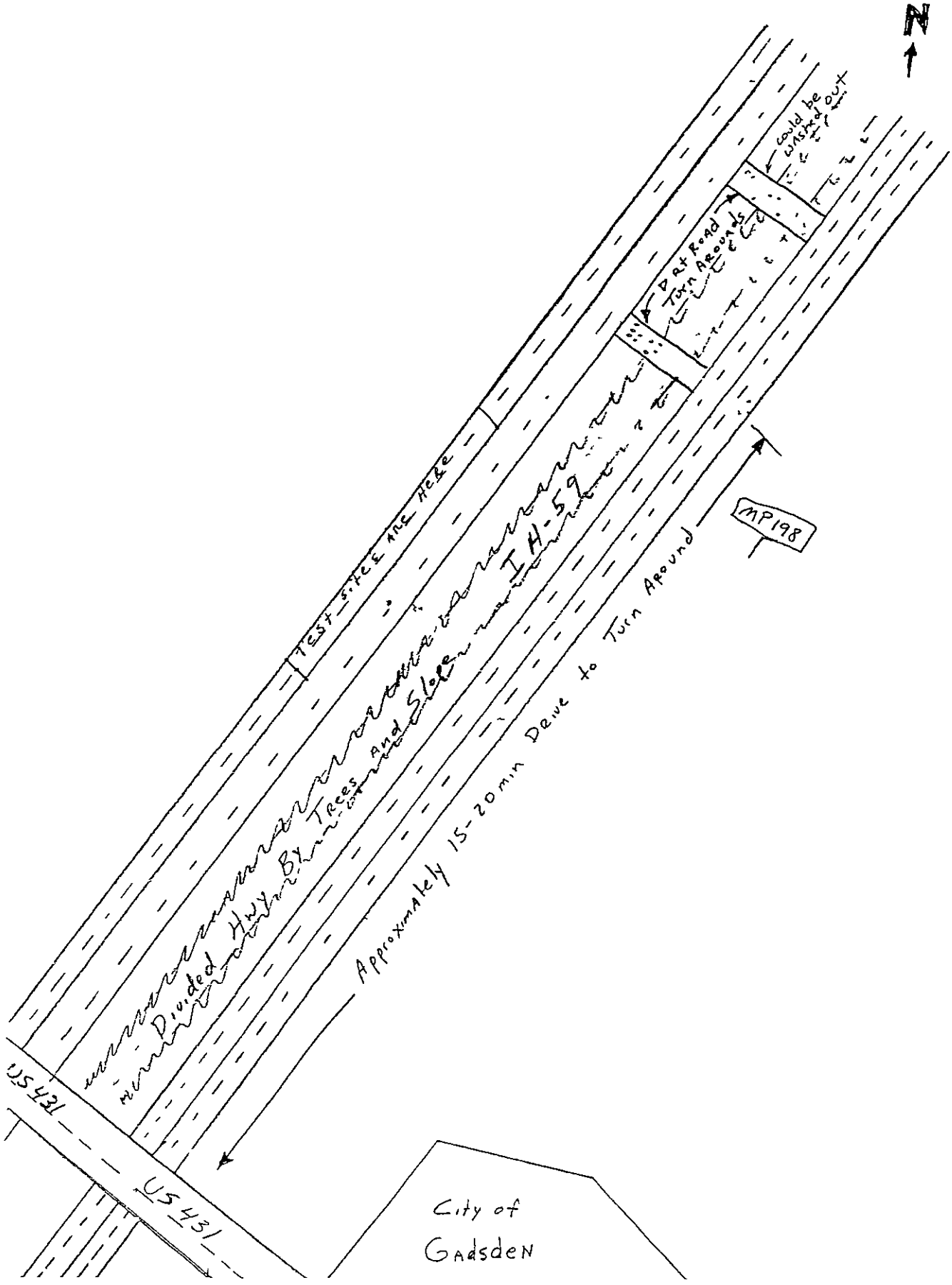
OUTLETS FOR THE PAVEMENT EDGE DRAIN SYSTEM WILL BE REQUIRED AT THE LOW POINT OF ANY SAG VERTICAL CURVE AND AT 243M INTERVALS

ALDOT METRIC

NOT TO SCALE

ALL DIMENSIONS ARE SHOWN IN METERS UNLESS OTHERWISE INDICATED


Near Gadsden, AL
Alabama SPS-6
1998
Metric Stationing
South bound
IH-59
Traffic
43+15
41+32
37+97
34+61
31+56
29+73
27+97
SA1 50'
1
control
SA2 50'
SA3 50'
(1000 ft)
2
Diamond Grind
SA4 50'
SA5 50
(1000 ft)
5
Diamond Grind
SA6 50'
~1,000 ft
Transition
HMAC
0" → 4"
SA7 50'
Crack + Seat
7
4" AC
SA8 50'
~577 ft
Transition
HMAC
4" → 8"
SA9 50'
Crack + Seat
8
8" AC
SA10 50'
317 234
(Km)
317 051
316 716
Test Pit #1
Begin
316 380
316 075
315 892
315 716
315,533
Edge Drain
20+14
25+42
23+70
22+63
20+80
18+52
16+69
~200 ft
Transition
HMAC
8" → 9.6"
SA11 50'
Rubblize
63
9.5" AC
SA12 50'
~351 ft
Transition
HMAC
9.6" → 8"
SA13 50'
Rubblize
62
8" AC
SA14 50'
~748'
Transition
8" → 4"
SA15 50'
Rubblize
61
4" AC
SA16 50'
SA17 50'
6
4" AC
SA18 50'
SA19 50'
315 533
315 472
315 289
315 182
314 999
314 771
314 588
Test Pit #2
314 405
End Edgedrain
13+03
11+20
SAW + SEAL
4
4" AC
SA20 50'
SA21 50'
3
4" AC
SA22 50'
~394 ft
Transition
4" → 0"
HMAC
END OF Project
314 222
314 039
313 919
Pre Construction should begin March 2, 98
SA = Sampling Area for Coring etc


N
could be washed out
Dirt Road Turn Arounds
Test sites are here
IH-59
Divided Hwy By Trees And Slope
MP198
Approximately 15-20 min Drive to Turn Around
US 431
US 431
City of Gadsden

Area Code 205

PRE-CONSTRUCTION CONFERENCE

PROJECT NO IM-59-2 (105) DATE November 18, 1997

NAME	REPRESENTING	PHONE NO
Ben Thackerson	ALDOT-Gadsden	442-4434
Zane W. Dunnam	Brent Rauhut Engr Southern Region LTPP	512-346-0870
Jim Chambers	McCarthy Const Co Inc	547-6386
M H McCarty	" " " "	
Elbert Tarvin	" " " "	
Charles O. Pullin III	" " " "	
HAROLD G. Hansard	AL. DOT - Gadsden (R Eo)	546-4671
Mark Gardner	Brent Rauhut Engineering	(512) 346-0870
Lynn Wolfe	ALDOT - Bur of Matls & Tests	(334) 206-2250
Wayne Tucker	ALDOT - Div Const	(205) 581-5615

PRECONSTRUCTION MEETING NOTES - ALABAMA SPS-6 (010600)

Introduction

Mark Gardner, Co-PI/SRCO (512/346-0870, Ext 113)
Zane W Dunnam, Graduate Engineer/SRCO (512/346-0870, Ext 126)

History

- 20-year program
- Formerly known as the Strategic Highway Research Program (SHRP)
- Currently known as the Long Term Pavement Program (LTPP)
- Comprised primarily of
  - General Pavement Studies (GPS), and
  - Specific Pavement Studies (SPS)

Current Project

SPS-6, Study of Rehabilitation of PCC Pavements
Consists of six (6) 500′ test sections, and
two (2) 1000′ test sections, each with 50′ either side of test section to accommodate field material sampling

- Section 1 - Control Section, for a baseline, 500′
- Section 2 - Minimal Restoration, no overlay, 1000′
- Section 3 - Minimal Restoration, w/4″ overlay of HMAC, 500′
- Section 4 - Minimal Restoration, w/4″ overlay w/saw & seal joints, 500′
- Section 5 - Maximum Restoration, no overlay, 1000′
- Section 6 - Maximum Restoration, w/4″ overlay
- Section 7 - Crack and Seat Section, w/4″ overlay, 500′
- Section 8 - Crack and Seat Section, w/8″ overlay, 500′
- State Supplemental Section, 61 - Rubblization, w/4″ overlay, 500′
- State Supplemental Section, 62 - Rubblization, w/8″ overlay, 500′
- State Supplemental Section, 63 - Minimal Restoration, w/[illegible]″ overlay, 500′
  9 5″

Main Concerns

1 Communication between contractor, state and SRCO - Need to know when each stage of the project will begin and end, so as to help us plan for material sampling and rod and level shots

2 Scheduling - We are going to have someone on site at critical times We will need constant contact and knowledge of any scheduling and changes with the project

3 Adherence to the SPS Construction Guidelines and Policies - This is a research project It will be compared to other similar research projects across the nation Therefore, it is crucial that the construction of this SPS-6 project is followed as closely as possible to the SPS-6 construction guidelines (which have been incorporated into the state plans)

4 No Deviations in Test Sections - No cold joints, no coring, no equipment marks (gouges), proper HMAC thickness

* Specific Items Needed for Each Structural Layer

- Rod and Level Shots
- Material Sampling and Coring
- Stakes (Lathes) Offset to Indicate Station Numbers - Every 100'
- Nuclear Density Readings

*** Need full-lane closure for the above specific items.**

Other

- FWD Needed
  - On original road prior to HMAC or rubblization
  - Immediately after rubblization
  - On final HMAC surface layer

- Equipment Specs
  - Name and model number (rollers, saw, rubblizer)
  - Weight of each machine
  - Rolling patterns (number of passes, static/vibratory)
  - Amplitude and frequency of vibratory roller

- Cement Specs
  - Type used
  - Air entrainment
  - Slump
  - Mix design of PCC
  - Curing agents
  - Type of contraction joint sealant (and name of same)

- Edge Drain Specs
  - Name and type of pipe used
  - Nominal size and flow rate of rocks

Slide Show

Previous SPS-6 Projects

- Manual Distress Survey of Existing Distress
- Falling Weight Deflectometer (FWD) on Existing Road
- Marking Punchouts and Other Areas to Be Repaired
- Sawing for Partial and Full Depth Repair of JPCP
- Edge Drain
- Material Sampling
- Adding Structural Layers (HMAC)
  - Need Rod and Level shots after final lift of binder and surface layer has been laid

- Need Beginning and Ending Stations of Any Unforeseen Project Deviations, See Level-up
- Pavement Markings to Identify Each Test Section
- Crack and Seat
  - Need confirmation of full-depth cracking by coring
  - Also need FWD testing after seating
- Rubblizing - State supplemental sections only
- Various Rollers
- Saw and Seal Section (HMAC) - Saw cuts over existing JPC saw cuts, marked by lathes
- Postconstruction Coring - Labeling and caring for cores
- Profilograph
- Final FWD Testing

Names and Number of Important Contacts

Name	Phone Number

Questions

Revised Section Layout
Alabama SPS-6

Section	Station	Conversion	Kmp
Proj Limit	843 5	<==>	317 234
1	843 5		317 234
2	837 5		317 051
5	826 5		316 716
Trans.	815 5	0"- 4" HMAC	316 325
7	805 5		316 020
Trans.	799 5	4"- 8" HMAC	315 837
8	795 5		315 716
Trans.	789 5	8"- 9 6" HMAC	315 533
63	787 5		315 472
Trans.	781 5	9 6"- 8" HMAC	315 289
62	778		315 182
Trans.	772	8"- 4" HMAC	314 999
61	764 5		314 771
6	758 5		314 588
4	752 5		314 405
3	746 5		314 222
Proj Limit	739 9695	<==>	~~314 023~~ 314.919

EQ 819+27 24 AH
EQ 819+29 78 BK

Edge Drain

South Bound Traffic

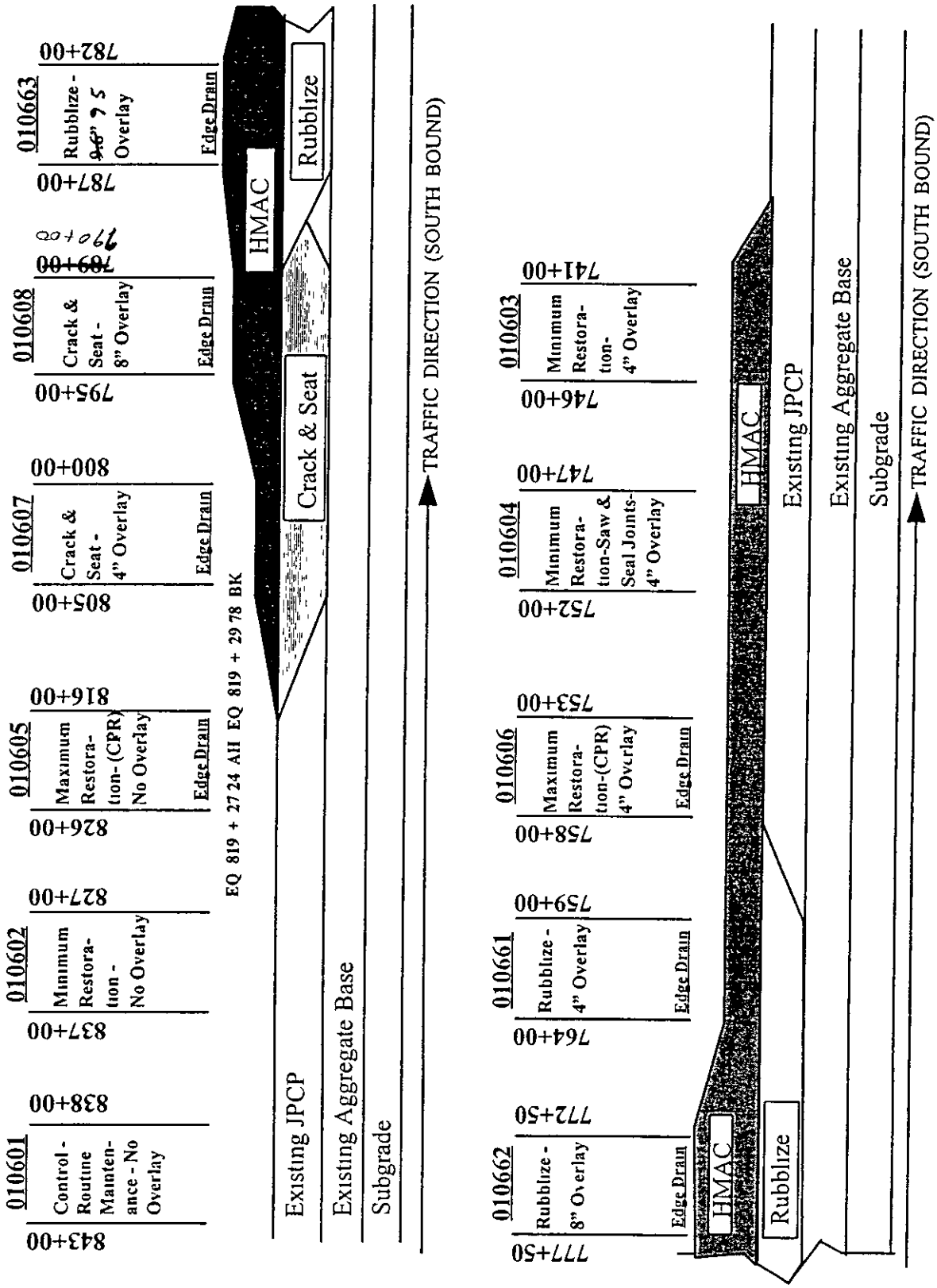


Figure 1 Layout of Test Sections Alabama SPS-6 (010600)

5-12-98 Design Mix

ALABAMA DEPARTMENT OF TRANSPORTATION

1409 Coliseum Boulevard, Montgomery, Alabama 36130-3050

Fob James, Jr
Governor

Jimmy Butts
Transportation Director

cc: Randy Mountcastle III
McCartney
H. Hansard, PE
Aaron Oates (7)
James Wood
lw 3-10-98

Mix Design for Alabama
SP6-6 GB I-59 1998

February 20, 1998

McCartney Construction Co , Inc
P O Box 1890
Gadsden, AL 35902

Project No IM-59-2(105)

County Etowah

Dear Sir

The job mix below may be used only at the plant noted and for materials listed The plant mix will be manufactured in compliance with the applicable specifications, plan notes, and special provisions

PLANT: McCartney Construction Co , Inc , Centre, Talladega & Turkey Town, AL
Calhoun Asphalt Co , Inc , Glencoe, AL

SP 5008(3), 5051(4), 5200(5), 5301, 5302

Section 429 A-281, 287 Wearing Layer *ESAL Category* Range "E"

Max Size Aggregate ¾" (w/ Additives) *Binder Grade* PG 76-22
Hunt Oil Co

MATERIALS

% (APPROX)	*DESCRIPTION*	*I D #*	*SOURCE*	*BPN-9*
25	#8910 Mod Limestone	0158	VMC, Glencoe, AL	27
5	#6 Limestone	0158	VMC, Glencoe, AL	27
10	Coarse Sand	0697	Sims Pit, Whorton, AL	
1	Baghouse Fines		Plant	
15	#8910 B F Slag	0172	VMC, AL , City, AL	
44	#78 B F Slag	0172	VMC, AL , City, AL	

RECEIVED

JOB MIX

SIEVES	*% PASSING*
37 5 mm	
25 0 mm	
19 0 mm	100
12 5 mm	96
9 5 mm	80
4 75 mm	47
2 36 mm	32
1 18 mm	23
600 µm	16
300 µm	11
150 µm	7
75 µm	5 4

OTHER INFORMATION (75 Blow)

% AC Required	5 50
AC Req'd/MetricTon, kg	55 0
Max Sp Gr Mix	2 429
Mass, kg/m³	2323
Stability, N	14 9
TSR	85
Anti-Strip	N/A
Effective AC	4 77
Dust/Asphalt Ratio	1 13
Coarse Agg Angularity	100/99
Fine Agg Angularity	48
% VMA	
Agg Bulk SG	2 581

NOTE

must be added to the mix The remaining comes form the RAP

DESIGN CALIBRATION FACTOR 0 9841

cc Hot-Mix Asphalt Engineer
3rd Division
AO 3-9-98

st51sm/js

Joel E. Stokes (BJ)
Hot-Mix Asphalt Engineer

ALABAMA DEPARTMENT OF TRANSPORTATION

1409 Coliseum Boulevard, Montgomery, Alabama 36130-3050

Fob James, Jr
Governor

Jimmy Butts
Transportation Director

cc. Randy Mountcastle III
McCartney
H. Hansard, PE
Aaron Oates (7)
James Wood
lw 3-10-98

February 27, 1998

McCartney Construction Co , Inc
P O Box 1890
Gadsden, AL 35902

Project No IM-59-2(105)

County Etowah

Dear Sir

The job mix below may be used only at the plant noted and for materials listed The plant mix will be manufactured in compliance with the applicable specifications, plan notes and special provisions

PLANT: McCartney Construction Co , Inc , Centre, Talladega & Turkeytown, AL
Calhoun Asphalt Co , Inc , Glencoe, AL

Sp. 5008 (G), 5051 (H), 5200 (S), 5301, 5302

Section 429 B - 281 Upper Binder *ESAL Category* Range "E"

Max Size Aggregate 25 mm W/ Additive *Binder Grade* PG 76-22 Hunt Oil Co

MATERIALS

% (APPROX)	*DESCRIPTION*	*I D #*	*SOURCE*	*BPN-9*
31	#57 Mod Limestone	0158	VMC, Glencoe, AL	27
34	#78 Limestone	0158	VMC, Glencoe, AL	27
24	#8910 Mod Limestone	0158	VMC, Glencoe, AL	27
10	Coarse Sand	0697	Sims Pit, Whorton Blend, AL	
1	Baghouse Fines		Plant	

JOB MIX.

SIEVES	*% PASSING*
37 5 mm	
25 0 mm	100
19 0 mm	96
12 5 mm	84
9 5 mm	69
4 75 mm	35
2 36 mm	24
1 18 mm	18
600 µm	13
300 µm	9
150 µm	6
75 µm	4 6

OTHER INFORMATION (75 Blow)

% AC Required	4 40
AC Req'd/MetricTon, kg	44 0
Max Sp Gr Mix	2 531
Mass, kg/m^3	2421
Stability, N	13 7
TSR	0 91
Anti-Strip	N/A
Effective AC	4 19
Dust/Asphalt Ratio	1 10
Coarse Agg Angularity	100/99
Fine Agg Angularity	45
% VMA	
Agg Bulk SG	2 694

NOTE

must be added to the mix The remaining comes form the RAP

DESIGN CALIBRATION FACTOR 0 9888

cc Hot-Mix Asphalt Engineer
3rd Division
3-4-98

st50sm/js

Joel E. Stapes (BH)
Hot-Mix Asphalt Engineer

ALABAMA DEPARTMENT OF TRANSPORTATION

1409 Coliseum Boulevard, Montgomery, Alabama 36130-3050

cc: Randy Mountcastle III
McCartney
H. Hansard, PE
Aaron Oates (7)
James Wood
2-23-98

Fob James, Jr
Governor

October 15, 1997

Jimmy Butts
Transportation Director

McCartney Construction Co
P O Box 1890
Gadsden, AL. 35902

Project No IM-59-2(105)
County ETOWAH

Dear Sir

The job mix below may be used only at the plant noted and for materials listed The plant mix will be manufactured in compliance with the applicable specifications, plan notes, and special provisions
S.P. 5008(3), 5051(4), 5200(5), 5301, 5302

PLANT: McCartney Construction Co , Ashville, Centre & Talladega
Calhoun Asphalt Co , Alabama City & Glencoe

Section	429 B Binder - 301	*ESAL Category*	Range ~~B~~ "E"
Max Size Aggregate	25 mm B	*Binder Grade*	PG 64-22 (1 3) Hunt Oil Co

(No Additive) Lower Binder

MATERIALS.

% (APPROX)	*DESCRIPTION*	*I D #*	*SOURCE*	*BPN-9*
19	#57 Mod Limestone	0158	VMC, Glencoe, AL	25
50	#78 Limestone	0158	VMC Glencoe AL	25
25	Coarse Sand	0697	Sims Pit, Whorton Bend AL	
5	#8910 Mod Limestone	0158	VMC, Glencoe AL	25
1	Baghouse Fines		Plant	

JOB MIX

SIEVES	*% PASSING*
37 5 mm	
25 0 mm	100
19 0 mm	96
12 5 mm	90
9 5 mm	74
4 75 mm	34
2 36 mm	25
1 18 mm	17
600 µm	13
300 µm	7
150 µm	4
75 µm	3 0

OTHER INFORMATION (75 Blow)

% AC Required	4 60
AC Reqd/Metric Ton, kg	46 0
Max Sp Gr Mix	2 496
Mass kg/m³	2387
Stability , N	13 4
TSR	0 89
Anti-strip	N/A
Effective AC	4 21
Dust/Asphalt Ratio	0 71
Coarse Agg Angularity	98/98
Fine Agg Angularity	45
%VMA	
Agg Bulk SG	2 652

NOTE

must be added to the mix The remaining comes from the RAP

DESIGN CALIBRATION FACTOR 1 0037

NOTE This Report Supercedes Report Dated 5/29/97

cc Hot-Mix Asphalt Engineer
3rd Division
st0265/js

Joel E. Stokes (BH)
Hot-Mix Asphalt Engineer

ALABAMA DEPARTMENT OF TRANSPORTATION

1409 Coliseum Boulevard, Montgomery, Alabama 36130-3050

cc Randy Mountcastle III
McCartney
H Hansard, PE
Aaron Oates (7)
James Wood
lw 2-23-98

Fob James, Jr
Governor

Jimmy Butts
Transportation Director

October 24, 1997

IcCartney Construction Co , Inc
O Box 1890
adsden, AL 35902

Project No IM-59-2(105)

County ETOWAH

ear Sir

The job mix below may be used only at the plant noted and for materials listed The plant mix will be ianufactured in compliance with the applicable specifications, plan notes, and special provisions S.P. 5008(3), 5051(4), 5200(5), 5301, 5302

LANT: McCartney Construction Co , Ashville, Centre & Talladega
Calhoun Asphalt Co , AL. City & Glencoe

ection 429A 287 Leveling, Widening & Patching *ESAL Category* Range "~~D~~ E"

Max *Size Aggregate* 19 mm *Binder Grade* PG 64-22 (1 3) Hunt Oil Co

Shoulder

IATERIALS:

% (APPROX)	DESCRIPTION	I D. #	SOURCE	BPN-9
0	#8910 Mod. Limestone	0158	VMC, Glencoe, AL	27
9	#78 Limestone	0158	VMC, Glencoe, AL	27
0	Coarse Sand	0697	Sims Pit, Whortons Bend, AL	
1	Baghouse Fines		Plant	

IOB MIX:

SIEVES	% PASSING
37 5 mm	
25 0 mm	
9 0 mm	100
2.5 mm	98
9 5 mm	86
1 75 mm	54
2 36 mm	37
1 18 mm	25
600 µm	18
300 µm	11
150 µm	7
75 µm	4 6

OTHER INFORMATION (75 Blow)

% AC Required	5 20
AC Req'd/MetricTon, kg	52 0
Max Sp Gr Mix	2 484
Mass, kg/m³	2376
Stability, N	15 7
TSR	0 93
Anti-Strip	N/A
Effective AC	4 85
Dust/Asphalt Ratio	0 95
Coarse Agg Angularity	99/98
Fine Agg Angularity	46
% VMA	
Agg Bulk SG	2 661

NOTE:

must be added to the mix The remaining comes form the RAP

DESIGN CALIBRATION FACTOR 1 0008

cc Hot-Mix Asphalt Engineer
3rd Division
st519sm/js

2 23-98

Joel E. Stopes (BH)
Hot-Mix Asphalt Engineer

RECEIVED

FEB 10 1998

ALABAMA DEPARTMENT OF TRANSPORTATION

1409 Coliseum Boulevard, Montgomery, Alabama 36130 3050

Fob James Jr
Governor

Jimmy Butts
Transportation Director

cc: Randy Mountcastle III
APAC
J. Pennington, Co. Eng.
Aaron Oates (7)
James Wood
lw 2-23-98

February 5, 1998

APAC-Alabama Inc
P O Box 818
Birmingham AL 35201

Project No STPOA-5800 (9)

County St. Clair

Dear Sir

The job mix below may be used only at the plant noted and for materials listed The plant mix will be manufactured in compliance with the applicable specifications, plan notes, and special provisions
SP 5008 (4), 5051, (4) 5200 (5), 5301, 5302

PLANT: APAC-Alabama Inc Tarrant AL

Section 429-A-201 Weaning Layer Shoulder *ESAL Category* Range A,B&C

Max Size Aggregate 19 mm *Binder Grade* PG 64-22 (1 3), Hunt Oil Co

MATERIALS:

% (APPROX)	*DESCRIPTION*	*I D #*	*SOURCE*	*BPN-9*
28	#78 Limestone	0134	VMC, Tarrant, AL	27
44	⅜" Crushed Gravel	0054	Superior Products, Jemison, AL	
7	#810 Limestone	0134	VMC Tarrant, AL	27
5	Coarse Sand	1611	Oaks Plantation Pit, Waugh, AL	
1	Baghouse Fines		Plant	
15	RAP		Stockpile 97-3-7	

JOB MIX.

SIEVES	*% PASSING*
37 5 mm	
25 0 mm	
19 0 mm	100
12 5 mm	98
9 5 mm	89
4 75 mm	56
2 36 mm	33
1 18 mm	22
600 µm	15
300 µm	10
150 µm	7
75 µm	4 8

OTHER INFORMATION (50 Blow)

% AC Required	5 65*
AC Req'd/MetricTon kg	56 5
Max Sp Gr Mix	2 480
Mass, kg/m³	2370
Stability, N	9 8
TSR	0 85
Anti-Strip (Adhere 110)	0 50
Effective AC	5 53
Dust/Asphalt Ratio	0 87
Coarse Agg Angularity	96/94
Fine Agg Angularity	46
% VMA	
Agg Bulk SG	2 696

NOTE:

*4 77% PG 64-22 (1 3) must be added to the mix The remaining 0 88% comes form the RAP

DESIGN CALIBRATION FACTOR 1 0012

cc Hot-Mix Asphalt Engineer
3rd Division

st22sm/js
2-12-98

Joel E. Stopen (BH)
Hot-Mix Asphalt Engineer

BADGER STATE HIGHWAY EQUIPMENT, INC.

2520 North Clermont Street, P O Box 337, Antigo, Wisconsin, 54409
Phone 715-627-4384 Fax 715-623-7073

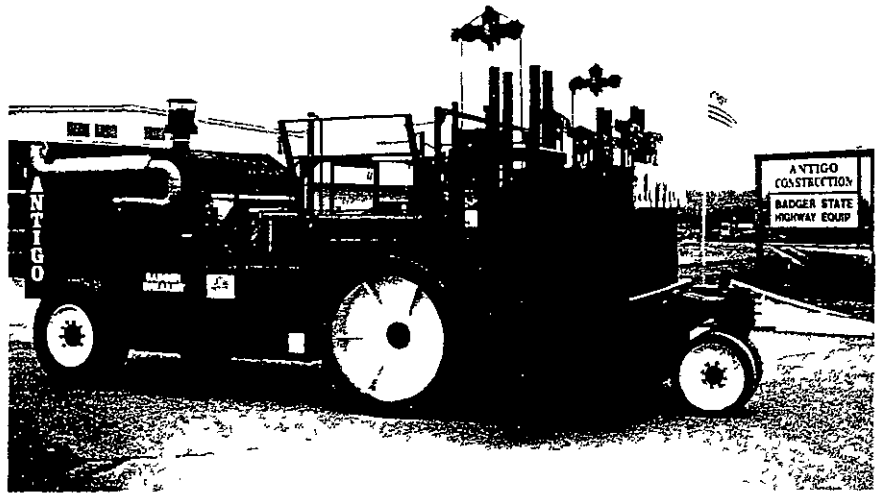
Badger Breaker® model 8600 guillotine type concrete pavement breaker

Technical Description

Hammer Weight	5'500 kg (12,000 pounds)
Hammer Size	2'440 mm x 1'370 mm x 203 mm (96 inches x 54 inches x 8 inches)
Striking Bar Width	Replaceable, 38 mm (1 5 inches) wide, weld-on striking bar mounted on bottom of hammer can be any length up to width of hammer (2'440 mm (96 inches))
Engine	Deutz BF6L913
Drive System	Hydrostatic drive - Rexroth pump and drive motor
Drive Axle/Tires	John Deere / 14 00 R 25
Steer Axle/Tires	John Deere / 10 00 R 20
Operator Controls	Electrical plug-in box controlling steering, forward/reverse direction, travel speed, lift height, cycle rate, and emergency stop
Lift System	Rexroth pump, Badger 90 mm x 1'520 mm (3 5" x 60") hydraulic cylinder, and Rexroth hydraulic control components
Lift Height	Up to 2 75 meters (108 inches), electrically adjustable
Lift Cycle	Up to 35 cycles/min (18 at 1'825 mm (72 inches) lift), electrically adjustable
Brake System	Spring loaded-hydraulic off
Machine Width	2'540 mm (100 inches)
Machine Length	5'500 mm (216 inches), folded for travel 6'200 mm (244 inches)
Machine Height	Mast upright 3'730 mm (12'3"), folded for travel 2'740 mm (9'0")
Machine Weight	17'900 kg (37,500 pounds)
Working Speed	0/27 meters (0/88 feet) per minute
Travel Speed	Up to 8 km (5 miles) per hour

Badger State Highway Equipment, Inc reserves the right to make changes in specifications shown herein or add improvements at any time without notice or obligation (5/97)

MODEL MHB BADGER BREAKER®



The Model MHB Badger Breaker® is a rubber tired, self propelled unit which carries 1,000 to 1,200 pound hammers mounted laterally in pairs with half the hammers in a forward row and the remainder diagonally offset in a rear row so that there is continuous breakage from side to side Each pair of hammers is attached to a hydraulic lift cylinder which operates as an independent unit, develops between 2,000 and 12,000 foot pounds of energy depending upon lift height selected, and cycles at a rate of 30 to 35 impacts per minute The eight foot wide machine carries twelve hammers eight inches in width A wing, carrying two 1,500 pound hammers, can be added to each side for a total breaking width of up to 13 feet Due to individual control of each lifting cylinder breaking can be as narrow as 2 5 feet or increased in increments to as wide as 13 feet Working speed ranges from 8 to 52 ft/min which permits PCC pavement rubblization at slower speeds or selective cracking for pavement overlay or removal as the speed increases Patent Number 5695254

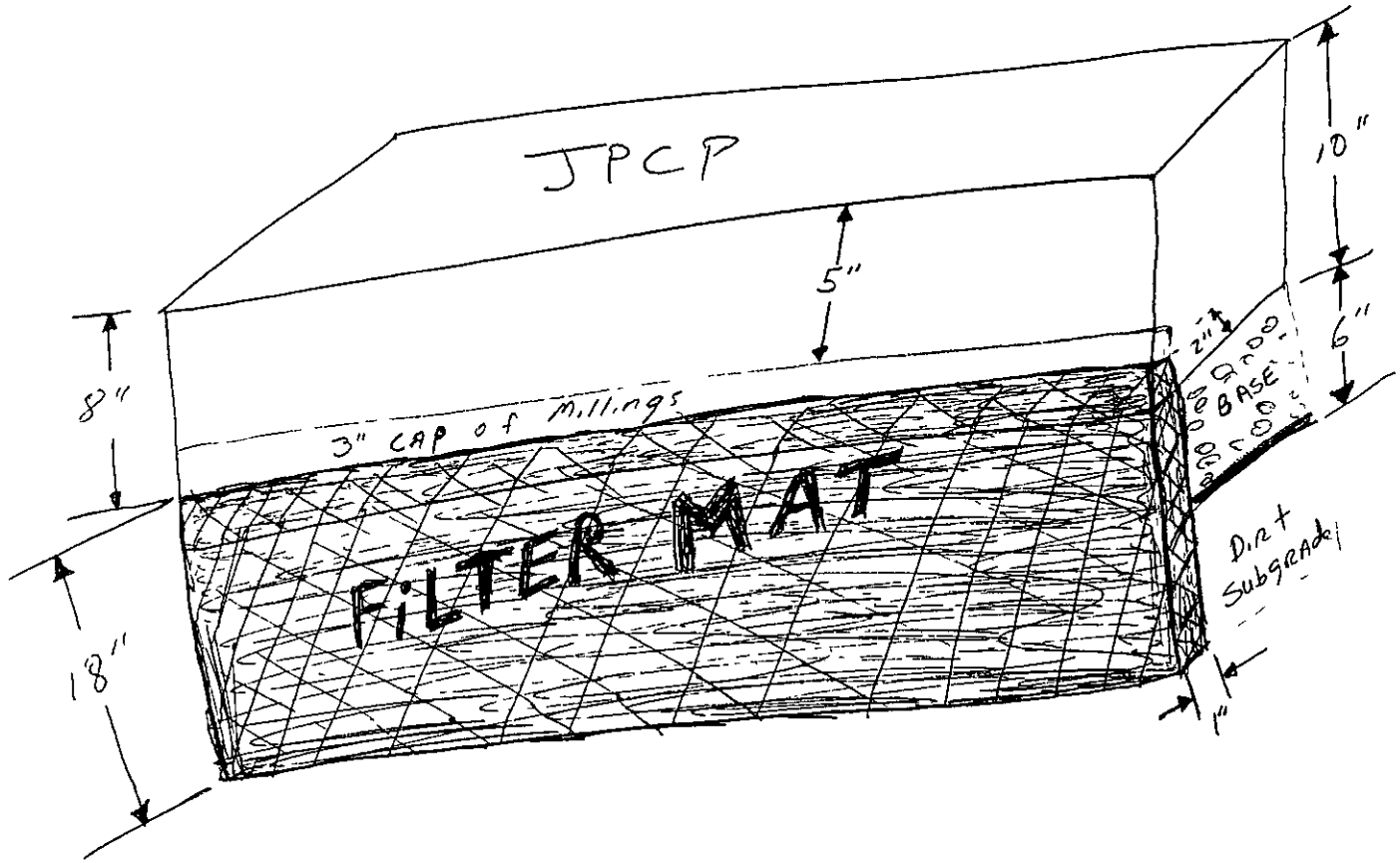
Chassis	8' Mode	13' Mode
Length	28' 11"	28' 11"
Width	100"	156"
Height	112"	112"
Weight	40,260 lbs	48,260 lbs
Transport Speed Range - 0 to 14 5 mph		

Hammer Assembly	8' Mode	13' Mode
Number of Hammers	12	16
Number of Lift Circuits	6	8
	Standard Hammer	Wing Hammer
Strike Width	8"	12" to 15"
Weight	1000-1200 lbs	1500 lbs
Max Lift	60"	60"

Lifting Control - independent electrical timers to vary lift height
Lifting Cycle - 0 to 35 impacts per minute
Working Speed Range - 8 to 52 feet per minute

Manufactured by Badger State Highway Equipment Inc
2520 N Clermont St P O Box 337
Antigo Wisconsin 54409
Phone 715-627-2222 Fax 715-623-7073

AL-SPS-6 EDGE DRAIN Schematic 3/98 (See Photos)



APPENDIX B

MATERIALS SAMPLING AND TESTING PLAN

Brent Rauhut Engineering Inc.

12 February 1998

Mr R Lynn Wolfe, Jr
Bureau of Research & Development
Alabama Department of Transportation
1409 Coliseum Boulevard
Montgomery, Alabama 36130-3050

Subject Alabama SPS-6 Project (010600) Materials Sampling and Field Testing Plan

Dear Lynn,

Enclosed is the revised plan for materials sampling and field testing activities for the Alabama SPS-6 project, located in the southbound lanes of IH-59 near Gadsden, Alabama This plan has been prepared to identify details of the materials sampling, field testing, and laboratory materials testing to occur as part of the SPS-6 project construction The construction of this project is scheduled for March 1998

If you have any questions or comments regarding the information provided in this plan, please do not hesitate to contact me A copy of this document is also being provided to Mr Monte Symons of the FHWA, for review and approval

Sincerely,

Zane W Dunnam
Graduate Engineer, SRCO

ZWD dmj

Enclosure As stated

c w/Enc J Wayne Tucker, ALDOT-Birmingham
Harold Hansard, ALDOT-Gadsden
Kelly Watkins, ALDOT-Gadsden
Monte Symons, FHWA/LTPP-PPD
Gonzalo Rada, PCS/LAW
Mark Gardner, SRCO

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

MATERIAL SAMPLING
AND
FIELD TESTING PLAN

ALABAMA SPS-6 PROJECT 010600
IH-59, SOUTHBOUND
GADSDEN, ALABAMA

PREPARED BY:

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

REVISED FEBRUARY 1998

MATERIAL SAMPLING AND FIELD TESTING PLAN
ALABAMA SPS-6 PROJECT (010600)
IH-59, SOUTHBOUND
GADSDEN, ALABAMA

INTRODUCTION

As part of their participation in the SHRP/FHWA Long Term Pavement Performance (LTPP) studies, the State of Alabama has elected to construct an SPS-6 project to study the rehabilitation of rigid pavements This project will consist of multiple test sections with similar details and materials along a stretch of IH-59, in the southbound lane, near Gadsden, Alabama It is the intent of this document to provide a plan for the materials sampling and field testing, and a listing of the laboratory materials testing that will occur as a part of this project

This document has been prepared in accordance with the guidelines provided by the Strategic Highway Research Program in Operational Memorandum Nº SHRP-LTPP-OM-019, entitled "Specific Pavement Studies Materials Sampling and Testing Requirements for Experiment SPS-6, Rehabilitation of Jointed Portland Cement Concrete Pavements, January 1991" 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-6 study is to evaluate rehabilitation methods that can be used to restore the condition and extend the service life of jointed portland cement concrete pavements The pavement type and condition, environment, traffic, intended pavement preparation, and use of asphalt concrete overlay are primary considerations in selecting an appropriate rehabilitation method The in-service tests proposed in this experiment will help quantify the influence of these parameters on pavement performance and life expectancy, and improve current design procedures Consequently, the experiment will help highway agencies select methods and strategies for rehabilitation of existing jointed portland cement concrete pavements

This sampling and testing plan was developed by Brent Rauhut Engineering Inc (BRE), the Southern Region Coordination Office (SRCO), under contract to the Federal Highway Administration (FHWA) 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 Alabama Department of Transportation (Alabama DOT), who may refer them to the Southern Region Coordination Office

This document has been prepared in three distinct parts

- A General Layout Information
- B Materials Sampling and Testing
- C Laboratory Materials Testing

The General Layout section provides tables and figures of the layout showing the eleven 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-6 project in terms of the location of the test sections along the roadway Table A-1 lists the test sections in order of decreasing kilometers, 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 kilometer 317 234 to the end of the last section at kilometer 314 039 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 Alabama DOT If there are significant changes in alignment or stationing, this plan should be reviewed closely to determine if revisions are warranted

TABLE A-1. PROPOSED TEST SECTION LAYOUT

Section	Cross Section	Begin km	End km
010601	Existing JPCP	317 234	317 051
	Routine Maintenance		
	No Overlay		
010602	Existing JPCP	317 051	316 716
	Min Restoration		
	No Overlay		
010605	Existing JPCP	316 716	316 380
	Max Restoration (CPR)		
	No Overlay		
010607	Existing JPCP	316 075	315 892
	Crack/Break & Seat		
	102 mm HMAC Overlay		
010608	Existing JPCP	315 716	315 533
	Crack/Break & Seat		
	204 mm HMAC Overlay		
010663	Existing JPCP	315 472	315 289
	Rubblization		
	242 mm HMAC Overlay		

TABLE A-1. PROPOSED TEST SECTION LAYOUT
(Continued)

Section	Cross Section	Begin km	End km
010662	Existing JPCP	315 182	314 999
	Rubblization		
	204 mm HMAC Overlay		
010661	Existing JPCP	314 771	314 588
	Rubblization		
	102 mm HMAC Overlay		
010606	Existing JPCP	314 588	314 405
	Max Restoration (CPR)		
	102 mm HMAC Overlay		
010604	Existing JPCP	314 405	314 222
	Min Restoration		
	102 mm HMAC Overlay w/Saw Joints		
010603	Existing JPCP	314 222	314 039
	Min Restoration		
	102 mm HMAC Overlay		

TABLE A-2. ORDERING OF SECTIONS BY EXISTING KILOMETER MARKINGS

Section ID	Begin km	End km	Treatment/Overlay Thickness			
			Restoration	Crack/ Break & Seat	(1) AC Surface (mm)	Retrofitted Edgedrains
010601	317 234	317 051	Routine	No	0	No
010602	317 051	316 716	Min	No	0	No
010605	316 716	316 380	Max	No	0	Yes
Transition	316 380	316 075	Max -Min	No-Yes	0-102	Yes
010607	316 075	315 892	Min	Yes	(3) 102	Yes
Transition	315 892	315 716	Min	Yes	(3) 102-204	Yes
010608	315 716	315 533	Min	Yes	(3) 204	Yes
Transition	315 533	315 472	Min -Rubblize	Yes-No	204-242	Yes
010663	315 472	315 289	Rubblize	No	242	Yes
Transition	315 289	315 182	Rubblize	No	242-204	Yes
010662	315 182	314 999	Rubblize	No	204	Yes
Transition	314 999	314 771	Rubblize	No	204-102	Yes
010661	314 771	314 588	Rubblize	No	102	Yes
010606	314 588	314 405	Max	No	102	Yes
010604	314 405	314 222	Min	No	(2) 102	No
010603	314 222	314 039	Min	No	102	No
Transition	314 039	313 919	Min	No	102-0	No

Notes
1 Combined binder and wearing course thickness
2 With saw HMAC overlay joints above JPCP joints and seal
3 Crack and seat JPCP before overlay

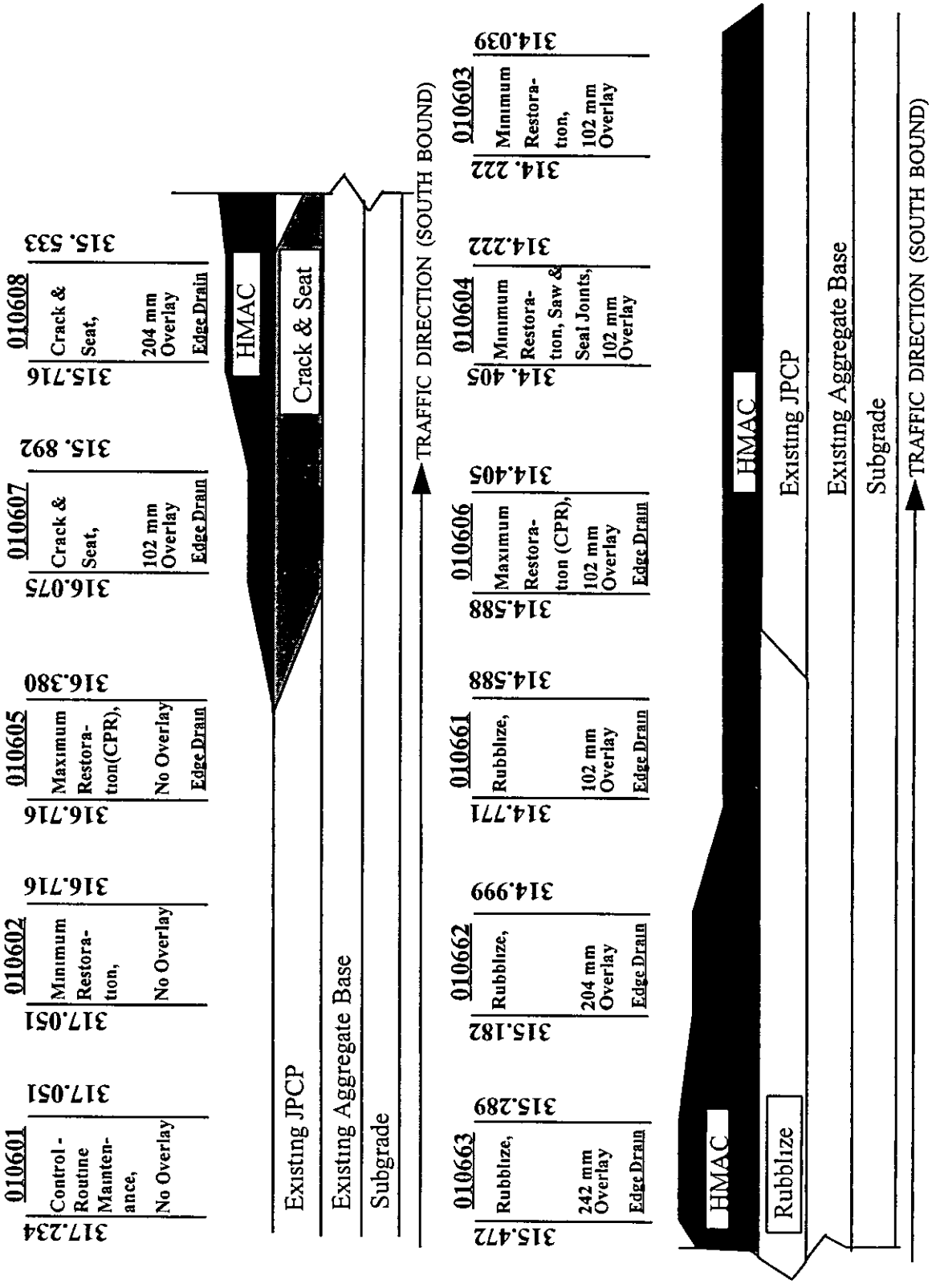


FIGURE A-1. LAYOUT OF TEST SECTIONS

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 Table B-1 provides the scope of the material sampling and testing activities Table B-2 describes special sampling needs for the Materials Reference Library and provides contact information to coordinate sample shipping arrangements

Figures B-1 through B-14 show the locations and numbering scheme for the many samples and tests scheduled Figures B-2 and B-3 show the sampling and testing to occur for preconstruction and postconstruction, respectively, while Figures B-4 through B-14 show all sampling and testing scheduled for each test section

Finally, Tables B-3 and B-4 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, Braun Intertec, Minneapolis, Minnesota, should be coordinated through the Southern Region Coordination Office

TABLE B-1. SCOPE OF MATERIAL SAMPLING AND FIELD TESTING

MATERIAL & SAMPLING DESCRIPTION	Nº. OF MATERIAL SAMPLES	SAMPLE LOCATION
PRE-CONSTRUCTION SAMPLING		
1 PCC (Original Layer)		
Coring - 102 mm diameter cores	26	C1-C26
Coring - 152 mm diameter cores	3	A1-A3
Coring - 305 mm diameter cores	3	BA1-BA3
2 Unbound Base/Subbase Layers (Per Layer)		
Augering 152 mm diameter holes	3	A1-A3
Bulk Sampling in 305 mm diameter holes (100-200 lb)	3	BA1-BA3
Bulk Sampling in Test Pit (91 kg/sample)	2	TP1-TP2
In Situ Density & Moisture Content (Nuclear Gauge)	2	TP1-TP2
Moisture Content Samples	5	TP1-TP2, BA1-BA3
3 Subgrade		
Thin-walled Tube Sampling (2 tubes per hole)	4	A1-A2
Bulk Sampling in 305 mm diameter holes (200 lb)	3	BA1-BA3
Bulk Sampling in Test Pits (91 kg/sample)	2	TP1-TP2
In Situ Density & Moisture Content (Nuclear Gauge)	2	TP1-TP2
Moisture Content Samples	5	TP1-TP2, BA1-BA3
4 Shoulder Auger Probes (6")	3	S1-S3
POST-CONSTRUCTION SAMPLING		
1 Asphaltic Concrete (Overlay)		
Coring - 102 mm diameter cores	32	C27-C58
Bulk Samples from Plant (45 kg ea)		
HMAC Binder Mix (LOWER)	3	B1-B3
HMAC ~~Surface~~ BINDER Mix (UPPER)	3	B4-B6
HMAC SURFACE MIX	3	B7-B9

TABLE B-2. MATERIAL SAMPLING FOR THE MATERIALS REFERENCE LIBRARY (MRL)

Material and Sample Description[2]	Nº. of Samples	Vol. of Each Sample	Sample Location
Asphalt Cement [1]			
Surface Mix (SAME AS UPPER BINDER)	3	19 l	Plant
Binder Mix	3	19 l	Plant
Combined Graded Coarse & Fine Aggregate [1]			
Surface Mix → BINDER MIX (UPPER)	1 → 1	209 l → 209L	Plant → PLANT
Binder Mix (LOWER)	1	209 l	Plant
Finished HMAC Mix (Uncompacted)			
Surface Mix	3	19 l	Paver
Binder Mix (LOWER)	3	19 l	Paver
BINDER MIX (UPPER)	3	19 L	PAVER

Notes:

1 Where identical material types are used for different layers, it is not necessary to duplicate sampling For example, if only one grade of asphalt cement is used for all three layers, then only three 19 l samples are needed

2 Only those materials for the standard SPS-6 experiment sections will be sampled and stored at the MRL Containers for this sampling will be provided by the LTPP **Materials Reference Library (MRL). Shipping of the sample containers and samples to the MRL will be paid for by the 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 ~~Allan Coldan~~ SIROUSH ALAVI
Materials Reference Library
Nichols Consulting Engineers, Chtd
1885 So Arlington, Suite 111
Reno, Nevada 89509
(702) 329-4955, FAX (702) 329-5098

These samples should be labeled with MRL labels provided by the MRL contractor and shipped to the MRL Contractor upon completion of sampling activities

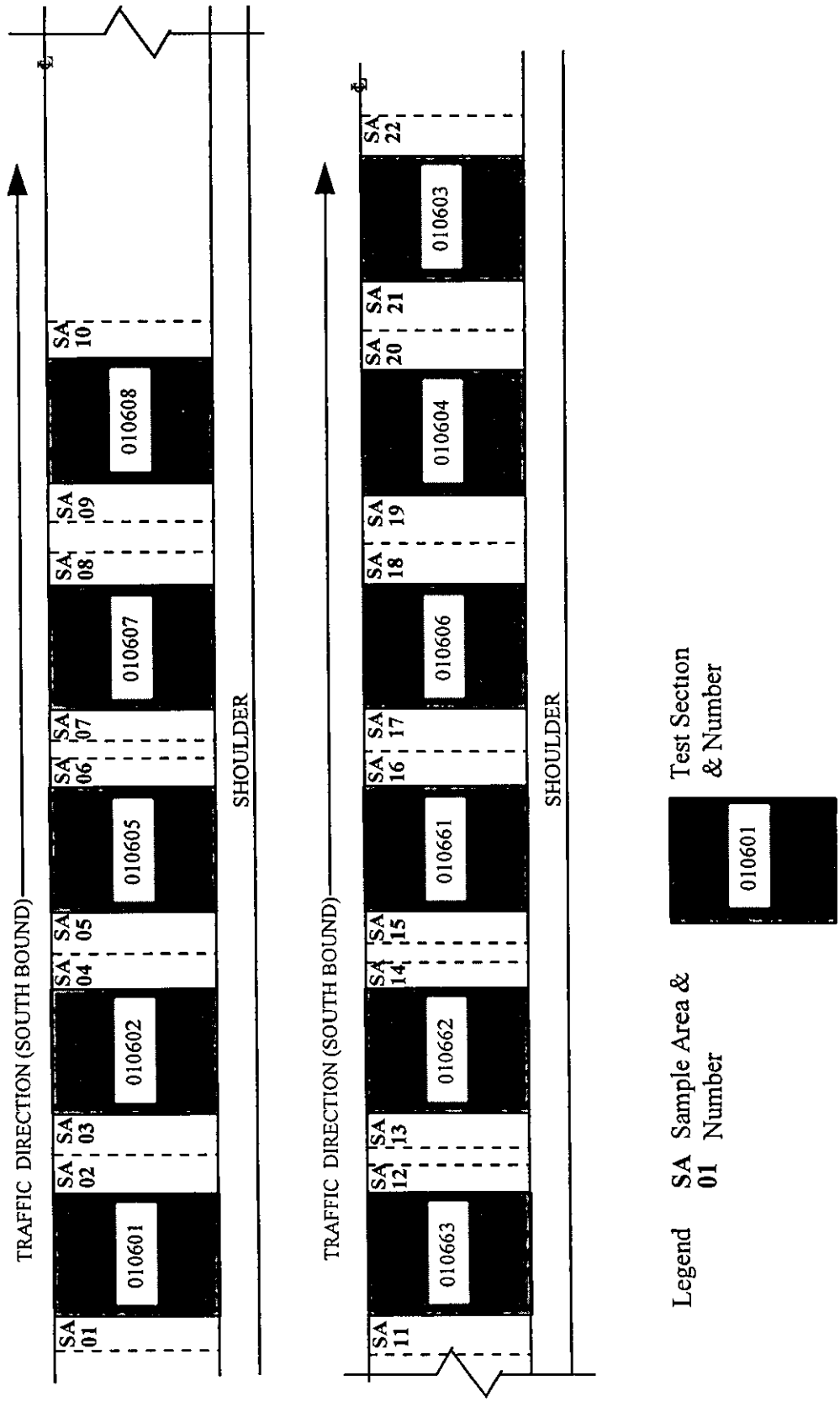


FIGURE B-1. SITE LAYOUT WITH SAMPLING AREA LOCATIONS

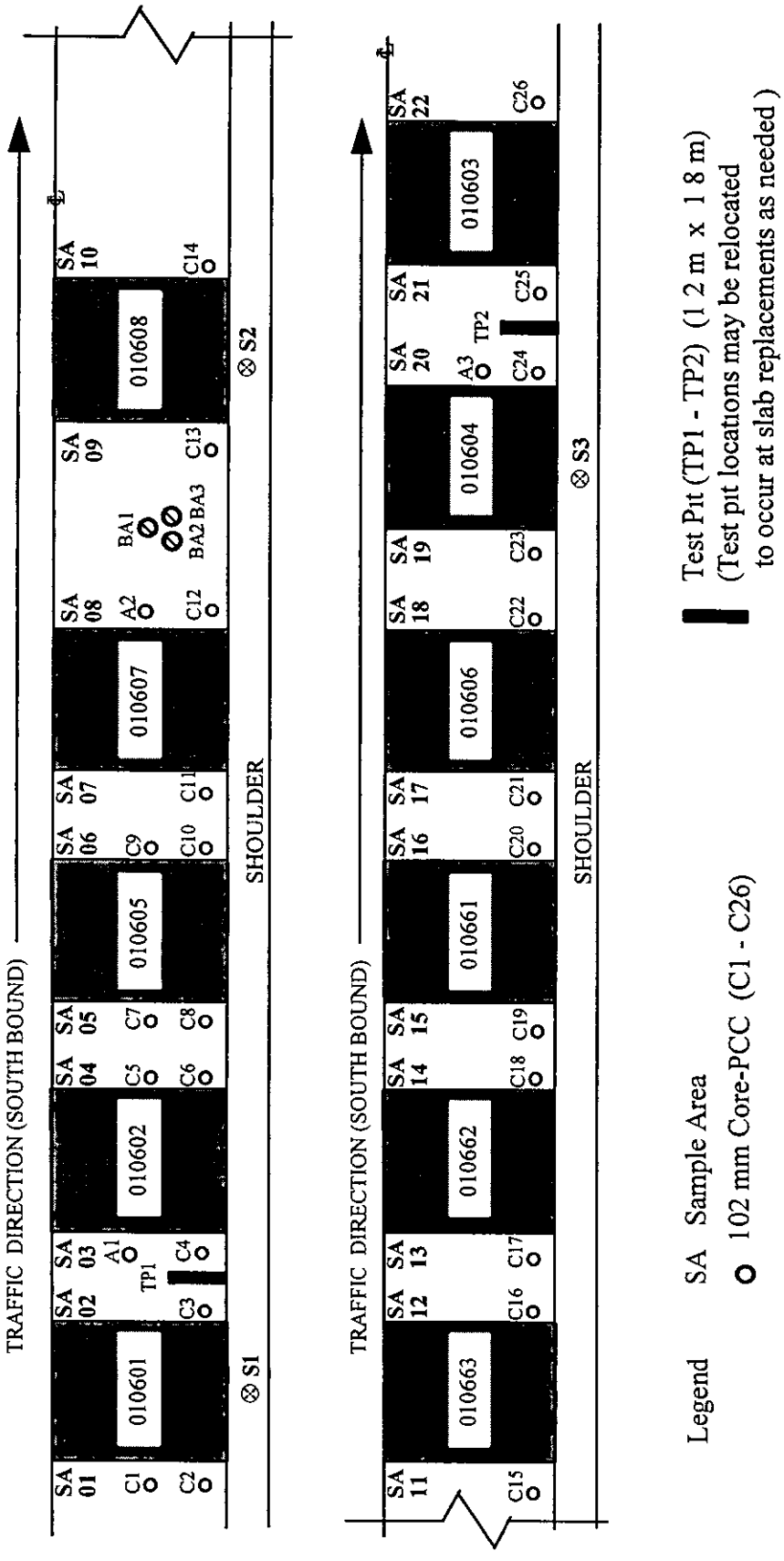
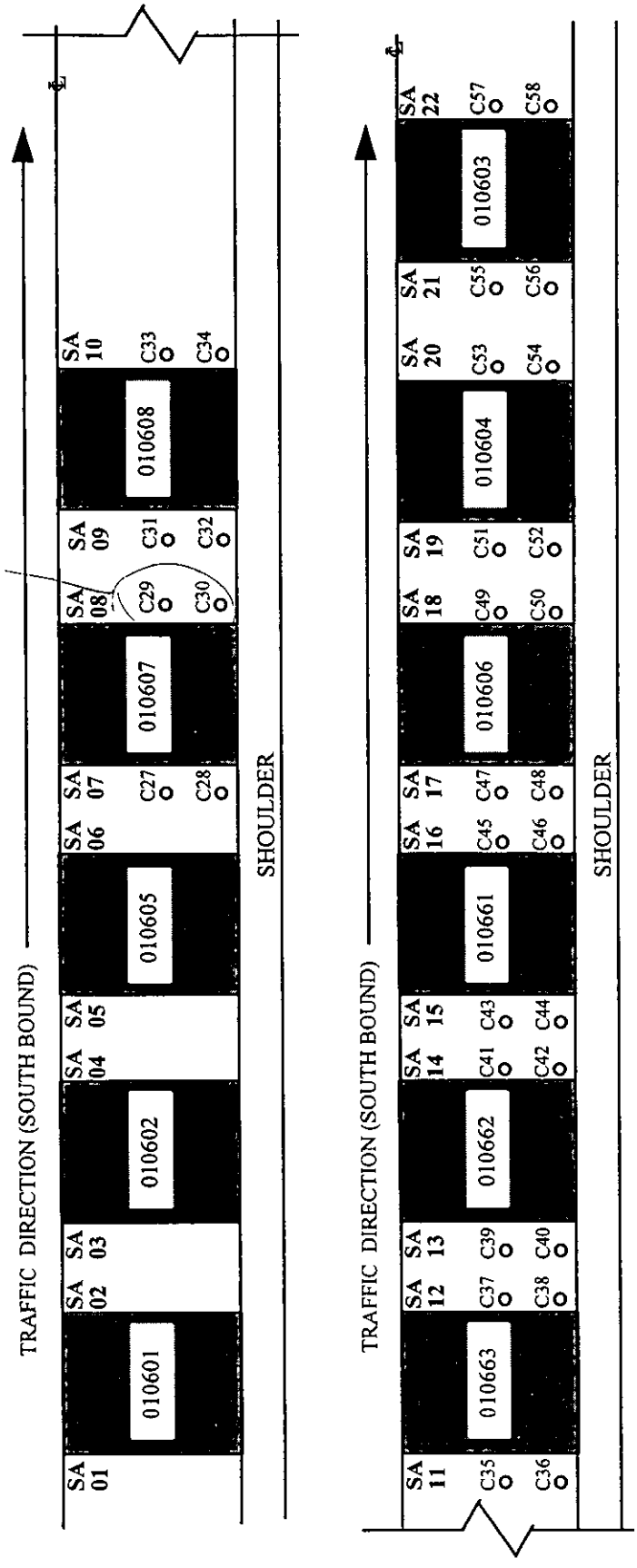


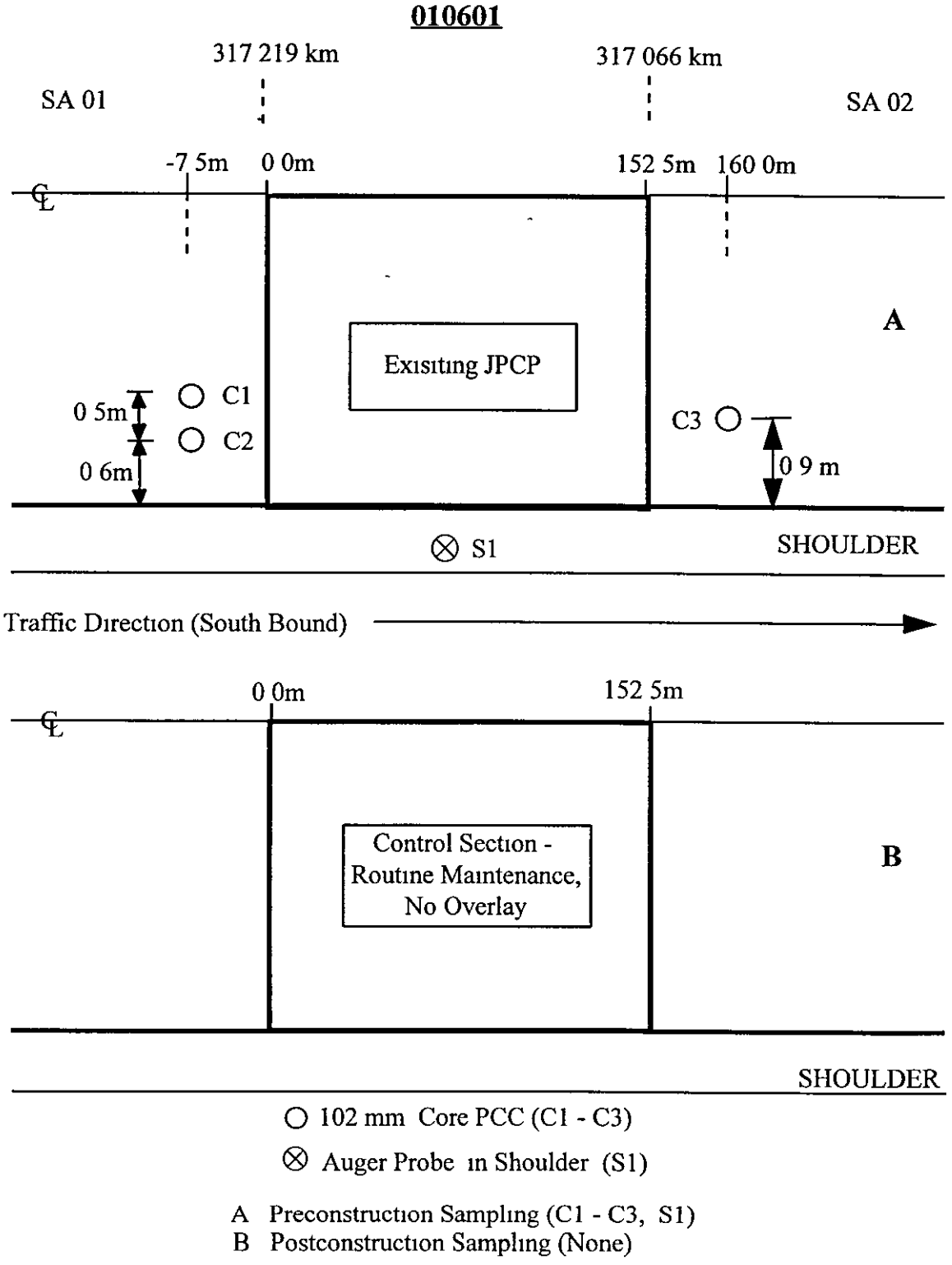
FIGURE B-2. PRECONSTRUCTION SAMPLING



Legend SA Sample Area

o 102 mm Core-HMAC (C27 - C58)

FIGURE B-3. POSTCONSTRUCTION SAMPLING



A Preconstruction Sampling (C1 - C3, S1)
B Postconstruction Sampling (None)

FIGURE B-4. SAMPLING PLAN FOR TEST SECTION 010601

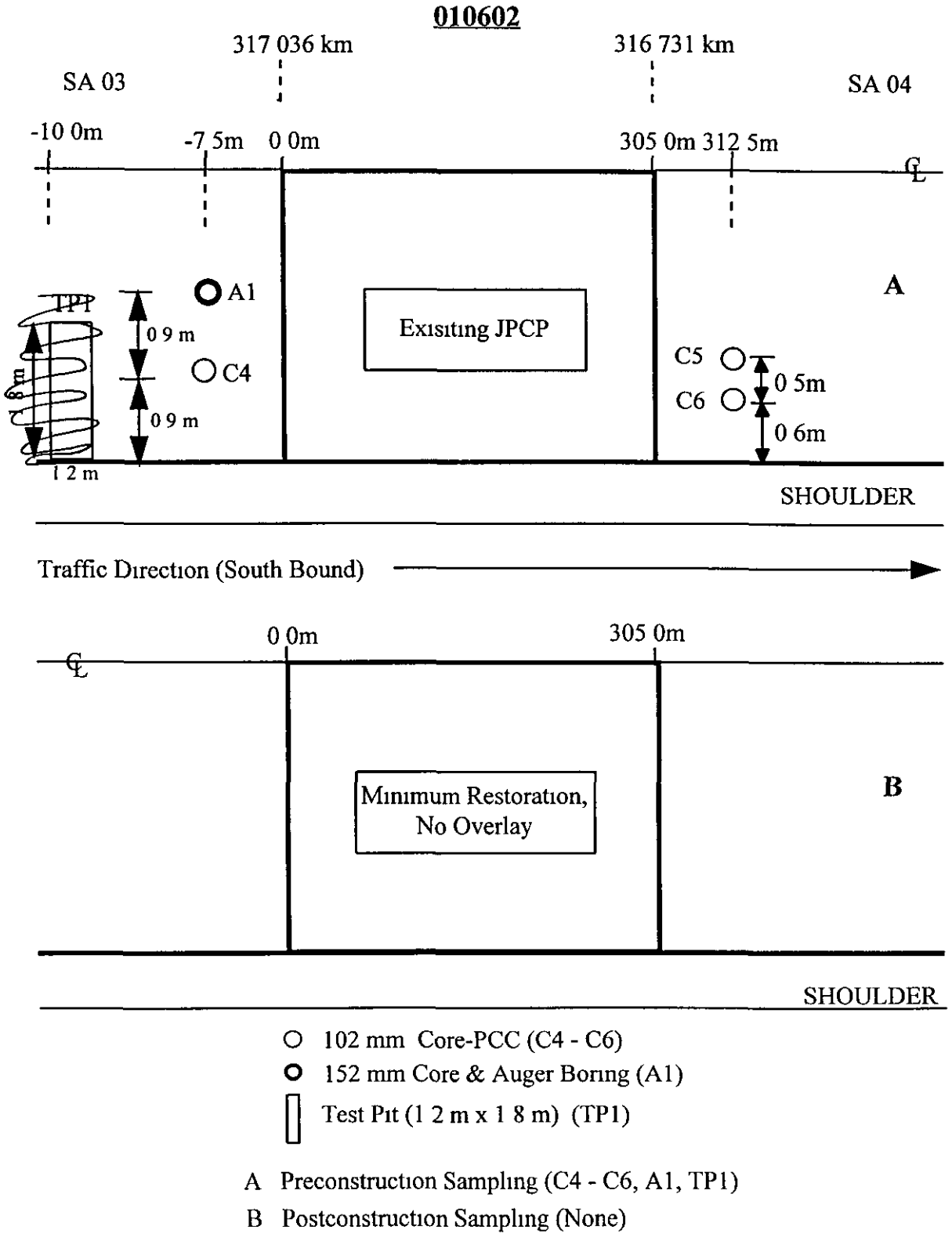
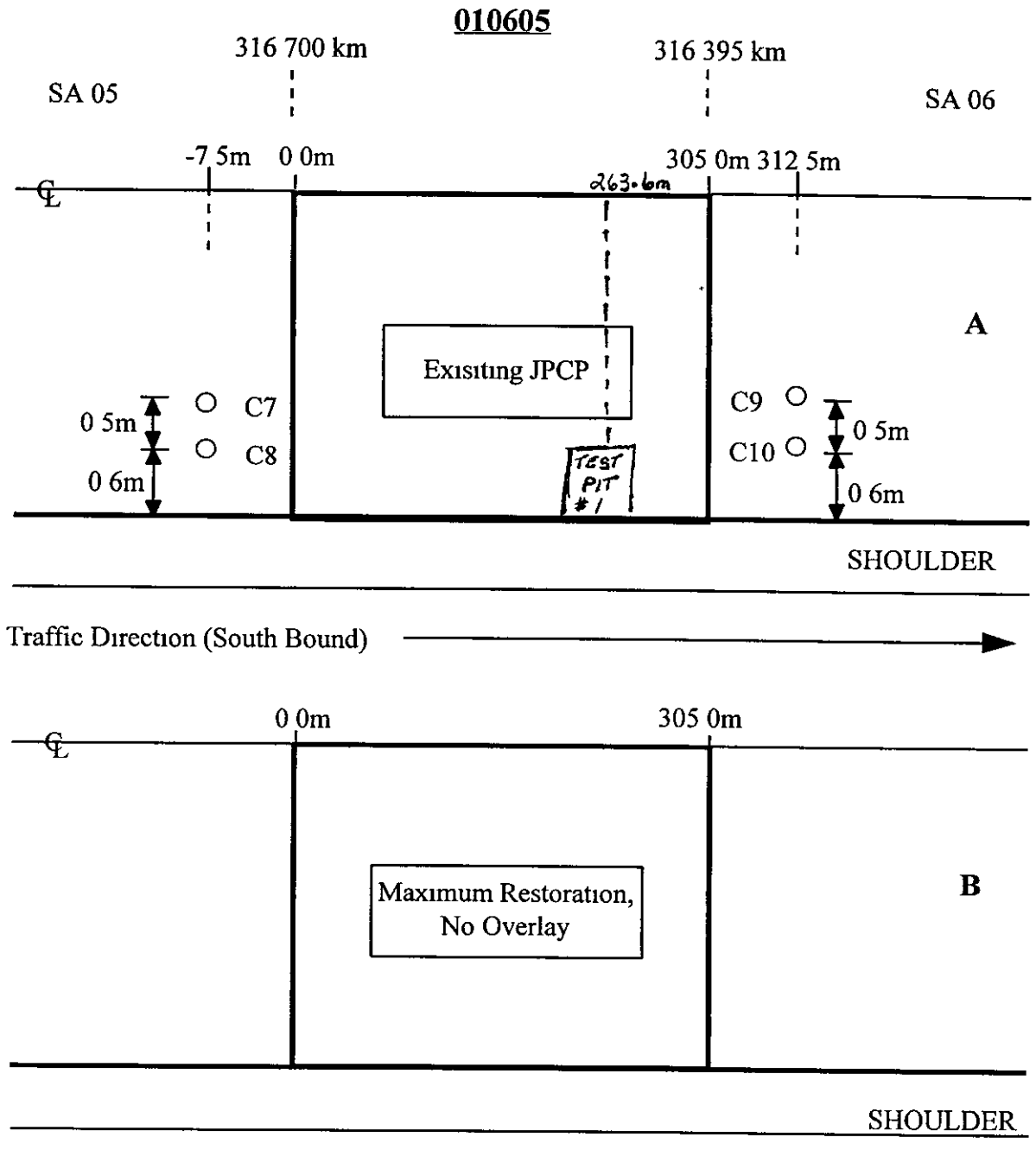


FIGURE B-5. SAMPLING PLAN FOR TEST SECTION 010602



○ 102 mm Core-PCC (C7 - C10)

A Preconstruction Sampling (C7 - C10)

B Postconstruction Sampling (None)

FIGURE B-6. SAMPLING PLAN FOR TEST SECTION 010605

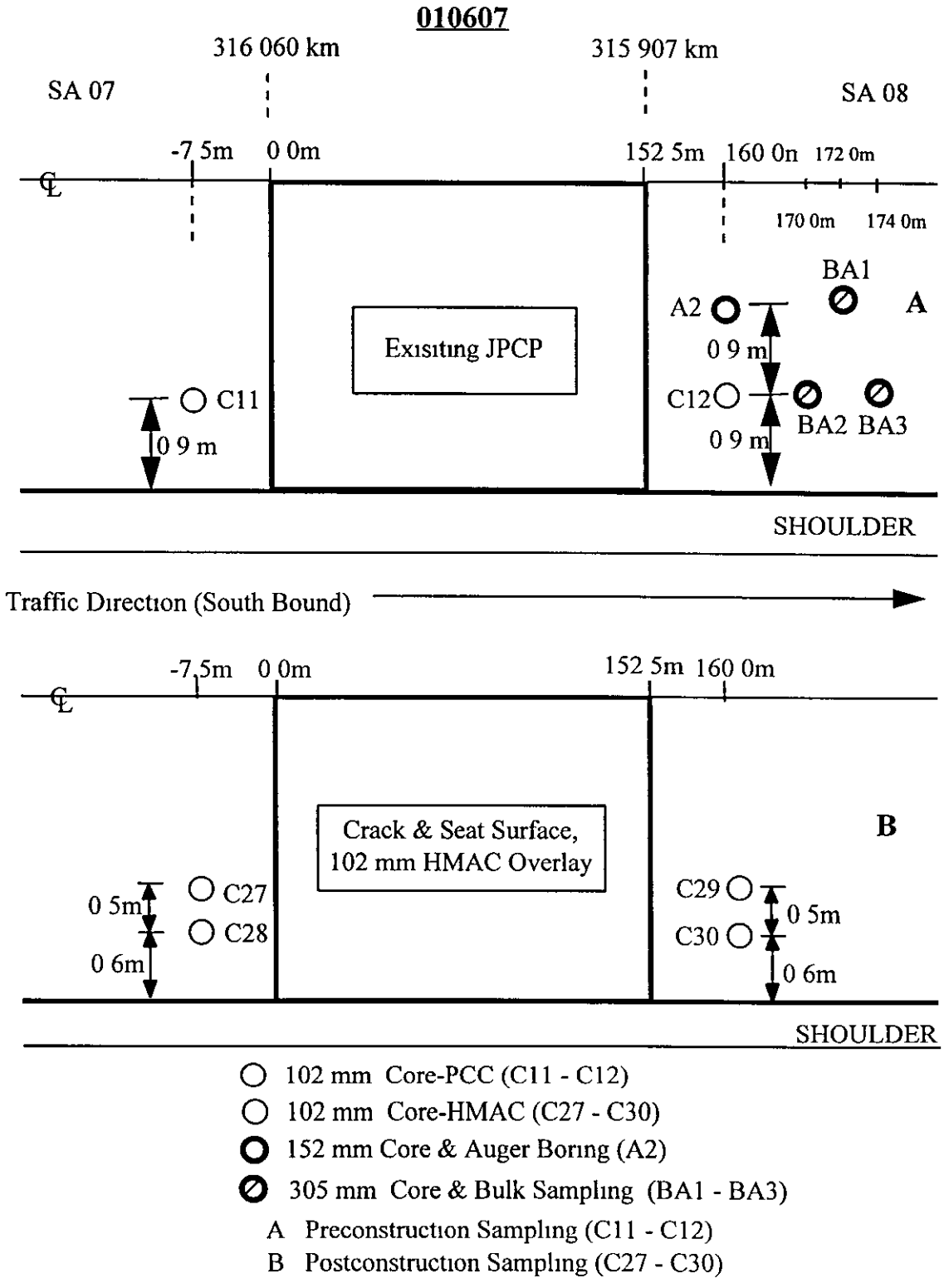


FIGURE B-7. SAMPLING PLAN FOR TEST SECTION 010607

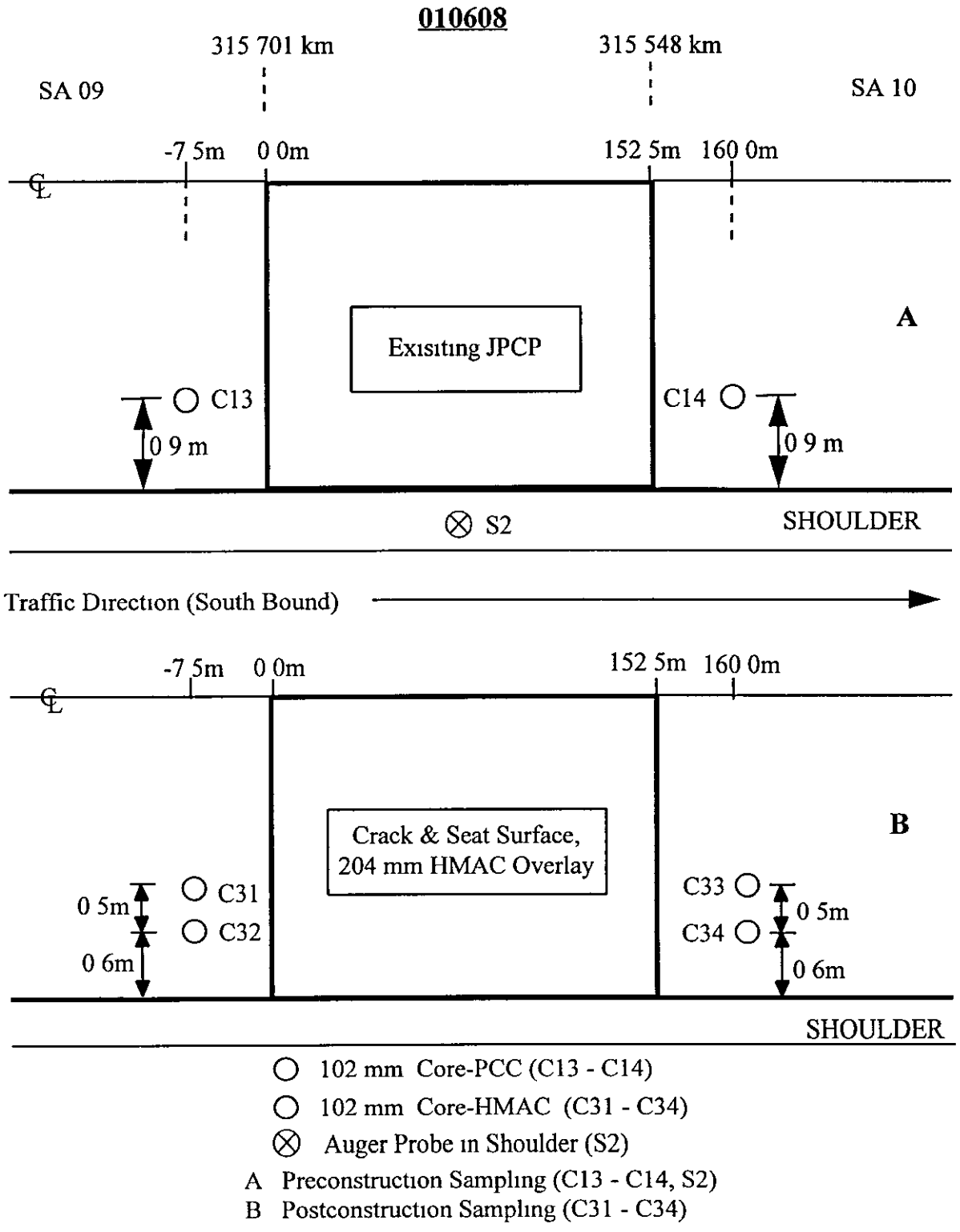
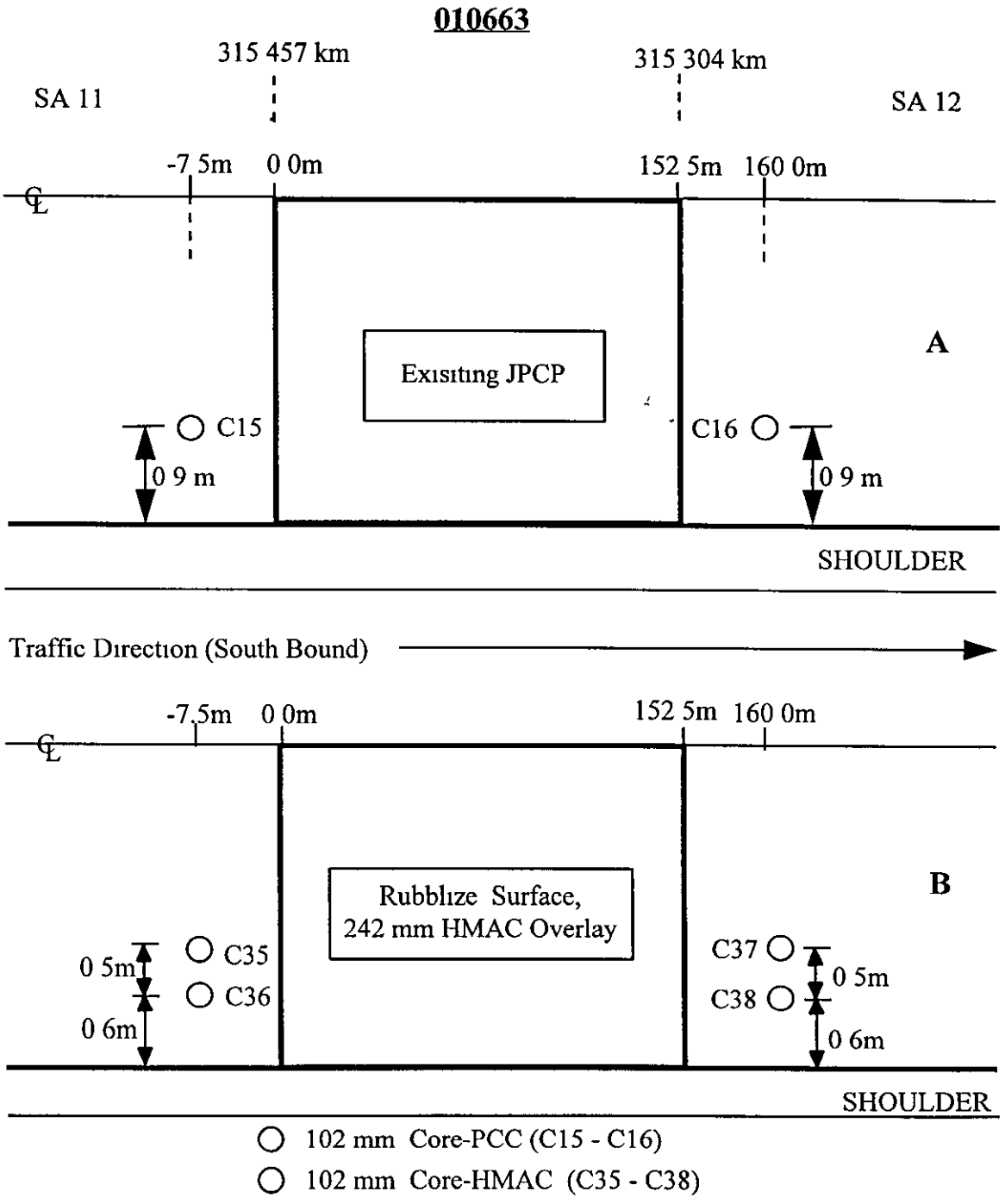


FIGURE B-8. SAMPLING PLAN FOR TEST SECTION 010608



A Preconstruction Sampling (C15 - C16)
B Postconstruction Sampling (C35 - C38)

FIGURE B-9. SAMPLING PLAN FOR TEST SECTION 010663

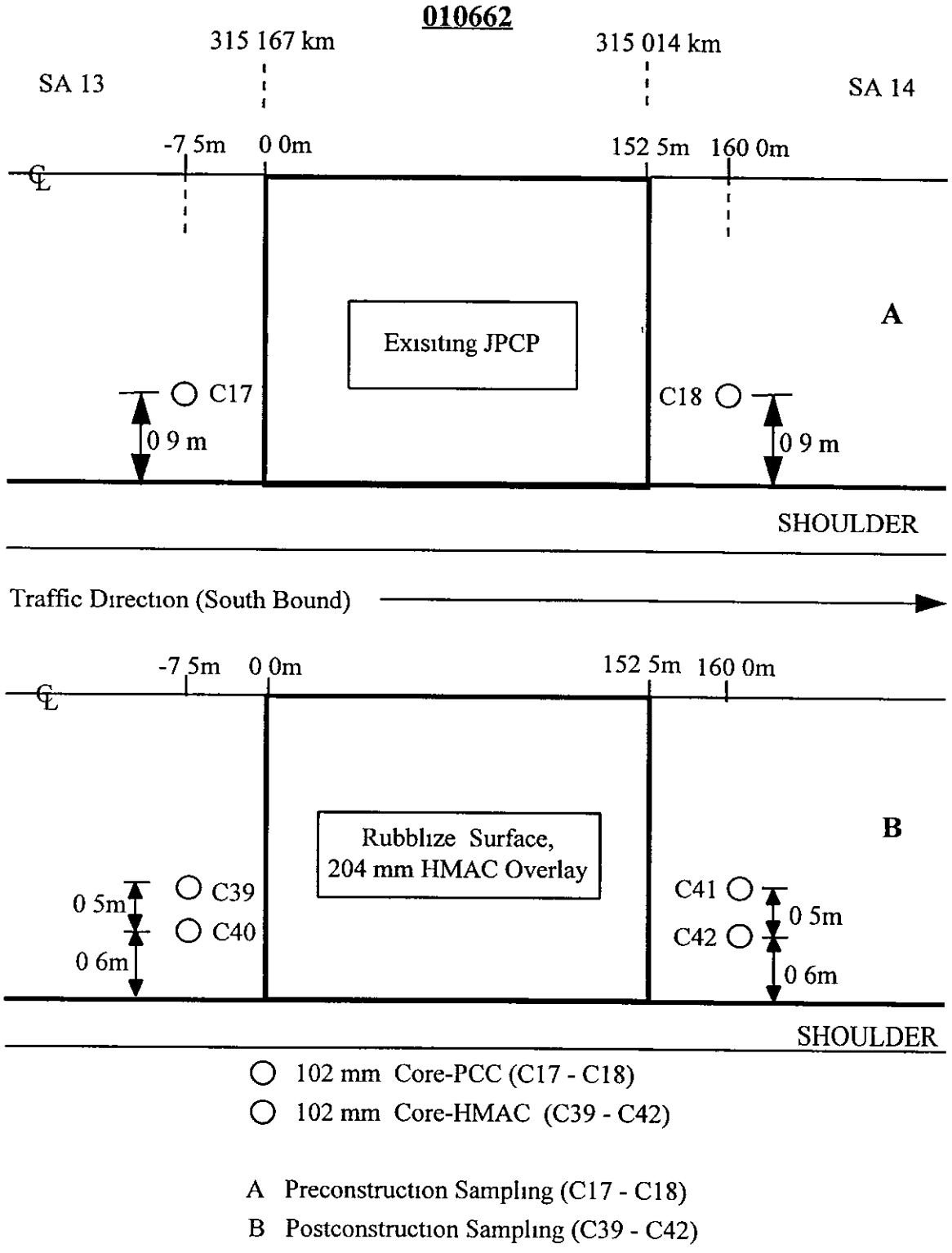


FIGURE B-10. SAMPLING PLAN FOR TEST SECTION 010662

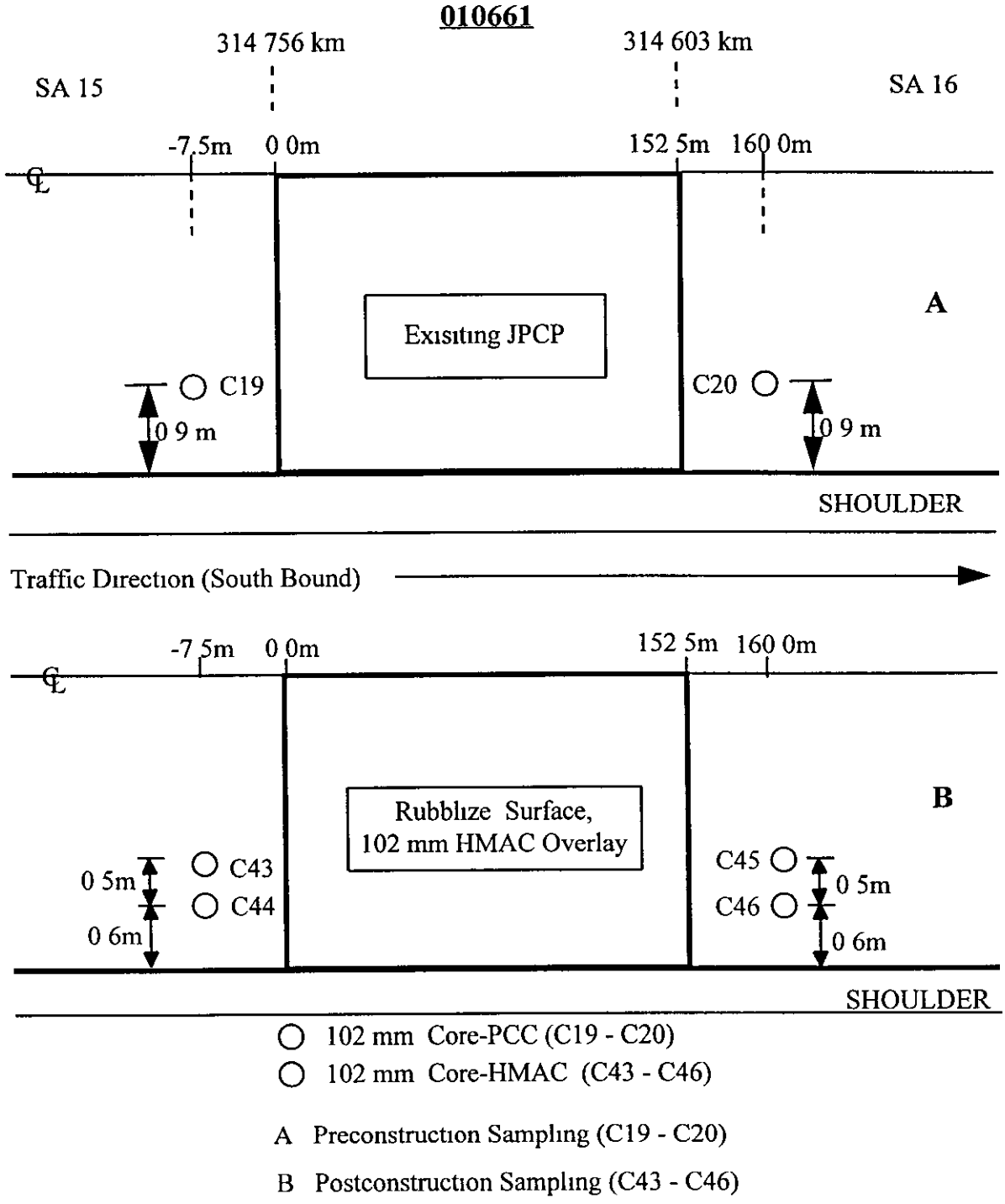


FIGURE B-11. SAMPLING PLAN FOR TEST SECTION 010661

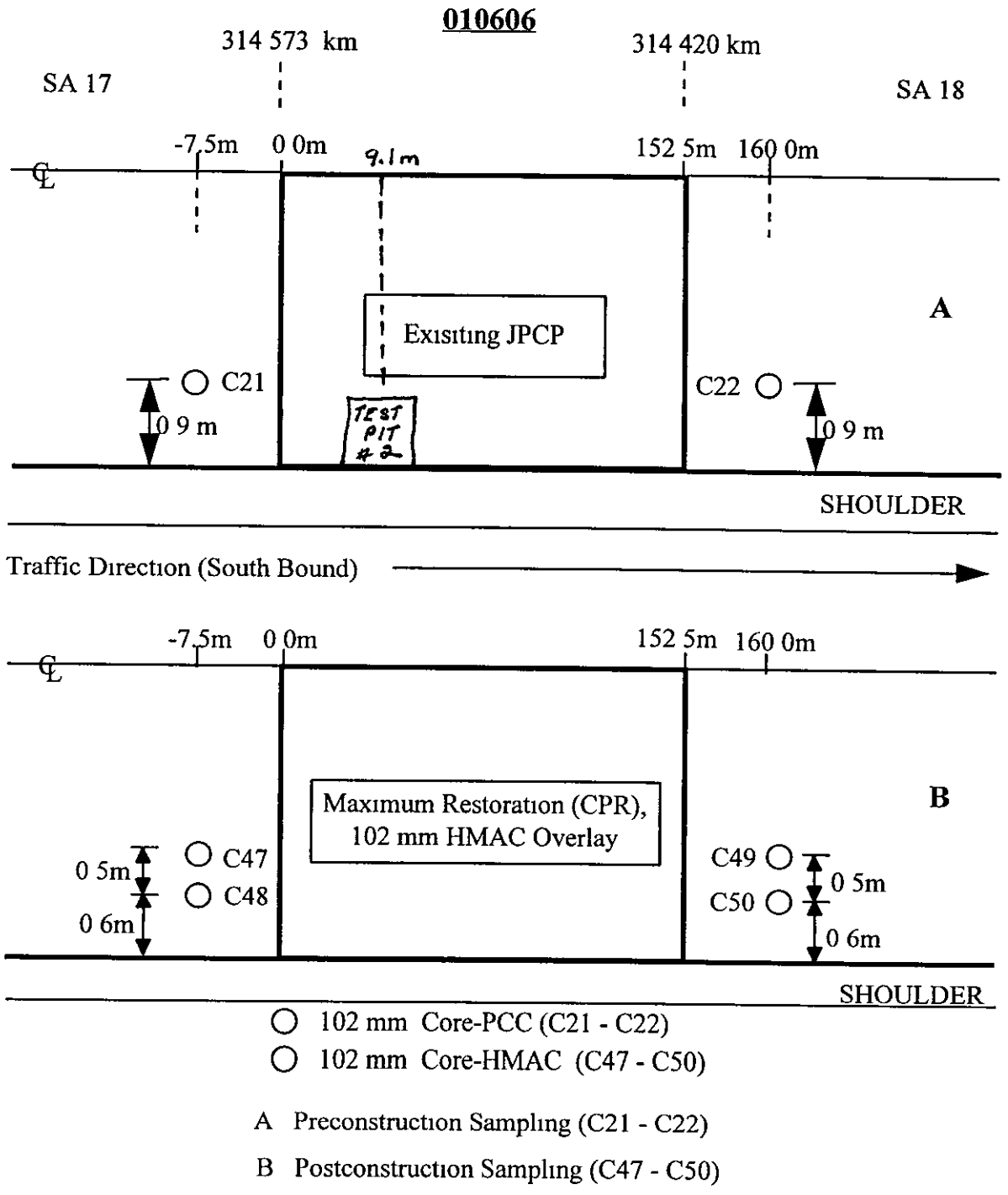


FIGURE B-12. SAMPLING PLAN FOR TEST SECTION 010606

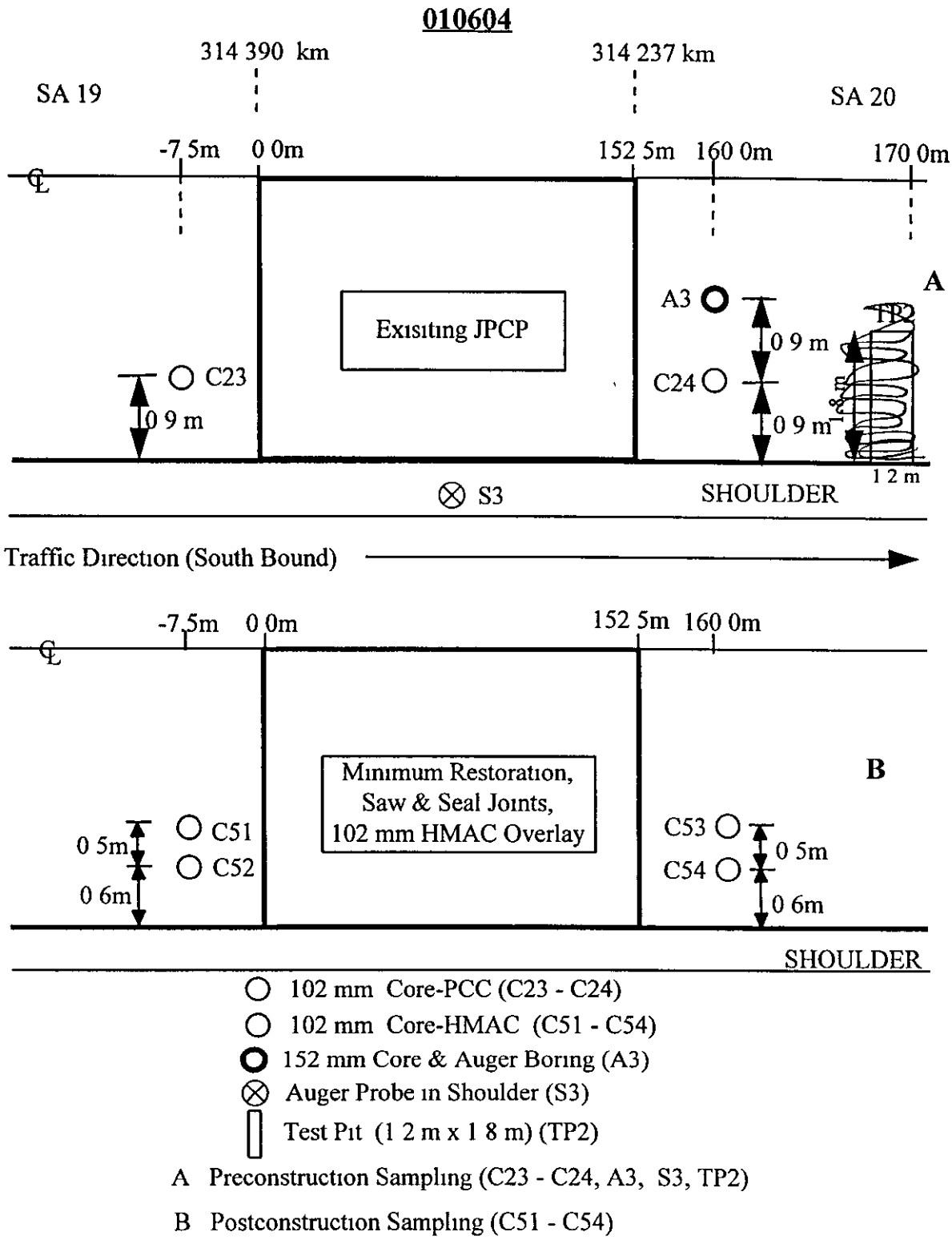


FIGURE B-13. SAMPLING PLAN FOR TEST SECTION 010604

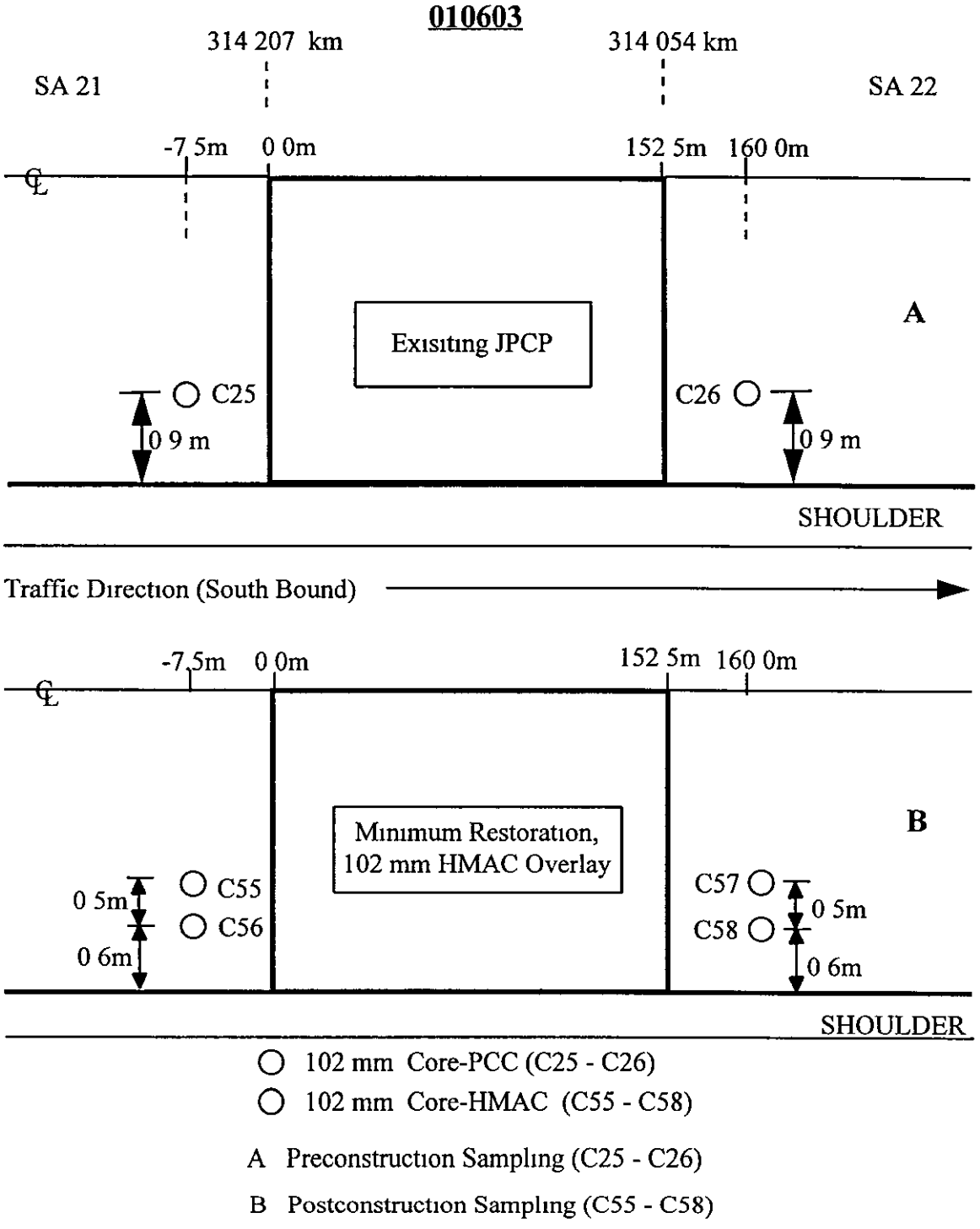


FIGURE B-14. SAMPLING PLAN FOR TEST SECTION 010603

TABLE B-3. SAMPLES TO BE SHIPPED TO THE STATE LABORATORY (OR THEIR DESIGNEE)

Sample Location	Sample Number	Lab Test Number [1]	Type of Sample
Portland Cement Concrete			
C1	CP01	1	102 mm Core
C2	CP02	1	102 mm Core
C3	CP03	2	102 mm Core
C4	CP04	1	102 mm Core
C5	CP05	2	102 mm Core
C6	CP06	2	102 mm Core
C7	CP07	1	102 mm Core
C8	CP08	1	102 mm Core
C9	CP09	2	102 mm Core
C10	CP10	2	102 mm Core
C11	CP11	1	102 mm Core
C12	CP12	2	102 mm Core
C13	CP13	1	102 mm Core
C14	CP14	2	102 mm Core
C15	CP15	1	102 mm Core
C16	CP16	2	102 mm Core
C17	CP17	1	102 mm Core
C18	CP18	2	102 mm Core
C19	CP19	1	102 mm Core
C20	CP20	2	102 mm Core
C21	CP21	1	102 mm Core
C22	CP22	2	102 mm Core
C23	CP23	1	102 mm Core
C24	CP24	2	102 mm Core
C25	CP25	1	102 mm Core
C26	CP26	2	102 mm Core

TABLE B-3. SAMPLES TO BE SHIPPED TO THE STATE LABORATORY (OR THEIR DESIGNEE) (Continued)

Sample Location	Sample Number	Lab Test Number (1)	Type of Sample
BA1	CP61	2	305 mm Core
BA2	CP62	2	305 mm Core
BA3	CP63	2	305 mm Core
Asphalt Concrete Overlay			
C~~32~~ 31	CA31	1	102 mm Core
C32	CA32	1	102 mm Core
C33	CA33	2	102 mm Core
C34	CA34	2	102 mm Core
C39	CA39	1	102 mm Core
C40	CA40	1	102 mm Core
C41	CA41	2	102 mm Core
C42	CA42	2	102 mm Core
C47	CA47	1	102 mm Core
C48	CA48	1	102 mm Core
C49	CA49	2	102 mm Core
C50	CA50	2	102 mm Core
C55	CA55	1	102 mm Core
C56	CA56	1	102 mm Core
C57	CA57	2	102 mm Core
C58	CA58	2	102 mm Core
B1	BA01	4	45 kg Bulk Sample
B2	BA02	4	45 kg Bulk Sample
B3	BA03	4	45 kg Bulk Sample
B4	BA04	4	45 kg Bulk Sample
B5	BA05	4	45 kg Bulk Sample
B6	BA06	4	45 kg Bulk Sample
B7	BA07	4	45 Kg BULK SAMPLE
B8	BA08	4	45 Kg BULK SAMPLE
B9	BA09	4	45 Kg BULK SAMPLE

TABLE B-3. SAMPLES TO BE SHIPPED TO THE STATE LABORATORY (OR THEIR DESIGNEE) (Continued)

Sample Location	Sample Number	Lab Test Number [1]	Type of Sample
COMBINED SAMPLE	**Dense-Graded Aggregate Base**		
BA1-BA3	BG01	2	23 kg Bulk Sample
~~BA2~~	~~BG02~~	~~2~~	~~23 kg Bulk Sample~~
~~BA3~~	~~BG03~~	~~2~~	~~23 kg Bulk Sample~~
TP1	BG55	1	23 kg Bulk Sample
TP2	BG56	2	23 kg Bulk Sample
COMBINED SAMPLE	**Subgrade**		
BA1-BA3	BS01	2	23 kg Bulk Sample
~~BA2~~	~~BS02~~	~~2~~	~~23 kg Bulk Sample~~
~~BA3~~	~~BS03~~	~~2~~	~~23 kg Bulk Sample~~
TP1	BS55	1	23 kg Bulk Sample
TP2	BS56	2	23 kg Bulk Sample
A1	TS02	1	Thin-Wall Tube
A2	TS04	2	Thin-Wall Tube
A3	TS06	2	Thin-Wall Tube

[1] Lab Test Number
- 1 Sample from Approach End of Section
- 2 Sample from Leave End of Section
- 3 Sample from Within Section
- 4 Sample From Plant

TABLE B-4. SAMPLES TO BE SHIPPED TO THE FHWA-LTPP TESTING CONTRACTOR LABORATORY

Sample Location	Sample Number	Lab Test Number	Type of Sample
Portland Cement Concrete			
A1	CP51	1	152 mm Core
A2	CP52	2	152 mm Core
A3	CP53	2	152 mm Core
Asphalt Concrete			
C27	CA27	1	102 mm Core
C28	CA28	1	102 mm Core
C29	CA29	2	102 mm Core
C30	CA30	2	102 mm Core
C35	CA35	1	102 mm Core
C36	CA36	1	102 mm Core
C37	CA37	2	102 mm Core
C38	CA38	2	102 mm Core
C43	CA43	1	102 mm Core
C44	CA44	1	102 mm Core
C45	CA45	2	102 mm Core
C46	CA46	2	102 mm Core
C51	CA51	1	102 mm Core
C52	CA52	1	102 mm Core
C53	CA53	2	102 mm Core
C54	CA54	2	102 mm Core
Dense-Graded Aggregate Base			
COMBINED SAMPLE (FROM 3 12" DIAMETER CORE HOLES) BA1-BA3	BG0~~1~~2	2	68 kg Bulk Sample
~~BA2~~	~~BG02~~	~~2~~	~~68 kg Bulk Sample~~
~~BA3~~	~~BG03~~	~~2~~	~~68 kg Bulk Sample~~

TABLE B-4. SAMPLES TO BE SHIPPED TO THE FHWA-LTPP TESTING CONTRACTOR LABORATORY (Continued)

Sample Location	Sample Number	Lab Test Number	Type of Sample
TP1	BG5~~8~~7	1	68 kg Bulk Sample
TP2	BG5~~6~~8	2	68 kg Bulk Sample
BA1	MG01	2	Moisture Content Jar Sample
BA2	MG02	2	Moisture Content Jar Sample
BA3	MG03	2	Moisture Content Jar Sample
TP1	MG55	1	Moisture Content Jar Sample
TP2	MG56	2	Moisture Content Jar Sample
COMBINED SAMPLES		**Subgrade**	
BA1-BA3	BS0~~1~~2	2	68 kg Bulk Sample
~~BA2~~	~~BS02~~	~~2~~	~~68 kg Bulk Sample~~
~~BA3~~	~~BS03~~	~~2~~	~~68 kg Bulk Sample~~
TP1	BS5~~8~~7	1	68 kg Bulk Sample
TP2	BS5~~6~~8	2	68 kg Bulk Sample
A1	TS01	1	Thin wall Tube Sample
A2	TS03	2	Thin wall Tube Sample
A3	TS05	2	Thin wall Tube Sample
BA1	MS01	2	Moisture Content Jar Sample
BA2	MS02	2	Moisture Content Jar Sample
BA3	MS03	2	Moisture Content Jar Sample
TP1	MS5~~8~~7	1	Moisture Content Jar Sample
TP2	MS5~~6~~8	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 Alabama SPS-6 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

Tables C-2 through C-4 provide 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-5 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-12 provide similar information for the FHWA/LTPP contracted laboratory

TABLE C-1. PROJECT LAYER NUMBERING

Layer Nº.	LTPP Description	Alabama Description
1	Subgrade	Subgrade
2	Dense Graded Aggregate Base (DGAB)	Aggregate Base
3	Jointed Plain Concrete Pavement (JPCP)	Jointed Plain Concrete Pavement (JPCP)
4	Dense Graded Hot Mix Asphalt Concrete	Bituminous Plant Mix Binder Course
5	Hot Mix Asphalt Concrete Surface Course (HMAC)	Bituminous Plant Mix Surface Course

TABLE C-2. ALABAMA SPS-6 LABORATORY TESTING PLANS - PRECONSTRUCTION

MATERIAL TYPE AND PROPERTIES	SHRP TEST DESIGNATION	SHRP PROTOCOL	Nº. OF TESTS PER LAYER	MATERIAL SOURCE/ [1] TEST LOCATIONS	TEST CONDUCTED BY: STATE	FHWA
PORTLAND CEMENT CONCRETE						
Compressive Strength	PC01	P61	13	C1,C3,C5,C7,C9,C11,C13,C15, C17,C19,C21,C23,C25	X	
Splitting Tensile Strength	PC02	P62	13	C2,C4,C6,C8,C10,C12,C14, C16,C18,C20,C22,C24,C26	X	
PCC Coefficient of Thermal Expansion	PC03	P63	3	A1,A2,A3		X
Static Modulus of Elasticity	PC04	P64	6	C3,C5,C7,C11,C15,C17	X	
PCC Unit Weight	PC05	P65	13	C1,C3,C5,C7,C9,C11,C13,C15, C17,C19,C21,C23,C25	X	
Core Examination/Thickness	PC06	P66	29	C1-C26, A1,A2,A3	X	X
UNBOUND GRANULAR BASE AND SUBBASE						
Particle Size Analysis	UG01	P41	3	TP1,[BA1-BA3],TP2		X
Sieve Analysis (Washed)	UG02	P41	3	TP1,[BA1-BA3],TP2		X
Atterberg Limits	UG04	P43	3	TP1,[BA1-BA3] TP2		X
Moisture-Density Relations	UG05	P44	3	TP1,[BA1-BA3],TP2		X
Resilient Modulus	UG07	P46	3	TP1,[BA1-BA3],TP2		X
Classification	UG08	P47	3	TP1,[BA1-BA3],TP2		X
Permeability	UG09	P48	3	TP1,[BA1-BA3],TP2	X	
Natural Moisture Content	UG10	P49	3	TP1,[BA1-BA3],TP2		X
SUBGRADE						
Sieve Analysis	SS01	P51	3	TP1,[BA1-BA3],TP2		X
Hydrometer to 0 001mm	SS02	P42	3	TP1,[BA1-BA3],TP2		X
Atterberg Limits	SS03	P43	3	TP1,[BA1-BA3],TP2		X
Classification	SS04	P52	6	TP1 [BA1-BA3],TP2, A1,A2,A3	X	X
Moisture-Density Relations	SS05	P55	3	TP1,[BA1-BA3],TP2		X
Resilient Modulus	SS07	P46	3	A1 A2,A3		X
Unit Weight	SS08	P56	6	TP1,[BA1-BA3],TP2, A1,A2,A3	X	
Natural Moisture Content	SS09	P49	3	TP1,[BA1-BA3] TP2		X

NOTE 1 Samples within brackets are from the same sampling location

TABLE C-3. ALABAMA SPS-6 LABORATORY TESTING PLANS FOR HMAC LOWER BINDER LAYER - POSTCONSTRUCTION

MATERIAL TYPE AND PROPERTIES	SHRP TEST DESIGNATION	SHRP PROTOCOL	Nº OF TESTS PER LAYER	MATERIAL SOURCE/ [1] TEST LOCATIONS	TEST CONDUCTED BY: STATE	FHWA
ASPHALTIC CONCRETE *						
Core Examination/Thickness	AC01	P01	32	All Cores	X	X
Bulk Specific Gravity	AC02	P02	32	All Cores	X	x
Maximum Specific Gravity	AC03	P03	3	B1,B2,B3	X	
Asphalt Content (Extraction)	AC04	P04	3	B1,B2,B3	X	
Moisture Susceptibility	AC05	P05	3	B1,B2,B3	X	
Resilient Modulus	AC07	P07	4	[C27 C28,C29], [C35,C36,C37], [C43,C44,C45], [C51,C52,C53]		X
Tensile Strength	AC07	P07	3	C30,C38,C46,C54		X
EXTRACTED AGGREGATE						
Bulk Specific Gravity						
Coarse Aggregate	AG01	P11	3	From Uncompacted Mix	X	
Fine Aggregate	AG02	P12	3	From Uncompacted Mix	X	
Type and Classification						
Coarse Aggregate	AG03	P13	3	From Uncompacted Mix	X	
Fine Aggregate	AG03		3	From Uncompacted Mix	X	
Gradation of Aggregate	AG04	P14	3	From Uncompacted Mix	X	
NAA Test for Fine Aggregate Particle Shape	AG05	P14A	3	From Uncompacted Mix	X	
ASPHALT CEMENT (FROM MIX)						
Abson Recovery	AE01	P21	3	From Uncompacted Mix	X	
Penetration at 10°C, 25°C 32°C (50°F, 77°F, 90°F)	AE02	P22	3	From Uncompacted Mix	X	
Specific Gravity at 16°C (60°F)	AE03	P23	3	From Uncompacted Mix	X	
Viscosity at 60°C & 135°C (140°F & 275°F)	AE05	P25	3	From Uncompacted Mix	X	

* Cores need to be split in order to test each bituminous layer

TABLE C-4. ALABAMA SPS-6 LABORATORY TESTING PLANS FOR HMAC UPPER BINDER LAYER - POSTCONSTRUCTION

MATERIAL TYPE AND PROPERTIES	SHRP TEST DESIGNATION	SHRP PROTOCOL	Nº OF TESTS PER LAYER	MATERIAL SOURCE/ [1] TEST LOCATIONS	TEST CONDUCTED BY: STATE	FHWA
ASPHALTIC CONCRETE *						
Core Examination/Thickness	AC01	P01	32	All Cores	X	X
Bulk Specific Gravity	AC02	P02	32	All Cores	X	x
Maximum Specific Gravity	AC03	P03	3	B4,B5,B6	X	
Asphalt Content (Extraction)	AC04	P04	3	B4,B5,B6	X	
Moisture Susceptibility	AC05	P05	3	B4,B5,B6	X	
Resilient Modulus	AC07	P07	4	[C27,C28,C29], [C35,C36,C37], [C43,C44,C45], [C51,C52,C53]		X
Tensile Strength	AC07	P07	3	C30,C38,C46,C54		X
EXTRACTED AGGREGATE						
Bulk Specific Gravity						
Coarse Aggregate	AG01	P11	3	From Uncompacted Mix	X	
Fine Aggregate	AG02	P12	3	From Uncompacted Mix	X	
Type and Classification						
Coarse Aggregate	AG03	P13	3	From Uncompacted Mix	X	
Fine Aggregate	AG03		3	From Uncompacted Mix	X	
Gradation of Aggregate	AG04	P14	3	From Uncompacted Mix	X	
NAA Test for Fine Aggregate Particle Shape	AG05	P14A	3	From Uncompacted Mix	X	
ASPHALT CEMENT (FROM MIX)						
Abson Recovery	AE01	P21	3	From Uncompacted Mix	X	
Penetration at 10°C, 25°C, 32°C (50°F, 77°F, 90°F)	AE02	P22	3	From Uncompacted Mix	X	
Specific Gravity at 16°C (60°F)	AE03	P23	3	From Uncompacted Mix	X	
Viscosity at 60°C & 135°C (140°F & 275°F)	AE05	P25	3	From Uncompacted Mix	X	

* Cores need to be split in order to test each bituminous layer

TABLE C-~~4~~ 5. ALABAMA SPS-6 LABORATORY TESTING PLANS FOR HMAC SURFACE LAYER - POSTCONSTRUCTION

MATERIAL TYPE AND PROPERTIES	SHRP TEST DESIGNATION	SHRP PROTOCOL	Nº OF TESTS PER LAYER	MATERIAL SOURCE/ [1] TEST LOCATIONS	TEST CONDUCTED BY: STATE	FHWA
ASPHALTIC CONCRETE *						
Core Examination/Thickness	AC01	P01	32	All Cores	X	X
Bulk Specific Gravity	AC02	P02	32	All Cores	X	X
Maximum Specific Gravity	AC03	P03	3	~~B4,B5,B6~~ B7, B8, B9	X	
Asphalt Content (Extraction)	AC04	P04	3	~~B4,B5,B6~~ B7, B8, B9	X	
Moisture Susceptibility	AC05	P05	3	~~B4,B5,B6~~ B7, B8, B9	X	
Resilient Modulus	AC07	P07	4	[C27,C28,C29], [C35,C36,C37], [C43,C44,C45], [C51,C52,C53]		X
Tensile Strength	AC07	P07	3	C30,C38,C46,C54		X
EXTRACTED AGGREGATE						
Bulk Specific Gravity						
Coarse Aggregate	AG01	P11	3	From Uncompacted Mix	X	
Fine Aggregate	AG02	P12	3	From Uncompacted Mix	X	
Type and Classification						
Coarse Aggregate	AG03	P13	3	From Uncompacted Mix	X	
Fine Aggregate	AG03		3	From Uncompacted Mix	X	
Gradation of Aggregate	AG04	P14	3	From Uncompacted Mix	X	
NAA Test for Fine Aggregate Particle Shape	AG05	P14A	3	From Uncompacted Mix	X	
ASPHALT CEMENT (FROM MIX)						
Abson Recovery	AE01	P21	3	From Uncompacted Mix	X	
Penetration at 10°C, 25°C, 32°C (50°F, 77°F, 90°F)	AE02	P22	3	From Uncompacted Mix	X	
Specific Gravity at 16°C (60°F)	AE03	P23	3	From Uncompacted Mix	X	
Viscosity at 60°C & 135°C (140°F & 275°F)	AE05	P25	3	From Uncompacted Mix	X	

* Cores need to be split in order to test each bituminous layer

FOOTNOTE (1) REFERENCE SHEET FOR TABLES C-~~5~~ 6 THROUGH C-12

Note: All of the core specimens noted herein shall be stored for possible future use

(1) Sample Storage

a Environmentally protected and controlled storeroom at 5-21°C (40-70°F)

b Environmentally protected and controlled storeroom at 5-38°C (40-100°F)

c Thin-walled tube samples of the subgrade that should be stored in a fully supported condition and at temperatures between 5°C (40°F) and 21°C (70°F) in an environmentally protected storeroom They shall be stored on their ends and shall always be stored in a vertical position with respect to the longitudinal axis of the tube in the same orientation as that retrieved from the field

TABLE C-~~5~~6. TRACKING TABLE OF PORTLAND CEMENT 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	CP01	1	PC06/P66	PC05/P65	PC01/P61		No	(a)	Yes
C2	CP02	1	PC06/P66	PC02/P62			No	(a)	Yes
C3	CP03	2	PC06/P66	PC05/P65	PC04/P64	PC01/P61	No	(a)	Yes
C4	CP04	1	PC06/P66	PC02/P62			No	(a)	Yes
C5	CP05	2	PC06/P66	PC05/P65	PC04/P64	PC01/P61	No	(a)	Yes
C6	CP06	2	PC06/P66	PC02/P62			No	(a)	Yes
C7	CP07	1	PC06/P66	PC05/P65	PC04/P64	PC01/P61	No	(a)	Yes
C8	CP08	1	PC06/P66	PC02/P62			No	(a)	Yes
C9	CP09	2	PC06/P66	PC05/P65	PC01/P61		No	(a)	Yes
C10	CP10	2	PC06/P66	PC02/P62			No	(a)	Yes
C11	CP11	1	PC06/P66	PC05/P65	PC04/P64	PC01/P61	No	(a)	Yes
C12	CP12	2	PC06/P66	PC02/P62			No	(a)	Yes
C13	CP13	1	PC06/P66	PC05/P65	PC01/P61		No	(a)	Yes
C14	CP14	2	PC06/P66	PC02/P62			No	(a)	Yes
C15	CP15	1	PC06/P66	PC05/P65	PC04/P64	PC01/P61	No	(a)	Yes
C16	CP16	2	PC06/P66	PC02/P62			No	(a)	Yes
C17	CP17	1	PC06/P66	PC05/P65	PC04/P64	PC01/P61	No	(a)	Yes
C18	CP18	2	PC06/P66	PC02/P62			No	(a)	Yes
C19	CP19	1	PC06/P66	PC05/P65	PC01/P61		No	(a)	Yes
C20	CP20	2	PC06/P66	PC02/P62			No	(a)	Yes
C21	CP21	1	PC06/P66	PC05/P65	PC01/P61		No	(a)	Yes
C22	CP22	2	PC06/P66	PC02/P62			No	(a)	Yes
C23	CP23	1	PC06/P66	PC05/P65	PC01/P61		No	(a)	Yes
C24	CP24	2	PC06/P66	PC02/P62			No	(a)	Yes
C25	CP25	1	PC06/P66	PC05/P65	PC01/P61		No	(a)	Yes
C26	CP26	2	PC06/P66	PC02/P62			No	(a)	Yes

TABLE C-~~6~~ 7. TRACKING TABLE OF ASPHALT CONCRETE TESTING IN THE STATE LABORATORY (OR THEIR DESIGNEE)

Sample Location	Sample Number	Lab Test Number [1]	Steps Involved in Laboratory Handling and Testing Sequence						
			Required Laboratory Tests Per Layer				Extra Sample	Sample Storage	Sample Disposed?
			First	Second	Third	Fourth			
C31	CA31	1	AC01/P01	AC02/P02			Yes	(a)	No
C32	CA32	1	AC01/P01	AC02/P02			Yes	(a)	No
C33	CA33	2	AC01/P01	AC02/P02			Yes	(a)	No
C34	CA34	2	AC01/P01	AC02/P02			Yes	(a)	No
C39	CA39	1	AC01/P01	AC02/P02			Yes	(a)	No
C40	CA40	1	AC01/P01	AC02/P02			Yes	(a)	No
C41	CA41	2	AC01/P01	AC02/P02			Yes	(a)	No
C42	CA42	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
C50	CA50	2	AC01/P01	AC02/P02			Yes	(a)	No
C55	CA55	1	AC01/P01	AC02/P02			Yes	(a)	No
C56	CA56	1	AC01/P01	AC02/P02			Yes	(a)	No
C57	CA57	2	AC01/P01	AC02/P02			Yes	(a)	No
C58	CA58	2	AC01/P01	AC02/P02			Yes	(a)	No
B1	BA01	3	See Figure C-1				No	(a)	Yes
B2	BA02	3	See Figure C-1				No	(a)	Yes
B3	BA03	3	See Figure C-1				No	(a)	Yes
B4	BA04	3	See Figure C-1				No	(a)	Yes
B5	BA05	3	See Figure C-1				No	(a)	Yes
B6	BA06	3	See Figure C-1				No	(a)	Yes
B7	BA07	3	"				"	"	"
B8	BA08	3	"				"	"	"
B9	BA09	3	"				"	"	"

(1) Lab Test Number

1 Sample from Approach End of Section

2 Sample from Leave End of Section

3 Sample from Within Section

TABLE C-~~7~~ 8. TRACKING TABLE OF DENSE GRADED AGGREGATE 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			
BA1-BA3 ~~BA1~~	BG01	2	UG09/P48				No	(b)	Yes
~~BA2~~	~~BG02~~	~~2~~	~~UG09/P48~~				~~No~~	~~(b)~~	~~Yes~~
~~BA3~~	~~BG03~~	~~2~~	~~UG09/P48~~				~~No~~	~~(b)~~	~~Yes~~
TP1	BG55	1	UG09/P48				No	(b)	Yes
TP2	BG56	2	UG09/P48				No	(b)	Yes

TABLE C-~~8~~9. TRACKING TABLE OF SUBGRADE 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			
BA1-BA3 ~~BA1~~	BS01	2	No testing - samples stored				Yes	(b)	No
~~BA2~~	~~BS02~~	~~2~~	~~No testing - samples stored~~				~~Yes~~	~~(b)~~	~~No~~
~~BA3~~	~~BS03~~	~~2~~	~~No testing - samples stored~~				~~Yes~~	~~(b)~~	~~No~~
TP1	BS55	1	No testing - samples stored				Yes	(b)	No
TP2	BS56	2	No testing - samples stored				Yes	(b)	No
A1	TS02	1	SS04/P52	SS08/P56			No	(c)	Yes
A2	TS04	2	SS04/P52	SS08/P56			No	(c)	Yes
A3	TS06	2	SS04/P52	SS08/P56			No	(c)	Yes

TABLE C-~~9~~ 10. TRACKING TABLE OF PORTLAND CEMENT 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			
A1	CP ~~CA~~51	1	PC06/P66	PC03/P63			No	(a)	Yes
A2	CP ~~CA~~52	2	PC06/P66	PC03/P63			No	(a)	Yes
A3	CP ~~CA~~53	2	PC06/P66	PC03/P63			No	(a)	Yes

TABLE C-~~10~~11. TRACKING TABLE OF ASPHALT CONCRETE 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 (1)	Sample Disposed?
			First	Second	Third	Fourth			
C27	CA27	1	AC01/P01	AC02/P02	AC07/P07		No	(a)	Yes
C28	CA28	1	AC01/P01	AC02/P02	AC07/P07		No	(a)	Yes
C29	CA29	2	AC01/P01	AC02/P02	AC07/P07		No	(a)	Yes
C30	CA30	2	AC01/P01	AC02/P02		AC07/P07 (ITS)	No	(a)	Yes
C35	CA35	1	AC01/P01	AC02/P02	AC07/P07		No	(a)	Yes
C36	CA36	1	AC01/P01	AC02/P02	AC07/P07		No	(a)	Yes
C37	CA37	2	AC01/P01	AC02/P02	AC07/P07		No	(a)	Yes
C38	CA38	2	AC01/P01	AC02/P02		AC07/P07 (ITS)	No	(a)	Yes
C43	CA43	1	AC01/P01	AC02/P02	AC07/P07		No	(a)	Yes
C44	CA44	1	AC01/P01	AC02/P02	AC07/P07		No	(a)	Yes
C45	CA45	2	AC01/P01	AC02/P02	AC07/P07		No	(a)	Yes
C46	CA46	2	AC01/P01	AC02/P02		AC07/P07 (ITS)	No	(a)	Yes
C51	CA51	1	AC01/P01	AC02/P02	AC07/P07		No	(a)	Yes
C52	CA52	1	AC01/P01	AC02/P02	AC07/P07		No	(a)	Yes
C53	CA53	2	AC01/P01	AC02/P02	AC07/P07		No	(a)	Yes
C54	CA54	2	AC01/P01	AC02/P02		AC07/P07 (ITS)	No	(a)	Yes

TABLE C-~~11~~ 12. 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			
BA1-BA3 ~~BA1~~	BG02 ~~BG01~~	2	UG01/P41	UG02/P41	UG04/P43	UG08/P47	UG05/P44	UG07/P46	No	(b)	Yes
~~BA2~~	~~BG02~~	~~2~~	~~UG01/P41~~	~~UG02/P41~~	~~UG04/P43~~	~~UG08/P47~~	~~UG05/P44~~	~~UG07/P46~~	~~No~~	~~(b)~~	~~Yes~~
~~BA3~~	~~BG03~~	~~2~~	~~UG01/P41~~	~~UG02/P41~~	~~UG04/P43~~	~~UG08/P47~~	~~UG05/P44~~	~~UG07/P46~~	~~No~~	~~(b)~~	~~Yes~~
TP1	BG57 ~~BG55~~	1	UG01/P41	UG02/P41	UG04/P43	UG08/P47	UG05/P44	UG07/P46	No	(b)	Yes
TP2	BG58 ~~BG56~~	2	UG01/P41	UG02/P41	UG04/P43	UG08/P47	UG05/P44	UG07/P46	No	(b)	Yes
BA1	MG01	2	UG10/P49						No	(b)	Yes
BA2	MG02	2	UG10/P49						No	(b)	Yes
BA3	MG03	2	UG10/P49						No	(b)	Yes
TP1	MG57 ~~MG55~~	1	UG10/P49						No	(b)	Yes
TP2	MG58 ~~MG56~~	2	UG10/P49						No	(b)	Yes

TABLE C-~~12~~ 13. TRACKING TABLE OF SUBGRADE 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			
BA1-BA3 ~~BA1~~	BS02 ~~BS01~~	2	SS01/P51	SS02/P42	SS03/P43	SS04/P52	SS05/P55		No	(b)	Yes
~~BA2~~	~~BS02~~	~~2~~	~~SS01/P51~~	~~SS02/P42~~	~~SS03/P43~~	~~SS04/P52~~	~~SS05/P55~~		~~No~~	~~(b)~~	~~Yes~~
~~BA3~~	~~BS03~~	~~2~~	~~SS01/P51~~	~~SS02/P42~~	~~SS03/P43~~	~~SS04/P52~~	~~SS05/P55~~		~~No~~	~~(b)~~	~~Yes~~
TP1	BS57 ~~BS55~~	1	SS01/P51	SS02/P42	SS03/P43	SS04/P52	SS05/P55		No	(b)	Yes
TP2	BS58 ~~BS56~~	2	SS01/P51	SS02/P42	SS03/P43	SS04/P52	SS05/P55		No	(b)	Yes
A1	TS01	1	SS04/P52	SS07/P46					No	(c)	Yes
A2	TS03	2	SS04/P52	SS07/P46					No	(c)	Yes
A3	TS05	2	SS04/P52	SS07/P46					No	(c)	Yes
BA1	MS01	2	SS09/P49	SS07/P46 *					No	(b)	Yes
BA2	MS02	2	SS09/P49	SS07/P46 *					No	(b)	Yes
BA3	MS03	2	SS09/P49	SS07/P46 *					No	(b)	Yes
TP1	MS57 ~~MS55~~	1	SS09/P49	SS07/P46 *					No	(b)	Yes
TP2	MS58 ~~MS56~~	2	SS09/P49	SS07/P46 *					No	(b)	Yes

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

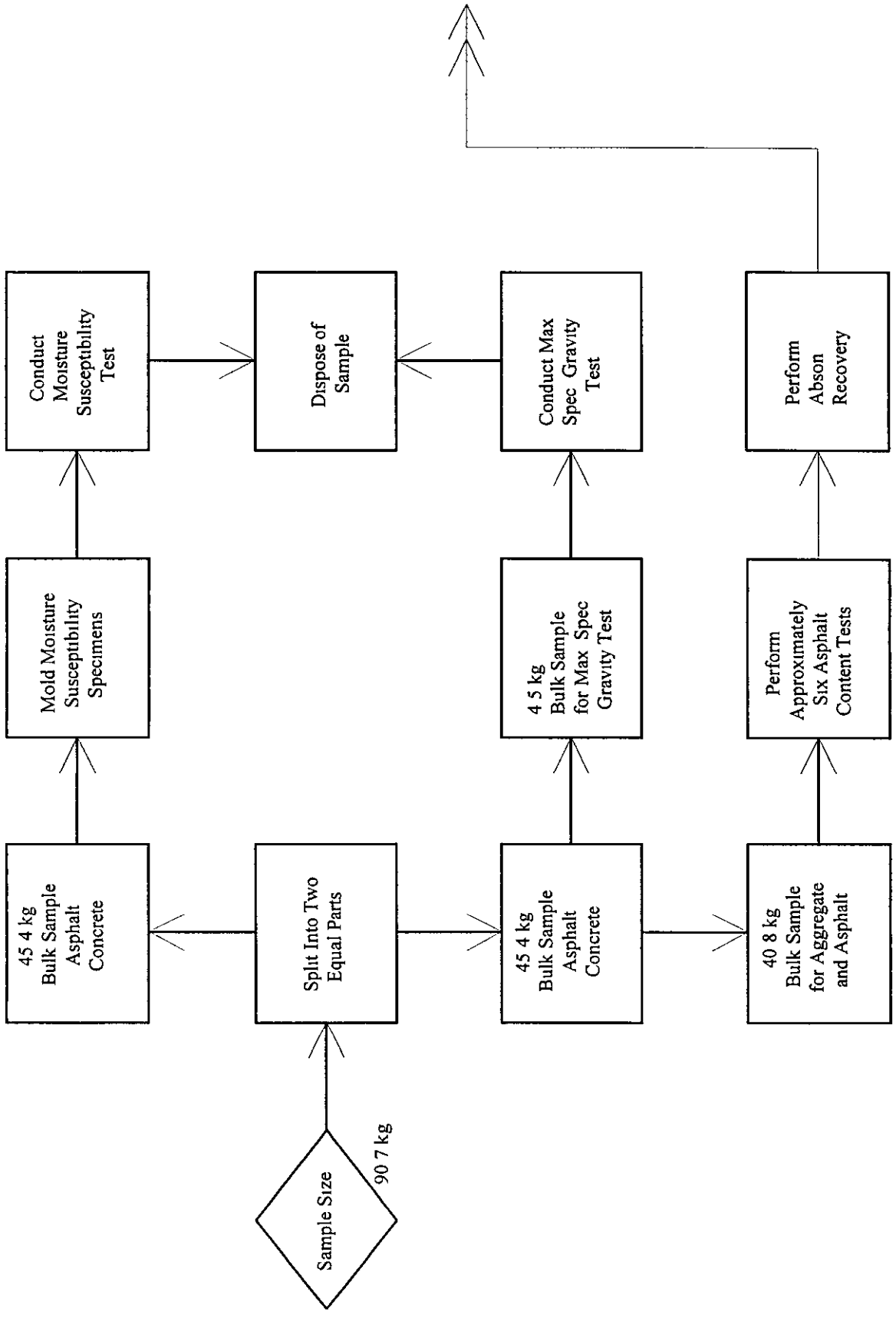


FIGURE C-1. FLOWCHART FOR ASPHALT CONCRETE BULK SAMPLES

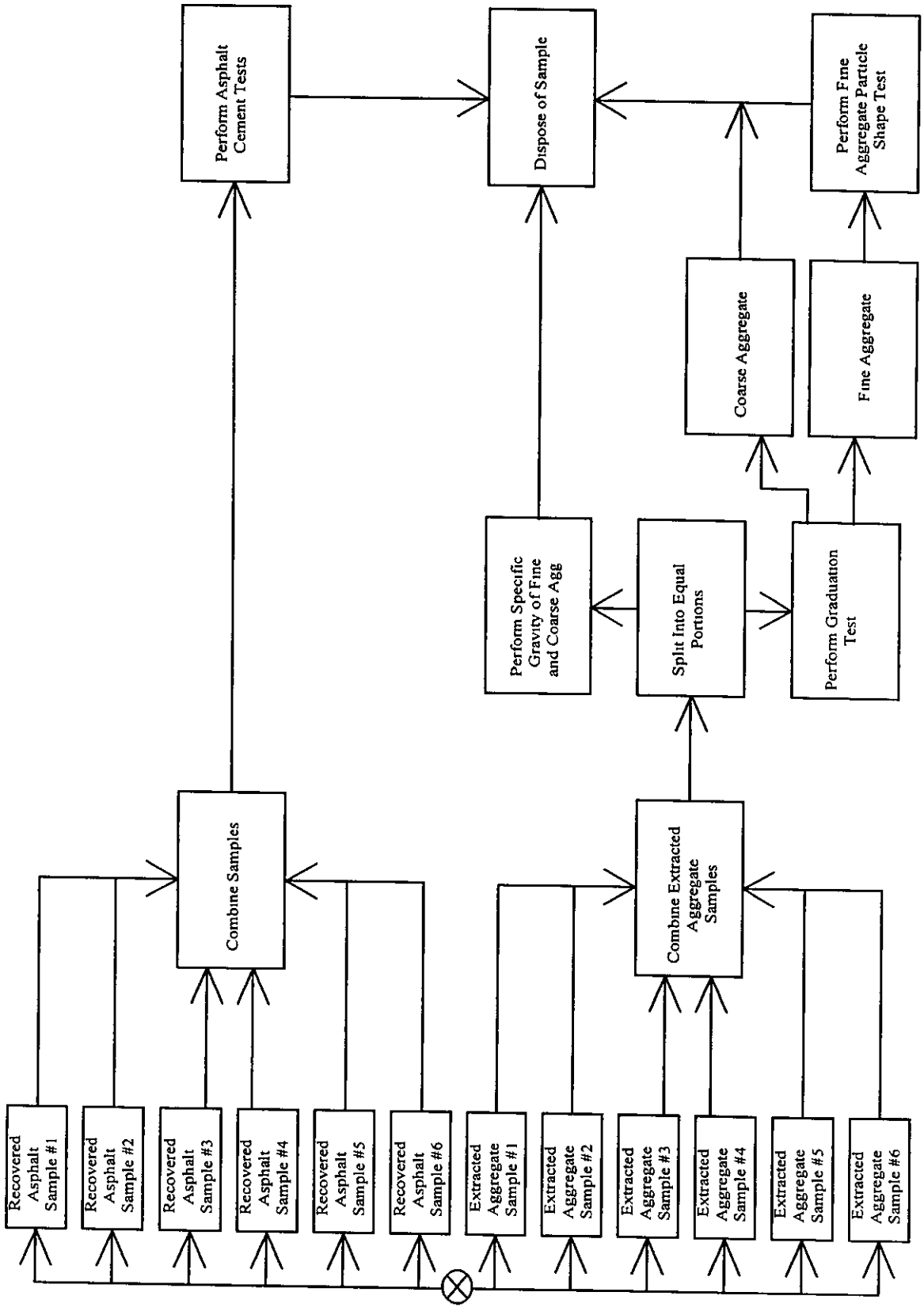


FIGURE C.1. FLOWCHART FOR ASPHALT CONCRETE BULK SAMPLES (Continued)

APPENDIX C

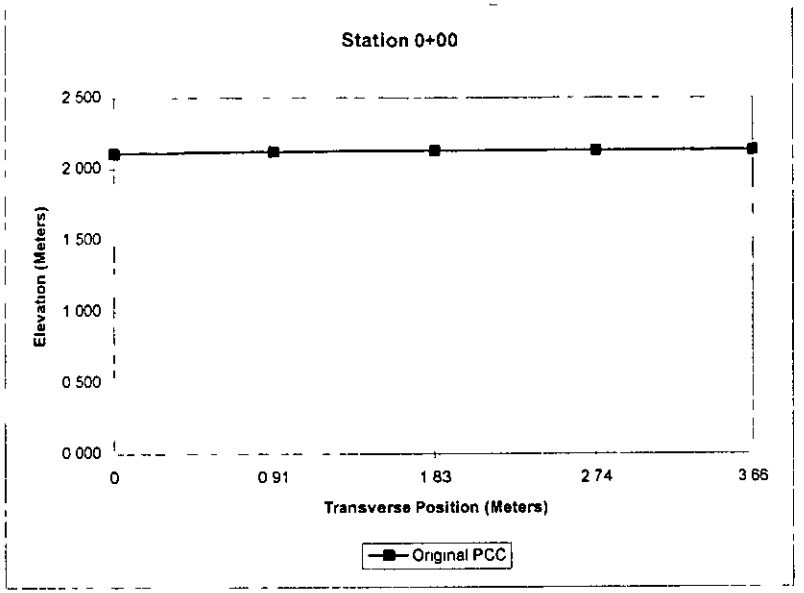
CROSS-PROFILES OF HMAC OVERLAYS

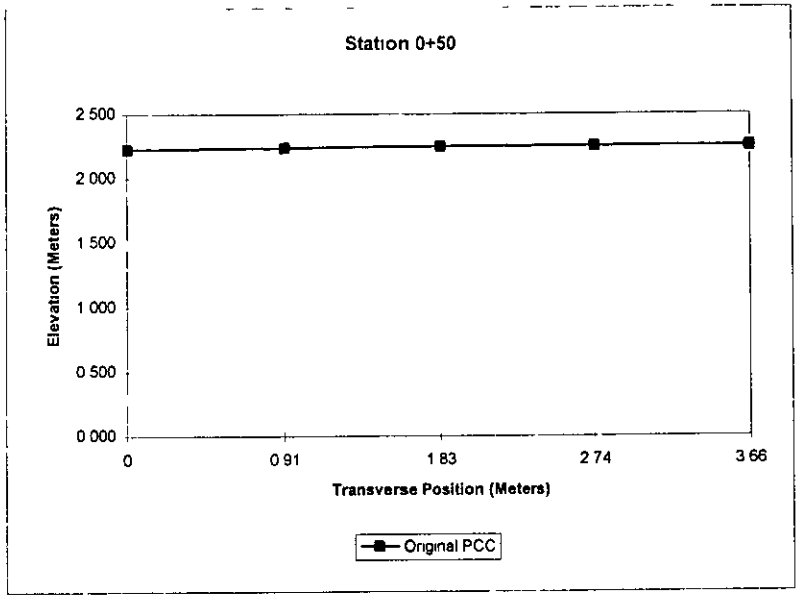
Alabama SPS-A6 (010601)

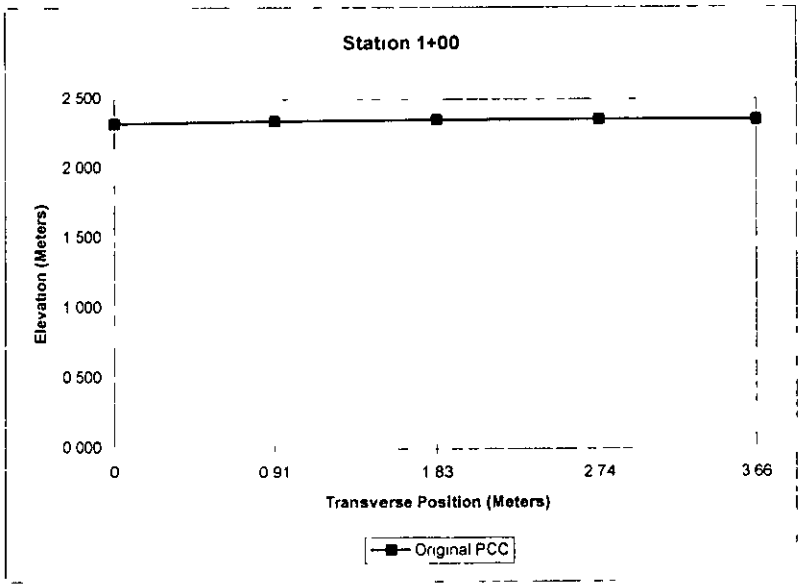
Transverse Offset	2 LAYERS	ELEVATION 0 Meters	Existing PCC THICKNESS Meters	ELEVATION 0 91 Meters	Existing PCC THICKNESS Meters	ELEVATION 1 83 Meters	Existing PCC THICKNESS Meters	ELEVATION 2 74 Meters	Existing PCC THICKNESS Meters	ELEVATION 3 66 Meters	Existing PCC THICKNESS Meters
0+00	Existing PCC	2 106	0 000	2 118	0 000	2 124	0 000	2 128	0 000	2 131	0 000
	Original PCC	2 106		2 118		2 124		2 128		2 131	
0+50	Existing PCC	2 225	0 000	2 237	0 000	2 246	0 000	2 249	0 000	2 249	0 000
	Original PCC	2 225		2 237		2 246		2 249		2 249	
1+00	Existing PCC	2 323	0 000	2 341	0 000	2 350	0 000	2 353	0 000	2 353	0 000
	Original PCC	2 323		2 341		2 350		2 353		2 353	
1+50	Existing PCC	2 411	0 000	2 420	0 000	2 432	0 000	2 435	0 000	2 435	0 000
	Original PCC	2 411		2 420		2 432		2 435		2 435	
2+00	Existing PCC	2 487	0 000	2 490	0 000	2 499	0 000	2 502	0 000	2 505	0 000
	Original PCC	2 487		2 490		2 499		2 502		2 505	
2+50	Existing PCC	2 542	0 000	2 551	0 000	2 557	0 000	2 563	0 000	2 563	0 000
	Original PCC	2 542		2 551		2 557		2 563		2 563	
3+00	Existing PCC	2 585	0 000	2 594	0 000	2 600	0 000	2 603	0 000	2 606	0 000
	Original PCC	2 585		2 594		2 600		2 603		2 606	
3+50	Existing PCC	2 609	0 000	2 615	0 000	2 618	0 000	2 618	0 000	2 618	0 000
	Original PCC	2 609		2 615		2 618		2 618		2 618	
4+00	Existing PCC	2 624	0 000	2 630	0 000	2 633	0 000	2 637	0 000	2 633	0 000
	Original PCC	2 624		2 630		2 633		2 637		2 633	
4+50	Existing PCC	2 630	0 000	2 630	0 000	2 637	0 000	2 640	0 000	2 640	0 000
	Original PCC	2 630		2 630		2 637		2 640		2 640	
5+00	Existing PCC	2 609	0 000	2 615	0 000	2 624	0 000	2 624	0 000	2 627	0 000
	Original PCC	2 609		2 615		2 624		2 624		2 627	
	AVG		0 000		0 000		0 000		0 000		0 000
	MAX		0 000		0 000		0 000		0 000		0 000
	MIN		0 000		0 000		0 000		0 000		0 000
	STD		0 000		0 000		0 000		0 000		0 000

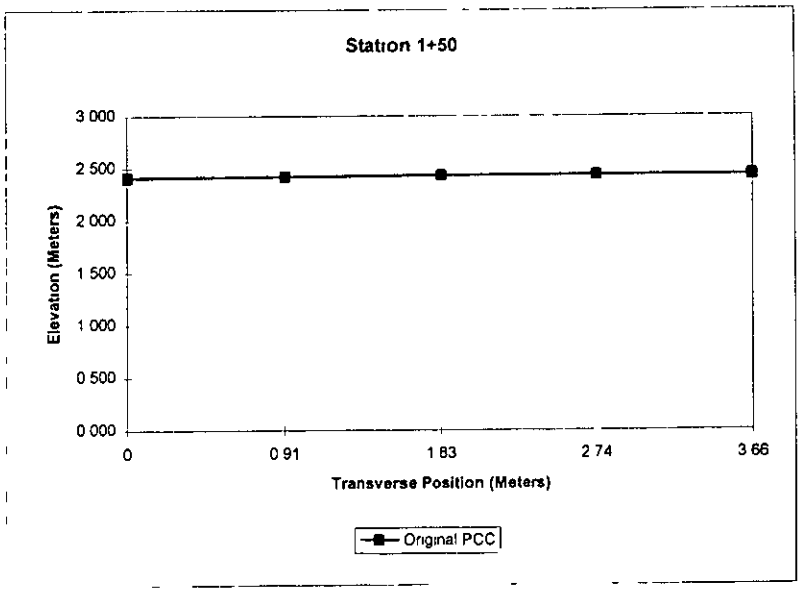
Note This is the "Control Section" No work was done on this section

Alabama SPS-A6 (010601)

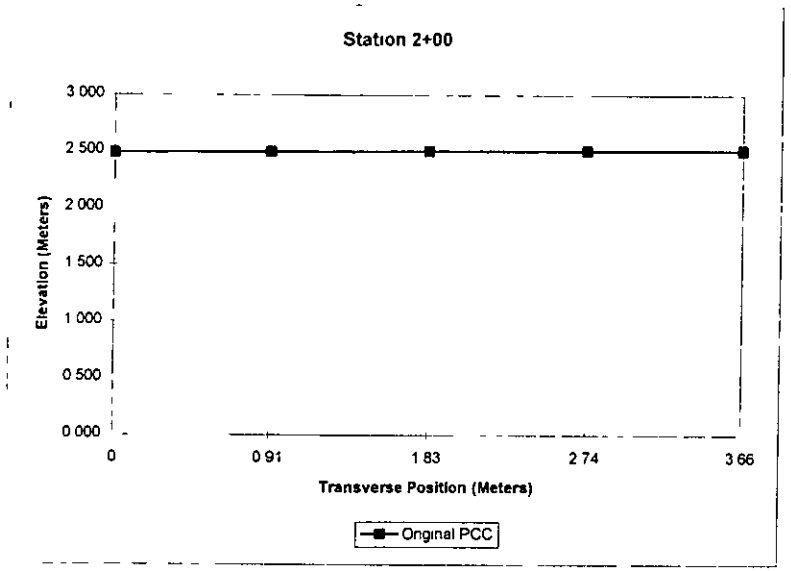


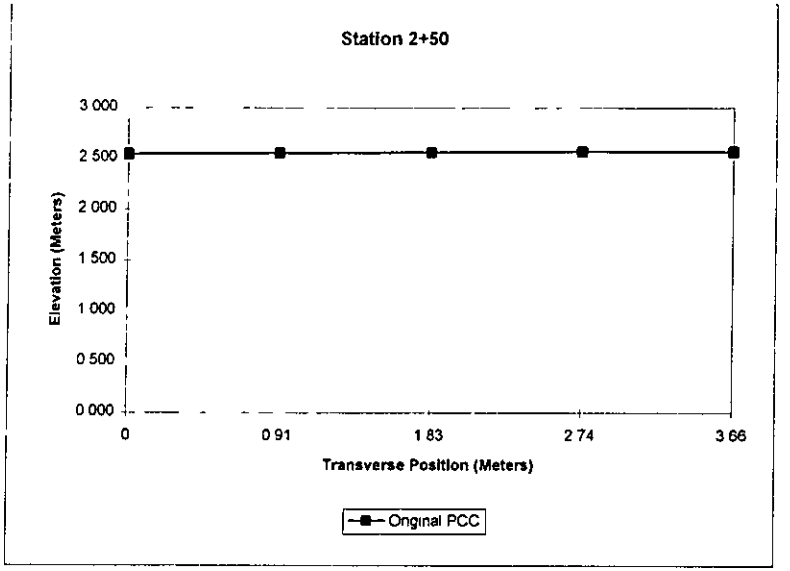


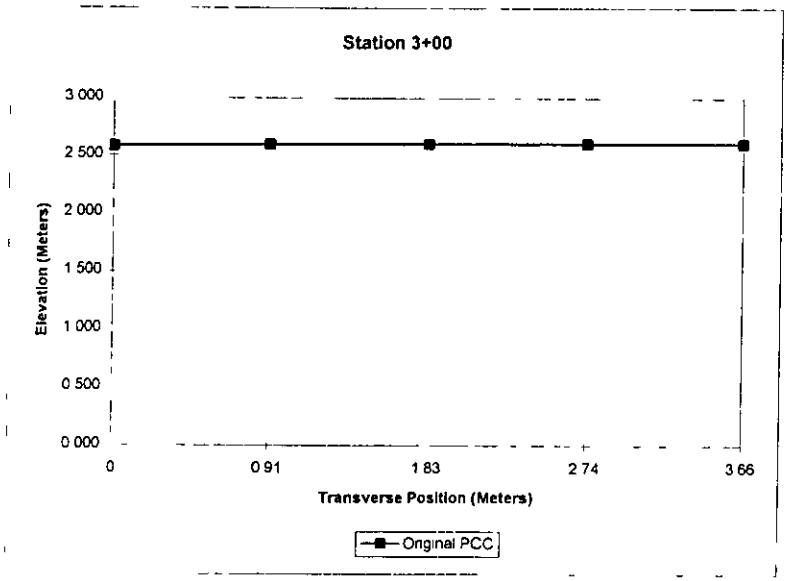


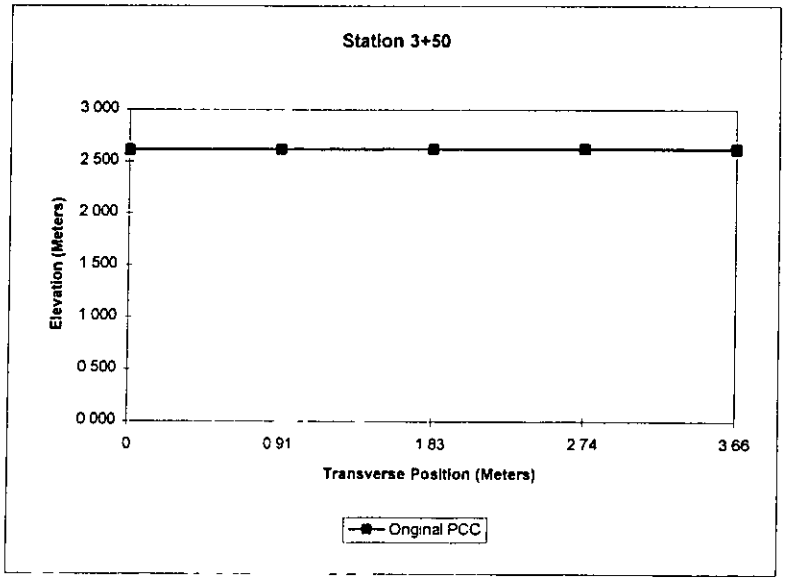


Alabama SPS-A6 (010601)

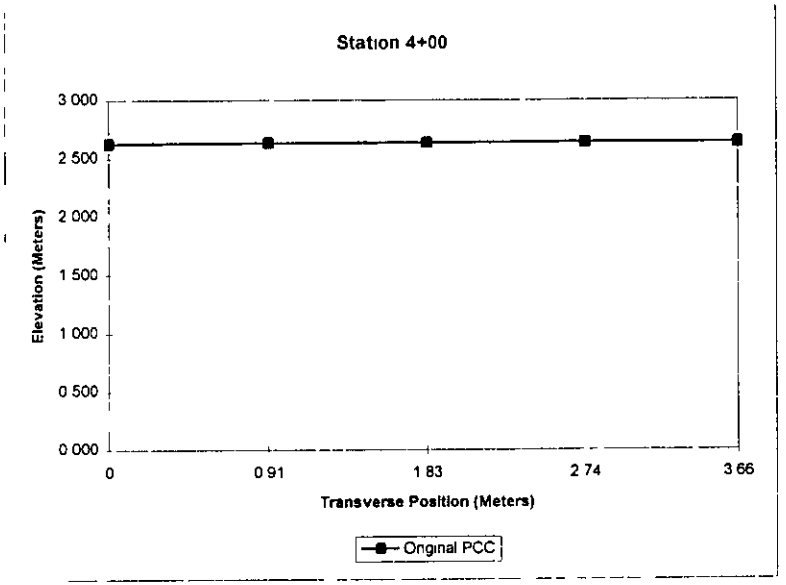


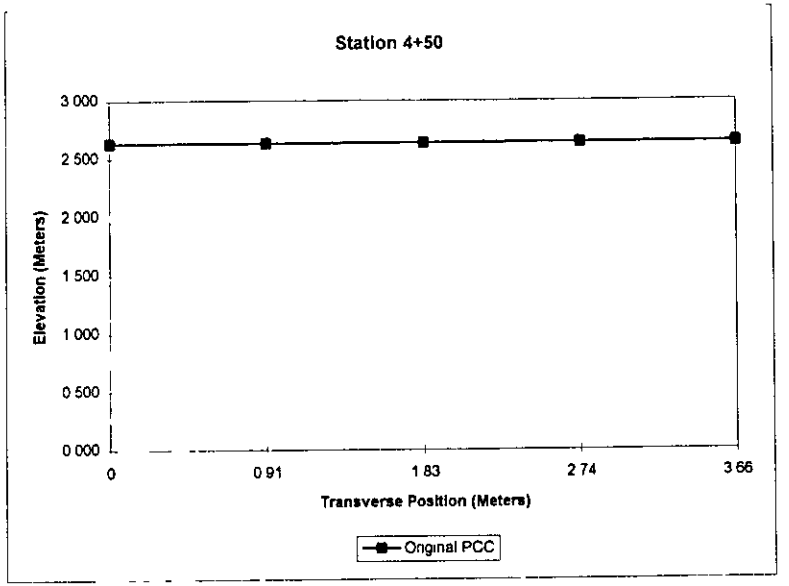


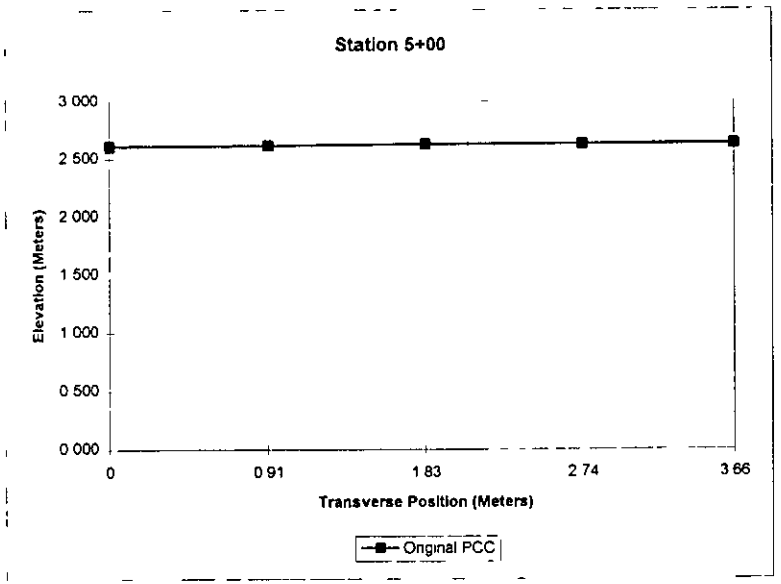




Alabama SPS-A6 (010601)







Alabama SPS-A6 (010602)

Transverse Offset	2 LAYERS	ELEVATION 0 Meters	Milled PCC THICKNESS Meters	ELEVATION 0 91 Meters	Milled PCC THICKNESS Meters	ELEVATION 1 83 Meters	Milled PCC THICKNESS Meters	ELEVATION 2 74 Meters	Milled PCC THICKNESS Meters	ELEVATION 3 66 Meters	Milled PCC THICKNESS Meters
0+00	Milled PCC	3 789	0 000	3 795	0 000	3 801	0 000	3 804	0 000	3 807	0 000
	Milled PCC	3 789		3 795		3 801		3 804		3 807	
0+50	Milled PCC	3 728	0 000	3 737	0 000	3 746	0 000	3 749	0 000	3 752	0 000
	Milled PCC	3 728		3 737		3 746		3 749		3 752	
1+00	Milled PCC	3 652	0 000	3 661	0 000	3 667	0 000	3 673	0 000	3 673	0 000
	Milled PCC	3 652		3 661		3 667		3 673		3 673	
1+50	Milled PCC	3 566	0 000	3 572	0 000	3 581	0 000	3 584	0 000	3 584	0 000
	Milled PCC	3 566		3 572		3 581		3 584		3 584	
2+00	Milled PCC	3 466	0 000	3 472	0 000	3 475	0 000	3 481	0 000	3 481	0 000
	Milled PCC	3 466		3 472		3 475		3 481		3 481	
2+50	Milled PCC	3 353	0 000	3 359	0 000	3 365	0 000	3 365	0 000	3 365	0 000
	Milled PCC	3 353		3 359		3 365		3 365		3 365	
3+00	Milled PCC	3 222	0 000	3 231	0 000	3 237	0 000	3 240	0 000	3 240	0 000
	Milled PCC	3 222		3 231		3 237		3 240		3 240	
3+50	Milled PCC	3 072	0 000	3 085	0 000	3 091	0 000	3 091	0 000	3 094	0 000
	Milled PCC	3 072		3 085		3 091		3 091		3 094	
4+00	Milled PCC	2 914	0 000	2 923	0 000	2 926	0 000	2 926	0 000	2 929	0 000
	Milled PCC	2 914		2 923		2 926		2 926		2 929	
4+50	Milled PCC	2 728	0 000	2 743	0 000	2 749	0 000	2 752	0 000	2 755	0 000
	Milled PCC	2 728		2 743		2 749		2 752		2 755	
5+00	Milled PCC	2 551	0 000	2 566	0 000	2 573	0 000	2 576	0 000	2 582	0 000
	Milled PCC	2 551		2 566		2 573		2 576		2 582	
	AVG		0 000		0 000		0 000		0 000		0 000
	MAX		0 000		0 000		0 000		0 000		0 000
	MIN		0 000		0 000		0 000		0 000		0 000
	STD		0 000		0 000		0 000		0 000		0 000

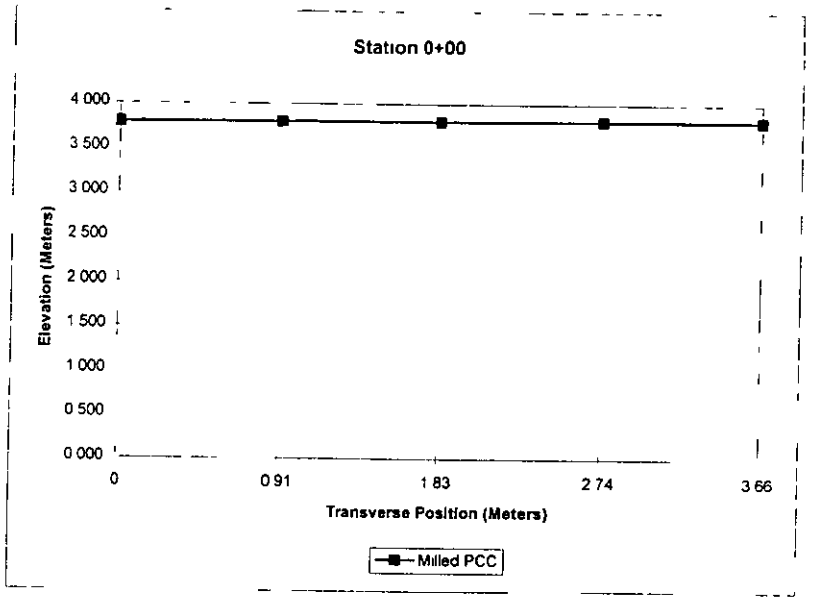
Notes Original PCC data (before milling) was unobtained Sta 5+00 - 10+00 are on the next page

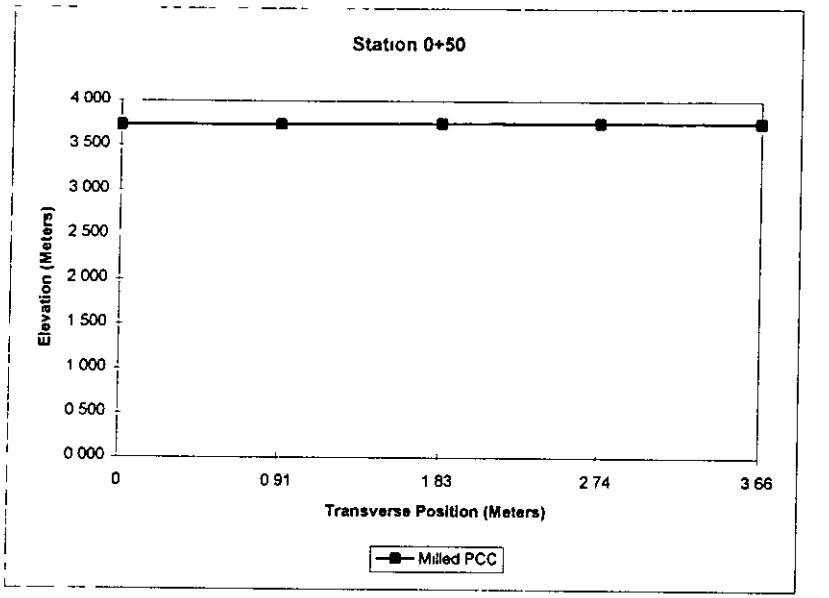
Alabama SPS-A6 (010602)

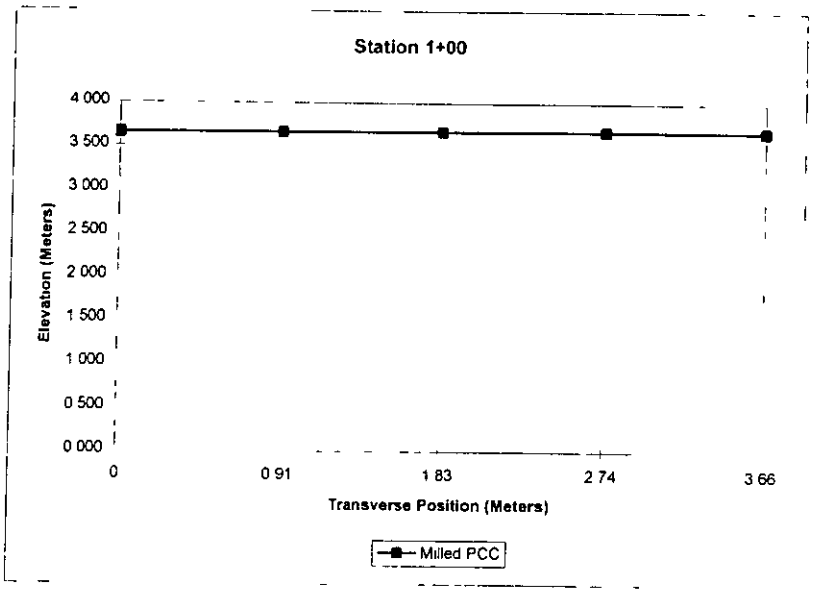
Transverse Offset	2 LAYERS	ELEVATION 0 Meters	Milled PCC THICKNESS Meters	ELEVATION 0 91 Meters	Milled PCC THICKNESS Meters	ELEVATION 1 83 Meters	Milled PCC THICKNESS Meters	ELEVATION 2 74 Meters	Milled PCC THICKNESS Meters	ELEVATION 3 66 Meters	Milled PCC THICKNESS Meters
5+00	Milled PCC	2 551	0 000	2 566	0 000	2 573	0 000	2 576	0 000	2 582	0 000
	Milled PCC	2 551		2 566		2 573		2 576		2 582	
5+50	Milled PCC	2 362	0 000	2 374	0 000	2 441	0 000	2 441	0 000	2 444	0 000
	Milled PCC	2 362		2 374		2 441		2 441		2 444	
6+00	Milled PCC	2 182	0 000	2 195	0 000	2 201	0 000	2 201	0 000	2 201	0 000
	Milled PCC	2 182		2 195		2 201		2 201		2 201	
6+50	Milled PCC	2 003	0 000	2 009	0 000	2 015	0 000	2 015	0 000	2 018	0 000
	Milled PCC	2 003		2 009		2 015		2 015		2 018	
7+00	Milled PCC	1 826	0 000	1 829	0 000	1 829	0 000	1 826	0 000	1 826	0 000
	Milled PCC	1 826		1 829		1 829		1 826		1 826	
7+50	Milled PCC	1 628	0 000	1 637	0 000	1 649	0 000	1 652	0 000	1 655	0 000
	Milled PCC	1 628		1 637		1 649		1 652		1 655	
8+00	Milled PCC	1 423	0 000	1 445	0 000	1 457	0 000	1 466	0 000	1 469	0 000
	Milled PCC	1 423		1 445		1 457		1 466		1 469	
8+50	Milled PCC	1 262	0 000	1 274	0 000	1 283	0 000	1 289	0 000	1 292	0 000
	Milled PCC	1 262		1 274		1 283		1 289		1 292	
9+00	Milled PCC	1 079	0 000	1 091	0 000	1 097	0 000	1 103	0 000	1 106	0 000
	Milled PCC	1 079		1 091		1 097		1 103		1 106	
9+50	Milled PCC	0 884	0 000	0 896	0 000	0 908	0 000	0 914	0 000	0 917	0 000
	Milled PCC	0 884		0 896		0 908		0 914		0 917	
10+00	Milled PCC	0 722	0 000	0 728	0 000	0 738	0 000	0 741	0 000	0 741	0 000
	Milled PCC	0 722		0 728		0 738		0 741		0 741	
	AVG		0 000		0 000		0 000		0 000		0 000
	MAX		0 000		0 000		0 000		0 000		0 000
	MIN		0 000		0 000		0 000		0 000		0 000
	STD		0 000		0 000		0 000		0 000		0 000

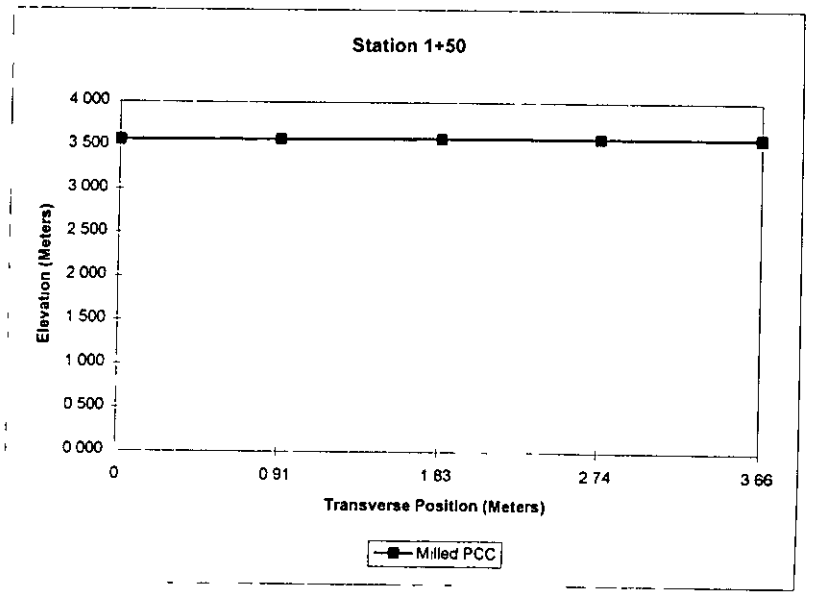
Note Original PCC data (before milling) was unobtained

Alabama SPS-A6 (010602)

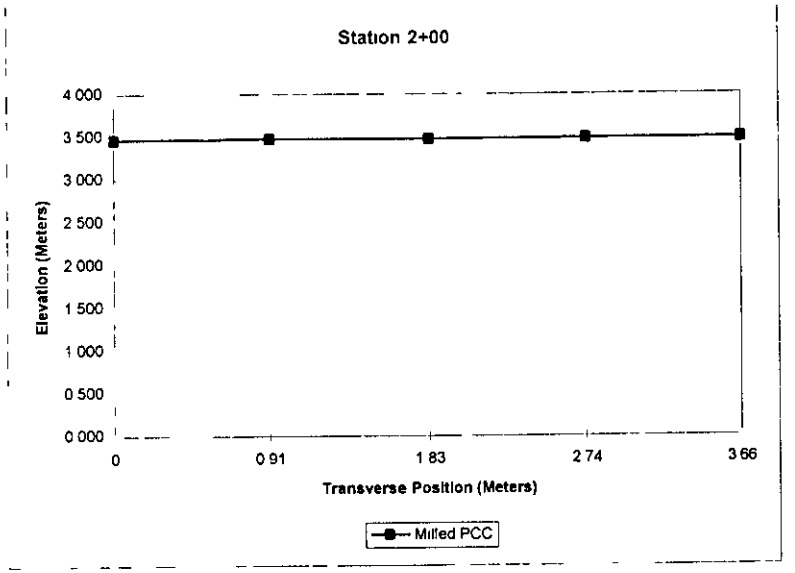


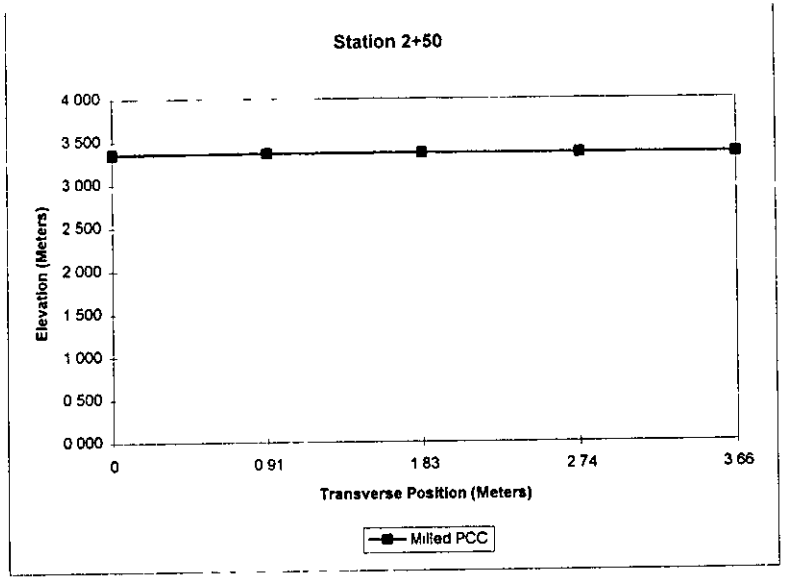


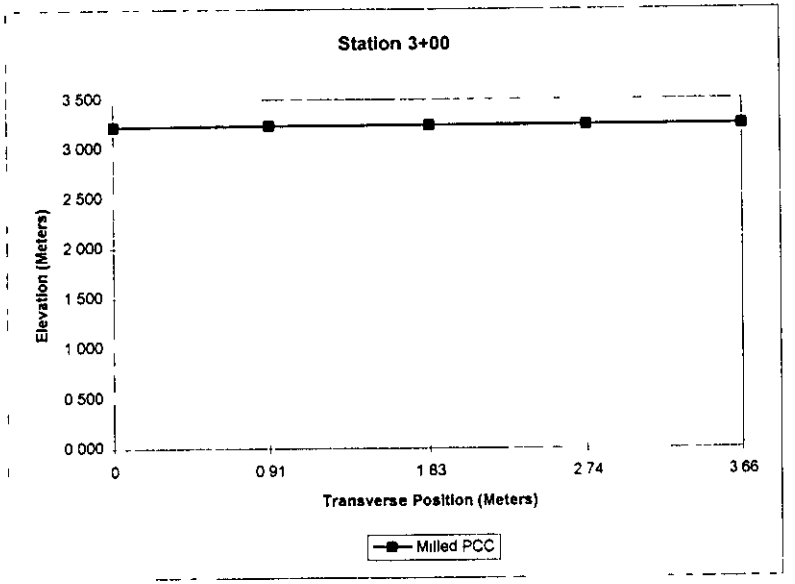


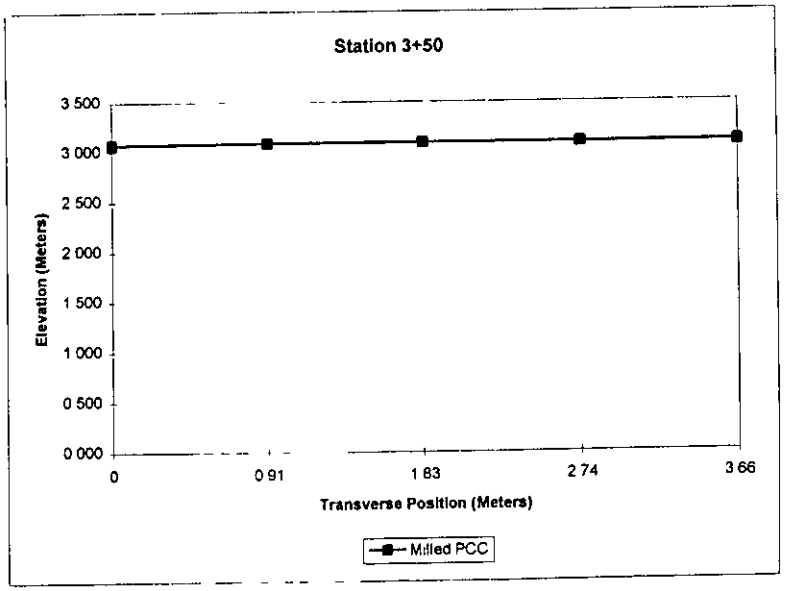


Alabama SPS-A6 (010602)

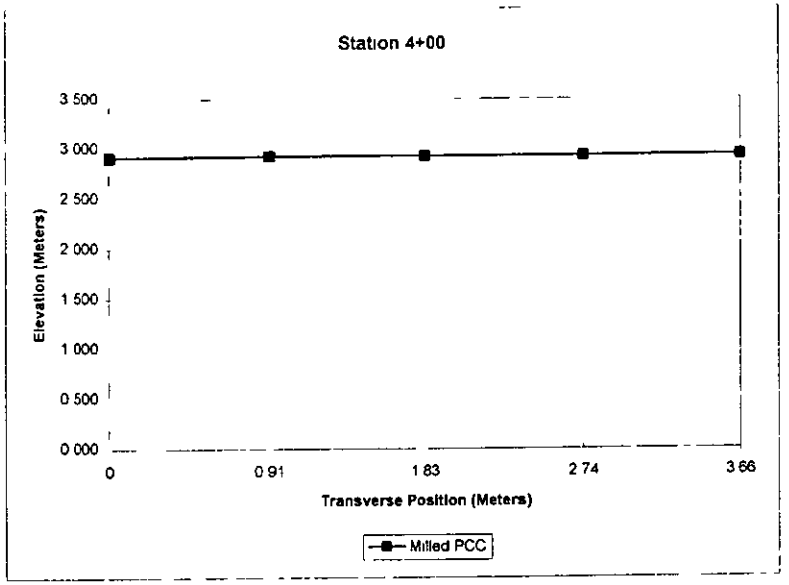


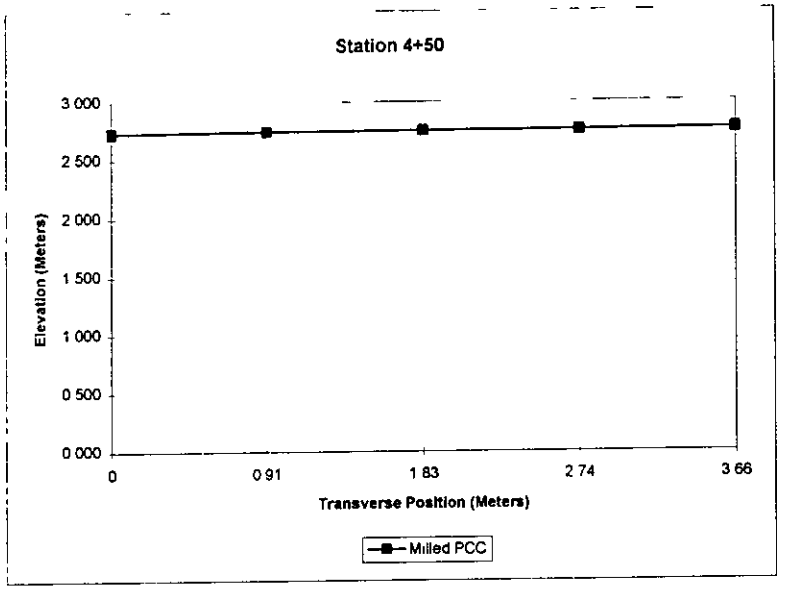


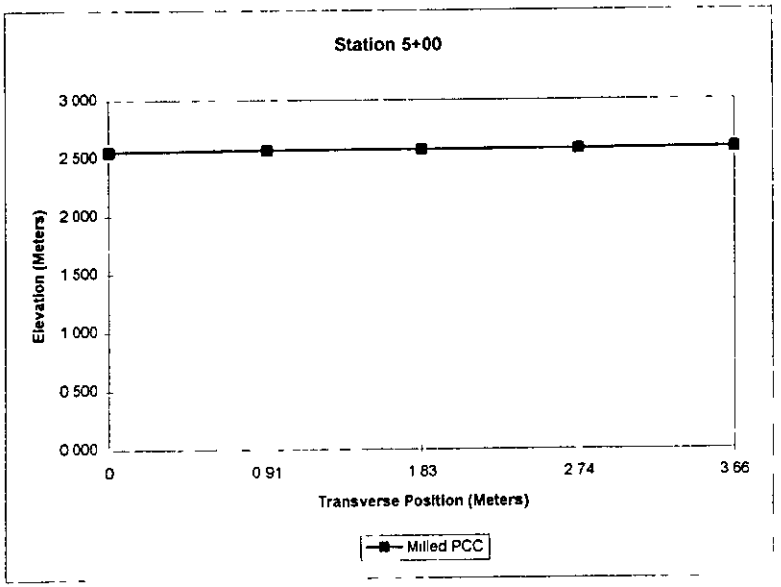




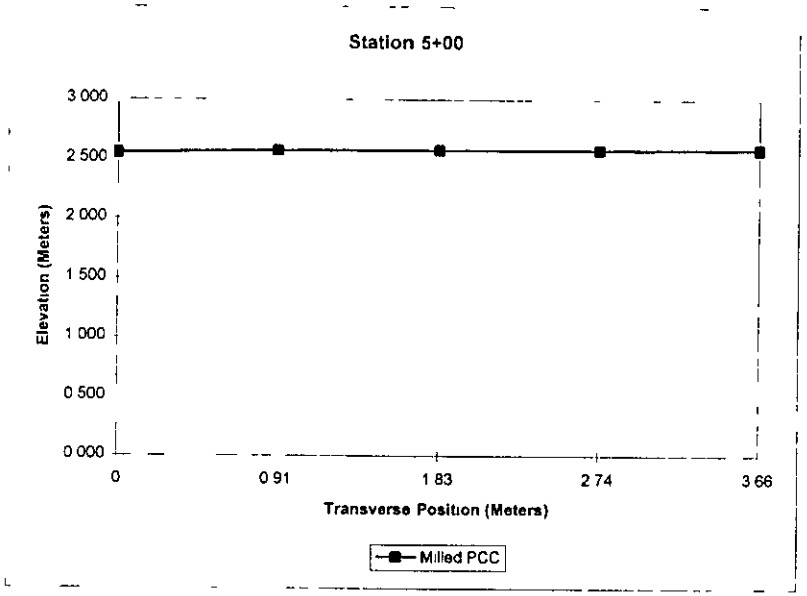
Alabama SPS-A6 (010602)

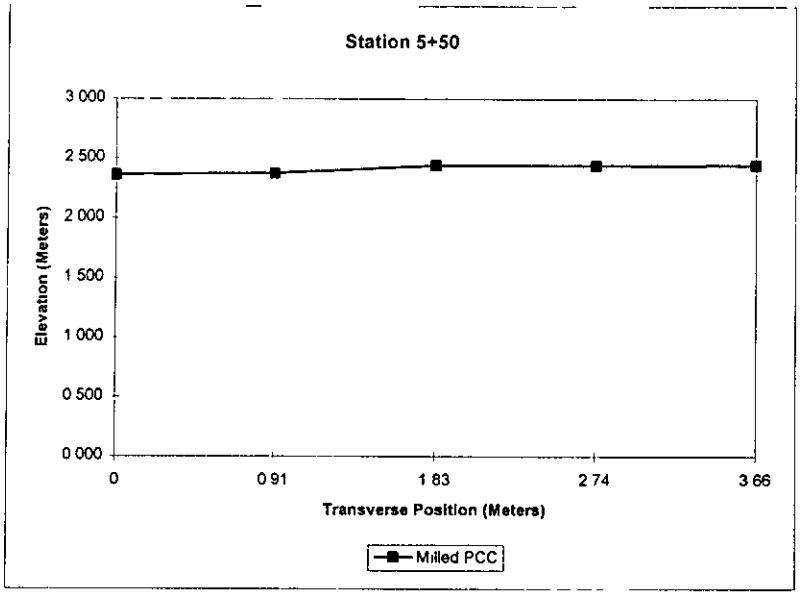


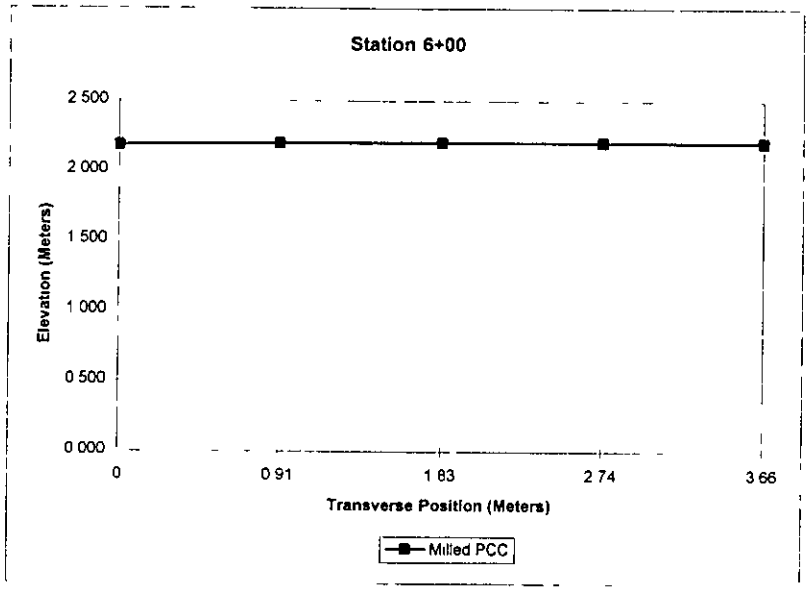


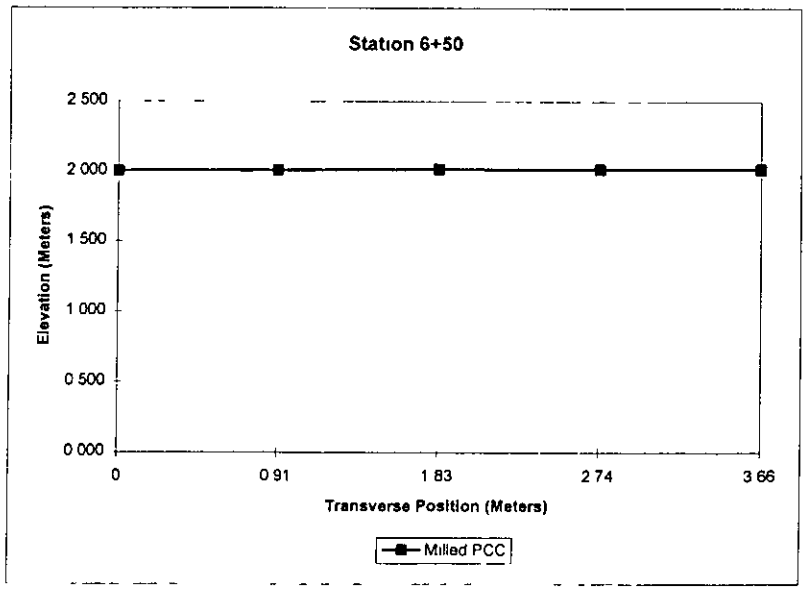


Alabama SPS-A6 (010602)

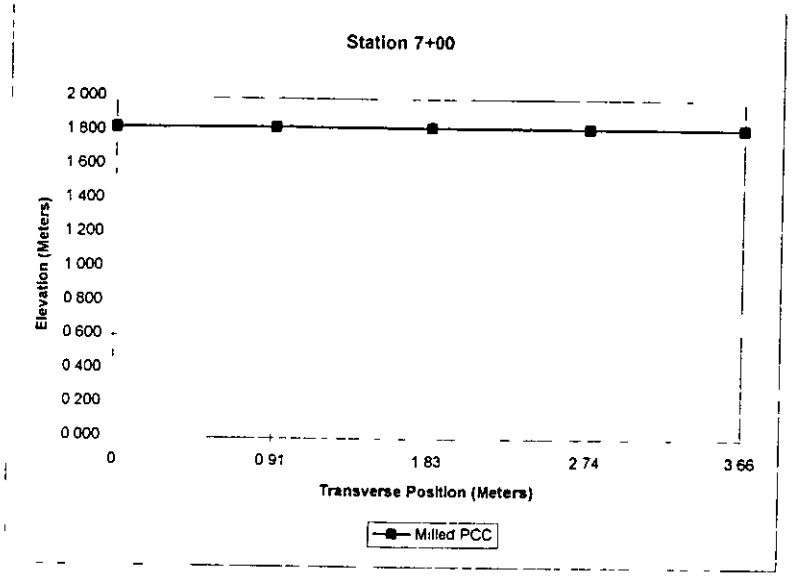


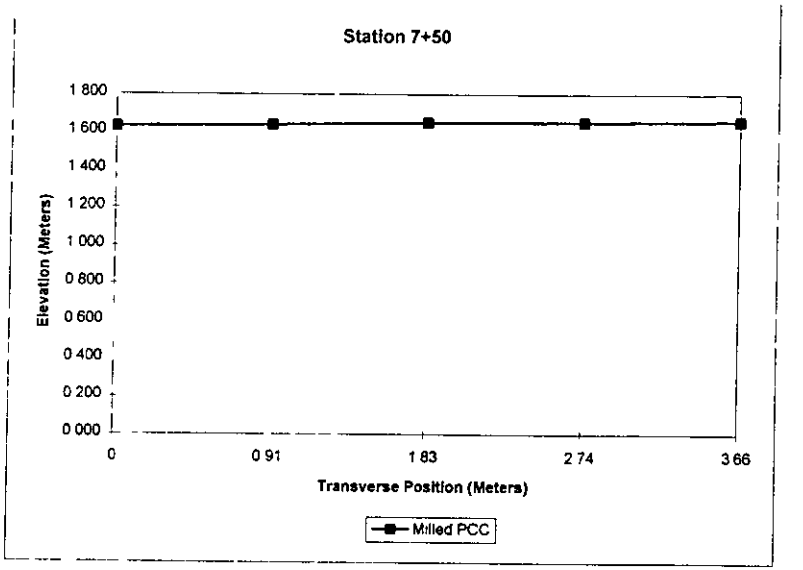


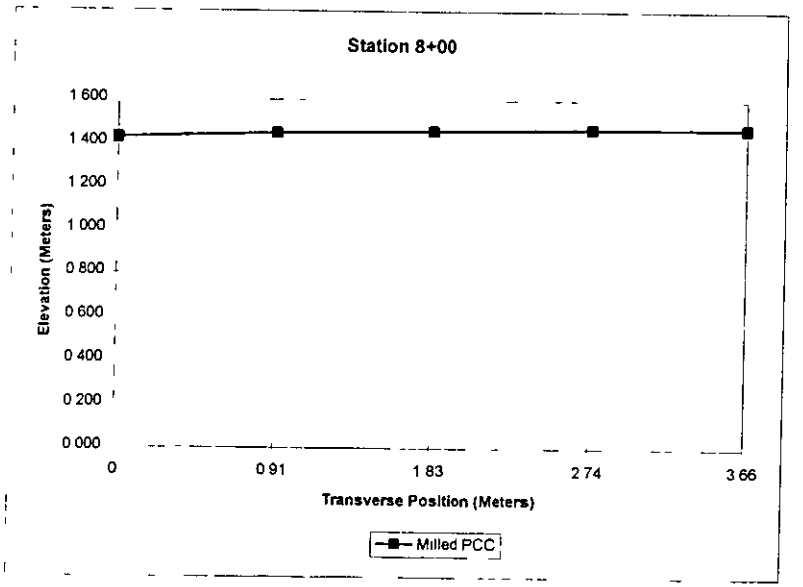


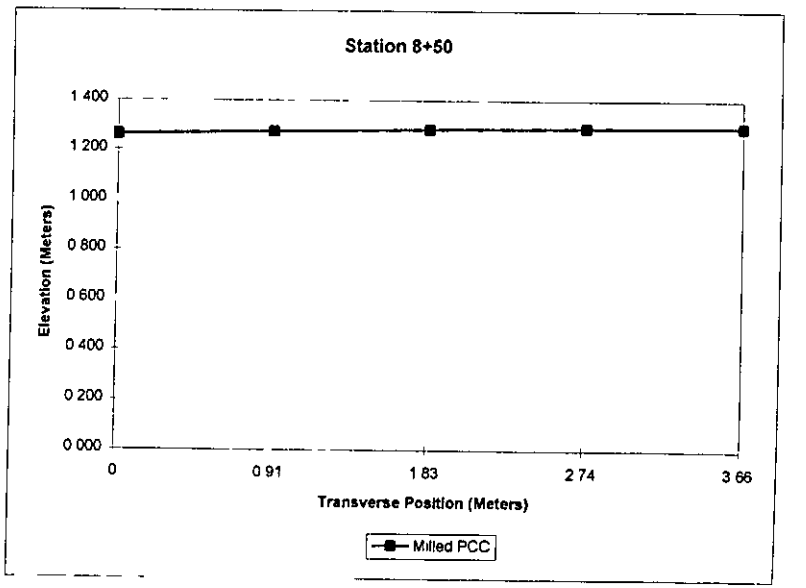


Alabama SPS-A6 (010602)

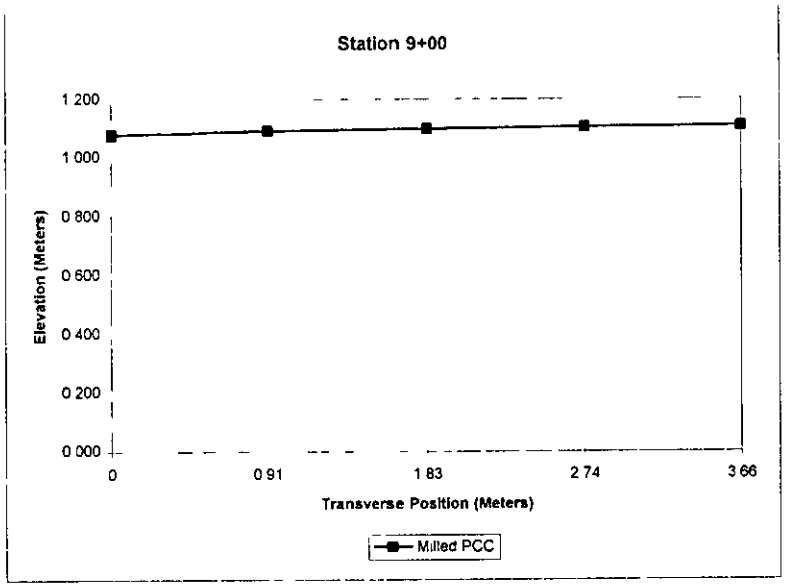


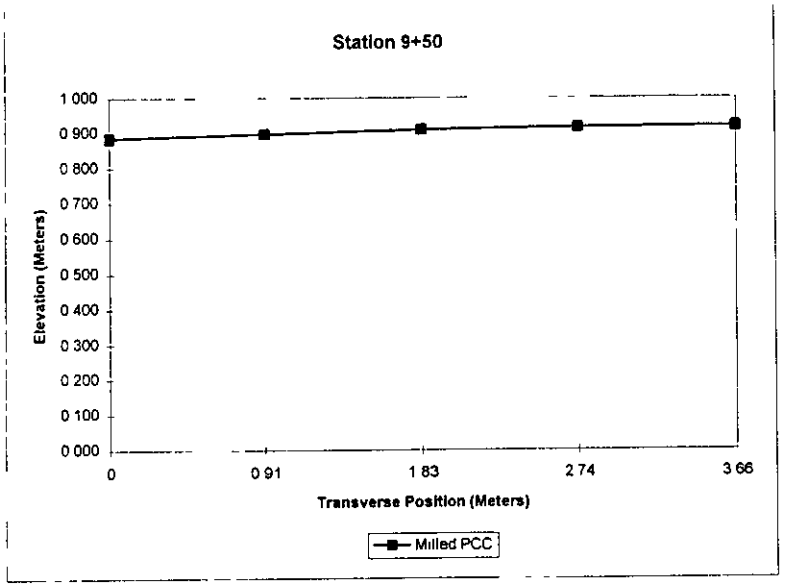


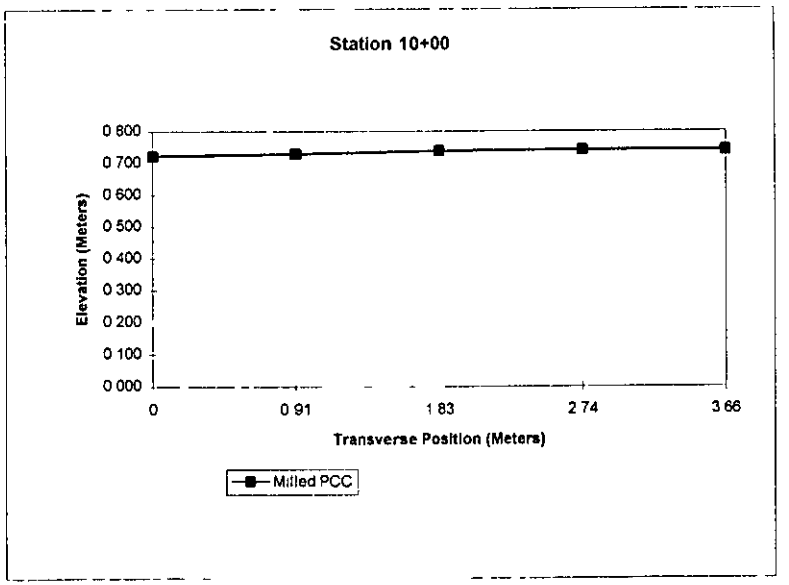




Alabama SPS-A6 (010602)



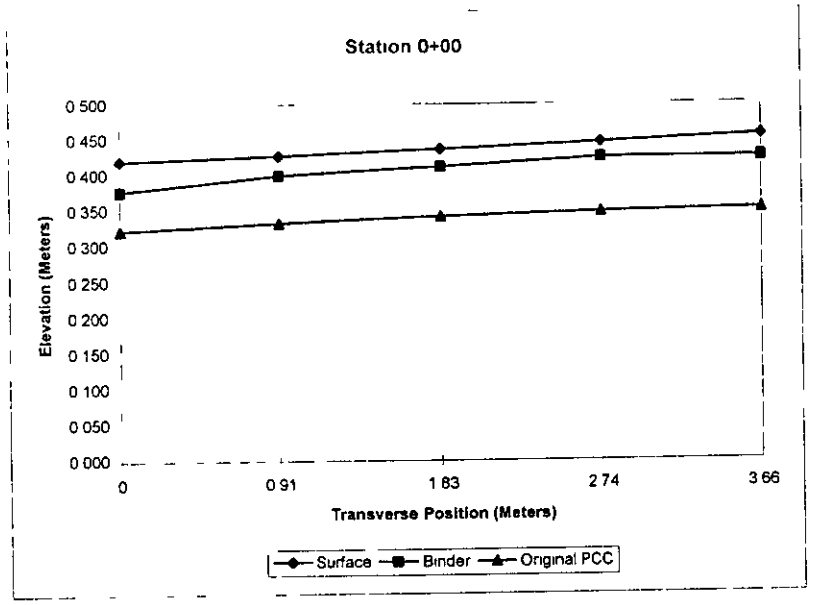


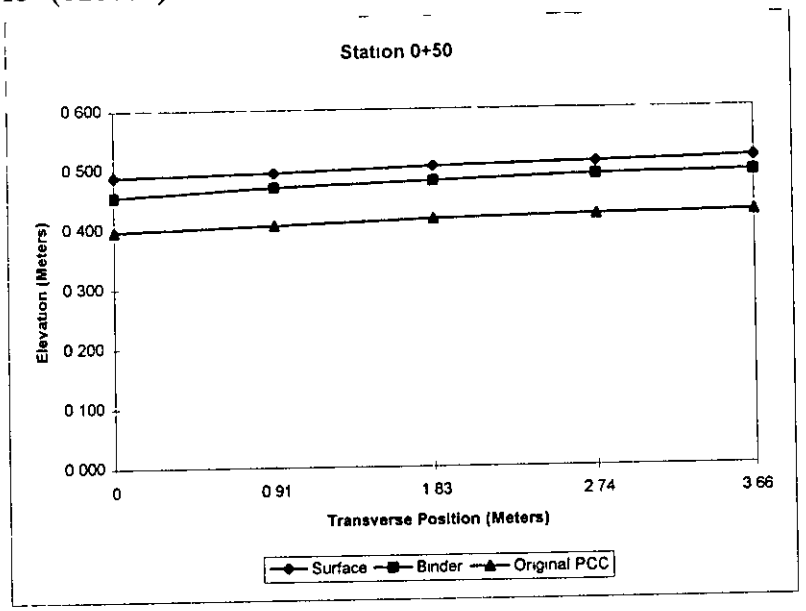


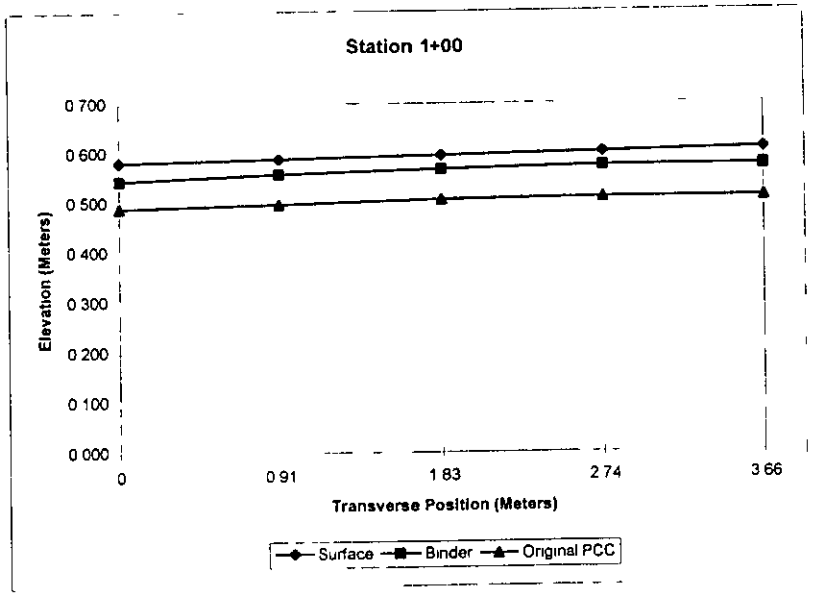
Alabama SPS-A6 (010603)

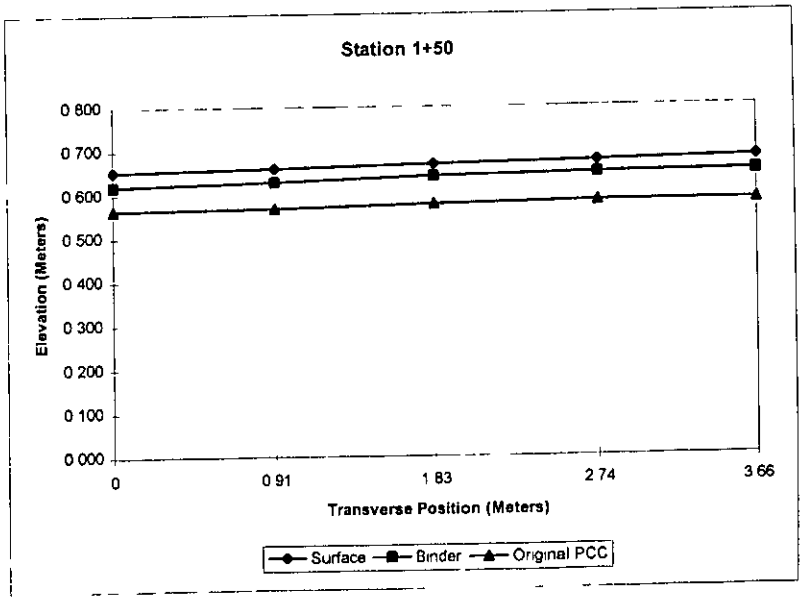
Transverse Offset	3 LAYERS	ELEVATION 0 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	ELEVATION 0 91 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	ELEVATION 1 83 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	ELEVATION 2 74 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	ELEVATION 3 66 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters
0+00	Surface	0 421	0 043	0 055	0 427	0 027	0 067	0 436	0 024	0 070	0 445	0 021	0 076	0 454	0 030	0 073
	Binder	0 378			0 399			0 411			0 424			0 424		
	Original PCC	0 323			0 332			0 341			0 347			0 351		
0+50	Surface	0 488	0 034	0 058	0 494	0 024	0 064	0 503	0 024	0 064	0 509	0 021	0 067	0 515	0 024	0 067
	Binder	0 454			0 469			0 479			0 488			0 491		
	Original PCC	0 396			0 405			0 415			0 421			0 424		
1+00	Surface	0 582	0 037	0 055	0 588	0 030	0 061	0 594	0 027	0 061	0 600	0 027	0 064	0 607	0 034	0 064
	Binder	0 546			0 558			0 567			0 573			0 573		
	Original PCC	0 491			0 497			0 506			0 509			0 509		
1+50	Surface	0 652	0 034	0 055	0 658	0 030	0 061	0 668	0 027	0 064	0 674	0 027	0 064	0 680	0 030	0 067
	Binder	0 619			0 628			0 640			0 646			0 649		
	Original PCC	0 564			0 567			0 576			0 582			0 582		
2+00	Surface	0 728	0 034	0 055	0 735	0 024	0 064	0 741	0 024	0 064	0 747	0 027	0 061	0 756	0 030	0 067
	Binder	0 695			0 710			0 716			0 719			0 725		
	Original PCC	0 640			0 646			0 652			0 658			0 658		
2+50	Surface	0 811	0 040	0 052	0 817	0 030	0 061	0 823	0 027	0 061	0 832	0 030	0 061	0 838	0 030	0 067
	Binder	0 771			0 786			0 796			0 802			0 808		
	Original PCC	0 719			0 725			0 735			0 741			0 741		
3+00	Surface	0 887	0 030	0 055	0 896	0 024	0 067	0 905	0 024	0 064	0 914	0 027	0 064	0 924	0 030	0 067
	Binder	0 856			0 872			0 881			0 887			0 893		
	Original PCC	0 802			0 805			0 817			0 823			0 826		
3+50	Surface	0 963	0 043	0 046	0 972	0 027	0 064	0 981	0 024	0 064	0 988	0 024	0 067	0 991	0 024	0 067
	Binder	0 920			0 945			0 957			0 963			0 966		
	Original PCC	0 875			0 881			0 893			0 896			0 899		
4+00	Surface	1 030	0 037	0 049	1 039	0 027	0 061	1 045	0 021	0 064	1 055	0 024	0 064	1 061	0 027	0 061
	Binder	0 994			1 012			1 024			1 030			1 033		
	Original PCC	0 945			0 951			0 960			0 966			0 972		
4+50	Surface	1 091	0 024	0 055	1 103	0 021	0 067	1 113	0 021	0 064	1 125	0 024	0 070	1 131	0 024	0 073
	Binder	1 067			1 082			1 091			1 100			1 106		
	Original PCC	1 012			1 015			1 027			1 030			1 033		
5+00	Surface	1 164	0 034	0 052	1 177	0 027	0 061	1 183	0 024	0 061	1 192	0 027	0 064	1 195	0 024	0 067
	Binder	1 131			1 149			1 158			1 164			1 170		
	Original PCC	1 079			1 088			1 097			1 100			1 103		
	AVG		0 035	0 053		0 027	0 063		0 025	0 064		0 026	0 066		0 028	0 067
	MAX		0 043	0 058		0 030	0 067		0 027	0 070		0 030	0 076		0 034	0 073
	MIN		0 024	0 046		0 021	0 061		0 021	0 061		0 021	0 061		0 024	0 061
	STD		0 005	0 003		0 003	0 003		0 002	0 003		0 003	0 004		0 003	0 003

Alabama SPS-A6 (010603)

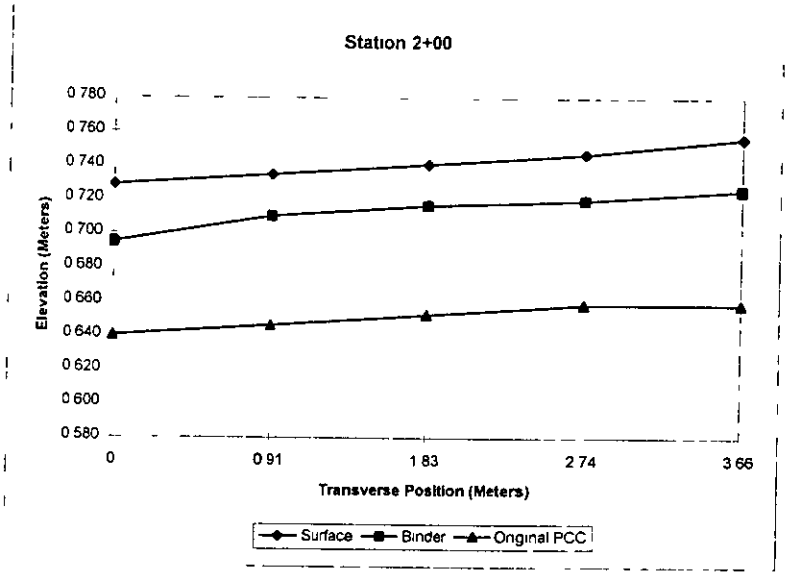


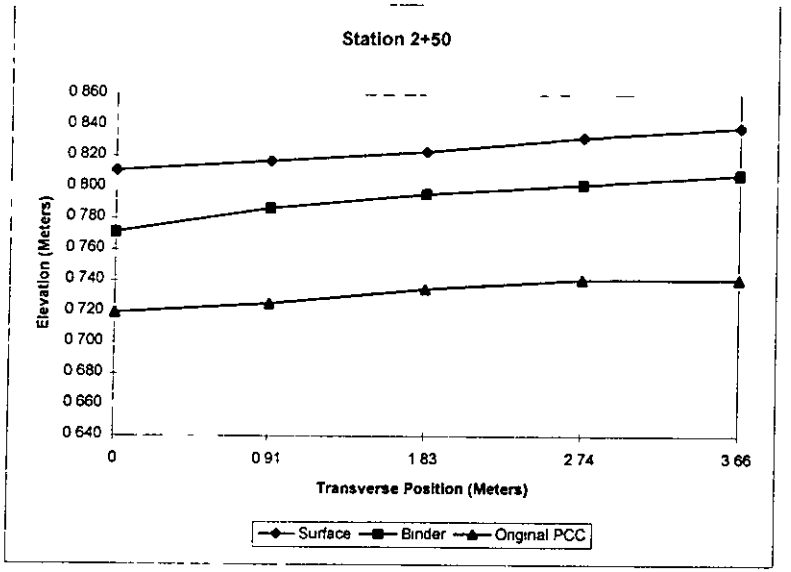


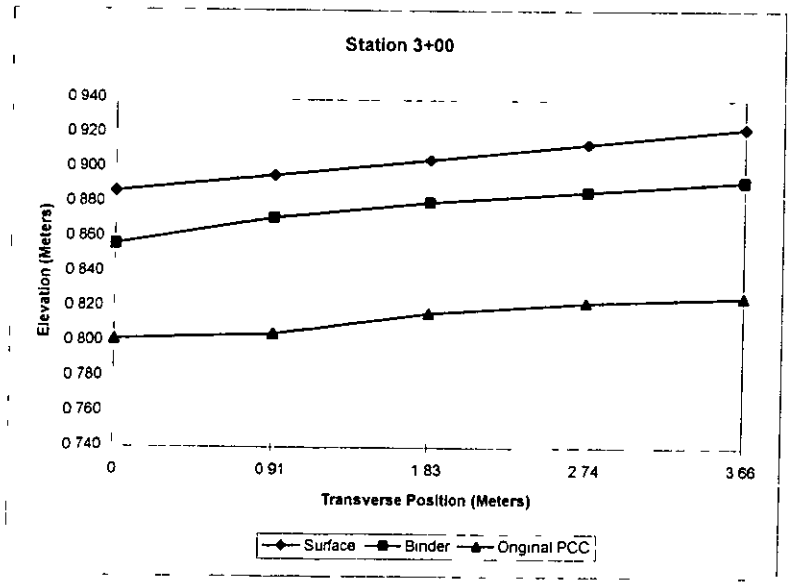


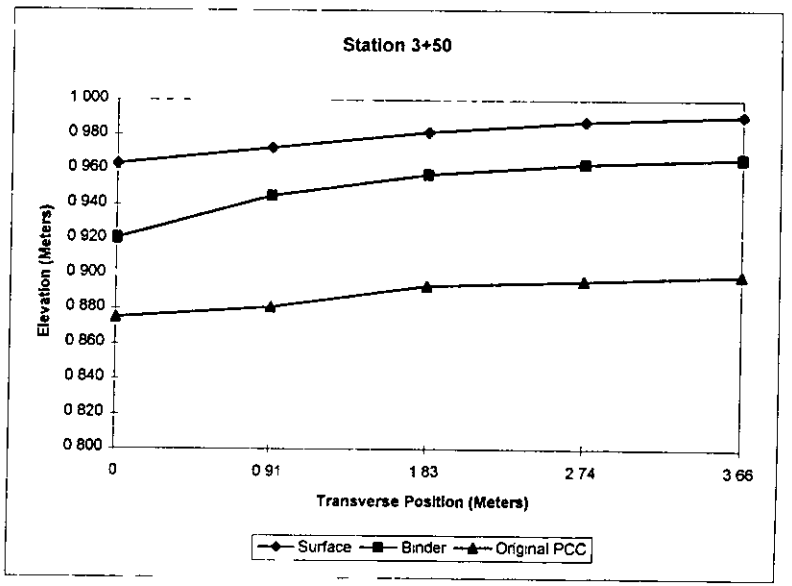


Alabama SPS-A6 (010603)

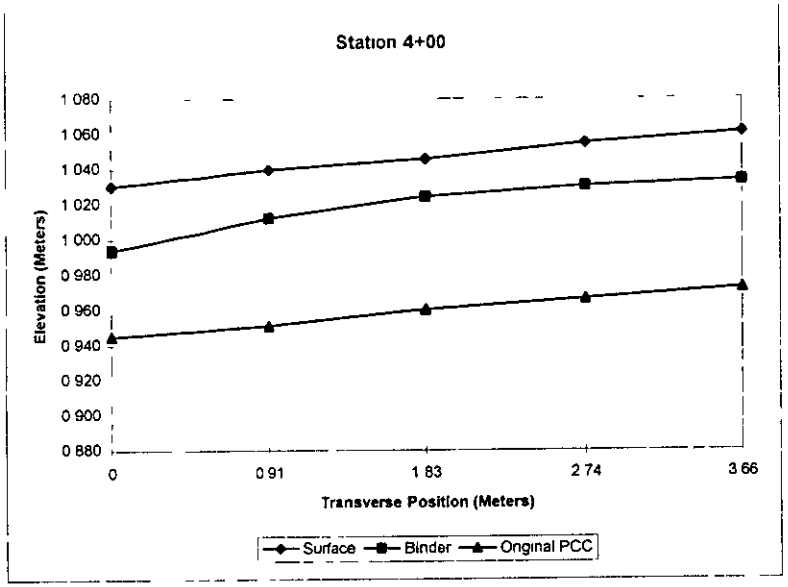


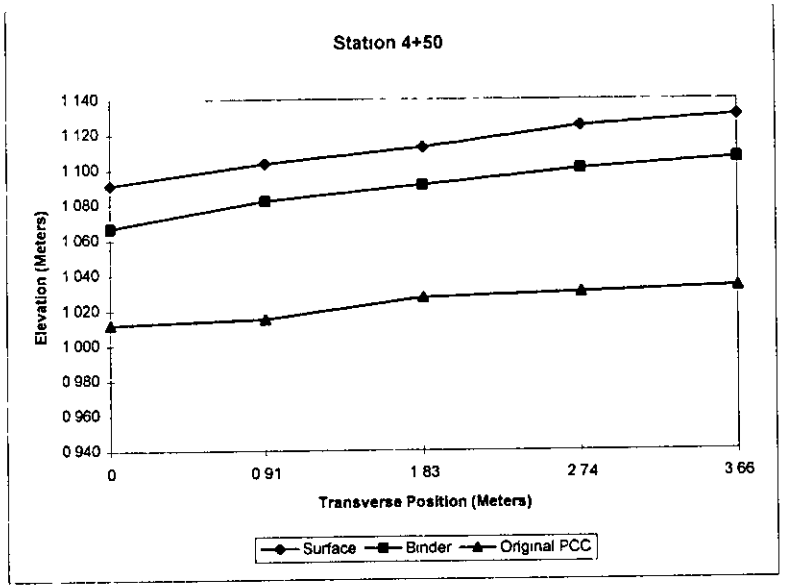


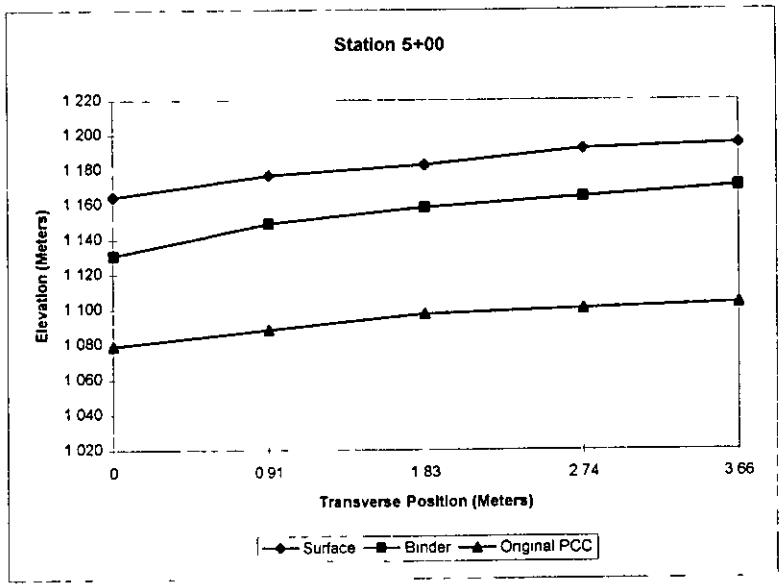




Alabama SPS-A6 (010603)



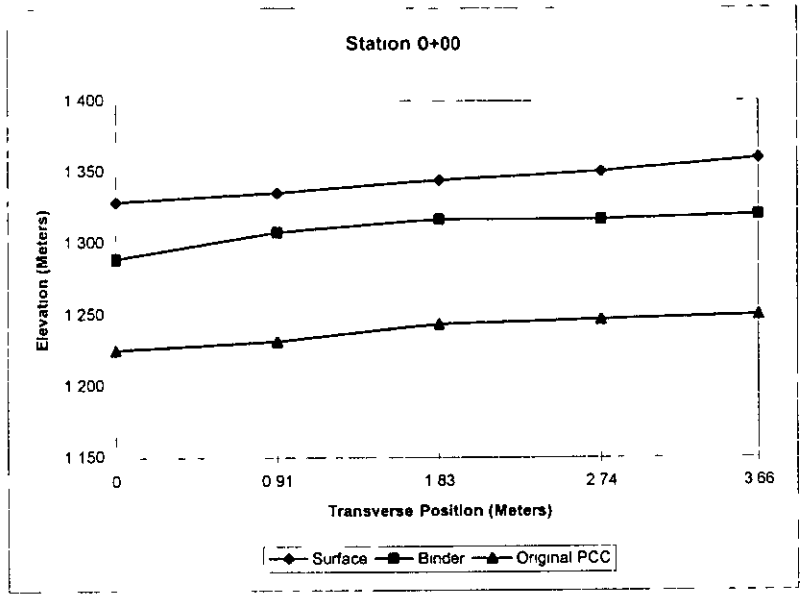


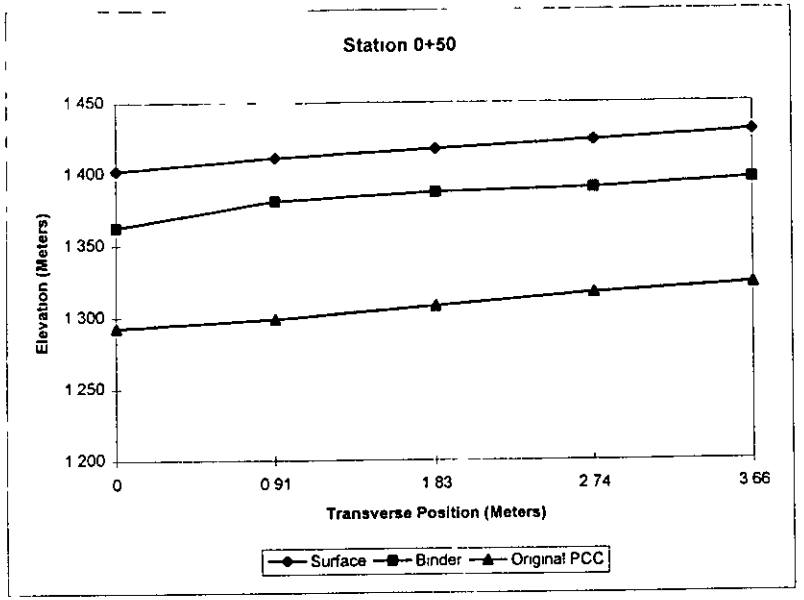


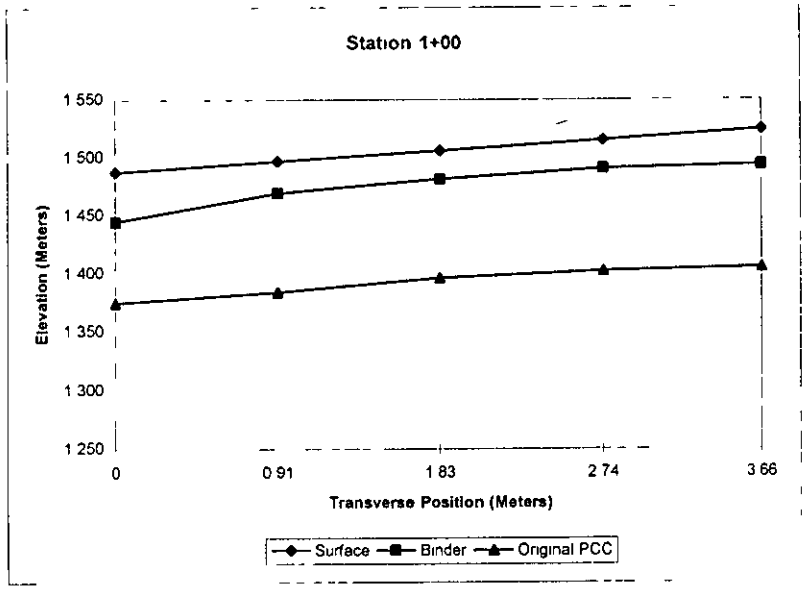
Alabama SPS-A6 (010604)

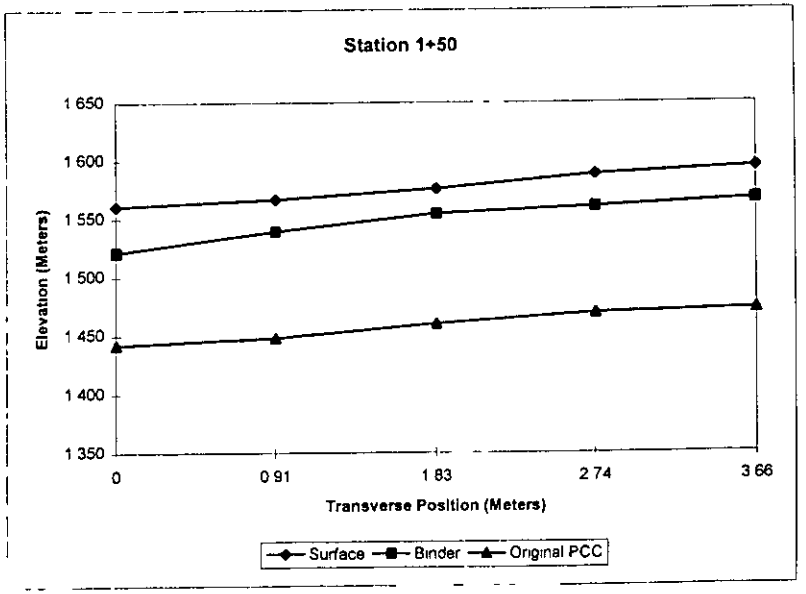
Transverse Offset	3 LAYERS	ELEVATION 0 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	ELEVATION 0.91 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	ELEVATION 1.83 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	ELEVATION 2.74 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	ELEVATION 3.66 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters
0+00	Surface	1.329	0.040	0.064	1.335	0.027	0.076	1.344	0.027	0.073	1.350	0.034	0.070	1.359	0.040	0.070
	Binder	1.289			1.308			1.317			1.317			1.320		
	Original PCC	1.225			1.231			1.244			1.247			1.250		
0+50	Surface	1.402	0.040	0.070	1.411	0.030	0.082	1.417	0.030	0.079	1.423	0.034	0.073	1.430	0.034	0.073
	Binder	1.362			1.381			1.387			1.390			1.396		
	Original PCC	1.292			1.298			1.308			1.317			1.323		
1+00	Surface	1.487	0.043	0.070	1.497	0.027	0.085	1.506	0.024	0.085	1.515	0.024	0.088	1.524	0.030	0.088
	Binder	1.445			1.469			1.481			1.490			1.494		
	Original PCC	1.375			1.384			1.396			1.402			1.405		
1+50	Surface	1.561	0.040	0.079	1.567	0.027	0.091	1.576	0.021	0.094	1.588	0.027	0.091	1.594	0.027	0.094
	Binder	1.521			1.539			1.554			1.561			1.567		
	Original PCC	1.442			1.448			1.460			1.469			1.472		
2+00	Surface	1.640	0.040	0.070	1.646	0.030	0.079	1.658	0.030	0.082	1.670	0.037	0.082	1.679	0.040	0.085
	Binder	1.600			1.615			1.628			1.634			1.640		
	Original PCC	1.530			1.536			1.545			1.551			1.554		
2+50	Surface	1.731	0.043	0.070	1.734	0.030	0.076	1.743	0.027	0.079	1.753	0.034	0.076	1.756	0.040	0.073
	Binder	1.689			1.704			1.716			1.719			1.716		
	Original PCC	1.618			1.628			1.637			1.643			1.643		
3+00	Surface	1.814	0.040	0.076	1.823	0.034	0.082	1.829	0.027	0.088	1.835	0.030	0.085	1.838	0.037	0.082
	Binder	1.774			1.789			1.801			1.804			1.801		
	Original PCC	1.698			1.707			1.713			1.719			1.719		
3+50	Surface	1.893	0.037	0.076	1.899	0.027	0.085	1.911	0.027	0.091	1.917	0.030	0.088	1.923	0.037	0.088
	Binder	1.856			1.871			1.884			1.887			1.887		
	Original PCC	1.780			1.786			1.792			1.798			1.798		
4+00	Surface	1.978	0.040	0.076	1.984	0.030	0.082	1.993	0.030	0.088	2.003	0.037	0.085	2.009	0.043	0.082
	Binder	1.939			1.954			1.963			1.966			1.966		
	Original PCC	1.862			1.871			1.875			1.881			1.884		
4+50	Surface	2.054	0.046	0.064	2.063	0.040	0.070	2.076	0.043	0.073	2.085	0.043	0.079	2.091	0.046	0.079
	Binder	2.009			2.024			2.033			2.042			2.045		
	Original PCC	1.945			1.954			1.960			1.963			1.966		
5+00	Surface	2.134	0.049	0.067	2.140	0.034	0.079	2.149	0.030	0.082	2.155	0.034	0.082	2.158	0.034	0.082
	Binder	2.085			2.106			2.118			2.121			2.124		
	Original PCC	2.018			2.027			2.036			2.039			2.042		
	AVG		0.041	0.071		0.031	0.081		0.029	0.084		0.033	0.082		0.037	0.081
	MAX		0.049	0.079		0.040	0.091		0.043	0.094		0.043	0.091		0.046	0.094
	MIN		0.037	0.064		0.027	0.070		0.021	0.073		0.024	0.070		0.027	0.070
	STD		0.003	0.005		0.004	0.006		0.005	0.007		0.005	0.007		0.005	0.007

Alabama SPS-A6 (010604)

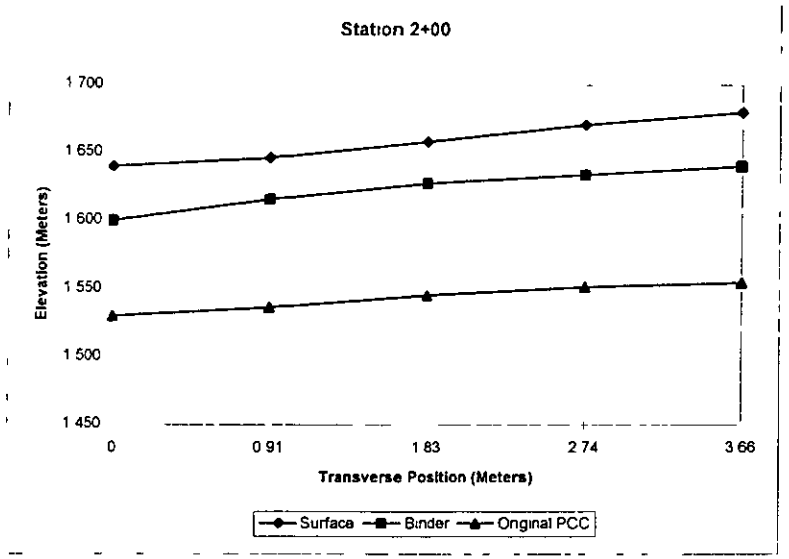


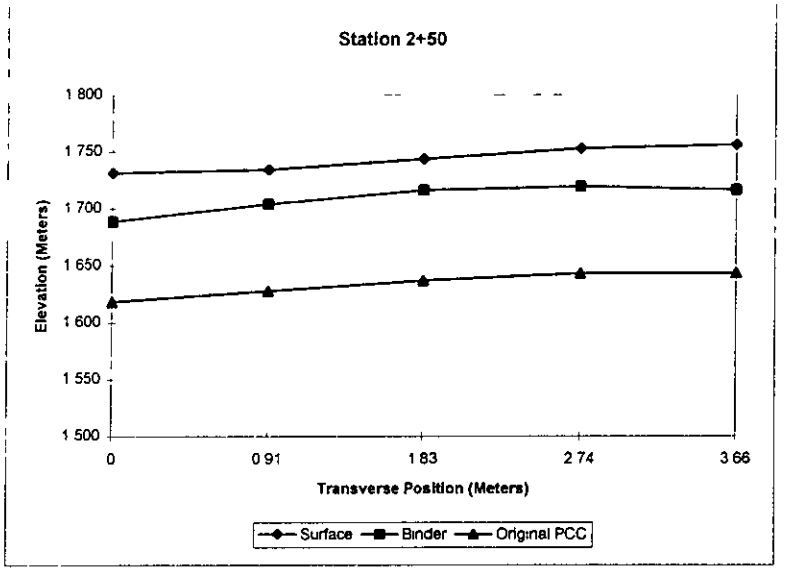


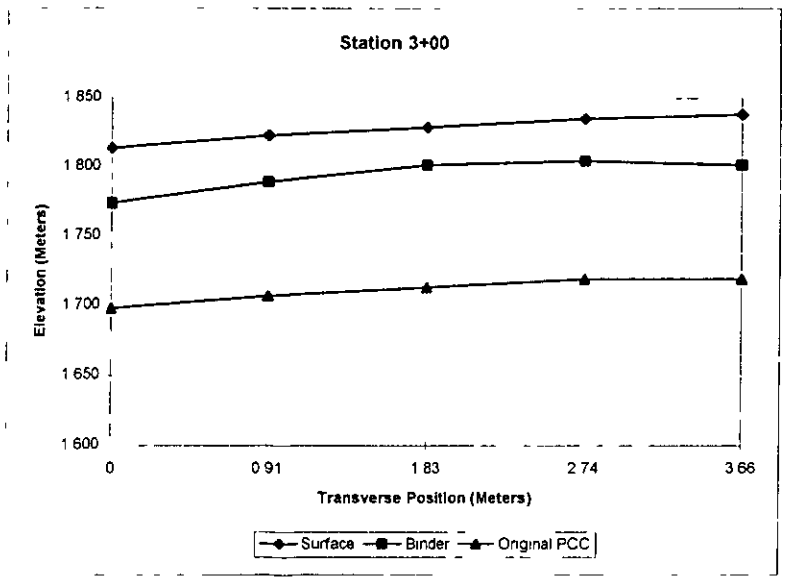


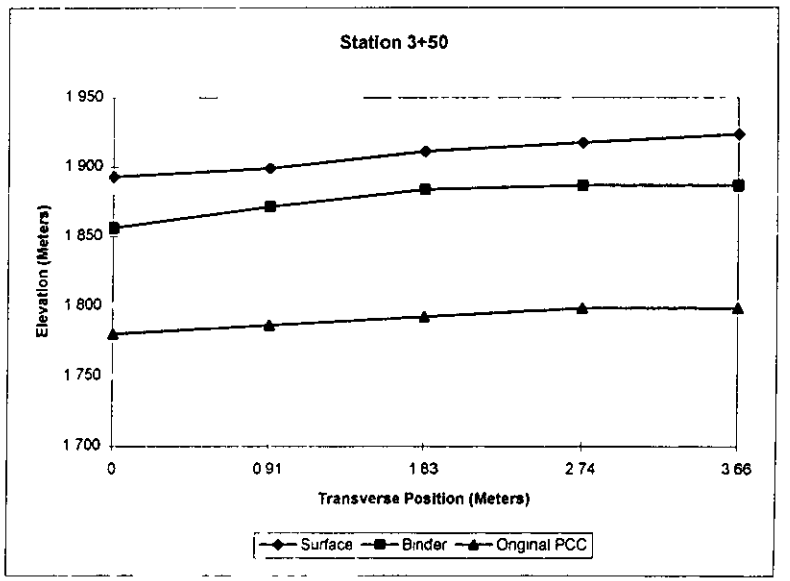


Alabama SPS-A6 (010604)

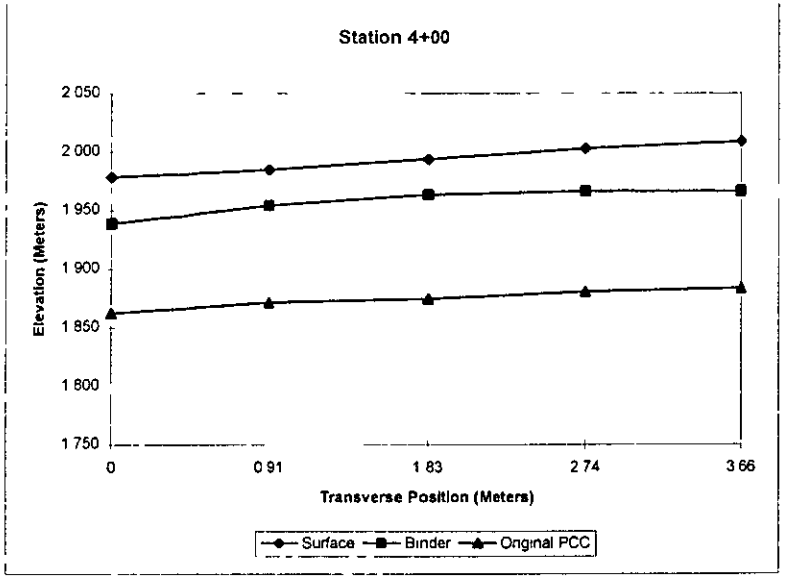


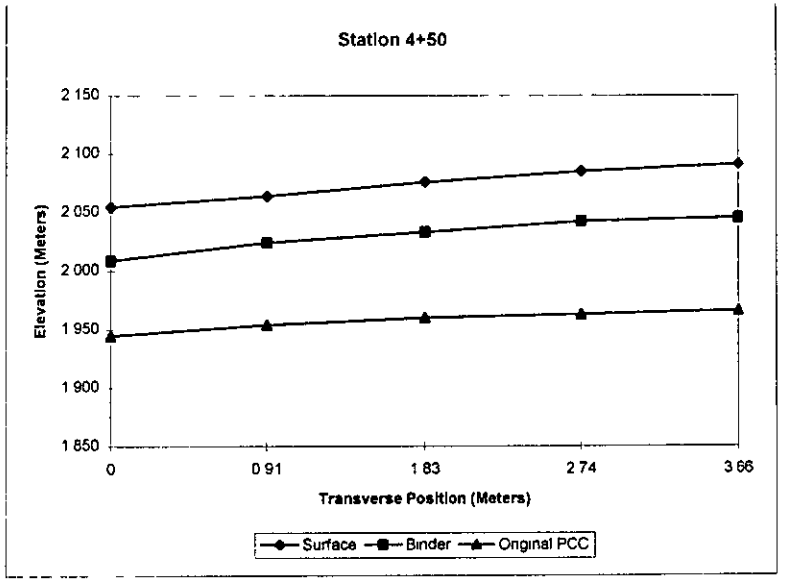


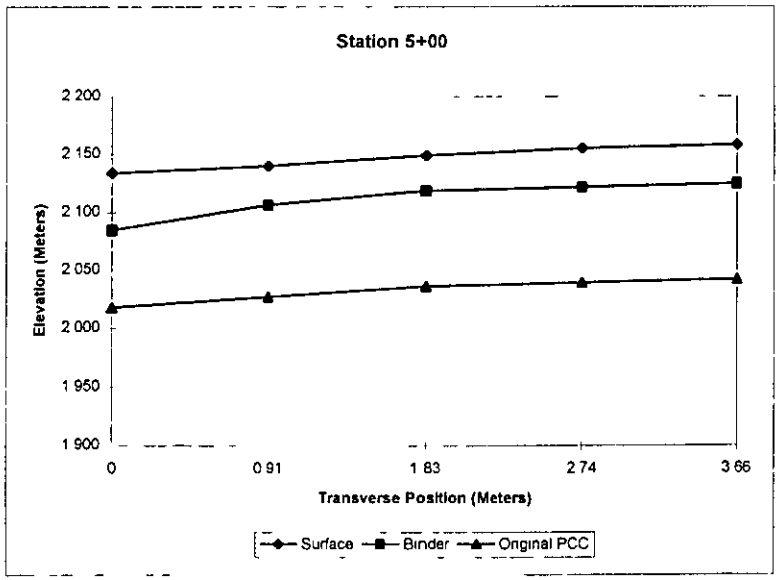




Alabama SPS-A6 (010604)







Alabama SPS-A6 (010605)

Transverse Offset	2 LAYERS	ELEVATION 0 Meters	Milled PCC THICKNESS Meters	ELEVATION 0 91 Meters	Milled PCC THICKNESS Meters	ELEVATION 1 83 Meters	Milled PCC THICKNESS Meters	ELEVATION 2 74 Meters	Milled PCC THICKNESS Meters	ELEVATION 3 66 Meters	Milled PCC THICKNESS Meters
0+00	Milled PCC	4 508	-0 003	4 520	-0 003	4 523	0 006	4 529	0 000	4 529	0 000
	Original PCC	4 511		4 523		4 529		4 529		4 529	
0+50	Milled PCC	4 313	-0 009	4 325	-0 009	4 337	-0 006	4 340	-0 009	4 346	-0 006
	Original PCC	4 322		4 334		4 343		4 349		4 353	
1+00	Milled PCC	4 161	-0 003	4 170	-0 003	4 179	-0 003	4 182	-0 006	4 185	-0 003
	Original PCC	4 164		4 173		4 182		4 188		4 188	
1+50	Milled PCC	3 968	-0 006	3 981	-0 003	3 990	-0 006	3 996	-0 003	3 999	0 003
	Original PCC	3 975		3 984		3 996		3 999		4 002	
2+00	Milled PCC	3 783	-0 003	3 795	-0 006	3 807	-0 003	3 810	-0 003	3 813	-0 003
	Original PCC	3 786		3 801		3 810		3 813		3 816	
2+50	Milled PCC	3 609	-0 006	3 612	-0 006	3 618	-0 006	3 621	-0 009	3 627	-0 012
	Original PCC	3 615		3 618		3 624		3 630		3 639	
3+00	Milled PCC	3 423	-0 006	3 432	-0 006	3 438	-0 006	3 441	-0 003	3 444	-0 003
	Original PCC	3 429		3 438		3 444		3 444		3 447	
3+50	Milled PCC	3 240	-0 006	3 249	-0 003	3 261	0 000	3 264	0 000	3 271	0 000
	Original PCC	3 246		3 252		3 261		3 264		3 271	
4+00	Milled PCC	3 060	-0 006	3 069	-0 006	3 082	-0 003	3 082	-0 003	3 088	0 000
	Original PCC	3 066		3 075		3 085		3 085		3 088	
4+50	Milled PCC	2 896	-0 009	2 905	-0 009	2 917	-0 003	2 920	-0 006	2 926	-0 003
	Original PCC	2 905		2 914		2 920		2 926		2 929	
5+00	Milled PCC	2 719	-0 009	2 731	-0 009	2 740	-0 006	2 743	-0 009	2 749	-0 006
	Original PCC	2 728		2 740		2 746		2 752		2 755	
	AVG		-0 006		-0 006		-0 005		-0 005		-0 004
	MAX		-0 003		-0 003		0 000		0 000		0 000
	MIN		-0 009		-0 009		-0 006		-0 009		-0 012
	STD		0 002		0 003		0 002		0 003		0 004

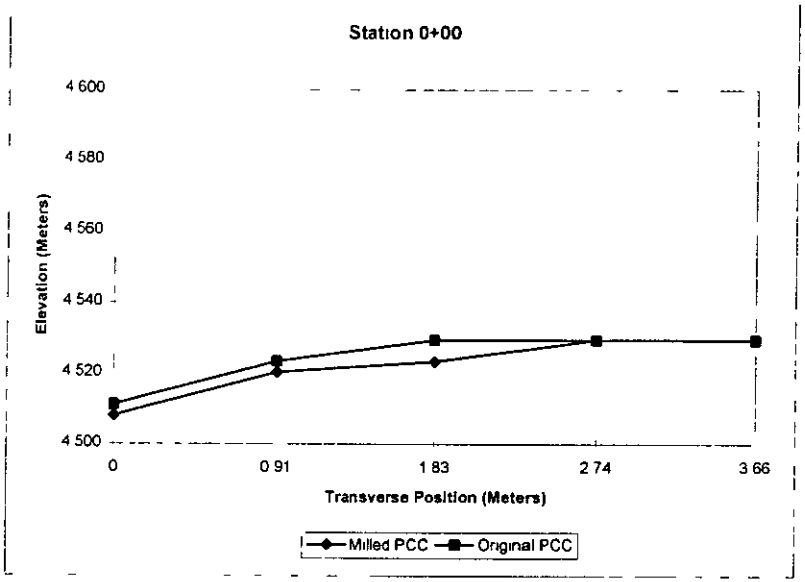
Notes Values are negative due to the PCC being milled Sta 5+00 - 10+00 are on the next page

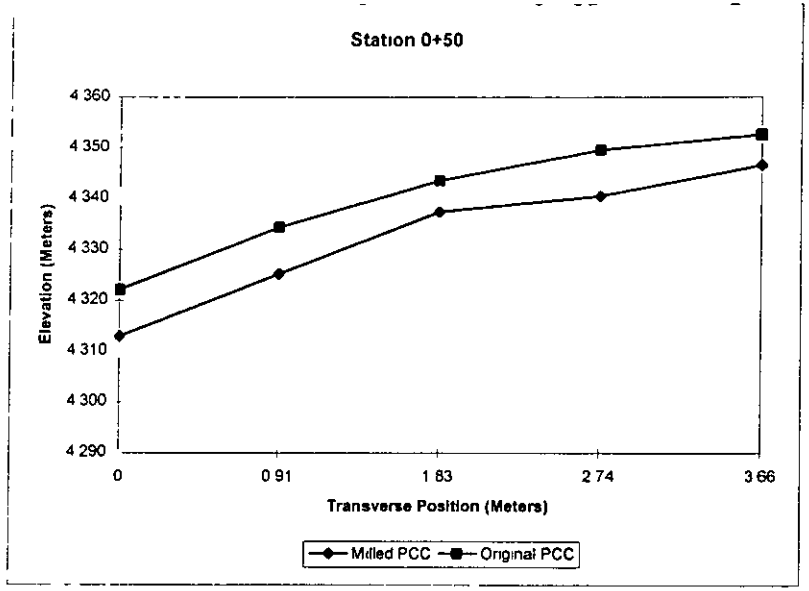
Alabama SPS-A6 (010605)

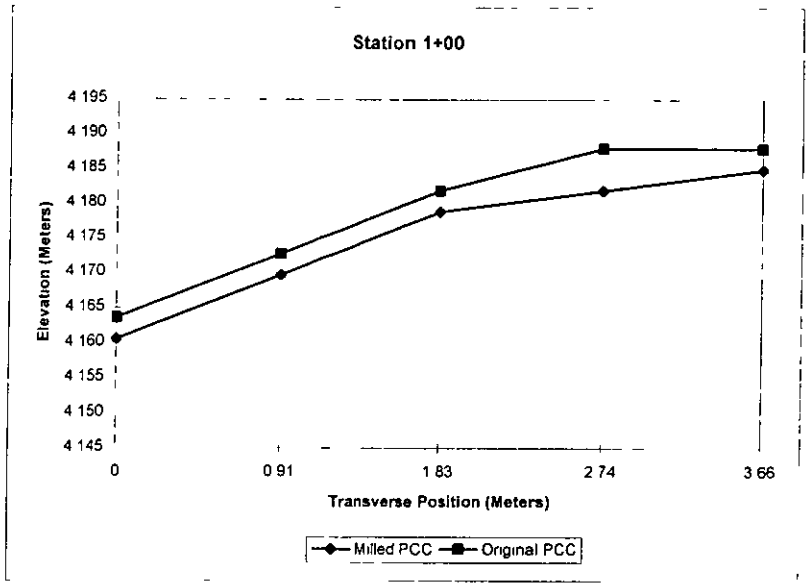
Transverse Offset	2 LAYERS	ELEVATION 0 Meters	Milled PCC THICKNESS Meters	ELEVATION 0.91 Meters	Milled PCC THICKNESS Meters	ELEVATION 1 83 Meters	Milled PCC THICKNESS Meters	ELEVATION 2 74 Meters	Milled PCC THICKNESS Meters	ELEVATION 3 66 Meters	Milled PCC THICKNESS Meters
5+00	Milled PCC	2 719	-0 009	2 731	-0 009	2 740	-0 006	2 743	-0 009	2 749	-0 006
	Original PCC	2 728		2 740		2 746		2 752		2 755	
5+50	Milled PCC	2 573	-0 009	2 579	-0 012	2 585	-0 012	2 591	-0 009	2 597	-0 006
	Original PCC	2 582		2 591		2 597		2 600		2 603	
6+00	Milled PCC	2 411	-0 009	2 423	-0 006	2 429	-0 009	2 435	-0 006	2 441	-0 003
	Original PCC	2 420		2 429		2 438		2 441		2 444	
6+50	Milled PCC	2 283	-0 009	2 292	-0 009	2 301	-0 006	2 304	-0 006	2 310	0 000
	Original PCC	2 292		2 301		2 307		2 310		2 310	
7+00	Milled PCC	2 146	-0 021	2 158	-0 018	2 164	-0 018	2 170	-0 018	2 173	-0 018
	Original PCC	2 167		2 176		2 182		2 188		2 192	
7+50	Milled PCC	2 030	-0 015	2 042	-0 015	2 051	-0 018	2 057	-0 015	2 063	-0 012
	Original PCC	2 045		2 057		2 070		2 073		2 076	
8+00	Milled PCC	1 914	-0 018	1 923	-0 021	1 932	-0 021	1 942	-0 018	1 945	-0 018
	Original PCC	1 932		1 945		1 954		1 960		1 963	
8+50	Milled PCC	1 801	-0 018	1 817	-0 015	1 826	-0 021	1 835	-0 018	1 841	-0 015
	Original PCC	1 820		1 832		1 847		1 853		1 856	
9+00	Milled PCC	1 722	-0 006	1 734	-0 006	1 747	-0 003	1 750	-0 006	1 756	-0 003
	Original PCC	1 728		1 740		1 750		1 756		1 759	
9+50	Milled PCC	1 634	-0 003	1 643	-0 006	1 658	-0 003	1 661	-0 003	1 667	-0 003
	Original PCC	1 637		1 649		1 661		1 664		1 670	
10+00	Milled PCC	1 558	-0 009	1 570	-0 009	1 579	-0 009	1 582	-0 006	1 588	-0 003
	Original PCC	1 567		1 579		1 588		1 588		1 591	
		AVG	**-0 012**		**-0 011**		**-0 011**		**-0 010**		**-0 007**
		MAX	**-0 003**		**-0 006**		**-0 003**		**-0 003**		**0 000**
		MIN	**-0 021**		**-0 021**		**-0 021**		**-0 018**		**-0 018**
		STD	**0 005**		**0 005**		**0 007**		**0 005**		**0 006**

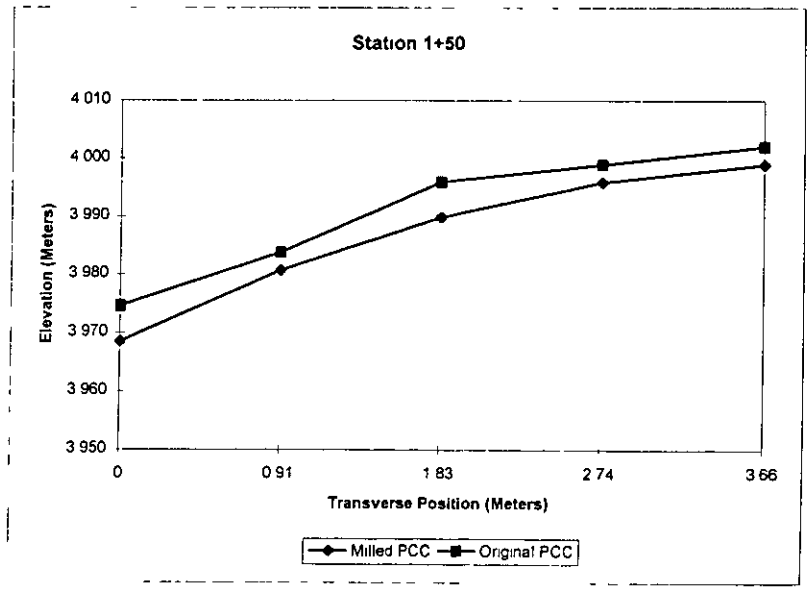
Notes Values are negative due to the PCC being milled

Alabama SPS-A6 (010605)

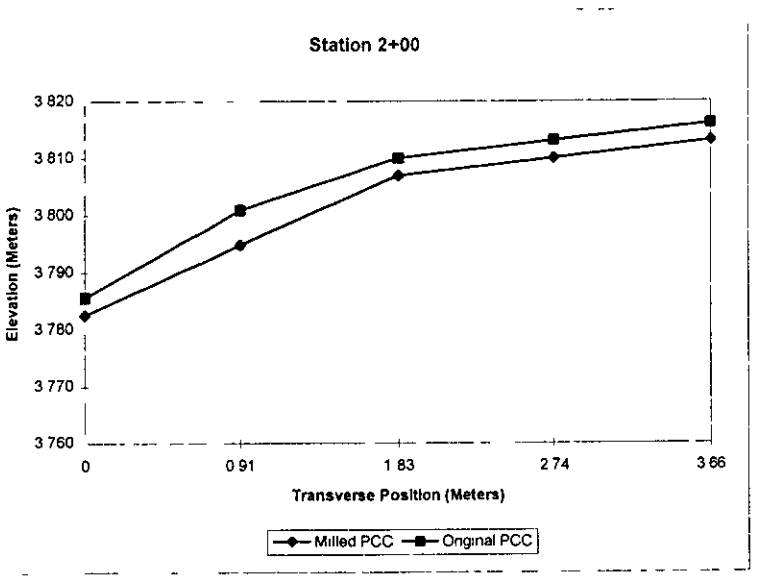


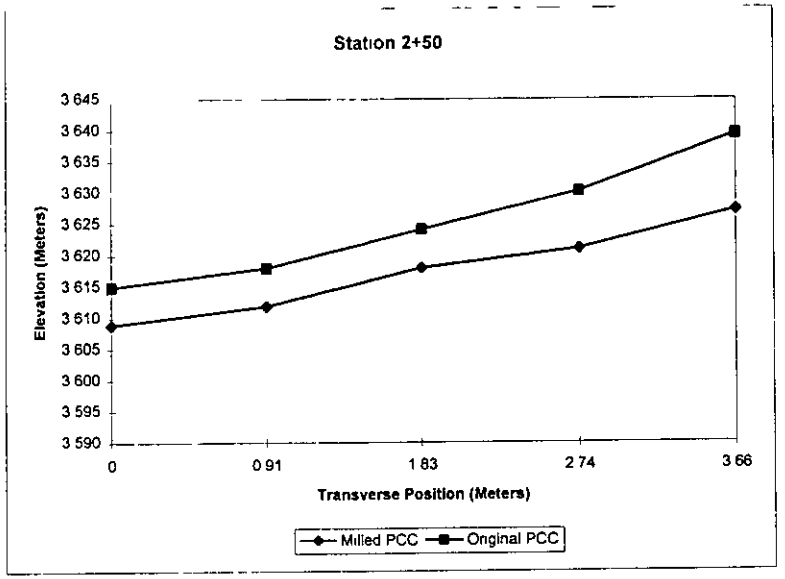


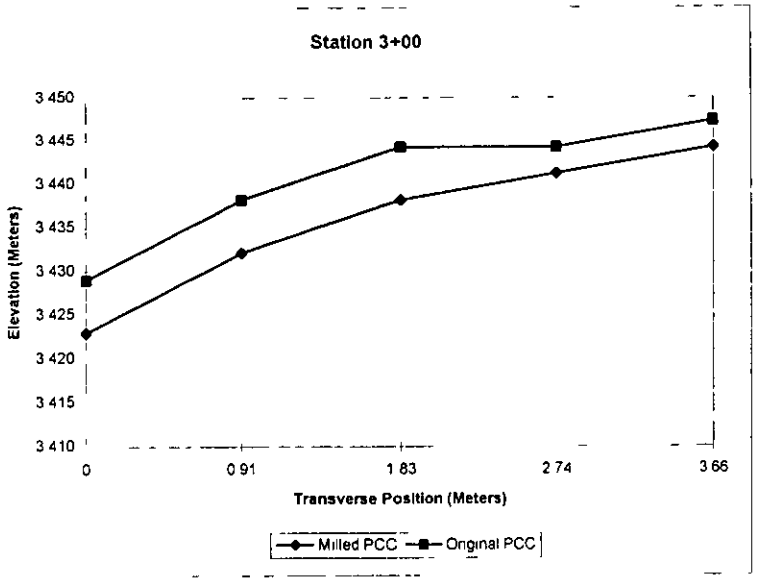


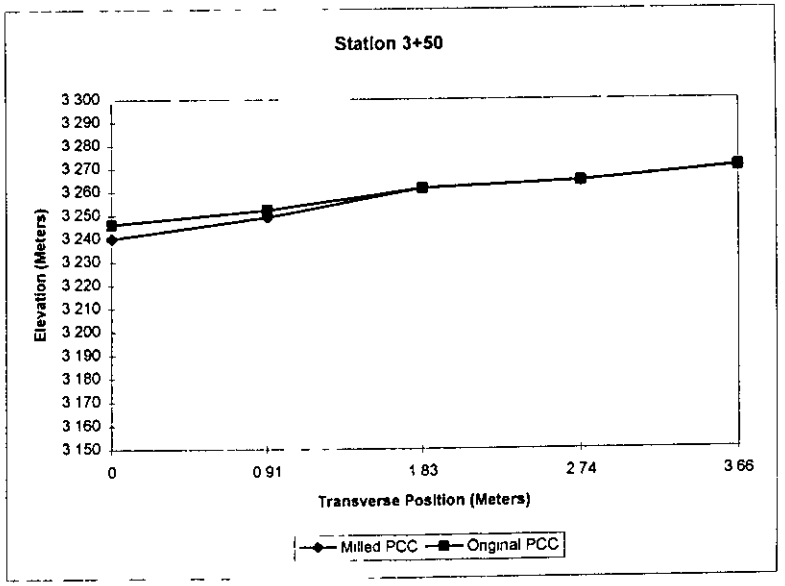


Alabama SPS-A6 (010605)

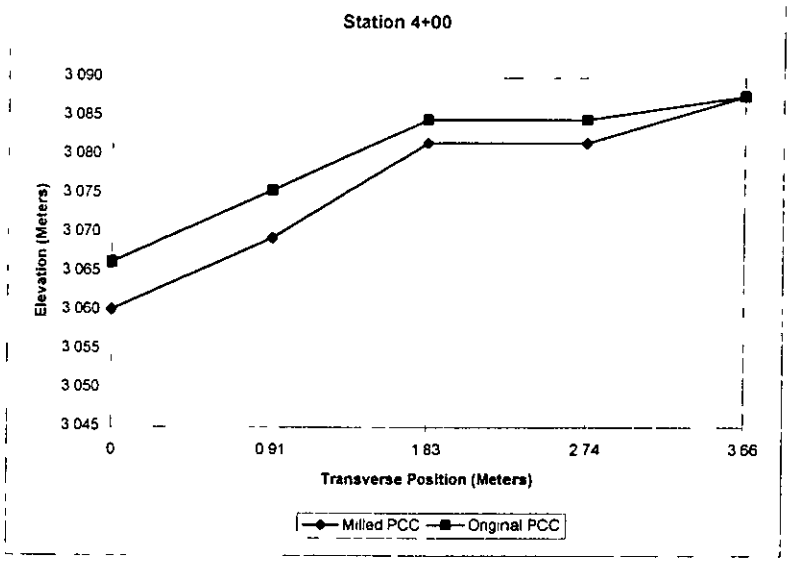


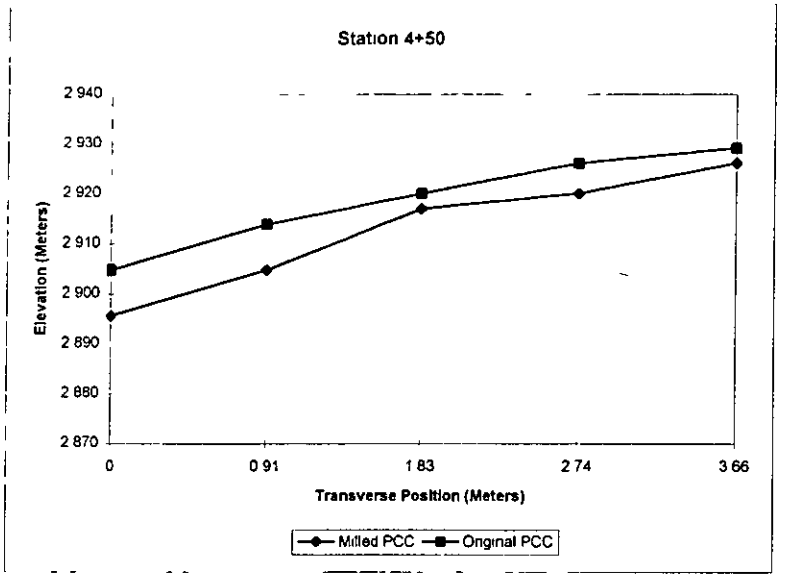


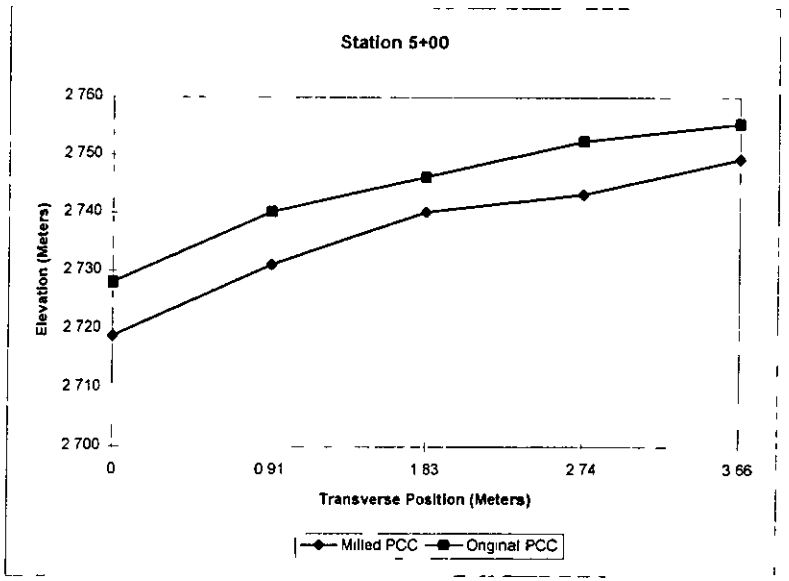




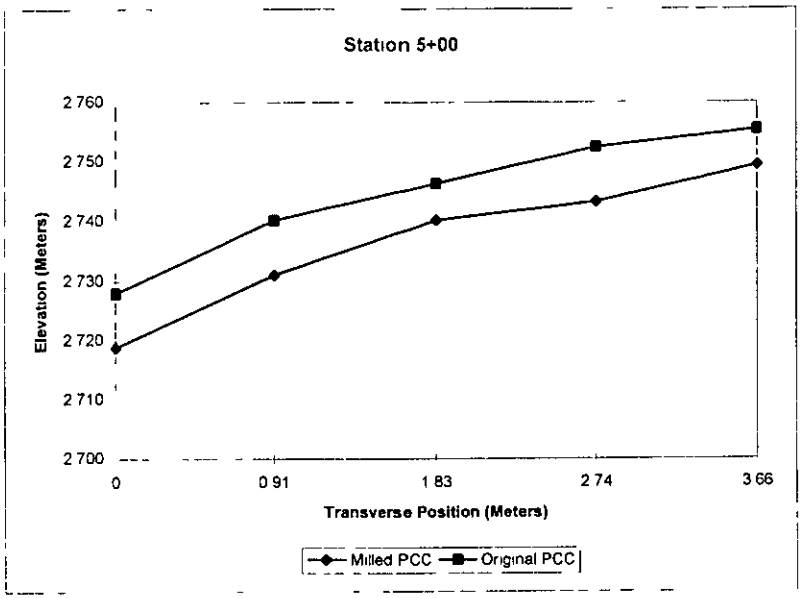
Alabama SPS-A6 (010605)

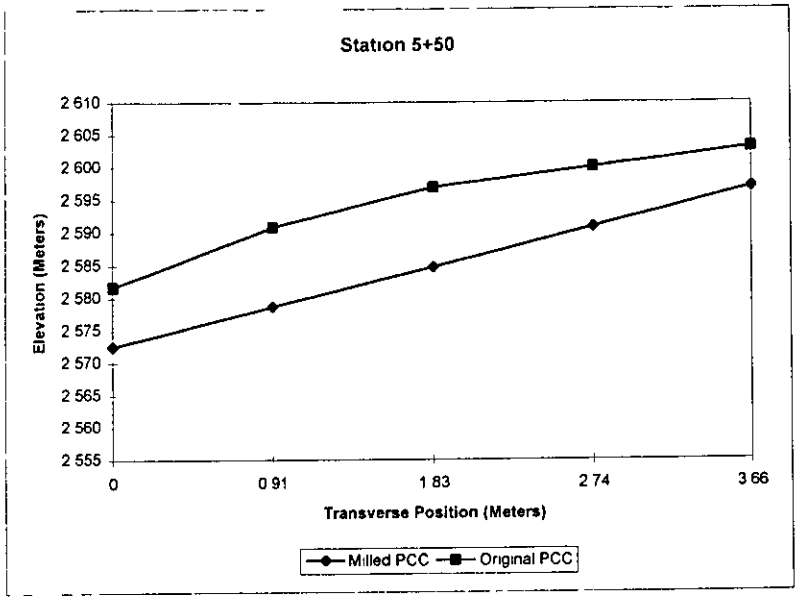


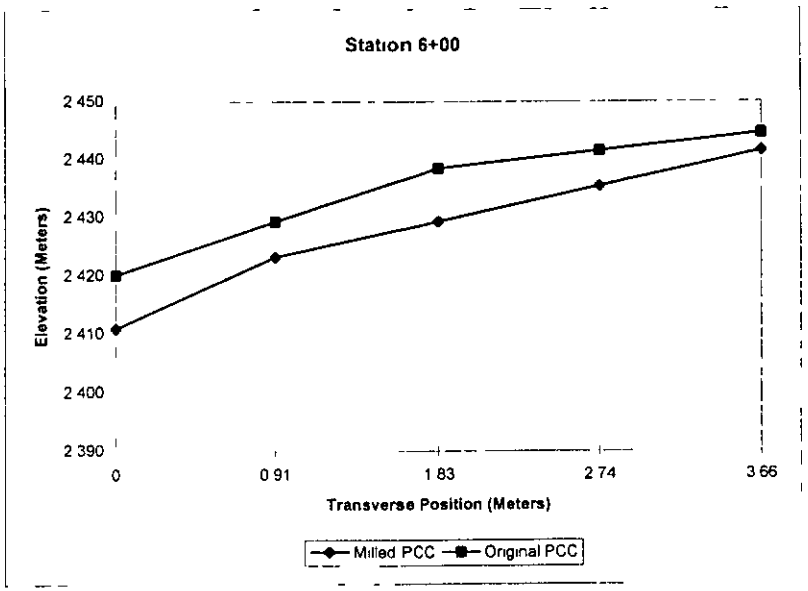


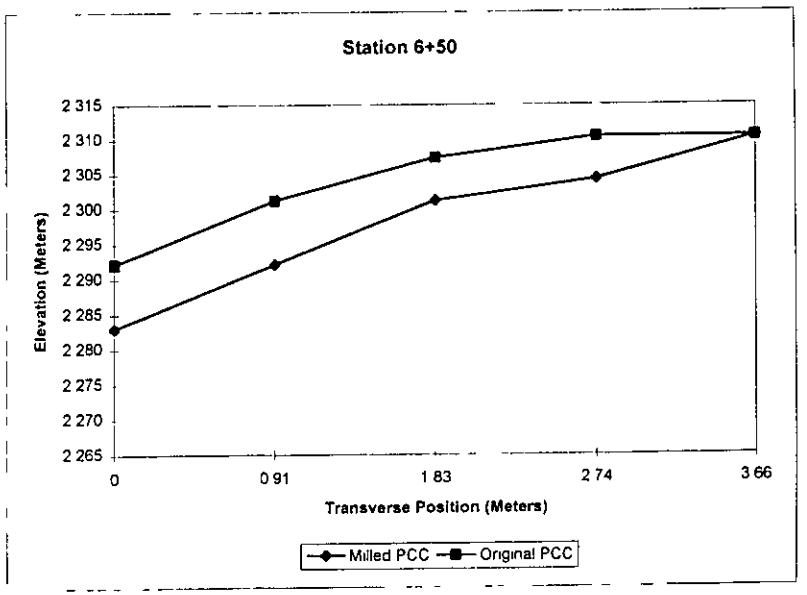


Alabama SPS-A6 (010605)

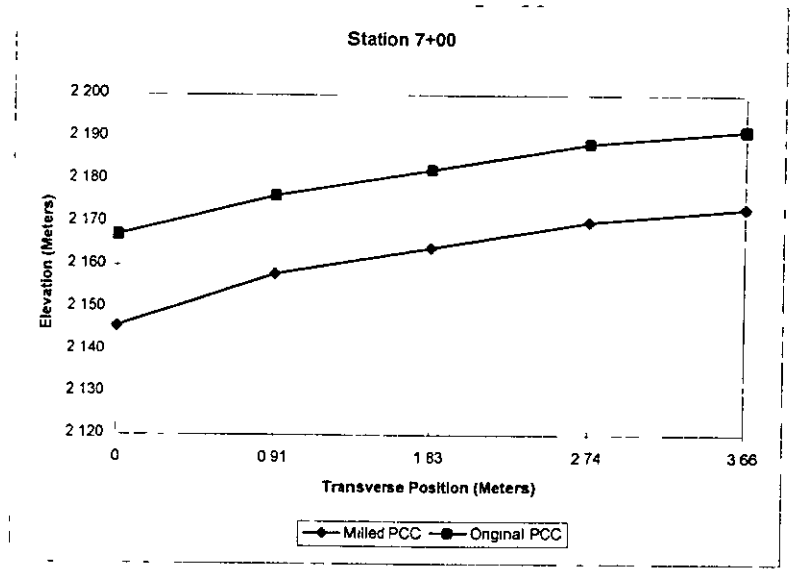


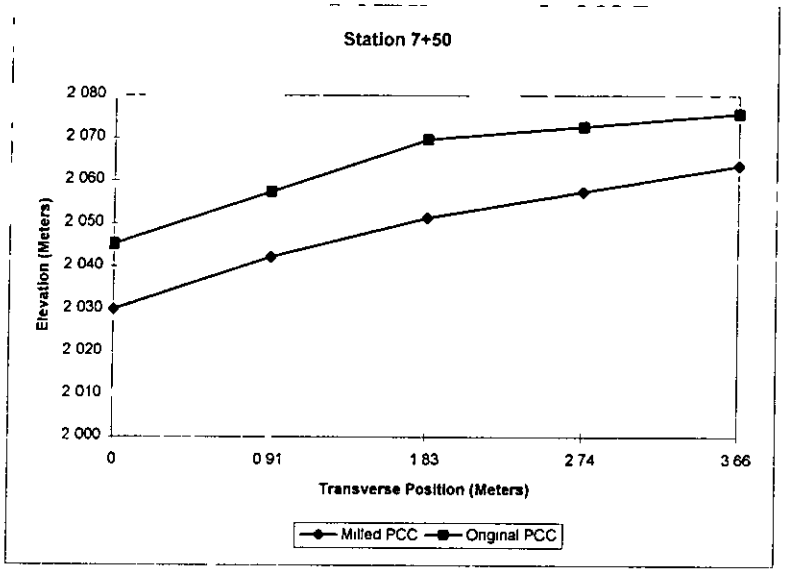


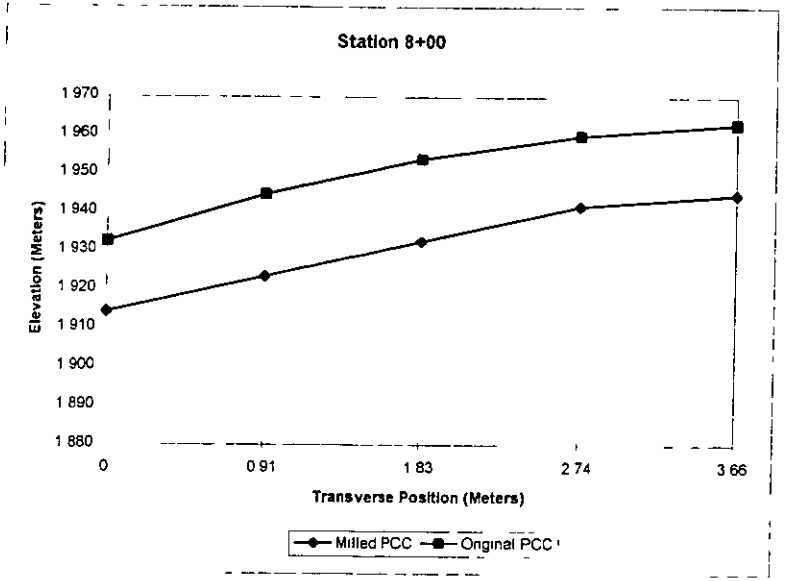


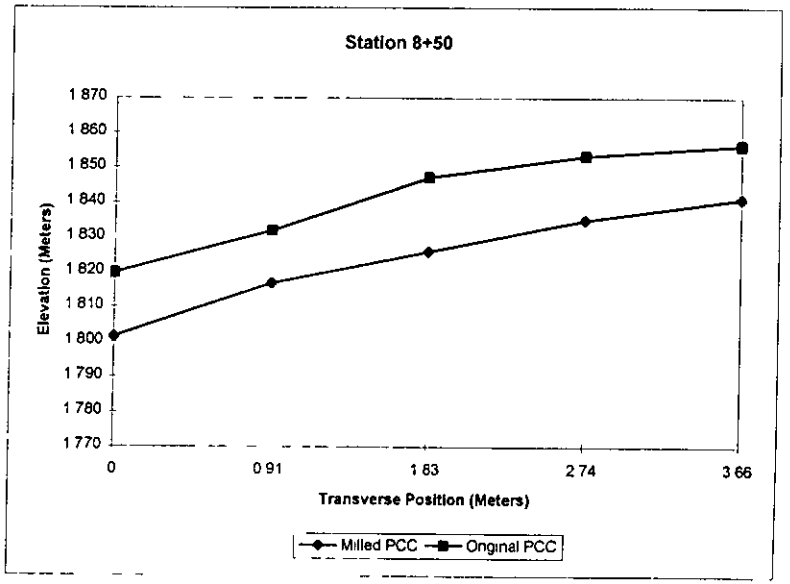


Alabama SPS-A6 (010605)

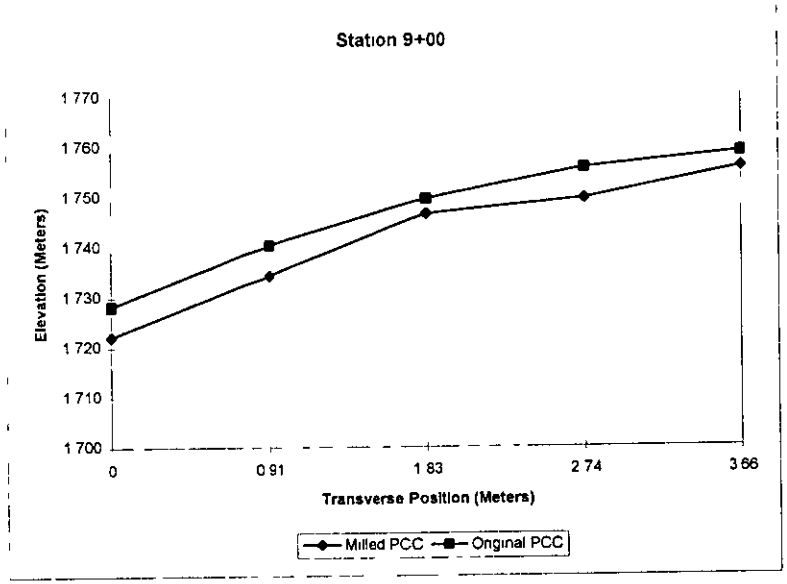


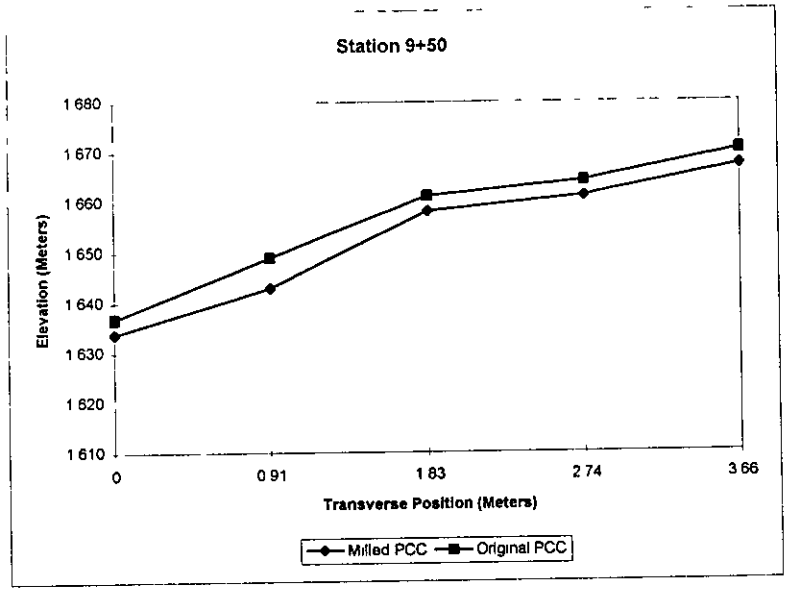


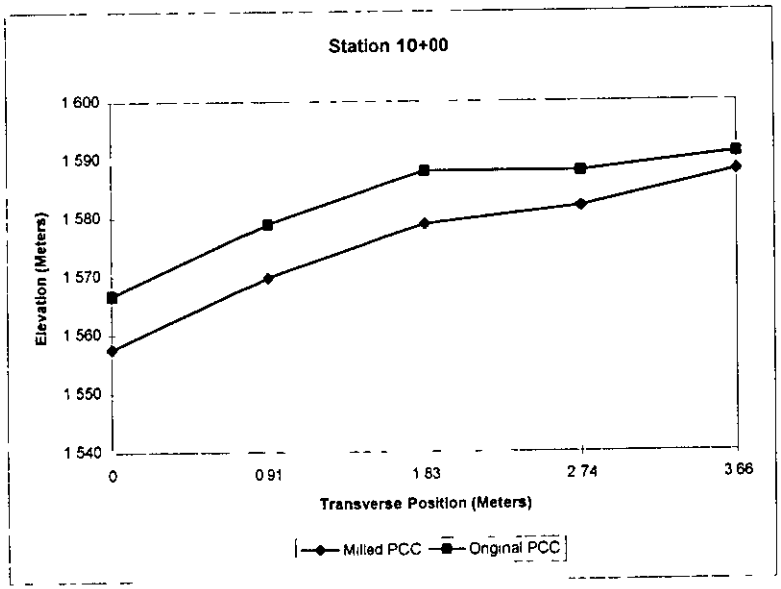




Alabama SPS-A6 (010605)



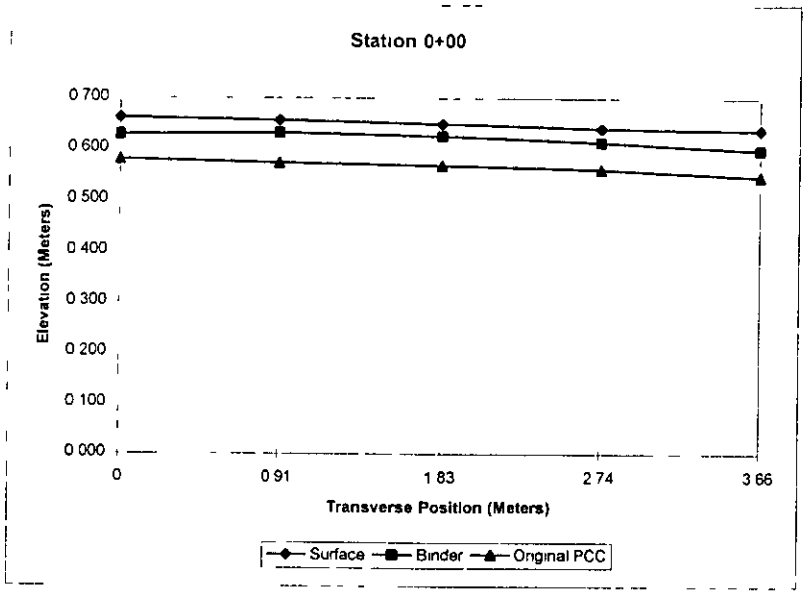


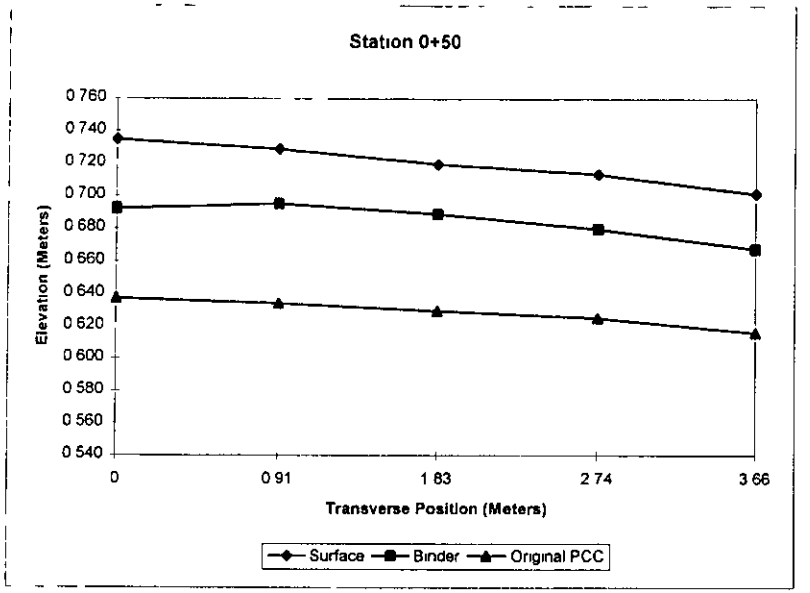


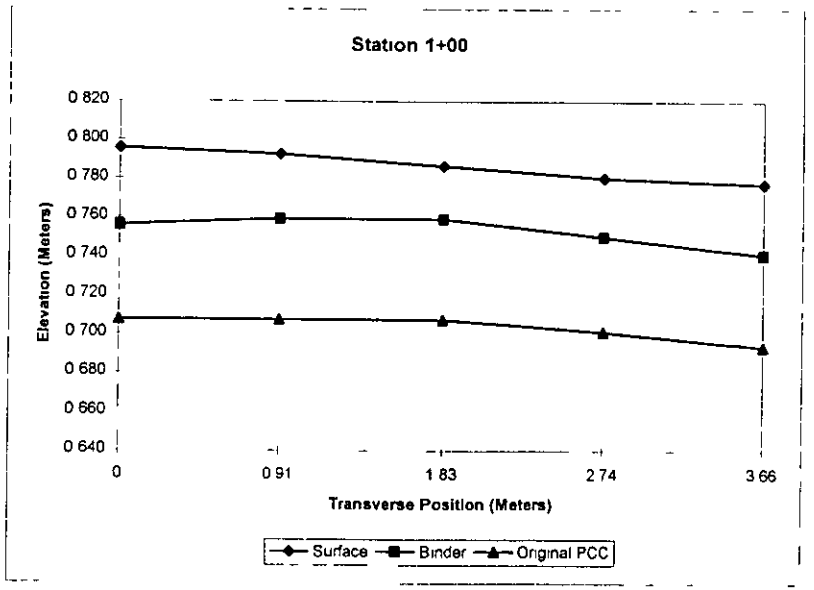
Alabama SPS-A6 (010606)

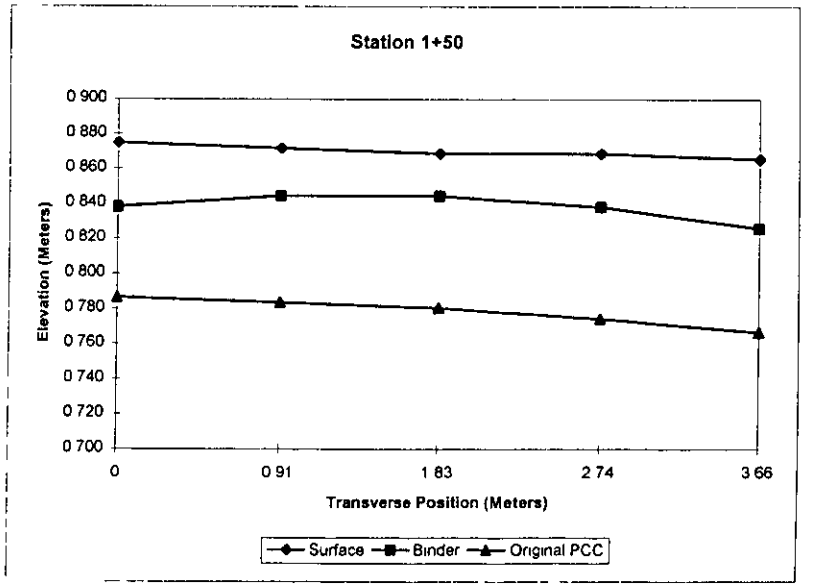
Transverse Offset	3 LAYERS	ELEVATION 0 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	ELEVATION 0 91 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	ELEVATION 1.83 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	ELEVATION 2 74 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	ELEVATION 3 66 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters
0+00	Surface	0 661	0 034	0 049	0 655	0 024	0 059	0 649	0 024	0 058	0 640	0 027	0 053	0 637	0 040	0 052
	Binder	0 628			0 631			0 625			0 613			0 597		
	Original PCC	0 579			0 572			0 567			0 559			0 546		
0+50	Surface	0 735	0 043	0 055	0 728	0 034	0 061	0 719	0 030	0 059	0 713	0 034	0 055	0 701	0 034	0 052
	Binder	0 692			0 695			0 689			0 680			0 668		
	Original PCC	0 637			0 634			0 629			0 625			0 616		
1+00	Surface	0 796	0 040	0 049	0 792	0 034	0 052	0 786	0 027	0 052	0 780	0 030	0 049	0 777	0 037	0 047
	Binder	0 756			0 759			0 759			0 750			0 741		
	Original PCC	0 707			0 707			0 707			0 701			0 693		
1+50	Surface	0 875	0 037	0 052	0 872	0 027	0 061	0 869	0 024	0 064	0 869	0 030	0 064	0 866	0 040	0 059
	Binder	0 838			0 844			0 844			0 838			0 826		
	Original PCC	0 786			0 783			0 780			0 774			0 767		
2+00	Surface	0 933	0 043	0 055	0 933	0 034	0 064	0 933	0 030	0 064	0 930	0 034	0 061	0 927	0 040	0 058
	Binder	0 890			0 899			0 902			0 896			0 887		
	Original PCC	0 835			0 835			0 838			0 835			0 829		
2+50	Surface	1 000	0 043	0 046	1 000	0 034	0 058	1 000	0 030	0 056	0 997	0 027	0 061	0 997	0 037	0 055
	Binder	0 957			0 966			0 969			0 969			0 960		
	Original PCC	0 911			0 908			0 913			0 908			0 905		
3+00	Surface	1 064	0 030	0 049	1 070	0 030	0 058	1 073	0 034	0 055	1 076	0 034	0 059	1 070	0 030	0 059
	Binder	1 033			1 039			1 039			1 042			1 039		
	Original PCC	0 985			0 981			0 985			0 983			0 980		
3+50	Surface	1 125	0 040	0 044	1 131	0 030	0 058	1 134	0 030	0 056	1 134	0 030	0 055	1 131	0 030	0 052
	Binder	1 085			1 100			1 103			1 103			1 100		
	Original PCC	1 041			1 042			1 047			1 049			1 049		
4+00	Surface	1 186	0 046	0 043	1 192	0 034	0 058	1 198	0 030	0 058	1 204	0 030	0 061	1 207	0 034	0 056
	Binder	1 140			1 158			1 167			1 173			1 173		
	Original PCC	1 097			1 100			1 109			1 113			1 117		
4+50	Surface	1 262	0 037	0 043	1 268	0 027	0 053	1 277	0 024	0 053	1 283	0 024	0 055	1 289	0 037	0 046
	Binder	1 225			1 241			1 253			1 259			1 253		
	Original PCC	1 183			1 187			1 199			1 204			1 207		
5+00	Surface	1 347	0 043	0 043	1 356	0 034	0 052	1 362	0 030	0 049	1 372	0 030	0 055	1 375	0 034	0 052
	Binder	1 305			1 323			1 332			1 341			1 341		
	Original PCC	1 262			1 271			1 283			1 286			1 289		
	AVG		0 039	0 047		0 031	0 057		0 029	0 056		0 030	0 057		0 035	0 053
	MAX		0 046	0 055		0 034	0 061		0 034	0 064		0 034	0 064		0 040	0 059
	MIN		0 030	0 043		0 024	0 052		0 024	0 049		0 024	0 049		0 030	0 046
	STD		0 004	0 004		0 003	0 003		0 003	0 004		0 003	0 004		0 003	0 004

Alabama SPS-A6 (010606)



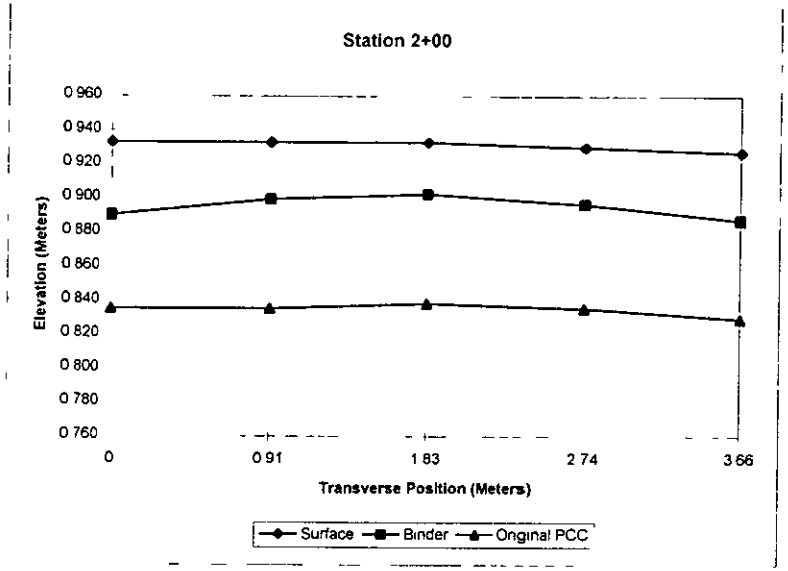


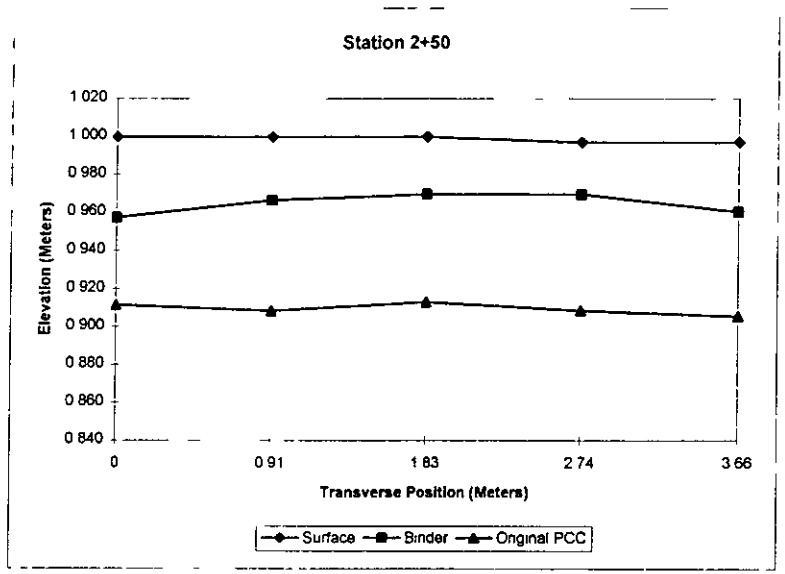


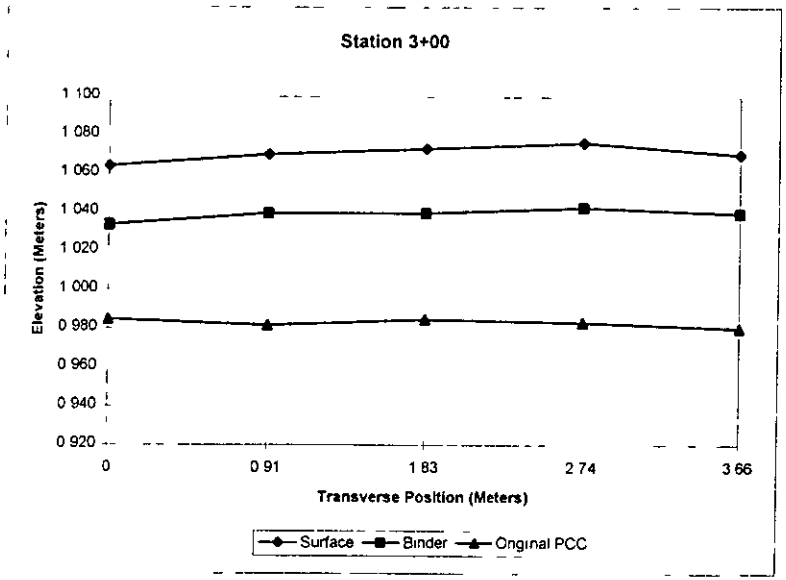


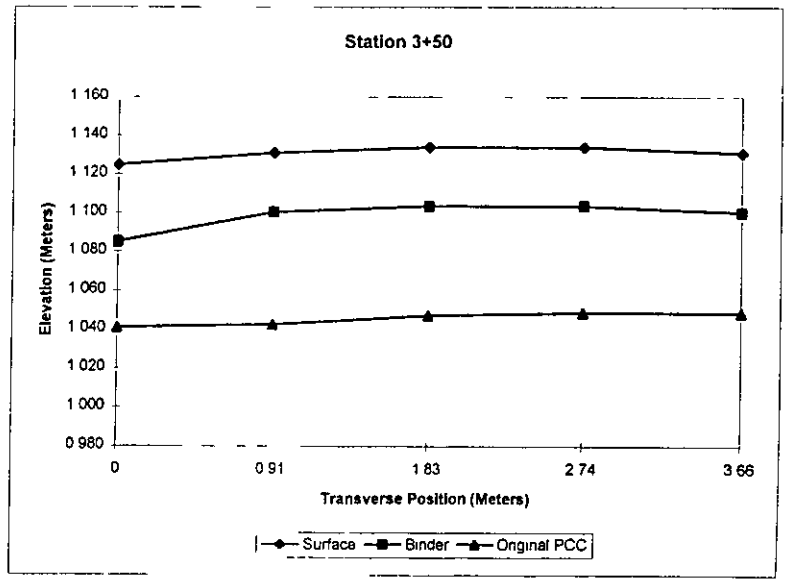
Alabama SPS-6 (010606)

Alabama SPS-A6 (010606)



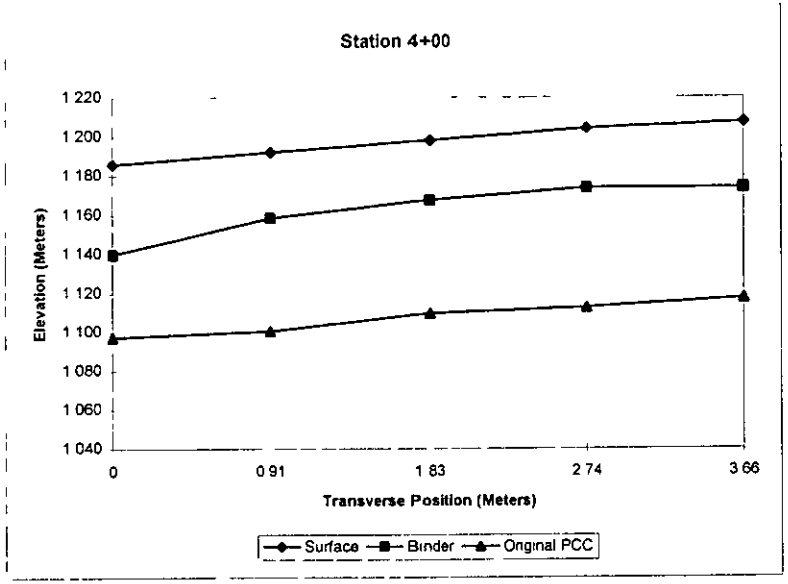


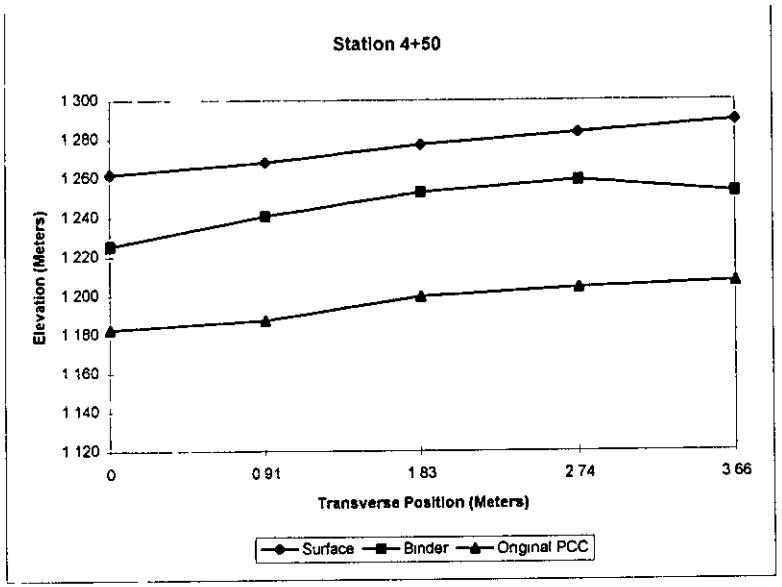


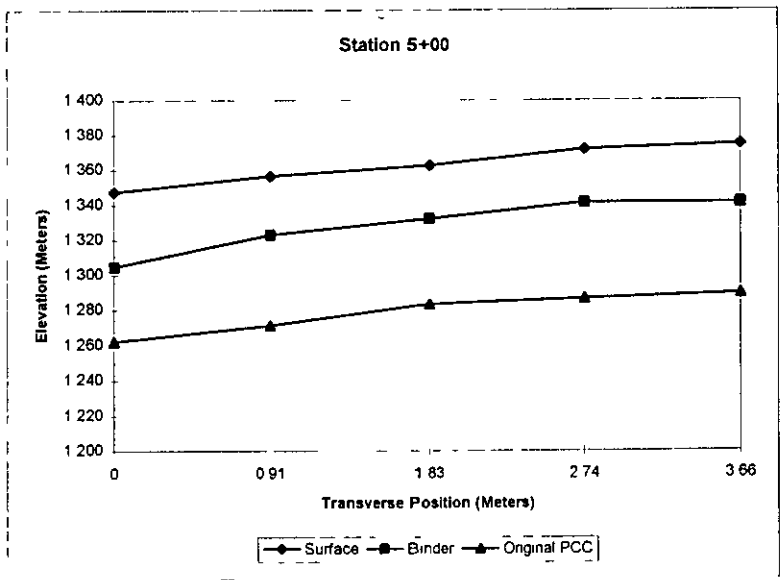


Alabama SPS-6 (010606)

Alabama SPS-A6 (010606)





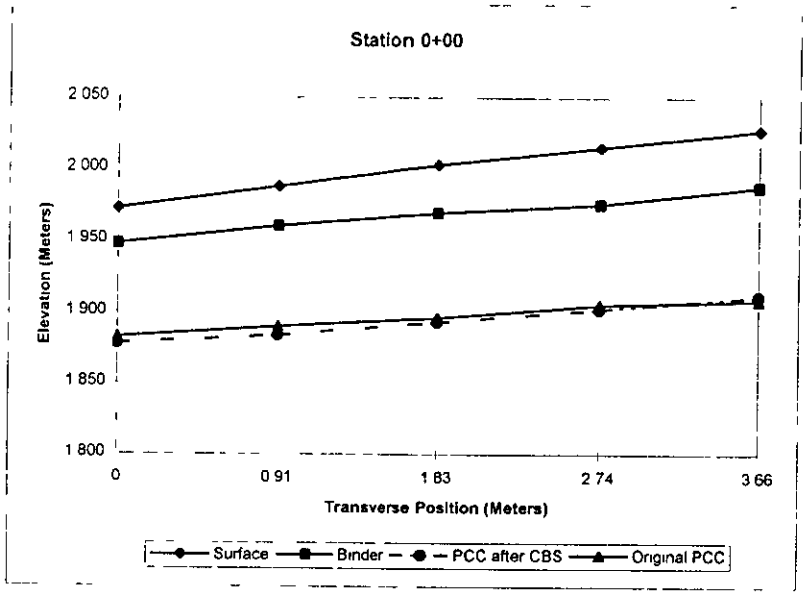


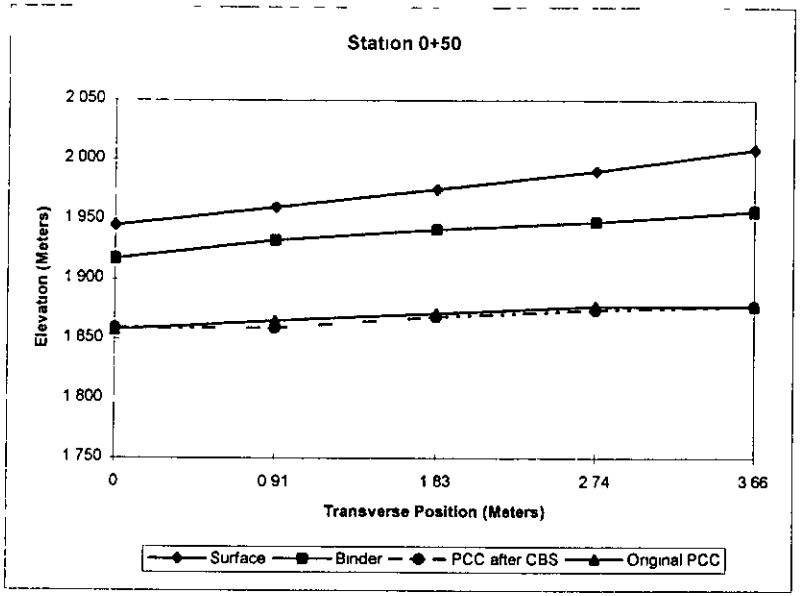
Alabama SPS-A6 (010607)

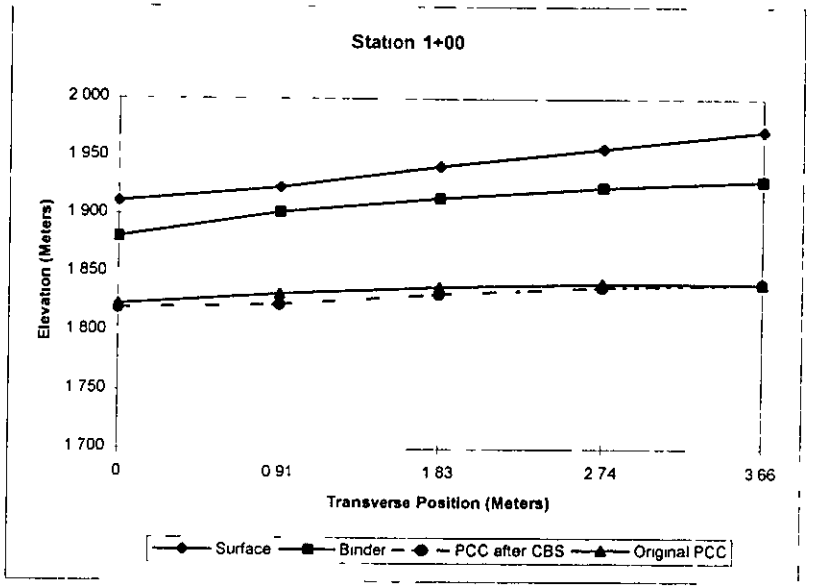
Transverse Offset	4 LAYERS	ELEVATION 0 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	CBS THICKNESS Meters	ELEVATION 0 91 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	CBS THICKNESS Meters	ELEVATION 1 83 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	CBS THICKNESS Meters	ELEVATION 2 74 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	CBS THICKNESS Meters	ELEVATION 3.66 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	CBS THICKNESS Meters
0+00	Surface	1 972	0 024	0 070	-0 005	1 987	0 027	0 076	-0 006	2 003	0 034	0 076	0 003	2 015	0 040	0 073	-0 003	2 027	0 040	0 076	0 003
	Binder	1 948				1 960				1 969				1 975				1 987			
	CBS	1 878				1 884				1 893				1 902				1 911			
	Original PCC	1 882				1 890				1 896				1 905				1 908			
0+50	Surface	1 945	0 027	0 058	0 002	1 960	0 027	0 073	0 006	1 975	0 034	0 073	0 003	1 990	0 043	0 073	0 003	2 009	0 052	0 079	0 000
	Binder	1 917				1 932				1 942				1 948				1 957			
	CBS	1 859				1 859				1 868				1 875				1 878			
	Original PCC	1 858				1 865				1 871				1 878				1 878			
1+00	Surface	1 911	0 030	0 061	0 003	1 923	0 021	0 079	0 009	1 942	0 027	0 082	0 006	1 957	0 034	0 085	-0 003	1 972	0 043	0 088	0 000
	Binder	1 881				1 902				1 914				1 923				1 929			
	CBS	1 820				1 823				1 832				1 838				1 841			
	Original PCC	1 823				1 832				1 838				1 841				1 841			
1+50	Surface	1 887	0 030	0 061	-0 003	1 902	0 030	0 070	0 008	1 917	0 030	0 076	0 006	1 932	0 034	0 082	0 005	1 948	0 040	0 085	0 000
	Binder	1 856				1 871				1 887				1 899				1 908			
	CBS	1 795				1 801				1 811				1 817				1 823			
	Original PCC	1 798				1 809				1 817				1 821				1 823			
2+00	Surface	1 859	0 034	0 061	0 003	1 875	0 027	0 079	-0 009	1 890	0 030	0 082	0 006	1 905	0 040	0 079	-0 003	1 917	0 049	0 076	0 000
	Binder	1 826				1 847				1 859				1 865				1 868			
	CBS	1 765				1 768				1 777				1 786				1 792			
	Original PCC	1 768				1 777				1 783				1 789				1 792			
2+50	Surface	1 832	0 034	0 061	0 003	1 844	0 024	0 079	0 009	1 862	0 030	0 079	0 006	1 881	0 037	0 085	0 006	1 896	0 040	0 088	0 000
	Binder	1 798				1 820				1 832				1 844				1 858			
	CBS	1 737				1 740				1 753				1 759				1 768			
	Original PCC	1 740				1 750				1 759				1 765				1 768			
3+00	Surface	1 798	0 030	0 061	0 009	1 814	0 024	0 082	0 018	1 832	0 024	0 094	0 018	1 844	0 030	0 091	0 015	1 862	0 037	0 094	0 009
	Binder	1 768				1 789				1 807				1 814				1 826			
	CBS	1 707				1 707				1 713				1 722				1 731			
	Original PCC	1 716				1 725				1 731				1 737				1 740			
3+50	Surface	1 762	0 037	0 052	-0 018	1 777	0 037	0 067	0 026	1 795	0 037	0 076	0 024	1 817	0 046	0 079	0 015	1 838	0 049	0 088	0 009
	Binder	1 725				1 740				1 759				1 771				1 789			
	CBS	1 673				1 673				1 682				1 692				1 701			
	Original PCC	1 692				1 699				1 707				1 707				1 710			
4+00	Surface	1 728	0 034	0 037	0 011	1 750	0 034	0 055	0 015	1 774	0 034	0 070	0 017	1 801	0 040	0 082	0 012	1 823	0 043	0 088	0 003
	Binder	1 695				1 716				1 740				1 762				1 780			
	CBS	1 658				1 661				1 670				1 679				1 692			
	Original PCC	1 669				1 676				1 687				1 692				1 695			
4+50	Surface	1 707	0 030	0 046	-0 009	1 725	0 030	0 064	0 014	1 747	0 034	0 070	0 012	1 768	0 037	0 082	-0 012	1 786	0 037	0 091	-0 008
	Binder	1 676				1 695				1 713				1 731				1 750			
	CBS	1 631				1 631				1 643				1 649				1 658			
	Original PCC	1 640				1 644				1 655				1 661				1 666			
5+00	Surface	1 704	0 030	0 061	-0 005	1 722	0 030	0 079	0 015	1 740	0 030	0 085	0 015	1 765	0 037	0 091	0 011	1 786	0 034	0 107	0 009
	Binder	1 673				1 692				1 710				1 728				1 753			
	CBS	1 612				1 612				1 625				1 637				1 646			
	Original PCC	1 617				1 628				1 640				1 647				1 655			
	AVG		0 031	0 057	-0 006		0 029	0 073	-0 013		0 031	0 078	-0 011		0 037	0 083	-0 009		0 041	0 089	-0 004
	MAX		0 037	0 070	0 002		0 037	0 082	-0 006		0 037	0 094	-0 003		0 046	0 091	-0 003		0 052	0 107	0 003
	MIN		0 024	0 037	-0 018		0 021	0 055	-0 026		0 024	0 070	-0 024		0 030	0 073	-0 015		0 034	0 076	-0 009
	STD		0 003	0 009	0 005		0 004	0 008	0 008		0 003	0 007	0 007		0 004	0 006	0 005		0 005	0 008	0 005

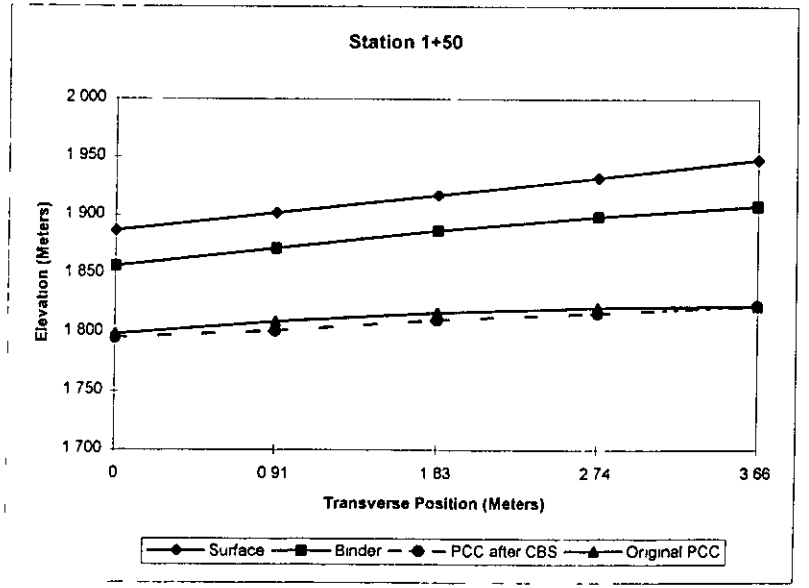
Note CBS values are negative due to the Crack Break & Seating

Alabama SPS-A6 (010607)

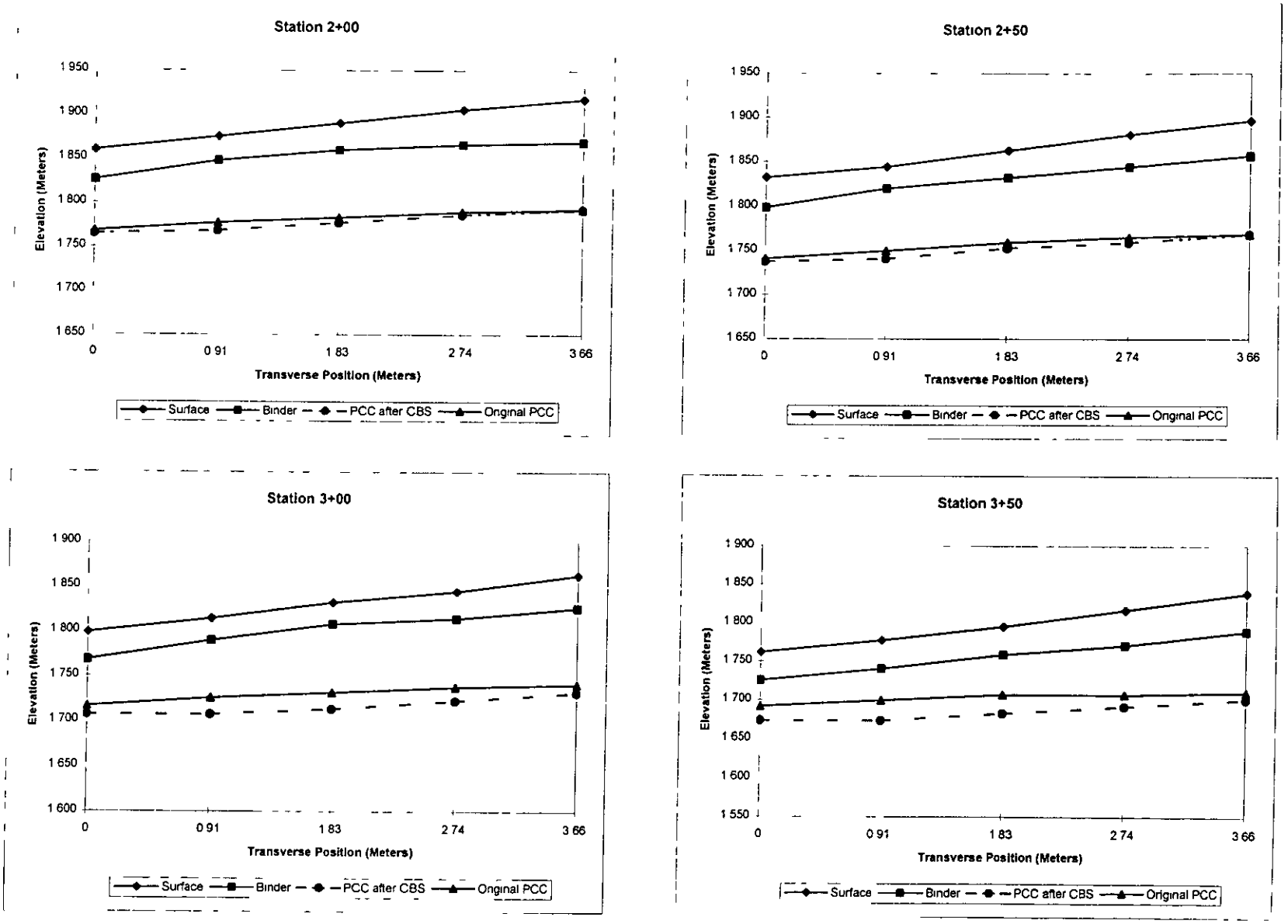




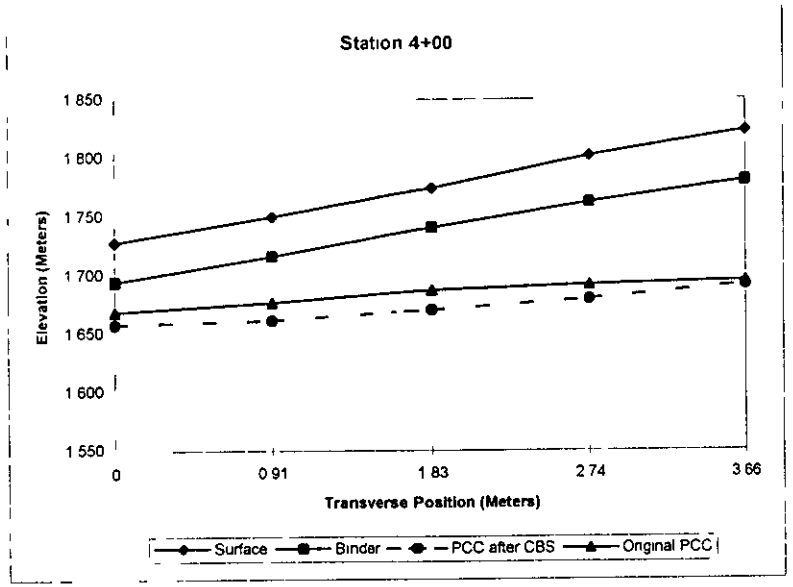


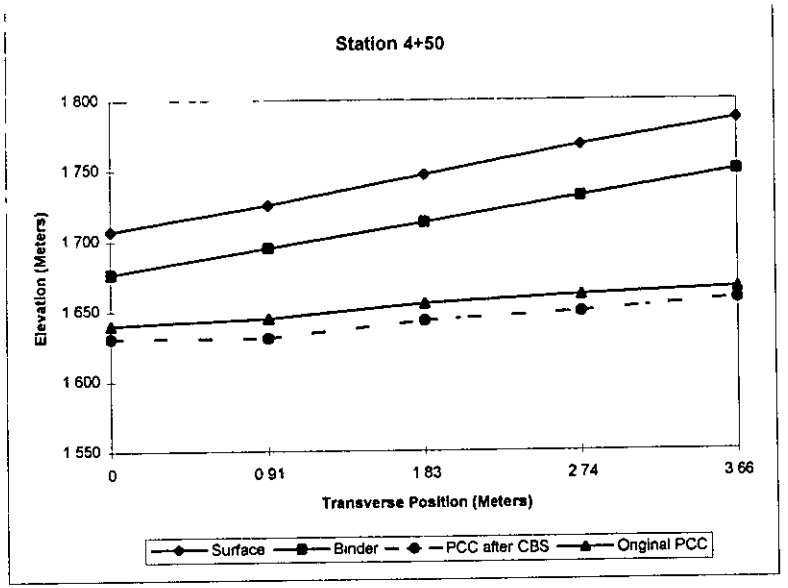


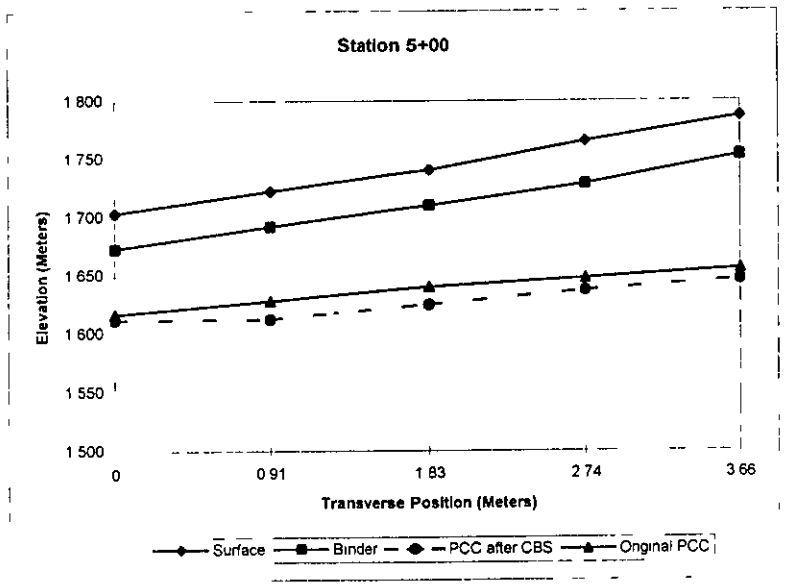
Alabama SPS-A6 (010607)



Alabama SPS-A6 (010607)







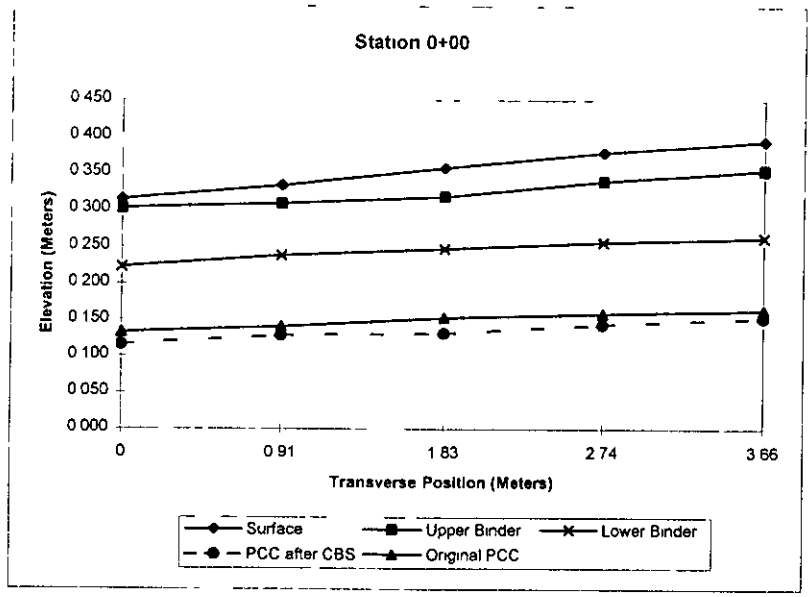
Alabama SPS-A6 (010608)

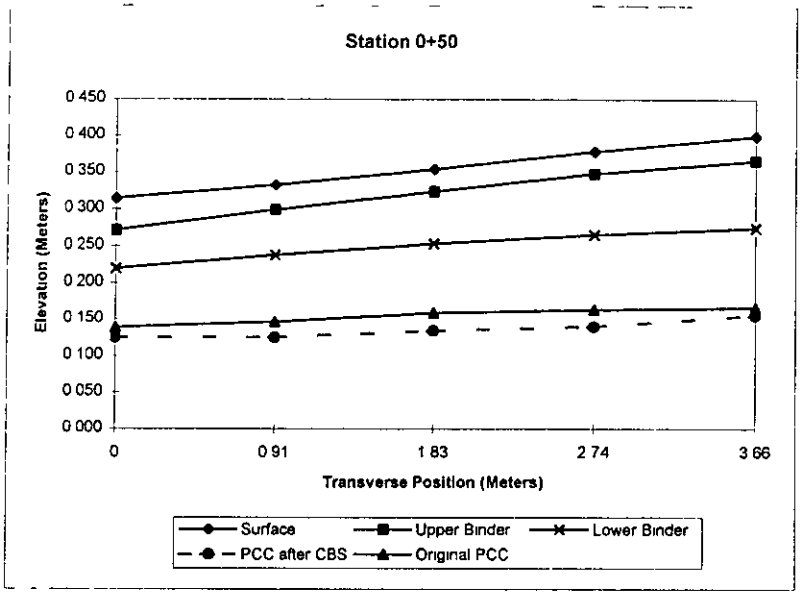
Transverse Offset	5 LAYERS	ELEVATION 0 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	CBS THICKNESS Meters	ELEVATION 0.91 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	CBS THICKNESS Meters
0+00	Surface	0.314	0.012	0.079	0.107	-0.017	0.332	0.024	0.070	0.110	-0.012
	Upper Binder	0.302					0.308				
	Lower Binder	0.223					0.238				
	CBS	0.116					0.128				
	Original PCC	0.133					0.140				
0+50	Surface	0.314	0.043	0.052	0.094	-0.014	0.332	0.034	0.061	0.113	-0.021
	Upper Binder	0.271					0.299				
	Lower Binder	0.219					0.238				
	CBS	0.125					0.125				
	Original PCC	0.139					0.146				
1+00	Surface	0.308	0.043	0.049	0.091	-0.014	0.329	0.037	0.055	0.107	-0.015
	Upper Binder	0.265					0.293				
	Lower Binder	0.216					0.238				
	CBS	0.1 5					0.131				
	Original PCC	0.139					0.146				
1+50	Surface	0.302	0.040	0.049	0.101	-0.015	0.326	0.040	0.055	0.116	-0.023
	Upper Binder	0.262					0.287				
	Lower Binder	0.213					0.232				
	CBS	0.113					0.116				
	Original PCC	0.1 5					0.139				
2+00	Surface	0.308	0.043	0.052	0.094	-0.012	0.329	0.043	0.052	0.116	-0.023
	Upper Binder	0.265					0.287				
	Lower Binder	0.213					0.235				
	CBS	0.119					0.119				
	Original PCC	0.131					0.142				
2+50	Surface	0.296	0.043	0.052	0.091	-0.011	0.314	0.040	0.052	0.110	-0.018
	Upper Binder	0.253					0.274				
	Lower Binder	0.201					0.223				
	CBS	0.110					0.113				
	Original PCC	0.120					0.131				
3 00	Surface	0.283	0.034	0.052	0.101	0.012	0.299	0.0 7	0.052	0.122	-0.016
	Upper Binder	0.250					0.271				
	Lower Binder	0.198					0.219				
	CBS	0.098					0.098				
	Original PCC	0.110					0.118				
3+50	Surface	0.280	0.034	0.070	0.091	-0.012	0.296	0.034	0.064	0.110	-0.017
	Upper Binder	0.247					0.262				
	Lower Binder	0.177					0.198				
	CBS	0.085					0.088				
	Original PCC	0.098					0.105				
4+00	Surface	0.268	0.040	0.061	0.094	-0.015	0.280	0.034	0.058	0.113	-0.020
	Upper Binder	0.229					0.247				
	Lower Binder	0.168					0.189				
	CBS	0.073					0.076				
	Original PCC	0.088					0.096				
4+50	Surface	0.265	0.037	0.058	0.104	-0.018	0.277	0.030	0.061	0.119	-0.027
	Upper Binder	0.229					0.247				
	Lower Binder	0.171					0.186				
	CBS	0.067					0.067				
	Original PCC	0.085					0.094				
5+00	Surface	0.247	0.030	0.061	0.101	-0.015	0.268	0.034	0.064	0.119	-0.026
	Upper Binder	0.216					0.235				
	Lower Binder	0.155					0.171				
	CBS	0.055					0.052				
	Original PCC	0.070					0.078				
	AVG		0.036	0.058	0.098	-0.014		0.033	0.059	0.114	-0.020
	MAX		0.043	0.079	0.107	-0.011		0.040	0.070	0.122	-0.012
	MIN		0.012	0.049	0.091	-0.018		0.024	0.052	0.107	-0.027
	STD		0.009	0.009	0.005	0.002		0.005	0.006	0.005	0.004

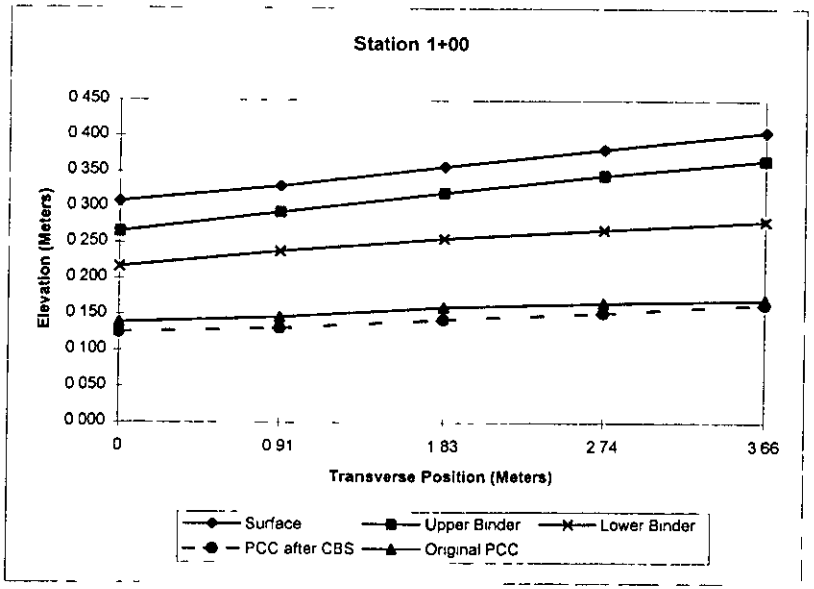
Transverse Offset	5 LAYERS	ELEVATION 1.83 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	CBS THICKNESS Meters	ELEVATION 2.74 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	CBS THICKNESS Meters	ELEVATION 3.66 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	CBS THICKNESS Meters
0+00	Surface	0.357	0.040	0.070	0.116	-0.021	0.378	0.040	0.082	0.113	-0.015	0.393	0.040	0.091	0.110	-0.011
	Upper Binder	0.317					0.338					0.354				
	Lower Binder	0.247					0.256					0.262				
	CBS	0.131					0.143					0.152				
	Original PCC	0.152					0.158					0.163				
0+50	Surface	0.354	0.030	0.070	0.119	-0.024	0.378	0.030	0.082	0.125	-0.023	0.399	0.034	0.091	0.119	-0.011
	Upper Binder	0.323					0.347					0.366				
	Lower Binder	0.253					0.265					0.274				
	CBS	0.134					0.140					0.155				
	Original PCC	0.158					0.163					0.166				
1+00	Surface	0.357	0.037	0.064	0.113	-0.017	0.381	0.037	0.076	0.116	-0.014	0.405	0.040	0.085	0.116	-0.006
	Upper Binder	0.320					0.344					0.366				
	Lower Binder	0.256					0.268					0.280				
	CBS	0.143					0.152					0.165				
	Original PCC	0.160					0.166					0.171				
1+50	Surface	0.347	0.037	0.064	0.113	-0.017	0.372	0.040	0.070	0.116	-0.012	0.387	0.034	0.079	0.119	-0.008
	Upper Binder	0.311					0.332					0.354				
	Lower Binder	0.247					0.262					0.274				
	CBS	0.134					0.146					0.155				
	Original PCC	0.151					0.158					0.163				
2+00	Surface	0.351	0.040	0.061	0.116	-0.017	0.372	0.043	0.067	0.119	-0.015	0.387	0.040	0.076	0.119	-0.008
	Upper Binder	0.311					0.329					0.347				
	Lower Binder	0.250					0.262					0.271				
	CBS	0.134					0.143					0.152				
	Original PCC	0.151					0.158					0.160				
2+50	Surface	0.332	0.030	0.061	0.113	-0.015	0.354	0.034	0.067	0.116	-0.011	0.369	0.027	0.076	0.122	-0.009
	Upper Binder	0.302					0.320					0.341				
	Lower Binder	0.241					0.253					0.265				
	CBS	0.128					0.137					0.143				
	Original PCC	0.143					0.148					0.152				
3 00	Surface	0.320	0.030	0.052	0.128	-0.018	0.338	0.030	0.052	0.134	-0.017	0.354	0.000	0.082	0.143	-0.015
	Upper Binder	0.290					0.308					0.354				
	Lower Binder	0.238					0.256					0.271				
	CBS	0.110					0.122					0.128				
	Original PCC	0.128					0.139					0.143				
3+50	Surface	0.314	0.034	0.06	0.116	-0.021	0.326	0.034	0.064	0.119	-0.012	0.341	0.034	0.064	0.122	-0.006
	Upper Binder	0.280					0.293					0.308				
	Lower Binder	0.213					0.229					0.244				
	CBS	0.098					0.110					0.122				
	Original PCC	0.119					0.122					0.128				
4+00	Surface	0.299	0.034	0.067	0.113	-0.023	0.314	0.030	0.073	0.113	-0.018	0.329	0.027	0.079	0.113	-0.011
	Upper Binder	0.265					0.283					0.302				
	Lower Binder	0.198					0.210					0.223				
	CBS	0.085					0.098					0.110				
	Original PCC	0.108					0.116					0.120				
4+50	Surface	0.290	0.027	0.064	0.116	-0.021	0.305	0.027	0.067	0.125	-0.024	0.320	0.030	0.087	0.122	-0.012
	Upper Binder	0.262					0.277					0.290				
	Lower Binder	0.198					0.210					0.223				
	CBS	0.082					0.085					0.101				
	Original PCC	0.104					0.110					0.113				
5+00	Surface	0.287	0.030	0.067	0.128	-0.030	0.305	0.034	0.067	0.128	-0.020	0.320	0.030	0.070	0.128	-0.012
	Upper Binder	0.256					0.271					0.290				
	Lower Binder	0.189					0.204					0.219				
	CBS	0.061					0.076					0.091				
	Original PCC	0.091					0.096					0.104				
	AVG		0.033	0.065	0.117	-0.021		0.034	0.070	0.120	-0.017		0.030	0.079	0.121	-0.010
	MAX		0.040	0.070	0.128	-0.015		0.040	0.082	0.134	-0.011		0.040	0.091	0.143	-0.006
	MIN		0.027	0.052	0.113	-0.030		0.027	0.052	0.113	-0.024		0.000	0.064	0.110	-0.015
	STD		0.004	0.005	0.006	0.004		0.004	0.009	0.007	0.004		0.011	0.009	0.009	0.003

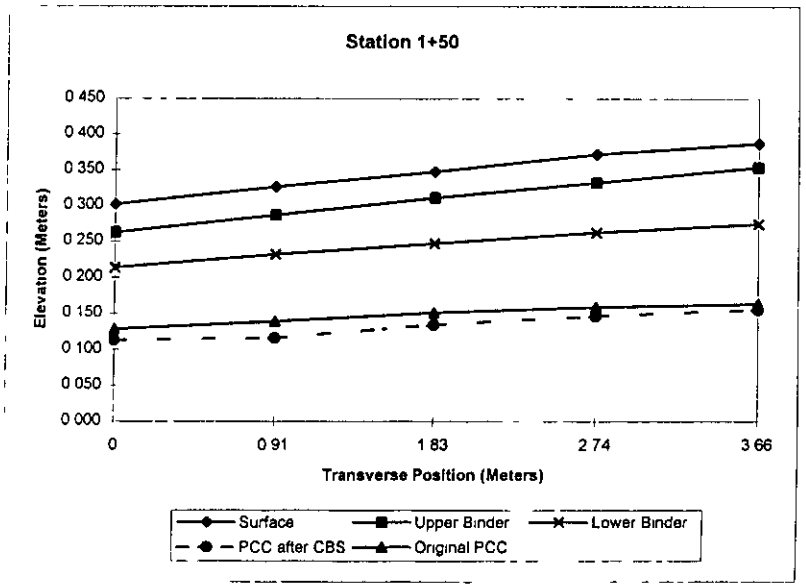
Note CBS values are negative due to the Crack Break & Seating

Alabama SPS-A6 (010608)









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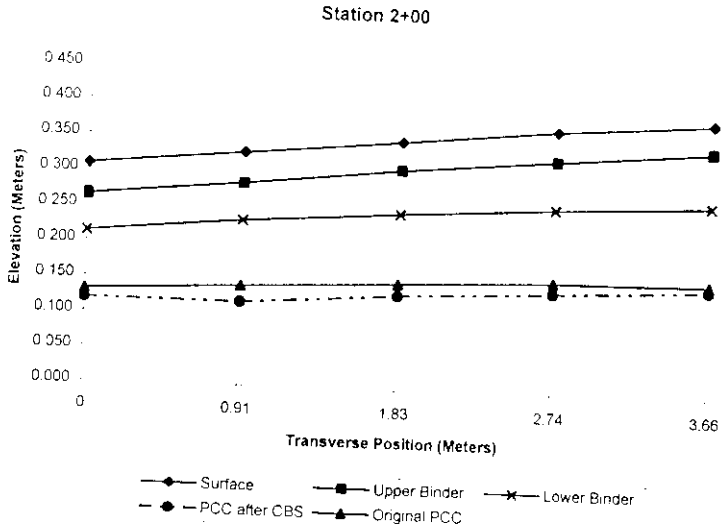
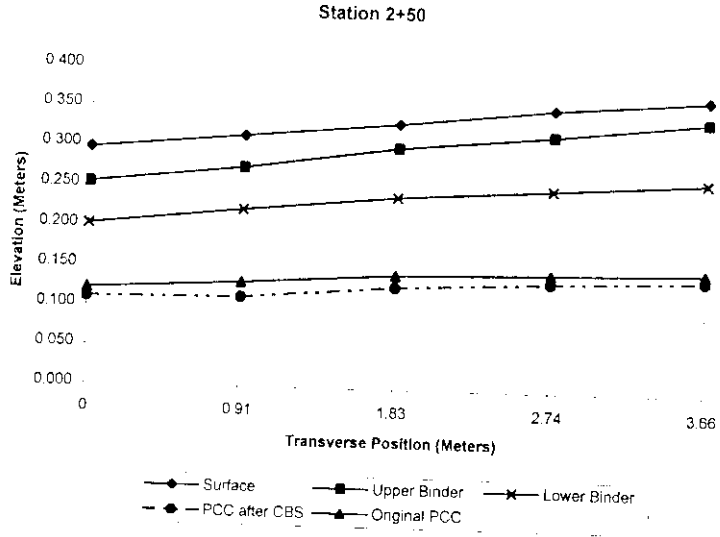
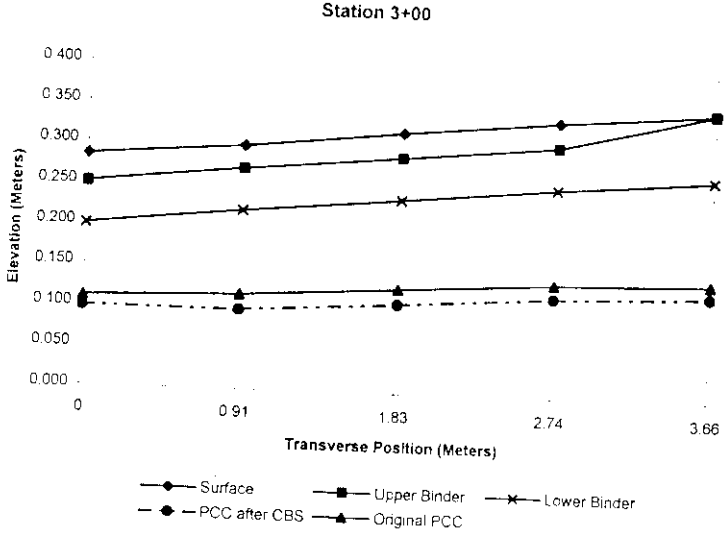
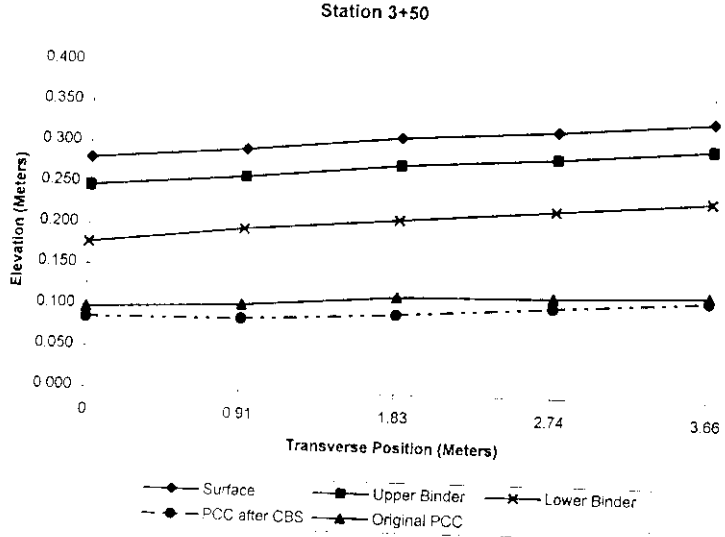
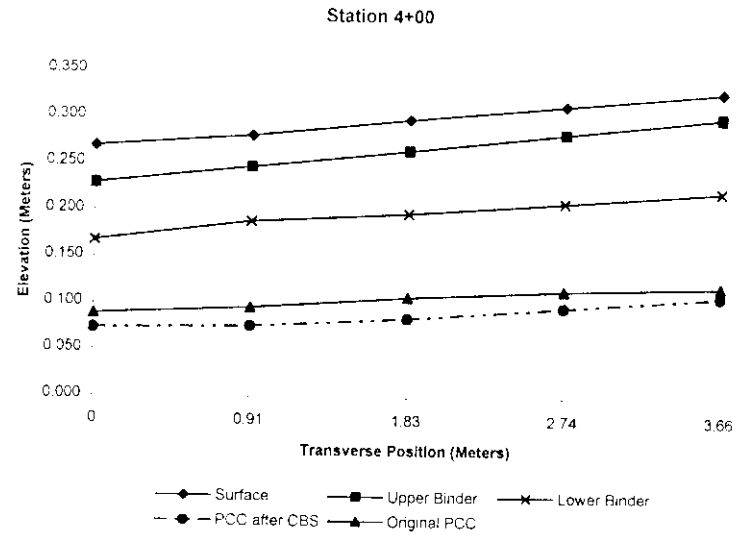


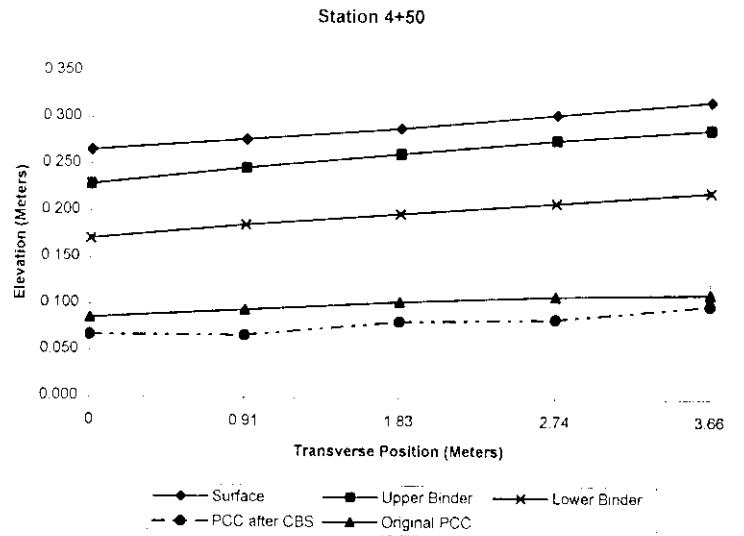


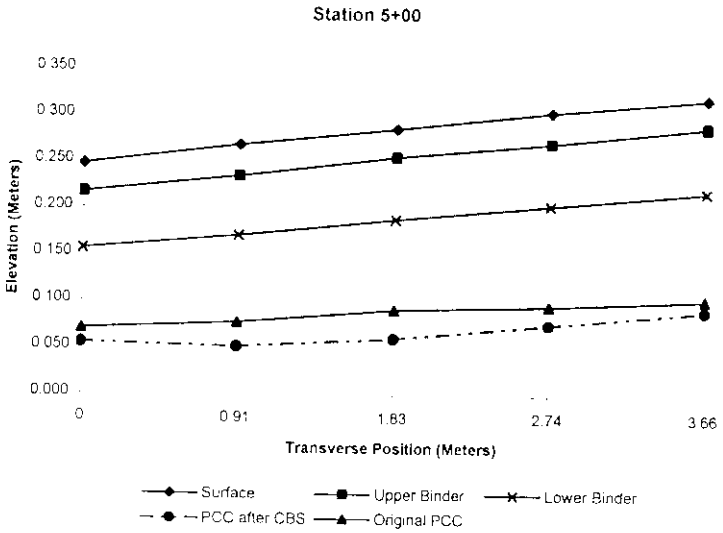




Alabama SPS-A6 (010608)





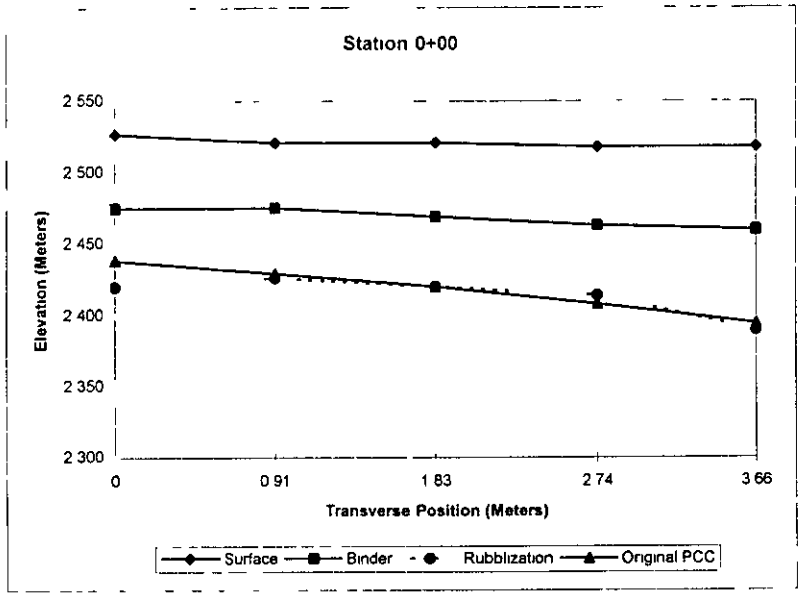


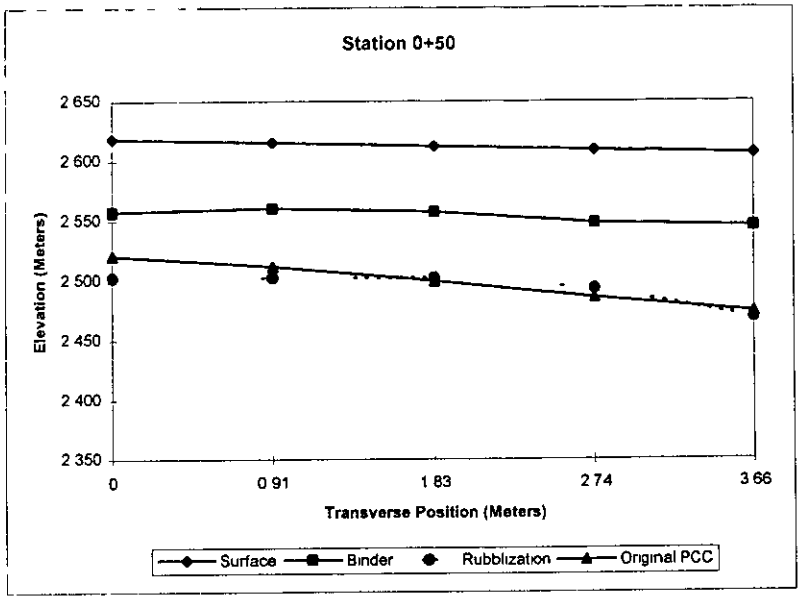
Alabama SPS-A6 (010661)

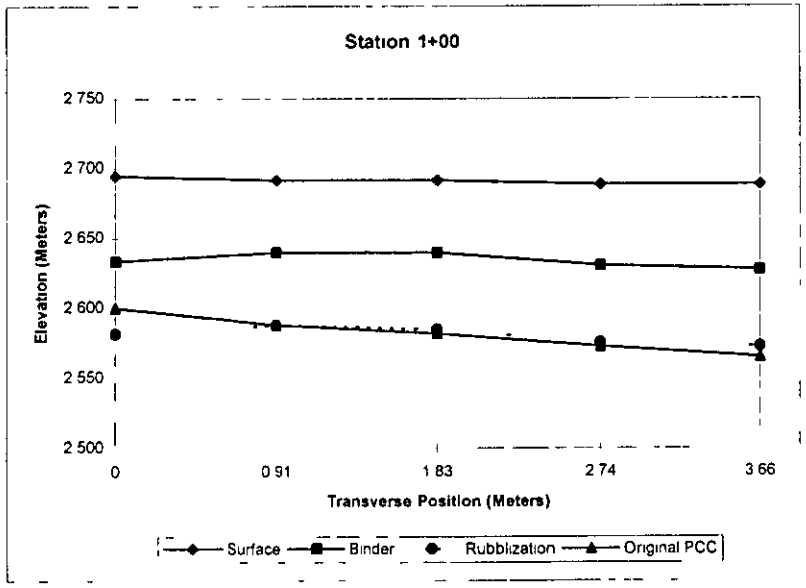
Transverse Offset	4 LAYERS	ELEVATION 0 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	Rubblization THICKNESS Meters	ELEVATION 0 91 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	Rubblization THICKNESS Meters	ELEVATION 1 83 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	Rubblization THICKNESS Meters	ELEVATION 2 74 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	Rubblization THICKNESS Meters	ELEVATION 3.66 Meters	Surface THICKNESS Meters	Binder THICKNESS Meters	Rubblization THICKNESS Meters
0+00	Surface	2 527	0 052	0 055	0 018	2 521	0 046	0 049	0 003	2 521	0 052	0 049	0 000	2 518	0 055	0 049	0 006	2 518	0 058	0 070	-0 005
	Binder	2 475				2 475				2 469				2 463				2 460			
	Rubblization	2 420				2 426				2 420				2 414				2 390			
	Original PCC	2 438				2 429				2 420				2 408				2 394			
0+50	Surface	2 618	0 061	0 055	0 018	2 615	0 055	0 058	0 009	2 612	0 055	0 055	0 003	2 609	0 061	0 055	0 008	2 606	0 061	0 076	-0 005
	Binder	2 557				2 560				2 557				2 548				2 545			
	Rubblization	2 502				2 502				2 502				2 493				2 489			
	Original PCC	2 521				2 512				2 499				2 486				2 473			
1+00	Surface	2 694	0 061	0 052	0 018	2 691	0 052	0 052	0 000	2 691	0 052	0 055	0 003	2 688	0 058	0 055	0 003	2 688	0 061	0 055	0 008
	Binder	2 633				2 640				2 640				2 630				2 627			
	Rubblization	2 582				2 588				2 585				2 576				2 573			
	Original PCC	2 600				2 588				2 582				2 573				2 565			
1+50	Surface	2 771	0 052	0 079	-0 034	2 771	0 055	0 061	0 012	2 768	0 055	0 046	0 009	2 768	0 058	0 043	0 017	2 768	0 058	0 066	0 003
	Binder	2 719				2 716				2 713				2 710				2 710			
	Rubblization	2 640				2 655				2 667				2 667				2 644			
	Original PCC	2 673				2 667				2 658				2 650				2 641			
2+00	Surface	2 856	0 055	0 052	0 003	2 853	0 049	0 055	0 005	2 853	0 046	0 058	0 006	2 853	0 055	0 058	0 009	2 850	0 055	0 070	0 006
	Binder	2 801				2 804				2 807				2 798				2 795			
	Rubblization	2 749				2 749				2 749				2 740				2 725			
	Original PCC	2 752				2 754				2 743				2 731				2 719			
2+50	Surface	2 920	0 052	0 046	0 006	2 920	0 049	0 055	0 002	2 923	0 052	0 058	0 003	2 926	0 058	0 061	0 006	2 929	0 061	0 079	0 003
	Binder	2 868				2 871				2 871				2 868				2 868			
	Rubblization	2 822				2 816				2 813				2 807				2 789			
	Original PCC	2 829				2 818				2 810				2 801				2 792			
3+00	Surface	2 978	0 058	0 055	0 021	2 981	0 055	0 052	0 003	2 984	0 058	0 055	0 003	2 981	0 058	0 061	0 002	2 984	0 064	0 061	0 009
	Binder	2 920				2 926				2 926				2 923				2 920			
	Rubblization	2 865				2 874				2 871				2 862				2 859			
	Original PCC	2 886				2 877				2 874				2 864				2 850			
3+50	Surface	3 045	0 049	0 052	0 024	3 042	0 046	0 049	-0 012	3 039	0 043	0 034	0 006	3 039	0 043	0 030	0 018	3 036	0 049	0 052	0 003
	Binder	2 996				2 996				2 996				2 996				2 987			
	Rubblization	2 944				2 947				2 963				2 966				2 935			
	Original PCC	2 969				2 960				2 957				2 947				2 938			
4+00	Surface	3 124	0 052	0 049	0 030	3 124	0 055	0 027	0 006	3 124	0 055	0 034	0 011	3 121	0 061	0 021	0 003	3 115	0 061	0 030	-0 003
	Binder	3 072				3 069				3 069				3 060				3 054			
	Rubblization	3 024				3 042				3 036				3 039				3 024			
	Original PCC	3 054				3 048				3 046				3 036				3 027			
4+50	Surface	3 213	0 040	0 024	0 000	3 210	0 043	0 030	0 003	3 210	0 043	0 027	0 003	3 203	0 052	0 015	0 012	3 197	0 055	0 040	0 012
	Binder	3 173				3 167				3 167				3 152				3 142			
	Rubblization	3 149				3 136				3 139				3 136				3 103			
	Original PCC	3 149				3 139				3 136				3 124				3 115			
5+00	Surface	3 280	0 064	0 021	0 018	3 277	0 064	0 024	0 021	3 274	0 061	0 027	0 018	3 267	0 058	0 037	0 024	3 261	0 058	0 043	0 040
	Binder	3 216				3 213				3 213				3 210				3 203			
	Rubblization	3 194				3 188				3 185				3 173				3 161			
	Original PCC	3 213				3 210				3 203				3 197				3 200			
	AVG		0 054	0 049	-0 019		0 052	0 046	-0 007		0 052	0 044	0 000		0 056	0 043	0 005		0 059	0 057	-0 005
	MAX		0 064	0 079	0 000		0 064	0 061	0 000		0 061	0 058	0 009		0 061	0 061	0 018		0 064	0 079	0 009
	MIN		0 040	0 021	-0 034		0 043	0 024	-0 021		0 043	0 027	-0 018		0 043	0 015	-0 024		0 049	0 030	-0 040
	STD		0 007	0 016	0 010		0 006	0 013	0 006		0 006	0 012	0 008		0 005	0 015	0 011		0 004	0 015	0 013

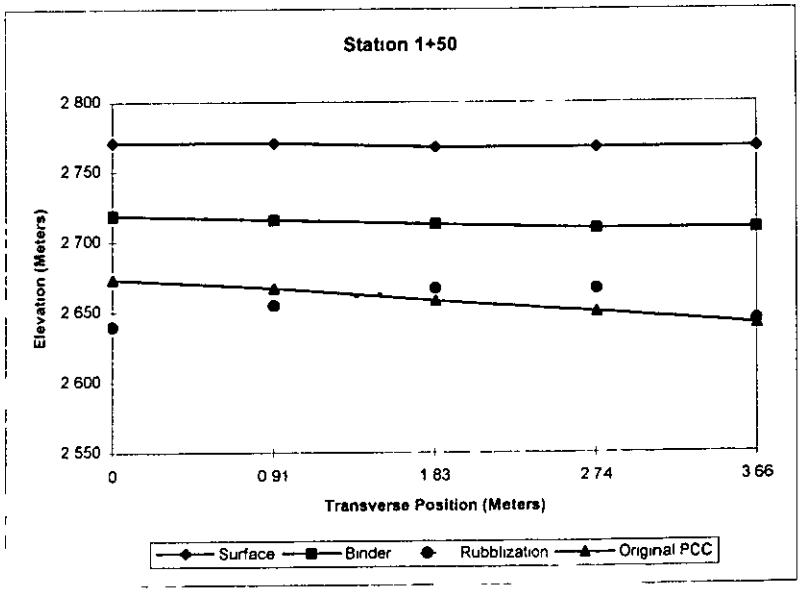
Note Rubblized values could be positive or negative due to the position of the rocks on which the data was obtained

Alabama SPS-A6 (010661)

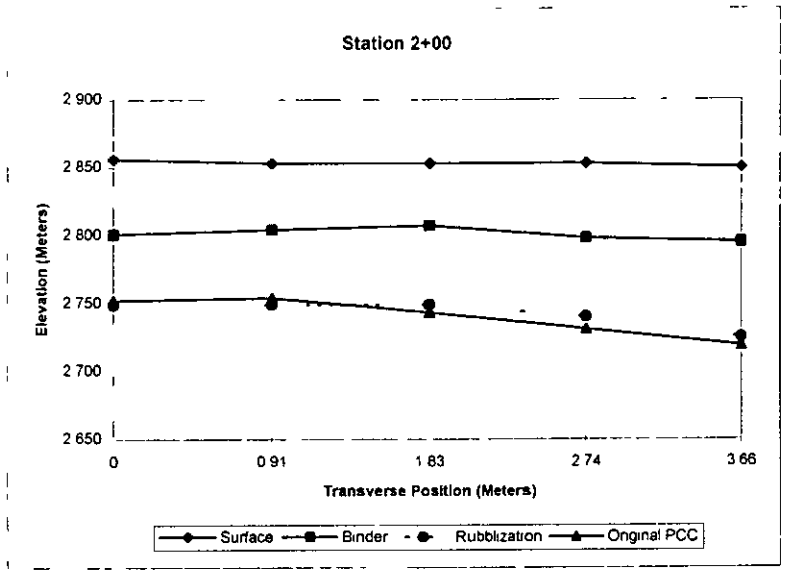


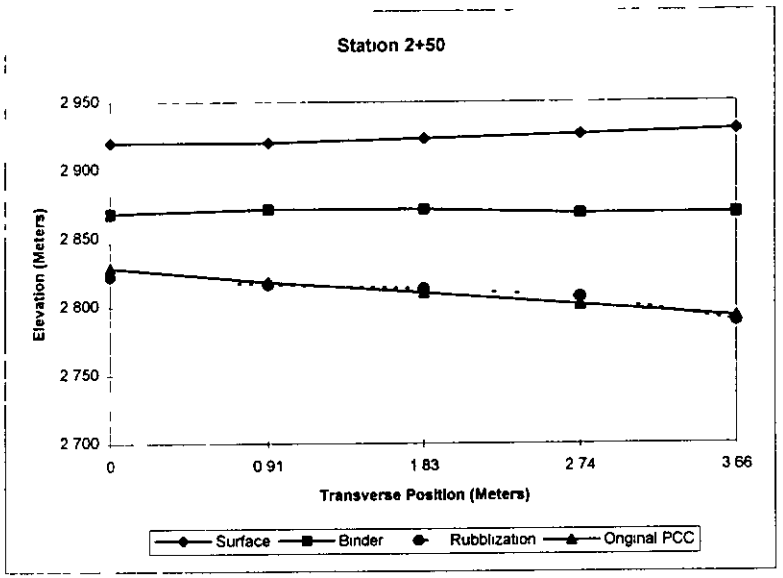


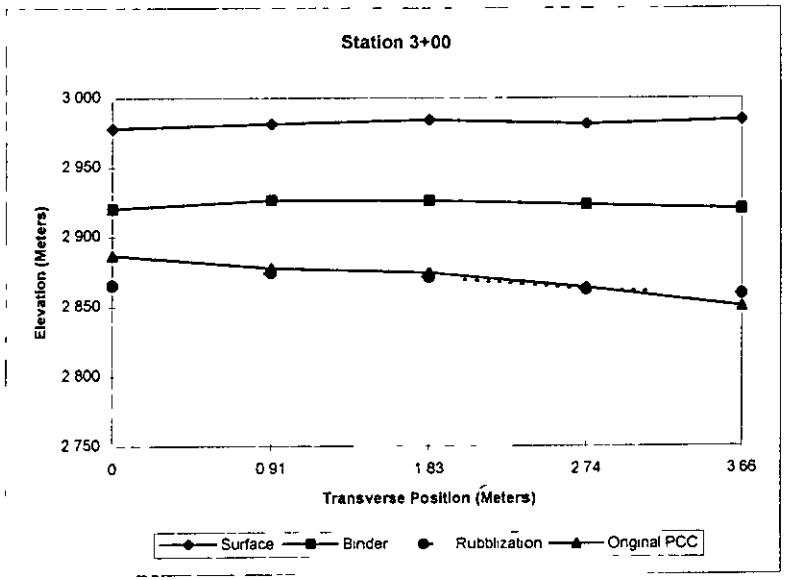


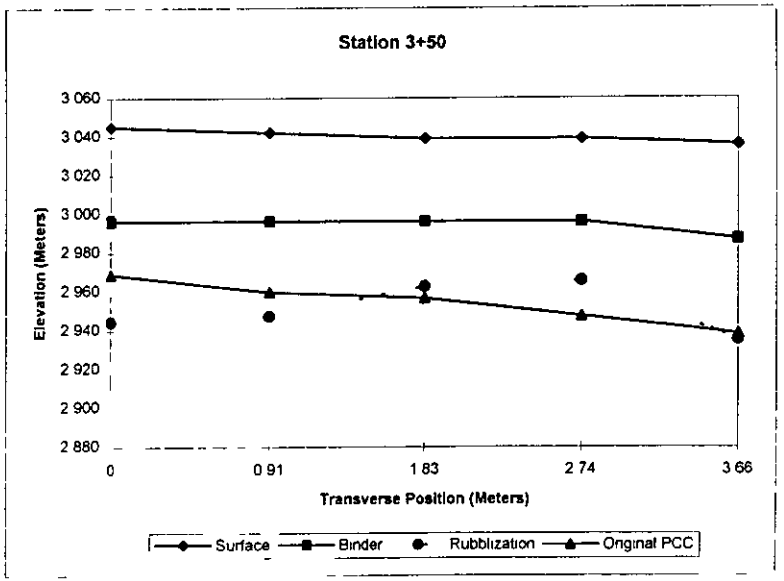


Alabama SPS-A6 (010661)

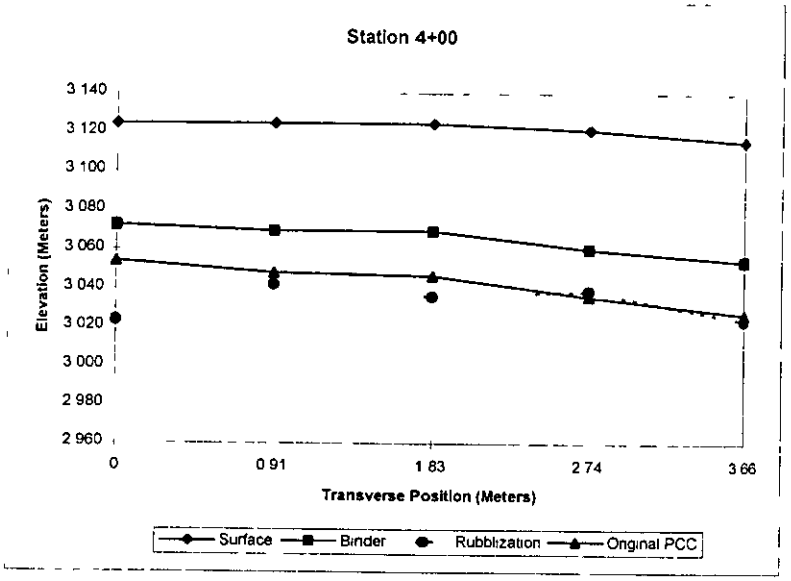


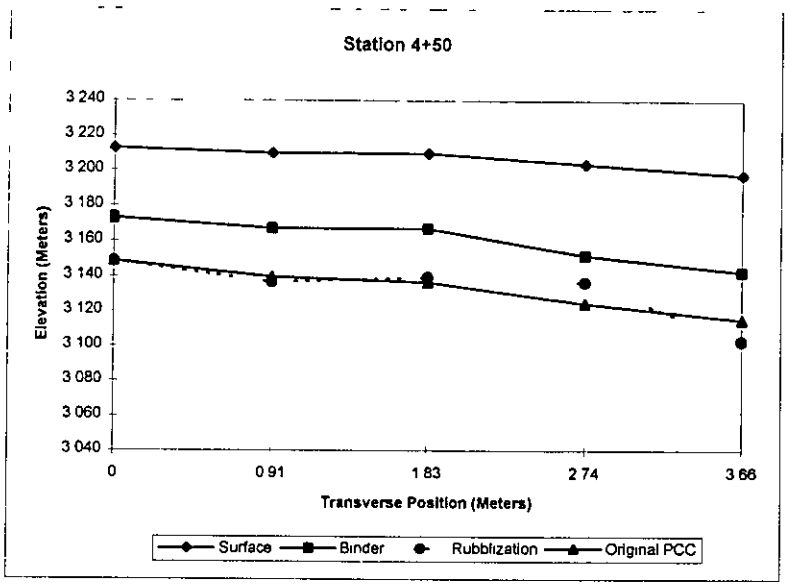


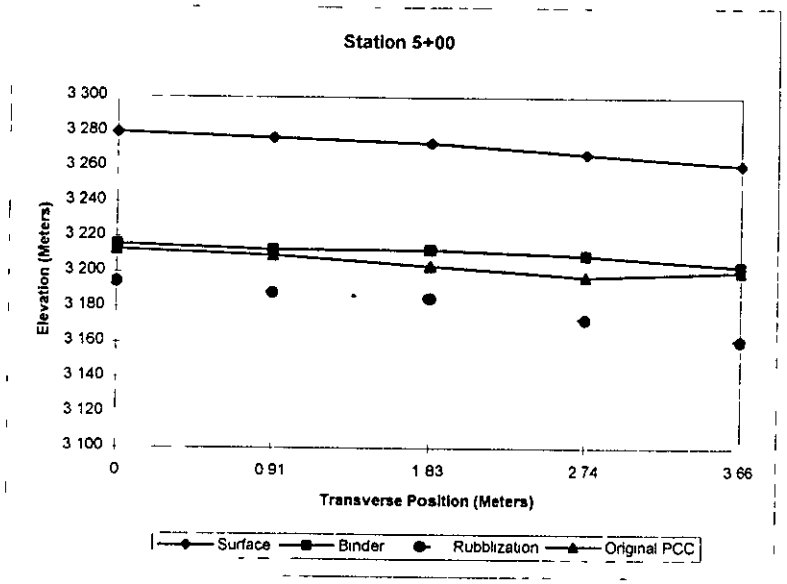




Alabama SPS-A6 (010661)







Alabama SPS-A6 (010662)

Transverse Offset 5	LAYERS	ELEVATION 0 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	Rubblization THICKNESS Meters	ELEVATION 0.91 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	Rubblization THICKNESS Meters
0+00	Surface	1.993	0.040	0.049	0.119	-0.011	2.012	0.034	0.052	0.104	0.016
	Upper Binder	1.954					1.978				
	Lower Binder	1.905					1.926				
	Rubblization	1.786					1.823				
	Original PCC	1.797					1.804				
0+50	Surface	1.990	0.043	0.055	0.104	-0.009	2.003	0.034	0.052	0.091	0.016
	Upper Binder	1.948					1.969				
	Lower Binder	1.893					1.917				
	Rubblization	1.789					1.826				
	Original PCC	1.798					1.807				
1+00	Surface	1.972	0.034	0.058	0.061	0.040	1.990	0.027	0.055	0.101	0.015
	Upper Binder	1.939					1.963				
	Lower Binder	1.881					1.908				
	Rubblization	1.820					1.807				
	Original PCC	1.780					1.792				
1+50	Surface	1.972	0.037	0.046	0.116	-0.009	1.984	0.030	0.046	0.107	0.009
	Upper Binder	1.935					1.954				
	Lower Binder	1.890					1.908				
	Rubblization	1.774					1.801				
	Original PCC	1.783					1.792				
2+00	Surface	1.978	0.037	0.049	0.119	-0.018	1.990	0.030	0.049	0.098	0.012
	Upper Binder	1.842					1.960				
	Lower Binder	1.893					1.911				
	Rubblization	1.774					1.814				
	Original PCC	1.792					1.801				
2+50	Surface	1.981	0.037	0.058	0.104	-0.012	1.993	0.027	0.052	0.110	0.002
	Upper Binder	1.945					1.966				
	Lower Binder	1.887					1.914				
	Rubblization	1.783					1.804				
	Original PCC	1.795					1.803				
3+00	Surface	1.987	0.037	0.055	0.113	-0.024	2.003	0.030	0.055	0.104	0.000
	Upper Binder	1.951					1.972				
	Lower Binder	1.896					1.917				
	Rubblization	1.763					1.814				
	Original PCC	1.807					1.814				
3+50	Surface	2.003	0.046	0.043	0.107	-0.014	2.018	0.027	0.052	0.113	-0.002
	Upper Binder	1.957					1.990				
	Lower Binder	1.914					1.939				
	Rubblization	1.807					1.826				
	Original PCC	1.821					1.827				
4+00	Surface	2.021	0.034	0.049	0.113	-0.014	2.036	0.030	0.049	0.110	0.003
	Upper Binder	1.987					2.006				
	Lower Binder	1.939					1.957				
	Rubblization	1.826					1.847				
	Original PCC	1.839					1.844				
4+50	Surface	2.051	0.030	0.058	0.107	-0.014	2.067	0.027	0.055	0.104	0.009
	Upper Binder	2.021					2.039				
	Lower Binder	1.963					1.984				
	Rubblization	1.856					1.881				
	Original PCC	1.870					1.871				
5+00	Surface	2.070	0.034	0.058	0.104	-0.027	2.079	0.027	0.055	0.101	-0.003
	Upper Binder	2.036					2.051				
	Lower Binder	1.978					1.996				
	Rubblization	1.875					1.896				
	Original PCC	1.902					1.899				

Transverse Offset 5	LAYERS	ELEVATION 1.83 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	Rubblization THICKNESS Meters	ELEVATION 2.74 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	Rubblization THICKNESS Meters	ELEVATION 3.66 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	Rubblization THICKNESS Meters
0+00	Surface	2.030	0.030	0.055	0.101	0.027	2.051	0.034	0.061	0.116	0.017	2.067	0.034	0.064	0.128	0.016
	Upper Binder	1.999					2.018					2.033				
	Lower Binder	1.945					1.957					1.969				
	Rubblization	1.844					1.841					1.841				
	Original PCC	1.817					1.824					1.826				
0+50	Surface	2.021	0.027	0.058	0.094	0.021	2.039	0.030	0.061	0.091	0.034	2.057	0.027	0.070	0.110	0.023
	Upper Binder	1.993					2.009					2.030				
	Lower Binder	1.935					1.948					1.960				
	Rubblization	1.841					1.856					1.850				
	Original PCC	1.820					1.823					1.827				
1+00	Surface	2.006	0.018	0.058	0.101	0.027	2.027	0.021	0.070	0.094	0.030	2.045	0.027	0.073	0.094	0.035
	Upper Binder	1.987					2.006					2.018				
	Lower Binder	1.929					1.935					1.945				
	Rubblization	1.829					1.841					1.850				
	Original PCC	1.801					1.811					1.815				
1+50	Surface	2.003	0.027	0.052	0.110	0.009	2.021	0.030	0.055	0.101	0.026	2.033	0.030	0.058	0.116	0.017
	Upper Binder	1.975					1.990					2.003				
	Lower Binder	1.923					1.935					1.945				
	Rubblization	1.814					1.835					1.829				
	Original PCC	1.804					1.809					1.812				
2+00	Surface	2.003	0.027	0.046	0.101	0.015	2.018	0.027	0.052	0.101	0.021	2.030	0.030	0.052	0.088	0.041
	Upper Binder	1.975					1.990					1.999				
	Lower Binder	1.929					1.939					1.948				
	Rubblization	1.829					1.838					1.859				
	Original PCC	1.814					1.817					1.818				
2+50	Surface	2.009	0.024	0.055	0.110	0.003	2.027	0.024	0.061	0.104	0.015	2.045	0.030	0.064	0.110	0.015
	Upper Binder	1.984					2.003					2.015				
	Lower Binder	1.929					1.942					1.951				
	Rubblization	1.820					1.838					1.841				
	Original PCC	1.817					1.823					1.826				
3+00	Surface	2.018	0.027	0.055	0.107	0.006	2.039	0.034	0.061	0.110	0.003	2.057	0.037	0.067	0.110	0.009
	Upper Binder	1.990					2.006					2.021				
	Lower Binder	1.935					1.945					1.954				
	Rubblization	1.829					1.835					1.844				
	Original PCC	1.823					1.832					1.835				
3+50	Surface	2.036	0.027	0.058	0.107	0.008	2.057	0.034	0.058	0.116	0.009	2.070	0.030	0.061	0.119	0.018
	Upper Binder	2.009					2.024					2.039				
	Lower Binder	1.951					1.968					1.978				
	Rubblization	1.844					1.850					1.859				
	Original PCC	1.836					1.841					1.841				
4+00	Surface	2.051	0.024	0.058	0.104	0.015	2.073	0.030	0.064	0.091	0.034	2.091	0.034	0.073	0.113	0.018
	Upper Binder	2.027					2.042					2.057				
	Lower Binder	1.969					1.978					1.984				
	Rubblization	1.865					1.887					1.871				
	Original PCC	1.850					1.853					1.853				
4+50	Surface	2.082	0.024	0.058	0.110	0.012	2.097	0.027	0.064	0.110	0.018	2.115	0.034	0.067	0.122	0.015
	Upper Binder	2.057					2.070					2.082				
	Lower Binder	1.999					2.006					2.015				
	Rubblization	1.890					1.896					1.893				
	Original PCC	1.878					1.878					1.878				
5+00	Surface	2.094	0.024	0.058	0.118	-0.005	2.109	0.030	0.064	0.116	0.000	2.124	0.030	0.078	0.116	0.009
	Upper Binder	2.070					2.079					2.094				
	Lower Binder	2.012					2.015					2.018				
	Rubblization	1.894					1.899					1.902				
	Original PCC	1.899					1.899					1.893				

		Surface	Upper Binder	Lower Binder	Rubblization
Note Rubblized values could be positive or negative due to the position of the rocks on which the data was obtained	AVG	0.037	0.053	0.105	-0.010
	MAX	0.046	0.058	0.119	0.040
	MIN	0.030	0.043	0.061	-0.027
	STD	0.004	0.005	0.015	0.017

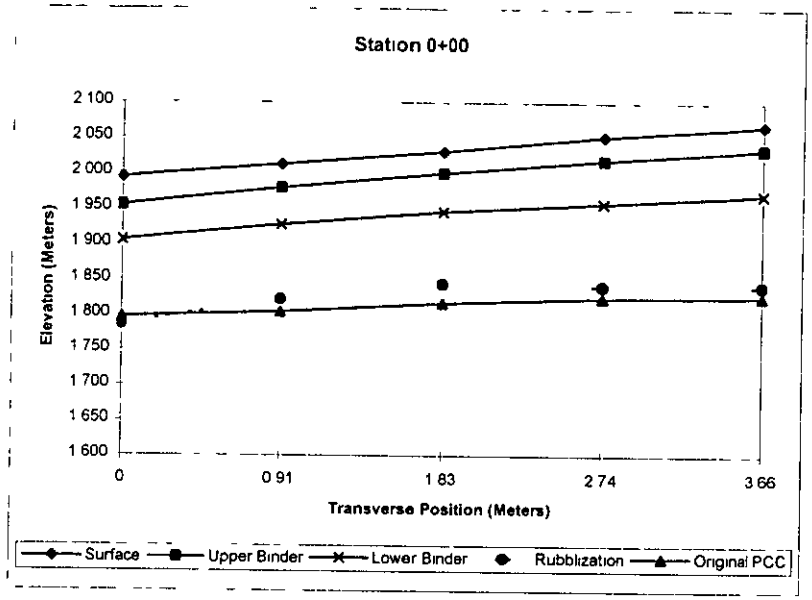
	Surface	Upper Binder	Lower Binder	Rubblization
AVG	0.030	0.052	0.104	0.007
MAX	0.034	0.055	0.113	0.018
MIN	0.034	0.055	0.113	0.018
STD	0.002	0.003	0.006	0.008

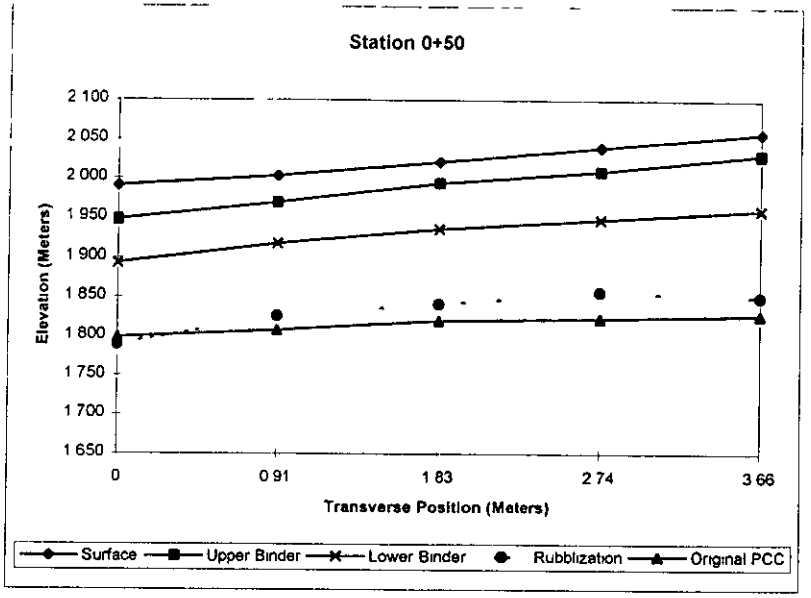
	Surface	Upper Binder	Lower Binder	Rubblization
AVG	0.028	0.056	0.106	0.012
MAX	0.030	0.056	0.118	0.027
MIN	0.030	0.056	0.118	0.027
STD	0.003	0.002	0.006	0.010

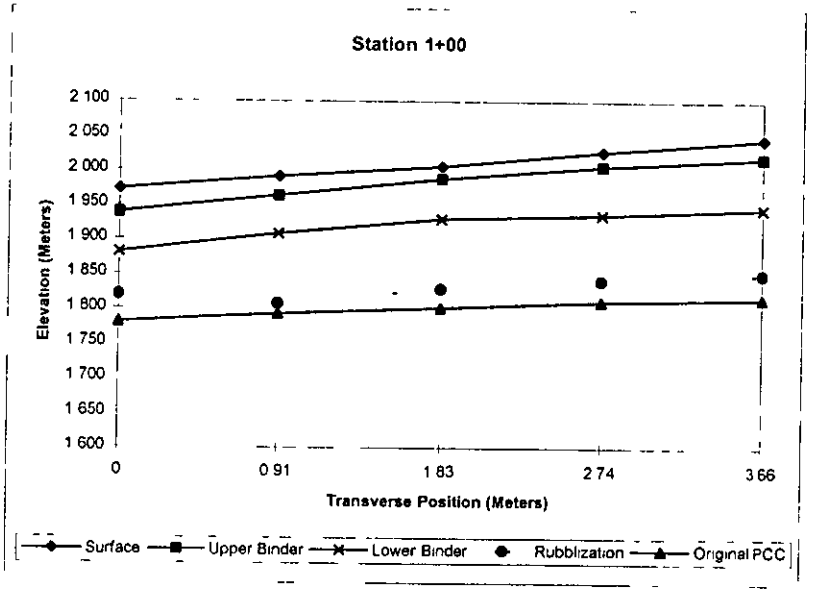
	Surface	Upper Binder	Lower Binder	Rubblization
AVG	0.030	0.062	0.105	0.019
MAX	0.034	0.070	0.116	0.034
MIN	0.034	0.070	0.116	0.034
STD	0.004	0.004	0.009	0.012

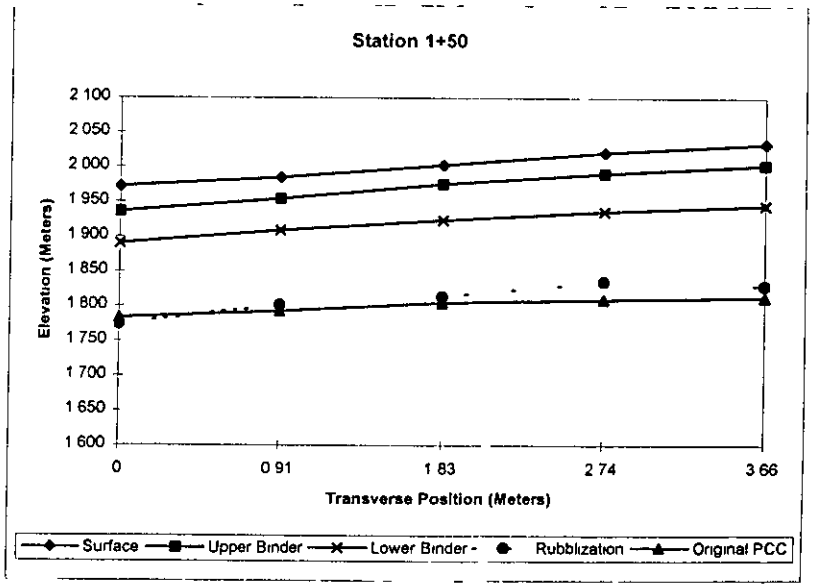
	Surface	Upper Binder	Lower Binder	Rubblization
AVG	0.031	0.067	0.114	0.018
MAX	0.037	0.078	0.128	0.035
MIN	0.037	0.078	0.128	0.035
STD	0.003	0.006	0.009	0.007

Alabama SPS-A6 (010662)

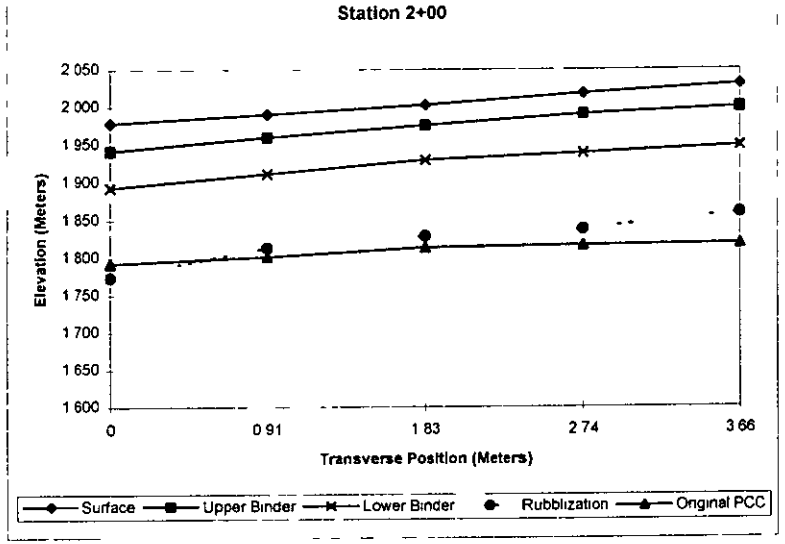


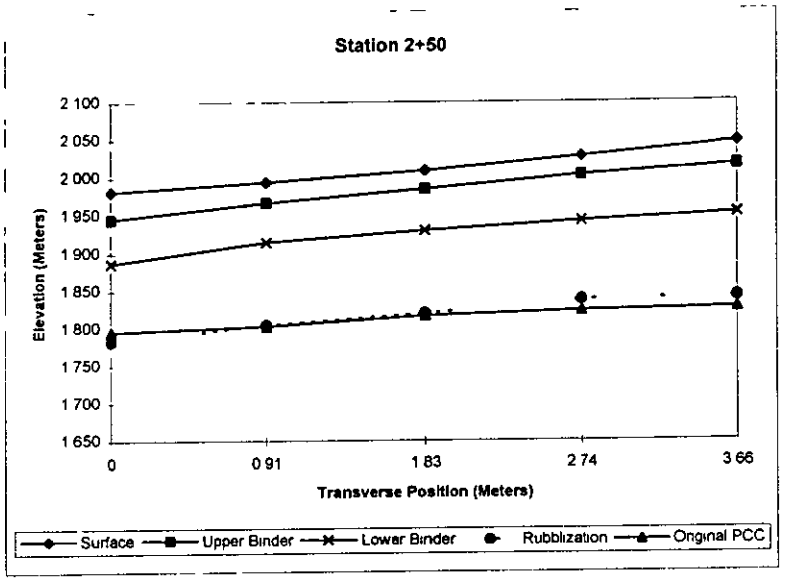


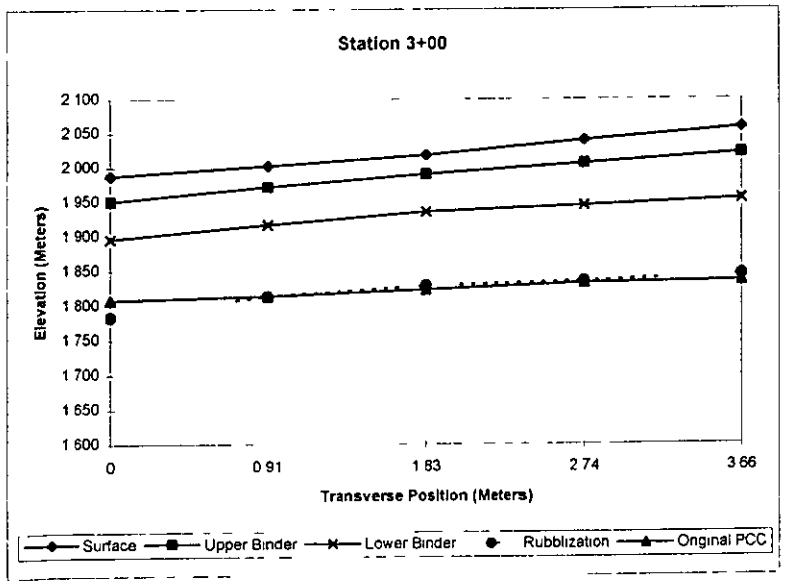


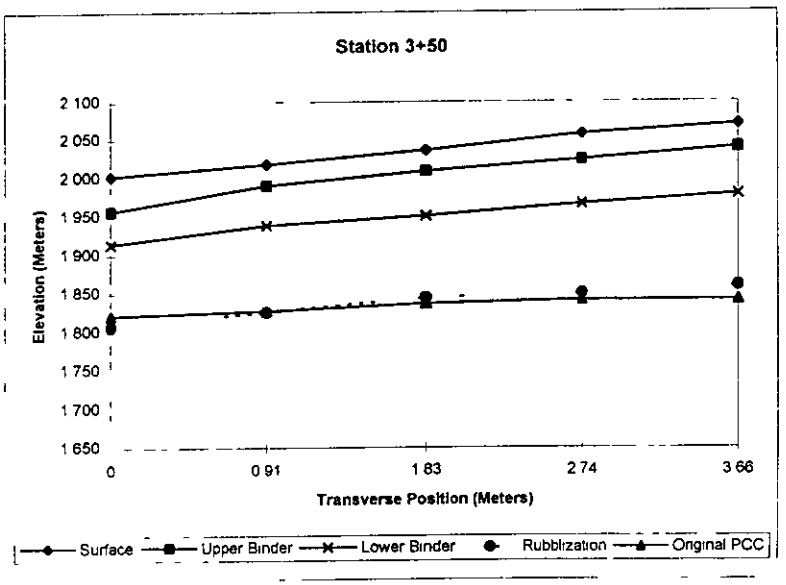


Alabama SPS-A6 (010662)

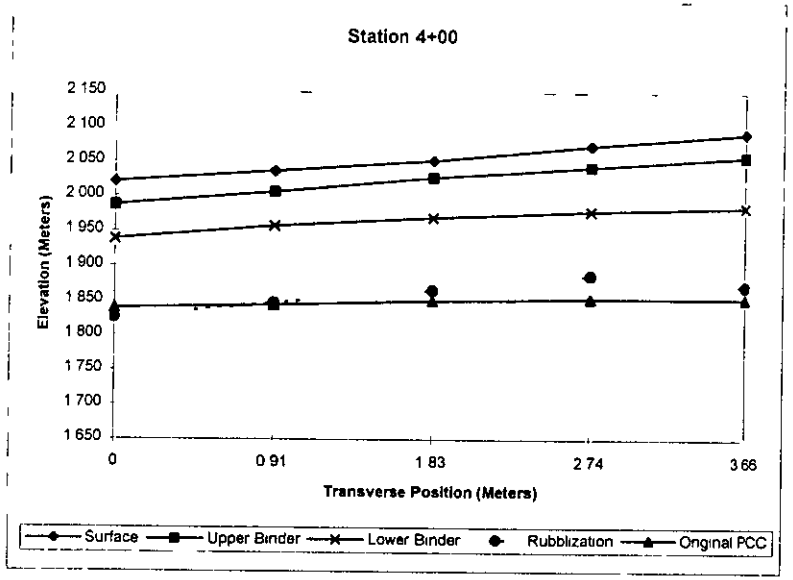


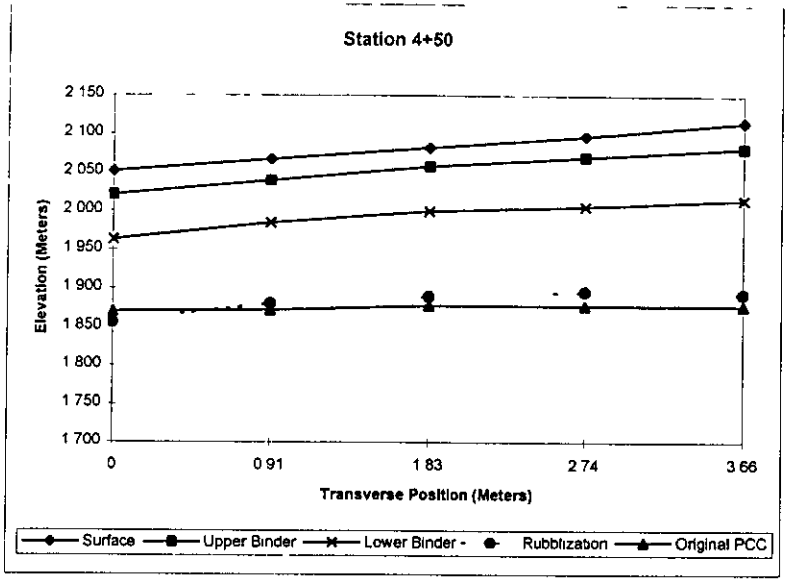


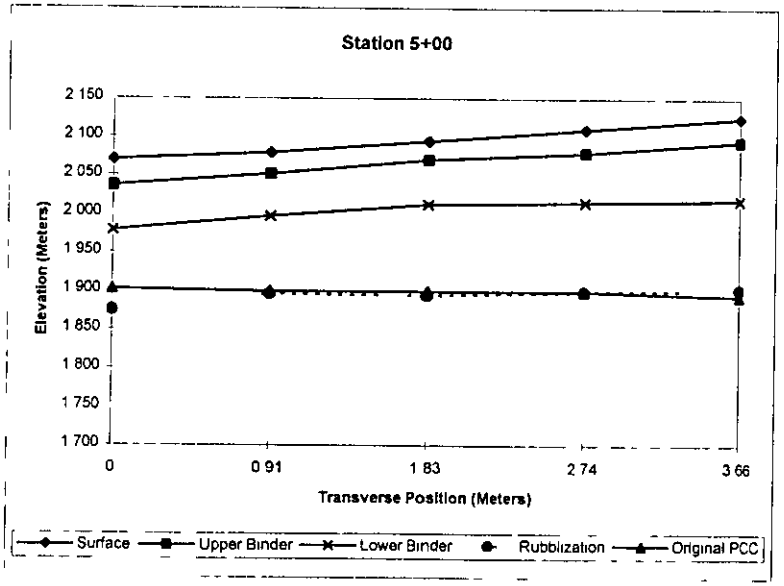




Alabama SPS-A6 (010662)





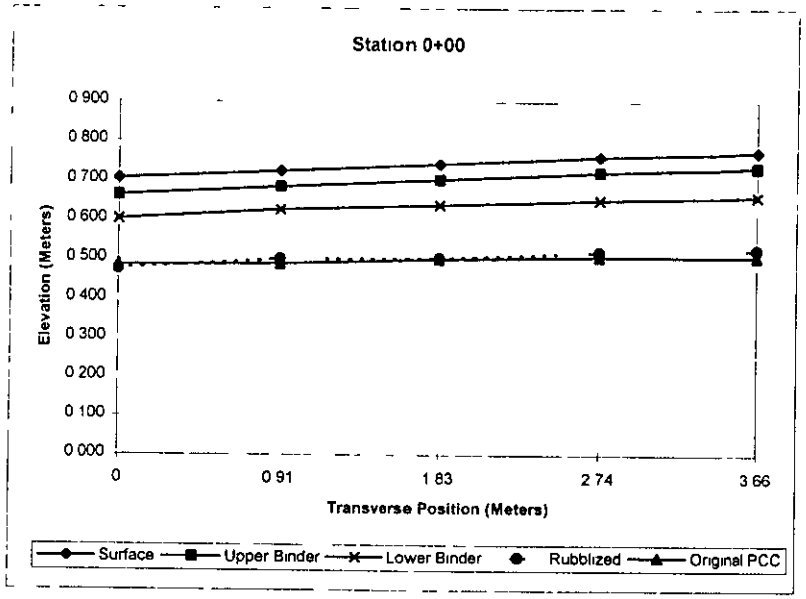


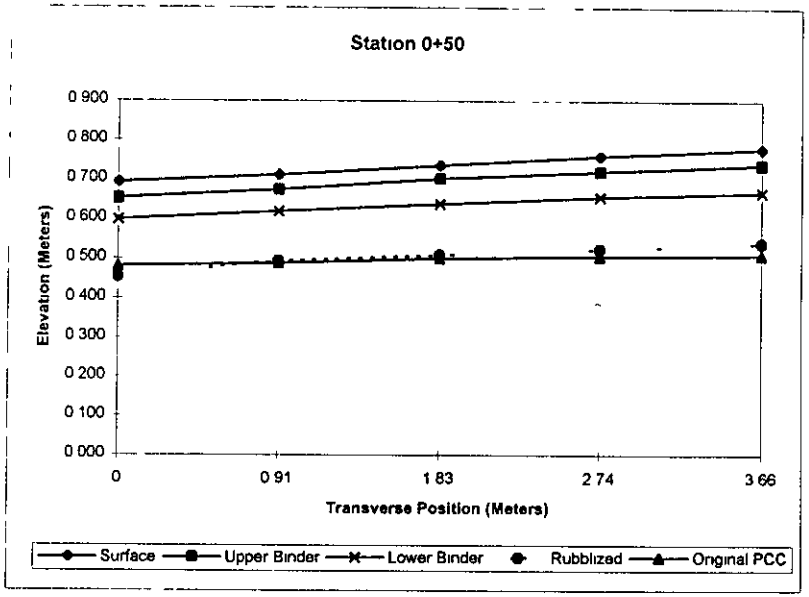
Alabama SPS-A6 (010663)

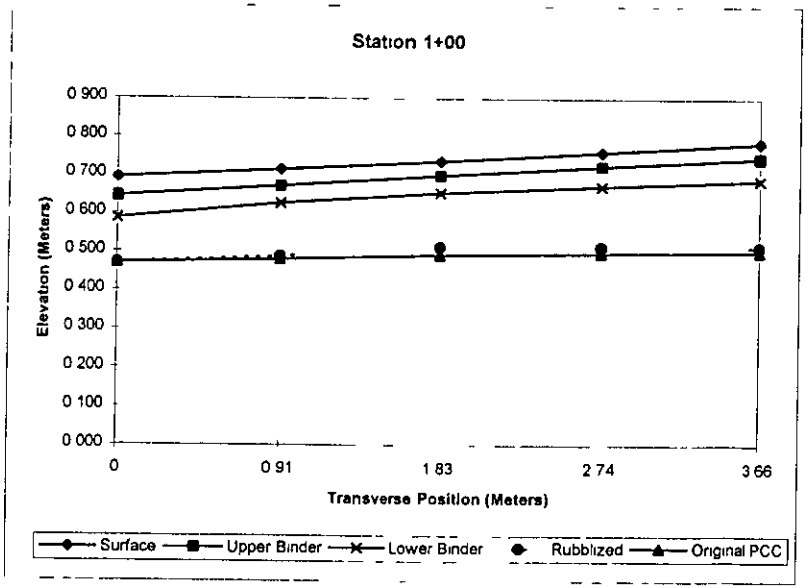
Transverse Offset	5 LAYERS	ELEVATION 0 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	Rubblized THICKNESS Meters	ELEVATION 0.91 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	Rubblized THICKNESS Meters	ELEVATION 1.83 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	Rubblized THICKNESS Meters	ELEVATION 2.74 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	Rubblized THICKNESS Meters	ELEVATION 3.66 Meters	Surface THICKNESS Meters	Upper Binder THICKNESS Meters	Lower Binder THICKNESS Meters	Rubblized THICKNESS Meters
0+00	Surface	0.704	0.043	0.061	0.125	-0.009	0.722	0.040	0.058	0.125	0.012	0.741	0.040	0.054	0.134	0.003	0.759	0.040	0.070	0.131	0.012	0.771	0.040	0.073	0.134	0.018
	Upper Binder	0.661					0.683					0.701					0.719					0.732				
	Lower Binder	0.600					0.625					0.637					0.649					0.658				
	Rubblized	0.475					0.500					0.503					0.518					0.524				
	Original PCC	0.485					0.488					0.500					0.508					0.508				
0+50	Surface	0.692	0.040	0.055	0.143	-0.026	0.710	0.037	0.055	0.125	0.006	0.735	0.034	0.064	0.128	0.009	0.759	0.040	0.064	0.131	0.018	0.777	0.040	0.070	0.128	0.030
	Upper Binder	0.652					0.674					0.701					0.719					0.738				
	Lower Binder	0.597					0.619					0.637					0.655					0.668				
	Rubblized	0.454					0.494					0.509					0.524					0.539				
	Original PCC	0.480					0.488					0.500					0.508					0.509				
1+00	Surface	0.692	0.049	0.058	0.116	0.000	0.713	0.043	0.046	0.137	0.009	0.735	0.037	0.046	0.140	0.021	0.759	0.037	0.052	0.158	0.017	0.783	0.040	0.058	0.174	0.012
	Upper Binder	0.643					0.671					0.698					0.722					0.744				
	Lower Binder	0.585					0.625					0.652					0.671					0.686				
	Rubblized	0.469					0.488					0.512					0.512					0.512				
	Original PCC	0.469					0.479					0.491					0.495					0.500				
1+50	Surface	0.680	0.040	0.061	0.137	-0.015	0.701	0.037	0.061	0.131	0.006	0.722	0.034	0.061	0.149	0.000	0.750	0.037	0.064	0.134	0.029	0.771	0.040	0.070	0.155	0.015
	Upper Binder	0.640					0.664					0.689					0.713					0.732				
	Lower Binder	0.579					0.604					0.628					0.649					0.661				
	Rubblized	0.442					0.472					0.479					0.515					0.506				
	Original PCC	0.457					0.466					0.479					0.486					0.491				
2+00	Surface	0.671	0.040	0.064	0.122	-0.002	0.692	0.034	0.061	0.128	0.015	0.716	0.030	0.070	0.146	0.006	0.741	0.034	0.073	0.152	0.014	0.765	0.037	0.082	0.158	0.015
	Upper Binder	0.631					0.656					0.686					0.707					0.726				
	Lower Binder	0.567					0.597					0.616					0.634					0.646				
	Rubblized	0.445					0.469					0.469					0.482					0.488				
	Original PCC	0.447					0.454					0.463					0.468					0.472				
2+50	Surface	0.661	0.043	0.058	0.119	0.003	0.686	0.043	0.055	0.131	0.009	0.713	0.037	0.067	0.152	-0.003	0.741	0.037	0.082	0.155	0.000	0.765	0.040	0.091	0.152	0.008
	Upper Binder	0.619					0.643					0.677					0.704					0.725				
	Lower Binder	0.561					0.588					0.610					0.622					0.634				
	Rubblized	0.442					0.457					0.457					0.466					0.482				
	Original PCC	0.439					0.448					0.460					0.466					0.474				
3+00	Surface	0.674	0.046	0.055	0.146	-0.012	0.695	0.040	0.055	0.143	0.012	0.719	0.037	0.064	0.155	0.008	0.744	0.040	0.079	0.158	0.006	0.768	0.040	0.094	0.152	0.018
	Upper Binder	0.628					0.655					0.683					0.704					0.728				
	Lower Binder	0.573					0.600					0.619					0.625					0.634				
	Rubblized	0.427					0.457					0.463					0.466					0.482				
	Original PCC	0.439					0.445					0.456					0.460					0.463				
3+50	Surface	0.649	0.040	0.061	0.122	-0.006	0.677	0.034	0.064	0.131	0.009	0.710	0.037	0.067	0.143	0.012	0.738	0.034	0.085	0.143	0.018	0.765	0.034	0.094	0.188	0.009
	Upper Binder	0.610					0.643					0.674					0.704					0.732				
	Lower Binder	0.549					0.579					0.607					0.619					0.637				
	Rubblized	0.427					0.448					0.463					0.475					0.469				
	Original PCC	0.433					0.439					0.451					0.457					0.460				
4+00	Surface	0.643	0.052	0.061	0.125	-0.015	0.671	0.049	0.055	0.134	0.005	0.701	0.040	0.064	0.149	0.009	0.732	0.040	0.073	0.149	0.024	0.759	0.040	0.076	0.192	0.003
	Upper Binder	0.591					0.622					0.661					0.692					0.719				
	Lower Binder	0.530					0.567					0.597					0.619					0.643				
	Rubblized	0.405					0.433					0.448					0.469					0.451				
	Original PCC	0.421					0.428					0.439					0.445					0.448				
4+50	Surface	0.646	0.058	0.067	0.152	-0.055	0.671	0.052	0.058	0.122	0.008	0.692	0.040	0.064	0.122	0.021	0.719	0.037	0.073	0.143	0.011	0.741	0.034	0.076	0.158	0.015
	Upper Binder	0.568					0.619					0.652					0.683					0.707				
	Lower Binder	0.521					0.561					0.588					0.610					0.631				
	Rubblized	0.369					0.439					0.466					0.466					0.472				
	Original PCC	0.424					0.433					0.445					0.456					0.457				
5+00	Surface	0.637	0.058	0.061	0.119	-0.021	0.655	0.052	0.052	0.110	0.012	0.674	0.043	0.052	0.125	0.017	0.695	0.040	0.061	0.146	0.005	0.710	0.037	0.061	0.143	0.020
	Upper Binder	0.579					0.604					0.631					0.655					0.674				
	Lower Binder	0.518					0.552					0.579					0.594					0.613				
	Rubblized	0.399					0.442					0.454					0.448					0.469				
	Original PCC	0.421					0.430					0.437					0.443					0.450				
	AVG	0.646	0.060	0.130	-0.014		0.042	0.058	0.129	0.009		0.037	0.061	0.146	0.010		0.038	0.070	0.145	0.014		0.038	0.077	0.164	0.016
	MAX	0.058	0.067	0.152	0.003		0.052	0.064	0.143	0.012		0.043	0.067	0.155	0.021		0.040	0.085	0.158	0.029		0.040	0.094	0.192	0.030
	MIN	0.040	0.055	0.116	-0.055		0.052	0.064	0.143	0.012		0.043	0.067	0.155	0.021		0.040	0.085	0.158	0.029		0.040	0.094	0.192	0.030
	STD	0.007	0.003	0.012	0.015		0.006	0.005	0.009	0.003		0.003	0.007	0.011	0.008		0.002	0.010	0.010	0.009		0.002	0.012	0.018	0.007

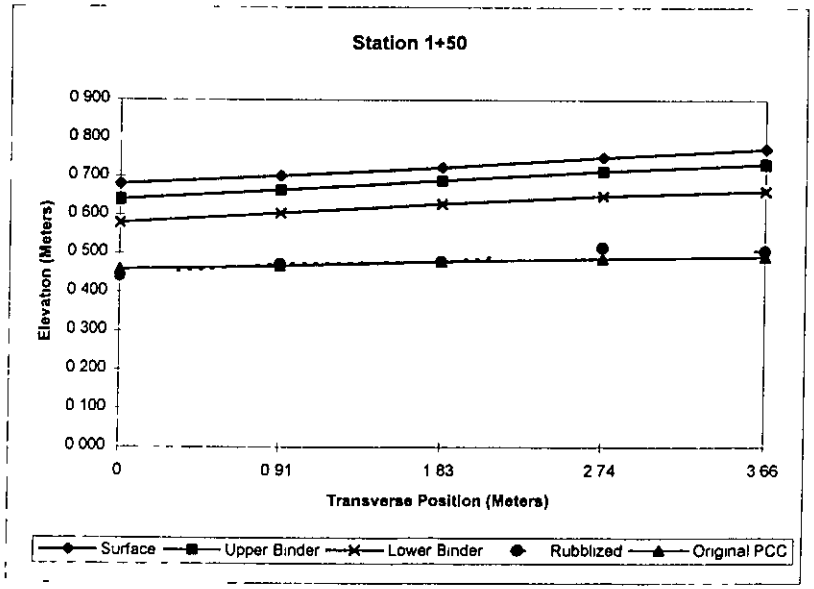
Note: Rubblized values could be positive or negative due to the position of the rocks on which the data was obtained

Alabama SPS-A6 (010663)









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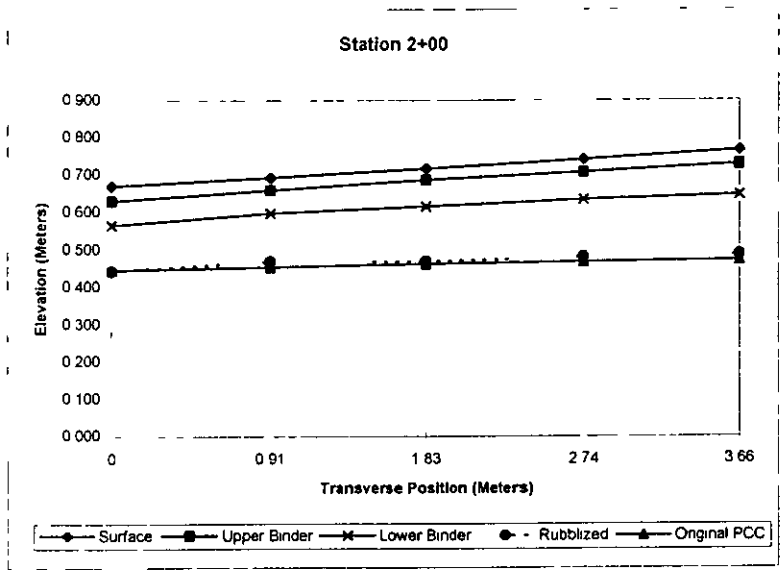
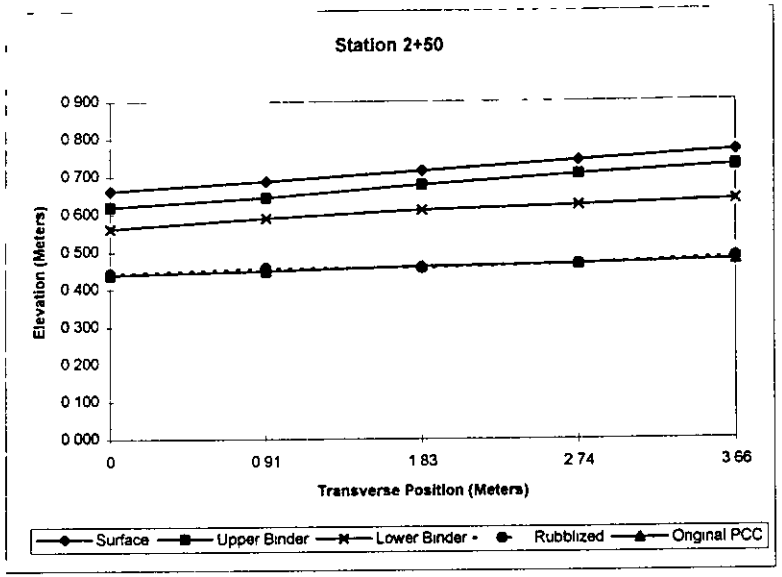
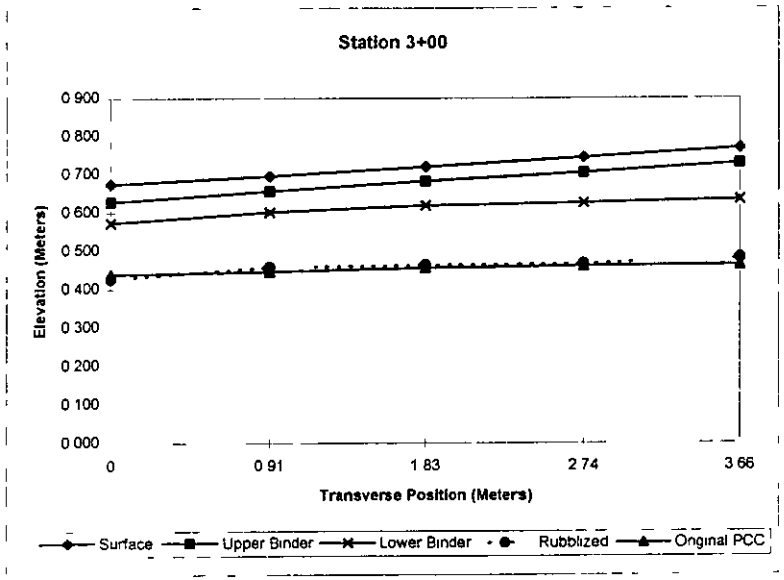
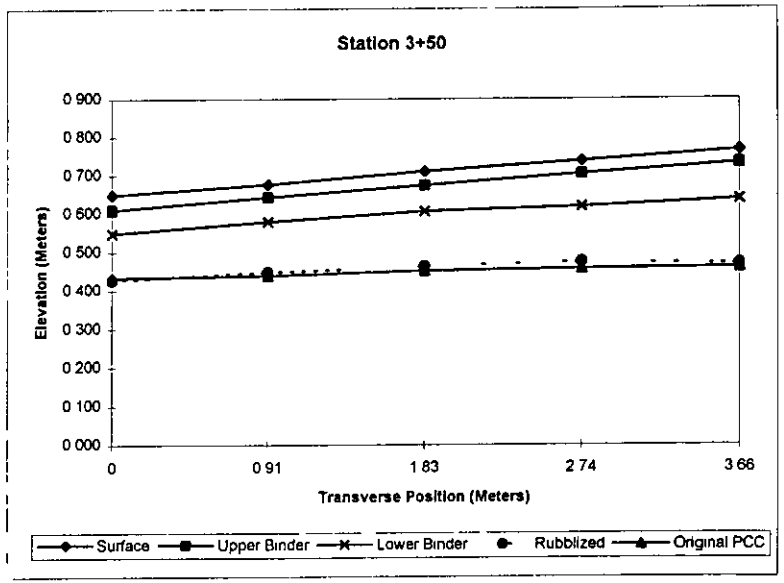
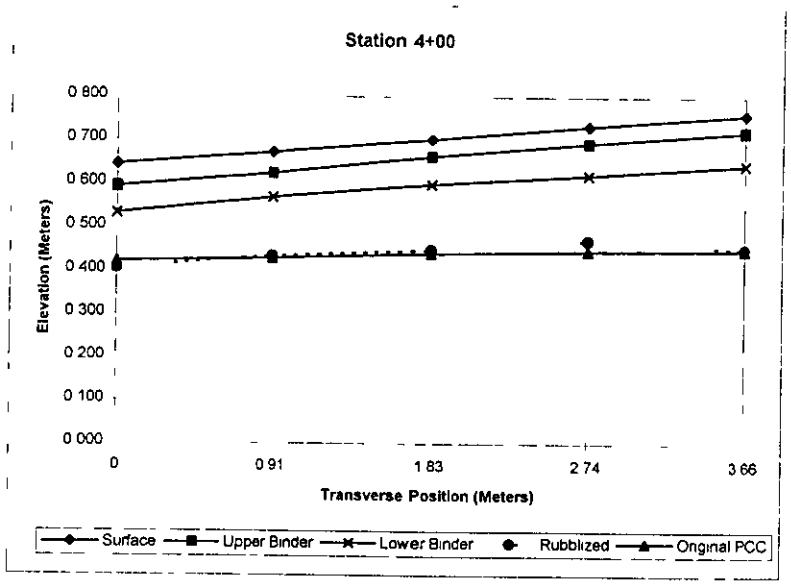


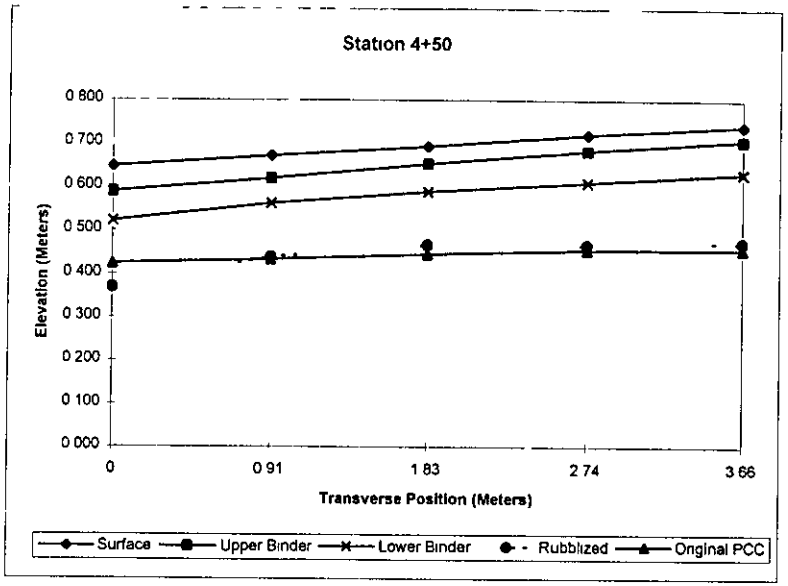


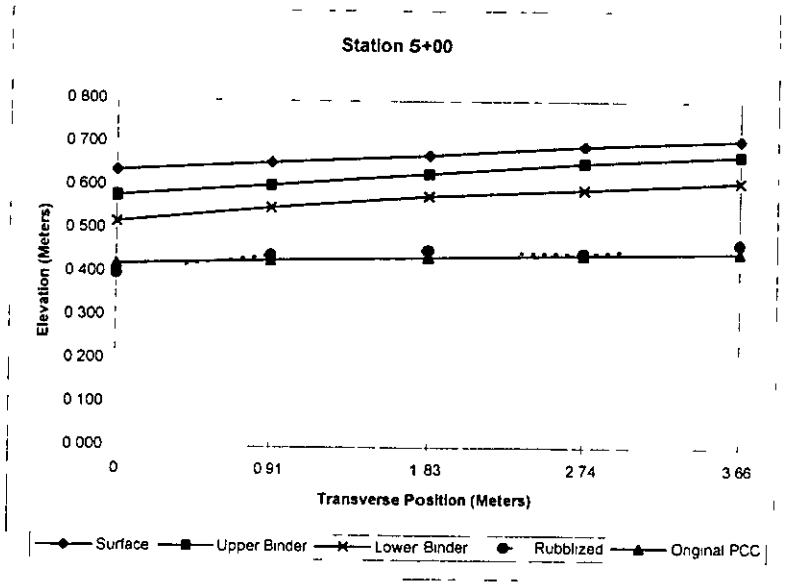




Alabama SPS-A6 (010663)







APPENDIX D

ROD AND LEVEL DATA

State	**Alabama**
Project	**010601**

Existing PCC	**Rod & Level Shots**				
010601	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	6 91	6 95	6 97	6 98	6 99
0+50	7 30	7 34	7 37	7 38	7 38
1+00	7 62	7 68	7 71	7 72	7 72
1+50	7 91	7 94	7 98	7 99	7 99
2+00	8 16	8 17	8 20	8 21	8 22
2+50	8 34	8 37	8 39	8 41	8 41
3+00	8 48	8 51	8 53	8 54	8 55
3+50	8 56	8 58	8 59	8 59	8 59
4+00	8 61	8 63	8 64	8 65	8 64
4+50	8 63	8 63	8 65	8 66	8 66
5+00	8 56	8 58	8 61	8 61	8 62

Std Dev = 0 56

State	**Alabama**
Project	**010602**

Existing PCC	**Rod & Level Shots**				
010602	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00					
0+50					
1+00	**Was not able to get this data**				
1+50					
2+00					
2+50					
3+00					
3+50					
4+00					
4+50					
5+00					
5+50					
6+00					
6+50					
7+00					
7+50					
8+00					
8+50					
9+00					
9+50					
10+00					

State	**Alabama**
Project	**010602**

Grind PCC	**Rod & Level Shots**				
010602	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	12 43	12 45	12 47	12 48	12 49
0+50	12 23	12 26	12 29	12 30	12 31
1+00	11 98	12 01	12 03	12 05	12 05
1+50	11 70	11 72	11 75	11 76	11 76
2+00	11 37	11 39	11 40	11 42	11 42
2+50	11 00	11 02	11 04	11 04	11 04
3+00	10 57	10 60	10 62	10 63	10 63
3+50	10 08	10 12	10 14	10 14	10 15
4+00	9 56	9 59	9 60	9 60	9 61
4+50	8 95	9 00	9 02	9 03	9 04
5+00	8 37	8 42	8 44	8 45	8 47
5+50	7 75	7 79	8 01	8 01	8 02
6+00	7 16	7 20	7 22	7 22	7 22
6+50	6 57	6 59	6 61	6 61	6 62
7+00	5 99	6 00	6 00	5 99	5 99
7+50	5 34	5 37	5 41	5 42	5 43
8+00	4 67	4 74	4 78	4 81	4 82
8+50	4 14	4 18	4 21	4 23	4 24
9+00	3 54	3 58	3 60	3 62	3 63
9+50	2 90	2 94	2 98	3 00	3 01
10+00	2 37	2 39	2 42	2 43	2 43

Std Dev 3 24

State	Alabama
Project	010603

Existing PCC 010603	Rod & Level Shots Offset from Shoulder (ft)				
Station No	0	3	6	9	12
0+00	1 06	1 09	1 12	1 14	1 15
0+50	1 30	1 33	1 36	1 38	1 39
1+00	1 61	1 63	1 66	1 67	1 67
1+50	1 85	1 86	1 89	1 91	1 91
2+00	2 10	2 12	2 14	2 16	2 16
2+50	2 36	2 38	2 41	2 43	2 43
3+00	2 63	2 64	2 68	2 70	2 71
3+50	2 87	2 89	2 93	2 94	2 95
4+00	3 10	3 12	3 15	3 17	3 19
4+50	3 32	3 33	3 37	3 38	3 39
5+00	3 54	3 57	3 60	3 61	3 62

Binder 010603	Rod & Level Shots Offset from Shoulder (ft)				
Station No	0	3	6	9	12
0+00	1 24	1 31	1 35	1 39	1 39
0+50	1 49	1 54	1 57	1 60	1 61
1+00	1 79	1 83	1 86	1 88	1 88
1+50	2 03	2 06	2 10	2 12	2 13
2+00	2 28	2 33	2 35	2 36	2 38
2+50	2 53	2 58	2 61	2 63	2 65
3+00	2 81	2 86	2 89	2 91	2 93
3+50	3 02	3 10	3 14	3 16	3 17
4+00	3 26	3 32	3 36	3 38	3 39
4+50	3 50	3 55	3 58	3 61	3 63
5+00	3 71	3 77	3 80	3 82	3 84

Surface 010603	Rod & Level Shots Offset from Shoulder (ft)				
Station No	0	3	6	9	12
0+00	1 38	1 40	1 43	1 46	1 49
0+50	1 60	1 62	1 65	1 67	1 69
1+00	1 91	1 93	1 95	1 97	1 99
1+50	2 14	2 16	2 19	2 21	2 23
2+00	2 39	2 41	2 43	2 45	2 48
2+50	2 66	2 68	2 70	2 73	2 75
3+00	2 91	2 94	2 97	3 00	3 03
3+50	3 16	3 19	3 22	3 24	3 25
4+00	3 38	3 41	3 43	3 46	3 48
4+50	3 58	3 62	3 65	3 69	3 71
5+00	3 82	3 86	3 88	3 91	3 92

State	**Alabama**
Project	**010603**

010603	Binder Thickness (in)				
	Offset from Shoulder (ft)				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	2 16	2 64	2 76	3 00	2 88
0+50	2 28	2 52	2 52	2 64	2 64
1+00	2 16	2 40	2 40	2 52	2 52
1+50	2 16	2 40	2 52	2 52	2 64
2+00	2 16	2 52	2 52	2 40	2 64
2+50	2 04	2 40	2 40	2 40	2 64
3+00	2 16	2 64	2 52	2 52	2 64
3+50	1 80	2 52	2 52	2 64	2 64
4+00	1 92	2 40	2 52	2 52	2 40
4+50	2 16	2 64	2 52	2 76	2 88
5+00	2 04	2 40	2 40	2 52	2 64

Average	2 47
Min	1 80
Max	3 00
Std Dev	0 23

State	**Alabama**
Project	**010603**

010603	SurfaceThickness (in)				
	Offset from Shoulder (ft)				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	1 68	1 08	0 96	0 84	1 20
0+50	1 32	0 96	0 96	0 84	0 96
1+00	1 44	1 20	1 08	1 08	1 32
1+50	1 32	1 20	1 08	1 08	1 20
2+00	1 32	0 96	0 96	1 08	1 20
2+50	1 56	1 20	1 08	1 20	1 20
3+00	1 20	0 96	0 96	1 08	1 20
3+50	1 68	1 08	0 96	0 96	0 96
4+00	1 44	1 08	0 84	0 96	1 08
4+50	0 96	0 84	0 84	0 96	0 96
5+00	1 32	1 08	0 96	1 08	0 96

Average	1 11
Min	0 84
Max	1 68
Std Dev	0 20

010603	Total HMAC Thickness (in)				
	Offset from Shoulder (ft)				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	3 84	3 72	3 72	3 84	4 08
0+50	3 60	3 48	3 48	3 48	3 60
1+00	3 60	3 60	3 48	3 60	3 84
1+50	3 48	3 60	3 60	3 60	3 84
2+00	3 48	3 48	3 48	3 48	3 84
2+50	3 60	3 60	3 48	3 60	3 84
3+00	3 36	3 60	3 48	3 60	3 84
3+50	3 48	3 60	3 48	3 60	3 60
4+00	3 36	3 48	3 36	3 48	3 48
4+50	3 12	3 48	3 36	3 72	3 84
5+00	3 36	3 48	3 36	3 60	3 60

Average	3 58
Min	3 12
Max	4 08
Std Dev	0 17

State	**Alabama**
Project	**010604**

Existing PCC	**Rod & Level Shots**				
010604	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	4 02	4 04	4 08	4 09	4 10
0+50	4 24	4 26	4 29	4 32	4 34
1+00	4 51	4 54	4 58	4 60	4 61
1+50	4 73	4 75	4 79	4 82	4 83
2+00	5 02	5 04	5 07	5 09	5 10
2+50	5 31	5 34	5 37	5 39	5 39
3+00	5 57	5 60	5 62	5 64	5 64
3+50	5 84	5 86	5 88	5 90	5 90
4+00	6 11	6 14	6 15	6 17	6 18
4+50	6 38	6 41	6 43	6 44	6 45
5+00	6 62	6 65	6 68	6 69	6 70

Binder	**Rod & Level Shots**				
010604	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	4 23	4 29	4 32	4 32	4 33
0+50	4 47	4 53	4 55	4 56	4 58
1+00	4 74	4 82	4 86	4 89	4 90
1+50	4 99	5 05	5 10	5 12	5 14
2+00	5 25	5 30	5 34	5 36	5 38
2+50	5 54	5 59	5 63	5 64	5 63
3+00	5 82	5 87	5 91	5 92	5 91
3+50	6 09	6 14	6 18	6 19	6 19
4+00	6 36	6 41	6 44	6 45	6 45
4+50	6 59	6 64	6 67	6 70	6 71
5+00	6 84	6 91	6 95	6 96	6 97

Surface	**Rod & Level Shots**				
010604	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	4 36	4 38	4 41	4 43	4 46
0+50	4 60	4 63	4 65	4 67	4 69
1+00	4 88	4 91	4 94	4 97	5 00
1+50	5 12	5 14	5 17	5 21	5 23
2+00	5 38	5 40	5 44	5 48	5 51
2+50	5 68	5 69	5 72	5 75	5 76
3+00	5 95	5 98	6 00	6 02	6 03
3+50	6 21	6 23	6 27	6 29	6 31
4+00	6 49	6 51	6 54	6 57	6 59
4+50	6 74	6 77	6 81	6 84	6 86
5+00	7 00	7 02	7 05	7 07	7 08

State	**Alabama**
Project	**010604**

010604	**Binder Thickness (in)**				
	Offset from Shoulder (ft)				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	2 52	3 00	2 88	2 76	2 76
0+50	2 76	3 24	3 12	2 88	2 88
1+00	2 76	3 36	3 36	3 48	3 48
1+50	3 12	3 60	3 72	3 60	3 72
2+00	2 76	3 12	3 24	3 24	3 36
2+50	2 76	3 00	3 12	3 00	2 88
3+00	3 00	3 24	3 48	3 36	3 24
3+50	3 00	3 36	3 60	3 48	3 48
4+00	3 00	3 24	3 48	3 36	3 24
4+50	2 52	2 76	2 88	3 12	3 12
5+00	2 64	3 12	3 24	3 24	3 24

Average	3 14
Min	2 52
Max	3 72
Std Dev	0 30

State	**Alabama**
Project	**010604**

010604	SurfaceThickness (in)				
	Offset from Shoulder (ft)				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	1 56	1 08	1 08	1 32	1 56
0+50	1 56	1 20	1 20	1 32	1 32
1+00	1 68	1 08	0 96	0 96	1 20
1+50	1 56	1 08	0 84	1 08	1 08
2+00	1 56	1 20	1 20	1 44	1 56
2+50	1 68	1 20	1 08	1 32	1 56
3+00	1 56	1 32	1 08	1 20	1 44
3+50	1 44	1 08	1 08	1 20	1 44
4+00	1 56	1 20	1 20	1 44	1 68
4+50	1 80	1 56	1 68	1 68	1 80
5+00	1 92	1 32	1 20	1 32	1 32

Average	1.35
Min	0.84
Max	1.92
Std. Dev.	0.25

010604	Total HMAC Thickness (in)				
	Offset from Shoulder (ft)				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	4 08	4 08	3 96	4 08	4 32
0+50	4 32	4 44	4 32	4 20	4 20
1+00	4 44	4 44	4 32	4 44	4 68
1+50	4 68	4 68	4 56	4 68	4 80
2+00	4 32	4 32	4 44	4 68	4 92
2+50	4 44	4 20	4 20	4 32	4 44
3+00	4 56	4 56	4 56	4 56	4 68
3+50	4 44	4 44	4 68	4 68	4 92
4+00	4 56	4 44	4 68	4 80	4 92
4+50	4 32	4 32	4 56	4 80	4 92
5+00	4 56	4 44	4 44	4 56	4 56

Average	4.49
Min.	3.96
Max	4.92
Std. Dev	0.23

State	**Alabama**
Project	**010605**

Existing PCC	**Rod & Level Shots**				
010605	***Offset from Shoulder (ft)***				
Station No.	*0*	*3*	*6*	*9*	*12*
0+00	14.80	14.84	14.86	14.86	14.86
0+50	14.18	14.22	14.25	14.27	14.28
1+00	13.66	13.69	13.72	13.74	13.74
1+50	13.04	13.07	13.11	13.12	13.13
2+00	12.42	12.47	12.50	12.51	12.52
2+50	11.86	11.87	11.89	11.91	11.94
3+00	11.25	11.28	11.30	11.30	11.31
3+50	10.65	10.67	10.70	10.71	10.73
4+00	10.06	10.09	10.12	10.12	10.13
4+50	9.53	9.56	9.58	9.60	9.61
5+00	8.95	8.99	9.01	9.03	9.04
5+50	8.47	8.50	8.52	8.53	8.54
6+00	7.94	7.97	8.00	8.01	8.02
6+50	7.52	7.55	7.57	7.58	7.58
7+00	7.11	7.14	7.16	7.18	7.19
7+50	6.71	6.75	6.79	6.80	6.81
8+00	6.34	6.38	6.41	6.43	6.44
8+50	5.97	6.01	6.06	6.08	6.09
9+00	5.67	5.71	5.74	5.76	5.77
9+50	5.37	5.41	5.45	5.46	5.48
10+00	5.14	5.18	5.21	5.21	5.22
After Grinding	**Rod & Level Shots**				
0+00	14.79	14.83	14.84	14.86	14.86
0+50	14.15	14.19	14.23	14.24	14.26
1+00	13.65	13.68	13.71	13.72	13.73
1+50	13.02	13.06	13.09	13.11	13.12
2+00	12.41	12.45	12.49	12.50	12.51
2+50	11.84	11.85	11.87	11.88	11.90
3+00	11.23	11.26	11.28	11.29	11.30
3+50	10.63	10.66	10.70	10.71	10.73
4+00	10.04	10.07	10.11	10.11	10.13
4+50	9.50	9.53	9.57	9.58	9.60
5+00	8.92	8.96	8.99	9.00	9.02
5+50	8.44	8.46	8.48	8.50	8.52
6+00	7.91	7.95	7.97	7.99	8.01
6+50	7.49	7.52	7.55	7.56	7.58
7+00	7.04	7.08	7.10	7.12	7.13
7+50	6.66	6.70	6.73	6.75	6.77
8+00	6.28	6.31	6.34	6.37	6.38
8+50	5.91	5.96	5.99	6.02	6.04
9+00	5.65	5.69	5.73	5.74	5.76
9+50	5.36	5.39	5.44	5.45	5.47
10+00	5.11	5.15	5.18	5.19	5.21

State	**Alabama**
Project	**010605**

Difference	**Amount of PCC Ground Off (in)**				
010605	***Offset from Shoulder (ft)***				
Station No.	*0*	*3*	*6*	*9*	*12*
0+00	0.12	0.12	0.24	0.00	0.00
0+50	0.36	0.36	0.24	0.36	0.24
1+00	0.12	0.12	0.12	0.24	0.12
1+50	0.24	0.12	0.24	0.12	0.12
2+00	0.12	0.24	0.12	0.12	0.12
2+50	0.24	0.24	0.24	0.36	0.48
3+00	0.24	0.24	0.24	0.12	0.12
3+50	0.24	0.12	0.00	0.00	0.00
4+00	0.24	0.24	0.12	0.12	0.00
4+50	0.36	0.36	0.12	0.24	0.12
5+00	0.36	0.36	0.24	0.36	0.24
5+50	0.36	0.48	0.48	0.36	0.24
6+00	0.36	0.24	0.36	0.24	0.12
6+50	0.36	0.36	0.24	0.24	0.00
7+00	0.84	0.72	0.72	0.72	0.72
7+50	0.60	0.60	0.72	0.60	0.48
8+00	0.72	0.84	0.84	0.72	0.72
8+50	0.72	0.60	0.84	0.72	0.60
9+00	0.24	0.24	0.12	0.24	0.12
9+50	0.12	0.24	0.12	0.12	0.12
10+00	0.36	0.36	0.36	0.24	0.12

Average	0.31
Min.	0.00
Max.	0.84
Std. Dev.	0.22

State	**Alabama**
Project	**010606**

Existing PCC	**Rod & Level Shots**				
010606	***Offset from Shoulder (ft)***				
Station No.	*0*	*3*	*6*	*9*	*12*
0+00	1.90	1.88	1.86	1.84	1.79
0+50	2.09	2.08	2.07	2.05	2.02
1+00	2.32	2.32	2.32	2.30	2.28
1+50	2.58	2.57	2.56	2.54	2.52
2+00	2.74	2.74	2.75	2.74	2.72
2+50	2.99	2.98	3.00	2.98	2.97
3+00	3.23	3.22	3.23	3.23	3.22
3+50	3.42	3.42	3.44	3.44	3.44
4+00	3.60	3.61	3.64	3.65	3.67
4+50	3.88	3.90	3.94	3.95	3.96
5+00	4.14	4.17	4.21	4.22	4.23

Binder	**Rod & Level Shots**				
010606	***Offset from Shoulder (ft)***				
Station No.	*0*	*3*	*6*	*9*	*12*
0+00	2.06	2.07	2.05	2.01	1.96
0+50	2.27	2.28	2.26	2.23	2.19
1+00	2.48	2.49	2.49	2.46	2.43
1+50	2.75	2.77	2.77	2.75	2.71
2+00	2.92	2.95	2.96	2.94	2.91
2+50	3.14	3.17	3.18	3.18	3.15
3+00	3.39	3.41	3.41	3.42	3.41
3+50	3.56	3.61	3.62	3.62	3.61
4+00	3.74	3.80	3.83	3.85	3.85
4+50	4.02	4.07	4.11	4.13	4.11
5+00	4.28	4.34	4.37	4.40	4.40

Surface	**Rod & Level Shots**				
010606	***Offset from Shoulder (ft)***				
Station No.	*0*	*3*	*6*	*9*	*12*
0+00	2.17	2.15	2.13	2.10	2.09
0+50	2.41	2.39	2.36	2.34	2.30
1+00	2.61	2.60	2.58	2.56	2.55
1+50	2.87	2.86	2.85	2.85	2.84
2+00	3.06	3.06	3.06	3.05	3.04
2+50	3.28	3.28	3.28	3.27	3.27
3+00	3.49	3.51	3.52	3.53	3.51
3+50	3.69	3.71	3.72	3.72	3.71
4+00	3.89	3.91	3.93	3.95	3.96
4+50	4.14	4.16	4.19	4.21	4.23
5+00	4.42	4.45	4.47	4.50	4.51

State	**Alabama**
Project	**010606**

010606	Binder Thickness (in)				
	Offset from Shoulder (ft)				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	1 92	2 34	2 28	2 10	2 04
0+50	2 16	2 40	2 34	2 16	2 04
1+00	1 92	2 04	2 04	1 92	1 86
1+50	2 04	2 40	2 52	2 52	2 34
2+00	2 16	2 52	2 52	2 40	2 28
2+50	1 80	2 28	2 22	2 40	2 16
3+00	1 92	2 28	2 16	2 34	2 34
3+50	1 74	2 28	2 22	2 16	2 04
4+00	1 68	2 28	2 28	2 40	2 22
4+50	1 68	2 10	2 10	2 16	1 80
5+00	1 68	2 04	1 92	2 16	2 04

Average	2 15
Min	1 68
Max	2 52
Std Dev	0 22

State	**Alabama**
Project	**010606**

010606	SurfaceThickness (in)				
	Offset from Shoulder (ft)				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	1 32	0 96	0 96	1 08	1 56
0+50	1 68	1 32	1 20	1 32	1 32
1+00	1 56	1 32	1 08	1 20	1 44
1+50	1 44	1 08	0 96	1 20	1 56
2+00	1 68	1 32	1 20	1 32	1 56
2+50	1 68	1 32	1 20	1 08	1 44
3+00	1 20	1 20	1 32	1 32	1 20
3+50	1 56	1 20	1 20	1 20	1 20
4+00	1 80	1 32	1 20	1 20	1 32
4+50	1 44	1 08	0 96	0 96	1 44
5+00	1 68	1 32	1 20	1 20	1 32

Average	1 30
Min	0 96
Max	1 80
Std Dev	0 20

010606	Total HMAC Thickness (in)				
	Offset from Shoulder (ft)				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	3 24	3 30	3 24	3 18	3 60
0+50	3 84	3 72	3 54	3 48	3 36
1+00	3 48	3 36	3 12	3 12	3 30
1+50	3 48	3 48	3 48	3 72	3 90
2+00	3 84	3 84	3 72	3 72	3 84
2+50	3 48	3 60	3 42	3 48	3 60
3+00	3 12	3 48	3 48	3 66	3 54
3+50	3 30	3 48	3 42	3 36	3 24
4+00	3 48	3 60	3 48	3 60	3 54
4+50	3 12	3 18	3 06	3 12	3 24
5+00	3 36	3 36	3 12	3 36	3 36

Average	3 45
Min	3 06
Max	3 90
Std Dev	0 22

State	**Alabama**
Project	**010607**

Existing PCC	**Rod & Level Shots**				
010607	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	6 18	6 20	6 22	6 25	6 26
0+50	6 10	6 12	6 14	6 16	6 16
1+00	5 98	6 01	6 03	6 04	6 04
1+50	5 90	5 94	5 96	5 98	5 98
2+00	5 80	5 83	5 85	5 87	5 88
2+50	5 71	5 74	5 77	5 79	5 80
3+00	5 63	5 66	5 68	5 70	5 71
3+50	5 55	5 58	5 60	5 60	5 61
4+00	5 48	5 50	5 54	5 55	5 56
4+50	5 38	5 40	5 43	5 45	5 47
5+00	5 31	5 34	5 38	5 41	5 43

PCC after CBS	**Rod & Level Shots**				
010607	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	6 16	6 18	6 21	6 24	6 27
0+50	6 10	6 10	6 13	6 15	6 16
1+00	5 97	5 98	6 01	6 03	6 04
1+50	5 89	5 91	5 94	5 96	5 98
2+00	5 79	5 80	5 83	5 86	5 88
2+50	5 70	5 71	5 75	5 77	5 80
3+00	5 60	5 60	5 62	5 65	5 68
3+50	5 49	5 49	5 52	5 55	5 58
4+00	5 44	5 45	5 48	5 51	5 55
4+50	5 35	5 35	5 39	5 41	5 44
5+00	5 29	5 29	5 33	5 37	5 40

Binder	**Rod & Level Shots**				
010607	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	6 39	6 43	6 46	6 48	6 52
0+50	6 29	6 34	6 37	6 39	6 42
1+00	6 17	6 24	6 28	6 31	6 33
1+50	6 09	6 14	6 19	6 23	6 26
2+00	5 99	6 06	6 10	6 12	6 13
2+50	5 90	5 97	6 01	6 05	6 09
3+00	5 80	5 87	5 93	5 95	5 99
3+50	5 66	5 71	5 77	5 81	5 87
4+00	5 56	5 63	5 71	5 78	5 84
4+50	5 50	5 56	5 62	5 68	5 74
5+00	5 49	5 55	5 61	5 67	5 75

State	**Alabama**
Project	**010607**

Surface	**Rod & Level Shots**				
010607	***Offset from Shoulder (ft)***				
Station No.	*0*	*3*	*6*	*9*	*12*
0+00	6.47	6.52	6.57	6.61	6.65
0+50	6.38	6.43	6.48	6.53	6.59
1+00	6.27	6.31	6.37	6.42	6.47
1+50	6.19	6.24	6.29	6.34	6.39
2+00	6.10	6.15	6.20	6.25	6.29
2+50	6.01	6.05	6.11	6.17	6.22
3+00	5.90	5.95	6.01	6.05	6.11
3+50	5.78	5.83	5.89	5.96	6.03
4+00	5.67	5.74	5.82	5.91	5.98
4+50	5.60	5.66	5.73	5.80	5.86
5+00	5.59	5.65	5.71	5.79	5.86

State	**Alabama**
Project	**010607**

Difference in JPCP after Crack/Break & Seat (in)

010607	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	0 18	0 24	0 12	0 12	-0 12
0+50	-0 06	0 24	0 12	0 12	0 00
1+00	0 12	0 36	0 24	0 12	0 00
1+50	0 12	0 30	0 24	0 18	0 00
2+00	0 12	0 36	0 24	0 12	0 00
2+50	0 12	0 36	0 24	0 24	0 00
3+00	0 36	0 72	0 72	0 60	0 36
3+50	0 72	1 02	0 96	0 60	0 36
4+00	0 42	0 60	0 66	0 48	0 12
4+50	0 36	0 54	0 48	0 48	0 30
5+00	0 18	0 60	0 60	0 42	0 36

Average	0 32
Min	-0 12
Max	1 02
Std Dev	0 25

Binder Thickness Compared to CBS Data (in)

010607	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	2 76	3 00	3 00	2 88	3 00
0+50	2 28	2 88	2 88	2 88	3 12
1+00	2 40	3 12	3 24	3 36	3 48
1+50	2 40	2 76	3 00	3 24	3 36
2+00	2 40	3 12	3 24	3 12	3 00
2+50	2 40	3 12	3 12	3 36	3 48
3+00	2 40	3 24	3 72	3 60	3 72
3+50	2 04	2 64	3 00	3 12	3 48
4+00	1 44	2 16	2 76	3 24	3 48
4+50	1 80	2 52	2 76	3 24	3 60
5+00	2 40	3 12	3 36	3 60	4 20

Average	2 98
Min	1 44
Max	4 20
Std Dev	0 51

Binder Thickness Compared to Existing PCC Data (in)

010607	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	2 58	2 76	2 88	2 76	3 12
0+50	2 34	2 64	2 76	2 76	3 12
1+00	2 28	2 76	3 00	3 24	3 48
1+50	2 28	2 46	2 76	3 06	3 36
2+00	2 28	2 76	3 00	3 00	3 00
2+50	2 28	2 76	2 88	3 12	3 48
3+00	2 04	2 52	3 00	3 00	3 36
3+50	1 32	1 62	2 04	2 52	3 12
4+00	1 02	1 56	2 10	2 76	3 36
4+50	1 44	1 98	2 28	2 76	3 30
5+00	2 22	2 52	2 76	3 18	3 84

Average	2 67
Min	1 02
Max	3 84
Std Dev	0 58

State	**Alabama**
Project	**010607**

SurfaceThickness (in)

010607	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	0 96	1 08	1 32	1 56	1 56
0+50	1 08	1 08	1 32	1 68	2 04
1+00	1 20	0 84	1 08	1 32	1 68
1+50	1 20	1 20	1 20	1 32	1 56
2+00	1 32	1 08	1 20	1 56	1 92
2+50	1 32	0 96	1 20	1 44	1 56
3+00	1 20	0 96	0 96	1 20	1 44
3+50	1 44	1 44	1 44	1 80	1 92
4+00	1 32	1 32	1 32	1 56	1 68
4+50	1 20	1 20	1 32	1 44	1 44
5+00	1 20	1 20	1 20	1 44	1 32

Average	1 34
Min	0 84
Max	2 04
Std Dev	0 26

Total HMAC Thickness as Compared to CBS Data (in)

010607	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	3 72	4 08	4 32	4 44	4 56
0+50	3 36	3 96	4 20	4 56	5 16
1+00	3 60	3 96	4 32	4 68	5 16
1+50	3 60	3 96	4 20	4 56	4 92
2+00	3 72	4 20	4 44	4 68	4 92
2+50	3 72	4 08	4 32	4 80	5 04
3+00	3 60	4 20	4 68	4 80	5 16
3+50	3 48	4 08	4 44	4 92	5 40
4+00	2 76	3 48	4 08	4 80	5 16
4+50	3 00	3 72	4 08	4 68	5 04
5+00	3 60	4 32	4 56	5 04	5 52

Average	4 32
Min	2 76
Max	5 52
Std Dev	0 61

Total HMAC as Compared to Existing PCC Data (in)

010607	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	3 54	3 84	4 20	4 32	4 68
0+50	3 42	3 72	4 08	4 44	5 16
1+00	3 48	3 60	4 08	4 56	5 16
1+50	3 48	3 66	3 96	4 38	4 92
2+00	3 60	3 84	4 20	4 56	4 92
2+50	3 60	3 72	4 08	4 56	5 04
3+00	3 24	3 48	3 96	4 20	4 80
3+50	2 76	3 06	3 48	4 32	5 04
4+00	2 34	2 88	3 42	4 32	5 04
4+50	2 64	3 18	3 60	4 20	4 74
5+00	3 42	3 72	3 96	4 62	5 16

Average	4 01
Min	2 34
Max	5 16
Std Dev	0 69

State	**Alabama**
Project	**010608**

Existing PCC	**Rod & Level Shots**				
010608	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	0 44	0 46	0 50	0 52	0 54
0+50	0 46	0 48	0 52	0 54	0 55
1+00	0 46	0 48	0 53	0 55	0 56
1+50	0 42	0 46	0 50	0 52	0 54
2+00	0 43	0 47	0 50	0 52	0 53
2+50	0 40	0 43	0 47	0 49	0 50
3+00	0 36	0 38	0 42	0 46	0 47
3+50	0 32	0 35	0 39	0 40	0 42
4+00	0 29	0 32	0 36	0 38	0 40
4+50	0 28	0 31	0 34	0 36	0 37
5+00	0 23	0 26	0 30	0 32	0 34

PCC after CBS	**Rod & Level Shots**				
010608	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	0 38	0 42	0 43	0 47	0 50
0+50	0 41	0 41	0 44	0 46	0 51
1+00	0 41	0 43	0 47	0 50	0 54
1+50	0 37	0 38	0 44	0 48	0 51
2+00	0 39	0 39	0 44	0 47	0 50
2+50	0 36	0 37	0 42	0 45	0 47
3+00	0 32	0 32	0 36	0 40	0 42
3+50	0 28	0 29	0 32	0 36	0 40
4+00	0 24	0 25	0 28	0 32	0 36
4+50	0 22	0 22	0 27	0 28	0 33
5+00	0 18	0 17	0 20	0 25	0 30

Lower Binder	**Rod & Level Shots**				
010608	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	0 73	0 78	0 81	0 84	0 86
0+50	0 72	0 78	0 83	0 87	0 90
1+00	0 71	0 78	0 84	0 88	0 92
1+50	0 70	0 76	0 81	0 86	0 90
2+00	0 70	0 77	0 82	0 86	0 89
2+50	0 66	0 73	0 79	0 83	0 87
3+00	0 65	0 72	0 78	0 84	0 89
3+50	0 58	0 65	0 70	0 75	0 80
4+00	0 55	0 62	0 65	0 69	0 73
4+50	0 56	0 61	0 65	0 69	0 73
5+00	0 51	0 56	0 62	0 67	0 72

State	**Alabama**
Project	**010608**

Upper Binder	**Rod & Level Shots**				
010608	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	0 99	1 01	1 04	1 11	1 16
0+50	0 89	0 98	1 06	1 14	1 20
1+00	0 87	0 96	1 05	1 13	1 20
1+50	0 86	0 94	1 02	1 09	1 16
2+00	0 87	0 94	1 02	1 08	1 14
2+50	0 83	0 90	0 99	1 05	1 12
3+00	0 82	0 89	0 95	1 01	1 16
3+50	0 81	0 86	0 92	0 96	1 01
4+00	0 75	0 81	0 87	0 93	0 99
4+50	0 75	0 81	0 86	0 91	0 95
5+00	0 71	0 77	0 84	0 89	0 95

Surface	**Rod & Level Shots**				
010608	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	1 03	1 09	1 17	1 24	1 29
0+50	1 03	1 09	1 16	1 24	1 31
1+00	1 01	1 08	1 17	1 25	1 33
1+50	0 99	1 07	1 14	1 22	1 27
2+00	1 01	1 08	1 15	1 22	1 27
2+50	0 97	1 03	1 09	1 16	1 21
3+00	0 93	0 98	1 05	1 11	1 16
3+50	0 92	0 97	1 03	1 07	1 12
4+00	0 88	0 92	0 98	1 03	1 08
4+50	0 87	0 91	0 95	1 00	1 05
5+00	0 81	0 88	0 94	1 00	1 05

State	**Alabama**
Project	**010608**

Difference in JPCP after Crack/Break & Seat (in)

010608	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	0 66	0 48	0 84	0 60	0 42
0+50	0 54	0 84	0 96	0 90	0 42
1+00	0 54	0 60	0 66	0 54	0 24
1+50	0 60	0 90	0 66	0 48	0 30
2+00	0 48	0 90	0 66	0 60	0 30
2+50	0 42	0 72	0 60	0 42	0 36
3+00	0 48	0 72	0 72	0 66	0 60
3+50	0 48	0 66	0 84	0 48	0 24
4+00	0 60	0 78	0 90	0 72	0 42
4+50	0 72	1 08	0 84	0 96	0 48
5+00	0 60	1 02	1 20	0 78	0 48

Average	0 64
Min	0 24
Max	1 20
Std Dev	0 21

Lower Binder Thickness Compared to CBS Data (in)

010608	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	4 20	4 32	4 56	4 44	4 32
0+50	3 72	4 44	4 68	4 92	4 68
1+00	3 60	4 20	4 44	4 56	4 56
1+50	3 96	4 56	4 44	4 56	4 68
2+00	3 72	4 56	4 56	4 68	4 68
2+50	3 60	4 32	4 44	4 56	4 80
3+00	3 96	4 80	5 04	5 28	5 64
3+50	3 60	4 32	4 56	4 68	4 80
4+00	3 72	4 44	4 44	4 44	4 44
4+50	4 08	4 68	4 56	4 92	4 80
5+00	3 96	4 68	5 04	5 04	5 04

Average	4 49
Min	3 60
Max	5 64
Std Dev	0 42

Lower Binder Thickness Compared to Existing PCC Data (in)

010608	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	3 54	3 84	3 72	3 84	3 90
0+50	3 18	3 60	3 72	4 02	4 26
1+00	3 06	3 60	3 78	4 02	4 32
1+50	3 36	3 66	3 78	4 08	4 38
2+00	3 24	3 66	3 90	4 08	4 38
2+50	3 18	3 60	3 84	4 14	4 44
3+00	3 48	4 08	4 32	4 62	5 04
3+50	3 12	3 66	3 72	4 20	4 56
4+00	3 12	3 66	3 54	3 72	4 02
4+50	3 36	3 60	3 72	3 96	4 32
5+00	3 36	3 66	3 84	4 26	4 56

Average	3 85
Min	3 06
Max	5 04
Std Dev	0 43

State	**Alabama**
Project	**010608**

010608	**Upper Binder Thickness (in)**				
	Offset from Shoulder (ft)				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	3 12	2 76	2 76	3 24	3 60
0+50	2 04	2 40	2 76	3 24	3 60
1+00	1 92	2 16	2 52	3 00	3 36
1+50	1 92	2 16	2 52	2 76	3 12
2+00	2 04	2 04	2 40	2 64	3 00
2+50	2 04	2 04	2 40	2 64	3 00
3+00	2 04	2 04	2 04	2 04	3 24
3+50	2 76	2 52	2 64	2 52	2 52
4+00	2 40	2 28	2 64	2 88	3 12
4+50	2 28	2 40	2 52	2 64	2 64
5+00	2 40	2 52	2 64	2 64	2 76

Average	2.59
Min	1.92
Max	3.60
Std. Dev.	0.43

State	**Alabama**
Project	**010608**

SurfaceThickness (in)

010608	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	0 48	0 96	1 56	1 56	1 56
0+50	1 68	1 32	1 20	1 20	1 32
1+00	1 68	1 44	1 44	1 44	1 56
1+50	1 56	1 56	1 44	1 56	1 32
2+00	1 68	1 68	1 56	1 68	1 56
2+50	1 68	1 56	1 20	1 32	1 08
3+00	1 32	1 08	1 20	1 20	0 00
3+50	1 32	1 32	1 32	1 32	1 32
4+00	1 56	1 32	1 32	1 20	1 08
4+50	1 44	1 20	1 08	1 08	1 20
5+00	1 20	1 32	1 20	1 32	1 20

Average	1 33
Min	0 00
Max	1 68
Std Dev	0 29

Total HMAC Thickness as Compared to CBS Data (in)

010608	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	7 80	8 04	8 88	9 24	9 48
0+50	7 44	8 16	8 64	9 36	9 60
1+00	7 20	7 80	8 40	9 00	9 48
1+50	7 44	8 28	8 40	8 88	9 12
2+00	7 44	8 28	8 52	9 00	9 24
2+50	7 32	7 92	8 04	8 52	8 88
3+00	7 32	7 92	8 28	8 52	8 88
3+50	7 68	8 16	8 52	8 52	8 64
4+00	7 68	8 04	8 40	8 52	8 64
4+50	7 80	8 28	8 16	8 64	8 64
5+00	7 56	8 52	8 88	9 00	9 00

Average	8 40
Min	7 20
Max	9 60
Std Dev	0 61

Total HMAC as Compared to Existing PCC Data (in)

010608	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	7 14	7 56	8 04	8 64	9 06
0+50	6 90	7 32	7 68	8 46	9 18
1+00	6 66	7 20	7 74	8 46	9 24
1+50	6 84	7 38	7 74	8 40	8 82
2+00	6 96	7 38	7 86	8 40	8 94
2+50	6 90	7 20	7 44	8 10	8 52
3+00	6 84	7 20	7 56	7 86	8 28
3+50	7 20	7 50	7 68	8 04	8 40
4+00	7 08	7 26	7 50	7 80	8 22
4+50	7 08	7 20	7 32	7 68	8 16
5+00	6 96	7 50	7 68	8 22	8 52

Average	7 76
Min	6 66
Max	9 24
Std Dev	0 66

State	**Alabama**
Project	**010661**

Existing PCC
010661

Station No.	Rod & Level Shots *Offset from Shoulder (ft)* 0	3	6	9	12
0+00	8.00	7.97	7.94	7.90	7.86
0+50	8.27	8.24	8.20	8.16	8.12
1+00	8.53	8.49	8.47	8.44	8.42
1+50	8.77	8.75	8.72	8.70	8.67
2+00	9.03	9.04	9.00	8.96	8.92
2+50	9.28	9.25	9.22	9.19	9.16
3+00	9.47	9.44	9.43	9.40	9.35
3+50	9.74	9.71	9.70	9.67	9.64
4+00	10.02	10.00	10.00	9.96	9.93
4+50	10.33	10.30	10.29	10.25	10.22
5+00	10.54	10.53	10.51	10.49	10.50

PCC after Rubblization
010661

Station No.	Rod & Level Shots *Offset from Shoulder (ft)* 0	3	6	9	12
0+00	7.94	7.96	7.94	7.92	7.84
0+50	8.21	8.21	8.21	8.18	8.10
1+00	8.47	8.49	8.48	8.45	8.44
1+50	8.66	8.71	8.75	8.75	8.68
2+00	9.02	9.02	9.02	8.99	8.94
2+50	9.26	9.24	9.23	9.21	9.15
3+00	9.40	9.43	9.42	9.39	9.38
3+50	9.66	9.67	9.72	9.73	9.63
4+00	9.92	9.98	9.96	9.97	9.92
4+50	10.33	10.29	10.30	10.29	10.18
5+00	10.48	10.46	10.45	10.41	10.37

Binder
010661

Station No.	Rod & Level Shots *Offset from Shoulder (ft)* 0	3	6	9	12
0+00	8.12	8.12	8.10	8.08	8.07
0+50	8.39	8.40	8.39	8.36	8.35
1+00	8.64	8.66	8.66	8.63	8.62
1+50	8.92	8.91	8.90	8.89	8.89
2+00	9.19	9.20	9.21	9.18	9.17
2+50	9.41	9.42	9.42	9.41	9.41
3+00	9.58	9.60	9.60	9.59	9.58
3+50	9.83	9.83	9.83	9.83	9.80
4+00	10.08	10.07	10.07	10.04	10.02
4+50	10.41	10.39	10.39	10.34	10.31
5+00	10.55	10.54	10.54	10.53	10.51

State	**Alabama**
Project	**010661**

Surface	**Rod & Level Shots**				
010661	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	8 29	8 27	8 27	8 26	8 26
0+50	8 59	8 58	8 57	8 56	8 55
1+00	8 84	8 83	8 83	8 82	8 82
1+50	9 09	9 09	9 08	9 08	9 08
2+00	9 37	9 36	9 36	9 36	9 35
2+50	9 58	9 58	9 59	9 60	9 61
3+00	9 77	9 78	9 79	9 78	9 79
3+50	9 99	9 98	9 97	9 97	9 96
4+00	10 25	10 25	10 25	10 24	10 22
4+50	10 54	10 53	10 53	10 51	10 49
5+00	10 76	10 75	10 74	10 72	10 70

State	**Alabama**
Project	**010661**

Difference in JPCP after Rubblization (in)

010661 — *Offset from Shoulder (ft)*

Station No	*0*	*3*	*6*	*9*	*12*
0+00	0 72	0 12	0 00	-0 24	0 18
0+50	0 72	0 36	-0 12	-0 30	0 18
1+00	0 72	0 00	-0 12	-0 12	-0 30
1+50	1 32	0 48	-0 36	-0 66	-0 12
2+00	0 12	0 18	-0 24	-0 36	-0 24
2+50	0 24	0 06	-0 12	-0 24	0 12
3+00	0 84	0 12	0 12	0 06	-0 36
3+50	0 96	0 48	-0 24	-0 72	0 12
4+00	1 20	0 24	0 42	-0 12	0 12
4+50	0 00	0 12	-0 12	-0 48	0 48
5+00	0 72	0 84	0 72	0 96	1 56

Average	0 18
Min	-0 72
Max.	1 56
Std. Dev.	0 49

Binder Thickness Compared to Rubblized Data (in)

010661 — *Offset from Shoulder (ft)*

Station No	*0*	*3*	*6*	*9*	*12*
0+00	2 16	1 92	1 92	1 92	2 76
0+50	2 16	2 28	2 16	2 16	3 00
1+00	2 04	2 04	2 16	2 16	2 16
1+50	3 12	2 40	1 80	1 68	2 58
2+00	2 04	2 16	2 28	2 28	2 76
2+50	1 80	2 16	2 28	2 40	3 12
3+00	2 16	2 04	2 16	2 40	2 40
3+50	2 04	1 92	1 32	1 20	2 04
4+00	1 92	1 08	1 32	0 84	1 20
4+50	0 96	1 20	1 08	0 60	1 56
5+00	0 84	0 96	1 08	1 44	1 68

Average	1 91
Min.	0 60
Max.	3 12
Std. Dev.	0 59

Binder Thickness Compared to Existing PCC Data (in)

010661 — *Offset from Shoulder (ft)*

Station No	*0*	*3*	*6*	*9*	*12*
0+00	1 44	1 80	1 92	2 16	2 58
0+50	1 44	1 92	2 28	2 46	2 82
1+00	1 32	2 04	2 28	2 28	2 46
1+50	1 80	1 92	2 16	2 34	2 70
2+00	1 92	1 98	2 52	2 64	3 00
2+50	1 56	2 10	2 40	2 64	3 00
3+00	1 32	1 92	2 04	2 34	2 76
3+50	1 08	1 44	1 56	1 92	1 92
4+00	0 72	0 84	0 90	0 96	1 08
4+50	0 96	1 08	1 20	1 08	1 08
5+00	0 12	0 12	0 36	0 48	0 12

Average	1 73
Min	0 12
Max.	3 00
Std. Dev.	0 76

State	**Alabama**
Project	**0106061**

SurfaceThickness (in)

0106061	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	2 04	1 80	2 04	2 16	2 28
0+50	2 40	2 16	2 16	2 40	2 40
1+00	2 40	2 04	2 04	2 28	2 40
1+50	2 04	2 16	2 16	2 28	2 28
2+00	2 16	1 92	1 80	2 16	2 16
2+50	2 04	1 92	2 04	2 28	2 40
3+00	2 28	2 16	2 28	2 28	2 52
3+50	1 92	1 80	1 68	1 68	1 92
4+00	2 04	2 16	2 16	2 40	2 40
4+50	1 56	1 68	1 68	2 04	2 16
5+00	2 52	2 52	2 40	2 28	2 28

Average	2 14
Min	1 56
Max	2 52
Std Dev	0 24

Total HMAC Thickness as Compared to Rubblized Data (in)

0106061	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	4 20	3 72	3 96	4 08	5 04
0+50	4 56	4 44	4 32	4 56	5 40
1+00	4 44	4 08	4 20	4 44	4 56
1+50	5 16	4 56	3 96	3 96	4 86
2+00	4 20	4 08	4 08	4 44	4 92
2+50	3 84	4 08	4 32	4 68	5 52
3+00	4 44	4 20	4 44	4 68	4 92
3+50	3 96	3 72	3 00	2 88	3 96
4+00	3 96	3 24	3 48	3 24	3 60
4+50	2 52	2 88	2 76	2 64	3 72
5+00	3 36	3 48	3 48	3 72	3 96

Average	4.05
Min	2 52
Max	5.52
Std Dev	0.68

Total HMAC as Compared to Existing PCC Data (in)

0106061	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	3 48	3 60	3 96	4 32	4 86
0+50	3 84	4 08	4 44	4 86	5 22
1+00	3 72	4 08	4 32	4 56	4 86
1+50	3 84	4 08	4 32	4 62	4 98
2+00	4 08	3 90	4 32	4 80	5 16
2+50	3 60	4 02	4 44	4 92	5 40
3+00	3 60	4 08	4 32	4 62	5 28
3+50	3 00	3 24	3 24	3 60	3 84
4+00	2 76	3 00	3 06	3 36	3 48
4+50	2 52	2 76	2 88	3 12	3 24
5+00	2 64	2 64	2 76	2 76	2 40

Average	3 87
Min	2 40
Max	5 40
Std Dev	0 81

State	**Alabama**
Project	**010662**

Existing PCC
010662

Station No.	Rod & Level Shots *Offset from Shoulder (ft)* 0	3	6	9	12
0+00	5.90	5.92	5.96	5.99	5.99
0+50	5.90	5.93	5.97	5.98	6.00
1+00	5.84	5.88	5.91	5.94	5.96
1+50	5.85	5.88	5.92	5.94	5.95
2+00	5.88	5.91	5.95	5.96	5.97
2+50	5.89	5.92	5.96	5.98	5.99
3+00	5.93	5.95	5.98	6.01	6.02
3+50	5.98	6.00	6.03	6.04	6.04
4+00	6.04	6.05	6.07	6.08	6.08
4+50	6.14	6.14	6.16	6.16	6.16
5+00	6.24	6.23	6.23	6.23	6.21

PCC after Rubblization
010662

Station No.	Rod & Level Shots *Offset from Shoulder (ft)* 0	3	6	9	12
0+00	5.86	5.98	6.05	6.04	6.04
0+50	5.87	5.99	6.04	6.09	6.07
1+00	5.97	5.93	6.00	6.04	6.07
1+50	5.82	5.91	5.95	6.02	6.00
2+00	5.82	5.95	6.00	6.03	6.10
2+50	5.85	5.92	5.97	6.03	6.04
3+00	5.85	5.95	6.00	6.02	6.05
3+50	5.93	5.99	6.05	6.07	6.10
4+00	5.99	6.06	6.12	6.19	6.14
4+50	6.09	6.17	6.20	6.22	6.21
5+00	6.15	6.22	6.21	6.23	6.24

Lower Binder
010662

Station No.	Rod & Level Shots *Offset from Shoulder (ft)* 0	3	6	9	12
0+00	6.25	6.32	6.38	6.42	6.46
0+50	6.21	6.29	6.35	6.39	6.43
1+00	6.17	6.26	6.33	6.35	6.38
1+50	6.20	6.26	6.31	6.35	6.38
2+00	6.21	6.27	6.33	6.36	6.39
2+50	6.19	6.28	6.33	6.37	6.40
3+00	6.22	6.29	6.35	6.38	6.41
3+50	6.28	6.36	6.40	6.45	6.49
4+00	6.36	6.42	6.46	6.49	6.51
4+50	6.44	6.51	6.56	6.58	6.61
5+00	6.49	6.55	6.60	6.61	6.62

State	**Alabama**
Project	**010662**

Upper Binder	**Rod & Level Shots**				
010662	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	6 41	6 49	6 56	6 62	6 67
0+50	6 39	6 46	6 54	6 59	6 66
1+00	6 36	6 44	6 52	6 58	6 62
1+50	6 35	6 41	6 48	6 53	6 57
2+00	6 37	6 43	6 48	6 53	6 56
2+50	6 38	6 45	6 51	6 57	6 61
3+00	6 40	6 47	6 53	6 58	6 63
3+50	6 42	6 53	6 59	6 64	6 69
4+00	6 52	6 58	6 65	6 70	6 75
4+50	6 63	6 69	6 75	6 79	6 83
5+00	6 68	6 73	6 79	6 82	6 87

Surface	**Rod & Level Shots**				
010662	***Offset from Shoulder (ft)***				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	6 54	6 60	6 66	6 73	6 78
0+50	6 53	6 57	6 63	6 69	6 75
1+00	6 47	6 53	6 58	6 65	6 71
1+50	6 47	6 51	6 57	6 63	6 67
2+00	6 49	6 53	6 57	6 62	6 66
2+50	6 50	6 54	6 59	6 65	6 71
3+00	6 52	6 57	6 62	6 69	6 75
3+50	6 57	6 62	6 68	6 75	6 79
4+00	6 63	6 68	6 73	6 80	6 86
4+50	6 73	6 78	6 83	6 88	6 94
5+00	6 79	6 82	6 87	6 92	6 97

State	**Alabama**
Project	**010662**

Difference in JPCP after Rubblization (in)

010662	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	0 42	-0 72	-1 08	-0 66	-0 60
0+50	0 36	-0 72	-0 84	-1 32	-0 90
1+00	-1 56	-0 60	-1 08	-1 20	-1 38
1+50	0 36	-0 36	-0 36	-1 02	-0 66
2+00	0 72	-0 48	-0 60	-0 84	-1 62
2+50	0 48	-0 06	-0 12	-0 60	-0 60
3+00	0 96	0 00	-0 24	-0 12	-0 36
3+50	0 54	0 06	-0 30	-0 36	-0 72
4+00	0 54	-0 12	-0 60	-1 32	-0 72
4+50	0 54	-0 36	-0 48	-0 72	-0 60
5+00	1 08	0 12	0 20	0 00	-0 36

Average	-0 38
Min	-1 62
Max	1 08
Std. Dev.	0 63

Lower Binder Thickness Compared to Rubblization Data (in)

010662	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	4 68	4 08	3 96	4 56	5 04
0+50	4 08	3 60	3 72	3 60	4 32
1+00	2 40	3 96	3 96	3 72	3 72
1+50	4 56	4 20	4 32	3 96	4 56
2+00	4 68	3 84	3 96	3 96	3 48
2+50	4 08	4 32	4 32	4 08	4 32
3+00	4 44	4 08	4 20	4 32	4 32
3+50	4 20	4 44	4 20	4 56	4 68
4+00	4 44	4 32	4 08	3 60	4 44
4+50	4 20	4 08	4 32	4 32	4 80
5+00	4 08	3 96	4 64	4 56	4 56

Average	4 18
Min	2 40
Max	5 04
Std. Dev.	0 41

Lower Binder Thickness Compared to Existing PCC Data (in)

010662	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	4 26	4 80	5 04	5 22	5 64
0+50	3 72	4 32	4 56	4 92	5 22
1+00	3 96	4 56	5 04	4 92	5 10
1+50	4 20	4 56	4 68	4 98	5 22
2+00	3 96	4 32	4 56	4 80	5 10
2+50	3 60	4 38	4 44	4 68	4 92
3+00	3 48	4 08	4 44	4 44	4 68
3+50	3 66	4 38	4 50	4 92	5 40
4+00	3 90	4 44	4 68	4 92	5 16
4+50	3 66	4 44	4 80	5 04	5 40
5+00	3 00	3 84	4 44	4 56	4 92

Average	4 56
Min	3 00
Max	5 64
Std. Dev.	0 54

State	**Alabama**
Project	**010662**

010662	**Upper Binder Thickness (in)**				
	Offset from Shoulder (ft)				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	1 92	2 04	2 16	2 40	2 52
0+50	2 16	2 04	2 28	2 40	2 76
1+00	2 28	2 16	2 28	2 76	2 88
1+50	1 80	1 80	2 04	2 16	2 28
2+00	1 92	1 92	1 80	2 04	2 04
2+50	2 28	2 04	2 16	2 40	2 52
3+00	2 16	2 16	2 16	2 40	2 64
3+50	1 68	2 04	2 28	2 28	2 40
4+00	1 92	1 92	2 28	2 52	2 88
4+50	2 28	2 16	2 28	2 52	2 64
5+00	2 28	2 16	2 28	2 52	3 00

Average	2 26
Min	1 68
Max	3 00
Std Dev	0 29

State	**Alabama**
Project	**0106062**

SurfaceThickness (in)

0106062	*Offset from Shoulder (ft)*				
Station No.	*0*	*3*	*6*	*9*	*12*
0+00	1.56	1.32	1.20	1.32	1.32
0+50	1.68	1.32	1.08	1.20	1.08
1+00	1.32	1.08	0.72	0.84	1.08
1+50	1.44	1.20	1.08	1.20	1.20
2+00	1.44	1.20	1.08	1.08	1.20
2+50	1.44	1.08	0.96	0.96	1.20
3+00	1.44	1.20	1.08	1.32	1.44
3+50	1.80	1.08	1.08	1.32	1.20
4+00	1.32	1.20	0.96	1.20	1.32
4+50	1.20	1.08	0.96	1.08	1.32
5+00	1.32	1.08	0.96	1.20	1.20

Average	1.20
Min	0.72
Max	1.80
Std. Dev.	0.19

Total HMAC Thickness as Compared to Rubblized Data (in)

0106062	*Offset from Shoulder (ft)*				
Station No.	*0*	*3*	*6*	*9*	*12*
0+00	8.16	7.44	7.32	8.28	8.88
0+50	7.92	6.96	7.08	7.20	8.16
1+00	6.00	7.20	6.96	7.32	7.68
1+50	7.80	7.20	7.44	7.32	8.04
2+00	8.04	6.96	6.84	7.08	6.72
2+50	7.80	7.44	7.44	7.44	8.04
3+00	8.04	7.44	7.44	8.04	8.40
3+50	7.68	7.56	7.56	8.16	8.28
4+00	7.68	7.44	7.32	7.32	8.64
4+50	7.68	7.32	7.56	7.92	8.76
5+00	7.68	7.20	7.88	8.28	8.76

Average	7.64
Min	6.00
Max	8.88
Std. Dev.	0.56

Total HMAC as Compared to Existing PCC Data (in)

0106062	*Offset from Shoulder (ft)*				
Station No.	*0*	*3*	*6*	*9*	*12*
0+00	7.74	8.16	8.40	8.94	9.48
0+50	7.56	7.68	7.92	8.52	9.06
1+00	7.56	7.80	8.04	8.52	9.06
1+50	7.44	7.56	7.80	8.34	8.70
2+00	7.32	7.44	7.44	7.92	8.34
2+50	7.32	7.50	7.56	8.04	8.64
3+00	7.08	7.44	7.68	8.16	8.76
3+50	7.14	7.50	7.86	8.52	9.00
4+00	7.14	7.56	7.92	8.64	9.36
4+50	7.14	7.68	8.04	8.64	9.36
5+00	6.60	7.08	7.68	8.28	9.12

Average	8.02
Min	6.60
Max	9.48
Std. Dev.	0.68

State	**Alabama**
Project	**010663**

Existing PCC
010663

Station No	Rod & Level Shots *Offset from Shoulder (ft)* 0	3	6	9	12
0+00	1 59	1 60	1 64	1 66	1 66
0+50	1 58	1 60	1 64	1 66	1 67
1+00	1 54	1 57	1 61	1 63	1 64
1+50	1 50	1 53	1 57	1 60	1 61
2+00	1 47	1 49	1 52	1 54	1 55
2+50	1 44	1 47	1 51	1 53	1 56
3+00	1 44	1 46	1 50	1 51	1 52
3+50	1 42	1 44	1 48	1 50	1 51
4+00	1 38	1 41	1 44	1 46	1 47
4+50	1 39	1 42	1 46	1 50	1 50
5+00	1 38	1 41	1 44	1 46	1 48

PCC after Rubblization
010663

Station No	Rod & Level Shots *Offset from Shoulder (ft)* 0	3	6	9	12
0+00	1 56	1 64	1 65	1 70	1 72
0+50	1 49	1 62	1 67	1 72	1 77
1+00	1 54	1 60	1 68	1 68	1 68
1+50	1 45	1 55	1 57	1 69	1 66
2+00	1 46	1 54	1 54	1 58	1 60
2+50	1 45	1 50	1 50	1 53	1 58
3+00	1 40	1 50	1 52	1 53	1 58
3+50	1 40	1 47	1 52	1 56	1 54
4+00	1 33	1 42	1 47	1 54	1 48
4+50	1 21	1 44	1 53	1 53	1 55
5+00	1 31	1 45	1 49	1 47	1 54

Lower Binder
010663

Station No	Rod & Level Shots *Offset from Shoulder (ft)* 0	3	6	9	12
0+00	1 97	2 05	2 09	2 13	2 16
0+50	1 96	2 03	2 09	2 15	2 19
1+00	1 92	2 05	2 14	2 20	2 25
1+50	1 90	1 98	2 06	2 13	2 17
2+00	1 86	1 96	2 02	2 08	2 12
2+50	1 84	1 93	2 00	2 04	2 08
3+00	1 88	1 97	2 03	2 05	2 08
3+50	1 80	1 90	1 99	2 03	2 09
4+00	1 74	1 86	1 96	2 03	2 11
4+50	1 71	1 84	1 93	2 00	2 07
5+00	1 70	1 81	1 90	1 95	2 01

State	**Alabama**
Project	**010663**

Upper Binder	**Rod & Level Shots**				
010663	***Offset from Shoulder (ft)***				
Station No.	*0*	*3*	*6*	*9*	*12*
0+00	2.17	2.24	2.30	2.36	2.40
0+50	2.14	2.21	2.30	2.36	2.42
1+00	2.11	2.20	2.29	2.37	2.44
1+50	2.10	2.18	2.26	2.34	2.40
2+00	2.07	2.16	2.25	2.32	2.39
2+50	2.03	2.11	2.22	2.31	2.38
3+00	2.06	2.15	2.24	2.31	2.39
3+50	2.00	2.11	2.21	2.31	2.40
4+00	1.94	2.04	2.17	2.27	2.36
4+50	1.93	2.03	2.14	2.24	2.32
5+00	1.90	1.98	2.07	2.15	2.21

Surface	**Rod & Level Shots**				
010663	***Offset from Shoulder (ft)***				
Station No.	*0*	*3*	*6*	*9*	*12*
0+00	2.31	2.37	2.43	2.49	2.53
0+50	2.27	2.33	2.41	2.49	2.55
1+00	2.27	2.34	2.41	2.49	2.57
1+50	2.23	2.30	2.37	2.46	2.53
2+00	2.20	2.27	2.35	2.43	2.51
2+50	2.17	2.25	2.34	2.43	2.51
3+00	2.21	2.28	2.36	2.44	2.52
3+50	2.13	2.22	2.33	2.42	2.51
4+00	2.11	2.20	2.30	2.40	2.49
4+50	2.12	2.20	2.27	2.36	2.43
5+00	2.09	2.15	2.21	2.28	2.33

State	**Alabama**
Project	**010663**

Difference in JPCP after Rubblization (in)

010663	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	0 36	-0 48	-0 12	-0 48	-0 72
0+50	1 02	-0 24	-0 36	-0 72	-1 20
1+00	0 00	-0 36	-0 84	-0 66	-0 48
1+50	0 60	-0 24	0 00	-1 14	-0 60
2+00	0 06	-0 60	-0 24	-0 54	-0 60
2+50	-0 12	-0 36	0 12	0 00	-0 30
3+00	0 48	-0 48	-0 30	-0 24	-0 72
3+50	0 24	-0 36	-0 48	-0 72	-0 36
4+00	0 60	-0 18	-0 36	-0 96	-0 12
4+50	2 16	-0 24	-0 84	-0 42	-0 60
5+00	0 84	-0 48	-0 66	-0 18	-0 78

Average	-0 26
Min	-1 20
Max	2 16
Std. Dev.	0.56

Lower Binder Thickness Compared to Rubblization Data (in)

010663	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	4 92	4 92	5 28	5 16	5 28
0+50	5 64	4 92	5 04	5 16	5 04
1+00	4 56	5 40	5 52	6 24	6 84
1+50	5 40	5 16	5 88	5 28	6 12
2+00	4 80	5 04	5 76	6 00	6 24
2+50	4 68	5 16	6 00	6 12	6 00
3+00	5 76	5 64	6 12	6 24	6 00
3+50	4 80	5 16	5 64	5 64	6 60
4+00	4 92	5 28	5 88	5 88	7 56
4+50	6 00	4 80	4 80	5 64	6 24
5+00	4 68	4 32	4 92	5 76	5 64

Average	5 52
Min	4.32
Max	7.56
Std. Dev.	0.63

Lower Binder Thickness Compared to Existing PCC Data (in)

010663	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	4 56	5 40	5 40	5 64	6 00
0+50	4 62	5 16	5 40	5 88	6 24
1+00	4 56	5 76	6 36	6 90	7 32
1+50	4 80	5 40	5 88	6 42	6 72
2+00	4 74	5 64	6 00	6 54	6 84
2+50	4 80	5 52	5 88	6 12	6 30
3+00	5 28	6 12	6 42	6 48	6 72
3+50	4 56	5 52	6 12	6 36	6 96
4+00	4 32	5 46	6 24	6 84	7 68
4+50	3 84	5 04	5 64	6 06	6 84
5+00	3 84	4 80	5 58	5 94	6 42

Average	5 78
Min	3.84
Max	7.68
Std Dev.	0.86

State	**Alabama**
Project	**010663**

010663	**Upper Binder Thickness (in)**				
	Offset from Shoulder (ft)				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	2 40	2 28	2 52	2 76	2 88
0+50	2 16	2 16	2 52	2 52	2 76
1+00	2 28	1 80	1 80	2 04	2 28
1+50	2 40	2 40	2 40	2 52	2 76
2+00	2 52	2 40	2 76	2 88	3 24
2+50	2 28	2 16	2 64	3 24	3 60
3+00	2 16	2 16	2 52	3 12	3 72
3+50	2 40	2 52	2 64	3 36	3 72
4+00	2 40	2 16	2 52	2 88	3 00
4+50	2 64	2 28	2 52	2 88	3 00
5+00	2 40	2 04	2 04	2 40	2 40

Average	2.57
Min	1.80
Max	3.72
Std. Dev	0.43

State	**Alabama**
Project	**0106063**

SurfaceThickness (in)

0106063	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	1 68	1 56	1 56	1 56	1 56
0+50	1 56	1 44	1 32	1 56	1 56
1+00	1 92	1 68	1 44	1 44	1 56
1+50	1 56	1 44	1 32	1 44	1 56
2+00	1 56	1 32	1 20	1 32	1 44
2+50	1 68	1 68	1 44	1 44	1 56
3+00	1 80	1 56	1 44	1 56	1 56
3+50	1 56	1 32	1 44	1 32	1 32
4+00	2 04	1 92	1 56	1 56	1 56
4+50	2 28	2 04	1 56	1 44	1 32
5+00	2 28	2 04	1 68	1 56	1 44

Average	1.57
Min	1.20
Max	2.28
Std. Dev.	0.23

Total HMAC Thickness as Compared to Rubblized Data (in)

0106063	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	9 00	8 76	9 36	9 48	9 72
0+50	9 36	8 52	8 88	9 24	9 36
1+00	8 76	8 88	8 76	9 72	10 68
1+50	9 36	9 00	9 60	9 24	10 44
2+00	8 88	8 76	9 72	10 20	10 92
2+50	8 64	9 00	10 08	10 80	11 16
3+00	9 72	9 36	10 08	10 92	11 28
3+50	8 76	9 00	9 72	10 32	11 64
4+00	9 36	9 36	9 96	10 32	12 12
4+50	10 92	9 12	8 88	9 96	10 56
5+00	9 36	8 40	8 64	9 72	9 48

Average	9.66
Min	8.40
Max	12.12
Std. Dev.	0.86

Total HMAC as Compared to Existing PCC Data (in)

0106063	*Offset from Shoulder (ft)*				
Station No	*0*	*3*	*6*	*9*	*12*
0+00	8 64	9 24	9 48	9 96	10 44
0+50	8 34	8 76	9 24	9 96	10 56
1+00	8 76	9 24	9 60	10 38	11 16
1+50	8 76	9 24	9 60	10 38	11 04
2+00	8 82	9 36	9 96	10 74	11 52
2+50	8 76	9 36	9 96	10 80	11 46
3+00	9 24	9 84	10 38	11 16	12 00
3+50	8 52	9 36	10 20	11 04	12 00
4+00	8 76	9 54	10 32	11 28	12 24
4+50	8 76	9 36	9 72	10 38	11 16
5+00	8 52	8 88	9 30	9 90	10 26

Average	9.92
Min	8.34
Max	12.24
Std. Dev.	1.00

APPENDIX E

COMPACTION DATA

State	Alabama
Project	**0106**
Nuclear Densities	

Binder

010603	Average	150.8
152.4	Min.	148.4
153.7	Max.	153.7
148.4	Std. Dev.	1.6
152.2		
150.4		
151.5		
150.9		
149.6		
148.7		
149.6		
151.8		
150.7		

Surface

010603	Average	138.3
137.8	Min.	135.0
135.0	Max.	140.8
136.7	Std. Dev.	1.5
138.8		
138.3		
137.7		
138.8		
137.5		
138.9		
139.4		
139.6		
140.8		

Binder

010604	Average	151.2
153.9	Min.	145.6
153.6	Max.	154.6
153.0	Std. Dev.	2.8
152.6		
150.6		
150.3		
148.7		
149.0		
148.7		
145.6		
154.6		
153.8		

Surface

010604	Average	139.0
136.8	Min.	135.6
135.6	Max.	142.3
138.7	Std. Dev.	2.0
139.8		
137.5		
136.9		
142.3		
139.9		
140.8		
139.3		
140.3		
140.6		

Binder

010606	Average	148.2
149.5	Min.	142.4
149.1	Max.	152.1
150.6	Std. Dev.	2.8
144.1		
142.4		
146.9		
147.8		
149.2		
152.1		
149.9		
146.7		
150.4		

Surface

010606	Average	142.2
137.3	Min.	136.6
140.0	Max.	146.2
136.6	Std. Dev.	3.2
139.2		
146.2		
145.8		
144.0		
143.1		
143.7		
145.1		
142.6		
142.9		

Binder	
010607	Average 149.5
150.8	Min. 145.6
150.6	Max. 152.3
150.2	Std. Dev. 1.9
145.6	
148.9	
150.3	
147.3	
149.1	
150.6	
147.4	
150.4	
152.3	

Surface	
010607	Average 139.7
136.7	Min. 136.7
138.5	Max. 143.2
139.4	Std. Dev. 2.2
137.4	
143.2	
142.1	
142.7	
141.8	
139.1	
138.6	
138.9	
137.8	

Lower Binder	
010608	
147.6	
147.3	
146.7	
143.9	
143.3	
143.9	
144.3	
142.9	
143.1	
143.6	
143.8	
144.0	
Average	144.5
Min.	142.9
Max	147.6
Std. Dev	1.7

Upper Binder	
010608	
147.5	
148.1	
147.9	
150.6	
150.7	
149.2	
148.5	
148.1	
150.9	
147.7	
147.3	
148.7	
Average	148.8
Min.	147.3
Max.	150.9
Std. Dev.	1.3

Surface	
010608	
139.2	
140.8	
142.8	
140.1	
137.2	
140.2	
139.7	
139.9	
142.1	
142.1	
145.9	
144.2	
Average	141.2
Min.	137.2
Max.	145.9
Std. Dev.	2.4

Binder	
010661	Average 148.4
150.6	Min. 145.5
148.2	Max. 151.9
147.7	Std. Dev. 1.9
146.1	
149.5	
146.9	
151.9	
148.8	
148.6	
149.4	
147.0	
145.5	

Surface	
010661	Average 138.8
139.3	Min. 134.8
138.9	Max. 140.3
139.7	Std. Dev. 1.6
138.2	
137.6	
137.8	
140.3	
140.1	
134.8	
138.7	
139.8	
140.3	

Lower Binder	Upper Binder	Surface
010662	010662	010662
138 6	148 5	137 3
141 9	147 9	140 9
144 0	147 9	141 1
143 2	150 9	141 1
144 0	149 0	137 5
148 5	148 8	138 5
148 1	149 7	138 4
141 1	148 6	138 9
142 1	150 2	139 9
145 9	148 9	140 6
147 4	148 4	138 6
142 9	147 1	138 1
Average 144.0	Average 148.8	Average 139.2
Min 138.6	Min 147.1	Min 137.3
Max 148.5	Max 150.9	Max 141.1
Std Dev 3.0	Std. Dev. 1.0	Std. Dev 1.4

Lower Binder	Upper Binder	Surface
010663	010663	010663
141 0	148 1	140 3
145 1	146 4	143 3
142 8	150 1	145 8
143 4	147 7	143 3
145 7	145 1	139 0
144 8	146 4	141 0
145 4	147 3	142 1
146 5	148 3	139 9
145 2	150 9	142 0
146 5	145 8	146 2
144 4	148 9	144 8
146 4	147 8	141 9
Average 144.8	Average 147.7	Average 142.5
Min 141.0	Min 145.1	Min 139.0
Max 146.5	Max 150.9	Max 146.2
Std Dev 1.7	Std Dev 1.7	Std. Dev. 2.3

APPENDIX F

CONSTRUCTION DATA

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 1 REFERENCE PROJECT STATION TABLE	* STATE CODE [01] * SPS PROJECT CODE [06] * TEST SECTION NO [00]

ORDER	TEST SECTION ID NO (1)	REFERENCE PROJECT STATION NUMBER (2) START	(3) END	(4) CUT-FILL[1] TYPE	STATION
1	010601	0+00	5+00	2	+
2	010602	6+00	16+00	2	+
3	010605	17+00	27+00	2	+
4	010607	38+00	43+00	2	+
5	010608	49+77	54+77	2	+
6	010663	57+77	62+77	2	+
7	010662	67+28	72+28	2	+
8	010661	80+76	85+76	2	+
9	010606	86+76	91+76	2	+
10	010604	92+76	97+76	2	+
11	010603	98+76	103+76	2	+
12		+	+		+
13		+	+		+
14		+	+		+
15		+	+		+
16		+	+		+
17		+	+		+
18		+	+		+
19		+	+		+
20		+	+		+

GW ENTERED JAN 05 1998

5 SPS - GPS TEST SECTION EQUALITIES

GPS section _____ is the same as SPS section _____

GPS section _____ is the same as SPS section _____

6 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 section the test section is located on

Cut 1 Fill 2 At-Grade 3 Cut and Fill 4

If cut-fill transition is located in a test section, enter test section station of the cut-fill transition location

PREPARER Ken W. Duncan EMPLOYER BRE DATE 4-16-98

Revised December 15, 1989

G.W. ENTERED FEB 08 1999

SHEET 1

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 1]

IMPROVEMENT LISTING

* 1 DATE COMPLETED (MO/DAY/YR)	* 2 WORK[1] TYPE CODE (TABLE A 17)	* 3 WORK QUANTITY (UNITS FROM (TABLE A 17)	4 THICKNESS (INCHES)	5 COST[2] (THOUSANDS OF DOLLARS PER LANE-MILE)
[0 6/2 6/9 8]	[1 1]	[_ _ 5 5 6]	_ 3 5	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _

NOTES

1 For each specific work type, the appropriate set of sheets should be completed (as indexed in Table 7 1) It is recognized that parts of both Chapter 6 (Maintenance Data Collection) and Chapter 7 (Rehabilitation Data Collection) may be required to adequately record a given set of improvements for a test section

2 Cost includes only pavement structure cost Non-pavement costs such as cut and fill work, work on bridges, culverts, lighting, and guard rails are to be excluded

11 AC ShldR Replacement

Sheet Added 1/27/99 [illegible]

Revised December 15, 1989

*STATE ASSIGNED ID [_ _ _ _]

SHEET 61

*STATE CODE [0 1]

REHABILITATION DATA

*SHRP SECTION ID [0 6 0 1]

LTPP PROGRAM

GW ENTERED FEB 08 1990

RESTORATION OF AC SHOULDERS

* 1 SHOULDER RESTORED [3]
- Outside 1
- Inside 2
- Both 3

		INSIDE SHOULDER	OUTSIDE SHOULDER
* 2	SURFACE TYPE (CODES-TABLE A 5)	1	[1]
* 3	TOTAL WIDTH (FEET)	0 4	[1 0]
* 4.	PAVED WIDTH (FEET)	0 4	[1 0]
* 5	SHOULDER BASE TYPE (CODES-TABLE A 6)	2 1	[2 1] ← No Base used
* 6	SURFACE THICKNESS (INCHES)	_ 3 5	[_ 3 5]
* 7	BASE THICKNESS (INCHES)	_ 0 0	[_ 0 0] N/A

* 8 TYPE OF SHOULDER RESTORATION [2]
- AC Overlay Without Removal of Existing AC . . 1
- Cold Milling and AC Overlay 2
- Complete Shoulder Removal and Replacement . . . 3
- In-place Recycling and Overlay 4
- Other (Specify)_____ 5

* 9 TYPE OF AC MATERIALS [1]
- New Materials . 1
- Hot Recycled Materials 2
- Cold Recycled Materials .. . 3
- Other (Specify)_____ 4

*10 THICKNESS OF AC MATERIAL REMOVED BY COLD MILLING (IN) [3.5]

*11 AC OVERLAY THICKNESS (IN) [3 5]

12 LANE/SHOULDER JOINT SEALANT [3]
- None 1
- Sealed Without Providing Reservoir . 2
- Saw Reservoir and Seal . . 3
- Other (Specify)_____ 4

13 LANE/SHOULDER JOINT SEALANT RESERVOIR
- WIDTH (INCHES) 1 0
- DEPTH (INCHES) 0 5

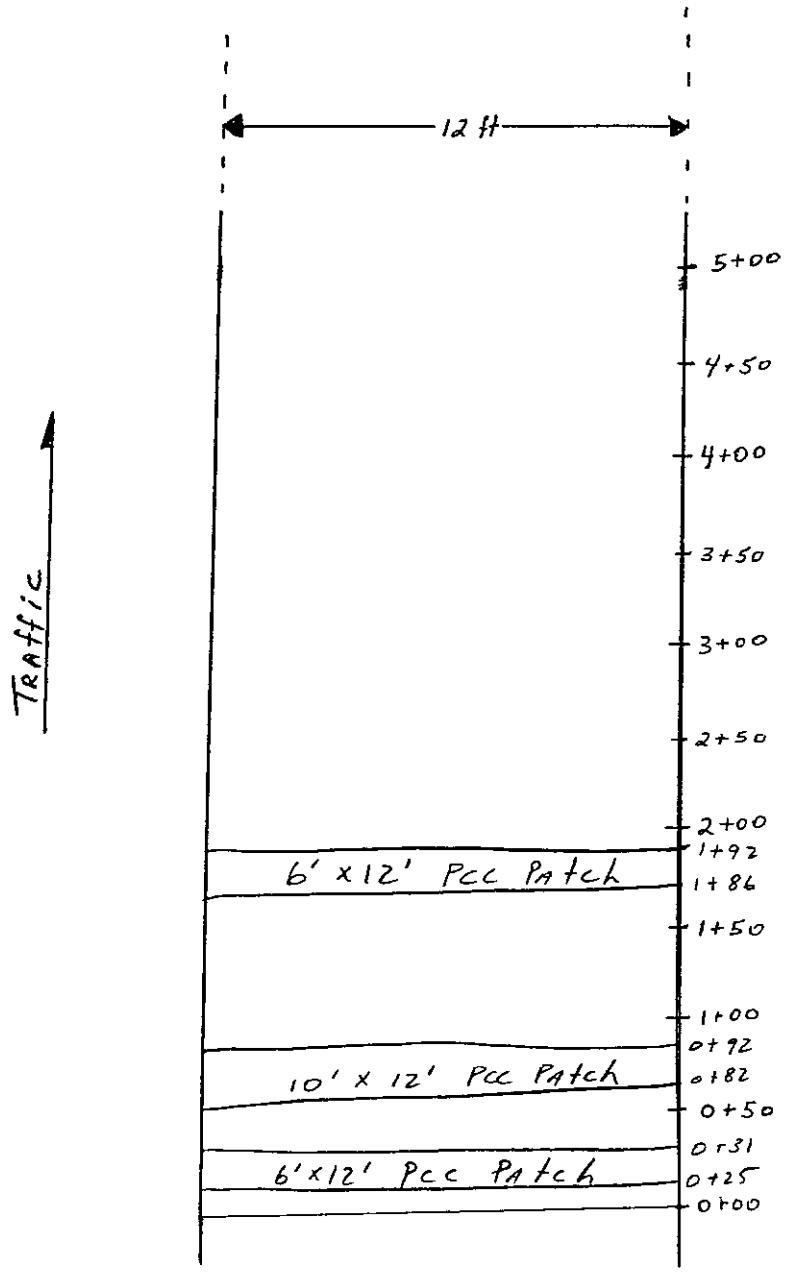
14 TYPE OF JOINT SEALANT 1
- Poured . 1
- Preformed . .. 2

NOTE DATA ITEMS 8 TO 14 PERTAIN ONLY TO THE RESTORED OUTSIDE SHOULDER

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 3 PRE-OVERLAY SURFACE PREPARATION SKETCH	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 2]

Pg 1 of 2

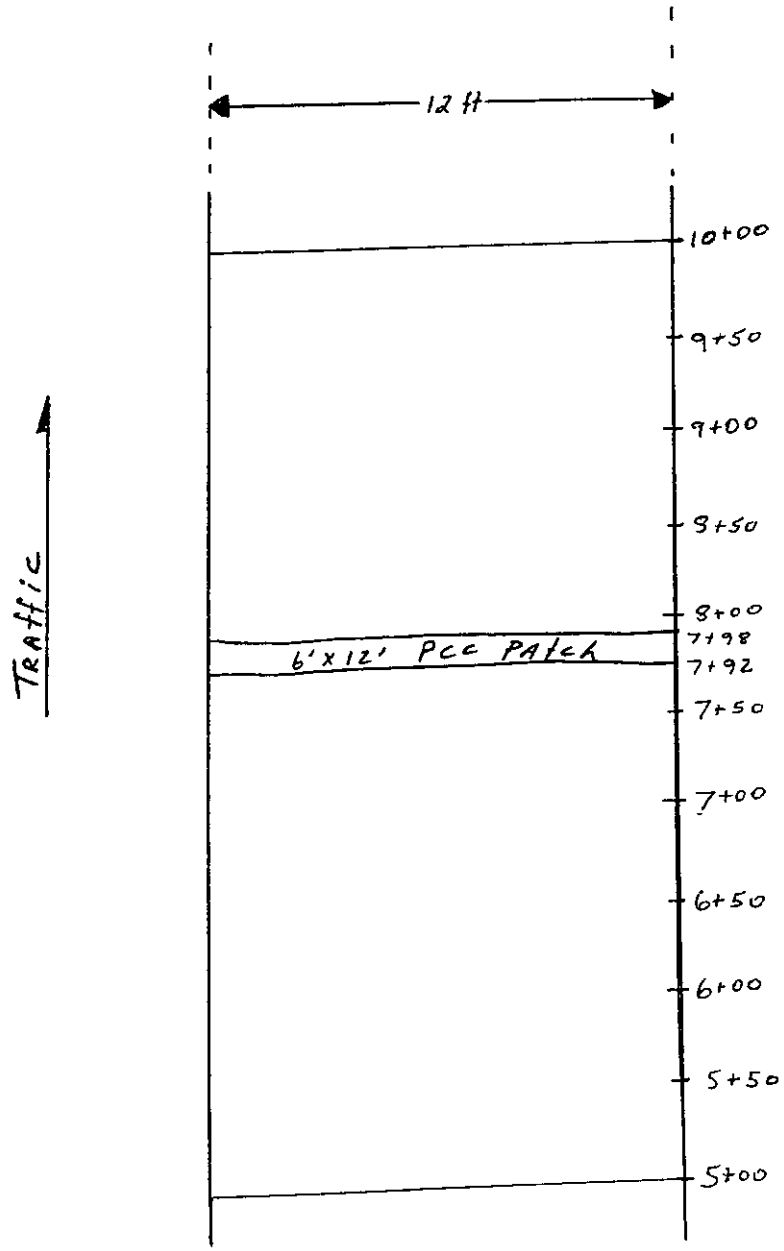


PREPARER [signature] EMPLOYER BRE DATE 5-11-98

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 3 PRE-OVERLAY SURFACE PREPARATION SKETCH	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO. [0 2]

Pg 2 of 2



PREPARER [signature] EMPLOYER BRE DATE 5-11-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~X~~ 15 JOINT RESEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 2]

GW ENTERED JAN 05 1998

1 DATE JOINT SEALANT OPERATIONS BEGAN (Month-Day-Year) [0 6-3 0-9 8]

2 DATE JOINT SEALANT OPERATIONS COMPLETED [0 7-0 2-9 8]

3 METHOD OF REMOVING OLD SEALANT [5]
Not Removed 1 Joint Plow - V-Shaped 2 Joint Plow - Rectangular 3
High Pressure Water Blasting 4 Diamond Blade Saw . 5
Carbide Blade Saw 6 Pull-Out of Old Compression Sealant 7
Not Previously Sealed 8
Other (Specify) 9 _____

4 NEW SEALANT RESERVOIR DIMENSIONS, INCHES
Width [0 5]
Depth (From Top of Slab to Top of Backer Rod or Tape) [0 5]

5 BOND BREAKER UNDER SEALANT [3]
None 1 Nonreactive Adhesive Backed Tape 2 Backer Rod 3
Other (Specify) 4 _____

6 WERE JOINT SIDEWALLS REFACED? 2
No 1 Yes - One-Blade 2 Yes - Two-Blade 3
Other (Specify) 4 _____

7 CLEANING OF SIDEWALLS [2]
None 1 Air Blast 2 Sand Blast 3 Water Blast 4
Other (Specify) 4 _____

PREPARER Kane W Duncan EMPLOYER BRE DATE 7-8-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~15~~ 16 JOINT RESEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 2]

1 TYPE OF CONTRACTION JOINT SEALANT [7]
(AASHTO OR ASTM SPECIFICATIONS)

D1850 (ASTM) Concrete Joint Sealer, Cold-Application Type 1
D1190 (ASTM) - M173 (AASHTO) Concrete Joint Sealer, Hot-Poured Elastic Type 2
D3406 (ASTM) - M282 (AASHTO) Joint Sealants, Hot-Poured, Elastomeric-Type, for PCC Pavements 3
D3405 (ASTM) - M301 (AASHTO) Joint Sealants, Hot-Poured for Concrete and Asphalt Pavements 4
D3542 (ASTM) Preformed Polychloroprene Elastomeric Joint Seals for Bridges 5
D2628 (ASTM) Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements 6
Other (Describe - if Silicone Material is Used Federal Spec TT-S-001543A, Georgia D O T Spec 833 06, or Equal Applies 7
Craftco Inc - Road Saver Silicone Sealant
Part No. 34902

Manufacturer Information on Type of Pressure Relief Joint Sealant
Manufacturer Name [ ]
Manufacturer Sealant Name [ ]

2 AVERAGE DEPTH OF TOP OF SEALANT PLACEMENT BELOW PAVEMENT SURFACE, INCHES [0 2]

3 ARE EXPANSION JOINTS SEALED DIFFERENTLY THAN CONTRACTION JOINTS? [2]
Yes 1 No 2

If Yes, Enter the code from Item 1, or describe below [ ]

Other [ ]

4 TOTAL LINEAR FEET OF JOINTS SEALED
Transverse Joints [4 8 1]
Longitudinal Joints [3 0 4 8]

NOTE IF DIFFERENT MATERIALS OR METHODS ARE USED REPEAT SHEETS 15 AND 16 FOR EACH RECORDING THEIR LENGTHS IN ITEM NO 4

CW ENTERED JAN 05 1998

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~X~~ 17 CRACK SEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 2]

GW ENTERED JAN 06 1998

1 DATE CRACK SEALING OPERATIONS BEGAN (Month-Day-Year) [0 6-3 0-9 8]

2 DATE CRACK SEALING OPERATIONS COMPLETED [0 6-3 0-9 8]

3 NEW SEALANT RESERVOIR DIMENSIONS, INCHES, If Used
Width
Depth (From Top of Slab to Top of Backer Rod or Tape) [_ _ _]

4. BOND BREAKER UNDER SEALANT, If Used [1]
None . 1 Nonreactive Adhesive Backed Tape 2 Backer Rod 3
Other (Specify) 4 _____

5 CLEANING OF CRACKS 1
None 1 Routing 2 Air Blast 3 Steel Wire Brush 4
Brooming 5 Other (Specify) 4 _____

No cracks visible due to grinding
(i.e None sealed)

PREPARER Tara W. Dunnan EMPLOYER BRE DATE 7-8-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~16~~ 18 CRACK SEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 2]

1 TYPE OF SEALANT [__]
(AASHTO OR ASTM SPECIFICATIONS)

D1850 (ASTM) Concrete Joint Sealer, Cold-Application Type 1
D1190 (ASTM) - M173 (AASHTO) Concrete Joint Sealer, Hot-Poured Elastic Type 2
D3406 (ASTM) - M282 (AASHTO) Joint Sealants, Hot-Poured, Elastomeric-Type, for PCC Pavements . 3
D3405 (ASTM) - M301 (AASHTO) Joint Sealants, Hot-Poured for Concrete and Asphalt Pavements 4
D3542 (ASTM) Preformed Polychloroprene Elastomeric Joint Seals for Bridges 5
D2628 (ASTM) Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements 6
Other (Describe - if Silicone Material is Used Federal Spec TT-S-001543A, Georgia D O T Spec 833 06, or Equal Applies 7

Manufacturer Information on Type of Pressure Relief Crack Sealant
Manufacturer Name [_____]
Manufacturer Sealant Name [_____]

2 AVERAGE DEPTH OF TOP OF SEALANT PLACEMENT
Below Pavement Surface, Inches [__ __]

3 TOTAL LINEAR FEET OF CRACKS SEALED [__ __ __ 0 0]

NOTE IF DIFFERENT MATERIALS OR METHODS ARE USED REPEAT SHEETS 17 AND 18 FOR EACH RECORDING THEIR LENGTHS IN ITEM NO 3

No cracks visible or sealed due to grinding

PREPARER Lane W. Dunnan EMPLOYER BRE DATE 7-8-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~16~~ 19 DIAMOND GRINDING FOR PORTLAND CEMENT CONCRETE PAVEMENT SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 2]

1 DATE DIAMOND GRINDING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 3-9 8]

2 DATE DIAMOND GRINDING OPERATIONS COMPLETED [0 5-1 8-9 8]

3 REASON FOR GRINDING [5]
Elimination of Faulting 1 Elimination of Slab Warping 2
Improve Skid Resistance 3
Restoration of Transverse Drainage Slope 4
Other (Specify) 5 Elimination of Faulting + Slab stabilization

4 AVERAGE DEPTH OF CUT, INCHES [0 1 2]

5. CUTTING HEAD WIDTH, INCHES 3 6 2 5

6 AVERAGE GROOVE WIDTH, INCHES 0 1

7 AVERAGE SPACING BETWEEN BLADES, INCHES 0 1

GW ENTERED JAN 06 1998

PREPARER [signature] EMPLOYER BRE DATE 6-2-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 20 FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 2]

1 DATE PATCHING OPERATIONS BEGAN (Month-Day-Year) [0 4-0 8-9 8]

2 DATE PATCHING OPERATIONS COMPLETED [0 4-1 0-9 8]

3 PRIMARY DISTRESS OCCURRENCE PATCHED OR REPLACED WITH NEW SLAB [3 6]
(See Table A 22 for Type Codes)
Other (Specify) _____

4 SECONDARY DISTRESS OCCURRENCE PATCHED OR REPLACED WITH NEW SLAB 2 3
(See Table A 22 for Type Codes)
Other (Specify) _____

5 PATCHES

	NUMBER	SQ FEET
SLAB ONLY	[4]	[3 3 6]
SLAB AND BASE	[0]	[0]

6 PATCH MATERIAL USED [1]
Portland Cement Concrete 1 Polymer Concrete 2 Epoxy Mortar 4
Other (Specify) 5 _____

7 SLABS REPLACED

	NUMBER	SQ FEET
SLAB ONLY	[0]	[0]
SLAB AND BASE	[0]	[0]

8 METHOD FOR PATCH BOUNDARY DETERMINATION 1
Visual 1 Coring 2 Deflection 3
State Standard or Specification 4
Other (Specify) 5 _____

9 CUTTING INSTRUMENT 1
Diamond Blade Saw 1 Carbide Blade Saw 2 Wheel Saw 3
Air Hammer 4
Other (Specify) 5 _____

PREPARER [signature] EMPLOYER BRE DATE 6-2-98

GW EMPLOYED JAN 06 1998

LTPP-SPS CONSTRUCTION DATA FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED CONSTRUCTION DATA SHEET 21	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 2]

1 SECURING LOAD TRANSFER DEVICES [3]
None 1 Grout Filler 2 Epoxy filler 3
Other .. 4 _____

2 REINFORCING STEEL PLACED IN PATCH [1]
No 1 Yes 2

	TEMPERATURE STEEL Transverse	TEMPERATURE STEEL Longitudinal	Dowel Bars	Tie Bars
3 REBAR NUMBER	[0 4]	[1 0]	[1 0]	[0 4]
4 BAR LENGTHS, INCHES	[1 8 0]	[1 8 . 0]	[1 8 0]	[1 8 0]
5 BAR SPACING, INCHES	[0 2 0]	[1 2 0]	[1 2 0]	[0 2 0]

GW ENTERED JAN 06 1998

6 DOWEL COATINGS [6]
None 1 Paint and/or Grease 2 Plastic 3
Monel 4 Stainless Steel 5 Epoxy 6
Other (Specify) 7 _____

7 NUMBER OF SAW CUTS PER PATCH (If Sawed) [_ 6]

8 DEPTH OF TYPICAL BOUNDARY SAW CUT, INCHES [_ 5 0]

9 CONCRETE BREAKUP [1]
None 1 Pneumatic Air Hammer 2 Gravity Drop Hammer 3
Sawing . 4
Other (Specify) 5 _____

10 REMOVAL OF CONCRETE [2]
Concrete Breakup and Cleanout . 1 Lift Out Intact Slab Section 2
Other (Specify) . 3 _____

PREPARER [signature] EMPLOYER BRE DATE 4-16-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~19~~ 22 FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 2]

1 METHOD OF REINFORCING STEEL PLACEMENT — leave blank → [ ]
Chairs 1 Between Layers of Concrete 2

2 MIXTURE DESIGN FOR PATCH MATERIAL, LB /CUBIC YARD
Coarse Aggregate [1 9 3 5]
Fine Aggregate [1 0 9 9]
Cement [6 2 0]
Water (Gallons/Cubic Yard) [3 6]

3 CEMENT TYPE USED [4 1]
(See Type Codes, Tables A 11)

4 AIR CONTENT, PERCENT BY VOLUME
Mean [4 5]
Range [4 0] to [5 0]

5 ADMIXTURES [0 8]
(See Cement Additive Codes, Table A 12) [0 4]

6 SLUMP, INCHES
Mean [1.2]
Range [0.8] to [2.0]

7 FLEXURAL STRENGTH (MODULUS OF RUPTURE), PSI [ ]
(Based on 3rd Point Loading) Curing Time, Days [ ]
If Unavailable, and Other Strength Test Conducted,
Enter Alternate Test [Not Done]
Type of Loading [ ]
Age, Days [ ], Strength, PSI [ ]

8 AMBIENT CONDITIONS AT TIME OF PATCHING
Air Temperature °F LOW [7 0] HIGH [7 5]
Surface Moisture - Dry = 1, Wet = 2 [1]

9 MAXIMUM SIZE OF COARSE AGGREGATE, INCHES 57/67 stone 1 0

10 CONSOLIDATION OF MATERIALS 1
Internal Vibrators 1 Vibrating Screeds 2 Troweling 3
Rolling 4 Tamping 5
Other (Specify) 6 _____

12 FINISHING 4
Screeding 1 Hand-Troweling 2 Machine-Troweling 3
Other (Specify) 4 Hand-Troweling then drag Burlap Sack over Area

GW ENTERED JAN 06 1998

PREPARER [signature] EMPLOYER BRE DATE 5-11-98

SPS-6 CONSTRUCTION DATA SHEET ~~20~~ 23 FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 2]

GW ENTERED JAN 06 1998

1 JOINT FORMING METHOD SHOULDER [1] TRANSVERSE [1] LONGITUDINAL [7]

None 1 Polyethylene Strip Insert 2 Styrofoam Insert . 3
Fiberboard Insert 4 Sawing 5 Forms 6
Other (Specify) . 7 TAR PAPER

(2) WAS BOND BREAKER USED BETWEEN ADJACENT LANES? [1]
Yes 1 No 2

3. CURING METHOD METHOD 1 [2] METHOD 2 [ ]

None 1 Membrane Curing Compound 2 Burlap Curing Blankets 3
Waterproof Paper Blankets 4 White Polyethylene Sheeting 6
Burlap-Polyethylene Blankets . 6 Insulating Layers 7
Cotton Mat Curing 8 Hay . 9
Other (Specify) 10 _____

4 APPROXIMATE TYPICAL TIME BETWEEN PATCHING AND OPENING TO TRAFFIC, HOURS [24]

(5) TYPE OF TRANSVERSE JOINTS IN PATCHES 2 OR SLABS _
None 1 All Expansion Joints 2 All Contraction Joints 3
Mixture of Expansion and Contraction Joints 4

6 WERE OLD JOINTS MATCHED? 2
Yes 1 No 2

PREPARER [signature] EMPLOYER BRE DATE 5-11-98

Revised December 15, 1989

SHEET 1

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 2]

G.W. ENTERED JAN 11 1999

IMPROVEMENT LISTING

* 1 DATE COMPLETED (MO/DAY/YR)	* 2 WORK[1] TYPE CODE (TABLE A 17)	* 3 WORK QUANTITY (UNITS FROM (TABLE A 17)	4 THICKNESS (INCHES)	5 COST[2] (THOUSANDS OF DOLLARS PER LANE-MILE)
ZWD 1/7/99 ~~[04/10/98]~~	~~[04]~~	~~[_ _ _ 37]~~	~~100~~	_ _ _
~~[05/18/98]~~	~~[12]~~	~~[_ _ 667]~~	~~_ 01~~	_ _ _
[06/26/98]	[11]	[_ _ 556]	_ 35	_ _ _
ZWD 1/7/99 ~~[07/01/98]~~	~~[02]~~	~~[_ _ 672]~~	~~_ 02~~	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _

NOTES

1 For each specific work type, the appropriate set of sheets should be completed (as indexed in Table 7 1) It is recognized that parts of both Chapter 6 (Maintenance Data Collection) and Chapter 7 (Rehabilitation Data Collection) may be required to adequately record a given set of improvements for a test section

2 Cost includes only pavement structure cost Non-pavement costs such as cut and fill work, work on bridges, culverts, lighting, and guard rails are to be excluded

Maintenance not Rehab 04 = Full Depth Jnt Repair Patching
12 = Milling/Grinding
11 = AC Shldr Replacement
02 = Transverse Jnt Sealing

Revised December 15, 1989

*STATE ASSIGNED ID [_ _ _ _]

SHEET 2

*STATE CODE [0 1]

REHABILITATION DATA

*SHRP SECTION ID [0 6 0 2]

LTPP PROGRAM

REVISED LAYER DESCRIPTIONS

1.	*2.	*3.	*4				
LAYER[1] NUMBER	LAYER[2] DESCRIPTION	MATERIAL[3,4] TYPE CLASSIFICATION	<-------- LAYER THICKNESS (IN) --------> MEAN	MIN	MAX	STD DEV	
1	SUBGRADE(7)	[9 9]					
2	[0 5]	[9 9]	[_ _ _._]	_ _ _ _	_ _ _ _	_ _ _ _	
3	[0 3]	[0 4]	[_ _9 9]	(Diamond Grinding)			
4	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _	
5	[_ _]	[_ _]	[_ _ _._]	_ _ _ _	_ _ _ _	_ _ _ _	
6	[_ _]	[_ _]	[_ _ _._]	_ _ _ _	_ _ _ _	_ _ _ _	
7	[_ _]	[_ _]	[_ _ _._]	_ _ _ _	_ _ _ _	_ _ _ _	
8	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _	
9	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _	

NOTES

1 Layer 1 is subgrade soil, last layer is existing 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 (Below Surface Layer)	04	Interlayer	08	Recycled Layer	12

3 The material type classification codes for surface, base or subbase, subgrade, and seal coat or interlayer materials appear in Tables A 5, A 6, A 7 and A 8, respectively

4. If the materials or thicknesses of a layer has not changed during the rehabilitation, enter "99" as the material type classification and leave the layer thicknesses for that layer blank If a layer has changed, enter the appropriate codes and thicknesses

This sheet added 1/27/99 [illegible]

GWF FEB 08 1999

Revised December 15, 1989

SHEET 61

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 2]

C.W. ENTERED JAN 11 1999

RESTORATION OF AC SHOULDERS

* 1. SHOULDER RESTORED [3]
- Outside 1
- Inside 2
- Both 3

		INSIDE SHOULDER	OUTSIDE SHOULDER
* 2.	SURFACE TYPE (CODES-TABLE A.5)	1	[1]
* 3	TOTAL WIDTH (FEET)	0 4	[1 0]
* 4	PAVED WIDTH (FEET)	0 4	[1 0]
* 5	SHOULDER BASE TYPE (CODES-TABLE A 6)	2 1	[2 1] ← No base used
* 6	SURFACE THICKNESS (INCHES)	_ 3 5	[_ 3 5]
* 7	BASE THICKNESS (INCHES)	_ 0 0	[_ 0 0] N/A

* 8 TYPE OF SHOULDER RESTORATION [2]
- AC Overlay Without Removal of Existing AC .. 1
- Cold Milling and AC Overlay 2
- Complete Shoulder Removal and Replacement . 3
- In-place Recycling and Overlay 4
- Other (Specify)_____ 5

* 9. TYPE OF AC MATERIALS [1]
- New Materials 1
- Hot Recycled Materials . 2
- Cold Recycled Materials . 3
- Other (Specify)_____ 4

*10 THICKNESS OF AC MATERIAL REMOVED BY COLD MILLING (IN) [3 5]

*11. AC OVERLAY THICKNESS (IN) [3 5]

12 LANE/SHOULDER JOINT SEALANT [3]
- None 1
- Sealed Without Providing Reservoir . 2
- Saw Reservoir and Seal . 3
- Other (Specify)_____ 4

13 LANE/SHOULDER JOINT SEALANT RESERVOIR
- WIDTH (INCHES) 1 0
- DEPTH (INCHES) 0 5

14 TYPE OF JOINT SEALANT 1
- Poured . . . 1
- Preformed . . . 2

NOTE DATA ITEMS 8 TO 14 PERTAIN ONLY TO THE RESTORED OUTSIDE SHOULDER

SPS-6 CONSTRUCTION DATA SHEET 2 REVISED LAYER DESCRIPTIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 3]

G.W. WILLIAMS JAN 11 1999

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 5]	[2 3]	[6 0]	- - - -	- - - -	- - - -
3	[0 3]	[0 4]	[1 0 0]	- - - -	- - - -	- - - -
4	[0 4]	[0 1]	[2 5]	1 8	3 0	0 2
5	[0 1]	[0 1]	[1 1]	0 8	1 7	0 2
6	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
7	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
8	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
9	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
10	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
11	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
12	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
13	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
14	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
15	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -

NOTES

1 Layer 1 is 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 w/overlay	02	Subbase Layer	06	Surface Treatment	10
Original Surface	03	Subgrade	07	Embankment (Fill)	11
HMAC Layer (Subsurface)	04	Interlayer	08		

If milling was performed, the layers which were milled shall be assigned their previous layer number and material type If the layer was completely removed by milling, it shall still be shown as a layer with a zero thickness

3 Enter the material type classification codes from Tables A 5, A 6, A 7 and A 8 which best describes the material in each layer If the layer was milled, enter the material classification code corresponding to the type material which was removed

4 Enter the average thickness of each layer and the maximum, minimum, and standard deviation of the thickness measurements, if known If a layer was partially milled, the remaining thickness of the layer shall be indicated

PREPARER Tom W. Duncan EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 7 OVERLAY PLACEMENT OPERATIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 3]

G.W. ENTERED JAN 11 1999

1 DATE SURFACE PREPARATION BEGAN (Month-Day-Year) [0 6 2 4 - 9 8]
2 DATE SURFACE PREPARATION COMPLETED [0 6 - 2 6 - 9 8]

3 SURFACE PREPARATION PRIOR TO PLACEMENT OF OVERLAY [3]
None 1 Broomed 2 Broomed + Asphaltic Tack Coat 3
Asphaltic Tack Coat (only) 4

4 TACK COAT MATERIAL
Material Type None 1 SS-1 . 2 SS-1H . 3 CRS-1 4 [1 0]
CRS-2 5 CMS-2 6 CMS-2H 7 CSS-1 . 8 CSS-1H 9
Other 10 (Specify) CQS1-H (Emulsion)

5 TACK COAT DILUTION (Percent) [0 0]
or Mixing Rate Parts Diluent ___ TO Parts Asphalt ___

6 TACK COAT APPLICATION RATE (Gal/Sq. Yd) [0 0 9]

7 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Glencoe Plant	[3 0]	[4 0]	[4]	[5]	[ ]
Plant 2	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]
Plant 3	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]

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

8 MANUFACTURER OF ASPHALT CONCRETE PAVER (OLD) Road Tec (Binder Only) + (New) Caterpillar

9 MODEL DESIGNATION OF ASPHALT CONCRETE PAVER AP-1055B

10 SINGLE PASS LAYDOWN WIDTH (Feet) [1 2 0]

01-AAMAC

11 Layer No	12 Material Type Classification Code	13 Nominal Lift Placement Thickness				14 Tack Coat Between Lifts? (Y/N)	15 Transverse Joint Station
		1st Lift	2nd Lift	3rd Lift	4th Lift		
[0 4]	[0 1]	[2 8]	[ ]	[ ]	[ ]	[Y]	[+]
[0 5]	[0 1]	[1 2]	[ ]	[ ]	[ ]	[Y]	[+]
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[+]

16 LOCATION OF LONGITUDINAL SURFACE JOINT [1]
Between lanes . 1 Within lane 2 (specify offset from pavement lane edge in feet) [1 2 0]

17 SIGNIFICANT EVENTS DURING CONSTRUCTION(disruptions, rain, equip problems, etc)

PREPARER [signature] EMPLOYER BRE DATE 7/7/98

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 3]

G.W ENTERED JAN 11 1999

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 6-2 4-9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 6-2 4-9 8]

3 LAYER NUMBER Binder [0 4]

4 MIXING TEMPERATURE (°F) [3 3 0]
5 LAYDOWN TEMPERATURES (°F)

Mean	3 0 0	Number of Tests	0 1
Minimum	3 0 0	Maximum	3 0 0
Standard Deviation	0 0		

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 0 0				
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				1-11-91	
15	J	Single-Drum Vibr					
16	K	Single-Drum Vibr				2 w D	
17	L	Single-Drum Vibr					
18	M	Double-Drum Vibr	1 0 0		2 5 0 0	~~Low~~	4 5
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	0 3			
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A			
28	Coverages	0 3			
29	Air Temperature (°F)	1 0 0			
30	Compacted Thickness (In)	2 5			
31	Curing Period (Days)	2 0			

PREPARER Lane W Duncan EMPLOYER BRE DATE 6-30-98

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 3]

G.W. ENTERED JAN 11 1999

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 6-2 6-9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 6-2 6-9 8]

3 LAYER NUMBER Surface [0 5]

4 MIXING TEMPERATURE (°F) [3 3 0]
5 LAYDOWN TEMPERATURES (°F)
Mean 3 0 9 8 Number of Tests 0 4 0
Minimum 3 0 5 0 Maximum 3 1 7 0
Standard Deviation 5 5 (305°, 306°F, 311°F, 317°F)

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 0 0				
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				1-11-99	
15	J	Single-Drum Vibr				2W0	
16	K	Single-Drum Vibr					
17	L	Single-Drum Vibr					
18	M	Double-Drum Vibr	1 0 0		2 5 0 0	1 0 0	4 5
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	0 3			
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A			
28	Coverages	0 3			
29	Air Temperature (°F)	1 0 0			
30	Compacted Thickness (In)	1 5			
31	Curing Period (Days)	2 0			

PREPARER [signature] EMPLOYER BRE DATE 6-30-98

SPS-6 CONSTRUCTION DATA SHEET 9 CONSTRUCTION QUALITY CONTROL MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 3]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 6-2 4-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 9-9 8]

3 NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	Rut Level-Up N/A	Mill Replacement N/A	Binder Course	Surface Course	Surface Friction N/A
Measurement Method (A, B, C)[1]			A	A	
Rod Depth (Inches)			N/A	N/A	
Number of Measurements			1 2	1 2	
Average (pcf)			1 5 0 8	1 3 8 3	
Maximum (pcf)			1 5 3 7	1 4 0 8	
Minimum (pcf)			1 4 8 4	1 3 5 0	
Standard Deviation (pcf)			1 6	1 5	
Layer Number			0 4	0 5	

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

4 MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

5 NUCLEAR DENSITY GAUGE MODEL NUMBER 4640

6 NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 626

7. NUCLEAR GAUGE DENSITY COUNT RATE FOR STANDARDIZATION

8 PROFILOGRAPH MEASUREMENTS N/A
Profilograph Type California 1 Rainhart 2
Profile Index (Inches/Mile)
Interpretation Method Manual 1 Mechanical 2 Computer 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

9 SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) NO

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

GW ENTERED JAN 11 1999

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 3]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 7-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) → Not Applicable SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP (N/A)	MILL REPLACEMENT (N/A)	BINDER COURSE	SURFACE COURSE	SURFACE FRICTION (N/A)
0+00	0			22	17	
	36			26	11	
	72			28	10	
	108			30	08	
	144			29	12	
0+50	0			23	13	
	36			25	10	
	72			25	10	
	108			26	08	
	144			26	10	
1+00	0			22	14	
	36			24	12	
	72			24	11	
	108			25	11	
	144			25	13	
1+50	0			22	13	
	36			24	12	
	72			25	11	
	108			25	11	
	144			26	12	
2+00	0			22	13	
	36			25	10	
	72			25	10	
	108			24	11	
	144			26	12	
2+50	0			20	16	
	36			24	12	
	72			24	11	
	108			24	12	
	144			26	12	
3+00	0			22	12	
	36			26	10	
	72			25	10	
	108			25	11	
	144			26	12	
LAYER NUMBER				04	05	

PREPARER Kevin W. Dunnan EMPLOYER BRE DATE 7-21-98

FILED JAN 13 1999 D F

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [01] * SPS PROJECT CODE [06] * TEST SECTION NO [03]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [03-26-98]
2. DATE MEASUREMENTS COMPLETED [06-27-98]

ENTERED JAN 12 1999 D F

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	N/A RUT LEVEL-UP	N/A MILL REPLACEMENT	BINDER COURSE	SURFACE COURSE	N/A SURFACE FRICTION
3+50	0			18	17	
	36			25	11	
	72			25	10	
	108			26	10	
	144			26	10	
4+00	0			19	14	
	36			24	11	
	72			25	08	
	108			25	10	
	144			24	11	
4+50	0			22	10	
	36			26	08	
	72			25	08	
	108			28	10	
	144			29	10	
5+00	0			20	13	
	36			24	11	
	72			24	10	
	108			25	11	
	144			26	10	
+						
+						
+						
LAYER NUMBER				04	05	

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 11 MISCELLANEOUS CONSTRUCTION NOTES AND COMMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 3]

ENTERED JAN 19 1999 D F

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

Turkey Town Plant was not used to produce the AMAC (Binder + Surface) for this Section. The production plant was the Glencoe plant.

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

Revised December 15, 1989

G.W. ENTERED FEB 08 1999

SHEET 1

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 3]

IMPROVEMENT LISTING

* 1 DATE COMPLETED (MO/DAY/YR)	* 2 WORK[1] TYPE CODE (TABLE A 17)	* 3 WORK QUANTITY (UNITS FROM (TABLE A 17)	4 THICKNESS (INCHES)	5 COST[2] (THOUSANDS OF DOLLARS PER LANE-MILE)
[0 6/2 6/9 8]	[1 1]	[_ _ 5 5 6]	_ 3 5	_ _ _
ZWD 1/27/99 ~~[0 6/2 6/9 8]~~	~~[1 9]~~	~~[_ _ 6 6 7]~~	~~_ 3 6~~	OK ZWD _ _ _
~~[0 6/2 6/9 8]~~	~~[3 6]~~	~~[_ _ 6 6 7]~~	~~_ N _~~	~~_ _ _~~
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _

NOTES

1 For each specific work type, the appropriate set of sheets should be completed (as indexed in Table 7 1) It is recognized that parts of both Chapter 6 (Maintenance Data Collection) and Chapter 7 (Rehabilitation Data Collection) may be required to adequately record a given set of improvements for a test section

2 Cost includes only pavement structure cost Non-pavement costs such as cut and fill work, work on bridges, culverts, lighting, and guard rails are to be excluded

Maintenance Not Rehab 36 Tack Coat

Revised December 15, 1989

G.W. ENTERED FEB 08 1999

SHEET 2

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 3]

REVISED LAYER DESCRIPTIONS

1.	*2	*3.	*4.			
LAYER[1] NUMBER	LAYER[2] DESCRIPTION	MATERIAL[3,4] TYPE CLASSIFICATION	<-------- LAYER THICKNESS (IN) --------> MEAN	MIN	MAX	STD DEV
1	SUBGRADE(7)	[9 9]				
2	[0 5]	[9 9]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
3	[0 3]	[9 9]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
4	[0 4]	[0 1]	[_ _2 5]	_ _1 8	_ _3 0	_ _0 2
5	[0 1]	[0 1]	[_ _1.1]	_ _0 8	_ _1 7	_ _0 2
6	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
7	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
8	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
9	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _

NOTES

1 Layer 1 is subgrade soil, last layer is existing 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 (Below Surface Layer)	04	Interlayer	08	Recycled Layer	12

3 The material type classification codes for surface, base or subbase, subgrade, and seal coat or interlayer materials appear in Tables A 5, A 6, A 7 and A 8, respectively

4 If the materials or thicknesses of a layer has not changed during the rehabilitation, enter "99" as the material type classification and leave the layer thicknesses for that layer blank If a layer has changed, enter the appropriate codes and thicknesses

This sheet added 1/27/99

Revised December 15, 1989

SHEET 7

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 3]

G.W. ENTERED FEB 09 1999

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)		Poly Binder [4]
2 MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)		2 5 5 2 ~~2 5 6 5~~
3 BULK SPECIFIC GRAVITY (ASTM D1188)	ZND 4/16/99	2 4 6 1 ~~2 6 9 4~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)		4 4
5 PERCENT AIR VOIDS (EQ 7 4)		3 6
6 MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)		2 3 4
7 NUMBER OF BLOWS		7 5 0
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(0.93mm)~~ (AASHTO T245 OR ASTM D1559)	ZND 4/16/99	1 0 3 ~~3 7~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)		
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)		

Lane W. Dunnam BRE/SRCO 7-17-98

Revised December 15, 1989

SHEET 7

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 3]

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)	Surface [5]
2. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)	2 4 3 ~~8~~ 7
3 BULK SPECIFIC GRAVITY (ASTM D1188) ZWD 4/16/99	2.338 ~~2 5 8 1~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	5 4
5. PERCENT AIR VOIDS (EQ 7 4)	4 1
6 MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559) ZWD 4/16/99	4260 ~~9 3 9 1 7~~
7 NUMBER OF BLOWS	7 5 0
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(0.99mm)~~ (AASHTO T245 OR ASTM D1559) ZWD 4/16/99	11.0 ~~3 9~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	_ _ _
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	_ _ _ _

Zane W. Duncan BRE/SRCO 7-17-98

Revised December 15, 1989

*STATE ASSIGNED ID [_ _ _ _]

SHEET 61

*STATE CODE [0 1]

REHABILITATION DATA

*SHRP SECTION ID [0 6 0 3]

LTPP PROGRAM

FEB 08 1999

RESTORATION OF AC SHOULDERS

* 1. SHOULDER RESTORED [3]
- Outside 1
- Inside 2
- Both 3

		INSIDE SHOULDER	OUTSIDE SHOULDER
* 2.	SURFACE TYPE (CODES-TABLE A.5)	1	[1]
* 3	TOTAL WIDTH (FEET)	0 4.	[1 0]
* 4.	PAVED WIDTH (FEET)	0 4.	[1 0.]
* 5	SHOULDER BASE TYPE (CODES-TABLE A 6)	2 1	[2 1] ← No Base used
* 6	SURFACE THICKNESS (INCHES)	_ 3 5	[_ 3 5]
* 7	BASE THICKNESS (INCHES)	_ 0 0	[_ 0 0] N/A

* 8 TYPE OF SHOULDER RESTORATION [2]
- AC Overlay Without Removal of Existing AC 1
- Cold Milling and AC Overlay . . 2
- Complete Shoulder Removal and Replacement 3
- In-place Recycling and Overlay 4
- Other (Specify)_____ 5

* 9 TYPE OF AC MATERIALS [1]
- New Materials . 1
- Hot Recycled Materials 2
- Cold Recycled Materials 3
- Other (Specify)_____ 4

*10 THICKNESS OF AC MATERIAL REMOVED BY COLD MILLING (IN) [3 5]

*11 AC OVERLAY THICKNESS (IN) [4.0]

12 LANE/SHOULDER JOINT SEALANT [1]
- None 1
- Sealed Without Providing Reservoir 2
- Saw Reservoir and Seal . 3
- Other (Specify)_____ 4

13 LANE/SHOULDER JOINT SEALANT RESERVOIR
- WIDTH (INCHES) _ _
- DEPTH (INCHES) _ _

14 TYPE OF JOINT SEALANT _
- Poured 1
- Preformed . 2

NOTE DATA ITEMS 8 TO 14 PERTAIN ONLY TO THE RESTORED OUTSIDE SHOULDER.

SPS-6 CONSTRUCTION DATA SHEET 2 REVISED LAYER DESCRIPTIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 4]

ENTERED JUL 12 1999 D F

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 5]	[2 3]	[6 0]	----	----	----
3	[0 3]	[0 4]	[1 0 0]	----	----	----
4	[0 4]	[0 1]	[3 1]	2 5	3 7	0 3
5	[0 1]	[0 1]	[1 4]	0 8	1 9	0 3
6	[ ]	[ ]	[ ]	----	----	----
7	[ ]	[ ]	[ ]	----	----	----
8	[ ]	[ ]	[ ]	----	----	----
9	[ ]	[ ]	[ ]	----	----	----
10	[ ]	[ ]	[ ]	----	----	----
11	[ ]	[ ]	[ ]	----	----	----
12	[ ]	[ ]	[ ]	----	----	----
13	[ ]	[ ]	[ ]	----	----	----
14	[ ]	[ ]	[ ]	----	----	----
15	[ ]	[ ]	[ ]	----	----	----

NOTES

1 Layer 1 is 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 w/overlay	02	Subbase Layer	06	Surface Treatment	10
Original Surface	03	Subgrade	07	Embankment (Fill)	11
HMAC Layer (Subsurface)	04	Interlayer	08		

If milling was performed, the layers which were milled shall be assigned their previous layer number and material type If the layer was completely removed by milling, it shall still be shown as a layer with a zero thickness

3 Enter the material type classification codes from Tables A 5, A 6, A 7 and A 8 which best describes the material in each layer If the layer was milled, enter the material classification code corresponding to the type material which was removed

4 Enter the average thickness of each layer and the maximum, minimum, and standard deviation of the thickness measurements, if known If a layer was partially milled, the remaining thickness of the layer shall be indicated

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 7 OVERLAY PLACEMENT OPERATIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 4]

1 DATE SURFACE PREPARATION BEGAN (Month-Day-Year) [06-23-98]
2 DATE SURFACE PREPARATION COMPLETED [06-2~~6~~ 3 98]

3 SURFACE PREPARATION PRIOR TO PLACEMENT OF OVERLAY [3] ZWD 1/27/99
None 1 Broomed 2 Broomed + Asphaltic Tack Coat 3
Asphaltic Tack Coat (only) 4

4 TACK COAT MATERIAL [1 0]
Material Type None 1 SS-1 2 SS-1H 3 CRS-1 4
CRS-2 5 CMS-2 6 CMS-2H 7 CSS-1 8 CSS-1H 9
Other 10 (Specify) CQS1-H (Emulsion)

5 TACK COAT DILUTION (Percent) [_ 0]
or Mixing Rate Parts Diluent ___ TO Parts Asphalt ___

6 TACK COAT APPLICATION RATE (Gal/Sq Yd) [0 0 9]

7 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Glencoe Plant	[_ 3 0]	[4 0]	[4]	[5]	[_]
Plant 2	[_]		[_ _ _]	[_ _]	[_]	[_]	[_]
Plant 3	[_]		[_ _ _]	[_ _]	[_]	[_]	[_]

Plant Type Batch 1 Drum Mix 2 Other 3 Specify

8 MANUFACTURER OF ASPHALT CONCRETE PAVER (OLD) Road Tec (for Binder only) (New) Catepillar

9 MODEL DESIGNATION OF ASPHALT CONCRETE PAVER AP-1055B

10 SINGLE PASS LAYDOWN WIDTH (Feet) [1 2 0]

01-AMAC

11 Layer No	12 Material Type Classification Code	13 Nominal Lift Placement Thickness				14 Tack Coat Between Lifts? (Y/N)	15 Transverse Joint Station
		1st Lift	2nd Lift	3rd Lift	4th Lift		
[0 4]	[0 1]	[2 8]	[_ _]	[_ _]	[_ _]	[Y]	[4+3 0]
[0 5]	[0 1]	[1 2]	[_ _]	[_ _]	[_ _]	[Y]	[_+_ _]
[_ _]	[_ _]	[_ _]	[_ _]	[_ _]	[_ _]	[_]	[_+_ _]

16 LOCATION OF LONGITUDINAL SURFACE JOINT [1]
Between lanes 1 Within lane 2 (specify offset from pavement lane edge in feet) [1 2 0]

17 SIGNIFICANT EVENTS DURING CONSTRUCTION(disruptions, rain, equip problems, etc)

PREPARER [signature] EMPLOYER BRE DATE 7-7-98

ENTERED ... G.W. ENTERED FEB 08 1999

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 4]

ENTERED JAN 12 1999 D F

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 6-2 3-9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 6-2 3-9 8]

3 LAYER NUMBER Binder [0 4]

4 MIXING TEMPERATURE (°F) [3 3 0]
5 LAYDOWN TEMPERATURES (°F)

Mean	3 0 0	Number of Tests	0 1
Minimum	3 0 0	Maximum	3 0 0
Standard Deviation	0 0		

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 0 0				
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	1 0 0		2 5 0 0	L o W	4 5
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	0 3			
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A			
28	Coverages	0 3			
29	Air Temperature (°F)	1 0 0			
30	Compacted Thickness (In)	2 5			
31	Curing Period (Days)	2 0			

PREPARER Lane W Dunnam EMPLOYER BRE DATE 7-7-98

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 4]

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 6-2 6-9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 6-2 6-9 8]

3 LAYER NUMBER Surface [0 5]

4 MIXING TEMPERATURE (°F) [3 3 0]
5 LAYDOWN TEMPERATURES (°F)

Mean	3 0 9 8	Number of Tests	0 4 0
Minimum	3 0 5 0	Maximum	3 1 7 0
Standard Deviation	5 5		

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 0 0				
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	1 0 0		2 5 0 0	1 0 0	4 5
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	0 3			
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A			
28	Coverages	0 3			
29	Air Temperature (°F)	1 0 0			
30	Compacted Thickness (In)	1 5			
31	Curing Period (Days)	2 0			

PREPARER [signature] EMPLOYER BRE DATE 6-30-98

SPS-6 CONSTRUCTION DATA SHEET 9 CONSTRUCTION QUALITY CONTROL MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 4]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 6-2 4-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 9-9 8]

3 NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	Rut Level-Up N/A	Mill Replacement N/A	Binder Course	Surface Course	Surface Friction N/A
Measurement Method (A, B, C)[1]	—	—	A	A	—
Rod Depth (Inches)	— —	— —	N/A	N/A	— —
Number of Measurements	— —	— —	1 2	1 2	— —
Average (pcf)	— — — —	— — — —	1 5 1 2	1 3 9 0	— — — —
Maximum (pcf)	— — — —	— — — —	1 5 4 6	1 4 2 3	— — — —
Minimum (pcf)	— — — —	— — — —	1 4 5 6	1 3 5 6	— — — —
Standard Deviation (pcf)	— — — —	— — — —	— — 2 8	— — 2 0	— — — —
Layer Number	— —	— —	0 4	0 5	— —

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

4 MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler
5 NUCLEAR DENSITY GAUGE MODEL NUMBER 4640
6 NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 626
7 NUCLEAR GAUGE DENSITY COUNT RATE FOR STANDARDIZATION — — — — —
8 PROFILOGRAPH MEASUREMENTS N/A
Profilograph Type California 1 Rainhart 2 —
Profile Index (Inches/Mile) — —
Interpretation Method Manual 1 Mechanical 2 Computer 3 —
Height of Blanking Band (Inches) — — —
Cutoff Height (Inches) — — —

9 SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) NO

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 4]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 7-9 8]

LAYER THICKNESS MEASUREMENTS (Inches)

SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP (N/A)	MILL REPLACEMENT (N/A)	BINDER COURSE	SURFACE COURSE	SURFACE FRICTION (N/A)
0+00	0			25	16	
	36			30	11	
	72			29	11	
	108			28	13	
	144			28	16	
0+50	0			28	16	
	36			32	12	
	72			31	12	
	108			29	13	
	144			29	13	
1+00	0			28	17	
	36			34	11	
	72			34	10	
	108			35	10	
	144			35	12	
1+50	0			31	16	
	36			36	11	
	72			37	08	
	108			36	11	
	144			37	11	
2+00	0			28	16	
	36			31	12	
	72			32	12	
	108			32	14	
	144			34	16	
2+50	0			28	17	
	36			30	12	
	72			31	11	
	108			30	13	
	144			29	16	
3+00	0			30	16	
	36			32	13	
	72			35	11	
	108			34	12	
	144			32	14	
LAYER NUMBER				04	05	

PREPARER Kane W. Duncan EMPLOYER BRE DATE 7-21-98

ENG-D JAN 12 1999 D F

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 4]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 7-9 8]

SHEET 2 OF 2

LAYER THICKNESS MEASUREMENTS (Inches)

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP (N/A)	MILL REPLACEMENT (N/A)	BINDER COURSE	SURFACE COURSE	SURFACE FRICTION (N/A)
3+50	0			3.0	1.4	
	36			3.4	1.1	
	72			3.6	1.1	
	108			3.5	1.2	
	144			3.5	1.4	
4+00	0			3.0	1.6	
	36			3.2	1.2	
	72			3.5	1.2	
	108			3.4	1.4	
	144			3.2	1.7	
4+50	0			2.5	1.8	
	36			2.8	1.6	
	72			2.9	1.7	
	108			3.1	1.7	
	144			3.1	1.8	
5+00	0			2.6	1.9	
	36			3.1	1.3	
	72			3.2	1.2	
	108			3.2	1.3	
	144			3.2	1.3	
+						
+						
+						
LAYER NUMBER				04	05	

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

ENTERED JUL 12 1999 F

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET #1 MISCELLANEOUS CONSTRUCTION NOTES AND COMMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 4]

ENTERED JAN 12 1993 D F

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

- Cold joint in binder mix @ station 4+30.

- Contractor overlaid test section without marking the location of the existing PCC joints (to be sawed and sealed later). After the binder course was laid, the contractor located the overlaid PCC joints by hammering a screwdriver into the asphalt The existing PCC joints were not consistently spaced apart from each other. Eventually the contractor located the joints up to station 3+55 and marked the joints with offset nails The Surface course was placed. After sawing the joints to station 3+55, the contractor located the remaining transverse PCC joints to station 5+00, using the same hammer + screwdriver method. All joints in section 04 were found and sawed (later to be sealed) Only 3 transverse PCC joints were located and sawed in the sampling area previous to the test section

- Binder + Surface HMAC was produced at the Glencoe Plant.

PREPARER [signature] EMPLOYER BRE DATE 7-22-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 30 SAW AND SEAL DATA FOR PORTLAND CEMENT CONCRETE SURFACES WITH ASPHALT CONCRETE OVERLAYS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 4]

1	DATE SAW AND SEAL OPERATION BEGAN (Month-Day-Year)	[0 6-3 0-9 8]
2	DATE SAW AND SEAL OPERATION COMPLETED	[0 7-0 1-9 8]
3	NUMBER OF JOINTS SAWED	[2 5]
4	NUMBER OF DAYS AFTER PLACEMENT OF OVERLAY BEFORE SAWING AND SEALING OPERATION BEGAN	[0 4]
5	AVERAGE EXTENT OF SAW CUT INTO SHOULDER, INCHES	[3 6 0]
6	AVERAGE DEPTH OF SAW CUT, INCHES	[1 5 0]
7	AVERAGE WIDTH OF SAW CUT, INCHES 3/8"	[0 3 8]
8	AVERAGE SHAPE FACTOR OF JOINT	[0 3 9]

Sealed with Seal Tight Sealant (AASHTO M213)

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

Revised December 15, 1989

GW ENTERED FEB 08 1999

SHEET 1

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 4]

IMPROVEMENT LISTING

* 1 DATE COMPLETED (MO/DAY/YR)	* 2 WORK[1] TYPE CODE (TABLE A 17)	* 3 WORK QUANTITY (UNITS FROM (TABLE A 17)	4 THICKNESS (INCHES)	5 COST[2] (THOUSANDS OF DOLLARS PER LANE-MILE)
[0 6/2 6/9 8]	[1 1]	[_ _ 5 5 6]	_ 3 5	_ _ _
[0 6/2 6/9 8]	[1 9]	[_ _ 6 6 7]	_ 4 5	_ _ _
ZLW 1/7/99 (maintenance) NOT Rehab ~~[0 7/0 1/9 8]~~	~~[0 2]~~	~~[_ _ 3 0 0]~~	~~_ 0 2~~	_ _ _
~~[0 6/2 6/9 8]~~	~~[3 6]~~	~~[_ _ 6 6 7]~~	~~_ N _~~	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _

NOTES

1 For each specific work type, the appropriate set of sheets should be completed (as indexed in Table 7 1) It is recognized that parts of both Chapter 6 (Maintenance Data Collection) and Chapter 7 (Rehabilitation Data Collection) may be required to adequately record a given set of improvements for a test section

2 Cost includes only pavement structure cost Non-pavement costs such as cut and fill work, work on bridges, culverts, lighting, and guard rails are to be excluded

02 Transverse Joint Sealing

36 Tack Coat

Revised December 15, 1989

*STATE ASSIGNED ID [_ _ _ _]

SHEET 2

*STATE CODE [0 1]

REHABILITATION DATA

*SHRP SECTION ID [0 6 0 4]

LTPP PROGRAM

G W ENTERED FEB 08 1999

REVISED LAYER DESCRIPTIONS

1.	*2.	*3	*4.			
LAYER[1] NUMBER	LAYER[2] DESCRIPTION	MATERIAL[3,4] TYPE CLASSIFICATION	<-------- LAYER THICKNESS (IN) --------> MEAN	MIN	MAX	STD DEV
1	SUBGRADE(7)	[9 9]				
2	[0 5]	[9 9]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
3	[0 3]	[9 9]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
4	[0 4]	[0 1]	[_ _3 1]	_ _2 5	_ _3 7	_ _0 3
5	[0 1]	[0 1]	[_ _1 4]	_ _0 8	_ _1 9	_ _0 3
6	[_ _]	[_ _]	[_ _._]	_ _ _ _	_ _ _ _	_ _ _ _
7	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
8	[_ _]	[_ _]	[_ _._]	_ _ _ _	_ _ _ _	_ _ _ _
9	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _

NOTES

1 Layer 1 is subgrade soil, last layer is existing 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 (Below Surface Layer)	04	Interlayer	08	Recycled Layer	12

3 The material type classification codes for surface, base or subbase, subgrade, and seal coat or interlayer materials appear in Tables A 5, A 6, A 7 and A 8, respectively

4 If the materials or thicknesses of a layer has not changed during the rehabilitation, enter "99" as the material type classification and leave the layer thicknesses for that layer blank If a layer has changed, enter the appropriate codes and thicknesses

This Sheet Added 4/27/99 [illegible]

Revised December 15, 1989

SHEET 7

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 4]

G.W. ENTERED FEB 09 1999

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)		Poly Binder [4]
2 MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)		2.552 ~~2565~~
3 BULK SPECIFIC GRAVITY (ASTM D1188)	ZWD 4/16/99	2.461 ~~2694~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)		4.4
5 PERCENT AIR VOIDS (EQ 7 4)		3.6
6 MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)		234
7 NUMBER OF BLOWS		750
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(0.95mm)~~ (AASHTO T245 OR ASTM D1559)	ZWD 4/16/99	10.3 ~~37~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)		
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)		

Tom W. Dunnam BRE/SRCO 7-17-98

Revised December 15, 1989

SHEET 7

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 4]

G.W. ENTERED FEB 08 1999

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)	Surface [5]
2. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)	2.437 ~~2 4 3 5~~
3 BULK SPECIFIC GRAVITY (ASTM D1188) ZWD 4/16/99	2.338 ~~2 5 8 1~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	5 4
5 PERCENT AIR VOIDS (EQ 7 4) ZWD 4/16/99	4 1
6 MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)	4260 ~~9 3 9 1 7~~
7 NUMBER OF BLOWS ZWD 4/16/99	75 110
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(0.99mm)~~ (AASHTO T245 OR ASTM D1559)	~~3 9~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	_ _ _
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	_ _ _ _

Tom W. Duncan BRE/SRCO 7-17-98

Revised December 15, 1989

SHEET 61

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 4]

G.W ENTERED FEB 08 1999

RESTORATION OF AC SHOULDERS

* 1 SHOULDER RESTORED [3]
- Outside 1
- Inside 2
- Both 3

		INSIDE SHOULDER	OUTSIDE SHOULDER
* 2	SURFACE TYPE (CODES-TABLE A.5)	1	[1]
* 3	TOTAL WIDTH (FEET)	0 4	[1 0]
* 4	PAVED WIDTH (FEET)	0 4	[1 0]
* 5	SHOULDER BASE TYPE (CODES-TABLE A 6)	2 1	[2 1] ← No Base used
* 6	SURFACE THICKNESS (INCHES)	_ 3 5	[_ 3 5]
* 7	BASE THICKNESS (INCHES)	_ 0 0	[_ 0 0] N/A

* 8 TYPE OF SHOULDER RESTORATION [2]
- AC Overlay Without Removal of Existing AC . . 1
- Cold Milling and AC Overlay 2
- Complete Shoulder Removal and Replacement . . . 3
- In-place Recycling and Overlay. . . 4
- Other (Specify)_____ 5

* 9 TYPE OF AC MATERIALS [1]
- New Materials . . 1
- Hot Recycled Materials 2
- Cold Recycled Materials . . 3
- Other (Specify)_____ 4

*10 THICKNESS OF AC MATERIAL REMOVED BY COLD MILLING (IN) [3 5]

*11 AC OVERLAY THICKNESS (IN) [4.0]

12 LANE/SHOULDER JOINT SEALANT [1]
- None . . . 1
- Sealed Without Providing Reservoir . 2
- Saw Reservoir and Seal 3
- Other (Specify)_____ 4

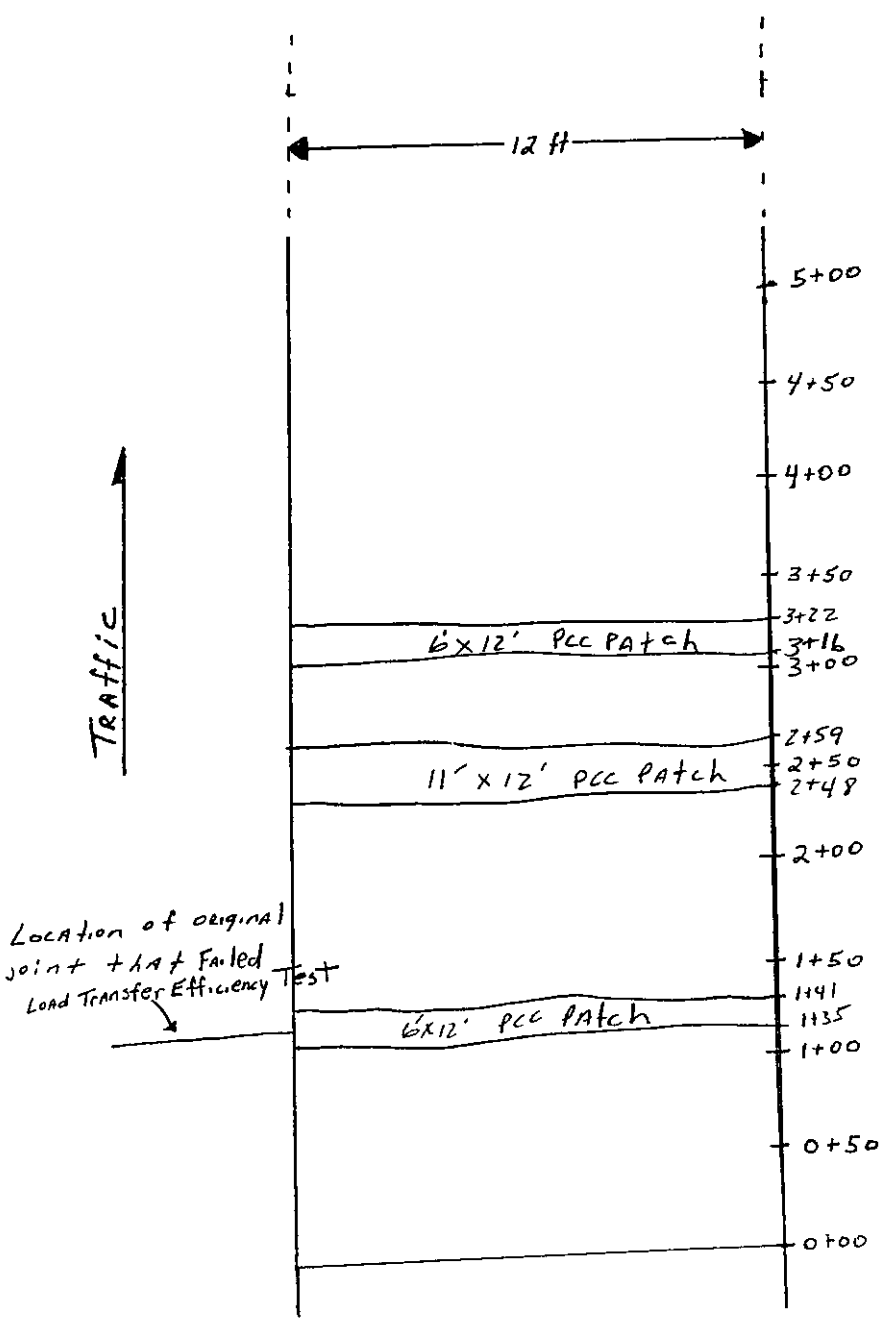
13 LANE/SHOULDER JOINT SEALANT RESERVOIR
- WIDTH (INCHES) _ _
- DEPTH (INCHES) _ _

14 TYPE OF JOINT SEALANT
- Poured . 1 _
- Preformed 2

NOTE DATA ITEMS 8 TO 14 PERTAIN ONLY TO THE RESTORED OUTSIDE SHOULDER.

SPS-6 CONSTRUCTION DATA SHEET 3 PRE-OVERLAY SURFACE PREPARATION SKETCH	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

Pg 1 of 2

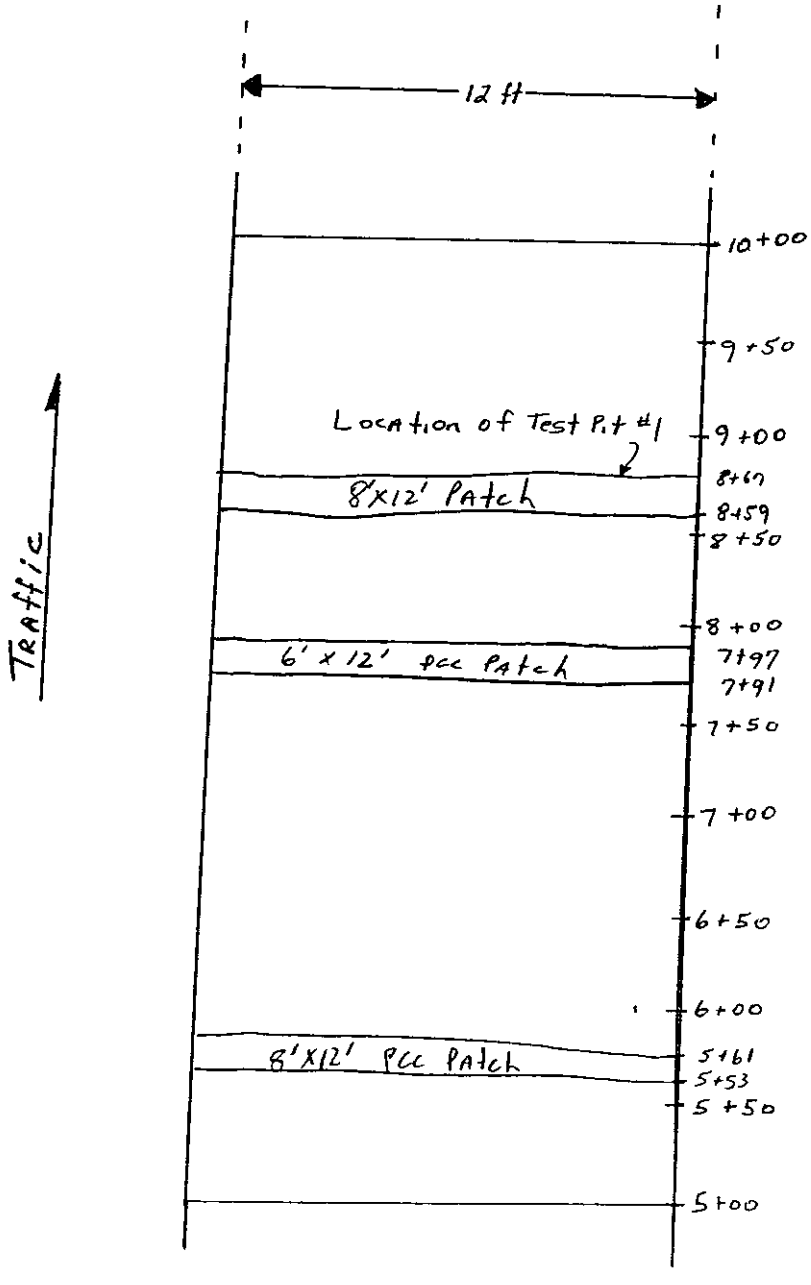


PREPARER [signature] EMPLOYER BRE DATE 5-11-98

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 3 PRE-OVERLAY SURFACE PREPARATION SKETCH	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

Pg. 2 of 2



PREPARER [signature] EMPLOYER BRE DATE 5-11-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 12 PARTIAL DEPTH PATCHING FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

1 DATE PATCHING OPERATIONS BEGAN (Month-Day-Year) [__ __-__ __-__ __]

2 DATE PATCHING OPERATIONS COMPLETED [__ __-__ __-__ __]

3 PRIMARY DISTRESS OCCURRENCE PATCHED (code from Table A 22) [__ __]
Other (Specify) _____

4 SECONDARY DISTRESS OCCURRENCE PATCHED (code from Table A 22) [__ __]
Other (Specify) _____

5. PATCHES
Total Square Feet [__ __ __ __.]
Number [__ __]
Average Depth, Inches [__ __ __]

6 METHOD USED FOR PATCH BOUNDARY DETERMINATION __
Visual 1 Ball Peen Hammer, Steel Rod, Chain or Equivalent 2
Delam-Tech 3 Other (Specify) 4 _____

7 METHOD USED TO CUT BOUNDARIES __
Diamond Blade Saw 1 Carbide Blade Saw 2 None 3 Air Hammer 4
Cold Milling 5 Other (Specify) 6 _____

8 METHOD USED TO BREAK UP AND/OR REMOVE DETERIORATED CONCRETE __
Jackhammer 1 Cold Milling 2
Other (Specify) 3 _____

9 METHOD FOR FINAL CLEANING OF PATCH AREA __
None 1 Sandblasting 2 Waterblasting 3
Other (Specify) 4 _____

No Partial Depth Patching Done

PREPARER Kane N. Duncan EMPLOYER BRE DATE 4-16-98

SPS-6 CONSTRUCTION DATA SHEET 13 (13) PARTIAL DEPTH PATCHING FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO. [0 5]

1 PATCH MATERIAL USED [__]
Portland Cement Concrete 1 Polymer Concrete 2 Epoxy Mortar . 3
Other (Specify) 5 _____

2. BONDING AGENT [__]
None . 1 Cement Grout 2 Epoxy Resin 3
Other (Specify) 5 _____

3 MIXTURE DESIGN FOR PATCH MATERIAL, LB /CUBIC YARD
Coarse Aggregate [__ __ __ __]
Fine Aggregate [__ __ __ __]
Cement [__ __ __ __]
Water (Gallons/Cubic yd) [__ __ __ __]

4 MAXIMUM SIZE OF COARSE AGGREGATE, INCHES __ __

5 CEMENT TYPE USED [__ __]
(See Cement Type Codes, Tables A 11)

6 AIR CONTENT, PERCENT BY VOLUME
Mean [__ __ __]
Range Min [__ __ __]
Max [__ __ __]

7 ADMIXTURES [__ __]
(See Cement Additive Codes, Table A 12) [__ __]

8 SLUMP, INCHES
Mean [__ __]
Range Min [__ __]
Max [__ __]

9 COMPRESSIVE STRENGTH OF PATCH MATERIAL, PSI [__ __ __ __]
Curing Time, Days [__ __]
If Unavailable, and Other Strength Test Conducted,
Alternate Test [_____]
Type of Loading [_____]
Age, Days [__ __], Strength, PSI [__ __ __ __]

No Partial Depth Patching Done

PREPARER [signature] EMPLOYER BRE DATE 4-16-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 1~~4~~ (14) PARTIAL DEPTH PATCHING FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

1 CURING METHOD — METHOD 1 [__ __] METHOD 2 [__ __]

None 1 Membrane Curing Compound 2 Burlap Curing Blankets 3
Waterproof Paper Blankets 4 White Polyethylene Sheeting 5
Burlap-Polyethylene Blankets 6 Insulating Layers 7
Cotton Mat Curing 8 Hay 9
Other (Specify) 10 _____

2 APPROXIMATE TIME BETWEEN PATCHING AND OPENING TO TRAFFIC, HOURS [__ __]

3 AMBIENT CONDITIONS AT TIME OF PATCHING — LOW [__ __ __]
Air Temperature °F — HIGH [__ __ __]
Surface Moisture - Dry = 1, Wet = 2 [__]

4 METHOD OF CONSOLIDATING MATERIALS __
Vibrators 1 Vibrating Screeds 2 Troweling 3
Rodding/Tamping 4 Rolling 5
Other (Specify) 6 _____

5 FINISHING METHOD __
Screeding 1 Hand-Troweling 2 Machine-Troweling 3
Other (Specify) 4 _____

6 JOINT FORMING METHOD
Shoulder __
Transverse __
Longitudinal __

None 1 Polyethylene Strip Insert 2 Styrofoam Insert 3
Fiberboard Insert 4 Sawing 5 Forms 6
Other (Specify) 7 _____

No Partial Depth Patching Done

PREPARER Tom W. Runner EMPLOYER BRE DATE 4-16-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~X~~ 15 JOINT RESEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

ENTERED JAN 13 1999

1 DATE JOINT SEALANT OPERATIONS BEGAN (Month-Day-Year) [0 6-3 0-9 8]

2 DATE JOINT SEALANT OPERATIONS COMPLETED [0 7-0 2-9 8]

3 METHOD OF REMOVING OLD SEALANT [5]
Not Removed 1 Joint Plow - V-Shaped 2 Joint Plow - Rectangular 3
High Pressure Water Blasting 4 Diamond Blade Saw 5
Carbide Blade Saw 6 Pull-Out of Old Compression Sealant 7
Not Previously Sealed . 8
Other (Specify) 9 _____

4 NEW SEALANT RESERVOIR DIMENSIONS, INCHES
Width [0 5]
Depth (From Top of Slab to Top of Backer Rod or Tape) [0 5]

5 BOND BREAKER UNDER SEALANT [3]
None 1 Nonreactive Adhesive Backed Tape . 2 Backer Rod 3
Other (Specify) 4 _____

6 WERE JOINT SIDEWALLS REFACED? 2
No 1 Yes - One-Blade 2 Yes - Two-Blade 3
Other (Specify) 4 _____

7 CLEANING OF SIDEWALLS [2]
None 1 Air Blast 2 Sand Blast 3 Water Blast 4
Other (Specify) 4 _____

PREPARER Kara W. Dannan EMPLOYER BRE DATE 7-8-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~15~~ 16 JOINT RESEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

1 TYPE OF CONTRACTION JOINT SEALANT [7]
(AASHTO OR ASTM SPECIFICATIONS)

D1850 (ASTM) Concrete Joint Sealer, Cold-Application Type 1
D1190 (ASTM) - M173 (AASHTO) Concrete Joint Sealer, Hot-Poured Elastic Type 2
D3406 (ASTM) - M282 (AASHTO) Joint Sealants, Hot-Poured, Elastomeric-Type, for PCC Pavements 3
D3405 (ASTM) - M301 (AASHTO) Joint Sealants, Hot-Poured for Concrete and Asphalt Pavements .. 4
D3542 (ASTM) Preformed Polychloroprene Elastomeric Joint Seals for Bridges . 5
D2628 (ASTM) Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements 6
Other (Describe - if Silicone Material is Used Federal Spec TT-S-001543A, Georgia D O T Spec 833 06, or Equal Applies 7
CRAFTCO, Inc - Road Saver Silicone Sealant
Part No. 34902

Manufacturer Information on Type of Pressure Relief Joint Sealant
Manufacturer Name [ ]
Manufacturer Sealant Name [ ]

2 AVERAGE DEPTH OF TOP OF SEALANT PLACEMENT BELOW PAVEMENT SURFACE, INCHES [0 2]

3 ARE EXPANSION JOINTS SEALED DIFFERENTLY THAN CONTRACTION JOINTS? [2]
Yes 1 No 2

If Yes, Enter the code from Item 1, or describe below [ ]

Other [ ]

4 TOTAL LINEAR FEET OF JOINTS SEALED
Transverse Joints [2 0 7 2]
Longitudinal Joints [3 0 4 8]

NOTE IF DIFFERENT MATERIALS OR METHODS ARE USED REPEAT SHEETS 15 AND 16 FOR EACH RECORDING THEIR LENGTHS IN ITEM NO 4

PREPARER Tim W Dunnam EMPLOYER BRE DATE 7-8-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~16~~ 17 CRACK SEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

1 DATE CRACK SEALING OPERATIONS BEGAN (Month-Day-Year) [0 6-3 0-9 8]

2. DATE CRACK SEALING OPERATIONS COMPLETED [0 6-3 0-9 8]

3 NEW SEALANT RESERVOIR DIMENSIONS, INCHES, If Used
Width
Depth (From Top of Slab to Top of Backer Rod or Tape) [_ _ _]

4 BOND BREAKER UNDER SEALANT, If Used [1]
None .. 1 Nonreactive Adhesive Backed Tape 2 Backer Rod . 3
Other (Specify) 4 _____

5. CLEANING OF CRACKS 1
None 1 Routing 2 Air Blast 3 Steel Wire Brush 4
Brooming 5 Other (Specify) 4 _____

No crack sealing done due to removal of cracks by grinding

PREPARER Lane H. Duncan EMPLOYER BRE DATE 7-8-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~16~~ 18 CRACK SEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

1 TYPE OF SEALANT [__]
(AASHTO OR ASTM SPECIFICATIONS)

D1850 (ASTM) Concrete Joint Sealer, Cold-Application Type 1
D1190 (ASTM) - M173 (AASHTO) Concrete Joint Sealer, Hot-Poured Elastic Type 2
D3406 (ASTM) - M282 (AASHTO) Joint Sealants, Hot-Poured, Elastomeric-Type, for PCC Pavements 3
D3405 (ASTM) - M301 (AASHTO) Joint Sealants, Hot-Poured for Concrete and Asphalt Pavements . 4
D3542 (ASTM) Preformed Polychloroprene Elastomeric Joint Seals for Bridges 5
D2628 (ASTM) Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements 6
Other (Describe - if Silicone Material is Used Federal Spec TT-S-001543A, Georgia D O T Spec 833 06, or Equal Applies 7

Manufacturer Information on Type of Pressure Relief Crack Sealant
Manufacturer Name [_____]
Manufacturer Sealant Name [_____]

2 AVERAGE DEPTH OF TOP OF SEALANT PLACEMENT
Below Pavement Surface, Inches [__ __]

3 TOTAL LINEAR FEET OF CRACKS SEALED [__ __ __ 0 0]

NOTE IF DIFFERENT MATERIALS OR METHODS ARE USED REPEAT SHEETS 17 AND 18 FOR EACH RECORDING THEIR LENGTHS IN ITEM NO 3

No cracks sealed

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

ENTERED JAN 13 1999 D F

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~16~~ 19 DIAMOND GRINDING FOR PORTLAND CEMENT CONCRETE PAVEMENT SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

1 DATE DIAMOND GRINDING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 3-9 8]

2 DATE DIAMOND GRINDING OPERATIONS COMPLETED [0 5-1 8-9 8]

3 REASON FOR GRINDING [5]
Elimination of Faulting 1 Elimination of Slab Warping 2
Improve Skid Resistance 3
Restoration of Transverse Drainage Slope 4
Other (Specify) . 5 Elimination of Faulting + Slab stabilization

4 AVERAGE DEPTH OF CUT, INCHES [0 3 1]

5 CUTTING HEAD WIDTH, INCHES 3 6 2 5

6 AVERAGE GROOVE WIDTH, INCHES 0 1

7 AVERAGE SPACING BETWEEN BLADES, INCHES 0 1

ENTERED JAN 13 1999 D F

PREPARER Tom W. Duncan EMPLOYER BRE DATE 6-2-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~19~~ 20 FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

ENTERED JAN 13 1999 D F

1 DATE PATCHING OPERATIONS BEGAN (Month-Day-Year) [0 4-0 8-9 8]

2 DATE PATCHING OPERATIONS COMPLETED [0 4-1 0-9 8]

3 PRIMARY DISTRESS OCCURRENCE PATCHED OR REPLACED WITH NEW SLAB [3 6]
(See Table A 22 for Type Codes)
Other (Specify) _____

4 SECONDARY DISTRESS OCCURRENCE PATCHED OR REPLACED WITH NEW SLAB 2 3
(See Table A 22 for Type Codes)
Other (Specify) _____

5 PATCHES

	NUMBER	SQ FEET
SLAB ONLY	[6]	[5 4 0]
SLAB AND BASE	[0]	[0]

6 PATCH MATERIAL USED [1]
Portland Cement Concrete 1 Polymer Concrete 2 Epoxy Mortar 4
Other (Specify) 5 _____

7 SLABS REPLACED

	NUMBER	SQ FEET
SLAB ONLY	[0]	[0]
SLAB AND BASE	[0]	[0]

8 METHOD FOR PATCH BOUNDARY DETERMINATION 1
Visual 1 Coring 2 Deflection 3
State Standard or Specification 4
Other (Specify) 5 _____

9 CUTTING INSTRUMENT 1
Diamond Blade Saw 1 Carbide Blade Saw 2 Wheel Saw 3
Air Hammer 4
Other (Specify) 5 _____

PREPARER [signature] EMPLOYER BRE DATE 6-2-98

LTPP-SPS CONSTRUCTION DATA FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED CONSTRUCTION DATA SHEET 21	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

1 *SECURING LOAD TRANSFER DEVICES* [3]
None 1 Grout Filler 2 Epoxy filler 3
Other . 4 _____

2 REINFORCING STEEL PLACED IN PATCH [1]
No. 1 Yes 2

	TEMPERATURE STEEL Transverse	TEMPERATURE STEEL Longitudinal	Dowel Bars	Tie Bars
3 REBAR NUMBER	[0 4]	[1 0]	[1 0]	[0 4]
4 BAR LENGTHS, INCHES	[1 8 0]	[1 8 0]	[1 8 0]	[1 8 0]
5 BAR SPACING, INCHES	[0 2 0]	[1 2 0]	[1 2 0]	[0 2 0]

6 DOWEL COATINGS [6]
None 1 Paint and/or Grease 2 Plastic . 3
Monel 4 Stainless Steel 5 Epoxy 6
Other (Specify) 7 _____

7 NUMBER OF SAW CUTS PER PATCH (If Sawed) [_ 6]

8 DEPTH OF TYPICAL BOUNDARY SAW CUT, INCHES [_ 5 0]

9 CONCRETE BREAKUP [1]
None 1 Pneumatic Air Hammer 2 Gravity Drop Hammer 3
Sawing... 4
Other (Specify) 5 _____

10 REMOVAL OF CONCRETE [2]
Concrete Breakup and Cleanout 1 Lift Out Intact Slab Section 2
Other (Specify) 3 _____

PREPARER [signature] EMPLOYER BRE DATE 4-16-98

SPS-6 CONSTRUCTION DATA SHEET ~~28~~ 27 FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH *PORTLAND CEMENT CONCRETE SURFACES, CONTINUED*	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

1 METHOD OF REINFORCING STEEL PLACEMENT — leave blank → [ ]
Chairs 1 Between Layers of Concrete 2

2 MIXTURE DESIGN FOR PATCH MATERIAL, LB /CUBIC YARD
Coarse Aggregate [1 9 3 5]
Fine Aggregate [1 0 9 9]
Cement [6 2 0]
Water (Gallons/Cubic Yard) [3 6]

3 CEMENT TYPE USED [4 1]
(See Type Codes, Tables A.11)

4 AIR CONTENT, PERCENT BY VOLUME
Mean [4 5]
Range [4 0] to [5 0]

5 ADMIXTURES [0 8]
(See Cement Additive Codes, Table A 12) [0 4]

6 SLUMP, INCHES
Mean [1.2]
Range [0.8] to [2.0]

7 FLEXURAL STRENGTH (MODULUS OF RUPTURE), PSI [ ]
(Based on 3rd Point Loading) Curing Time, Days [ ]
If Unavailable, and Other Strength Test Conducted,
Enter Alternate Test [Not Done]
Type of Loading [ ]
Age, Days [ ], Strength, PSI [ ]

8 AMBIENT CONDITIONS AT TIME OF PATCHING
Air Temperature °F LOW [7 0] HIGH [7 5]
Surface Moisture - Dry = 1, Wet = 2 [1]

9 MAXIMUM SIZE OF COARSE AGGREGATE, INCHES 57/67 stone 1 0

10 CONSOLIDATION OF MATERIALS 1
Internal Vibrators 1 Vibrating Screeds 2 Troweling 3
Rolling 4 Tamping 5
Other (Specify) 6 _____

12 FINISHING 4
Screeding 1 Hand-Troweling 2 Machine-Troweling 3
Other (Specify) 4 Hand-Troweling then drag Burlap Sack over Area

PREPARER [signature] EMPLOYER BRE DATE 5-11-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~20~~ 23 FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

1 JOINT FORMING METHOD SHOULDER [1] TRANSVERSE [1] LONGITUDINAL [7]

None 1 Polyethylene Strip Insert 2 Styrofoam Insert 3
Fiberboard Insert 4 Sawing 5 Forms 6
Other (Specify) 7 TAR PAPER

2 WAS BOND BREAKER USED BETWEEN ADJACENT LANES? [1]
Yes . 1 No 2

3. CURING METHOD METHOD 1 [2] METHOD 2 [ ]

None 1 Membrane Curing Compound . 2 Burlap Curing Blankets 3
Waterproof Paper Blankets 4 White Polyethylene Sheeting 6
Burlap-Polyethylene Blankets 6 Insulating Layers 7
Cotton Mat Curing 8 Hay . 9
Other (Specify) 10 _____

4 APPROXIMATE TYPICAL TIME BETWEEN PATCHING AND OPENING TO TRAFFIC, HOURS [24]

5 TYPE OF TRANSVERSE JOINTS IN PATCHES 3 OR SLABS _
None 1 All Expansion Joints 2 All Contraction Joints 3
Mixture of Expansion and Contraction Joints 4

6 WERE OLD JOINTS MATCHED? 2
Yes 1 No 2

PREPARER [signature] EMPLOYER BRE DATE 5-11-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~21~~ 24 LOAD TRANSFER RESTORATION DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

1 DATE LOAD TRANSFER RESTORATION BEGAN (Month-Day-Year) [0 3-3 0-9 8]

2 DATE LOAD TRANSFER RESTORATION COMPLETED [0 3-3 1-9 8]

3. NUMBER OF JOINTS IN TEST SECTION [_ 4 8]

4 NUMBER OF JOINT LOAD TRANSFER RESTORATION LOCATIONS [_ _ 1]

5 NUMBER OF DEVICES PER JOINT [_ 1 0]

6 LOCATION OF DOWELS OR SHEAR DEVICES (INCHES)

(DISTANCE FROM THE OUTER LANE EDGE TO THE CENTER OF EACH DEVICE)

1st	[_ 1 2]
2nd	[_ 2 4]
3rd	[_ 3 6]
4th	[_ 4 8]
5th	[_ 6 0]
6th	[_ 7 2]
7th	[_ 8 4]
8th	[_ 9 6]
9th	[1 0 8]
10th	[1 2 0]
11th	[_ _ _]
12th	[_ _ _]
13th	[_ _ _]
14th	[_ _ _]

7 DIAMETER OF RETROFIT DOWEL BARS, INCHES [1 5 0]

8 MATERIAL USED TO BACKFILL SLOT/CORE HOLE [3]
Cement Based Grout 1 Polymer Concrete 2
Epoxy Resin Grout 3
Other (Specify) 4 _____

9 BONDING AGENT USED BETWEEN EXISTING PCC AND BACKFILL MATERIAL [1]
None 1 Epoxy 2 Cement/Water 3
Other (Specify) 4 _____

PREPARER Lane W. Dunnan EMPLOYER BRE DATE 4-16-98

[redacted]

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~22~~ 25 LOAD TRANSFER RESTORATION DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

G.W. ENTERED FEB 08 1999

1 LOAD TRANSFER EFFICIENCY BEFORE AND AFTER RESTORATION

Entered 00 3 pw 2/8/99

POINT DISTANCE (FEET)	LOAD TRANSFER EFFICIENCY (%) BEFORE RESTORATION APPROACH	BEFORE RESTORATION LEAVE	AFTER RESTORATION APPROACH	AFTER RESTORATION LEAVE
[2.5] Failed joint ONLY*	[67.1]	[74.7]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]

2 DATE OF LOAD TRANSFER EFFICIENCY TESTS
BEFORE RESTORATION (Month-Day-Year) [03-30-98]
AFTER RESTORATION [- -]

* Note: Test results of each joint is located in the Construction file located at the Southern Region Coordinating Office (BRE).

PREPARER _____ EMPLOYER BRE DATE _____

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~23~~ 26 UNDERSEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

1 DATE UNDERSEALING BEGAN (Month-Day-Year) [__ __-__ __-__ __]

2 DATE UNDERSEALING COMPLETED [__ __-__ __-__ __]

3 TYPE OF MIXTURE USED IN SUBSEALING [__]
Cement-Loam Top Soil Slurry 1 Cement-Limestone Dust Slurry 2
Cement-Pozzolan Slurry 3 Cement-Fine Sand Slurry 4
Other (Specify) 6 _____

MIX DESIGN OF PORTLAND CEMENT GROUT (Items 4 to 8)

4 CEMENT TYPE (SEE CEMENT TYPE CODES, TABLE A 11) [__ __]
5 CEMENT TO SAND RATIO (BY WEIGHT) [__ __]
6 WATER/CEMENT RATIO (BY WEIGHT) [__ __ __]
7 ADDITIVE TYPE (SEE TABLE A 12) [__ __]
8 AMOUNT OF ADDITIVE (BY PERCENT OF CEMENT WEIGHT) [__ __ __]

9 FLUIDITY OF PORTLAND CEMENT GROUT [__ __ __]
(Flow Cone Method ASTM C939) (SEC)

10 CUBE COMPRESSIVE STRENGTH OF PORTLAND CEMENT GROUT, psi __ __ __

11 CURING PERIOD FOR PORTLAND CEMENT GROUT (DAYS) __ __

12 DETERMINATION OF AREA TO BE UNDERSEALED [__]
Blanket Coverage 1 Deflection Data 2
Visual Signs of Pumping 3
Other (Specify) 4 _____

No Undersealing Done

PREPARER Ron W. Hunson EMPLOYER BRE DATE 4-16-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~24~~ 27 UNDERSEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

1 DEPTH OF UNDERSEALING HOLE FROM TOP OF SLAB (INCHES) [_ _ _]

2 MAXIMUM ALLOWABLE PUMPING PRESSURE [_ _ _]
(Gauge at Plant) (PSI)

3 MAXIMUM SURGE PRESSURE (PSI) [_ _ _]

4 SLABS IN TEST SECTION (JOINTED CONCRETE PAVEMENTS ONLY)
Total Number [_ _ _] Number Undersealed [_ _ _]

5 AVERAGE NUMBER OF HOLES PER SLAB UNDERSEALED [_ _]
(JCP Only)

6 TYPICAL NUMBER OF UNDERSEALING HOLES NEAR JOINT OR CRACK [_ _]
(JCP Only)

7 AVERAGE VOLUME OF MATERIAL PUMPED PER HOLE [_ _ _]
(Cubic Feet)

8 MONITORING OF LIFT [_]
Deflection Device (e g , Benkelman Beam) 1 Maximum Pumping Time 2
Appearance of Material in Adjacent Joints or Cracks 3
Other (Specify) 4 _____

9 TYPICAL TIME BETWEEN UNDERSEALING AND REOPENING TO TRAFFIC (HOURS) [_ _]

FWD? 11 WERE DEFLECTION MEASUREMENTS TAKEN BEFORE AND AFTER UNDERSEALING?
Yes 1 No 2 BEFORE UNDERSEALING [_]
AFTER UNDERSEALING [_]

12 TIME OF DAY WHEN DEFLECTION MEASUREMENTS WERE CONDUCTED (HOURS)

	STARTING TIME	ENDING TIME
BEFORE UNDERSEALING	[_ _ _ _]	[_ _ _ _]
AFTER UNDERSEALING	[_ _ _ _]	[_ _ _ _]

No Undersealing Done

PREPARER [signature] EMPLOYER BRE DATE 4-16-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 2~~8~~ SUBDRAINAGE RETROFIT FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 5]

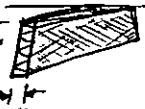
GW ENTERED FEB 08 1999

1 DATE SUBDRAINAGE PLACEMENT BEGAN (Month-Day-Year) [0 3-0 4-9 8]

2 DATE SUBDRAINAGE PLACEMENT COMPLETED [0 3-0 6-9 8]

3 TYPE OF DRAINAGE PIPE [7]
Clay Tile 1 Concrete Tile 2 Vitrified Clay 3
Perforated Plastic Bituminous Fiber 4 Perforated Corrugated Metal 5
Corrugated Plastic Tubing 6 Drainage Mat 7
Other (Specify) 8 _____

4 DIAMETER OF PIPE (INCHES) Filter Mat 1"x18" ⇒ 18" [_ _ _] N/A



5 DEPTH OF ~~PIPE~~ MAT BELOW TOP OF PAVEMENT SURFACE (INCHES) 1" [_ 8 0]

6 HORIZONTAL PLACEMENT OF ~~PIPE~~ MAT FROM OUTER EDGE OF PAVEMENT (INCHES) [_ 0 0]

7 TYPE OF PRIMARY FILTER USED [3]
Graded Aggregate 1 Uniformly Graded Aggregate (One Size) 2
Woven Fabric 3 Non-Woven Fabric 4 Porous PCC 5
Porous Bituminous Concrete 6
Other (Specify) 7 _____

8 MAXIMUM PARTICLE SIZE OF PRIMARY FILTER MATERIAL (INCHES) [_ _] N/A

9 GRADATION OF PRIMARY FILTER MATERIAL
% Passing #4 Sieve [_ _ _] % Passing #40 Sieve [_ _ _]
% Passing #10 Sieve [_ _ _] % Passing #100 Sieve [_ _ _] N/A

10 PERMEABILITY OF PRIMARY FILTER MATERIAL (FT/DAY) (566 93 ft/day) → WILL ON ~~_ _ _~~ except 99

11 TYPE AND LOCATION OF SECONDARY FILTER MATERIAL [3]
Fabric Encapsulating the Primary Filter Material 1
Fabric Encapsulating the Drainage Pipe 2
Other (Specify) 3 None used

12 AVERAGE OUTLET INTERVAL (FEET) 730 3ft

13 PRIMARY PURPOSE OF SUBDRAINAGE INSTALLATION [1]
Remove Free Water From Pavement Layers 1
Cut Off Side-Hill/Through Hill Seepage 2
Lower Water Table 3
Other (Specify) 4 _____

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

Revised December 15, 1989

GW ENTERED FEB 08 1999

SHEET 1

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 5]

IMPROVEMENT LISTING

* 1 DATE COMPLETED (MO/DAY/YR)	* 2 WORK[1] TYPE CODE (TABLE A 17)	* 3 WORK QUANTITY (UNITS FROM (TABLE A 17)	4 THICKNESS (INCHES)	5 COST[2] (THOUSANDS OF DOLLARS PER LANE-MILE)
ZND 1/7/99 ~~[04/10/98]~~	~~[04]~~	~~[_ _ _52]~~	~~100~~	_ _ _
~~[04/10/98]~~	~~[05]~~	~~[_ _ _ _8]~~	~~100~~	_ _ _
[06/26/98]	[11]	[_ _ 556]	_35	_ _ _
~~[05/18/98]~~	~~[12]~~	~~[_ _ 667]~~	~~_01~~	_ _ _
~~[09/01/98]~~	~~[02]~~	~~[_ _ 600]~~	~~_02~~	_ _ _
[04/13/98]	[38]	[_ _ 500]	_N_	_ _ _
[04/10/98]	[50]	[_ _ _ _N]	_N_	_ _ _

NOTES

1 For each specific work type, the appropriate set of sheets should be completed (as indexed in Table 7 1) It is recognized that parts of both Chapter 6 (Maintenance Data Collection) and Chapter 7 (Rehabilitation Data Collection) may be required to adequately record a given set of improvements for a test section

2 Cost includes only pavement structure cost Non-pavement costs such as cut and fill work, work on bridges, culverts, lighting, and guard rails are to be excluded

Maintenance Not Rehab

02 = Transverse Jnt Sealing
04 = Full Depth Jnt Repair Patching
05 = Full Depth Repair Patching other than At Joint
11 = AC Shldr Replacement
12 = Milling / Grinding
38 = Subdrains (Longitudinal)

(50 = Jnt Load Transfer Restoration)

Revised December 15, 1989

*STATE ASSIGNED ID [__ __ __ __]

SHEET 2

*STATE CODE [0 1]

REHABILITATION DATA

*SHRP SECTION ID [0 6 0 5]

LTPP PROGRAM

G.W ENTERED FEB 08 1999

REVISED LAYER DESCRIPTIONS

1.	*2	*3	*4				
LAYER[1] NUMBER	LAYER[2] DESCRIPTION	MATERIAL[3,4] TYPE CLASSIFICATION	<-------- LAYER THICKNESS (IN) --------> MEAN	MIN	MAX	STD DEV	
1	SUBGRADE(7)	[9 9]					
2	[0 5]	[9 9]	[_ _ _._]	_ _ _ _	_ _ _ _	_ _ _ _	
3	[0 3]	[0 4]	[_ _9.7]	_ _9 2	_ 1 0 0	_ _0 2	
4	[__ __]	[__ __]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _	
5	[__ __]	[__ __]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _	
6	[__ __]	[__ __]	[_ _ _._]	_ _ _ _	_ _ _ _	_ _ _ _	
7	[__ __]	[__ __]	[_ _ _._]	_ _ _ _	_ _ _ _	_ _ _ _	
8	[__ __]	[__ __]	[_ _ _._]	_ _ _ _	_ _ _ _	_ _ _._	
9	[__ __]	[__ __]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _	

NOTES

1 Layer 1 is subgrade soil, last layer is existing 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 (Below Surface Layer)	04	Interlayer	08	Recycled Layer	12

3 The material type classification codes for surface, base or subbase, subgrade, and seal coat or interlayer materials appear in Tables A 5, A 6, A 7 and A 8, respectively

4 If the materials or thicknesses of a layer has not changed during the rehabilitation, enter "99" as the material type classification and leave the layer thicknesses for that layer blank If a layer has changed, enter the appropriate codes and thicknesses

This Sheet Added 1/27/99

Revised December 15, 1989

SHEET 61

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 5]

EN D JAN 13 1999 D F

RESTORATION OF AC SHOULDERS

			INSIDE SHOULDER	OUTSIDE SHOULDER
* 1.	SHOULDER RESTORED			[3]
	Outside	1		
	Inside	2		
	Both	3		
* 2.	SURFACE TYPE (CODES-TABLE A.5)		1	[1]
* 3	TOTAL WIDTH (FEET)		0 4	[1 0]
* 4.	PAVED WIDTH (FEET)		0 4	[1 0]
* 5	SHOULDER BASE TYPE (CODES-TABLE A 6)		2 1	[2 1] ← No Base used
* 6	SURFACE THICKNESS (INCHES)		_ 3.5	[_ 3 5]
* 7	BASE THICKNESS (INCHES)		_ 0 0	[_ 0 0] N/A
* 8	TYPE OF SHOULDER RESTORATION			[2]
	AC Overlay Without Removal of Existing AC	1		
	Cold Milling and AC Overlay	2		
	Complete Shoulder Removal and Replacement	3		
	In-place Recycling and Overlay	4		
	Other (Specify)_____	5		
* 9	TYPE OF AC MATERIALS			[1]
	New Materials	1		
	Hot Recycled Materials	2		
	Cold Recycled Materials	3		
	Other (Specify)_____	4		
*10	THICKNESS OF AC MATERIAL REMOVED BY COLD MILLING (IN)			[3 5]
*11	AC OVERLAY THICKNESS (IN)			[3 5]
12	LANE/SHOULDER JOINT SEALANT			[3]
	None	1		
	Sealed Without Providing Reservoir	2		
	Saw Reservoir and Seal	3		
	Other (Specify)_____	4		
13	LANE/SHOULDER JOINT SEALANT RESERVOIR			
	WIDTH (INCHES)			1 0
	DEPTH (INCHES)			0 5
14	TYPE OF JOINT SEALANT			1
	Poured	1		
	Preformed	2		

NOTF DATA ITEMS 8 TO 14 PERTAIN ONLY TO THE RESTORED OUTSIDE SHOULDER.

SPS-6 CONSTRUCTION DATA SHEET 2 REVISED LAYER DESCRIPTIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

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 5]	[2 3]	[6 0]	- - - -	- - - -	- - - -
3	[0 3]	[0 4]	[1 0 0]	- - - -	- - - -	- - - -
4	[0 4]	[0 1]	[2 2]	1 7	2 5	0 2
5	[0 1]	[0 1]	[1 3]	1 0	1 8	0 2
6	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
7	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
8	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
9	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
10	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
11	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
12	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
13	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
14	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -
15	[ ]	[ ]	[ ]	- - - -	- - - -	- - - -

ENTERED JAN 13 1999 D F

NOTES

1 Layer 1 is 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 w/overlay	02	Subbase Layer	06	Surface Treatment	10
Original Surface	03	Subgrade	07	Embankment (Fill)	11
HMAC Layer (Subsurface)	04	Interlayer	08		

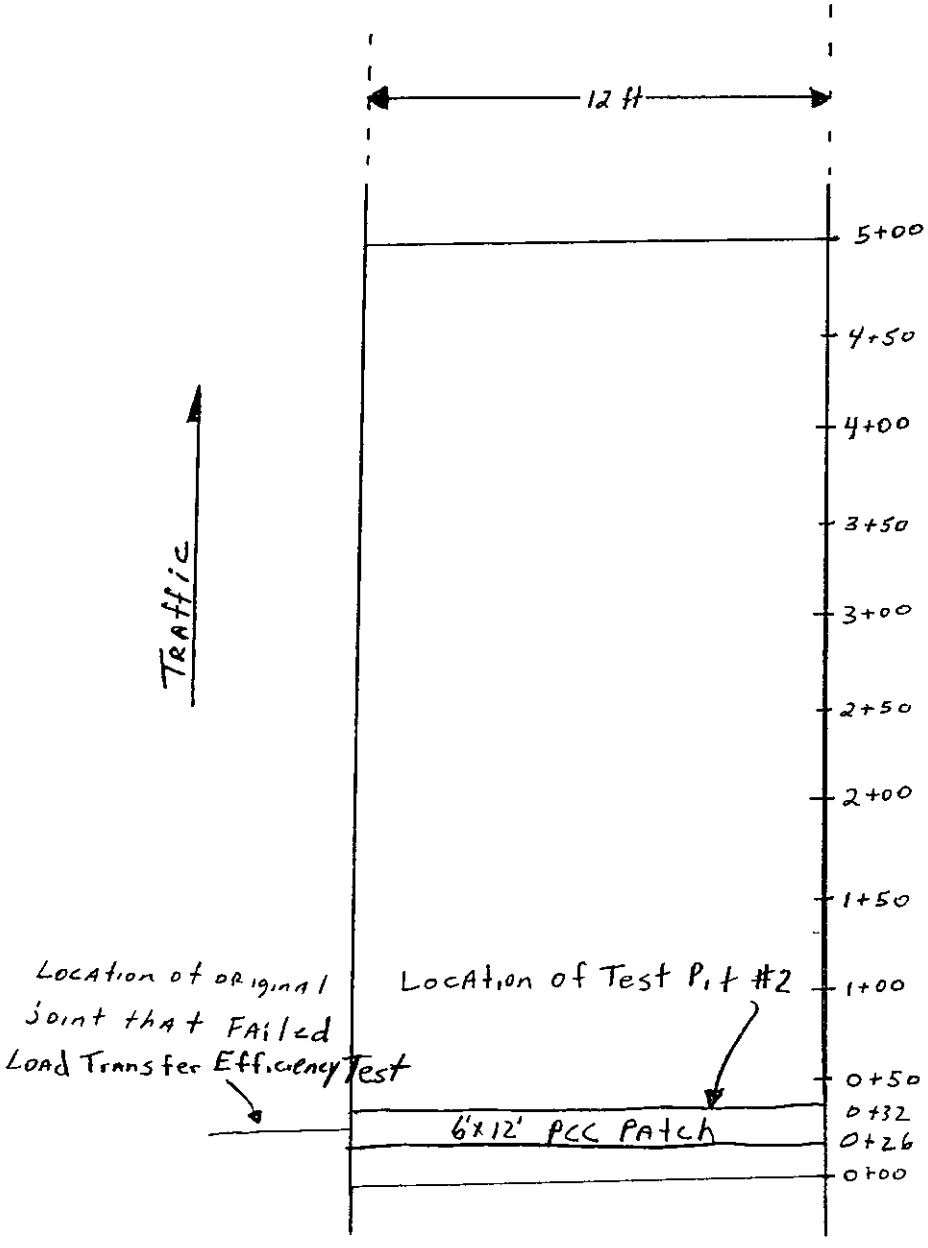
If milling was performed, the layers which were milled shall be assigned their previous layer number and material type If the layer was completely removed by milling, it shall still be shown as a layer with a zero thickness

3 Enter the material type classification codes from Tables A 5, A 6, A 7 and A 8 which best describes the material in each layer If the layer was milled, enter the material classification code corresponding to the type material which was removed

4 Enter the average thickness of each layer and the maximum, minimum, and standard deviation of the thickness measurements, if known If a layer was partially milled, the remaining thickness of the layer shall be indicated

PREPARER [illegible] W. Dunnan EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 3 PRE-OVERLAY SURFACE PREPARATION SKETCH	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]



PREPARER [signature] EMPLOYER BRE DATE 5-11-98

SPS-6 CONSTRUCTION DATA SHEET 7 OVERLAY PLACEMENT OPERATIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6

1 DATE SURFACE PREPARATION BEGAN (Month-Day-Year) [0 6 - 2 3 - 9 8]
2 DATE SURFACE PREPARATION COMPLETED [0 6 - 2 6 - 9 8]

3 SURFACE PREPARATION PRIOR TO PLACEMENT OF OVERLAY [3]
None 1 Broomed 2 Broomed + Asphaltic Tack Coat 3
Asphaltic Tack Coat (only) 4

4 TACK COAT MATERIAL
Material Type None 1 SS-1 2 SS-1H 3 CRS-1 4 [1 0]
CRS-2 5 CMS-2 . 6 CMS-2H 7 CSS-1 . 8 CSS-1H 9
Other 10 (Specify) CQS1-H (Emulsion)

5 TACK COAT DILUTION (Percent) [0]
or Mixing Rate Parts Diluent ___ TO Parts Asphalt ___

6 TACK COAT APPLICATION RATE (Gal/Sq Yd.) [0 0 9]

7. ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers
Plant 1	[2]	Glencoe Plant	[3 0]	[4 0]	[4] [5] [ ]
Plant 2	[ ]		[ ]	[ ]	[ ] [ ] [ ]
Plant 3	[ ]		[ ]	[ ]	[ ] [ ] [ ]

Plant Type Batch 1 Drum Mix.. . 2 Other . 3 Specify ___

8 MANUFACTURER OF ASPHALT CONCRETE PAVER (OLD) Road Tec (Binder only) (New) Caterpillar

9 MODEL DESIGNATION OF ASPHALT CONCRETE PAVER AP-1055B

10 SINGLE PASS LAYDOWN WIDTH (Feet) [1 2 0]

11 Layer No	12 Material Type Classification Code (01-HMAC)	13 Nominal Lift Placement Thickness				14 Tack Coat Between Lifts? (Y/N)	15 Transverse Joint Station
		1st Lift	2nd Lift	3rd Lift	4th Lift		
[0 4]	[0 1]	[2 8]	[ ]	[ ]	[ ]	[Y]	[+]
[0 5]	[0 1]	[1 2]	[ ]	[ ]	[ ]	[Y]	[1 + 9 0]
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[+]

16 LOCATION OF LONGITUDINAL SURFACE JOINT [1]
Between lanes 1 Within lane 2 (specify offset from pavement lane edge in feet) [1 2 0]

17 SIGNIFICANT EVENTS DURING CONSTRUCTION(disruptions, rain, equip problems, etc)
(Binder Layer) Contractor dug A small hole near shoulder stripe at 4+95 He was looking for the PCC Joint he Overlaid w/ HMAC. He also was looking in the wrong test Section for joints to saw + Seal

PREPARER Zac W Dunnam EMPLOYER BRE DATE 7-7-98

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 6 - 2 3 - 9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 6 - 2 3 - 9 8]

3 LAYER NUMBER Binder [0 4]

4 MIXING TEMPERATURE (°F) [3 3 0]
5 LAYDOWN TEMPERATURES (°F)

Mean	3 0 0	Number of Tests	0 1
Minimum	3 0 0	Maximum	3 0 0
Standard Deviation	0 0		

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 0 0				
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	1 0 0		2 5 0 0	L o w	4 5
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	0 3			
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A			
28	Coverages	0 3			
29	Air Temperature (°F)	1 0 0			
30	Compacted Thickness (In)	2 5			
31	Curing Period (Days)	2 0			

PREPARER [signature] EMPLOYER BRE DATE 7-7-98

ENTERED JAN 13 1999 D F-4

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 6-2 6-9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 6-2 6 9 8]

3 LAYER NUMBER Surface [0 5]

4 MIXING TEMPERATURE (°F) [3 3 0]
5 LAYDOWN TEMPERATURES (°F)

Mean	3 0 9 8	Number of Tests	0 4 0
Minimum	3 0 5 0	Maximum	3 1 7 0
Standard Deviation	5 5		

(305°F, 306°F, 311°F, 317°F)

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 0 0				
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	1 0 0		2 5 0 0	1 0 3	4 5
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	0 3			
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A			
28	Coverages	0 3			
29	Air Temperature (°F)	1 0 0			
30	Compacted Thickness (In)	1 5			
31	Curing Period (Days)	2 0			

PREPARER [signature] EMPLOYER BRE DATE 6-30-98

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 9 CONSTRUCTION QUALITY CONTROL MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 6-2 4-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 9-9 8]

3 NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	Rut Level-Up N/A	Mill Replacement N/A	Binder Course	Surface Course	Surface Friction N/A
Measurement Method (A, B, C)[1]			A	A	
Rod Depth (Inches)			N/A	N/A	
Number of Measurements			1 2	1 2	
Average (pcf)			1 4 8 2	1 4 2 2	
Maximum (pcf)			1 5 2 1	1 4 6 2	
Minimum (pcf)			1 4 2 4	1 3 6 6	
Standard Deviation (pcf)			2 8	3 2	
Layer Number			0 4	0 5	

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

4 MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

5 NUCLEAR DENSITY GAUGE MODEL NUMBER 4640

6 NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 626

7 NUCLEAR GAUGE DENSITY COUNT RATE FOR STANDARDIZATION

8 PROFILOGRAPH MEASUREMENTS N/A
Profilograph Type California 1 Rainhart 2
Profile Index (Inches/Mile)
Interpretation Method Manual 1 Mechanical 2 Computer 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

9 SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) NO

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 7-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP (N/A)	MILL REPLACEMENT (N/A)	BINDER COURSE	SURFACE COURSE	SURFACE FRICTION (N/A)
0+00	0			19	13	
	36			23	10	
	72			23	10	
	108			21	11	
	144			20	16	
0+50	0			22	17	
	36			24	13	
	72			23	12	
	108			22	13	
	144			20	13	
1+00	0			19	16	
	36			20	13	
	72			20	11	
	108			19	12	
	144			19	14	
1+50	0			20	14	
	36			24	11	
	72			25	11	
	108			25	12	
	144			23	16	
2+00	0			22	17	
	36			25	13	
	72			25	12	
	108			24	13	
	144			23	16	
2+50	0			18	17	
	36			23	13	
	72			22	12	
	108			24	11	
	144			22	14	
3+00	0			19	12	
	36			23	12	
	72			22	13	
	108			23	13	
	144			23	12	
LAYER NUMBER				04	05	

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

ENTERED JAN 13 1999 D F

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2. DATE MEASUREMENTS COMPLETED [0 6-2 7-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP (N/A)	MILL REPLACEMENT (N/A)	BINDER COURSE	SURFACE COURSE	SURFACE FRICTION (N/A)
3+50	0			17	16	
	36			23	12	
	72			22	12	
	108			22	12	
	144			20	12	
4+00	0			17	18	
	36			23	13	
	72			23	12	
	108			24	12	
	144			22	13	
4+50	0			17	14	
	36			21	11	
	72			21	10	
	108			22	10	
	144			18	14	
5+00	0			17	17	
	36			20	13	
	72			19	12	
	108			22	12	
	144			20	13	
+						
+						
+						
LAYER NUMBER				04	05	

PREPARER Ken W. Duncan EMPLOYER BRE DATE 7-21-98

JAN 13 1999 D F

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 11 MISCELLANEOUS CONSTRUCTION NOTES AND COMMENTS	* STATE CODE [01] * SPS PROJECT CODE [06] * TEST SECTION NO [06]

ENTERED JAN 13 1999 D F

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

- Contractor dug a hole in the binder layer with a pick axe @ 4+95. He was looking in the wrong section for (PCC) joints to saw + seal
- Cold joint @ 1+90 surface mix
- The Glencoe plant was used to produce both the binder and surface HMAC for this test section.

PREPARER Tom W. Dunman EMPLOYER BRE DATE 7-8-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 12 PARTIAL DEPTH PATCHING FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

1 DATE PATCHING OPERATIONS BEGAN (Month-Day-Year) [__ __-__ __-__ __]

2 DATE PATCHING OPERATIONS COMPLETED [__ __-__ __-__ __]

3. PRIMARY DISTRESS OCCURRENCE PATCHED (code from Table A 22) [__ __]
Other (Specify) _____

4 SECONDARY DISTRESS OCCURRENCE PATCHED (code from Table A 22) [__ __]
Other (Specify) _____

5 PATCHES
Total Square Feet [__ __ __ __]
Number [__ __]
Average Depth, Inches [__ __ __]

6 METHOD USED FOR PATCH BOUNDARY DETERMINATION __
Visual 1 Ball Peen Hammer, Steel Rod, Chain or Equivalent 2
Delam-Tech 3 Other (Specify) 4 _____

7 METHOD USED TO CUT BOUNDARIES __
Diamond Blade Saw 1 Carbide Blade Saw 2 None 3 Air Hammer 4
Cold Milling 5 Other (Specify) 6 _____

8 METHOD USED TO BREAK UP AND/OR REMOVE DETERIORATED CONCRETE __
Jackhammer 1 Cold Milling 2
Other (Specify) 3 _____

9 METHOD FOR FINAL CLEANING OF PATCH AREA __
None 1 Sandblasting 2 Waterblasting 3
Other (Specify) 4 _____

No Partial Depth Patching Done

PREPARER Ken N. Dunnam EMPLOYER BRE DATE 4-16-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 13 (13) PARTIAL DEPTH PATCHING FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

1 PATCH MATERIAL USED [__]
Portland Cement Concrete 1 Polymer Concrete 2 Epoxy Mortar 3
Other (Specify) 5 _____

2 BONDING AGENT [__]
None 1 Cement Grout 2 Epoxy Resin 3
Other (Specify) 5 _____

3 MIXTURE DESIGN FOR PATCH MATERIAL, LB /CUBIC YARD
Coarse Aggregate [__ __ __ __]
Fine Aggregate [__ __ __ __]
Cement [__ __ __ __]
Water (Gallons/Cubic yd) [__ __ __ __]

4 MAXIMUM SIZE OF COARSE AGGREGATE, INCHES __ __

5 CEMENT TYPE USED [__ __]
(See Cement Type Codes, Tables A 11)

6 AIR CONTENT, PERCENT BY VOLUME
Mean [__ __ .__]
Range Min [__ __ __]
Max [__ __ __]

7 ADMIXTURES [__ __]
(See Cement Additive Codes, Table A 12) [__ __]

8 SLUMP, INCHES
Mean [__ __]
Range Min [__ __]
Max [__ __]

9 COMPRESSIVE STRENGTH OF PATCH MATERIAL, PSI [__ __ __ __]
Curing Time, Days [__ __]
If Unavailable, and Other Strength Test Conducted,
Alternate Test [_____]
Type of Loading [_____]
Age, Days [__ __], Strength, PSI [__ __ __ __]

No Partial Depth Patching Done

PREPARER [signature] EMPLOYER BRE DATE 4-16-98

SPS-6 CONSTRUCTION DATA SHEET 14 PARTIAL DEPTH PATCHING FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

1 CURING METHOD METHOD 1 [__ __]
METHOD 2 [__ __]

None 1 Membrane Curing Compound 2 Burlap Curing Blankets . 3
Waterproof Paper Blankets 4 White Polyethylene Sheeting . 5
Burlap-Polyethylene Blankets 6 Insulating Layers 7
Cotton Mat Curing 8 Hay 9
Other (Specify) 10 _____

2. APPROXIMATE TIME BETWEEN PATCHING AND OPENING TO TRAFFIC, HOURS [__ __]

3 AMBIENT CONDITIONS AT TIME OF PATCHING LOW [__ __ __]
Air Temperature °F HIGH [__ __ __]
Surface Moisture - Dry = 1, Wet = 2 [__]

4 METHOD OF CONSOLIDATING MATERIALS __
Vibrators 1 Vibrating Screeds . 2 Troweling 3
Rodding/Tamping 4 Rolling 5
Other (Specify) 6 _____

5 FINISHING METHOD __
Screeding 1 Hand-Troweling 2 Machine-Troweling 3
Other (Specify) 4 _____

6 JOINT FORMING METHOD
Shoulder __
Transverse __
Longitudinal __

None 1 Polyethylene Strip Insert 2 Styrofoam Insert 3
Fiberboard Insert 4 Sawing 5 Forms 6
Other (Specify) 7 _____

No Partial Depth Patching Done

PREPARER [signature] EMPLOYER BRE DATE 4-16-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 20 FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

1 DATE PATCHING OPERATIONS BEGAN (Month-Day-Year) [0 4-0 8-9 8]

2 DATE PATCHING OPERATIONS COMPLETED [0 4-1 0-9 8]

3 PRIMARY DISTRESS OCCURRENCE PATCHED OR REPLACED WITH NEW SLAB [3 6]
(See Table A 22 for Type Codes)
Other (Specify) _____

4 SECONDARY DISTRESS OCCURRENCE PATCHED OR REPLACED WITH NEW SLAB 2 3
(See Table A 22 for Type Codes)
Other (Specify) _____

5 PATCHES

	NUMBER	SQ FEET
SLAB ONLY	[1]	[7 2]
SLAB AND BASE	[0]	[0]

6 PATCH MATERIAL USED [1]
Portland Cement Concrete 1 Polymer Concrete 2 Epoxy Mortar 4
Other (Specify) 5 _____

7 SLABS REPLACED

	NUMBER	SQ FEET
SLAB ONLY	[0]	[0]
SLAB AND BASE	[0]	[0]

8 METHOD FOR PATCH BOUNDARY DETERMINATION 1
Visual 1 Coring 2 Deflection 3
State Standard or Specification 4
Other (Specify) 5 _____

9 CUTTING INSTRUMENT 1
Diamond Blade Saw 1 Carbide Blade Saw 2 Wheel Saw 3
Air Hammer 4
Other (Specify) 5 _____

PREPARER [signature] EMPLOYER BRE DATE 6-2-98

LTPP-SPS CONSTRUCTION DATA FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED CONSTRUCTION DATA SHEET 21	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

1 SECURING LOAD TRANSFER DEVICES [3]
None 1 Grout Filler 2 Epoxy filler 3
Other 4 _____

2 REINFORCING STEEL PLACED IN PATCH [1]
No 1 Yes 2

	TEMPERATURE STEEL Transverse	TEMPERATURE STEEL Longitudinal	Dowel Bars	Tie Bars
3 REBAR NUMBER	[0 4]	[1 0]	[1 0]	[0 4]
4 BAR LENGTHS, INCHES	[1 8 0]	[1 8 0]	[1 8 0]	[1 8 0]
5 BAR SPACING, INCHES	[0 2 0]	[1 2 .0]	[1 2 0]	[0 2 0]

6 DOWEL COATINGS [6]
None 1 Paint and/or Grease 2 Plastic 3
Monel 4 Stainless Steel 5 Epoxy 6
Other (Specify) 7 _____

7 NUMBER OF SAW CUTS PER PATCH (If Sawed) [_ 6]

8 DEPTH OF TYPICAL BOUNDARY SAW CUT, INCHES [_ 5 0]

9 CONCRETE BREAKUP [1]
None . 1 Pneumatic Air Hammer . 2 Gravity Drop Hammer 3
Sawing 4
Other (Specify) 5 _____

10 REMOVAL OF CONCRETE [2]
Concrete Breakup and Cleanout . 1 Lift Out Intact Slab Section 2
Other (Specify) 3 _____

PREPARER Lone W. Duncan EMPLOYER BRE DATE 4-16-98

ENTERED JAN 13 1999 D F

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 22 FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

ENTERED JAN 13 1999 D F

1 METHOD OF REINFORCING STEEL PLACEMENT — leave blank → [__]
Chairs 1 Between Layers of Concrete 2

2 MIXTURE DESIGN FOR PATCH MATERIAL, LB./CUBIC YARD
Coarse Aggregate [1 9 3 5]
Fine Aggregate [1 0 9 9]
Cement [6 2 0]
Water (Gallons/Cubic Yard) [3 6]

3 CEMENT TYPE USED [4 1]
(See Type Codes, Tables A.11)

4 AIR CONTENT, PERCENT BY VOLUME
Mean [4 5]
Range [4 0] to [5 0]

5 ADMIXTURES [0 8]
(See Cement Additive Codes, Table A 12) [0 4]

6 SLUMP, INCHES
Mean [1.2]
Range [0.8] to [2.0]

7 FLEXURAL STRENGTH (MODULUS OF RUPTURE), PSI [__ __ __]
(Based on 3rd Point Loading) Curing Time, Days [__ __]
If Unavailable, and Other Strength Test Conducted,
Enter Alternate Test [Not Done]
Type of Loading [__]
Age, Days [__ __], Strength, PSI [__ __ __ __]

8 AMBIENT CONDITIONS AT TIME OF PATCHING
Air Temperature °F LOW [7 0] HIGH [7 5]
Surface Moisture - Dry = 1, Wet = 2 [1]

9 MAXIMUM SIZE OF COARSE AGGREGATE, INCHES 57/67 stone 1 0

10 CONSOLIDATION OF MATERIALS 1
Internal Vibrators 1 Vibrating Screeds 2 Troweling 3
Rolling 4 Tamping 5
Other (Specify) 6 ____

12 FINISHING 4
Screeding 1 Hand-Troweling 2 Machine-Troweling 3
Other (Specify) 4 Hand-Troweling then drug Burlap Sack over Area

PREPARER [signature] EMPLOYER BRE DATE 5-11-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~20~~ 23 FULL DEPTH REPAIR DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

1 JOINT FORMING METHOD SHOULDER [1] TRANSVERSE [1] LONGITUDINAL [7]

None 1 Polyethylene Strip Insert . 2 Styrofoam Insert 3
Fiberboard Insert 4 Sawing 5 Forms 6
Other (Specify) 7 TAR PAPER

2 WAS BOND BREAKER USED BETWEEN ADJACENT LANES? [1]
Yes 1 No . 2

3 CURING METHOD METHOD 1 [2] METHOD 2 [ ]

None 1 Membrane Curing Compound 2 Burlap Curing Blankets 3
Waterproof Paper Blankets 4 White Polyethylene Sheeting 6
Burlap-Polyethylene Blankets 6 Insulating Layers 7
Cotton Mat Curing 8 Hay 9
Other (Specify) . 10 _____

4 APPROXIMATE TYPICAL TIME BETWEEN PATCHING AND OPENING TO TRAFFIC, HOURS [24]

5 TYPE OF TRANSVERSE JOINTS IN PATCHES _ OR SLABS 3
None 1 All Expansion Joints 2 All Contraction Joints 3
Mixture of Expansion and Contraction Joints 4

6 WERE OLD JOINTS MATCHED? 2
Yes 1 No 2

PREPARER [signature] EMPLOYER BRE DATE 5-11-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 24 *LOAD TRANSFER RESTORATION DATA FOR PAVEMENTS WITH* PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * *SPS PROJECT CODE* [0 6] * TEST SECTION NO [0 6]

1 DATE LOAD TRANSFER RESTORATION BEGAN (Month-Day-Year) [0 3-3 0-9 8]

2. DATE LOAD TRANSFER RESTORATION COMPLETED [0 3-3 1-9 8]

3 NUMBER OF JOINTS IN TEST SECTION [2 5]

4 NUMBER OF JOINT LOAD TRANSFER RESTORATION LOCATIONS [1]

5 NUMBER OF DEVICES PER JOINT [1 0]

6 LOCATION OF DOWELS OR SHEAR DEVICES (INCHES)

(DISTANCE FROM THE OUTER LANE EDGE TO THE CENTER OF EACH DEVICE)

1st	[1 2]
2nd	[2 4]
3rd	[3 6]
4th	[4 8]
5th	[6 0]
6th	[7 2]
7th	[8 4]
8th	[9 6]
9th	[1 0 8]
10th	[1 2 0]
11th	[ ]
12th	[ ]
13th	[ ]
14th	[ ]

7 *DIAMETER OF RETROFIT DOWEL BARS, INCHES* [1 5 0]

8 MATERIAL USED TO BACKFILL SLOT/CORE HOLE [3]
Cement Based Grout 1 Polymer Concrete 2
Epoxy Resin Grout 3
Other (Specify) 4 _____

9 *BONDING AGENT USED BETWEEN EXISTING PCC AND BACKFILL MATERIAL* [1]
None 1 Epoxy 2 Cement/Water 3
Other (Specify) 4 _____

PREPARER [signature] EMPLOYER BRE DATE 4-16-98

EN
Q.W. ENTERED FEB 08 19

SPS-6 CONSTRUCTION DATA SHEET 25 LOAD TRANSFER RESTORATION DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO. [0 6]

G.W. ENTERED FEB 08 1999

1. LOAD TRANSFER EFFICIENCY BEFORE AND AFTER RESTORATION

Entered as 3

POINT DISTANCE (FEET)	LOAD TRANSFER EFFICIENCY (%) BEFORE RESTORATION APPROACH	BEFORE RESTORATION LEAVE	AFTER RESTORATION APPROACH	AFTER RESTORATION LEAVE
[2.5] Failed Joint ONLY *	[43.9	[64.0]	[.]	[.]
[.]	[.]	[.]	[.]	[.]
[.]	[.]	[.]	[.]	[.]
[.]	[.]	[.]	[.]	[.]
[.]	[.]	[.]	[.]	[.]
[.]	[.]	[.]	[.]	[.]
[.]	[.]	[.]	[.]	[.]
[.]	[.]	[.]	[.]	[.]
[.]	[.]	[.]	[.]	[.]
[.]	[.]	[.]	[.]	[.]

2. DATE OF LOAD TRANSFER EFFICIENCY TESTS
   BEFORE RESTORATION (Month-Day-Year) [03-30-98]
   AFTER RESTORATION [- -]

* Note: Test results for each joint can be found in the Construction file located at the Southern Region Coordination Office (BRE).

PREPARER Ken W. Dunnam EMPLOYER BRE DATE 4-16-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 2b UNDERSEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO. [0 6]

1. DATE UNDERSEALING BEGAN (Month-Day-Year) [__ __-__ __-__ __]

2. DATE UNDERSEALING COMPLETED [__ __-__ __-__ __]

3. TYPE OF MIXTURE USED IN SUBSEALING [__]
   Cement-Loam Top Soil Slurry... 1 Cement-Limestone Dust Slurry... 2
   Cement-Pozzolan Slurry... 3 Cement-Fine Sand Slurry... 4
   Other (Specify)... 6 _____

MIX DESIGN OF PORTLAND CEMENT GROUT (Items 4. to 8.)

4. CEMENT TYPE (SEE CEMENT TYPE CODES, TABLE A.11) [__ __]
5. CEMENT TO SAND RATIO (BY WEIGHT) [__ .__]
6. WATER/CEMENT RATIO (BY WEIGHT) [__ .__ __]
7. ADDITIVE TYPE (SEE TABLE A.12) [__ __]
8. AMOUNT OF ADDITIVE (BY PERCENT OF CEMENT WEIGHT) [__ __ __.]

9. FLUIDITY OF PORTLAND CEMENT GROUT [__ __ .__]
   (Flow Cone Method ASTM C939) (SEC)

10. CUBE COMPRESSIVE STRENGTH OF PORTLAND CEMENT GROUT, psi __ __ __.

11. CURING PERIOD FOR PORTLAND CEMENT GROUT (DAYS) __ __

12. DETERMINATION OF AREA TO BE UNDERSEALED [__]
    Blanket Coverage... 1 Deflection Data... 2
    Visual Signs of Pumping... 3
    Other (Specify)... 4 _____

No Undersealing Done

PREPARER Tom W. Duncan EMPLOYER BRE DATE 4-16-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 27 UNDERSEALING DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES, CONTINUED	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

1 DEPTH OF UNDERSEALING HOLE FROM TOP OF SLAB (INCHES) [_ _ _]

2 MAXIMUM ALLOWABLE PUMPING PRESSURE (Gauge at Plant) (PSI) [_ _ _]

3 MAXIMUM SURGE PRESSURE (PSI) [_ _ _]

4 SLABS IN TEST SECTION (JOINTED CONCRETE PAVEMENTS ONLY)
Total Number [_ _ _] Number Undersealed [_ _ _]

5 AVERAGE NUMBER OF HOLES PER SLAB UNDERSEALED (JCP Only) [_ _]

6 TYPICAL NUMBER OF UNDERSEALING HOLES NEAR JOINT OR CRACK (JCP Only) [_ _]

7 AVERAGE VOLUME OF MATERIAL PUMPED PER HOLE (Cubic Feet) [_ _ _]

8 MONITORING OF LIFT [_]
Deflection Device (e g , Benkelman Beam) 1 Maximum Pumping Time 2
Appearance of Material in Adjacent Joints or Cracks 3
Other (Specify) 4 _____

9 TYPICAL TIME BETWEEN UNDERSEALING AND REOPENING TO TRAFFIC (HOURS) [_ _]

FWD? 11 WERE DEFLECTION MEASUREMENTS TAKEN BEFORE AND AFTER UNDERSEALING?
Yes 1 No 2
BEFORE UNDERSEALING [_]
AFTER UNDERSEALING [_]

12 TIME OF DAY WHEN DEFLECTION MEASUREMENTS WERE CONDUCTED (HOURS)

	STARTING TIME	ENDING TIME
BEFORE UNDERSEALING	[_ _ _ _]	[_ _ _ _]
AFTER UNDERSEALING	[_ _ _ _]	[_ _ _ _]

No Undersealing Done

PREPARER [signature] EMPLOYER BRE DATE 4-16-98

April 1991 (Heading revised October 1992)

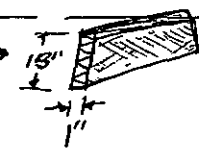
SPS-6 CONSTRUCTION DATA SHEET 28 SUBDRAINAGE RETROFIT FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 6]

G.W. ENTERED FEB 08 1999

1 DATE SUBDRAINAGE PLACEMENT BEGAN (Month-Day-Year) [03-04-98]

2 DATE SUBDRAINAGE PLACEMENT COMPLETED [03-06-98]

3 TYPE OF DRAINAGE PIPE [7]
Clay Tile 1 Concrete Tile 2 Vitrified Clay 3
Perforated Plastic Bituminous Fiber 4 Perforated Corrugated Metal 5
Corrugated Plastic Tubing 6 Drainage Mat 7
Other (Specify) 8 _____

4 DIAMETER OF PIPE (INCHES) Filter Mat 1"x18" ⇒  [_ _ _] N/A

5 DEPTH OF ~~PIPE~~ MAT BELOW TOP OF PAVEMENT SURFACE (INCHES) [_ 8 0]

6 HORIZONTAL PLACEMENT OF ~~PIPE~~ MAT FROM OUTER EDGE OF PAVEMENT (INCHES) [_ 0 0]

7 TYPE OF PRIMARY FILTER USED [3]
Graded Aggregate 1 Uniformly Graded Aggregate (One Size) 2
Woven Fabric 3 Non-Woven Fabric 4 Porous PCC 5
Porous Bituminous Concrete 6
Other (Specify) 7 _____

8 MAXIMUM PARTICLE SIZE OF PRIMARY FILTER MATERIAL (INCHES) [_ _] N/A

9 GRADATION OF PRIMARY FILTER MATERIAL
% Passing #4 Sieve [_ _ _] % Passing #40 Sieve [_ _ _]
% Passing #10 Sieve [_ _ _] % Passing #100 Sieve [_ _ _] N/A

10 PERMEABILITY OF PRIMARY FILTER MATERIAL (FT/DAY) 566 93 ft/day → will not except over 99

11 TYPE AND LOCATION OF SECONDARY FILTER MATERIAL [3]
Fabric Encapsulating the Primary Filter Material 1
Fabric Encapsulating the Drainage Pipe 2
Other (Specify) 3 None used

D.D Not Enter DW 2/8/99

12 AVERAGE OUTLET INTERVAL (FEET) 730 3 ft -

13 PRIMARY PURPOSE OF SUBDRAINAGE INSTALLATION [1]
Remove Free Water From Pavement Layers 1
Cut Off Side-Hill/Through Hill Seepage 2
Lower Water Table 3
Other (Specify) 4 _____

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

Revised December 15, 1989

SHEET 1

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 6]

GW ENTERED FEB 08 1999

IMPROVEMENT LISTING

* 1 DATE COMPLETED (MO/DAY/YR)	* 2. WORK[1] TYPE CODE (TABLE A 17)	* 3. WORK QUANTITY (UNITS FROM (TABLE A 17)	4 THICKNESS (INCHES)	5 COST[2] (THOUSANDS OF DOLLARS PER LANE-MILE)
[0 4/1 3/9 8]	[3 8]	[_ _ 5 0 0]	_ N _	_ _ _
[0 6/2 6/9 8]	[1 1]	[_ _ 5 5 6]	_ 3 5	_ _ _
[0 6/2 6/9 8]	[1 9]	[_ _ 6 6 7]	_ 3 5	_ _ _
END 1/7/99 ~~[0 4/1 0/9 8]~~	~~[0 4]~~	~~[_ _ _ _ 8]~~	~~1 0 0~~	_ _ _
[0 4/1 0/9 8]	[5 0]	[_ _ _ _ N]	_ N _	_ _ _
~~[0 6/2 6/9 8]~~	~~[3 6]~~	~~[_ _ 6 6 7]~~	~~_ N _~~	_ _ _

NOTES

1 For each specific work type, the appropriate set of sheets should be completed (as indexed in Table 7 1) It is recognized that parts of both Chapter 6 (Maintenance Data Collection) and Chapter 7 (Rehabilitation Data Collection) may be required to adequately record a given set of improvements for a test section

2 Cost includes only pavement structure cost Non-pavement costs such as cut and fill work, work on bridges, culverts, lighting, and guard rails are to be excluded

38 = Sub drains (longitudinal)
11 = AC Shlder Replacement
19 = AC overlay
09 = Full Depth Jnt Repair Patching
50 = Jnt. Load Transfer Restoration
36 = Tack Coat

Maintenance Not Rehab

Revised December 15, 1989

*STATE ASSIGNED ID [_ _ _ _]

SHEET 2

*STATE CODE [0 1]

REHABILITATION DATA

*SHRP SECTION ID [0 6 0 6]

LTPP PROGRAM

D.W. ENTERED FEB 08 1999

REVISED LAYER DESCRIPTIONS

1.	*2.	*3.	*4.			
LAYER[1] NUMBER	LAYER[2] DESCRIPTION	MATERIAL[3,4] TYPE CLASSIFICATION	<-------- LAYER THICKNESS (IN) --------> MEAN	MIN	MAX	STD DEV
1	SUBGRADE(7)	[9 9]				
2	[0 5]	[9 9]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
3	[0 3]	[9 9]	[_ _ _._]	_ _ _ _	_ _ _ _	_ _ _ _
4	[0 4]	[0 1]	[_ _2 2]	_ _1 7	_ _2 5	_ _0 2
5	[0 1]	[0 1]	[_ _1 3]	_ _1 0	_ _1 8	_ _0 2
6	[_ _]	[_ _]	[_ _ _._]	_ _ _ _	_ _ _ _	_ _ _ _
7	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
8	[_ _]	[_ _]	[_ _ _._]	_ _ _ _	_ _ _ _	_ _ _ _
9	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _

NOTES

1 Layer 1 is subgrade soil, last layer is existing 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 (Below Surface Layer)	04	Interlayer	08	Recycled Layer	12

3 The material type classification codes for surface, base or subbase, subgrade, and seal coat or interlayer materials appear in Tables A 5, A 6, A 7 and A 8, respectively

4 If the materials or thicknesses of a layer has not changed during the rehabilitation, enter "99" as the material type classification and leave the layer thicknesses for that layer blank If a layer has changed, enter the appropriate codes and thicknesses

This sheet Added 1/27/99

Revised December 15, 1989

*STATE ASSIGNED ID [_ _ _ _]

SHEET 7

*STATE CODE [0 1]

REHABILITATION DATA

*SHRP SECTION ID [0 6 0 6]

LTPP PROGRAM

G.W. ENTERED FEB 09 1999

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)	Poly Binder [4]
2. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)	2.552 ~~2565~~
3 BULK SPECIFIC GRAVITY (ASTM D1188) ZWP 4/16/99	2.461 ~~2694~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	4.4
5 PERCENT AIR VOIDS (EQ 7 4)	3.6
6 MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)	234
7. NUMBER OF BLOWS	750
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(0.93mm)~~ (AASHTO T245 OR ASTM D1559)	10.3 ~~37~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	_ _ _
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	_ _ _ _

Tom W. Dunnam BRE/SRCO 7-17-98

Revised December 15, 1989

SHEET 7

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 6]

G.W. ENTERED FEB 09 1999

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)	Surface [5]
2. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3) ZWD 4/16/99	2.437 ~~2.435~~
3. BULK SPECIFIC GRAVITY (ASTM D1188)	2.338 ~~2.581~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	5.4
5 PERCENT AIR VOIDS (EQ 7 4)	4.1
6. MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559) ZWD 4/16/99	4260 ~~4391~~
7 NUMBER OF BLOWS ZWD 4/16/99	750
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(0.99mm)~~ (AASHTO T245 OR ASTM D1559)	11.0 ~~39~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	_ _ _
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	_ _ _ _

Tom W. Duncan BRE/SRCO 7-15-98

Revised December 15, 1989

SHEET 61

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 6]

EN. D JUN 13 1990 D F

RESTORATION OF AC SHOULDERS

* 1. SHOULDER RESTORED [3]
- Outside 1
- Inside 2
- Both 3

		INSIDE SHOULDER	OUTSIDE SHOULDER
* 2.	SURFACE TYPE (CODES-TABLE A 5)	1	[1]
* 3	TOTAL WIDTH (FEET)	0 4	[1 0]
* 4	PAVED WIDTH (FEET)	0 4	[1 0]
* 5	SHOULDER BASE TYPE (CODES-TABLE A 6)	2 1	[2 1] ← No Base used
* 6	SURFACE THICKNESS (INCHES)	_ 3.5	[_ 3 5]
* 7	BASE THICKNESS (INCHES)	_ 0 0	[_ 0 0] N/A

* 8 TYPE OF SHOULDER RESTORATION [2]
- AC Overlay Without Removal of Existing AC .. 1
- Cold Milling and AC Overlay 2
- Complete Shoulder Removal and Replacement 3
- In-place Recycling and Overlay . 4
- Other (Specify)_____ 5

* 9 TYPE OF AC MATERIALS [1]
- New Materials 1
- Hot Recycled Materials. . 2
- Cold Recycled Materials . 3
- Other (Specify)_____ 4

*10 THICKNESS OF AC MATERIAL REMOVED BY COLD MILLING (IN) [3 5]

*11. AC OVERLAY THICKNESS (IN) [4 0]

12 LANE/SHOULDER JOINT SEALANT [1]
- None . .. 1
- Sealed Without Providing Reservoir 2
- Saw Reservoir and Seal . 3
- Other (Specify)_____ 4

13 LANE/SHOULDER JOINT SEALANT RESERVOIR
- WIDTH (INCHES) _ _
- DEPTH (INCHES) _ _

14 TYPE OF JOINT SEALANT _
- Poured 1
- Preformed . 2

NOTE DATA ITEMS 8 TO 14 PERTAIN ONLY TO THE RESTORED OUTSIDE SHOULDER

SPS-6 CONSTRUCTION DATA SHEET 2 REVISED LAYER DESCRIPTIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 7]

ENV - D JAN 13 1999 D F

1 LAYER NUMBER	2 LAYER DESCRIPTION	3 MATERIAL TYPE CLASS	4 LAYER THICKNESSES (Inches)			
			AVERAGE	MINIMUM	MAXIMUM	STD. DEV
1	SUBGRADE(7)	[5 2]	[redacted]	[redacted]	[redacted]	[redacted]
2	[0 5]	[2 3]	[_ _6 0]	_ _ _ _	_ _ _ _	_ _ _ _
3	[0 3]	[0 4]	[_ 10.0]	_ _ _ _	_ _ _ _	_ _ _ _
Polymer modified Binder 4	[0 4]	[0 1]	[_ _3 0]	_ _1 4	_ _4 2	_ _0 5
surface 5	[0 1]	[0 1]	[_ _1 3]	_ _0 8	_ _2 0	_ _0 3
6	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
7	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
8	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
9	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
10	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
11	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
12	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
13	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
14	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
15	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _

NOTES

1 Layer 1 is 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 w/overlay	02	Subbase Layer	06	Surface Treatment	10
Original Surface	03	Subgrade	07	Embankment (Fill)	11
HMAC Layer (Subsurface)	04	Interlayer	08		

If milling was performed, the layers which were milled shall be assigned their previous layer number and material type If the layer was completely removed by milling, it shall still be shown as a layer with a zero thickness

3 Enter the material type classification codes from Tables A 5, A 6, A 7 and A 8 which best describes the material in each layer If the layer was milled, enter the material classification code corresponding to the type material which was removed

4 Enter the average thickness of each layer and the maximum, minimum, and standard deviation of the thickness measurements, if known If a layer was partially milled, the remaining thickness of the layer shall be indicated

PREPARER Tom W. Denman EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 7 OVERLAY PLACEMENT OPERATIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 7]

1 DATE SURFACE PREPARATION BEGAN (Month-Day-Year) [0 5-1 3-9 8]
2 DATE SURFACE PREPARATION COMPLETED [0 6-2 6-9 8]

3 SURFACE PREPARATION PRIOR TO PLACEMENT OF OVERLAY [3]
None 1 Broomed 2 Broomed + Asphaltic Tack Coat 3
Asphaltic Tack Coat (only) 4

4 TACK COAT MATERIAL
Material Type None 1 SS-1 .. 2 SS-1H 3 CRS-1 4 [1 0]
CRS-2 5 CMS-2 6 CMS-2H.. 7 CSS-1 . 8 CSS-1H 9
Other. 10 (Specify) CQS1-H (Emulsion)

5 TACK COAT DILUTION (Percent) [0]
or Mixing Rate Parts Diluent ___ TO Parts Asphalt ___

6 TACK COAT APPLICATION RATE (Gal/Sq Yd.) [0 0 9]

7 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Glencoe Plant	[3 0]	[4 0]	[5]	[ ]	[ ]
Plant 2	[2]	Turkey Town Plant	[3 0]	[4 0]	[4]	[ ]	[ ]
Plant 3	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]

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

8 MANUFACTURER OF ASPHALT CONCRETE PAVER Barber Greene (Binder only) Caterpillar

9 MODEL DESIGNATION OF ASPHALT CONCRETE PAVER AP-1055B

10 SINGLE PASS LAYDOWN WIDTH (Feet) [1 2 0]

01-AMAC

11 Layer No	12 Material Type Classification Code	13 Nominal Lift Placement Thickness				14 Tack Coat Between Lifts? (Y/N)	15 Transverse Joint Station
		1st Lift	2nd Lift	3rd Lift	4th Lift		
[0 4]	[0 1]	[2 8]	[ ]	[ ]	[ ]	[Y]	[2+5 0]
[0 5]	[0 1]	[1 2]	[ ]	[ ]	[ ]	[Y]	[+]
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[+]

16. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
Between lanes.. 1 Within lane 2 (specify offset from pavement lane edge in feet) [1 2 0]

17 SIGNIFICANT EVENTS DURING CONSTRUCTION(disruptions, rain, equip problems, etc)
Started Transition in test section near 5+00 for 1st 1 ft into test section 8 on binder. 2nd cold joint in binder @ 3+40 Plant kept breaking down

PREPARER [signature] EMPLOYER BRE DATE 7-7-98

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 7]

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5 - 1 3 - 9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 5 - 1 4 - 9 8]

3 LAYER NUMBER Binder [0 4]

4 MIXING TEMPERATURE (°F) [3 2 0]
5 LAYDOWN TEMPERATURES (°F)
Mean 310 Number of Tests 01
Minimum 310 Maximum 310
Standard Deviation 00

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press (psi)	Frequency (Vibr /Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	100				
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	100		2500	Low	45
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	03			
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A			
28	Coverages	03			
29	Air Temperature (°F)	100			
30	Compacted Thickness (In)	25			
31	Curing Period (Days)	20			

PREPARER [signature] EMPLOYER BRE DATE 7-7-98

ENTERED JAN 13 1999 D F

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 7]

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [06-26-98]
2 DATE PAVING OPERATIONS COMPLETED [06-26-98]

3 LAYER NUMBER Surface [05]

4 MIXING TEMPERATURE (°F) [315]
5 LAYDOWN TEMPERATURES (°F)

Mean	306	Number of Tests	01.
Minimum	306	Maximum	306.
Standard Deviation	00		

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press (psi)	Frequency (Vibr /Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	100				
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	100		2500	LOW	45
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
23	BREAKDOWN Roller Code (A-Q)	M			
24	Coverages	03			
25	INTERMEDIATE Roller Code (A-Q)				
26	Coverages				
27	FINAL Roller Code (A-Q)	A			
28	Coverages	03			
29	Air Temperature (°F)	100			
30	Compacted Thickness (In)	15			
31	Curing Period (Days)	20			

PREPARER [signature] EMPLOYER BRE DATE 7-7-98

SPS-6 CONSTRUCTION DATA SHEET 9 CONSTRUCTION QUALITY CONTROL MEASUREMENTS	* STATE CODE [01] * SPS PROJECT CODE [06] * TEST SECTION NO [07]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [05-14-98]
2 DATE MEASUREMENTS COMPLETED [06-29-98]

3 NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	Rut Level-Up (N/A)	Mill Replacement (N/A)	Binder Course	Surface Course	Surface Friction (N/A)
Measurement Method (A, B, C)[1]			A	A	
Rod Depth (Inches)			N/A	N/A	
Number of Measurements			12	12	
Average (pcf)			1495	1397	
Maximum (pcf)			1523	1432	
Minimum (pcf)			1456	1367	
Standard Deviation (pcf)			19	22	
Layer Number			04	05	

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

4 MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

5 NUCLEAR DENSITY GAUGE MODEL NUMBER 4640

6 NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 626

7 NUCLEAR GAUGE DENSITY COUNT RATE FOR STANDARDIZATION

8 PROFILOGRAPH MEASUREMENTS N/A
Profilograph Type California 1 Rainhart 2
Profile Index (Inches/Mile)
Interpretation Method Manual 1 Mechanical 2 Computer 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

9 SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) No

PREPARER Tore W. Duman EMPLOYER BRE DATE 7-21-98

JAN 13 1999 D F

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 7]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 6-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP N/A	MILL REPLACEMENT N/A	BINDER COURSE	SURFACE COURSE	SURFACE FRICTION N/A
0+00	0			28	10	
	36			30	11	
	72			30	13	
	108			29	16	
	144			30	16	
0+50	0			23	11	
	36			29	11	
	72			29	13	
	108			29	17	
	144			31	20	
1+00	0			24	12	
	36			31	08	
	72			32	11	
	108			34	13	
	144			35	17	
1+50	0			24	12	
	36			28	12	
	72			30	12	
	108			32	13	
	144			34	16	
2+00	0			24	13	
	36			31	11	
	72			32	12	
	108			31	16	
	144			30	19	
2+50	0			24	13	
	36			31	10	
	72			31	12	
	108			34	14	
	144			35	16	
3+00	0			24	12	
	36			32	10	
	72			37	10	
	108			36	12	
	144			37	14	
LAYER NUMBER				04	05	

PREPARER Fred W. Duncan EMPLOYER BRE DATE 7-21-98

JAN 13 1999 D F

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 7]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 6-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP (N/A)	MILL REPLACEMENT (N/A)	BINDER COURSE	SURFACE COURSE	SURFACE FRICTION (N/A)
3+50	0			20	14	
	36			26	14	
	72			30	14	
	108			31	18	
	144			3.5	19	
4+00	0			14	13	
	36			22	13	
	72			28	13	
	108			32	16	
	144			35	17	
4+50	0			18	12	
	36			25	12	
	72			28	13	
	108			32	14	
	144			36	14	
5+00	0			24	12	
	36			31	12	
	72			34	12	
	108			36	1.4	
	144			42	1.3	
+						
+						
+						
+						
LAYER NUMBER				04	05	

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

ENG-ED JUL 13 1999 D F.

SPS-6 CONSTRUCTION DATA SHEET 11 MISCELLANEOUS CONSTRUCTION NOTES AND COMMENTS	* STATE CODE [01] * SPS PROJECT CODE [06] * TEST SECTION NO [07]

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

(Turkey Town Plant)

- Plant kept gumming up due to polymer in mix so there were two cold joints in the binder layer at 2+50 and 3+40.

- Paver started paving (transition) near 5+00 for the binder layer. Therefore, the cores taken outside of 5+00 may be a little thicker than 4".

- Different asphalt plants were used for binder and surface HMAC production

PREPARER Kane N. Dunner EMPLOYER BRE DATE 7-8-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 28 SUBDRAINAGE RETROFIT FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 7]

GW ENTERED FEB 08 1999

1 DATE SUBDRAINAGE PLACEMENT BEGAN (Month-Day-Year) [0 3 - 0 4 - 9 8]

2 DATE SUBDRAINAGE PLACEMENT COMPLETED [0 3 - 0 6 - 9 8]

3 TYPE OF DRAINAGE PIPE [7]
Clay Tile 1 Concrete Tile 2 Vitrified Clay 3
Perforated Plastic Bituminous Fiber 4 Perforated Corrugated Metal . 5
Corrugated Plastic Tubing 6 Drainage Mat 7
Other (Specify) 8 _____

4 DIAMETER OF PIPE (INCHES) Filter MAT 1"x18" ⇒ 18" [_ _ _] N/A

5 DEPTH OF ~~PIPE~~ MAT BELOW TOP OF PAVEMENT SURFACE (INCHES) 1" [_ 8 0]

6 HORIZONTAL PLACEMENT OF ~~PIPE~~ MAT FROM OUTER EDGE OF PAVEMENT (INCHES) [_ 0 0]

7 TYPE OF PRIMARY FILTER USED [3]
Graded Aggregate 1 Uniformly Graded Aggregate (One Size) 2
Woven Fabric 3 Non-Woven Fabric 4 Porous PCC 5
Porous Bituminous Concrete 6
Other (Specify) 7 _____

8 MAXIMUM PARTICLE SIZE OF PRIMARY FILTER MATERIAL (INCHES) [_ _] N/A

9 GRADATION OF PRIMARY FILTER MATERIAL
% Passing #4 Sieve [_ _ _] % Passing #40 Sieve [_ _ _]
% Passing #10 Sieve [_ _ _] % Passing #100 Sieve [_ _ _] N/A

10 PERMEABILITY OF PRIMARY FILTER MATERIAL (FT/DAY) (566.93 ft/day) ← Did Not Enter

11 TYPE AND LOCATION OF SECONDARY FILTER MATERIAL [3]
Fabric Encapsulating the Primary Filter Material 1
Fabric Encapsulating the Drainage Pipe 2
Other (Specify) 3 None used

12 AVERAGE OUTLET INTERVAL (FEET) 7303 ft

13 PRIMARY PURPOSE OF SUBDRAINAGE INSTALLATION [1]
Remove Free Water From Pavement Layers 1
Cut Off Side-Hill/Through Hill Seepage 2
Lower Water Table 3
Other (Specify) 4 _____

PREPARER Tim W Dunnon EMPLOYER BRE DATE 7-8-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET ~~26~~ 29 CRACK/BREAK AND SEAT DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 7]

G.W. ENTERED FEB 08 1999

1 DATE CRACK/BREAK AND SEAT OPERATION BEGAN (Month-Day-Year) [05-04-98]

2 DATE CRACK/BREAK AND SEAT OPERATION COMPLETED [05-04-98]

3 AVERAGE PCC BREAKAGE SIZE (INCHES)
Width 144 in → 1 [44.]
Length [18]

Did not Enter 2/8/99

4 PAVEMENT BREAKER PASSES/LANE [1]

5 PAVEMENT BREAKER TYPE [4]
Pile Driver Hammer 2 Guillotine Drop Hammer 4
Other (Specify) 7 _____

6 SEATING ROLLER WEIGHT (TONS) [30]

7 NUMBER OF SEATING ROLLER PASSES/LANE [2]

8 DEFLECTION MEASUREMENTS TAKEN
Yes 1 No 2
Before Breaking [1]
After Breaking (Prior to Seating) [2]
After Seating (Prior to Overlay) [1]
After Overlay [1]

9 BROKEN PAVEMENT SURFACE PREPARATION [1]
None 1 Sweeping 2 Tack Coat 3 Leveling Course 4
Full Depth Repair of Failed Areas 5
Other (Specify) 6 _____

PREPARER [signature] EMPLOYER BRE DATE 6-15-98

Revised December 15, 1989

SHEET 1

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 7]

G.W ENTERED FEB 08 1999

IMPROVEMENT LISTING

* 1 DATE COMPLETED (MO/DAY/YR)	* 2. WORK[1] TYPE CODE (TABLE A 17)	* 3 WORK QUANTITY (UNITS FROM (TABLE A 17)	4 THICKNESS (INCHES)	5 COST[2] (THOUSANDS OF DOLLARS PER LANE-MILE)
[0 4/1 3/9 8]	[3 8]	[_ _ 5 0 0]	_ N _	_ _ _
[0 6/2 6/9 8]	[1 1]	[_ _ 5 5 6]	_ 3 5	_ _ _
[0 6/2 6/9 8]	[1 9]	[_ _ 6 6 7]	_ 4 3	_ _ _
ZWD 1/27/99 ~~[0 6/2 6/9 8]~~	~~[3 6]~~	~~[_ _ 6 6 7]~~	~~_ N _~~	_ _ _
[0 5/0 4/9 8]	[4 6]	[_ _ 6 6 7]	_ N _	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _

NOTES

1 For each specific work type, the appropriate set of sheets should be completed (as indexed in Table 7 1) It is recognized that parts of both Chapter 6 (Maintenance Data Collection) and Chapter 7 (Rehabilitation Data Collection) may be required to adequately record a given set of improvements for a test section

2 Cost includes only pavement structure cost Non-pavement costs such as cut and fill work, work on bridges, culverts, lighting, and guard rails are to be excluded

38 = Subdrains (Longitudinal)
11 = AC Shldr Replacement
19 = AC Overlay
36 = Tack Coat
46 = Crack + Seat for new AC Surface

Maintenance not Rehab

Revised December 15, 1989

SHEET 2

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 7]

G W ENTERED FEB 08 1999

REVISED LAYER DESCRIPTIONS

1. LAYER[1] NUMBER	*2. LAYER[2] DESCRIPTION	*3. MATERIAL[3,4] TYPE CLASSIFICATION	*4 <-------- LAYER THICKNESS (IN) --------> MEAN	MIN	MAX	STD DEV
1	SUBGRADE(7)	[9 9]				
2	[0 5]	[9 9]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
3	[0 3]	[9 9]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
4	[0 4]	[0 1]	[_ _3 0]	_ _1 4	_ _4 2	_ _0 5
5	[0 1]	[0 1]	[_ _1 3]	_ _0 8	_ _2 0	_ _0 3
6	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
7	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
8	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
9	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _

NOTES

1 Layer 1 is subgrade soil, last layer is existing 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 (Below Surface Layer)	04	Interlayer	08	Recycled Layer	12

3 The material type classification codes for surface, base or subbase, subgrade, and seal coat or interlayer materials appear in Tables A 5, A 6, A 7 and A 8, respectively

4 If the materials or thicknesses of a layer has not changed during the rehabilitation, enter "99" as the material type classification and leave the layer thicknesses for that layer blank If a layer has changed, enter the appropriate codes and thicknesses

This Sheet Added 1/27/99 [illegible]

Revised December 15, 1989

SHEET 7

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 7]

O.W. ENTERED FEB 09 1999

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)	Poly Binder [4]
2. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)	2.545 ~~2.548~~
3 BULK SPECIFIC GRAVITY (ASTM D1188) ZWD 4/16/99	2.452 ~~2.694~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	4.3
5 PERCENT AIR VOIDS (EQ 7 4)	3.7
6. MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)	2447
7 NUMBER OF BLOWS	750
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(1.14mm)~~ ZWD 4/16/99 (AASHTO T245 OR ASTM D1559)	12.7 ~~4.5~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	_ _ _
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	_ _ _ _

~~Tom~~ W Duncan BRE/SRCO 7-15-98

Revised December 15, 1989

SHEET 7

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 7]

GW ENTERED FEB 09 1999

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)	Surface [5]
2. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)	2.440 ~~2442~~
3. BULK SPECIFIC GRAVITY (ASTM D1188) ZWD 4/16/99	2.344 ~~2581~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	5.5
5 PERCENT AIR VOIDS (EQ 7 4)	3.9
6 MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559) ZWD 4/16/99	4260 ~~9391~~
7 NUMBER OF BLOWS ZWD 4/16/99	750
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(0.99mm)~~ (AASHTO T245 OR ASTM D1559)	11.0 ~~39~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	_ _ _
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	_ _ _ _

Fred N. Dawson BRE/SRCO 7-17-98

Revised December 15, 1989

SHEET 61

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 7]

RESTORATION OF AC SHOULDERS

* 1. SHOULDER RESTORED [3]
- Outside 1
- Inside 2
- Both 3

		INSIDE SHOULDER	OUTSIDE SHOULDER
* 2.	SURFACE TYPE (CODES-TABLE A.5)	1	[1]
* 3	TOTAL WIDTH (FEET)	0 4.	[1 0]
* 4.	PAVED WIDTH (FEET)	0 4	[1 0]
* 5	SHOULDER BASE TYPE (CODES-TABLE A.6)	2 1	[2 1] ← No Base used
* 6	SURFACE THICKNESS (INCHES)	_ 3.5	[_ 3 5]
* 7	BASE THICKNESS (INCHES)	_ 0 0	[_ 0 0] N/A

* 8. TYPE OF SHOULDER RESTORATION [2]
- AC Overlay Without Removal of Existing AC 1
- Cold Milling and AC Overlay. . 2
- Complete Shoulder Removal and Replacement 3
- In-place Recycling and Overlay.. . 4
- Other (Specify)_____ 5

* 9. TYPE OF AC MATERIALS [1]
- New Materials 1
- Hot Recycled Materials . 2
- Cold Recycled Materials .. 3
- Other (Specify)_____ 4

*10 THICKNESS OF AC MATERIAL REMOVED BY COLD MILLING (IN) [3 5]

*11 AC OVERLAY THICKNESS (IN) [4 0]

12 LANE/SHOULDER JOINT SEALANT [1]
- None 1
- Sealed Without Providing Reservoir . 2
- Saw Reservoir and Seal 3
- Other (Specify)_____ 4

13 LANE/SHOULDER JOINT SEALANT RESERVOIR
- WIDTH (INCHES) _ _
- DEPTH (INCHES) _ _

14 TYPE OF JOINT SEALANT _
- Poured . . . 1
- Preformed . . 2

NOTE DATA ITEMS 8 TO 14 PERTAIN ONLY TO THE RESTORED OUTSIDE SHOULDER

SPS-6 CONSTRUCTION DATA SHEET 2 REVISED LAYER DESCRIPTIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 8]

G.W. ENTERED JAN 12 1999

	1 LAYER NUMBER	2 LAYER DESCRIPTION	3 MATERIAL TYPE CLASS	4 LAYER THICKNESSES (Inches)			
				AVERAGE	MINIMUM	MAXIMUM	STD. DEV
	1	SUBGRADE(7)	[5 2]	[redacted]	[redacted]	[redacted]	[redacted]
	2	[0 5]	[2 3]	[6 0]	----	----	----
	3	[0 3]	[0 4]	[1 0 0]	----	----	----
Lower Binder	4	[0 4]	[0 1]	[4 5]	3 6	5 6	0 4
Upper Binder	5	[0 4]	[0 1]	[2 6]	1 9	3 6	0 4
Surface	6	[0 1]	[0 1]	[1 3]	0 0	1 7	0 3
	7	[ ]	[ ]	[ ]	----	----	----
	8	[ ]	[ ]	[ ]	----	----	----
	9	[ ]	[ ]	[ ]	----	----	----
	10	[ ]	[ ]	[ ]	----	----	----
	11	[ ]	[ ]	[ ]	----	----	----
	12	[ ]	[ ]	[ ]	----	----	----
	13	[ ]	[ ]	[ ]	----	----	----
	14	[ ]	[ ]	[ ]	----	----	----
	15	[ ]	[ ]	[ ]	----	----	----

NOTES

1 Layer 1 is 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 w/overlay	02	Subbase Layer	06	Surface Treatment	10
Original Surface	03	Subgrade	07	Embankment (Fill).	11
HMAC Layer (Subsurface)	04	Interlayer	08		

If milling was performed, the layers which were milled shall be assigned their previous layer number and material type If the layer was completely removed by milling, it shall still be shown as a layer with a zero thickness

3 Enter the material type classification codes from Tables A 5, A 6, A 7 and A 8 which best describes the material in each layer If the layer was milled, enter the material classification code corresponding to the type material which was removed

4 Enter the average thickness of each layer and the maximum, minimum, and standard deviation of the thickness measurements, if known If a layer was partially milled, the remaining thickness of the layer shall be indicated

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 7 OVERLAY PLACEMENT OPERATIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 8]

1 DATE SURFACE PREPARATION BEGAN (Month-Day-Year) [0 5-1 2-9 8]
2 DATE SURFACE PREPARATION COMPLETED [0 6-2 6-9 8]

3 SURFACE PREPARATION PRIOR TO PLACEMENT OF OVERLAY [3]
None 1 Broomed 2 Broomed + Asphaltic Tack Coat 3
Asphaltic Tack Coat (only) 4

4 TACK COAT MATERIAL
Material Type None 1 SS-1 2 SS-1H . 3 CRS-1 4 [1 0]
CRS-2 5 CMS-2 6 CMS-2H 7 CSS-1 8 CSS-1H 9
Other 10 (Specify) CQS1-H (Emulsion)

5 TACK COAT DILUTION (Percent) [_ 0]
or Mixing Rate Parts Diluent ___ TO Parts Asphalt ___

6 TACK COAT APPLICATION RATE (Gal/Sq Yd) [0 0 9]

7 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Turkey Town Plant	[_ 3 0]	[4 0]	[4]	[5]	[_]
Plant 2	[2]	Glencoe Plant	[_ 3 0]	[4 0]	[6]	[_]	[_]
Plant 3	[_]		[_ _ _]	[_ _]	[_]	[_]	[_]

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

8 MANUFACTURER OF ASPHALT CONCRETE PAVER (Layers 4+5) → Barber-Greene

9 MODEL DESIGNATION OF ASPHALT CONCRETE PAVER (Layer 6) → Caterpillar AP-1055B

10 SINGLE PASS LAYDOWN WIDTH (Feet) [1 2 0]

01-AMAC

11 Layer No	12 Material Type Classification Code	13 Nominal Lift Placement Thickness				14 Tack Coat Between Lifts? (Y/N)	15 Transverse Joint Station
		1st Lift	2nd Lift	3rd Lift	4th Lift		
[0 4]	[0 1]	[2 8]	[2 8]	[_ _]	[_ _]	[N]	[_+_ _]
[0 5]	[0 1]	[2 7]	[_ _]	[_ _]	[_ _]	[N]	[_+_ _]
[0 6]	[0 1]	[3 0]	[_ _]	[_ _]	[_ _]	[Y]	[_+_ _]

16 LOCATION OF LONGITUDINAL SURFACE JOINT [1]
Between lanes 1 Within lane 2 (specify offset from pavement lane edge in feet) [1 2 0]

17 SIGNIFICANT EVENTS DURING CONSTRUCTION(disruptions, rain, equip problems, etc)
Road was open to traffic before surface layer was placed
Small hump in 2nd lft of lower binder @ 0+60

PREPARER [signature] EMPLOYER BRE DATE 7-7-98

G.W. ENTERED JAN 12 1999

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 8]

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5 - 1 2 - 9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 5 - 1 2 - 9 8]

3 LAYER NUMBER Lower Binder [0 4]

4 MIXING TEMPERATURE (°F) [3 0 0]
5 LAYDOWN TEMPERATURES (°F)
Mean 2 8 6 Number of Tests 0 2
Minimum 2 8 0 Maximum 2 9 2
Standard Deviation 8 5

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 0 0				
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	1 0 0		2 5 0 0	Low	4 5
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	0 3	0 3		
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A	A		
28	Coverages	0 3	0 3		
29	Air Temperature (°F)	9 0	9 3		
30	Compacted Thickness (In)	2 2	2 2		
31	Curing Period (Days)	0 1	1 5		

PREPARER [signature] EMPLOYER BRE DATE 7-7-98

G.W. ENTERED JAN 12 1999

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 8]

1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 4-9 8]
2. DATE PAVING OPERATIONS COMPLETED [0 5-1 4-9 8]
3. LAYER NUMBER Upper Binder [0 5]
4. MIXING TEMPERATURE (°F) [3 2 0]
5. LAYDOWN TEMPERATURES (°F)

Mean	309	Number of Tests	01
Minimum	309	Maximum	309
Standard Deviation	00		

ROLLER DATA

	Roller Code #	Roller Description	Gross Wt (Tons)	Tire Press (psi)	Frequency (Vibr /Min)	Amplitude (Inches)	Speed (mph)
6	A	Steel-Whl Tandem	100				
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	100		2500	Low	45
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	03			
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A			
28	Coverages	03			
29	Air Temperature (°F)	92			
30	Compacted Thickness (In)	22			
31	Curing Period (Days)	30			

PREPARER [signature] EMPLOYER BRE DATE 7-7-98

GW ENTERED JAN 12 1999

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 8]

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 6-2 6-9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 6-2 6-9 8]

3 LAYER NUMBER Surface [0 6]

4 MIXING TEMPERATURE (°F) [3 2 0]
5 LAYDOWN TEMPERATURES (°F)

Mean	3 0 7 5	Number of Tests	0 2
Minimum	3 0 6	Maximum	3 0 8
Standard Deviation	0 7		

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 0 0				
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	1 0 0		2 5 0 0	L O W	4 5
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	0 3			
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A			
28	Coverages	0 3			
29	Air Temperature (°F)	1 0 0			
30	Compacted Thickness (In)	1 5			
31	Curing Period (Days)	3 0			

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

GW ENTERED JAN 12 1999

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 9 CONSTRUCTION QUALITY CONTROL MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 9]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [05-13-98]
2 DATE MEASUREMENTS COMPLETED [05-13-98]

3 NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	Rut Level-Up N/A	Mill Replacement N/A	Binder Course (Lower)	~~Surface Course~~	Surface Friction N/A
Measurement Method (A, B, C)[1]			A		
Rod Depth (Inches)			N/A		
Number of Measurements			12		
Average (pcf)			1445		
Maximum (pcf)			1476		
Minimum (pcf)			1429		
Standard Deviation (pcf)			17		
Layer Number			04 Lower Binder		

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

4 MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

5 NUCLEAR DENSITY GAUGE MODEL NUMBER 4640

6 NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 626

7 NUCLEAR GAUGE DENSITY COUNT RATE FOR STANDARDIZATION

8 PROFILOGRAPH MEASUREMENTS N/A
Profilograph Type California 1 Rainhart 2
Profile Index (Inches/Mile)
Interpretation Method Manual 1 Mechanical 2 Computer 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

9 SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) No

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

G.W ENTERED JAN 12 1999

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 9 CONSTRUCTION QUALITY CONTROL MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 8]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [05-14-98]
2 DATE MEASUREMENTS COMPLETED [06-29-98]

3 NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	Rut Level-Up (N/A)	Mill Replacement (N/A)	Binder Course (upper)	Surface Course	Surface Friction (N/A)
Measurement Method (A, B, C)[1]			A	A	
Rod Depth (Inches)			N/A	N/A	
Number of Measurements			12	12	
Average (pcf)			1488	1412	
Maximum (pcf)			1509	1459	
Minimum (pcf)			1473	1372	
Standard Deviation (pcf)			13	24	
Layer Number			05 Upper Binder	06 Surface	

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

4 MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

5 NUCLEAR DENSITY GAUGE MODEL NUMBER 4640

6 NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 626

7 NUCLEAR GAUGE DENSITY COUNT RATE FOR STANDARDIZATION

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

9 SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO)

PREPARER Tom D. Duncan EMPLOYER BRE DATE 7-21-98

G.W ENTERED JAN 12 1999

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [01] * SPS PROJECT CODE [06] * TEST SECTION NO [08]

G.W. ENTERED JAN 20 1999

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) This sheet is [03-26-98]
2 DATE MEASUREMENTS COMPLETED a combination of [06-26-98]

LAYER THICKNESS MEASUREMENTS (Inches) Both Binder layers GW Entered as 1 layer SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP	MILL REPLACEMENT	BINDER COURSE Lower + Upper	SURFACE COURSE	SURFACE FRICTION
0+00	0			73	05	
	36			71	10	
	72			74	16	
	108			76	16	
	144			79	14	
0+50	0			57	17	
	36			68	13	
	72			75	12	
	108			51	12	
	144			83	13	
1+00	0			55	17	
	36			64	14	
	72			69	14	
	108			76	14	
	144			80	16	
1+50	0			59	16	
	36			68	16	
	72			69	14	
	108			74	16	
	144			78	13	
2+00	0			57	17	
	36			66	17	
	72			70	14	
	108			73	17	
	144			77	14	
2+50	0			56	17	
	36			63	16	
	72			68	12	
	108			72	13	
	144			78	11	
3+00	0			60	13	
	36			68	11	
	72			70	12	
	108			73	12	
	144			82	00	
LAYER NUMBER				04+05	06	

PREPARER _____ EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 8]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 6-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) Lower Upper SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP	MILL REPLACEMENT	BINDER COURSE	SURFACE COURSE	SURFACE FRICTION
3+50	0			6 4	1 3	
	36			6 8	1 3	
	72			7 2	1 3	
	108			7 2	1 3	
	144			7 3	1 3	
4+00	0			6 1	1 6	
	36			6 7	1 3	
	72			7 0	1 3	
	108			7 7	1 2	
	144			7 5	1 1	
4+50	0			6 4	1 4	
	36			7 1	1 2	
	72			7 1	1 1	
	108			7 3	1 1	
	144			7 4	1 2	
5+00	0			6 4	1 2	
	36			7 2	1 2	
	72			7 6	1 2	
	108			7 6	1 3	
	144			7 8	1 2	
+						
+						
+						
LAYER NUMBER						

PREPARER _____ EMPLOYER _____ DATE _____

G.W. ENTERED JAN 20 1999

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 8]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 6-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	N/A RUT LEVEL-UP	N/A MILL REPLACEMENT	(LOWER) BINDER COURSE	~~SURFACE COURSE~~	N/A SURFACE FRICTION
0+00	0			42		
	36			43		
	72			46		
	108			44		
	144			43		
0+50	0			37		
	36			44		
	72			47		
	108			49		
	144			47		
1+00	0			36		
	36			42		
	72			44		
	108			46		
	144			46		
1+50	0			40		
	36			46		
	72			44		
	108			46		
	144			47		
2+00	0			37		
	36			46		
	72			46		
	108			47		
	144			47		
2+50	0			36		
	36			43		
	72			44		
	108			46		
	144			48		
3+00	0			40		
	36			48		
	72			50		
	108			53		
	144			56		
LAYER NUMBER				04		

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

G.W. ENTERED JAN 12 1999

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 8]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2. DATE MEASUREMENTS COMPLETED [0 6-2 6-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP (N/A)	MILL REPLACEMENT (N/A)	BINDER COURSE (upper)	SURFACE COURSE	SURFACE FRICTION (N/A)
0+00	0			31	05	
	36			28	10	
	72			28	16	
	108			32	16	
	144			36	16	
0+50	0			20	17	
	36			24	13	
	72			28	12	
	108			32	12	
	144			36	13	
1+00	0			19	17	
	36			22	14	
	72			25	14	
	108			30	14	
	144			34	16	
1+50	0			19	16	
	36			22	16	
	72			25	14	
	108			28	16	
	144			31	13	
2+00	0			20	17	
	36			20	17	
	72			24	16	
	108			26	17	
	144			30	16	
2+50	0			20	17	
	36			20	16	
	72			24	12	
	108			26	13	
	144			30	11	
3+00	0			20	13	
	36			20	11	
	72			20	12	
	108			20	12	
	144			32	00	
LAYER NUMBER				05	06	

PREPARER Tom W. Duncan EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 8]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 6-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP (N/A)	MILL REPLACEMENT (N/A)	BINDER COURSE (Lower)	~~SURFACE COURSE~~	SURFACE FRICTION (N/A)
3+50	0			36		
	36			43		
	72			46		
	108			47		
	144			48		
4+00	0			37		
	36			44		
	72			44		
	108			44		
	144			44		
4+50	0			41		
	36			47		
	72			46		
	108			49		
	144			48		
5+00	0			40		
	36			47		
	72			50		
	108			50		
	144			50		
+						
+						
+						
+						
LAYER NUMBER				04		

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

GW ENTERED JAN 12 1999

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 8]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2. DATE MEASUREMENTS COMPLETED [0 6-2 6-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP (N/A)	MILL REPLACEMENT (N/A)	BINDER COURSE (Upper)	SURFACE COURSE	SURFACE FRICTION (N/A)
3+50	0			2.8	1.3	
	36			2.5	1.3	
	72			2.6	1.3	
	108			2.5	1.3	
	144			2.5	1.3	
4+00	0			2.4	1.6	
	36			2.3	1.3	
	72			2.6	1.3	
	108			2.9	1.2	
	144			3.1	1.1	
4+50	0			2.3	1.4	
	36			2.4	1.2	
	72			2.5	1.1	
	108			2.6	1.1	
	144			2.6	1.2	
5+00	0			2.4	1.2	
	36			2.5	1.3	
	72			2.6	1.2	
	108			2.6	1.3	
	144			2.8	1.2	
+						
+						
+						
LAYER NUMBER				05	06	

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 11 MISCELLANEOUS CONSTRUCTION NOTES AND COMMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 8]

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

- Small hump in HMAC @ 0+60 of 2nd lift Lower binder.
- Two separate asphalt plants were used for HMAC production

G.W ENTERED JAN 12 1999

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

April 1991 (Heading revised October 1992)

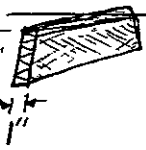
SPS-6 CONSTRUCTION DATA SHEET 2~~8~~ SUBDRAINAGE RETROFIT FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 8]

1 DATE SUBDRAINAGE PLACEMENT BEGAN (Month-Day-Year) [03-04-98]

2 DATE SUBDRAINAGE PLACEMENT COMPLETED [03-06-98]

3 TYPE OF DRAINAGE PIPE [7]
Clay Tile 1 Concrete Tile 2 Vitrified Clay 3
Perforated Plastic Bituminous Fiber 4 Perforated Corrugated Metal 5
Corrugated Plastic Tubing 6 Drainage Mat 7
Other (Specify) 8 _____

4 DIAMETER OF PIPE (INCHES) Filter MAT 1"x18" ⇒ 18" [_ _ _] N/A



5 DEPTH OF ~~PIPE~~ MAT BELOW TOP OF PAVEMENT SURFACE (INCHES) [_ 8 0]

6 HORIZONTAL PLACEMENT OF ~~PIPE~~ MAT FROM OUTER EDGE OF PAVEMENT (INCHES) [_ 0 0]

7 TYPE OF PRIMARY FILTER USED [3]
Graded Aggregate 1 Uniformly Graded Aggregate (One Size) 2
Woven Fabric 3 Non-Woven Fabric 4 Porous PCC 5
Porous Bituminous Concrete 6
Other (Specify) 7 _____

8 MAXIMUM PARTICLE SIZE OF PRIMARY FILTER MATERIAL (INCHES) [_ _] N/A

9 GRADATION OF PRIMARY FILTER MATERIAL
% Passing #4 Sieve [_ _ _] % Passing #40 Sieve [_ _ _]
% Passing #10 Sieve [_ _ _] % Passing #100 Sieve [_ _ _] N/A

10 PERMEABILITY OF PRIMARY FILTER MATERIAL (FT/DAY) (566.93 ft/day) _ _ _ _

11 TYPE AND LOCATION OF SECONDARY FILTER MATERIAL [3]
Fabric Encapsulating the Primary Filter Material 1
Fabric Encapsulating the Drainage Pipe 2
Other (Specify) 3 None used

12 AVERAGE OUTLET INTERVAL (FEET) 730 3 ft

13 PRIMARY PURPOSE OF SUBDRAINAGE INSTALLATION [1]
Remove Free Water From Pavement Layers 1
Cut Off Side-Hill/Through Hill Seepage 2
Lower Water Table 3
Other (Specify) 4 _____

PREPARER Tom W. Dunn EMPLOYER BRE DATE 7-8-98

G.W ENTERED JAN 12 1999

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 29 CRACK/BREAK AND SEAT DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [0 8]

1 DATE CRACK/BREAK AND SEAT OPERATION BEGAN (Month-Day-Year) [0 5-0 4-9 8]

2 DATE CRACK/BREAK AND SEAT OPERATION COMPLETED [0 5-0 4-9 8]

3 AVERAGE PCC BREAKAGE SIZE (INCHES)
Width
Length

Entered as 144 in → 1 [4 4.]
99
Would not accept 144 in

GW 1/12/99

4 PAVEMENT BREAKER PASSES/LANE [1]

5 PAVEMENT BREAKER TYPE [4]
Pile Driver Hammer 2 Guillotine Drop Hammer 4
Other (Specify) 7 _____

6 SEATING ROLLER WEIGHT (TONS) [3 0]

7 NUMBER OF SEATING ROLLER PASSES/LANE [2]

8 DEFLECTION MEASUREMENTS TAKEN
Yes 1 No 2
Before Breaking [1]
After Breaking (Prior to Seating) [2]
After Seating (Prior to Overlay) [1]
After Overlay [1]

9 BROKEN PAVEMENT SURFACE PREPARATION [1]
None 1 Sweeping 2 Tack Coat 3 Leveling Course 4
Full Depth Repair of Failed Areas 5
Other (Specify) 6 _____

G.W ENTERED JAN 12 1999

PREPARER [signature] EMPLOYER BRE DATE 6-15-98

G.W. ENTERED JAN 12 1999

Revised December 15, 1989

SHEET 1

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 8]

IMPROVEMENT LISTING

* 1 DATE COMPLETED (MO/DAY/YR)	* 2 WORK[1] TYPE CODE (TABLE A 17)	* 3. WORK QUANTITY (UNITS FROM (TABLE A 17)	4 THICKNESS (INCHES)	5 COST[2] (THOUSANDS OF DOLLARS PER LANE-MILE)
[0 4/1 3/9 8]	[3 8]	[_ _ 5 0 0]	_ N _	_ _ _
[0 5/0 4/9 8]	[4 6]	[_ _ 6 6 7]	_ N _	_ _ _
[0 6/2 6/9 8]	[1 1]	[_ _ 5 5 6]	_ 3 5	_ _ _
~~[0 6/2 6/9 8]~~	~~[3 6]~~	~~[6 6 7]~~	~~_ N _~~	~~_ _ _~~ 1/20/99 DW
[0 6/2 6/9 8]	[1 9]	[_ _ 6 6 7]	_ 8 4	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _

NOTES

1 For each specific work type, the appropriate set of sheets should be completed (as indexed in Table 7 1) It is recognized that parts of both Chapter 6 (Maintenance Data Collection) and Chapter 7 (Rehabilitation Data Collection) may be required to adequately record a given set of improvements for a test section

2 Cost includes only pavement structure cost Non-pavement costs such as cut and fill work, work on bridges, culverts, lighting, and guard rails are to be excluded

*36 Tack Coat is Maintenance Not Rehab
EWP
1/27/99

Revised December 15, 1989

G.W. ENTERED FEB 08 1999

*STATE ASSIGNED ID [_ _ _ _]

SHEET 2

*STATE CODE [0 1]

REHABILITATION DATA

*SHRP SECTION ID [0 6 0 8]

LTPP PROGRAM

REVISED LAYER DESCRIPTIONS

1.	*2.	*3.	*4			
LAYER[1] NUMBER	LAYER[2] DESCRIPTION	MATERIAL[3,4] TYPE CLASSIFICATION	<-------- LAYER THICKNESS (IN) --------> MEAN	MIN	MAX	STD DEV
1	SUBGRADE(7)	[9 9]				
2	[0 5]	[9 9]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
3	[0 3]	[9 9]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
4	[0 4]	[0 1]	[_ _ 4 5]	_ _ 3 6	_ _ 5 6	_ _ 0 4
5	[0 4]	[0 1]	[_ _ 2 6]	_ _ 1 9	_ _ 3 6	_ _ 0 4
6	[0 1]	[0 1]	[_ _ 1 3]	_ _ 0 0	_ _ 1 7	_ _ 0 3
7	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
8	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
9	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _

NOTES

1 Layer 1 is subgrade soil, last layer is existing 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 (Below Surface Layer)	04	Interlayer	08	Recycled Layer	12

3 The material type classification codes for surface, base or subbase, subgrade, and seal coat or interlayer materials appear in Tables A 5, A 6, A 7 and A 8, respectively

4 If the materials or thicknesses of a layer has not changed during the rehabilitation, enter "99" as the material type classification and leave the layer thicknesses for that layer blank If a layer has changed, enter the appropriate codes and thicknesses

This Sheet Added 1/27/99

Revised December 15, 1989

GW ENTERED FEB 09 1999

SHEET 7

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 8]

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

No Polymer Added

* 1. LAYER NUMBER (FROM SHEET 2)	Lower Binder [4]
2. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)	2.510 ~~2 5 2 9~~
3 BULK SPECIFIC GRAVITY (ASTM D1188) ZWD 4/16/99	2 3 9 9 ~~2 6 6 9~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	_ 4 6
5. PERCENT AIR VOIDS (EQ 7 4)	_ 4 4
6. MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)	_ _ 2 9 8
7 NUMBER OF BLOWS (75 Blows each side of P.11)	7 5 0
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(.9mm)~~ (AASHTO T245 OR ASTM D1559) ZWD 4/16/99	_ _ _ 10.0 ~~3 5~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	_ _ _
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	_ _ _ _

Lane W. Dunnan BRE/SRCO 7-15-98

Revised December 15, 1989

*STATE ASSIGNED ID [_ _ _ _]

SHEET 7

*STATE CODE [0 1]

REHABILITATION DATA

*SHRP SECTION ID [0 6 0 8]

LTPP PROGRAM

G.W. ENTERED FEB 09 1999

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

Polymer Added

* 1. LAYER NUMBER (FROM SHEET 2)	Upper Binder [5]
2. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)	~~2.548~~ 2.545
3. BULK SPECIFIC GRAVITY (ASTM D1188) ZNR 4/16/99	~~2.694~~ 2.452
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	4.3
5 PERCENT AIR VOIDS (EQ 7 4)	3.7
6 MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)	2442
7 NUMBER OF BLOWS ZNR 4/16/99	75
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(1.14mm)~~ (AASHTO T245 OR ASTM D1559)	~~45~~ 12.7
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	_ _ _
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	_ _ _ _

Fred W. Duncan BRE/SRCO 7-15-98

Revised December 15, 1989

SHEET 7

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 8]

FEB 09 1999

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)	Surface [6]
2. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)	2.440 ~~2.442~~
3 BULK SPECIFIC GRAVITY (ASTM D1188) ZWD 4/16/99	2.344 ~~2.581~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	5.5
5 PERCENT AIR VOIDS (EQ 7 4)	3.9
6 MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)	4260 ~~9391~~
7 NUMBER OF BLOWS ZWD 4/16/99	750
8. MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(0.99mm)~~ (AASHTO T245 OR ASTM D1559)	11.0 ~~39~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	_ _ _
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	_ _ _ _

Dave W Dunnam BRE/SRCO 7-17-98

Revised December 15, 1989

SHEET 61

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 0 8]

G.W ENTERED JAN 12 1999

RESTORATION OF AC SHOULDERS

			INSIDE SHOULDER	OUTSIDE SHOULDER
* 1	SHOULDER RESTORED			[3]
	Outside	1		
	Inside	2		
	Both	3		
* 2	SURFACE TYPE (CODES-TABLE A 5)		1	[1]
* 3	TOTAL WIDTH (FEET)		0 4	[1 0]
* 4	PAVED WIDTH (FEET)		0 4	[1 0]
* 5	SHOULDER BASE TYPE (CODES-TABLE A 6)		2 1	[2 1] ← No Base used
* 6	SURFACE THICKNESS (INCHES)		_ 3 5	[_ 3 5]
* 7	BASE THICKNESS (INCHES)		_ 0 0	[_ 0 0] N/A
* 8	TYPE OF SHOULDER RESTORATION			[2]
	AC Overlay Without Removal of Existing AC	1		
	Cold Milling and AC Overlay	2		
	Complete Shoulder Removal and Replacement	3		
	In-place Recycling and Overlay	4		
	Other (Specify)_____	5		
* 9	TYPE OF AC MATERIALS			[1]
	New Materials	1		
	Hot Recycled Materials	2		
	Cold Recycled Materials	3		
	Other (Specify)_____	4		
*10	THICKNESS OF AC MATERIAL REMOVED BY COLD MILLING (IN)			[3.5]
*11	AC OVERLAY THICKNESS (IN)			[8 0]
12	LANE/SHOULDER JOINT SEALANT			[1]
	None	1		
	Sealed Without Providing Reservoir	2		
	Saw Reservoir and Seal	3		
	Other (Specify)_____	4		
13	LANE/SHOULDER JOINT SEALANT RESERVOIR			
	WIDTH (INCHES)			_ _
	DEPTH (INCHES)			_ _
14	TYPE OF JOINT SEALANT			_
	Poured	1		
	Preformed	2		

NOTE DATA ITEMS 8 TO 14 PERTAIN ONLY TO THE RESTORED OUTSIDE SHOULDER

SPS-6 CONSTRUCTION DATA SHEET 2 REVISED LAYER DESCRIPTIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 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]				
2	[0 5]	[2 3]	[6 0]	----	----	----
3	[0 3]	[0 4]	[10 0]	----	----	----
4	[0 4]	[0 1]	[1 9]	0 6	3 1	0 6
5	[0 1]	[0 1]	[2 1]	1 6	2 5	0 2
6	[ ]	[ ]	[ ]	----	----	----
7	[ ]	[ ]	[ ]	----	----	----
8	[ ]	[ ]	[ ]	----	----	----
9	[ ]	[ ]	[ ]	----	----	----
10	[ ]	[ ]	[ ]	----	----	----
11	[ ]	[ ]	[ ]	----	----	----
12	[ ]	[ ]	[ ]	----	----	----
13	[ ]	[ ]	[ ]	----	----	----
14	[ ]	[ ]	[ ]	----	----	----
15	[ ]	[ ]	[ ]	----	----	----

G.W. ENTERED JAN 12 1999

NOTES

1. Layer 1 is 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 w/overlay	02	Subbase Layer	06	Surface Treatment	10
Original Surface	03	Subgrade	07	Embankment (Fill)	11
HMAC Layer (Subsurface)	04	Interlayer	08		

If milling was performed, the layers which were milled shall be assigned their previous layer number and material type If the layer was completely removed by milling, it shall still be shown as a layer with a zero thickness

3. Enter the material type classification codes from Tables A 5, A 6, A 7 and A 8 which best describes the material in each layer If the layer was milled, enter the material classification code corresponding to the type material which was removed
4. Enter the average thickness of each layer and the maximum, minimum, and standard deviation of the thickness measurements, if known If a layer was partially milled, the remaining thickness of the layer shall be indicated

PREPARER Tom W. Dorman EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 7 OVERLAY PLACEMENT OPERATIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 1]

1 DATE SURFACE PREPARATION BEGAN (Month-Day-Year) [0 5-1 2-9 8]
2 DATE SURFACE PREPARATION COMPLETED [0 6-2 6-9 8]

3 SURFACE PREPARATION PRIOR TO PLACEMENT OF OVERLAY [4]
None 1 Broomed . 2 Broomed + Asphaltic Tack Coat 3
Asphaltic Tack Coat (only) .. 4
No Tack on Rubblized Surface

4 TACK COAT MATERIAL
Material Type None 1 SS-1 . . 2 SS-1H 3 CRS-1 4 [1 0]
CRS-2 5 CMS-2 6 CMS-2H.. 7 CSS-1 . 8 CSS-1H 9
Other 10 (Specify) CQS1-H (Emulsion)

5 TACK COAT DILUTION (Percent) [_ 0]
or Mixing Rate Parts Diluent __ TO Parts Asphalt __

6 TACK COAT APPLICATION RATE (Gal/Sq. Yd) [0 0 9]

7 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Glencoe	[_ 3 0]	[4 0]	[5]	]	[_]
Plant 2	[2]	Turkey Town	[_ 3 0]	[4 0]	4	[_]	[_]
Plant 3	[_]		[_ _ _]	[_ _]	[_]	[_]	[_]

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

8 MANUFACTURER OF ASPHALT CONCRETE PAVER Barber Greene (Baden) (Surface) Caterpillar

9 MODEL DESIGNATION OF ASPHALT CONCRETE PAVER AP-1055B

10 SINGLE PASS LAYDOWN WIDTH (Feet) [1 2 0]

01-AMAC

11 Layer No	12 Material Type Classification Code	13 Nominal Lift Placement Thickness				14 Tack Coat Between Lifts? (Y/N)	15 Transverse Joint Station
		1st Lift	2nd Lift	3rd Lift	4th Lift		
[0 4]	[0 1]	[3 0]	[_ _]	[_ _]	[_ _]	[N]	[_+_ _]
[0 5]	[0 1]	[1 7]	[_ _]	[_ _]	[_ _]	[Y]	[_+_ _]
[_ _]	[_ _]	[_ _]	[_ _]	[_ _]	[_ _]	[_]	[_+_ _]

16 LOCATION OF LONGITUDINAL SURFACE JOINT [1]
Between lanes. 1 Within lane 2 (specify offset from pavement lane edge in feet) [1 2 0]

17 SIGNIFICANT EVENTS DURING CONSTRUCTION(disruptions, rain, equip problems, etc)
Road was open to traffic before surface layer was placed
Started tapering down @ 3+35 to 0" @ 5+75. milled back (Later) to 5+00 to began paving again.

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

GW ENTERED JAN 12 1999

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 1]

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 4-9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 5-1 4-9 8]

3 LAYER NUMBER mod fied Binder [0 4]

4 MIXING TEMPERATURE (°F) [3 2 0]
5 LAYDOWN TEMPERATURES (°F)

Mean	3 0 9	Number of Tests	0 1
Minimum	3 0 9	Maximum	3 0 9
Standard Deviation	— 0 0		

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 0 0				
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	1 0 0		2 5 0 0	1 0 W	— 4 5
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	0 3	— —	— —	— —
	INTERMEDIATE				
25	Roller Code (A-Q)	—	—	—	—
26	Coverages	— —	— —	— —	— —
	FINAL				
27	Roller Code (A-Q)	A	—	—	—
28	Coverages	0 3	— —	— —	— —
29	Air Temperature (°F)	1 0 0	— — —	— — —	— — —
30	Compacted Thickness (In)	2 5	— —	— —	— —
31	Curing Period (Days)	— 3 0	— — —	— — —	— — —

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

GW ENGRG JAN 12 1999

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 1]

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 6-2 6-9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 6-2 6-9 8]

3 LAYER NUMBER Surface [0 5]

4 MIXING TEMPERATURE (°F) [3 2 0]
5 LAYDOWN TEMPERATURES (°F)
Mean 3 1 1
Minimum 3 0 5
Standard Deviation 6 0

Number of Tests 0 3
Maximum 3 1 7

GW ENTERED JAN 12 1999

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 0 0				
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	1 0 0		2 5 0 0	L O W	4 5
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	0 3			
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A			
28	Coverages	0 3			
29	Air Temperature (°F)	1 0 0			
30	Compacted Thickness (In)	1 2			
31	Curing Period (Days)	3 0			

PREPARER Lee N Dunnam EMPLOYER BRE DATE 7-8-98

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 9 CONSTRUCTION QUALITY CONTROL MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 1]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 5 - 1 4 - 9 8]
2 DATE MEASUREMENTS COMPLETED [0 6 - 2 9 - 9 8]

G.W. ENTERED JAN 12 1999

3 NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	Rut Level-Up (N/A)	Mill Replacement (N/A)	Binder Course	Surface Course	Surface Friction (N/A)
Measurement Method (A, B, C)[1]			A	A	
Rod Depth (Inches)			N/A	N/A	
Number of Measurements			1 2	1 2	
Average (pcf)			1 4 8 4	1 3 8 8	
Maximum (pcf)			1 5 1 9	1 4 0 3	
Minimum (pcf)			1 4 5 5	1 3 4 8	
Standard Deviation (pcf)			1 9	1 6	
Layer Number			0 4	0 5	

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

4 MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

5 NUCLEAR DENSITY GAUGE MODEL NUMBER 4640

6 NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 626

7 NUCLEAR GAUGE DENSITY COUNT RATE FOR STANDARDIZATION

8 PROFILOGRAPH MEASUREMENTS N/A
Profilograph Type California 1 Rainhart 2
Profile Index (Inches/Mile)
Interpretation Method Manual 1 Mechanical 2 Computer 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

9 SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) No

PREPARER Zane W. Duncan EMPLOYER BRE DATE 7-21-98

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 1]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 8-9 8]

SHEET 1 OF 2

LAYER THICKNESS MEASUREMENTS (Inches)

STATION NUMBER	OFFSET (Inches)	~~AUT~~ N/A LEVEL-UP	~~N/A~~ MILL REPLACEMENT	BINDER COURSE	SURFACE COURSE	~~N/A~~ SURFACE FRICTION
0+00	0			22	20	
	36			19	18	
	72			19	20	
	108			19	22	
	144			28	23	
0+50	0			22	24	
	36			23	22	
	72			22	22	
	108			22	24	
	144			30	24	
1+00	0			20	24	
	36			20	20	
	72			22	20	
	108			22	23	
	144			22	24	
1+50	0			31	20	
	36			24	22	
	72			18	22	
	108			17	23	
	144			26	23	
2+00	0			20	22	
	36			22	19	
	72			23	18	
	108			23	22	
	144			28	22	
2+50	0			18	20	
	36			22	19	
	72			23	20	
	108			24	23	
	144			31	24	
3+00	0			22	23	
	36			20	22	
	72			22	23	
	108			24	23	
	144			24	25	
LAYER NUMBER				04	05	

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

G.W. ENTERED JAN 12 1999

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 1]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 8-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	~~RUT~~ N/A LEVEL-UP	~~MILL~~ N/A REPLACEMENT	BINDER COURSE	SURFACE COURSE	~~SURFACE~~ N/A FRICTION
3+50	0			2.0	1.9	
	36			1.9	1.8	
	72			1.3	1.7	
	108			1.2	1.7	
	144			2.0	1.9	
4+00	0			1.9	2.0	
	36			1.1	2.2	
	72			1.3	2.2	
	108			0.8	2.4	
	144			1.2	2.4	
4+50	0			1.0	1.6	
	36			1.2	1.7	
	72			1.1	1.7	
	108			0.6	2.0	
	144			1.6	2.2	
5+00	0			0.8	2.5	
	36			1.0	2.5	
	72			1.1	2.4	
	108			1.4	2.3	
	144			1.7	2.3	
+						
+						
+						
LAYER NUMBER				0 4	0 5	

PREPARER Lee W. Duncan EMPLOYER BRE DATE 7-21-98

G.W. ENTERED JAN 12 1999

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 11 MISCELLANEOUS CONSTRUCTION NOTES AND COMMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 1]

G.W ENTERED JAN 12 1999

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

- No tack on Rubblized surface before overlaying with binder mix
- Binder Layer - Began tapering down @ 3+35 to 0.0" thick at 5+75 (5-14-98)
- Milled back to 5+00 (6-23-98) to resume paving
- Therefore, binder layer was not consistent from 0+00 to 5+00
- Two separate asphalt plants were used for HMAC production.

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 28 SUBDRAINAGE RETROFIT FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 1]

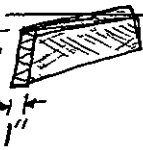
GW ENTERED JAN 12 1999

1 DATE SUBDRAINAGE PLACEMENT BEGAN (Month-Day-Year) [0 3-0 4-9 8]

2 DATE SUBDRAINAGE PLACEMENT COMPLETED [0 3-0 6-9 8]

3 TYPE OF DRAINAGE PIPE [7]
Clay Tile 1 Concrete Tile 2 Vitrified Clay 3
Perforated Plastic Bituminous Fiber 4 Perforated Corrugated Metal 5
Corrugated Plastic Tubing 6 Drainage Mat 7
Other (Specify) 8 _____

4 DIAMETER OF PIPE (INCHES) Filter MAT 1"x18" ⇒ 18" [_ _ _] N/A



5 DEPTH OF ~~PIPE~~ MAT BELOW TOP OF PAVEMENT SURFACE (INCHES) 1" [_ 8 0]

6 HORIZONTAL PLACEMENT OF ~~PIPE~~ MAT FROM OUTER EDGE OF PAVEMENT (INCHES) [_ 0 0]

7 TYPE OF PRIMARY FILTER USED [3]
Graded Aggregate 1 Uniformly Graded Aggregate (One Size) 2
Woven Fabric 3 Non-Woven Fabric 4 Porous PCC 5
Porous Bituminous Concrete 6
Other (Specify) 7 _____

8 MAXIMUM PARTICLE SIZE OF PRIMARY FILTER MATERIAL (INCHES) [_ _] N/A

9 GRADATION OF PRIMARY FILTER MATERIAL
% Passing #4 Sieve [_ _ _] % Passing #40 Sieve [_ _ _]
% Passing #10 Sieve [_ _ _] % Passing #100 Sieve [_ _ _] N/A

10 PERMEABILITY OF PRIMARY FILTER MATERIAL (FT/DAY) (566 93 ft/day) Entered as 99 91 1/12/99

11 TYPE AND LOCATION OF SECONDARY FILTER MATERIAL [3]
Fabric Encapsulating the Primary Filter Material 1
Fabric Encapsulating the Drainage Pipe 2
Other (Specify) 3 None used

12 AVERAGE OUTLET INTERVAL (FEET) 730 3 ft

13 PRIMARY PURPOSE OF SUBDRAINAGE INSTALLATION [1]
Remove Free Water From Pavement Layers 1
Cut Off Side-Hill/Through Hill Seepage 2
Lower Water Table 3
Other (Specify) 4 _____

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA Rubblize ~~CRACK/BREAK~~ AND SEAT DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES SHEET 29	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 1]

GW ENTERED JAN 12 1999

1 DATE CRACK/BREAK AND SEAT OPERATION BEGAN (Month-Day-Year) [05-04-98]

2 DATE CRACK/BREAK AND SEAT OPERATION COMPLETED [05-04-98]

3 AVERAGE PCC BREAKAGE SIZE (INCHES)
Width [04]
Length [04]

4 PAVEMENT BREAKER PASSES/LANE [1]

5 PAVEMENT BREAKER TYPE [7]
Pile Driver Hammer 2 Guillotine Drop Hammer 4
Other (Specify) 7 Multiple Head Rubblizer

6 SEATING ROLLER WEIGHT (TONS) [30]

7 NUMBER OF SEATING ROLLER PASSES/LANE [2]

8 DEFLECTION MEASUREMENTS TAKEN
Yes 1 No 2 [1]
Before Breaking [2]
After Breaking (Prior to Seating) [2]
After Seating (Prior to Overlay) [1]
After Overlay

9 BROKEN PAVEMENT SURFACE PREPARATION [1]
None 1 Sweeping 2 Tack Coat 3 Leveling Course 4
Full Depth Repair of Failed Areas 5
Other (Specify) 6 _____

PREPARER [signature] EMPLOYER BRE DATE 6-15-98

Revised December 15, 1989

SHEET 1

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 6 1]

CAN ENTERED FEB 08 1999

IMPROVEMENT LISTING

* 1 DATE COMPLETED (MO/DAY/YR)	* 2. WORK[1] TYPE CODE (TABLE A 17)	* 3. WORK QUANTITY (UNITS FROM (TABLE A 17)	4 THICKNESS (INCHES)	5 COST[2] (THOUSANDS OF DOLLARS PER LANE-MILE)
[0 4/1 3/9 8]	[3 8]	[_ _ 5 0 0]	_ N _	_ _ _
[0 5/0 4/9 8]	[5 3*]	[_ _ 6 6 7]	1 0 0	_ _ _
[0 6/2 6/9 8]	[1 1]	[_ _ 5 5 6]	_ 3 5	_ _ _
[0 6/2 6/9 8]	[1 9]	[_ _ 6 6 7]	_ 4 0	_ _ _
ZWD 1/27/99 ~~[0 6/2 6/9 8]~~	~~[3 6*]~~	~~[_ _ 6 6 7]~~	~~_ N _~~	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _

NOTES

1 For each specific work type, the appropriate set of sheets should be completed (as indexed in Table 7 1) It is recognized that parts of both Chapter 6 (Maintenance Data Collection) and Chapter 7 (Rehabilitation Data Collection) may be required to adequately record a given set of improvements for a test section

2 Cost includes only pavement structure cost Non-pavement costs such as cut and fill work, work on bridges, culverts, lighting, and guard rails are to be excluded

*53 = Rubblization of PCC And Seat for base of new AC Overlay

Maintenance not Rehab *36 = Tack Coat was only used between HMAC layers and not between Rubblized material and HMAC layer

Revised December 15, 1989

SHEET 2

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 6 1]

CW ENTERED FEB 08 1999

REVISED LAYER DESCRIPTIONS

1.	*2	*3	*4			
LAYER[1] NUMBER	LAYER[2] DESCRIP-TION	MATERIAL[3,4] TYPE CLASSIFICATION	<-------- LAYER THICKNESS (IN) --------> MEAN	MIN	MAX	STD DEV
1	SUBGRADE(7)	[9 9]				
2	[0 5]	[9 9]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
3	[0 3]	[9 9]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
4	[0 4]	[0 1]	[_ _ 1 9]	_ _ 0 6	_ _ 3 1	_ _ 0 6
5	[0 1]	[0 1]	[_ _ 2.1]	_ _ 1 6	_ _ 2 5	_ _ 0.2
6	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
7	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
8	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
9	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _

NOTES

1 Layer 1 is subgrade soil, last layer is existing 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 (Below Surface Layer)	04	Interlayer	08	Recycled Layer	12

3 The material type classification codes for surface, base or subbase, subgrade, and seal coat or interlayer materials appear in Tables A 5, A 6, A 7 and A 8, respectively

4 If the materials or thicknesses of a layer has not changed during the rehabilitation, enter "99" as the material type classification and leave the layer thicknesses for that layer blank If a layer has changed, enter the appropriate codes and thicknesses

This sheet added 1/27/99

Revised December 15, 1989

*STATE ASSIGNED ID [_ _ _ _]

SHEET 7

*STATE CODE [0 1]

REHABILITATION DATA

*SHRP SECTION ID [0 6 6 1]

LTPP PROGRAM

CM ENTERED FEB 09 1999

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)	Poly Binder [4]
2 MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)	2.545 ~~2548~~
3 BULK SPECIFIC GRAVITY (ASTM D1188) ZWD 4/16/99	2542 ~~2694~~
4. OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	4.3
5. PERCENT AIR VOIDS (EQ 7 4)	3.7
6 MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)	2447
7 NUMBER OF BLOWS ZWD 4/16/99	750
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(1.14 mm)~~ (AASHTO T245 OR ASTM D1559)	12.7 ~~45~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	_ _ _
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	_ _ _ _

Tom W. Duncan BRE/SRCO 7-15-98

Revised December 15, 1989

*STATE ASSIGNED ID [_ _ _ _]

SHEET 7

*STATE CODE [0 1]

REHABILITATION DATA

*SHRP SECTION ID [0 6 6 1]

LTPP PROGRAM

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)	Surface [5]
2. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)	2437 ~~2435~~
3. BULK SPECIFIC GRAVITY (ASTM D1188) 2ND 4/16/99	2338 ~~2581~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	5.4
5 PERCENT AIR VOIDS (EQ 7 4) 2ND 4/16/99	4.1
6 MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)	4260 ~~9391.7~~
7 NUMBER OF BLOWS 2ND 4/16/99	750
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(0.99mm)~~ (AASHTO T245 OR ASTM D1559)	11.0 ~~39~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	_ _ _
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	_ _ _ _

Frank W. Duncan BRE/SRCO 7-17-98

Revised December 15, 1989

SHEET 61

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 6 1]

G.W. ENTERED FEB 08 1999

RESTORATION OF AC SHOULDERS

* 1. SHOULDER RESTORED [3]
- Outside 1
- Inside 2
- Both 3

		INSIDE SHOULDER	OUTSIDE SHOULDER
* 2	SURFACE TYPE (CODES-TABLE A.5)	1	[1]
* 3	TOTAL WIDTH (FEET)	0 4	[1 0]
* 4	PAVED WIDTH (FEET)	0 4	[1 0]
* 5	SHOULDER BASE TYPE (CODES-TABLE A 6)	2 1	[2 1] ← No Base used
* 6	SURFACE THICKNESS (INCHES)	_ 3 5	[_ 3 5]
* 7	BASE THICKNESS (INCHES)	_ 0 0	[_ 0 0] N/A

* 8 TYPE OF SHOULDER RESTORATION [2]
- AC Overlay Without Removal of Existing AC . . 1
- Cold Milling and AC Overlay 2
- Complete Shoulder Removal and Replacement . . . 3
- In-place Recycling and Overlay . 4
- Other (Specify)_____ 5

* 9 TYPE OF AC MATERIALS [1]
- New Materials 1
- Hot Recycled Materials 2
- Cold Recycled Materials . 3
- Other (Specify)_____ 4

*10 THICKNESS OF AC MATERIAL REMOVED BY COLD MILLING (IN) [3 5]

*11 AC OVERLAY THICKNESS (IN) [4 0]

12 LANE/SHOULDER JOINT SEALANT [1]
- None . . 1
- Sealed Without Providing Reservoir 2
- Saw Reservoir and Seal . 3
- Other (Specify)_____ 4

13. LANE/SHOULDER JOINT SEALANT RESERVOIR
- WIDTH (INCHES) _ _
- DEPTH (INCHES) _ _

14 TYPE OF JOINT SEALANT _
- Poured 1
- Preformed . 2

NOTE DATA ITEMS 8 TO 14 PERTAIN ONLY TO THE RESTORED OUTSIDE SHOULDER

SPS-6 CONSTRUCTION DATA SHEET 2 REVISED LAYER DESCRIPTIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 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 5]	[2 3]	[6.0]	----	----	----
	3	[0 3]	[0 4]	[10 0]	----	----	----
Lower Binder	4	[0 4]	[0 1]	[4 2]	24	50	04
Upper Binders	5	[0 4]	[0 1]	[2 3]	17	30	03
Surface	6	[0 1]	[0 1]	[1 2]	07	18	02
	7	[ ]	[ ]	[ ]	----	----	----
	8	[ ]	[ ]	[ ]	----	----	----
	9	[ ]	[ ]	[ ]	----	----	----
	10	[ ]	[ ]	[ ]	----	----	----
	11	[ ]	[ ]	[ ]	----	----	----
	12	[ ]	[ ]	[ ]	----	----	----
	13	[ ]	[ ]	[ ]	----	----	----
	14	[ ]	[ ]	[ ]	----	----	----
	15	[ ]	[ ]	[ ]	----	----	----

G.W. ENTERED JAN 12 1999

NOTES

1 Layer 1 is 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 w/overlay	02	Subbase Layer	06	Surface Treatment	10
Original Surface	03	Subgrade	07	Embankment (Fill) .	11
HMAC Layer (Subsurface)	04	Interlayer	08		

If milling was performed, the layers which were milled shall be assigned their previous layer number and material type If the layer was comp'etely removed by milling, it shall still be shown as a layer with a zero thickness

3 Enter the material type classification codes from Tables A 5, A 6, A 7 and A 8 which best describes the material in each layer If the layer was milled, enter the material classification code corresponding to the type material which was removed

4 Enter the average thickness of each layer and the maximum, minimum, and standard deviation of the thickness measurements, if known If a layer was partially milled, the remaining thickness of the layer shall be indicated

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 7 OVERLAY PLACEMENT OPERATIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 2]

GW ENTERED JAN 12 1999

1 DATE SURFACE PREPARATION BEGAN (Month-Day-Year) [0 5-1 2-9 8]
2 DATE SURFACE PREPARATION COMPLETED [0 6-2 6-9 8]

3 SURFACE PREPARATION PRIOR TO PLACEMENT OF OVERLAY [4]
None 1 Broomed 2 Broomed + Asphaltic Tack Coat 3
Asphaltic Tack Coat (only) 4
No tack used on rubblized surface

4 TACK COAT MATERIAL
Material Type None 1 SS-1 2 SS-1H . 3 CRS-1 4 [1 0]
CRS-2 5 CMS-2 6 CMS-2H . 7 CSS-1 . 8 CSS-1H 9
Other 10 (Specify) CQSI-H (Emulsion)

5 TACK COAT DILUTION (Percent) [0]
or Mixing Rate Parts Diluent ___ TO Parts Asphalt ___

6 TACK COAT APPLICATION RATE (Gal/Sq Yd) [0 0 9]

7 ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Turkey Town	[3 0]	[4 0]	[4]	[5]	[ ]
Plant 2	[2]	Glencoe	[3 0]	[4 0]	[6]	[ ]	[ ]
Plant 3	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]

Plant Type Batch 1 Drum Mix 2 Other . 3 Specify ___

8 MANUFACTURER OF ASPHALT CONCRETE PAVER Barber Greene (Binder) Caterpillar (Surface)

9 MODEL DESIGNATION OF ASPHALT CONCRETE PAVER AP-1055B

10 SINGLE PASS LAYDOWN WIDTH (Feet) [1 2 0]

01-HMAC

11 Layer No	12 Material Type Classification Code	13 Nominal Lift Placement Thickness				14 Tack Coat Between Lifts? (Y/N)	15 Transverse Joint Station
		1st Lift	2nd Lift	3rd Lift	4th Lift		
[0 4]	[0 1]	[2 8]	[ ]	[ ]	[ ]	[N]	[+]
[0 5]	[0 1]	[2 8]	[ ]	[ ]	[ ]	[Y]	[+]
[0 6]	[0 1]	[3 0]	[ ]	[ ]	[ ]	[Y]	[+]

16 LOCATION OF LONGITUDINAL SURFACE JOINT [1]
Between lanes 1 Within lane 2 (specify offset from pavement lane edge in feet) [1 2 0]

17 SIGNIFICANT EVENTS DURING CONSTRUCTION(disruptions, rain, equip problems, etc)

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 2]

G.W. ENTERED JAN 12 1999

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5 - 1 2 - 9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 5 - 1 3 - 9 8]

3 LAYER NUMBER [0 4] Lower Binder

4. MIXING TEMPERATURE (°F) [3 0 0]
5 LAYDOWN TEMPERATURES (°F)
Mean 2 8 6
Minimum 2 8 0
Standard Deviation 8 5
Number of Tests 0 2
Maximum 2 9 2

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 0 0				
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	1 0 0		2 5 0 0	L O W	4 5
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	0 3	0 3		
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A	A		
28	Coverages	0 3	0 3		
29	Air Temperature (°F)	9 5	9 8		
30	Compacted Thickness (In)	2 8	2 8		
31	Curing Period (Days)	1 0	1 0		

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 2]

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 4-9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 5-1 4-9 8]

3. LAYER NUMBER UPPER Binder [0 5]

4 MIXING TEMPERATURE (°F) [3 1 5]
5 LAYDOWN TEMPERATURES (°F)

Mean	3 0 9	Number of Tests	0 1
Minimum	3 0 9	Maximum	3 0 9
Standard Deviation	0.0		

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 0 0				
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	1 0 0		2 5 0 0	L o w	4 5
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	0 3			
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A			
28	Coverages	0 3			
29	Air Temperature (°F)	9 5			
30	Compacted Thickness (In)	2 5			
31	Curing Period (Days)	2 0			

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

GW ENTERED JAN 12 1999

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 2]

GW ENTERED JAN 12 1999

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 6-2 6-9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 6-2 6-9 8]

3 LAYER NUMBER surface [0 6]

4 MIXING TEMPERATURE (°F) [3 2 0]
5 LAYDOWN TEMPERATURES (°F)

Mean	3 1 1	Number of Tests	0 3
Minimum	3 0 5	Maximum	3 1 7
Standard Deviation	6 0		

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 0 0				
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	1 0 0		2 5 0 0	L o w	4 5
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	0 3			
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A			
28	Coverages	0 3			
29	Air Temperature (°F)	1 0 0			
30	Compacted Thickness (In)	1 2			
31	Curing Period (Days)	2 0			

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 9 CONSTRUCTION QUALITY CONTROL MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 2]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 5-1 3-9 8]
2 DATE MEASUREMENTS COMPLETED [0 5-1 3-9 8]

3 NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	Rut Level-Up (N/A)	Mill Replacement (N/A)	Binder Course (Lower)	~~Surface Course~~	Surface Friction (N/A)
Measurement Method (A, B, C)[1]			A		
Rod Depth (Inches)			N/A		
Number of Measurements			12		
Average (pcf)			1440		
Maximum (pcf)			1485		
Minimum (pcf)			1386		
Standard Deviation (pcf)			30		
Layer Number			04 Lower Binder		

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

4 MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

5 NUCLEAR DENSITY GAUGE MODEL NUMBER 4640

6 NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 626

7 NUCLEAR GAUGE DENSITY COUNT RATE FOR STANDARDIZATION

8 PROFILOGRAPH MEASUREMENTS N/A
Profilograph Type California 1 Rainhart 2
Profile Index (Inches/Mile)
Interpretation Method Manual 1 Mechanical 2 Computer 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

9 SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) NO

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

G.W. ENTERED JAN 12 1999

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 9 CONSTRUCTION QUALITY CONTROL MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 2]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 5-1 4-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 9-9 8]

3 NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	Rut Level-Up (N/A)	Mill Replacement (N/A)	Binder Course (Upper)	Surface Course	Surface Friction (N/A)
Measurement Method (A, B, C)[1]			A	A	
Rod Depth (Inches)			N/A	N/A	
Number of Measurements			1 2	1 2	
Average (pcf)			1 4 7 7	1 4 2 5	
Maximum (pcf)			1 5 0 9	1 4 6 2	
Minimum (pcf)			1 4 5 1	1 3 9 0	
Standard Deviation (pcf)			1 7	2 3	
Layer Number			0 5 UPPER Binder	0 6 SURFACE	

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

4 MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

5 NUCLEAR DENSITY GAUGE MODEL NUMBER 4640

6 NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 626

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

9 SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO)

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

G.W. ENTERED JAN 12 1999

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [01] * SPS PROJECT CODE [06] * TEST SECTION NO [62]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [03-26-98]
2 DATE MEASUREMENTS COMPLETED [06-27-98]

This sheet is a combination of Both Binder layers - Entered as 1 layer

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP	MILL REPLACEMENT	BINDER COURSE	SURFACE COURSE	SURFACE FRICTION
0+00	0			66	16	
	36			61	13	
	72			62	12	
	108			70	13	
	144			75	13	
0+50	0			63	17	
	36			56	13	
	72			60	11	
	108			60	12	
	144			71	11	
1+00	0			47	13	
	36			62	11	
	72			47	07	
	108			65	08	
	144			66	11	
1+50	0			64	14	
	36			60	12	
	72			63	11	
	108			62	12	
	144			69	12	
2+00	0			66	14	
	36			57	12	
	72			48	11	
	108			60	11	
	144			55	12	
2+50	0			64	14	
	36			63	11	
	72			65	10	
	108			65	09	
	144			68	12	
3+00	0			66	14	
	36			62	12	
	72			62	11	
	108			67	13	
	144			69	14	
LAYER NUMBER						

PREPARER _____ EMPLOYER BRF DATE 7-21-98

GW ENTERED JAN 20 1999

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 2]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6 9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 7-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP	MILL REPLACEMENT	BINDER COURSE	SURFACE COURSE	SURFACE FRICTION
3+50	0			5 9	1 8	
	36			6 5	1 1	
	72			6 3	1 1	
	108			6 9	1 2	
	144			7 1	1 2	
4+00	0			6 8	1 3	
	36			6 2	1 2	
	72			6 4	1 0	
	108			6 1	1 2	
	144			7 3	13 ~~2~~ 9	
4+50	0			6 5	1 2	
	36			6 3	1 1	
	72			6 5	1 0	
	108			6 6	1 1	
	144			7 4	1 3	
5+00	0			6 4	1 3	
	36			6 2	1 1	
	72			6 9	1 0	
	108			7 1	1 2	
	144			7 6	1 2	
+						
+						
+						
LAYER NUMBER						

PREPARER _____ EMPLOYER _____ DATE _____

GW ENTERED JAN 20 1999

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [01] * SPS PROJECT CODE [06] * TEST SECTION NO [62]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [03-26-98]
2 DATE MEASUREMENTS COMPLETED [06-27-98]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

GW ENTERED JAN 12 1999

STATION NUMBER	OFFSET (Inches)	N/A RUT LEVEL-UP	N/A MILL REPLACEMENT	(Lower) BINDER COURSE	~~SURFACE COURSE~~	N/A SURFACE FRICTION
0+00	0			47		
	36			41		
	72			40		
	108			46		
	144			50		
0+50	0			41		
	36			36		
	72			37		
	108			36		
	144			43		
1+00	0			24		
	36			40		
	72			40		
	108			37		
	144			37		
1+50	0			46		
	36			42		
	72			43		
	108			40		
	144			46		
2+00	0			47		
	36			38		
	72			40		
	108			40		
	144			35		
2+50	0			41		
	36			43		
	72			43		
	108			41		
	144			43		
3+00	0			44		
	36			41		
	72			42		
	108			43		
	144			43		
LAYER NUMBER				04		

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 2]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 7-9 8]

SHEET 1 OF 2

LAYER THICKNESS MEASUREMENTS (Inches)

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP (N/A)	MILL REPLACEMENT (N/A)	BINDER COURSE (Upper)	SURFACE COURSE	SURFACE FRICTION (N/A)
0+00	0			19	16	
	36			20	13	
	72			22	12	
	108			24	13	
	144			25	13	
0+50	0			22	17	
	36			20	13	
	72			23	11	
	108			24	12	
	144			28	11	
1+00	0			23	13	
	36			22	11	
	72			23	07	
	108			28	08	
	144			29	11	
1+50	0			18	14	
	36			18	12	
	72			20	11	
	108			22	12	
	144			23	12	
2+00	0			19	14	
	36			19	12	
	72			18	11	
	108			20	11	
	144			20	12	
2+50	0			23	14	
	36			20	11	
	72			22	10	
	108			24	10	
	144			25	12	
3+00	0			22	14	
	36			22	12	
	72			22	11	
	108			24	13	
	144			26	14	
LAYER NUMBER				05	06	

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 2]

1. DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2. DATE MEASUREMENTS COMPLETED [0 6-2 7-9 8]

GW ENTERED JAN 12 1999

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP (N/A)	MILL REPLACEMENT (N/A)	BINDER COURSE (Lower)	~~SURFACE COURSE~~	SURFACE FRICTION (N/A)
3+50	0			42		
	36			44		
	72			42		
	108			46		
	144			47		
4+00	0			44		
	36			43		
	72			41		
	108			36		
	144			44		
4+50	0			42		
	36			41		
	72			43		
	108			43		
	144			48		
5+00	0			41		
	36			40		
	72			46		
	108			46		
	144			46		
+						
+						
+						
LAYER NUMBER				04		

PREPARER Tara L. Dunnan EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 2]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 7-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP N/A	MILL REPLACEMENT N/A	BINDER COURSE (Upper)	SURFACE COURSE	SURFACE FRICTION N/A
3+50	0			17	18	
	36			20	11	
	72			23	11	
	108			23	13	
	144			24	12	
4+00	0			19	13	
	36			19	12	
	72			23	10	
	108			25	12	
	144			29	13	
4+50	0			23	12	
	36			22	11	
	72			22	10	
	108			25	11	
	144			26	13	
5+00	0			23	13	
	36			22	11	
	72			23	10	
	108			25	12	
	144			30	12	
+						
+						
+						
LAYER NUMBER				05	06	

PREPARER Lane W. Duncan EMPLOYER BRE DATE 7-21-98

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 11 MISCELLANEOUS CONSTRUCTION NOTES AND COMMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 2]

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

- No tack before overlay of binder on Rubblized surface.

- Two separate asphalt plants were used for HMAC production.

G.W. ENTERED JAN 13 1999

PREPARER Kevin W. Dunnam EMPLOYER BRE DATE 7-8-98

SPS-6 CONSTRUCTION DATA SHEET 28 SUBDRAINAGE RETROFIT FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 2]

GW ENTERED JAN 13 1999

1 DATE SUBDRAINAGE PLACEMENT BEGAN (Month-Day-Year) [0 3-0 4-9 8]

2 DATE SUBDRAINAGE PLACEMENT COMPLETED [0 3-0 6-9 8]

3 TYPE OF DRAINAGE PIPE [7]
Clay Tile 1 Concrete Tile 2 Vitrified Clay 3
Perforated Plastic Bituminous Fiber 4 Perforated Corrugated Metal 5
Corrugated Plastic Tubing 6 Drainage Mat 7
Other (Specify) 8 _____

4 DIAMETER OF PIPE (INCHES) Filter MAT 1"x18" ⇒ 18" [_ _ _] N/A

5 DEPTH OF ~~PIPE~~ MAT BELOW TOP OF PAVEMENT SURFACE (INCHES) 1" [_ 8 0]

6 HORIZONTAL PLACEMENT OF ~~PIPE~~ MAT FROM OUTER EDGE OF PAVEMENT (INCHES) [_ 0 0]

7 TYPE OF PRIMARY FILTER USED [3]
Graded Aggregate 1 Uniformly Graded Aggregate (One Size) 2
Woven Fabric 3 Non-Woven Fabric 4 Porous PCC 5
Porous Bituminous Concrete 6
Other (Specify) 7 _____

8 MAXIMUM PARTICLE SIZE OF PRIMARY FILTER MATERIAL (INCHES) [_ _] N/A

9 GRADATION OF PRIMARY FILTER MATERIAL
% Passing #4 Sieve [_ _ _] % Passing #40 Sieve [_ _ _]
% Passing #10 Sieve [_ _ _] % Passing #100 Sieve [_ _ _] N/A

10 PERMEABILITY OF PRIMARY FILTER MATERIAL (FT/DAY) (566 93 ft/day) _ _ _ _

11 TYPE AND LOCATION OF SECONDARY FILTER MATERIAL [3]
Fabric Encapsulating the Primary Filter Material 1
Fabric Encapsulating the Drainage Pipe 2
Other (Specify) 3 None used

12 AVERAGE OUTLET INTERVAL (FEET) 730 3 ft

13 PRIMARY PURPOSE OF SUBDRAINAGE INSTALLATION [1]
Remove Free Water From Pavement Layers 1
Cut Off Side-Hill/Through Hill Seepage 2
Lower Water Table 3
Other (Specify) 4 _____

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

SPS-6 CONSTRUCTION DATA Rubblize SHEET 29 ~~CRACK/BREAK~~ AND SEAT DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 2]

G.W. ENTERED JAN 13 1999

1 DATE CRACK/BREAK AND SEAT OPERATION BEGAN (Month-Day-Year) [05-04-98]

2 DATE CRACK/BREAK AND SEAT OPERATION COMPLETED [05-04-98]

3 AVERAGE PCC BREAKAGE SIZE (INCHES)
Width [04]
Length [04]

4 PAVEMENT BREAKER PASSES/LANE [1.]

5 PAVEMENT BREAKER TYPE [7]
Pile Driver Hammer 2 Guillotine Drop Hammer. . 4
Other (Specify) 7 Multiple Head Rubblizer

6. SEATING ROLLER WEIGHT (TONS) [30]

7 NUMBER OF SEATING ROLLER PASSES/LANE [2.]

8 DEFLECTION MEASUREMENTS TAKEN
Yes . 1 No. 2
Before Breaking [1]
After Breaking (Prior to Seating) [2]
After Seating (Prior to Overlay) [2]
After Overlay [1]

9 BROKEN PAVEMENT SURFACE PREPARATION [1]
None 1 Sweeping 2 Tack Coat 3 Leveling Course 4
Full Depth Repair of Failed Areas 5
Other (Specify) 6 _____

PREPARER Tom W. Dunnan EMPLOYER BRE DATE 6-15-98

Revised December 15, 1989

GW ENTERED FEB 08 1999

SHEET 1

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 6 2]

IMPROVEMENT LISTING

* 1 DATE COMPLETED (MO/DAY/YR)	* 2. WORK[1] TYPE CODE (TABLE A 17)	* 3. WORK QUANTITY (UNITS FROM (TABLE A 17)	4 THICKNESS (INCHES)	5 COST[2] (THOUSANDS OF DOLLARS PER LANE-MILE)
[0 4/1 3/9 8]	[3 8]	[_ _ 5 0 0]	_ N _	_ _ _
[0 5/0 4/9 8]	[5 3*]	[_ _ 6 6 7]	1 0 0	_ _ _
[0 6/2 6/9 8]	[1 1]	[_ _ 5 5 6]	_ 3 5	_ _ _
[0 6/2 6/9 8]	[1 9]	[_ _ 6 6 7]	_ 7 7	_ _ _
EWD 1/27/99 ~~[0 6/2 6/9 8]~~	~~[3 6*]~~	~~[_ _ 6 6 7]~~	~~_ N _~~	~~_ _ _~~
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _

NOTES

1 For each specific work type, the appropriate set of sheets should be completed (as indexed in Table 7 1) It is recognized that parts of both Chapter 6 (Maintenance Data Collection) and Chapter 7 (Rehabilitation Data Collection) may be required to adequately record a given set of improvements for a test section

2 Cost includes only pavement structure cost Non-pavement costs such as cut and fill work, work on bridges, culverts, lighting, and guard rails are to be excluded

*53 = Rubblization of PCC And Seat for base of new AC Overlay

Maintenance not Rehab *36 = Tack Coat was only used between HMAC layers and not between Rubblized material and HMAC layer

Revised December 15, 1989

SHEET 2

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 6 2]

GW ENTERED FEB 08 1999

REVISED LAYER DESCRIPTIONS

1. LAYER[1] NUMBER	*2. LAYER[2] DESCRIPTION	*3. MATERIAL[3,4] TYPE CLASSIFICATION	*4 LAYER THICKNESS (IN) MEAN	MIN	MAX	STD DEV
1	SUBGRADE(7)	[7 9]				
2	[0 5]	[9 9]	[_ _ _._]	_ _ _ _	_ _ _ _	_ _ _ _
3	[0 3]	[9 9]	[_ _ _._]	_ _ _ _	_ _ _ _	_ _ _ _
4	[0 4]	[0 1]	[_ _4 2]	_ _2 4	_ _5 0	_ _0 4
5	[0 4]	[0 1]	[_ _2 3]	_ _1 7	_ _3.0	_ _0 3
6	[0 1]	[0 1]	[_ _1 2]	_ _0 7	_ _1 8	_ _0 2
7	[_ _]	[_ _]	[_ _._]	_ _ _ _	_ _ _ _	_ _ _ _
8	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
9	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _

NOTES

1 Layer 1 is subgrade soil, last layer is existing 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 (Below Surface Layer)	04	Interlayer	08	Recycled Layer	12

3 The material type classification codes for surface, base or subbase, subgrade, and seal coat or interlayer materials appear in Tables A 5, A 6, A 7 and A 8, respectively

4 If the materials or thicknesses of a layer has not changed during the rehabilitation, enter "99" as the material type classification and leave the layer thicknesses for that layer blank If a layer has changed, enter the appropriate codes and thicknesses

This Sheet Added 1/27/99

Revised December 15, 1989

	*STATE ASSIGNED ID	[_ _ _ _]
SHEET 7	*STATE CODE	[0 1]
REHABILITATION DATA	*SHRP SECTION ID	[0 6 6 2]
LTPP PROGRAM		

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)	Lower Binder [4]
2 MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)	2.510 ~~2.527~~
3 BULK SPECIFIC GRAVITY (ASTM D1188) 2ND 4/16/99	2.399 ~~2.669~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	4.6
5 PERCENT AIR VOIDS (EQ 7 4)	4.4
6. MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)	298
7 NUMBER OF BLOWS	750
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(.90 mm)~~ 2ND 4/16/99 (AASHTO T245 OR ASTM D1559)	10.0 ~~35~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	_ _ _
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	_ _ _ _

~~Lou~~ D Dunnam BRE/SRCO 7-15-98

Revised December 15, 1989

SHEET 7

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 6 2]

G.W. ENTERED FEB 09 1999

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)		Upper Binder [5]
2. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)		2.545 ~~2548~~
3. BULK SPECIFIC GRAVITY (ASTM D1188)	ZWP 4/16/99	2.452 ~~2694~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)		4.3
5 PERCENT AIR VOIDS (EQ 7 4)		3.7
6 MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)		2447
7 NUMBER OF BLOWS		75
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(1.14mm)~~ (AASHTO T245 OR ASTM D1559)		12.7 ~~45~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)		_ _ _
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)		_ _ _ _

Steve W. Duncan BRE/SRCO 7-15-98

Revised December 15, 1989

G.W. ENTERED FEB 09 1999

SHEET 7

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 6 2]

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1	LAYER NUMBER (FROM SHEET 2)	Surface [6]
2	MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)	2.437 ~~2435~~
3	BULK SPECIFIC GRAVITY (ASTM D1188) ZWD 4/16/99	2.338 ~~2581~~
4	OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	5.4
5	PERCENT AIR VOIDS (EQ 7 4) ZWD 4/16/99	4.1
6	MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)	4260 ~~13917~~
7	NUMBER OF BLOWS	750
8	MARSHALL FLOW (HUNDREDTHS OF AN INCH) ZWD 4/16/99 ~~(0.99mm)~~ (AASHTO T245 OR ASTM D1559)	11.0 ~~39~~
9	HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	_ _ _
10	HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	_ _ _ _

Tom W. Duncan BRE/SRCO 7-17-98

Revised December 15, 1989

SHEET 61

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 6 2]

G.W. ENTERED FEB 08 1999

RESTORATION OF AC SHOULDERS

* 1 SHOULDER RESTORED [3]
- Outside 1
- Inside 2
- Both 3

		INSIDE SHOULDER	OUTSIDE SHOULDER
* 2	SURFACE TYPE (CODES-TABLE A.5)	1	[1]
* 3	TOTAL WIDTH (FEET)	0 4	[1 0]
* 4	PAVED WIDTH (FEET)	0 4	[1 0]
* 5	SHOULDER BASE TYPE (CODES-TABLE A 6)	2 1	[2 1] ← No Base used
* 6	SURFACE THICKNESS (INCHES)	_ 3 5	[_ 3 5]
* 7	BASE THICKNESS (INCHES)	_ 0 0	[_ 0 0] N/A

* 8 TYPE OF SHOULDER RESTORATION [2]
- AC Overlay Without Removal of Existing AC . . . 1
- Cold Milling and AC Overlay . 2
- Complete Shoulder Removal and Replacement . 3
- In-place Recycling and Overlay . 4
- Other (Specify)_____ 5

* 9 TYPE OF AC MATERIALS [1]
- New Materials 1
- Hot Recycled Materials . 2
- Cold Recycled Materials . . 3
- Other (Specify)_____ 4

*10 THICKNESS OF AC MATERIAL REMOVED BY COLD MILLING (IN) [3 5]

*11. AC OVERLAY THICKNESS (IN) [8.0]

12 LANE/SHOULDER JOINT SEALANT [1]
- None 1
- Sealed Without Providing Reservoir . 2
- Saw Reservoir and Seal 3
- Other (Specify)_____ 4

13 LANE/SHOULDER JOINT SEALANT RESERVOIR
- WIDTH (INCHES) _ _
- DEPTH (INCHES) _ _

14 TYPE OF JOINT SEALANT _
- Poured 1
- Preformed 2

NOTE DATA ITEMS 8 TO 14 PERTAIN ONLY TO THE RESTORED OUTSIDE SHOULDER

SPS-6 CONSTRUCTION DATA SHEET 2 REVISED LAYER DESCRIPTIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 3]

G.W ENTERED JAN 13 1999

	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 5]	[2 3]	[6 0]	----	----	----
	3	[0 3]	[0 4]	[10 0]	----	----	----
Lower Binder	4	[0 4]	[0 1]	[5 5]	4.3	7 6	0 6
Upper Binder	5	[0 4]	[0 1]	[2 6]	1 8	3 7	0 4
Surface	6	[0 1]	[0 1]	[1 6]	1 2	2 3	0 2
	7	[ ]	[ ]	[ ]	----	----	----
	8	[ ]	[ ]	[ ]	----	----	----
	9	[ ]	[ ]	[ ]	----	----	----
	10	[ ]	[ ]	[ ]	----	----	----
	11	[ ]	[ ]	[ ]	----	----	----
	12	[ ]	[ ]	[ ]	----	----	----
	13	[ ]	[ ]	[ ]	----	----	----
	14	[ ]	[ ]	[ ]	----	----	----
	15	[ ]	[ ]	[ ]	----	----	----

NOTES

1 Layer 1 is 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 w/overlay	02	Subbase Layer	06	Surface Treatment .	10
Original Surface	03	Subgrade	07	Embankment (Fill)	11
HMAC Layer (Subsurface)	04	Interlayer	08		

If milling was performed, the layers which were milled shall be assigned their previous layer number and material type If the layer was completely removed by milling, it shall still be shown as a layer with a zero thickness

3 Enter the material type classification codes from Tables A 5, A 6, A 7 and A 8 which best describes the material in each layer If the layer was milled, enter the material classification code corresponding to the type material which was removed

4 Enter the average thickness of each layer and the maximum, minimum, and standard deviation of the thickness measurements, if known If a layer was partially milled, the remaining thickness of the layer shall be indicated

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 7 OVERLAY PLACEMENT OPERATIONS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO. [6 3]

1. DATE SURFACE PREPARATION BEGAN (Month-Day-Year) [0 5-1 2-9 8]
2. DATE SURFACE PREPARATION COMPLETED [0 6-2 6-9 8]

3. SURFACE PREPARATION PRIOR TO PLACEMENT OF OVERLAY [4]
   None..... 1 Broomed..... 2 Broomed + Asphaltic Tack Coat.... 3
   Asphaltic Tack Coat (only).... 4
   No tack used on rubblized surface

4. TACK COAT MATERIAL
   Material Type None..... 1 SS-1.... 2 SS-1H.... 3 CRS-1.... 4 [1 0]
   CRS-2.... 5 CMS-2.... 6 CMS-2H.. 7 CSS-1.... 8 CSS-1H... 9
   Other.... 10 (Specify) CQS1-H (Emulsion)

5. TACK COAT DILUTION (Percent) [0]
   or Mixing Rate Parts Diluent ___ TO Parts Asphalt ___

6. TACK COAT APPLICATION RATE (Gal/Sq. Yd.) [0.0 9]

7. ASPHALT CONCRETE PLANT AND HAUL

	Type	Name	Haul Distance (Mi)	Time (Min)	Layer Numbers		
Plant 1	[2]	Turkey Town	[3 0]	[4 0]	[4]	[5]	[ ]
Plant 2	[2]	Glencoe	[3 0]	[4 0]	[6]	[ ]	[ ]
Plant 3	[ ]		[ ]	[ ]	[ ]	[ ]	[ ]

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

8. MANUFACTURER OF ASPHALT CONCRETE PAVER Barber Greene (Binder) (Surface) CatePillAR

9. MODEL DESIGNATION OF ASPHALT CONCRETE PAVER AP-1055B

10. SINGLE PASS LAYDOWN WIDTH (Feet) [12.0]

01-AMAC

11. Layer No.	12. Material Type Classification Code	13. Nominal Lift Placement Thickness				14. Tack Coat Between Lifts? (Y/N)	15. Transverse Joint Station
		1st Lift	2nd Lift	3rd Lift	4th Lift		
[0 4]	[0 1]	[2.8]	[3.2]	[.]	[.]	[N]	[+]
[0 5]	[0 1]	[3.0]	[.]	[.]	[.]	[N]	[0+70]
[0 6]	[0 1]	[1.8]	[.]	[.]	[.]	[Y]	[+]

16. LOCATION OF LONGITUDINAL SURFACE JOINT [1]
    Between lanes.. 1 Within lane.. 2 (specify offset from pavement lane edge in feet) [12.0]

17. SIGNIFICANT EVENTS DURING CONSTRUCTION(disruptions, rain, equip. problems, etc.)
    2" to thick 2nd lift lower binder from 2+80 – 3+00; PRoblem Corrected

PREPARER Kane W. Dunnan EMPLOYER BRE DATE 7-8-98

G.W. ENTERED JAN 13 1999

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO. [6 3]

1. DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5-1 2-9 8]
2. DATE PAVING OPERATIONS COMPLETED [0 5-1 3-9 8]

3. LAYER NUMBER Lower Binder [0 4]

4. MIXING TEMPERATURE (°F) [3 2 0.]
5. LAYDOWN TEMPERATURES (°F)
   Mean..... 2 9 7.5 Number of Tests ..... 0 2.
   Minimum..... 2 8 5. Maximum..... 3 1 0.
   Standard Deviation... 1 7.7

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 0.0				
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.	1 0.0		2 5 0 0.	. L 0 W	4.5
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	0 3.	0 3.	.	.
	INTERMEDIATE				
25	Roller Code (A-Q)	L			
26	Coverages	.	.	.	.
	FINAL				
27	Roller Code (A-Q)	A	A		
28	Coverages	0 3.	0 3.	.	.
29	Air Temperature (°F)	1 0 0.	.	.	.
30	Compacted Thickness (In)	2.2	2.8	.	.
31	Curing Period (Days)	1.0	1.0	.	.

PREPARER Tom W. Duncan EMPLOYER BRE DATE 7-8-98

G.W. ENTERED JAN 13 1999

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 3]

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 5 - 1 4 - 9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 5 - 1 4 - 9 8]

3 LAYER NUMBER Upper Binder [0 5]

4 MIXING TEMPERATURE (°F) [3 1 5]
5. LAYDOWN TEMPERATURES (°F)

Mean	3 0 9	Number of Tests	0 1
Minimum	3 0 9	Maximum	3 0 9
Standard Deviation	_ 0 0		

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 0 0				
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	1 0 0		2 5 0 0	4 0 W	4 5
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	0 3			
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A			
28	Coverages	0 3			
29	Air Temperature (°F)	9 5			
30	Compacted Thickness (In)	2 5			
31	Curing Period (Days)	2 0			

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

GW ENTERED JAN 13 1999

SPS-6 CONSTRUCTION DATA SHEET 8 OVERLAY COMPACTION DATA	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 3]

1 DATE PAVING OPERATIONS BEGAN (Month-Day-Year) [0 6-2 6-9 8]
2 DATE PAVING OPERATIONS COMPLETED [0 6-2 6-9 8]

3 LAYER NUMBER Surface [0 6]

4 MIXING TEMPERATURE (°F) [3 2 0]
5 LAYDOWN TEMPERATURES (°F)
Mean 3 1 1
Minimum 3 0 5
Standard Deviation _ 6 0

Number of Tests 0 3
Maximum 3 1 7

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 0 0				
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	1 0 0		2 5 0 0	1 0 w	4 5
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	0 3			
	INTERMEDIATE				
25	Roller Code (A-Q)				
26	Coverages				
	FINAL				
27	Roller Code (A-Q)	A			
28	Coverages	0 3			
29	Air Temperature (°F)	+ 0 0			
30	Compacted Thickness (In)	1 3			
31	Curing Period (Days)	2 5			

PREPARER Tom W Duncan EMPLOYER BRE DATE 7-8-98

GW ENTERED JAN 13 1999

SPS-6 CONSTRUCTION DATA SHEET 9 CONSTRUCTION QUALITY CONTROL MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 3]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 5-1 3-9 8]
2 DATE MEASUREMENTS COMPLETED [0 5-1 3-9 8]

3 NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	Rut Level-Up N/A	Mill Replacement N/A	Binder Course (Lower)	~~Surface Course~~	Surface Friction N/A
Measurement Method (A, B, C)[1]			A		
Rod Depth (Inches)			N/A		
Number of Measurements			1 2		
Average (pcf)			1 4 6 3		
Maximum (pcf)			1 4 6 5		
Minimum (pcf)			1 4 1 0		
Standard Deviation (pcf)			1 7		
Layer Number			0 4 Lower Binder		

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

4 MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

5 NUCLEAR DENSITY GAUGE MODEL NUMBER 4640

6 NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 626

7 NUCLEAR GAUGE DENSITY COUNT RATE FOR STANDARDIZATION

8 PROFILOGRAPH MEASUREMENTS N/A
Profilograph Type California 1 Rainhart 2
Profile Index (Inches/Mile)
Interpretation Method Manual 1 Mechanical 2 Computer 3
Height of Blanking Band (Inches)
Cutoff Height (Inches)

9 SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO) No

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

G.W ENTERED JAN 13 1999

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 9 CONSTRUCTION QUALITY CONTROL MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 3]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 5-1 4-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 9-9 8]

3 NUCLEAR DENSITY MEASUREMENTS

LAYER TYPE	Rut Level-Up (N/A)	Mill Replacement (N/A)	Binder Course (Upper)	Surface Course	Surface Friction (N/A)
Measurement Method (A, B, C)[1]			A	A	
Rod Depth (Inches)			N/A	N/A	
Number of Measurements			1 2	1 2	
Average (pcf)			1 4 7 7	1 4 2 5	
Maximum (pcf)			1 5 0 9	1 4 6 2	
Minimum (pcf)			1 4 5 1	1 3 9 0	
Standard Deviation (pcf)			1 7	2 3	
Layer Number			0 5 UPPER BINDER	0 6 SURFACE	

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

4 MANUFACTURER OF NUCLEAR DENSITY GAUGE Troxler

5 NUCLEAR DENSITY GAUGE MODEL NUMBER 4640

6 NUCLEAR DENSITY GAUGE IDENTIFICATION NUMBER 626

7 NUCLEAR GAUGE DENSITY COUNT RATE FOR STANDARDIZATION

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

9 SURFACE PROFILE USED AS BASIS OF INCENTIVE PAYMENT? (YES, NO)

PREPARER Lane V. Dunnan EMPLOYER BRE DATE 7-21-98

G.W. ENTERED JAN 13 1999

SPS-6 CONSTRUCTION DATA SHEET 7 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 3]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) This sheet is [03-26-98]
2. DATE MEASUREMENTS COMPLETED a combination of [06-29-98]
Both Binder layers -
Entered as 1 layer

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP	MILL REPLACEMENT	BINDER COURSE	SURFACE COURSE	SURFACE FRICTION
0+00	0			7.3	17	
	36			72	16	
	72			78	16	
	108			80	16	
	144			82	16	
0+50	0			70	16	
	36			51	14	
	72			75	13	
	108			77	16	
	144			50	28	
1+00	0			68	19	
	36			72	17	
	72			73	14	
	108			82	14	
	144			91	16	
1+50	0			78	16	
	36			76	14	
	72			83	13	
	108			78	14	
	144			88	16	
2+00	0			73	16	
	36			74	17	
	72			86	12	
	108			89	13	
	144			94	14	
2+50	0			70	17	
	36			74	17	
	72			86	14	
	108			93	14	
	144			96	16	
3+00	0			80	18	
	36			78	16	
	72			86	14	
	108			93	16	
	144			97	16	
LAYER NUMBER						

PREPARER _____ EMPLOYER BRE DATE 7-21-98

S.W. ENTERED JAN 20 1999

SPS-6 CONSTRUCTION DATA SHEET 7 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 3]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 8-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 7-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP	MILL REPLACEMENT	BINDER COURSE	SURFACE COURSE	SURFACE FRICTION
3+50	0			7 2	1 6	
	36			7 7	1 3	
	72			8 2	1 4	
	108			9 0	1 3	
	144			10 3	1 2	
4+00	0			7 3	2 0	
	36			7 5	1 9	
	72			8 4	1 6	
	108			8 8	1 6	
	144			10 6	1 6	
4+50	0			8 6	2 3	
	36			7 1	2 0	
	72			7 3	1 6	
	108			8 5	1 4	
	144			9 2	1 3	
5+00	0			7 1	2 3	
	36			6 2	2 0	
	72			6 9	1 7	
	108			8 2	1 6	
	144			9 0	1 4	
+						
+						
+						
LAYER NUMBER						

PREPARER _____ EMPLOYER _____ DATE _____

GW ENTERED JAN 20 1999

October 1990 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 3]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 7-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 1 OF 2

G.W. ENTERED JAN 13 1999

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP (N/A)	MILL REPLACEMENT (N/A)	BINDER COURSE (Lower)	~~SURFACE COURSE~~	SURFACE FRICTION (N/A)
0+00	0			4.9		
	36			4.9		
	72			5.3		
	108			5.2		
	144			5.3		
0+50	0			5.6		
	36			4.9		
	72			5.0		
	108			5.2		
	144			5.0		
1+00	0			4.6		
	36			5.4		
	72			5.5		
	108			6.2		
	144			6.8		
1+50	0			5.4		
	36			5.2		
	72			5.9		
	108			5.3		
	144			6.1		
2+00	0			4.8		
	36			5.0		
	72			5.8		
	108			6.0		
	144			6.2		
2+50	0			4.7		
	36			5.2		
	72			6.0		
	108			6.1		
	144			6.0		
3+00	0			5.8		
	36			5.6		
	72			6.1		
	108			6.2		
	144			6.0		
LAYER NUMBER				04 Lower Binder		

PREPARER Kevin W. Duncan EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO. [6 3]

1. DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2. DATE MEASUREMENTS COMPLETED [0 6-2 7-9 8]

SHEET 1 OF 2

LAYER THICKNESS MEASUREMENTS (Inches)

STATION NUMBER	OFFSET (Inches)	N/A RUT LEVEL-UP	N/A MILL REPLACEMENT	(Upper) BINDER COURSE	SURFACE COURSE	N/A SURFACE FRICTION
0+00	0			2.4	1.7	
	36			2.3	1.6	
	72			2.5	1.6	
	108			2.8	1.6	
	144			2.9	1.6	
0+50	0			2.2	1.6	
	36			2.2	1.4	
	72			2.5	1.3	
	108			2.5	1.6	
	144			2.8	1.6	
1+00	0			2.3	1.9	
	36			1.8	1.7	
	72			1.8	1.4	
	108			2.0	1.4	
	144			2.3	1.6	
1+50	0			2.4	1.6	
	36			2.4	1.4	
	72			2.4	1.3	
	108			2.5	1.4	
	144			2.8	1.6	
2+00	0			2.5	1.6	
	36			2.4	1.3	
	72			2.8	1.2	
	108			2.9	1.3	
	144			3.2	1.4	
2+50	0			2.3	1.7	
	36			2.2	1.7	
	72			2.6	1.4	
	108			3.2	1.4	
	144			3.6	1.6	
3+00	0			2.2	1.8	
	36			2.2	1.6	
	72			2.5	1.4	
	108			3.1	1.6	
	144			3.7	1.6	
LAYER NUMBER				05	06	

PREPARER Lane W. Dunnan EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 3]

1 DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2 DATE MEASUREMENTS COMPLETED [0 6-2 7-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	N/A RUT LEVEL-UP	N/A MILL REPLACEMENT	(Lower) BINDER COURSE	~~SURFACE COURSE~~	N/A SURFACE FRICTION
3+50	0			4.8		
	36			5.2		
	72			5.6		
	108			5.6		
	144			6.6		
4+00	0			4.9		
	36			5.3		
	72			5.9		
	108			5.9		
	144			7.6		
4+50	0			6.0		
	36			4.8		
	72			4.8		
	108			5.6		
	144			6.2		
5+00	0			4.7		
	36			4.3		
	72			4.9		
	108			5.8		
	144			5.6		
+						
+						
+						
LAYER NUMBER				04 Lower Binder		

PREPARER [signature] EMPLOYER BRE DATE 7-21-98

GW. ENTERED JAN 13 1999.

SPS-6 CONSTRUCTION DATA SHEET 10 LAYER THICKNESS MEASUREMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO. [6 3]

1. DATE MEASUREMENTS BEGAN (Month-Day-Year) [0 3-2 6-9 8]
2. DATE MEASUREMENTS COMPLETED [0 6-2 7-9 8]

LAYER THICKNESS MEASUREMENTS (Inches) SHEET 2 OF 2

STATION NUMBER	OFFSET (Inches)	RUT LEVEL-UP (N/A)	MILL REPLACEMENT (N/A)	BINDER COURSE (Upper)	SURFACE COURSE	SURFACE FRICTION (N/A)
3+50	0			2.4	1.6	
	36			2.5	1.3	
	72			2.6	1.4	
	108			3.4	1.3	
	144			3.7	1.3	
4+00	0			2.4	2.0	
	36			2.2	1.9	
	72			2.5	1.6	
	108			2.9	1.6	
	144			3.0	1.6	
4+50	0			2.6	2.3	
	36			2.3	2.0	
	72			2.5	1.6	
	108			2.9	1.4	
	144			3.0	1.3	
5+00	0			2.4	2.3	
	36			2.0	2.0	
	72			2.0	1.7	
	108			2.4	1.6	
	144			2.4	1.4	
+						
+						
+						
LAYER NUMBER				05	06	

PREPARER Tom V. Duncan EMPLOYER BRE DATE 7-21-98

SPS-6 CONSTRUCTION DATA SHEET 11 MISCELLANEOUS CONSTRUCTION NOTES AND COMMENTS	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 3]

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.

G.W. ENTERED JAN 13 1999

- No Tack used on Rubblized surface before overlay with Binder mix
- 2" to thick @ 2+80 – 3+00 in 2nd lift Lower Binder Problem Corrected
- Cold Joint in 2nd lift lower binder @ 0+70
- Two separate asphalt plants were used for HMAC production.

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

April 1991 (Heading revised October 1992)

SPS-6 CONSTRUCTION DATA SHEET 2B SUBDRAINAGE RETROFIT FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 3]

G.W. ENTER JAN 13 1999

1 DATE SUBDRAINAGE PLACEMENT BEGAN (Month-Day-Year) [0 3-0 4-9 8]

2 DATE SUBDRAINAGE PLACEMENT COMPLETED [0 3-0 6-9 8]

3 TYPE OF DRAINAGE PIPE [7]
Clay Tile 1 Concrete Tile 2 Vitrified Clay 3
Perforated Plastic Bituminous Fiber 4 Perforated Corrugated Metal 5
Corrugated Plastic Tubing . 6 Drainage Mat 7
Other (Specify) 8 _____

4 DIAMETER OF PIPE (INCHES) Filter Mat 1"x18" ⇒ 18" [_ _ _] N/A

5 DEPTH OF ~~PIPE~~ MAT BELOW TOP OF PAVEMENT SURFACE (INCHES) [_ 8 0]

6 HORIZONTAL PLACEMENT OF ~~PIPE~~ MAT FROM OUTER EDGE OF PAVEMENT (INCHES) [_ 0 0]

7 TYPE OF PRIMARY FILTER USED [3]
Graded Aggregate 1 Uniformly Graded Aggregate (One Size) 2
Woven Fabric 3 Non-Woven Fabric 4 Porous PCC 5
Porous Bituminous Concrete 6
Other (Specify) 7 _____

8 MAXIMUM PARTICLE SIZE OF PRIMARY FILTER MATERIAL (INCHES) [_ _] N/A

9 GRADATION OF PRIMARY FILTER MATERIAL
% Passing #4 Sieve [_ _ _] % Passing #40 Sieve [_ _ _]
% Passing #10 Sieve [_ _ _] % Passing #100 Sieve [_ _ _] N/A

10 PERMEABILITY OF PRIMARY FILTER MATERIAL (FT/DAY) (566 93 ft/day) [_ _ _] Did Not Entered 566 will not fit.

11 TYPE AND LOCATION OF SECONDARY FILTER MATERIAL [3]
Fabric Encapsulating the Primary Filter Material 1
Fabric Encapsulating the Drainage Pipe 2
Other (Specify) 3 None used

12 AVERAGE OUTLET INTERVAL (FEET) 730 3 ft

13 PRIMARY PURPOSE OF SUBDRAINAGE INSTALLATION [1]
Remove Free Water From Pavement Layers 1
Cut Off Side-Hill/Through Hill Seepage 2
Lower Water Table 3
Other (Specify) 4 _____

PREPARER [signature] EMPLOYER BRE DATE 7-8-98

SPS-6 CONSTRUCTION DATA Rubblize SHEET 29 ~~CRACK/BREAK~~ AND SEAT DATA FOR PAVEMENTS WITH PORTLAND CEMENT CONCRETE SURFACES	* STATE CODE [0 1] * SPS PROJECT CODE [0 6] * TEST SECTION NO [6 3]

G.W. ENTERED JAN 13 1999

1 DATE CRACK/BREAK AND SEAT OPERATION BEGAN (Month-Day-Year) [05-04-98]

2 DATE CRACK/BREAK AND SEAT OPERATION COMPLETED [05-04-98]

3 AVERAGE PCC BREAKAGE SIZE (INCHES)
Width [04]
Length [04]

4. PAVEMENT BREAKER PASSES/LANE [1.]

5. PAVEMENT BREAKER TYPE [7]
Pile Driver Hammer. . 2 Guillotine Drop Hammer . 4
Other (Specify) 7 Multiple Head Rubblizer

6. SEATING ROLLER WEIGHT (TONS) [30]

7 NUMBER OF SEATING ROLLER PASSES/LANE [2]

8. DEFLECTION MEASUREMENTS TAKEN
Yes 1 No 2
Before Breaking [1]
After Breaking (Prior to Seating) [2]
After Seating (Prior to Overlay) [2]
After Overlay [1]

9. BROKEN PAVEMENT SURFACE PREPARATION [1]
None 1 Sweeping 2 Tack Coat 3 Leveling Course 4
Full Depth Repair of Failed Areas 5
Other (Specify) 6 _____

PREPARER Zane W. Dunn EMPLOYER BRE DATE 6-15-98

Revised December 15, 1989

G.W. ENTERED FEB 08 1999

SHEET 1

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 6 3]

IMPROVEMENT LISTING

* 1. DATE COMPLETED (MO/DAY/YR)	* 2 WORK[1] TYPE CODE (TABLE A 17)	* 3. WORK QUANTITY (UNITS FROM (TABLE A 17)	4 THICKNESS (INCHES)	5 COST[2] (THOUSANDS OF DOLLARS PER LANE-MILE)
[0 4/1 3/9 8]	[3 8]	[_ _ 5 0 0]	_ N _	_ _ _
[0 5/0 4/9 8]	[5 3*]	[_ _ 6 6 7]	1 0 0	_ _ _
[0 6/2 6/9 8]	[1 1]	[_ _ 5 5 6]	_ 3 5	_ _ _
[0 6/2 6/9 8]	[1 9]	[_ _ 6 6 7]	_ 9 7	_ _ _
ZWD 1/27/99 ~~[0 6/2 6/9 8]~~	~~[3 6*]~~	~~[_ _ 6 6 7]~~	~~_ N _~~	_ _ _
[_ _/_ _/_ _]	[_ _]	[_ _ _ _ _]	_ _ _	_ _ _

NOTES

1 For each specific work type, the appropriate set of sheets should be completed (as indexed in Table 7 1) It is recognized that parts of both Chapter 6 (Maintenance Data Collection) and Chapter 7 (Rehabilitation Data Collection) may be required to adequately record a given set of improvements for a test section

2 Cost includes only pavement structure cost Non-pavement costs such as cut and fill work, work on bridges, culverts, lighting, and guard rails are to be excluded

*53 = Rubblization of PCC And Seat for base of new AC Overlay

Maintenance Not Rehab *36 = Tack Coat was only used between HMAC layers and not between Rubblized material And HMAC layer

Revised December 15, 1989

G.W. ENTERED FEB 08 1999

SHEET 2

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 6 3]

REVISED LAYER DESCRIPTIONS

1.	*2.	*3.	*4			
LAYER[1] NUMBER	LAYER[2] DESCRIP-TION	MATERIAL[3,4] TYPE CLASSIFICATION	<-------- LAYER THICKNESS (IN) --------> MEAN	MIN.	MAX	STD DEV.
1	SUBGRADE(7)	[9 9]				
2	[0 5]	[9 9]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
3	[0 3]	[9 9]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
4	[0 4]	[0 1]	[_ _5 5]	_ _4 3	_ _7 6	_ _0 6
5	[0 4]	[0 1]	[_ _2 6]	_ _1 8	_ _3 7	_ _0 4
6	[0 1]	[0 1]	[_ _1.6]	_ _1 2	_ _2 3	_ _0 2
7	[_ _]	[_ _]	[_ _._]	_ _ _ _	_ _ _ _	_ _ _._
8	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _
9	[_ _]	[_ _]	[_ _ _ _]	_ _ _ _	_ _ _ _	_ _ _ _

NOTES

1 Layer 1 is subgrade soil, last layer is existing 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 (Below Surface Layer)	04	Interlayer	08	Recycled Layer	12

3 The material type classification codes for surface, base or subbase, subgrade, and seal coat or interlayer materials appear in Tables A 5, A 6, A 7 and A 8, respectively

4 If the materials or thicknesses of a layer has not changed during the rehabilitation, enter "99" as the material type classification and leave the layer thicknesses for that layer blank If a layer has changed, enter the appropriate codes and thicknesses

This Sheet Added 1/27/99

Revised December 15, 1989

*STATE ASSIGNED ID [_ _ _ _]

SHEET 7

*STATE CODE [0 1]

REHABILITATION DATA

*SHRP SECTION ID [0 6 6 3]

LTPP PROGRAM

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)	Lower Binder [4]
2. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)	2.510 ~~2527~~
3. BULK SPECIFIC GRAVITY (ASTM D1188) ZWP 4/16/99	2.399 ~~2669~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	4 6
5 PERCENT AIR VOIDS (EQ 7 4)	4.4
6 MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)	2 9 8
7. NUMBER OF BLOWS	7 5 0
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(0.90 mm)~~ (AASHTO T245 OR ASTM D1559) ZWP 4/16/99	10.0 ~~3.5~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	

Zoro W. Duncan BRE/SRCO 7-15-98

Revised December 15, 1989

SHEET 7

REHABILITATION DATA

LTPP PROGRAM

*STATE ASSIGNED ID [_ _ _ _]

*STATE CODE [0 1]

*SHRP SECTION ID [0 6 6 3]

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2) ZNR 4/16/99	Upper Binder [5]
2. MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)	2.545 ~~2.548~~
3 BULK SPECIFIC GRAVITY (ASTM D1188)	2.452 ~~2.694~~
4. OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)	4 3
5. PERCENT AIR VOIDS (EQ 7 4)	3 7
6 MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)	2 4 4 7
7 NUMBER OF BLOWS	75 0 / 12 7
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(1.14mm)~~ (AASHTO T245 OR ASTM D1559)	~~4 5~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)	
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)	

Lois V. Duncan BRE/SRCO 7-15-98

Revised December 15, 1989

*STATE ASSIGNED ID [_ _ _ _]

SHEET 7

*STATE CODE [0 1]

REHABILITATION DATA

*SHRP SECTION ID [0 6 6 3]

LTPP PROGRAM

GMW ENTERED FEB 09 1999

ASPHALT CONCRETE OVERLAY
LABORATORY MIXTURE DESIGN

* 1. LAYER NUMBER (FROM SHEET 2)		Surface [6]
2 MAXIMUM SPECIFIC GRAVITY (NO AIR VOIDS) (EQ 7 3)		2.440 ~~2.442~~
3 BULK SPECIFIC GRAVITY (ASTM D1188)	ZWD 4/16/99	2.344 ~~2.581~~
4 OPTIMUM ASPHALT CONTENT (PERCENT WEIGHT OF TOTAL MIX) (AASHTO T164 OR ASTM D2172)		5.5
5 PERCENT AIR VOIDS (EQ 7 4)	ZWD 4/16/99	3.9
6 MARSHALL STABILITY (LBS) (AASHTO T245 OR ASTM D1559)		4260 ~~9391.7~~
7 NUMBER OF BLOWS		750
8 MARSHALL FLOW (HUNDREDTHS OF AN INCH) ~~(0.99mm)~~ (AASHTO T245 OR ASTM D1559)	ZWD 4/16/99	11.0 ~~3.9~~
9 HVEEM STABILITY (AASHTO T246 OR ASTM D1561)		_ _ _
10 HVEEM COHESIOMETER VALUE (GRAMS/25 MM OF WIDTH) (AASHTO T246 OR ASTM D1561)		_ _ _ _

Fred W. Duncan BRE/SRCO 7-17-98

Revised December 15, 1990

*STATE ASSIGNED ID [_ _ _ _]

SHEET 61

*STATE CODE [0 1]

REHABILITATION DATA

*SHRP SECTION ID [0 6 6 3]

LTPP PROGRAM

RESTORATION OF AC SHOULDERS

* 1. SHOULDER RESTORED [3]
- Outside 1
- Inside 2
- Both 3

		INSIDE SHOULDER	OUTSIDE SHOULDER
* 2	SURFACE TYPE (CODES-TABLE A.5)	1	[1]
* 3	TOTAL WIDTH (FEET)	0 4	[1 0]
* 4.	PAVED WIDTH (FEET)	0 4.	[1 0]
* 5	SHOULDER BASE TYPE (CODES-TABLE A 6)	2 1	[2 1] ← No Base used
* 6	SURFACE THICKNESS (INCHES)	_ 3 5	[_ 3 5]
* 7	BASE THICKNESS (INCHES)	_ 0 0	[_ 0 0] N/A

* 8 TYPE OF SHOULDER RESTORATION [2]
- AC Overlay Without Removal of Existing AC... 1
- Cold Milling and AC Overlay 2
- Complete Shoulder Removal and Replacement 3
- In-place Recycling and Overlay 4
- Other (Specify)_____ 5

* 9 TYPE OF AC MATERIALS [1]
- New Materials 1
- Hot Recycled Materials 2
- Cold Recycled Materials 3
- Other (Specify)_____ 4

*10 THICKNESS OF AC MATERIAL REMOVED BY COLD MILLING (IN) [3.5]

*11. AC OVERLAY THICKNESS (IN) [9 5]

12 LANE/SHOULDER JOINT SEALANT [1]
- None 1
- Sealed Without Providing Reservoir 2
- Saw Reservoir and Seal 3
- Other (Specify)_____ 4

13. LANE/SHOULDER JOINT SEALANT RESERVOIR
- WIDTH (INCHES) _ _
- DEPTH (INCHES) _ _

14 TYPE OF JOINT SEALANT _
- Poured 1
- Preformed 2

NOTE DATA ITEMS 8 TO 14 PERTAIN ONLY TO THE RESTORED OUTSIDE SHOULDER

UNCLASSIFIED FLB 08 1999

APPENDIX G

PHOTOGRAPHS

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2	Preconstruction Coring of JPCP	G 2
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6	Removal of JPCP for Full-Depth Patching	G 4
7	Crack and Break of JPCP	G 5
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9	Barber-Green Paver Used in Paving the Lower Binder HMAC	G 6
10	RoadTec Paver Used in Paving the Polymer-Enhanced Binder HMAC	G 6
11	Caterpillar Paver used to Pave the Surface HMAC	G 7
12	Milling Machine Used for the JPCP	G 7
13	Milling Machine Used for HMAC Taper at Section 010661, Station 5+00	G 8
14	Turkey Town Plant - For Lower and Upper Binder HMAC Production	G 8
15	Glencoe Plant - For Surface HMAC Production	G 9

Photo 1. Section 010601, Preconstruction

Photo 2. Preconstruction Coring of JPCP

Photo 3. Preconstruction Auger Probe in Shoulder

Photo 4. Milling of HMAC Shoulder

Photo 5. **Trenching and Placement of Edge Drain Filter Mat**

Photo 6. **Removal of Full-Depth JPCP for Full-Depth Patching**

Photo 7. Crack and Break of JPCP

Photo 8. Rubblization and Seating of State Supplemental Test Section

Photo 9. Barber-Green Paver Used in Paving the Lower Binder HMAC

Photo 10. RoadTec Paver Used in Paving the Polymer-Enhanced Binder HMAC

Photo 11. Caterpillar Paver used to Pave the Surface HMAC

Photo 12. Milling Machine Used for the JPCP

Photo 13. Milling Machine Used for HMAC Taper at Section 010661, Station 5+00

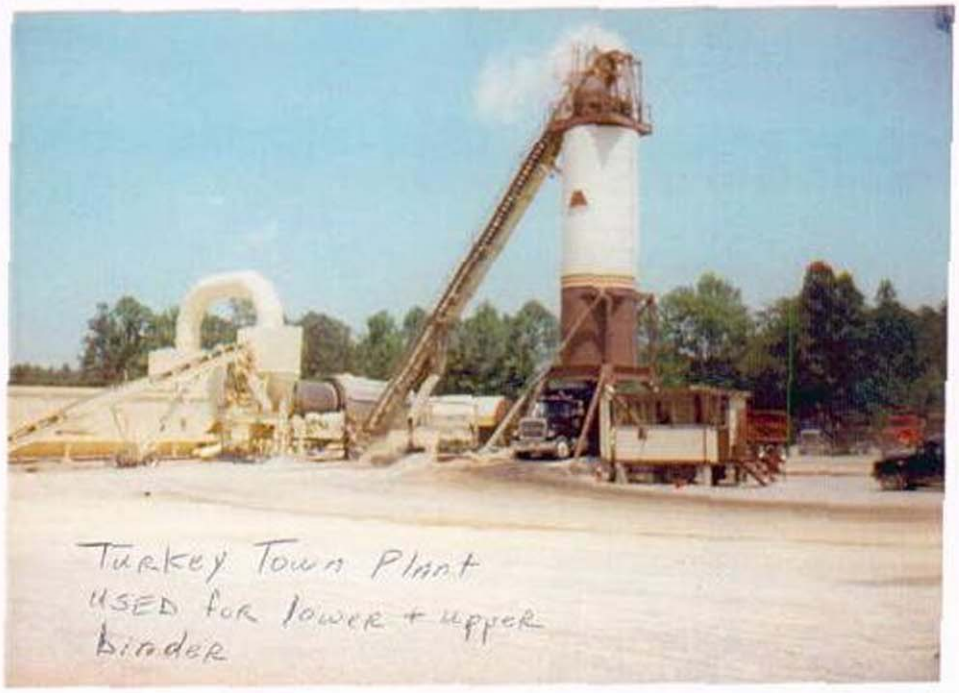

Photo 14. Turkey Town Plant - For Lower and Upper Binder HMAC Production

Photo 15. Glencoe Plant - For Surface HMAC Production