THIN ASPHALT OVERLAYS IN DIVISION VI

Final Report
June 1996

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Division VI is examining the feasibility of substituting thin asphalt overlays for chip seals as a maintenance application on low ADT roadways.

16. ABSTRACT

Field Division VI has typically applied "chip seals" to distressed low traffic roadways. Chip seals, however, have little effect on problems such as cracking, corrugating, and rutting. One or more of these problems existed at each of the seven sites selected for the application of thin asphalt overlays in lieu of chip seals.

Four similar roadway compositions were represented. Each was overlaid with 0.5 to 0.75 inches (13mm to 19mm) of Type D asphalt concrete. Field tests included traffic data collection, flexible pavement condition surveys, and rut measurements, as well as skid. ridemeter, and Benkelman Beam deflection tests.

Construction consisted of three steps: (1) placing a tack coat or fabric membrane on the old surface, (2) laying down a thin lift of Type D asphalt, and (3) compaction.

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SI (METRIC) CONVERSION FACTORS

Approximate Conversions to SI Units

Symbol	When you know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	25.40	millimeters	mm
ft	feet	0.3048	meters	m
yd	yards	0.9144	meters	m
mi	miles	1.609	kilometers	km
		AREA		
in^2	square inches	645.2	square millimeters	mm^2
ft^2	square feet	0.0929	square meters	m^2
yd^2	square yards	0.8361	square meters	m^2
ac	acres	0.4047	hectares	ha
mi^2	square miles	2.590	square kilometers	km^2
		VOLUME		
fl oz	fluid ounces	29.57	milliliters	mL
gal	gallons	3.785	liters	L
ft^3	cubic feet	0.0283	cubic meters	m^3
yd^3	cubic yards	0.7645	cubic meters	m^3
		MASS		
oz	ounces	28.35	grams	g
lb	pounds	0.4536	kilograms	kg
T	short tons (2000 lb)	0.907	megagrams	Mg
		TEMPERATURE (exact)		
°F	degrees Fahrenheit	(°F-32) / 1.8	degrees Celsius	°C
		FORCE and PRESSURE or STRESS		
lbf	poundforce	4.448	Newtons	N
lbf/in^2	poundforce	6.895	kilopascals	kPa

Approximate Conversions from SI Units

Symbol	When you know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.0394	inches	in
m	meters	3.281	feet	ft
m	meters	1.094	yards	yd
km	kilometers	0.6214	miles	mi
		AREA		
mm^2	square millimeters	0.00155	square inches	in^2
m^2	square meters	10.764	square feet	ft^2
m^2	square meters	1.196	square yards	yd^2
ha	hectares	2.471	acres	ac
km^2	square kilometers	0.3861	square miles	mi^2
		VOLUME		
mL	milliliters	0.0338	fluid ounces	fl oz
L	liters	0.2642	gallons	gal
m^3	cubic meters	35.315	cubic feet	ft^3
m^3	cubic meters	1.308	cubic yards	yd^3
		MASS		
g	grams	0.0353	ounces	oz
kg	kilograms	2.205	pounds	lb
Mg	megagrams	1.1023	short tons (2000 lb)	T
		TEMPERATURE (exact)		
°C	degrees Celsius	9/5+32	degrees Fahrenheit	°F
		FORCE and PRESSURE or STRESS		
N	Newtons	0.2248	poundforce	lbf
kPa	kilopascals	0.1450	poundforce	lbf/in^2

THIN ASPHALT OVERLAYS IN DIVISION VI

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September 1996

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EXECUTIVE SUMMARY

At seven sites in northwestern Oklahoma's Field Division VI, thin overlays (13mm and 19mm) of dense graded Type D mix (ODOT 708.04(b) Table 3A, 1988) were used to correct rutting and corrugating and to provide a uniform cross section slope of the roadway. Intended as an alternative to chip seals, their purpose was to increase skid resistance, seal poor bituminous surfaces, and improve the ride on roads with an ADT count of 2,000 or lower.

After four years of evaluation, the major distresses observed were cracking and corrugating. The final condition survey rated five sites as poor, one site as average, and one site as good.

An alternative treatment to thin overlays is micro-surfacing. (Chip sealing does not satisfactorily correct rutting and corrugating.) Cost analysis reveals that thin overlays are about 50 percent more expensive than micro-surfacing even though both require similar maintenance and have comparable design lives (9). However, the cost of transporting the aggregate used in a micro-surfacing slurry must be considered when contemplating treatment selection.

Another option is alternating thin overlays and chip seals. If rutting and corrugating are corrected with a thin overlay and have not recurred by the time another treatment is necessary, a chip seal will sufficiently address other common distresses, i.e., cracking and raveling. The next treatment would be another thin overlay followed by another chip seal and so on until such time as a full replacement is deemed necessary. Of course, periodic crack sealing is still necessary for maximizing the life cycles of both treatments.

Successive layers of either chip seals or thin overlays are not recommended. Each fails to correct those distresses which are addressed by the other. Successive layers of micro-surface slurry seals, however, have performed very well on SH 3 in Canadian County with an ADT count of 6000 and on US 77 in Oklahoma County with an ADT count of 60,000.

The performance of the seven thin overlays evaluated was slightly better than that of the previous chip seal applications. The determining factor in this difference was resistance to rutting. Cracking and corrugating continue to present problems for both treatments.

INTRODUCTION

At seven sites in northwestern Oklahoma (Field Division VI) thin overlays of dense graded Type D mix (ODOT 708.04 (b) Table 3A-1988) were used to correct rutting and corrugating and to provide a uniform cross section slope of the roadway. Their purpose was to increase skid resistance, seal poor bituminous surfaces, and improve transverse evenness (1,2). Overlays of 13mm (0.5in) and 19mm (0.75in) were placed with paving machines and compacted with pneumatic or steel-wheel rollers.

Sites 1, 2, and 3 were overlaid prior to 1991 and were evaluated by visual condition surveys. Prior to the construction of Sites 4 through 7 in the summer of 1992, Benkelman beam deflections and roadway condition data were collected. Subsequent readings were collected annually for comparative analysis.

BACKGROUND

Division VI, in northwestern Oklahoma, has typically treated failing pavements with a chip seal over a leveling course of soil asphalt. These standard maintenance overlays are intended as a "quick fix" and not a long term cure.

Division personnel believe that a thin overlay of 13 mm (½ in) or 19 mm (3/4 in) dense graded Type D mix may be a cost efficient substitute for the chip seal procedure on roadways with an ADT count below 2,000.

DESCRIPTION OF SITE LOCATIONS

SITE 1.Ellis County. US 60 extending 10.9 km (6.8 mi) east from Texas border.
SITE 2.Major County. SH 58 extending 9.3 km (5.8 mi) south from US 60.
SITE 3.Woods County. US 281 extending 9.6 km (6.0 mi) east from SH 14.
SITE 4.Alfalfa County. SH 8 extending 10.0 km (6.2 mi) south from US 64.
SITE 5.Beaver County. US 64 extending 9.6 km (6.0 mi) east from a point 12.4 km (7.7 mi) west of the Forgan city limits.
SITE 6.Major County. US 281 extending 8.6 km (5.4 mi) south from US 412.
SITE 7.Woodward County. SH 34 extending 9.3 km (5.8 mi) north from the Dewey County line.
See the Site Location Map in Figure 1.

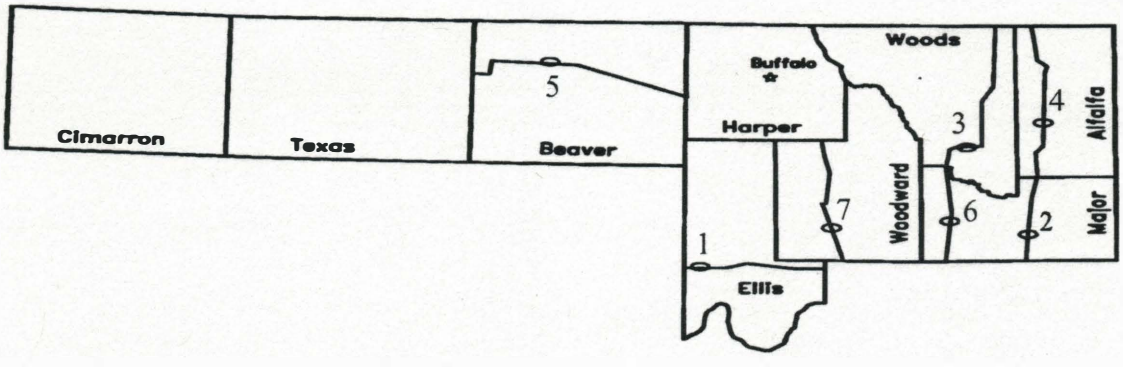

Figure 1. THIN OVERLAY LOCATIONS

MATERIALS

The sites were overlaid with the typical Type D mix design described in Table 1. The asphalt content was targeted at 6.3 percent and asphalt emulsion SS-1 was used as a tack coat. A 4oz/yd² non-woven Polypropylene reinforcement fabric was used at Site 7.

Table 1. TYPE D MIX DESIGN

SIEVE OPENING	% PASSING					JMF TOLERANCES
	MINE CHAT	SCREENINGS	SAND	COMBINED AGGREGATE	JOB FORMULA	
⅜ INCH	100	100	-	100	100	0
No. 4	81	97	-	93	93	+/- 7
No. 10	50	64	100	69	69	+/- 4
No. 40	24	100	-	100	100	0
No. 80	14	16	26	18	18	+/- 4
No. 200	10.0	13.6	2.0	9.7	9.7	+/- 2
% ASPHALT CEMENT (AC20)					6.3	+/- 0.4
MIX TEMPERATURE @ DISCHARGE FROM MIXER					305°F	+/- 20

CONSTRUCTION

Construction of the overlays consisted of three basic steps: 1) tack with emulsion, 2) lay down of the mix, 3) compaction (3). See Appendix A for construction photos.

A distributor truck applied an SS-1 diluted emulsion (50% water to 50% emulsified asphalt) tack coat directly to the old surface at the rate of 0.23 L/m² (0.05 gal/yd²). An AC-20 tack coat was used with the fabric membrane (4) at the rate of 1.04 L/m² (0.23 gal/yd²). The full width fabric was placed by mechanical means and seated with a pneumatic roller.

The Type D mix was dumped directly into the lay down machine hopper from a 13 to 18 Mg (6 to 8 ton) single axle dump truck. The mix was placed by the self-propelled lay down machine and leveled with a screed in 3.6 to 4.2m (12 to 14 ft) wide layers. The compacted density of the mix measured 57.7 kg/m²/25mm (106.2 lbs/yd²/in), making the yield weights 43.3kg/m²/19mm (79.7lbs/yd²/ 0.75in) and 28.8kg/m²/13mm (53.1lbs/yd²/0.5in).

Compaction was achieved with self-propelled pneumatic and static steel wheel rollers. No density requirement was specified. As the mat cooled, two to three passes were made in a rolling pattern established by the weight of the roller, the thickness of the mat, and the condition at the site.

FIELD INVESTIGATION

Preconstruction observation and testing of the four projects overlaid in 1992 began in the fall of 1991. These sites were located in Alfalfa, Beaver, Major, and Woodward counties. Researchers collected crack mapping data and conducted flexible pavement condition surveys. A field investigation of the seven sites began one year after completion of the last overlay in 1992. Testing included:

- A one time verification of the material composition of the roadway.
- An annual collection of traffic data.
- Crack mapping of selected sections.
- Flexible pavement condition surveys.
- Rut measurements.
- Benkelman beam deflections.
- Skid data.

Each project was cored to verify material composition and thickness of the layers. The results from each site are illustrated on pages six through nine.

Typical Section 1 consisted of a 13 to 19 mm (½ to 3/4 in) Type D surface over several successive layers of soil asphalt and chip seal. The thickness ranged from 152 to 254 mm (6 to 10 inches). Typical Section One is representative of the roadway composition at Sites 1, 2, 4 and 6. See Figure 2 for a graphical depiction of Typical Section 1.

Figure 2. TYPICAL SECTION 1.

Typical Section 2 had a 13 mm (½ inch) Type D surface over three layers of soil asphalt and chip seal measuring 76 mm (3 in). The base course was a dense graded black base mix. Typical Section 2 (Figure 3) is representative of the roadway composition at Site 3.

Figure 3. TYPICAL SECTION 2.

The third typical section consisted of a 13 mm (½ in) Type D surface over a fabric membrane and 292 mm (11 ½ in) of successive soil asphalt and chip seal layers. Typical Section 3 (Figure 4) represents the roadway composition at Site 7

Figure 4. TYPICAL SECTION 3.

Typical Section 4 had a 19 mm (3/4 in) Type D surface over a fabric membrane. Beneath the fabric was 83 mm (3 1/4 in) of a dense graded Type C mix, 51 mm (2 in) of Type B, and 51 mm (2 in) of layered soil asphalt and chip seals. The base course was a dense graded black base mix measuring 38 mm (1 ½ in). Typical Section 4 (Figure 5) represents the roadway composition at Site 5.

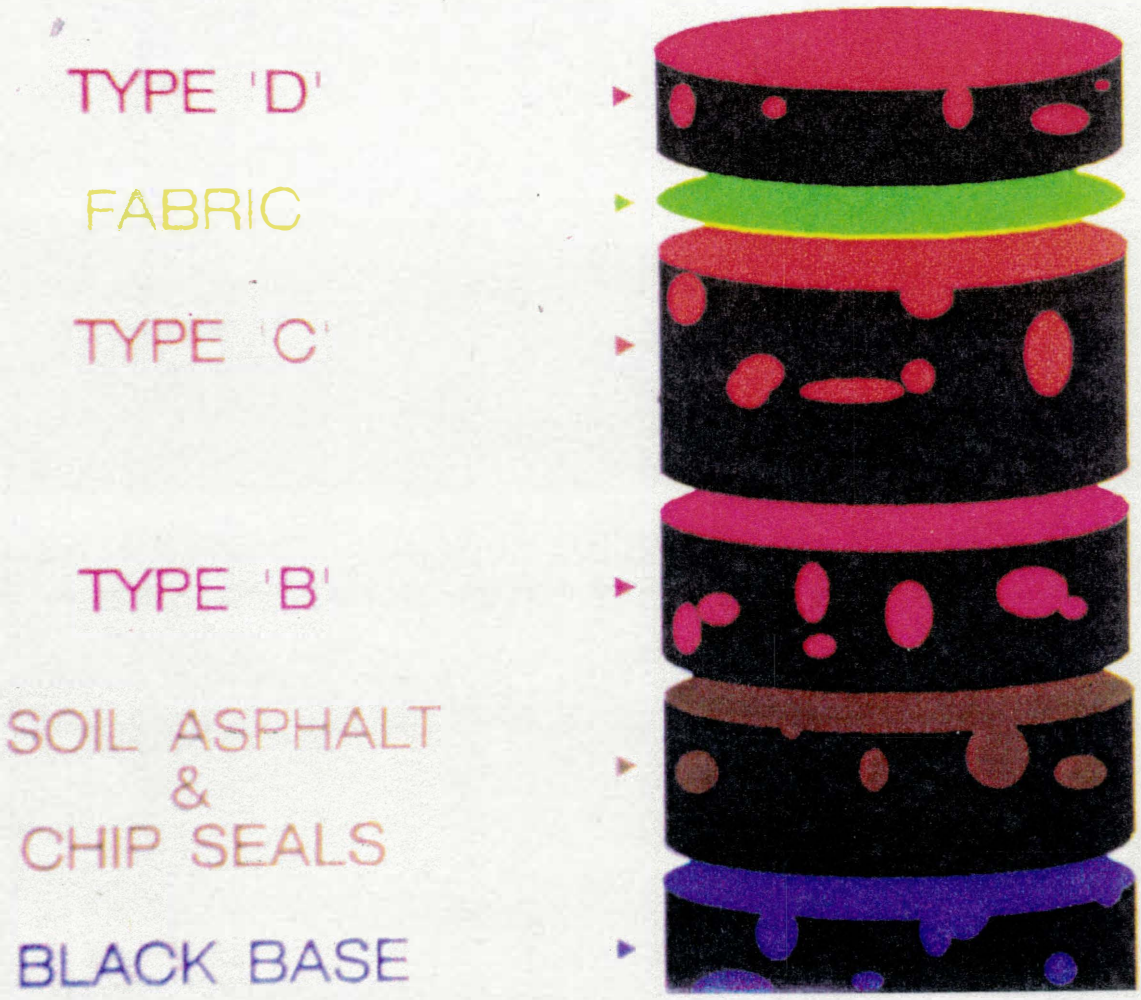

Figure 5. TYPICAL SECTION 4.

Traffic data was collected in the winter of 1991/92. Table 2 gives a complete vehicle class count from each project.

Table 2. THIN OVERLAY TRAFFIC STUDIES

COUNTY / HIGHWAY	CARS		BUSES		PICKUPS		TRUCK SEMIS		TRAILERS		TOTALS
	TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%	
ELLIS / US 64	238	36	0	0	256	38	141	21	30	5	665
MAJOR / SH 58	777	39	5	1	1088	54	124	6	0	0	1994
WOODS / US 281	405	45	0	0	375	42	112	13	0	0	892
ALFALFA / SH 8	776	43	5	1	84	4	786	44	158	8	1809
BEAVER / US 64	175	32	0		265		105		6		551
MAJOR / US 281	139	23	24		228		205		4		600
WOODWARD / SH 34	561	46	7		41		544		66		1219

Preconstruction crack map surveys were conducted at Sites 4, 5, 6, and 7 in the summer of 1991. Three 30.4 m (100 ft) sections were selected at each site.

That same summer, condition rating surveys for flexible pavements were performed on all seven projects. The surveys recorded the amount of cracking, bleeding, corrugating, raveling, base failures, rutting, and patching. Ratings were taken at 0.3 km (0.2 mi) intervals and an average was determined for each site. Rating averages ranged from "superior" on the one year old project to "poor" on the project yet to be overlaid. See Appendix B for Condition Survey results.

Only Site 6 displayed measurable rutting. Wheel path rutting measured 13 to 25 mm (0.5 to 1.0 in) over ten percent of the site. Another fifty percent exhibited rutting of 13 mm (0.5 in) or less. The measurements were taken in July 1991, prior to the thin overlay construction.

Benkelman beam and skid data were collected following completion of the overlays. The beam data was used to determine structural integrity and skid data helped analyze the effect the small aggregate in the Type D mix had on the surface texture.

FINAL INVESTIGATION

A four year study of the seven sites was completed in 1995. Final testing was concluded on Sites 1 and 3 in 1994 and on Sites 2, 4, 5, 6, and 7 in 1995.

TRAFFIC DATA

ADT counts from the seven sites showed no appreciable change from 1991 to 1995. (Figure 6.)

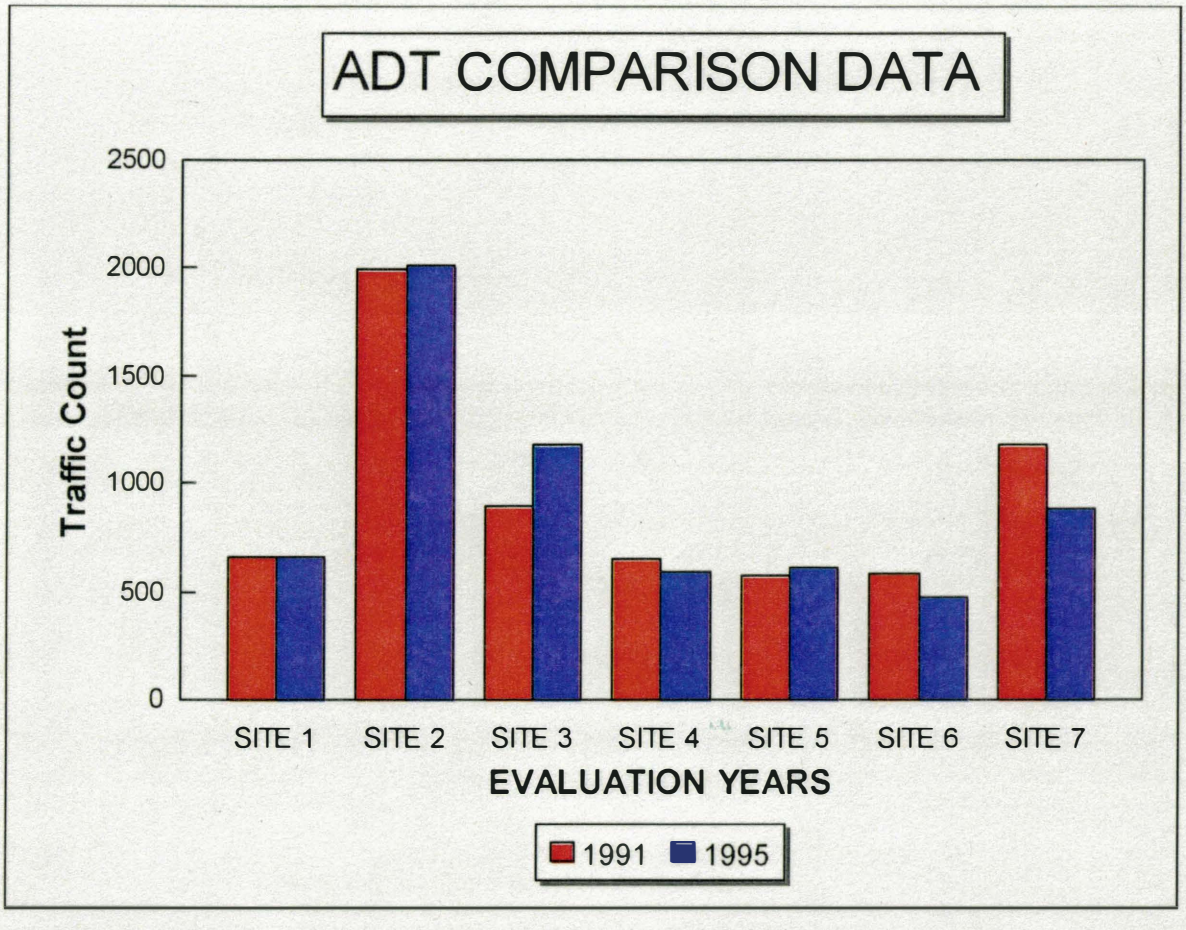

Figure 6. ADT COUNTS, 1991 VS 1995.

CRACK MAPPING

In the fall of 1990, original crack maps were diagrammed for Sites 4, 5, 6, and 7 revealing a combined total of 4,781 linear feet of cracking on the four sites. A 1995 survey of the same four sites revealed 6,113 linear feet of cracking, an increase of 1332 feet or 28 percent. At sites 4 and 6, 100 percent of the original cracks had reflected through the overlay. Both sites also displayed new cracks but Site 6 was substantially worse, exhibiting more than twice the number of cracks documented in the original survey. Reflection cracking was also prevalent at Sites 5 and 7 where 89 to 98 percent of the original cracks had reflected to the surface.

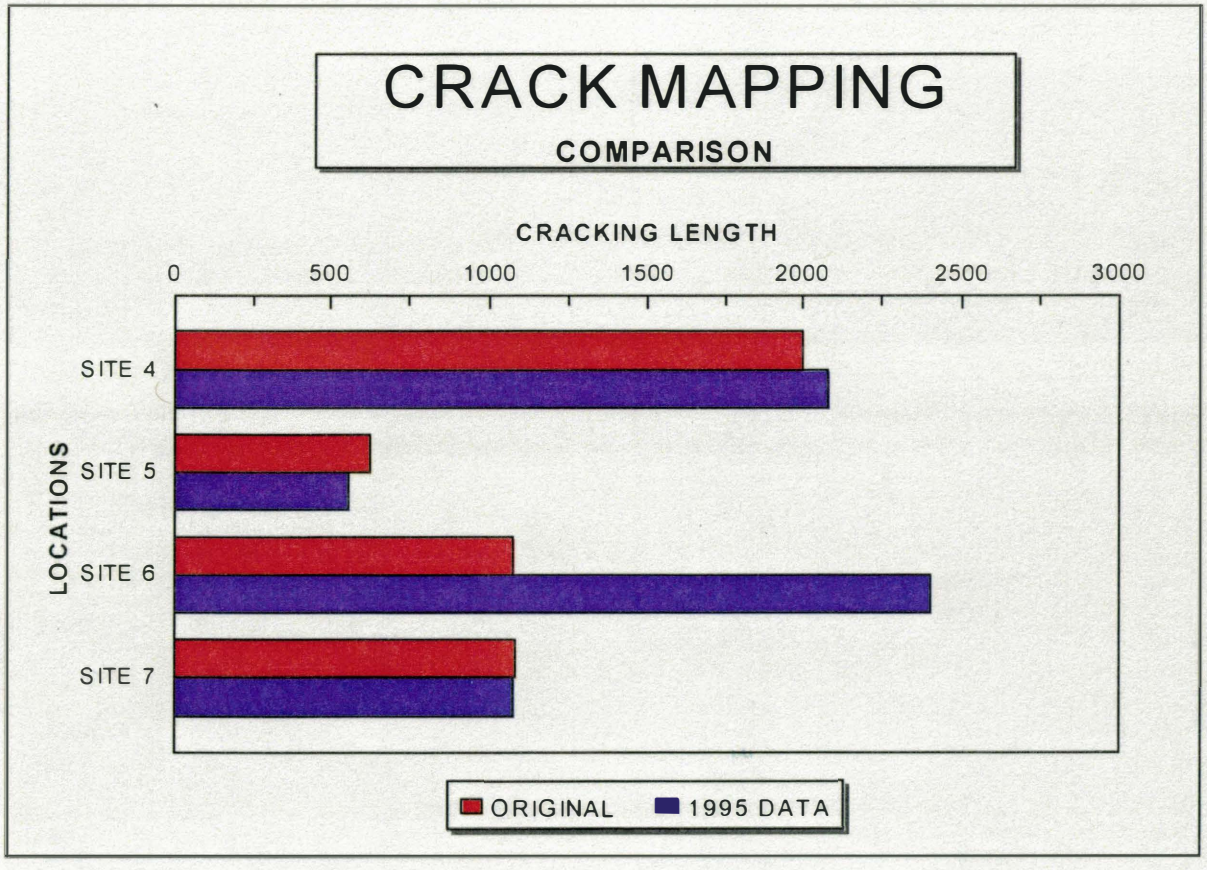

Figure 7. CRACK MAPPING COMPARISON.

CONDITION SURVEY

The "distress survey" is a technique widely used to evaluate and monitor pavement performance over time. It provides information needed to characterize pavement surface conditions and the causes of deterioration. (5) The final ratings distribution from distress surveys of the seven sites was:

GOOD - 1 site
AVERAGE - 1 site
POOR - 5 sites

Cracking was the primary distress encountered, followed by corrugating. Other distresses included base failures, patching, bleeding, shoving, raveling, and rutting, the least of these being rutting. Rut depth averages ranged from 0.00 inches, in the north bound lane at Site 7, to a mere 0.14 inches in the west bound lane at Site 4. Results from the final distress survey appear in Table 3. Percentages are given as part of the total area of the extent rated.

Table 3. DISTRESS SURVEY RESULTS

LOCATION	RATING	CRACKS	CORRUGATING	RAVELING	RUTTING	OTHER
SITE 1	POOR	20%	15%	12%	2%	0%
SITE 2	POOR	10%	28%	0%	5%	15%
SITE 3	AVERAGE	20%	1%	0%	3%	1%
SITE 4	POOR	19%	0%	19%	5%	2%
SITE 5	POOR	12%	20%	0%	8%	10%
SITE 6	POOR	20%	24%	0%	0%	2%
SITE 7	GOOD	10%	2%	5%	0%	0%

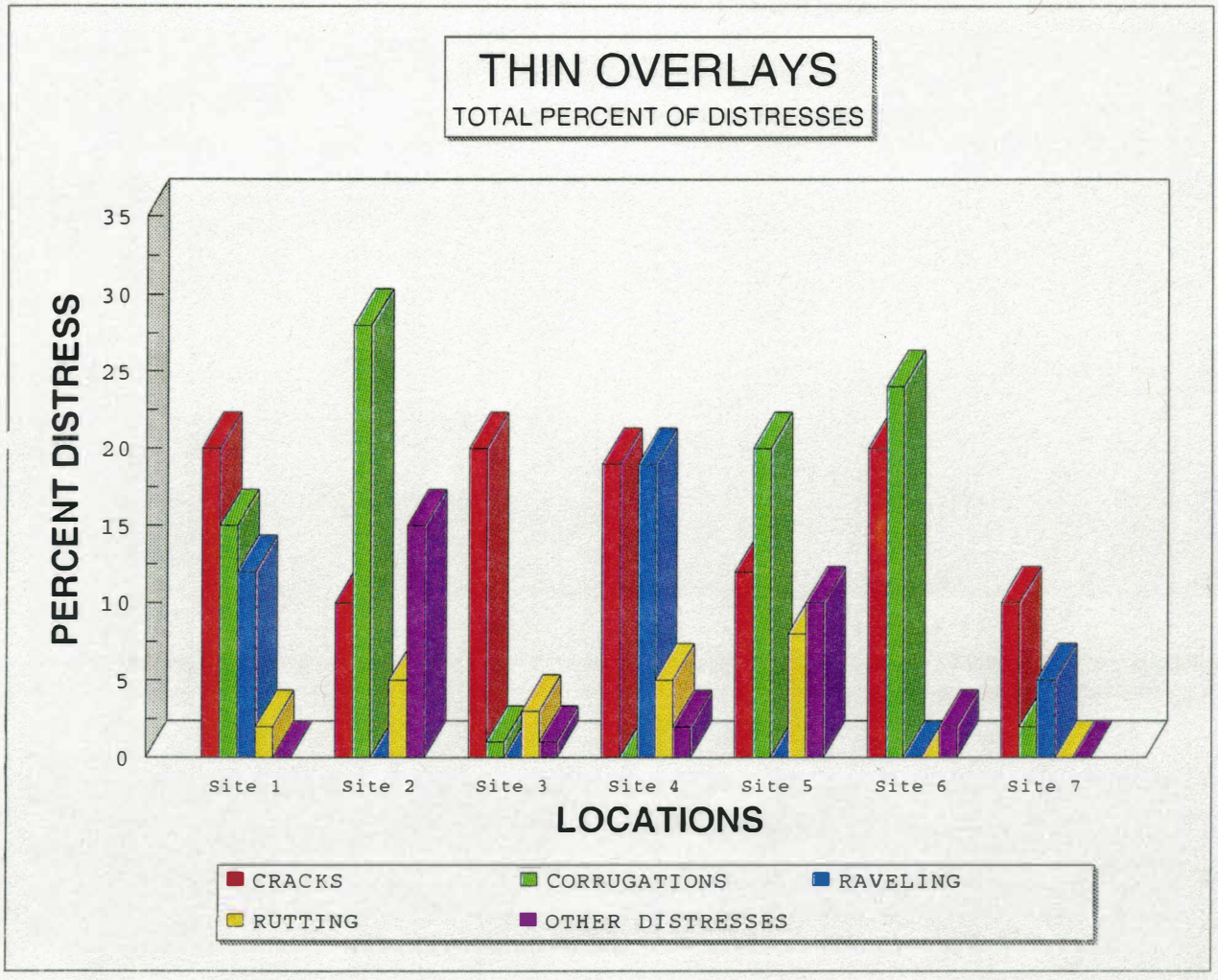

Figure 8. PERCENTAGE OF DISTRESSES FROM EACH SITE.

BENKELMAN BEAM DEFLECTIONS

On average, deflection readings were low. Site 5 had the greatest number of localized weak points. Readings indicated that forty percent of the west bound lane and thirty-seven percent of the east bound lane required the equivalent of a 25 mm (1 inch) overlay. The other six sites each had an AC equivalent requirement of less than 13 mm (0.5 inch).

SKID TEST DATA

Skid test results are calculated as the product of a mechanical test wherein a skid trailer tire interfaces with the road surface providing an approximate value which is converted into a coefficient of friction. (6) Because of the uncertainty of direct correlation between skid test results and actual resistance, the test is used only for comparative analysis of results from a common site over time.

Skid data was collected on this project in order to evaluate the effect of the small aggregate in the Type D mix on surface resistance. Figure 9 shows the highest, lowest, and average readings from each site.

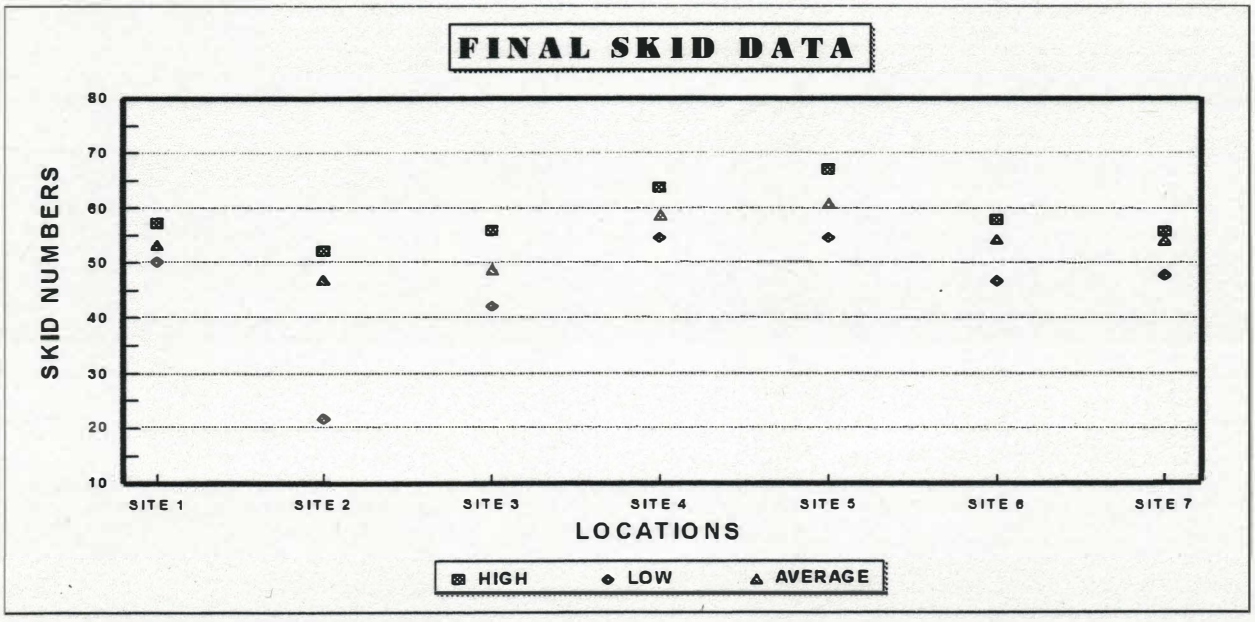

Figure 9. SKID TEST RESULTS.

COST COMPARISON

Two competing treatments for the correction of rutting and corrugating are thin overlays and micro-surfacing. Micro-surfacing typically costs about \$0.98 to \$1.45 per m^2 (\$0.85 to \$1.25 per yd^2). In western Oklahoma, the cost would be toward the high end of this range because of the distance from an available aggregate source.

The cost of a Type D thin overlay on this project was about \$1.39 per m^2 (\$1.20 per yd^2) for 13mm (½ in) and \$1.74 per m^2 (\$1.50 per yd^2) for 19mm (¾ in). Compared to the projected cost of micro-surfacing, thin overlays were about 30% more expensive.

CONCLUSION

Thin overlays were placed on the uneven surfaces of rutted and corrugated asphalt pavements. They were constructed with the same degree of success as any average asphalt dense graded mix overlay (7). There were no density requirements but the contractors were careful in achieving compaction and avoided the development of cracks during construction.

Cracks appeared six months after construction on 50 percent of the four newly constructed sites and were the dominate distress found on the three sites constructed before 1992. Crack sealing maintenance at three sites slowed deterioration of the soil asphalt bases where water can cause swelling and pot holing.

The Type D surfaces had no problem meeting the department standard for skid resistance over the four year evaluation period. Skid testing on each site, except Site 4, consistently returned good average values. (8) Skid data was not available for Site 4.

Overall, the thin overlay construction was able to address the existing problems. The uneven surfaces were leveled and elimination of the bleeding chip seals was accomplished. The fine aggregate created no problems with skid resistance and the ride was markedly improved at all sites. The only significant problem encountered was the early and abundant cracking. Cracking should be addressed early on with fog seals or other crack sealants in order to optimize the success of this procedure.

At the end of the four year evaluation period, each site was given a final rating in each category of distress. The results are depicted in Figure 10.

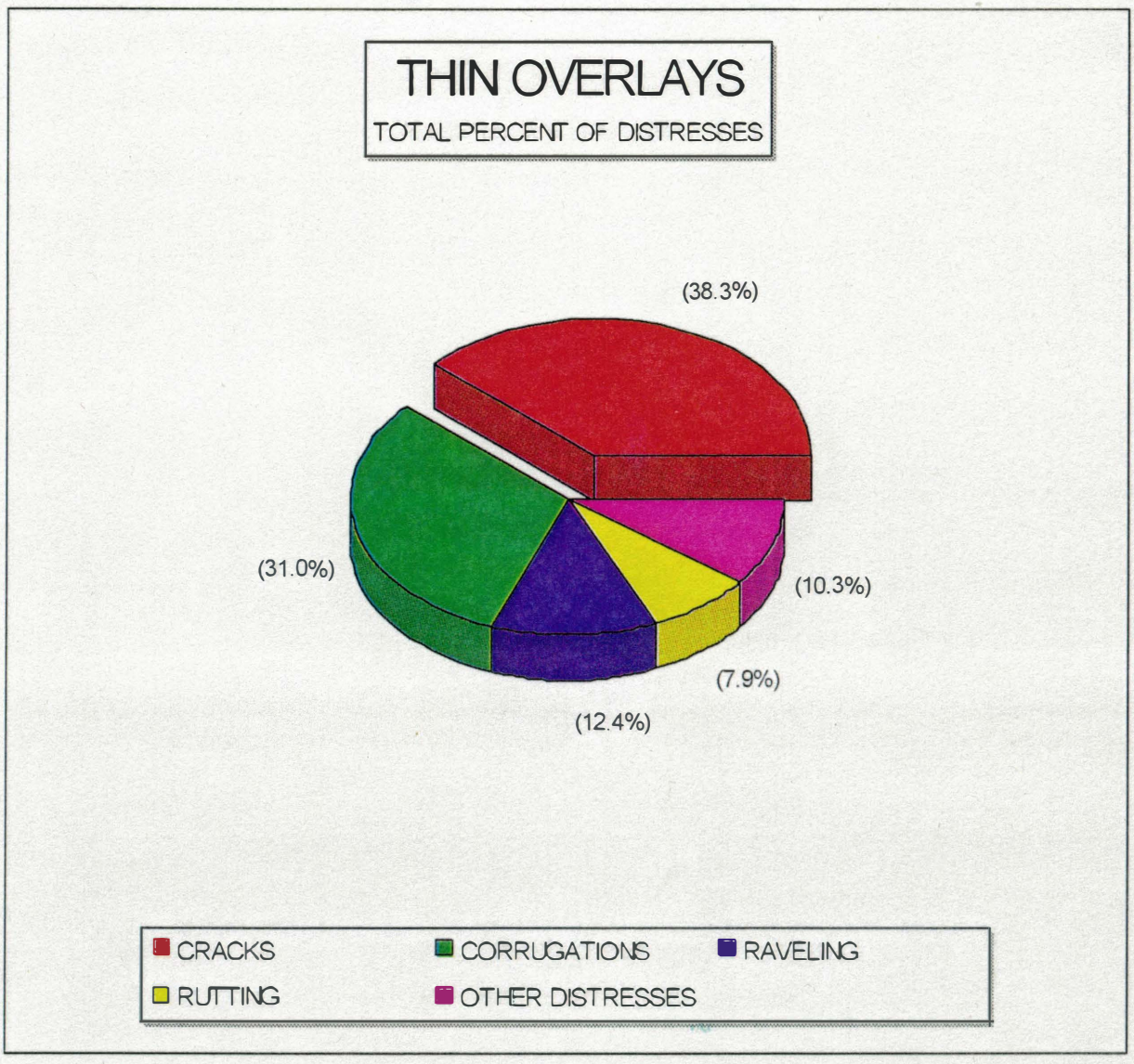

Figure 10. PROPORTION OF DISTRESSES.

RECOMMENDATIONS

An alternative treatment to thin overlays is micro-surfacing. (Chip sealing does not satisfactorily correct rutting and corrugating.) Cost analysis reveals that thin overlays are about 50 percent more expensive than micro-surfacing even though both require similar maintenance and have comparable design lives (9). However, the cost of transporting the aggregate used in a micro-surfacing slurry must be considered when contemplating treatment selection.

Another option is alternating thin overlays and chip seals. If rutting and corrugating are corrected with a thin overlay and have not recurred by the time another treatment is necessary, a chip seal will sufficiently address other common distresses, i.e., cracking and raveling. The next treatment would be another thin overlay followed by another chip seal and so on until such time as a full replacement is deemed necessary. Of course, periodic crack sealing is still necessary for maximizing the life cycles of both treatments.

Treating with multiple chip seals (chip seal over chip seal) or thin overlays (thin overlay over thin overlay) is not recommended. However, multiple micro-surfacing treatments are an acceptable alternative.

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APPENDICES

Appendix A is a group of photographs showing the thin overlay construction operation. The equipment shown is from several of the projects. Appendix B contains test results from various Sites.

APPENDIX A

CONSTRUCTION PHOTOS

PHOTO 1. SPREADING TACK COAT ON EXISTING SURFACE

PHOTO 2. PLACING A FABRIC MEMBRANE. (SITE 6 ONLY)

PHOTO 3. LAYDOWN AT SITE 6.

PHOTO 4. LAYDOWN OF A THIN OVERLAY TYPE D MIX.

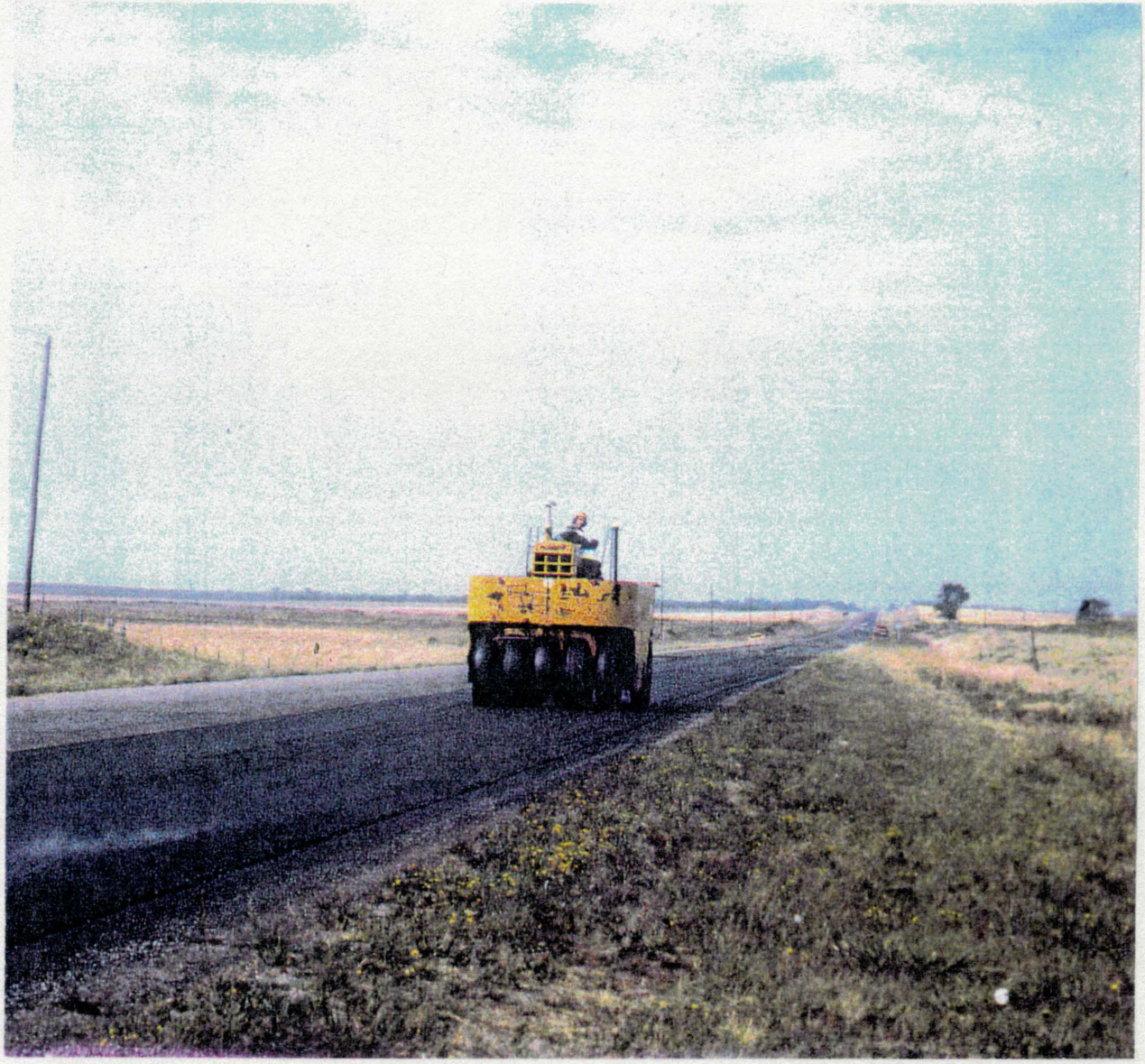

PHOTO 5. COMPACTING WITH PNEUMATIC ROLLER.

APPENDIX B

SELECTED CONDITION SURVEY RESULTS

1994

DATE June 1, 1994

LOCATION SH-58 Major Co.

LENGTH 5.8

CONDITION RATING FOR FLEXIBLE PAVEMENTS

PROJECT NUMBER 2285

CONTROL SECTION

SURVEYED BY Wilson Bruce

LEGEND FOR RATING CLASSES

Condition Rating	Cracking	Distortion	Raveling	Surface Roughness	Base Failure	Total Surface Area of Rating Interval
	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	

1. 100-98%= Excel.
2. 97-90%= Sup.
3. 89-80%= Good
4. 79-65%= Avg.
5. 64-50%= Poor
6. 50%-Less= Fail

1=less than 5%
2= 5% to 15%
3= 15% to 30%
4= 30% or more

Rating Interval (Mi.)	Condition Rating(%)	Cracking: Longitudinal	Cracking: Transverse	Cracking: Random	Cracking: Block	Cracking: Alligator	Cracking: Cracking	Distortion: Minor Bleeding	Distortion: Inter. Bleeding	Distortion: Major Bleeding	Distortion: Shoving	Distortion: Corrugating	Distortion: Distortion	Raveling: Minor	Raveling: Intermediate	Raveling: Major	Raveling: Raveling	Surface Roughness: Smooth	Surface Roughness: Mod. Rough	Surface Roughness: Rough	Surface Roughness: Surface Rough	Base Failure: Moderate	Base Failure: Severe	Base Failure: Base Failure	Rut Depth: 0.0 to 0.5 Inch	Rut Depth: 0.6 to 1.0 Inch	Rut Depth: 1.0 or Greater	Patch FT²	Comments
0.0	60		✓		✓		2					✓	2															12x50, 6x25, 6x100	
0.2	62		✓			✓	1			✓		✓	1															6x100, 6x50, 6x25	Small spots Patch over Crack
0.4	62		✓				1				✓	✓	2													✓		6x50, 6x30, 6x25, 6x25	
0.6	60	✓	✓				1			✓	✓	✓	3												✓			6x50, 6x300	spot Patches
0.8	60	✓	✓	✓			1					✓	2												✓			6x200, 6x100	
1.0	66		✓			✓	1				✓	✓	2													✓		6x100, 6x50, 8x200	spot Patches
1.2	62	✓	✓				1					✓	1												✓			6x25,	
1.4	58	✓	✓	✓	✓		2					✓	1						✓	2					✓			6x30,	Repressed trans.
1.6	55		✓			✓	2				✓	✓	2						✓	2					✓			6x6, 6x6, 6x10, 6x10, 8x100	Depressed/Spot trans. patches
1.8	55		✓			✓	2				✓	✓	2						✓	2					✓	✓		6x30, 6x25, 6x50, 6x50, 6x25	Old patches Repro trans.
2.0	55		✓			✓	2					✓	1						✓	2					✓			6x200, 6x25, 6x50, 6x25	"
2.2	60		✓			✓	1					✓	1												✓			6x10, 6x25, 6x50, 6x20	
2.4	60	✓	✓			✓	1					✓	1												✓	✓		6x150, 6x10, 6x100,	
2.6	60		✓		✓		1					✓	1															6x50, 6x25, 6x100	
2.8	62		✓		✓		2					✓	2												✓			6x500	
			✓		✓		1					✓	2															6x25, 6x200, 6x25, 6x200	

DATE June 1, 1994

PROJECT NUMBER 2285

LOCATION SH-58 Major Co.

CONDITION RATING FOR FLEXIBLE PAVEMENTS

CONTROL SECTION

LENGTH 5.2

SURVEYED BY Wilson Brewer

LEGEND FOR RATING CLASSES

Condition Rating	Cracking	Distortion	Raveling	Surface Roughness	Base Failure	Total Surface Area of Rating Interval
	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	

1. 100-98%= Excel.
2. 97-90%= Sup.
3. 89-80%= Good
4. 79-65%= Avg.
5. 64-50%= Poor
6. 50%-Less= Fail

1=less than 5%
2= 5% to 15%
3= 15% to 30%
4= 30% or more

Rating Interval (Mi.)	Condition Rating(%)	Cracking: Longitudinal	Cracking: Transverse	Cracking: Random	Cracking: Block	Cracking: Alligator	Cracking: Cracking	Distortion: Minor Bleeding	Distortion: Inter. Bleeding	Distortion: Major Bleeding	Distortion: Shoving	Distortion: Corrugating	Distortion: Distortion	Raveling: Minor	Raveling: Intermediate	Raveling: Major	Raveling: Raveling	Surface Roughness: Smooth	Surface Roughness: Mod. Rough	Surface Roughness: Rough	Surface Roughness: Surface Rough	Base Failure: Moderate	Base Failure: Severe	Base Failure: Base Failure	Rut Depth	Rut Depth	Rut Depth	Patch FT²	Comments
3.2	50		✓			✓	2					✓	2															6X50 6X25,	"
3.4	59		✓			✓	1					✓	2															12X25	<10 Patches over trans. crack
3.6	48		✓			✓	2					✓	2						✓		2							6X150, 6X300 6X25, 6X50	"
3.8	45		✓			✓	2				✓	✓	3															6X25, 6X50 6X300	
4.0	45		✓			✓	2					✓	3													✓		6X 200 6X50, 6X100	spot patches
4.2	40		✓			✓	2					✓	3						✓		2							6X25, 6X200 6X100,	
4.4	58		✓			✓	2				✓	✓	2															6X10, 6X25 12X25, 18	Patches Trans
4.6	55		✓			✓	1					✓	2															6X50, 6X100 6X50, 6X50 6X25	
4.8	60		✓			✓	1			✓		✓	1													✓		6X 50 6X 25 6X 30, 6X50	
5.0	40		✓				1					✓	1						✓		2					✓		6X25, 6X10 6X50, 12X20	
5.2	62		✓									✓	2													✓		12X25, 6X20	
AVER.	56																												

DATE June 8, 1994

PROJECT NUMBER 2285

LOCATION US-64 Beaver Co

CONDITION RATING FOR FLEXIBLE PAVEMENTS

CONTROL SECTION 1

LENGTH 6.8

SURVEYED BY Wilson Brewer

LEGEND FOR RATING CLASSES

Condition Rating	Cracking	Distortion	Raveling	Surface Roughness	Base Failure	Total Surface Area of Rating Interval
	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	

1. 100-98%= Excel.
2. 97-90%= Sup.
3. 89-80%= Good
4. 79-65%= Avg.
5. 64-50%= Poor
6. 50%-Less= Fail

1=less than 5%
2= 5% to 15%
3= 15% to 30%
4= 30% or more

Rating Interval (Mi.)	Condition Rating(%)	Cracking: Longitudinal	Cracking: Transverse	Cracking: Random	Cracking: Block	Cracking: Alligator	Cracking	Distortion: Minor Bleeding	Distortion: Inter. Bleeding	Distortion: Major Bleeding	Distortion: Shoving	Distortion: Corrugating	Distortion	Raveling: Minor	Raveling: Intermediate	Raveling: Major	Raveling	Surface Roughness: Smooth	Surface Roughness: Mod. Rough	Surface Roughness: Rough	Surface Rough	Base Failure: Moderate	Base Failure: Severe	Base Failure	Rut Depth			Patch FT²	Comments
9.1 0.0	75		✓				1					✓2							✓		2							9x25, 12x12, 9x10, 12x25, 6x26; CR20	Patch mult. road rocks
3 0.2	25		✓				2					✓	2							✓	1							12x20, 9x10, 7x10, 9x20	
7 0.4	60	✓	✓				2				✓	✓	3						✓		2							12x20	
7 0.6	58	✓	✓				2					✓	3						✓		2								
0.8	72	✓	✓				2					✓	2						✓		2								
1.0	72	✓	✓				2				✓	✓	2						✓		2								
1.2	72	✓	✓				2				✓	✓	2						✓		2								
1.4	75	✓	✓				2				✓	✓	2					✓			1				✓				
1.6	75	✓	✓				2					✓	2					✓			1				✓				
1.8	72		✓				2					✓	2						✓		2				✓				
2.0	72	✓	✓				2					✓	2						✓		2				✓	✓			
2.2	65		✓				1				✓	✓	2						✓		2				✓	✓			
2.4	65	✓	✓				1				✓	✓	2						✓		2				✓	✓			
2.6	65	✓	✓				2					✓	2						✓		2				✓	✓			
2.8	65	✓	✓				2					✓	2						✓		2				✓	✓			
3.0	65	✓	✓				2					✓	2						✓		2				✓	✓			

DATE June 8, 1994

PROJECT NUMBER 2285

LOCATION US-64 Beaver Co

CONDITION RATING FOR FLEXIBLE PAVEMENTS

CONTROL SECTION

LENGTH 6.8

SURVEYED BY Wilson Brewer

LEGEND FOR RATING CLASSES

Condition Rating	Cracking	Distortion	Raveling	Surface Roughness	Base Failure	Total Surface Area of Rating Interval
	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	

1. 100-98%= Excel.
2. 97-90%= Sup.
3. 89-80%= Good
4. 79-65%= Avg.
5. 64-50%= Poor
6. 50%-Less= Fail.

1=less than 5%
2= 5% to 15%
3= 15% to 30%
4= 30% or more

Rating Interval (Mi.)	Condition Rating(%)	Cracking: Longitudinal	Cracking: Transverse	Cracking: Random	Cracking: Block	Cracking: Alligator	Cracking	Distortion: Minor Bleeding	Distortion: Inter. Bleeding	Distortion: Major Bleeding	Distortion: Shoving	Distortion: Corrugating	Distortion	Raveling: Minor	Raveling: Intermediate	Raveling: Major	Raveling	Surface Roughness: Smooth	Surface Roughness: Mod. Rough	Surface Roughness: Rough	Surface Rough	Base Failure: Moderate	Base Failure: Severe	Base Failure	Rut Depth: 0.1 to 0.5 inch	Rut Depth: 0.5 to 1.0 inch	Rut Depth: 1.0 or greater	Patch FT²	Comments
3.2	73	✓	✓				1					✓	2						✓		2				✓				
3.4	55	✓	✓				1				✓	✓	3						✓		4				✓	✓		2x12, 2x12 2x12, 2x6	
3.6	52	✓	✓				2				✓	✓	3						✓		3				✓	✓		2x12, 2x12 2x12	
3.8	52		✓				2				✓	✓	3						✓		3				✓			2x12, 2x12 12-2x12	
4.0	52		✓				2					✓	3						✓		3				✓			5-2x12 12x20	
4.2	73		✓				1					✓	2						✓		3				✓			12x50 2x12(8)	
4.4	73		✓				1					✓	2						✓		3				✓			2x6 (15)	
4.6	55		✓				1					✓	3						✓		3							10x20 2x10(3)	
4.8	72	✓	✓				2					✓	2						✓		2				✓	✓			
5.0	72		✓				2					✓	2						✓		3				✓			10x50, 12x6 12x20	
5.2	75		✓				2					✓	2						✓		2				✓				
5.4	75	✓	✓				2					✓	2						✓		2				✓				
5.6	76		✓				1					✓	2						✓		1								
5.8	76	✓	✓				1					✓	2						✓		1								
6.0	76		✓				2					✓	2						✓		1				✓				
6.2	85		✓				1					✓	1						✓		1				✓				

DATE June 8, 1994 PROJECT NUMBER 2285

LOCATION US-64 Beaver Co CONDITION RATING FOR FLEXIBLE PAVEMENTS CONTROL SECTION

LENGTH 6.8 SURVEYED BY Wilson Brewer

LEGEND FOR RATING CLASSES

Condition Rating	Cracking	Distortion	Raveling	Surface Roughness	Base Failure	Total Surface Area of Rating Interv
	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	

1. 100-98%= Excel.
2. 97-90%= Sup.
3. 89-80%= Good
4. 79-65%= Avg.
5. 64-50%= Poor
6. 50%-Less= Fail

1=less than 5%
2= 5% to 15%
3= 15% to 30%
4= 30% or more

Rating Interval (Mi.)	Condition Rating(%)	Cracking: Longitudinal	Cracking: Transverse	Cracking: Random	Cracking: Block	Cracking: Alligator	Cracking: Cracking	Distortion: Minor Bleeding	Distortion: Inter. Bleeding	Distortion: Major Bleeding	Distortion: Shoving	Distortion: Corrugating	Distortion: Distortion	Raveling: Minor	Raveling: Intermediate	Raveling: Major	Raveling: Raveling	Surface Roughness: Smooth	Surface Roughness: Mod. Rough	Surface Roughness: Rough	Surface Roughness: Surface Rough	Base Failure: Moderate	Base Failure: Severe	Base Failure: Base Failure	Rut Depth: 0.1 to 0.5 in	Rut Depth: 0.5 to 1.0 in	Rut Depth: 1.0 or greater	Patch FT^2	Comments
6.4	72	✓	✓				1					✓	2						✓	2					✓				
6.6	72	✓	✓				2					✓	✓						✓	2					✓				
6.8	65	✓	✓				2					✓	2						✓	2					✓	✓			
	68																												

DATE June 8, 1994 PROJECT NUMBER 2285

LOCATION US-60 Ellis Co. CONDITION RATING FOR FLEXIBLE PAVEMENTS CONTROL SECTION

LENGTH 6.8 SURVEYED BY Wilson Brewer

LEGEND FOR RATING CLASSES

Condition Rating	Cracking	Distortion	Raveling	Surface Roughness	Base Failure	Total Surface Area of Rating Interv
	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	

1. 100-98%= Excel.
2. 97-90%= Sup.
3. 89-80%= Good
4. 79-65%= Avg.
5. 64-50%= Poor
6. 50%-Less= Fail

1=less than 5%
2= 5% to 15%
3= 15% to 30%
4= 30% or more

Rating Interval (Mi.)	Condition Rating(%)	Cracking: Longitudinal	Transverse	Random	Block	Alligator	Cracking	Distortion: Minor Bleeding	Inter. Bleeding	Major Bleeding	Shoving	Corrugating	Distortion	Raveling: Minor	Intermediate	Major	Raveling	Surface Roughness: Smooth	Mod. Rough	Rough	Surface Rough	Base Failure: Moderate	Severe	Base Failure	Rut Depth: 0.1 to 0.5 in	0.5 to 1.0 in	1.0 or greater	Patch FT²	Comments
31.5 0.0	64	✓	✓✓			✓	3					✓	1	✓		✓	1												
0.2	64	✓	✓			✓	3					✓	1	✓		✓	1												
0.4	64	✓	✓		✓	✓	3					✓	1		✓	✓	1												
0.6	60	✓	✓		✓	✓	3					✓	1		✓	✓	2												
0.8	60		✓		✓	✓	3					✓	1		✓	✓	2								✓				
1.0	60		✓		✓	✓	3					✓			✓	✓	2												
1.2	72		✓		✓	✓	2				✓	✓	2			✓	2											12x10	
1.4	60		✓			✓	3				✓	✓	2			✓	1											12x50 12x150	
1.6	52		✓		✓	✓	4					✓	2			✓	2												
1.8	52		✓		✓	✓	4					✓	2			✓	2								✓				
2.0	60		✓			✓	3					✓	2			✓	2												
2.2	62	✓	✓		✓	✓	3					✓	1		✓	✓	2												
2.4	62		✓		✓	✓	3					✓	1			✓	1												
2.6	62		✓		✓	✓	3					✓	2	✓		✓	1												
2.8	62		✓		✓	✓	3					✓	2			✓	2								✓				

DATE June 8, 1994 PROJECT NUMBER 2285

LOCATION US-64 Ellis Co. CONDITION RATING FOR FLEXIBLE PAVEMENTS CONTROL SECTION

LENGTH 6.8 SURVEYED BY Wilson Treuer

LEGEND FOR RATING CLASSES

Condition Rating	Cracking	Distortion	Raveling	Surface Roughness	Base Failure	Total Surface Area of Rating Interv
	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	

1. 100-98%= Excel.
2. 97-90%= Sup.
3. 89-80%= Good
4. 79-65%= Avg.
5. 64-50%= Poor
6. 50%-Less= Fail

1=less than 5%
2= 5% to 15%
3= 15% to 30%
4= 30% or more

Rating Interval (Mi.)	Condition Rating(%)	Cracking: Longitudinal	Cracking: Transverse	Cracking: Random	Cracking: Block	Cracking: Alligator	Cracking: Cracking	Distortion: Minor Bleeding	Distortion: Inter. Bleeding	Distortion: Major Bleeding	Distortion: Shoving	Distortion: Corrugating	Distortion: Distortion	Raveling: Minor	Raveling: Intermediate	Raveling: Major	Raveling: Raveling	Surface Roughness: Smooth	Surface Roughness: Mod. Rough	Surface Roughness: Rough	Surface Roughness: Surface Rough	Base Failure: Moderate	Base Failure: Severe	Base Failure: Base Failure	Rut Depth: 0.1 to 0.5 in	Rut Depth: 0.5 to 1.0 in	Rut Depth: 1.0 or greater	Patch FT²	Comments
3.2	62		✓			✓	3					✓	1		✓	✓	2								✓				
3.4	60		✓		✓	✓	3				✓	✓	1		✓	✓	2								✓			10x10	
3.6	53		✓		✓	✓	4				✓	✓	1		✓	✓	2								✓			6x25	
3.8	62		✓			✓	3					✓	2		✓	✓	1								✓	✓			
4.0	40		✓		✓	✓	3					✓	4		✓	✓	2								✓	✓			
4.2	35		✓		✓	✓	4					✓	4		✓	✓	2								✓				
4.4	35		✓		✓	✓	4					✓	4	✓		✓	2								✓				
4.6	52		✓		✓	✓	3					✓	3		✓	✓	2								✓				
4.8	60		✓			✓	3					✓	2		✓	✓	2												
5.0	60		✓			✓	3					✓	2		✓	✓	2												
5.2	60		✓			✓	3					✓	2		✓	✓	2												
5.4	52	✓	✓		✓	✓	3					✓	3		✓	✓	2									✓	✓		
5.6	58		✓		✓	✓	3					✓	3		✓	✓	2								✓				
5.8	58		✓			✓	3					✓	3		✓	✓	2								✓				
6.0	72		✓		✓	✓	2					✓	2			✓	2												

DATE June 8, 1994 PROJECT NUMBER 2285

LOCATION US-60 Ellis Co. CONDITION RATING FOR FLEXIBLE PAVEMENTS CONTROL SECTION

LENGTH 6.8 SURVEYED BY Wilson Brewer

LEGEND FOR RATING CLASSES

Condition Rating	Cracking	Distortion	Raveling	Surface Roughness	Base Failure	Total Surface Area of Rating Interv.
	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	

1. 100-98%= Excel.
2. 97-90%= Sup.
3. 89-80%= Good
4. 79-65%= Avg.
5. 64-50%= Poor
6. 50%-Less= Fail.

1=less than 5%
2= 5% to 15%
3= 15% to 30%
4= 30% or more

Rating Interval (Mi.)	Condition Rating(%)	Cracking: Longitudinal	Cracking: Transverse	Cracking: Random	Cracking: Block	Cracking: Alligator	Cracking: Cracking	Distortion: Minor Bleeding	Distortion: Inter. Bleeding	Distortion: Major Bleeding	Distortion: Shoving	Distortion: Corrugating	Distortion: Distortion	Raveling: Minor	Raveling: Intermediate	Raveling: Major	Raveling: Raveling	Surface Roughness: Smooth	Surface Roughness: Mod. Rough	Surface Roughness: Rough	Surface Roughness: Surface Rough	Base Failure: Moderate	Base Failure: Severe	Base Failure: Base Failure	Rut Depth: 0.1 to 0.5 in	Rut Depth: 0.5 to 1.0 in	Rut Depth: 1.0 or greater	Patch FT^2	Comments
6.4	82		✓			✓	2					✓	—	✓		✓	—											24x300	
6.6	60		✓			✓	3					✓	2	✓		—													
POOR	59 - Average																												

Date: 6-29-94 CONDITION RATING Project Number: 2285

Location: SH-8 Alfalfa Co, FOR Control Section:

Length: 5.8 mile FLEXIBLE PAVEMENTS Surveyed By: Wilson & Antonetta

LEGEND FOR RATING CLASSES

1. 100-98% = EXCEL.
2. 97-90% = SUPER.
3. 89-80% = GOOD
4. 79-65% = AVER.
5. 64-50% = POOR
6. 50%-LESS= FAIL

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING 1-2-3-4						DISTORTION 1-2-3-4						RAVELING 1-2-3-4				SURFACE ROUGHNESS 1-2-3-4				BASE FAILURE 1-2-3-4			RUT DEPTH			TOTAL SURFACE AREA OF RATING INTERVAL	
		Longitudinal	Transverse	Random	Block	Alligator	Cracking	Minor Bleeding	Inter. Bleeding	Major Bleeding	Shoving	Corrugating	Distortion	Minor	Intermediate	Major	Raveling	Smooth	Moderately Rough	Rough	Surface Rough	Moderate	Severe	Base Failure	0.1 to 0.5 inch	0.5 to 1.0 inch	1.0 or greater	PATCH FT²	COMMENTS
0.0	76	✓	✓	✓	✓	3								✓			1												
0.2	88	✓	✓			1								✓			1												
0.4	74	✓	✓		✓	3								✓			1								✓				
0.6	85	✓	✓		✓	2								✓			1								✓				
0.8	85	✓	✓		✓	2								✓			1												
1.0	68	✓	✓		✓	3								✓			1					✓		1	✓				
1.2	74	✓	✓		✓	3								✓			1												
1.4	74	✓	✓		✓	3								✓			1												
1.6	66	✓	✓		✓	3								✓			1					✓		1					
1.8	74	✓	✓		✓	3								✓			1												
2.0	88	✓	✓			2								✓			1												
2.2	74	✓	✓		✓	3								✓			1								✓				
2.4	88	✓	✓		✓	2								✓			1												
2.6	75	✓	✓		✓	3								✓			1											2x2	
2.8	76	✓	✓		✓	3	✓						1	✓			1												
3.0	88	✓	✓			2							1	✓			1												

1 = LESS THAN 5%
2 = 5% TO 15%
3 = 15% TO 30%
4 = 30% OR MORE

Date: 6-29-94 | CONDITION RATING | Project Number: 2285 (712)

Location: SH-8 Alfa/fa | FOR | Control Section:

Length: 5.8 mile | FLEXIBLE PAVEMENTS | Surveyed By: CW. Lon & Antonet

(50)

LEGEND FOR RATING CLASSES

CONDITION RATING	CRACKING	DISTORTION	RAVELING	SURFACE ROUGHNESS	BASE FAILURE	TOTAL SURFACE AREA OF RATING INTERVAL
	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	

1. 100-98% = EXCEL.
2. 97-90% = SUPER.
3. 89-80% = GOOD
4. 79-65% = AVER.
5. 64-50% = POOR
6. 50%-LESS= FAIL

1 = LESS THAN 5%
2 = 5% TO 15%
3 = 15% TO 30%
4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING: Longitudinal	Transverse	Random	Block	Alligator	Cracking	DISTORTION: Minor Bleeding	Inter. Bleeding	Major Bleeding	Shoving	Corrugating	Distortion	RAVELING: Minor	Intermediate	Major	Raveling	SURFACE ROUGHNESS: Smooth	Moderately Rough	Rough	Surface Rough	BASE FAILURE: Moderate	Severe	Base Failure	RUT DEPTH: 0.1 to 0.5 inch	0.5 to 1.0 inch	1.0 or greater	PATCH FT²	COMMENTS
3.2	74	✓	✓		✓		3						1	✓			1											2×6	
3.4	74	✓	✓		✓		3							✓			1												
3.6	74	✓	✓		✓		3							✓			1												
3.8	62	✓	✓		✓		4							✓			2												
4.0	88	✓	✓				2							✓			1											300×12 100×24	
4.2	80	✓	✓				2							✓			1												
4.4	88	✓	✓		✓		2							✓			1												
4.6	98		✓				1																						VERY LITTLE CRACK
4.8	97	✓	✓				1																						
5.0	96	✓	✓				1																						
5.2	97	✓	✓				1																					2×3	
5.4	88	✓	✓				2							✓			1												
5.6	78	✓	✓				2							✓			2												
5.8	95	✓	✓				1							✓			1												
Average	91																												

Date: Sept. 12, 1994	CONDITION RATING	Project Number: 2285
Location: SH-34 Woodward	FOR	Control Section:
Length: 5.4	FLEXIBLE PAVEMENTS	Surveyed By: Wilson Brewer

LEGEND FOR RATING CLASSES

CONDITION RATING	CRACKING	DISTORTION	RAVELING	SURFACE ROUGHNESS	BASE FAILURE	TOTAL SURFACE AREA OF RATING INTERVAL
1. 100-98% = EXCEL. 2. 97-90% = SUPER. 3. 89-80% = GOOD 4. 79-65% = AVER. 5. 64-50% = POOR 6. 50%-LESS= FAIL	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1 = LESS THAN 5% 2 = 5% TO 15% 3 = 15% TO 30% 4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING: Longitudinal	Transverse	Random	Block	Alligator	Cracking	DISTORTION: Minor Bleeding	Inter. Bleeding	Major Bleeding	Shoving	Corrugating	Distortion	RAVELING: Minor	Intermediate	Major	Raveling	SURFACE ROUGHNESS: Smooth	Moderately Rough	Rough	Surface Rough	BASE FAILURE: Moderate	Severe	Base Failure	RUT DEPTH: 0.1 to 0.5 inch	0.5 to 1.0 inch	1.0 or greater	PATCH FT²	COMMENTS
3.2		✓					|																						
3.4		✓					|																						
3.6		✓	✓				|																						
3.8		✓	✓				|	✓					|																
4.0		✓	✓				|																						
4.2		✓	✓				|																						
4.4		✓	✓				|																						
4.6		✓					|																						
4.8	9	✓					|	✓					|																
5.0	97	✓					|																						
5.2	89	✓					|	✓					|																
5.4	39	✓					|	✓					|																
5.6		✓					|																					6x50	
5.8	39							✓					|																

Date: Sept. 12, 1994 | CONDITION RATING | Project Number: 2285

Location: SH-34 Woodward Co. | FOR | Control Section:

Length: | FLEXIBLE PAVEMENTS | Surveyed By: Wilma & Steve

LEGEND FOR RATING CLASSES

CONDITION RATING	CRACKING	DISTORTION	RAVELING	SURFACE ROUGHNESS	BASE FAILURE	TOTAL SURFACE AREA OF RATING INTERVAL
1. 100-98% = EXCEL. 2. 97-90% = SUPER. 3. 89-80% = GOOD 4. 79-65% = AVER. 5. 64-50% = POOR 6. 50%-LESS= FAIL	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1 = LESS THAN 5% 2 = 5% TO 15% 3 = 15% TO 30% 4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING: Longitudinal	Transverse	Random	Block	Alligator	Cracking	DISTORTION: Minor Bleeding	Inter. Bleeding	Major Bleeding	Shoving	Corrugating	Distortion	RAVELING: Minor	Intermediate	Major	Raveling	SURFACE ROUGHNESS: Smooth	Moderately Rough	Rough	Surface Rough	BASE FAILURE: Moderate	Severe	Base Failure	RUT DEPTH: 0.1 to 0.5 inch	0.5 to 1.0 inch	1.0 or greater	PATCH FT²	COMMENTS
0.0		✓	✓	✓	✓		2																						
0.2		✓	✓		✓		2							✓			1												
0.4		✓	✓	✓			2																						
0.6		✓				✓	1																						
0.8		✓	✓				1																						
1.0		✓	✓	✓			2	✓					1		✓		1												
1.2		✓	✓				1							✓			1												
1.4		✓	✓		✓		1																						
1.6		✓	✓		✓		2								✓		1												
1.8		✓	✓		✓		2	✓					1																
2.0		✓					1							✓			1												
2.2		✓					1																						
2.4		✓	✓		✓		2	✓					1	✓			1												
2.6		✓	✓		✓		2								✓		1												
2.8		✓	✓		✓		2							✓			1												
3.0		✓	✓				1																						

Date: September 12, 1994 | CONDITION RATING | Project Number: 2285

Location: US-281 Major | FOR | Control Section:

Length: 6.2 | FLEXIBLE PAVEMENTS | Surveyed By: Wilson & Steve

LEGEND FOR RATING CLASSES

1. 100-98% = EXCEL.
2. 97-90% = SUPER.
3. 89-80% = GOOD
4. 79-65% = AVER.
5. 64-50% = POOR
6. 50%-LESS= FAIL

1 = LESS THAN 5%
2 = 5% TO 15%
3 = 15% TO 30%
4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING 1-2-3-4						DISTORTION 1-2-3-4						RAVELING 1-2-3-4				SURFACE ROUGHNESS 1-2-3-4				BASE FAILURE 1-2-3-4			RUT DEPTH			TOTAL SURFACE AREA OF RATING INTERVAL	
		Longitudinal	Transverse	Random	Block	Alligator	Cracking	Minor Bleeding	Inter. Bleeding	Major Bleeding	Shoving	Corrugating	Distortion	Minor	Intermediate	Major	Raveling	Smooth	Moderately Rough	Rough	Surface Rough	Moderate	Severe	Base Failure	0.1 to 0.5 inch	0.5 to 1.0 inch	1.0 or greater	PATCH FT²	COMMENTS
0.3		✓	✓	✓	✓	3	3	✓			✓		1																
0.2		✓	✓	✓	✓	2	2				✓		1																
0.4		✓	✓	✓	✓	2	2				✓		1																
0.5		✓	✓	✓	✓	1	1				✓		1																
0.3		✓	✓	✓			2				✓		1																
1.0		✓	✓	✓			2				✓		1															12 x 21 10 x 20	
1.3		✓	✓	✓			1				✓		1																
1.4		✓	✓	✓		✓	1				✓		1																
1.6		✓	✓	✓		✓	2				✓		1															9 x 200	
1.8		✓	✓	✓			1				✓		1															8 x 20 5 x 30	
2.0		✓	✓	✓			1				✓		1																
2.2		✓	✓	✓			1				✓		1																
2.4		✓	✓	✓			1				✓		1																
2.6		✓	✓	✓			2				✓		1															8 x 20	
2.8		✓	✓	✓			2				✓		1																
3.0		✓	✓	✓	✓		3				✓		1																

Date: September 12, 1994

Location: US-281 Major

Length:

CONDITION RATING FOR FLEXIBLE PAVEMENTS

Project Number: 2285

Control Section:

Surveyed By: [illegible] & Steve

LEGEND FOR RATING CLASSES

CONDITION RATING	CRACKING	DISTORTION	RAVELING	SURFACE ROUGHNESS	BASE FAILURE	TOTAL SURFACE AREA OF RATING INTERVAL
1. 100-98% = EXCEL. 2. 97-90% = SUPER. 3. 89-80% = GOOD 4. 79-65% = AVER. 5. 64-50% = POOR 6. 50%-LESS= FAIL	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1 = LESS THAN 5% 2 = 5% TO 15% 3 = 15% TO 30% 4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING: Longitudinal	Transverse	Random	Block	Alligator	Cracking	DISTORTION: Minor Bleeding	Inter. Bleeding	Major Bleeding	Shoving	Corrugating	Distortion	RAVELING: Minor	Intermediate	Major	Raveling	SURFACE ROUGHNESS: Smooth	Moderately Rough	Rough	Surface Rough	BASE FAILURE: Moderate	Severe	Base Failure	RUT DEPTH: 0.1 to 0.5 inch	0.5 to 1.0 inch	1.0 or greater	PATCH FT²	COMMENTS
3.2		✓	✓		✓		2				✓		1																
[illegible]		✓	✓		✓		3				✓		1																
[illegible]		✓	✓		✓		3				✓		1																
3.8		✓	✓		✓		3				✓	✓	[illegible]																
4.0		✓	✓				2																						
4.2		✓	✓				2				✓		2																
[illegible]		✓	✓		✓		3				✓		2																
[illegible]		✓	✓		✓		2				✓		1																
[illegible]		✓			✓		2				✓		1																
[illegible]		✓	✓		✓		[illegible]						1																
[illegible]		✓	✓		✓		[illegible]						[illegible]																
[illegible]		✓	✓		✓		[illegible]						[illegible]																
[illegible]		✓			✓		[illegible]						[illegible]																
[illegible]			✓		✓		[illegible]						[illegible]																
[illegible]		✓			✓		[illegible]				✓																		
[illegible]		✓	✓	✓			[illegible]				✓		[illegible]																

1995

ate: April 13, 1995 | CONDITION RATING | Project Number: 2285

ocation: SH-58 Major Co. | FOR | Control Section:

ength: 5.2 | FLEXIBLE PAVEMENTS | Surveyed By: Wilson Brewer

begin at Jct SH-51a travel north to Fairview

LEGEND FOR RATING CLASSES

CONDITION RATING	CRACKING	DISTORTION	RAVELING	SURFACE ROUGHNESS	BASE FAILURE	TOTAL SURFACE AREA OF RATING INTERVAL
1. 100-98% = EXCEL. 2. 97-90% = SUPER. 3. 89-80% = GOOD 4. 79-65% = AVER. 5. 64-50% = POOR 6. 50%-LESS= FAIL	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1 = LESS THAN 5% 2 = 5% TO 15% 3 = 15% TO 30% 4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING: LONGITUDINAL	CRACKING: TRANSVERSE	CRACKING: RANDOM	CRACKING: BLOCK	CRACKING: ALLIGATOR	CRACKING	DISTORTION: MINOR BLEEDING	DISTORTION: INTER. BLEEDING	DISTORTION: MAJOR BLEEDING	DISTORTION: SHOVING	DISTORTION: CORRUGATING	DISTORTION	RAVELING: MINOR	RAVELING: INTERMEDIATE	RAVELING: MAJOR	RAVELING	SURFACE ROUGHNESS: SMOOTH	SURFACE ROUGHNESS: MOD. ROUGH	SURFACE ROUGHNESS: ROUGH	SURFACE ROUGHNESS: SURFACE ROUGH	BASE FAILURE: MODERATE	BASE FAILURE: SEVERE	BASE FAILURE: BASE FAILURE	RUT DEPTH: 0.1 or 0.2 INCH	RUT DEPTH: 0.3 or 0.4 INCH	RUT DEPTH: 0.5 or GREATER	PATCH FT²	COMMENTS
0.0	58	✓	✓	✓	✓	✓	2				✓	✓	2												✓			12x8 0 6x25 6x100	See Last year Survey for
0.2	58	✓	✓			✓	2		✓	✓	✓	✓	2												✓			6x15	Patching no change
0.4	50		✓				1		✓	✓		✓	3													✓	✓	"	
0.6	52		✓			✓	1			✓	✓	✓	3												✓	✓		"	
0.8	60		✓			✓	1		✓	✓		✓	2														✓	"	
1.0	52	✓	✓		✓		1			✓	✓	✓	3													✓	✓	"	
1.2	45		✓		✓	✓	1		✓	✓	✓		3			✓	1										✓	"	
1.4	48		✓		✓	✓	2			✓	✓		3													✓		"	
1.6	48		✓			✓	2			✓	✓	✓	3													✓	✓	"	
1.8	58		✓			✓	2			✓	✓	✓	2													✓		"	
2.0	65		✓			✓	2		✓	✓		✓	1													✓		"	
2.2	59	✓	✓			✓	1		✓			✓	1													✓	✓	"	
2.4	79		✓				1		✓			✓	1												✓			"	
2.6	60		✓		✓	✓	2			✓		✓	2			✓	1								✓			"	
2.8	60		✓		✓		2			✓			2													✓		"	
3.0	58		✓		✓	✓	3			✓			2															"	

ate: April 13, 1995 | CONDITION RATING | Project Number: 2285

ocation: SH-58 Major Co | FOR | Control Section:

ength: 5.2 | FLEXIBLE PAVEMENTS | Surveyed By: Wilson Brewer

LEGEND FOR RATING CLASSES

1. 100-98% = EXCEL.
2. 97-90% = SUPER.
3. 89-80% = GOOD
4. 79-65% = AVER.
5. 64-50% = POOR
6. 50%-LESS = FAIL

1 = LESS THAN 5%
2 = 5% TO 15%
3 = 15% TO 30%
4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING 1-2-3-4						DISTORTION 1-2-3-4						RAVELING 1-2-3-4				SURFACE ROUGHNESS 1-2-3-4				BASE FAILURE 1-2-3-4			RUT DEPTH			TOTAL SURFACE AREA OF RATING INTERVAL	
		LONGITUDINAL	TRANSVERSE	RANDOM	BLOCK	ALLIGATOR	CRACKING	MINOR BLEEDING	INTER. BLEEDING	MAJOR BLEEDING	SHOVING	CORRUGATING	DISTORTION	MINOR	INTERMEDIATE	MAJOR	RAVELING	SMOOTH	MOD. ROUGH	ROUGH	SURFACE ROUGH	MODERATE	SEVERE	BASE FAILURE	0.1 or 0.2 INCH	0.3 or 0.4 INCH	0.5 or GREATER	PATCH FT²	COMMENTS
3.2	48	✓	✓			✓	2		✓			✓	3													✓			
3.4	50		✓			✓	1			✓	✓	✓	3													✓			
3.6	48	✓	✓		✓	✓	2		✓			✓	3													✓			
3.8	40	✓			✓	✓	3		✓			✓	3													✓			
4.0	48			✓		✓	2		✓	✓		✓	3													✓	✓		
4.2	40	✓	✓			✓	2		✓	✓		✓	4													✓			
4.4	38		✓			✓	2		✓	✓		✓	4										✓	1		✓	✓		
4.6	45	✓	✓			✓	2			✓	✓	✓	3													✓			
4.8	45		✓			✓	2		✓	✓		✓	3													✓	✓		
5.6	42		✓			✓	2		✓	✓		✓	3		✓		1									✓			
5.2	60		✓			✓	1			✓		✓	2													✓	✓		
POOR	52																												

Date: May 16, 1995 | CONDITION RATING | Project Number: 2285

Location: SH-34 Woodward Co | FOR | Control Section:

Length: | FLEXIBLE PAVEMENTS | Surveyed By: W. Ison

LEGEND FOR RATING CLASSES																																		
CONDITION RATING		CRACKING						DISTORTION						RAVELING				SURFACE ROUGHNESS				BASE FAILURE						TOTAL SURFACE AREA OF RATING INTERVAL								
		1-2-3-4						1-2-3-4						1-2-3-4				1-2-3-4				1-2-3-4														
1. 100-98% = EXCEL. 2. 97-90% = SUPER. 3. 89-80% = GOOD 4. 79-65% = AVER. 5. 64-50% = POOR 6. 50%-LESS= FAIL		CRACKING						DISTORTION						RAVELING				SURFACE ROUGHNESS				BASE FAILURE			RUT DEPTH			1 = LESS THAN 5% 2 = 5% TO 15% 3 = 15% TO 30% 4 = 30% OR MORE								
RATING INTERVAL (MI.)	CONDITION RATING (%)	Longitudinal	Transverse	Random	Block	Alligator	Cracking	Minor Bleeding	Inter. Bleeding	Major Bleeding	Shoving	Corrugating	Distortion	Minor	Intermediate	Major	Raveling	Smooth	Moderately Rough	Rough	Surface Rough	Moderate	Severe	Base Failure	0.1 to 0.5 inch	0.5 to 1.0 inch	1.0 or greater	PATCH FT²		COMMENTS					
0.0	82	✓	✓		✓		2							✓	✓		1																	
0.2	73	✓	✓		✓		3							✓	✓		1																	
0.4	69	✓	✓		✓		3	✓						✓	✓		1																	
0.6	88		✓				1					✓	1	✓			1																	
0.8	82	✓	✓				2					✓	1	✓			1																	
1.0	83	✓	✓		✓		2	✓				✓	1	✓			1																	
1.2	85		✓		✓		1							✓	✓		1																	
1.4	95	✓	✓		✓		1																											
1.6	70	✓	✓		✓		3							✓	✓		1																	
1.8	70	✓	✓		✓		3							✓	✓		1																	
2.0	82	✓	✓		✓		2							✓			1																	
2.2	88	✓	✓				1							✓			1																	
2.4	85	✓	✓		✓		2							✓			1																	
2.6	73	✓	✓		✓		3							✓	✓		1																	
2.8	85	✓	✓		✓		2							✓	✓		1																	
3.0	87	✓	✓				2							✓			1																	

Date: May 16, 1995 | CONDITION RATING | Project Number: 2285

Location: SH-34 Woodward Co. | FOR | Control Section:

Length: | FLEXIBLE PAVEMENTS | Surveyed By: Wilson Beard

LEGEND FOR RATING CLASSES

CONDITION RATING	CRACKING	DISTORTION	RAVELING	SURFACE ROUGHNESS	BASE FAILURE	TOTAL SURFACE AREA OF RATING INTERVAL
1. 100-98% = EXCEL. 2. 97-90% = SUPER. 3. 89-80% = GOOD 4. 79-65% = AVER. 5. 64-50% = POOR 6. 50%-LESS= FAIL	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1 = LESS THAN 5% 2 = 5% TO 15% 3 = 15% TO 30% 4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING: Longitudinal	Transverse	Random	Block	Alligator	Cracking	DISTORTION: Minor Bleeding	Inter. Bleeding	Major Bleeding	Shoving	Corrugating	Distortion	RAVELING: Minor	Intermediate	Major	Raveling	SURFACE ROUGHNESS: Smooth	Moderately Rough	Rough	Surface Rough	BASE FAILURE: Moderate	Severe	Base Failure	RUT DEPTH: 0.1 to 0.5 inch	0.5 to 1.0 inch	1.0 or greater	PATCH FT²	COMMENTS
3.2	83	✓	✓		✓		3							✓			1												
3.4	87	✓	✓				2																						
3.6	85	✓	✓		✓		2																						
3.8	88	✓	✓				1	✓					1	✓			1												
4.0	85	✓	✓				2							✓			1												
4.2	83	✓	✓		✓		2							✓			1												
4.4	83	✓	✓		✓		2							✓			1												
4.6	83	✓	✓		✓		2							✓			1												
4.8	87	✓	✓			✓	1	✓					1	✓			1												
5.0	94	✓	✓				1																						
5.2	85	✓	✓				1	✓				✓	1																
5.4	85	✓	✓				1	✓				✓	1																
5.6	88	✓	✓				1					✓	1																
5.8	76	✓	✓				1					✓	2															6x30	
Good	83																												

Date: May 16, 1995

Location: U.S. 64 Beaver Co.

Length:

CONDITION RATING FOR FLEXIBLE PAVEMENTS

Project Number: 2235

Control Section:

Surveyed By: Wilson Brewer

LEGEND FOR RATING CLASSES

CONDITION RATING	CRACKING	DISTORTION	RAVELING	SURFACE ROUGHNESS	BASE FAILURE	TOTAL SURFACE AREA OF RATING INTERVAL
1. 100-98% = EXCEL. 2. 97-90% = SUPER. 3. 89-80% = GOOD 4. 79-65% = AVER. 5. 64-50% = POOR 6. 50%-LESS = FAIL	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1 = LESS THAN 5% 2 = 5% TO 15% 3 = 15% TO 30% 4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING: Longitudinal	Transverse	Random	Block	Alligator	Cracking	DISTORTION: Minor Bleeding	Inter. Bleeding	Major Bleeding	Shoving	Corrugating	Distortion	RAVELING: Minor	Intermediate	Major	Raveling	SURFACE ROUGHNESS: Smooth	Moderately Rough	Rough	Surface Rough	BASE FAILURE: Moderate	Severe	Base Failure	RUT DEPTH: 0.1 to 0.5 inch	0.5 to 1.0 inch	1.0 or greater	PATCH FT²	COMMENTS
3.2	68	✓	✓			2					✓	✓	2												✓				
3.4	39		✓			2					✓	✓	3										✓	1	✓	✓	✓	12x2, 12x2 12x2	
3.6	35	✓	✓			3					✓	✓	3										✓	1	✓	✓	✓	(25)-2x12 2	
3.8	45	✓	✓			2						✓	3									✓		1	✓	✓		(10) 2x12	
4.0	64	✓	✓			2					✓	✓	2							✓	1				✓			(6) 2x12 20x12(5)	
4.2	64	✓	✓			2						✓	2							✓	1				✓			(10) 10x12	
4.4	65	✓	✓			2						✓	2												✓			(10) 6x12	
4.6	65	✓	✓			2						✓	2												✓			12x50 46x12	
4.8	65	✓	✓			2					✓	✓	2												✓			10x50(2) 10x10(2)	
5.0	68	✓	✓			3						✓	2						✓		2								
5.2	72	✓	✓			2						✓	2																
5.4	72	✓	✓			2						✓	2																
5.6	72	✓	✓			2						✓	2																
5.8	72	✓	✓			2						✓	2																
6.0	72	✓	✓			2					✓	✓	2												✓				
6.2	80	✓	✓			1					✓	✓	1															(2) 2x4	

Date: May 16, 1995 | CONDITION RATING | Project Number: 2285

Location: US-64 Beaver Co | FOR | Control Section: 1

Length: 6.8 | FLEXIBLE PAVEMENTS | Surveyed By: Wilson Brewer

LEGEND FOR RATING CLASSES

CONDITION RATING	CRACKING	DISTORTION	RAVELING	SURFACE ROUGHNESS	BASE FAILURE	TOTAL SURFACE AREA OF RATING INTERVAL
1. 100-98% = EXCEL. 2. 97-90% = SUPER. 3. 89-80% = GOOD 4. 79-65% = AVER. 5. 64-50% = POOR 6. 50%-LESS= FAIL	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1 = LESS THAN 5% 2 = 5% TO 15% 3 = 15% TO 30% 4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING: Longitudinal	Transverse	Random	Block	Alligator	Cracking	DISTORTION: Minor Bleeding	Inter. Bleeding	Major Bleeding	Shoving	Corrugating	Distortion	RAVELING: Minor	Intermediate	Major	Raveling	SURFACE ROUGHNESS: Smooth	Moderately Rough	Rough	Surface Rough	BASE FAILURE: Moderate	Severe	Base Failure	RUT DEPTH: 0.1 to 0.5 inch	0.5 to 1.0 inch	1.0 or greater	PATCH FT²	COMMENTS
0.0	67		✓				1						✓2						✓	2								12 X1,056	
0.2	75	✓	✓				1					✓	1						✓	2								12 X1,656	
0.4	52	✓	✓				3					✓	✓3						✓	2					✓	✓		12x225	
0.6	50	✓	✓				3					✓	3						✓	3									
0.8	50	✓	✓				2						✓2						✓	2	✓		1						
1.0	50	✓	✓				2					✓	✓2						✓	2	✓		1		✓				
1.2	45	✓	✓				2					✓	✓3						✓	2	✓		1	✓	✓			10x20	
1.4	50	✓	✓				2					✓	✓2								✓		1	✓	✓				
1.6	65	✓	✓				3					✓	✓2											✓	✓				
1.8	65	✓	✓				3					✓	✓2											✓	✓				
2.0	50	✓	✓				3					✓	✓3											✓	✓				
2.2	50	✓	✓				3					✓	✓3											✓	✓				
2.4	45	✓	✓				3					✓	✓3								✓		1	✓	✓				
2.6	65	✓	✓				2					✓	✓2											✓	✓				
2.8	50	✓	✓				2					✓	✓3											✓	✓				
3.0	48	✓	✓				2					✓	✓3								✓		1	✓	✓				

Date: May 16, 1995 | CONDITION RATING FOR FLEXIBLE PAVEMENTS | Project Number: 2235

Location: U.S-64 Beaver | Control Section: 1

Length: 6.8 | Surveyed By: Wilson Brewer

LEGEND FOR RATING CLASSES

CONDITION RATING	CRACKING	DISTORTION	RAVELING	SURFACE ROUGHNESS	BASE FAILURE	TOTAL SURFACE AREA OF RATING INTERVAL
1. 100-98% = EXCEL. 2. 97-90% = SUPER. 3. 89-80% = GOOD 4. 79-65% = AVER. 5. 64-50% = POOR 6. 50%-LESS= FAIL	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1 = LESS THAN 5% 2 = 5% TO 15% 3 = 15% TO 30% 4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING						DISTORTION						RAVELING				SURFACE ROUGHNESS				BASE FAILURE			RUT DEPTH			PATCH FT²	COMMENTS
		LONGITUDINAL	TRANSVERSE	RANDOM	BLOCK	ALLIGATOR	CRACKING	MINOR BLEEDING	INTER. BLEEDING	MAJOR BLEEDING	SHOVING	CORRUGATING	DISTORTION	MINOR	INTERMEDIATE	MAJOR	RAVELING	SMOOTH	MOD. ROUGH	ROUGH	SURFACE ROUGH	MODERATE	SEVERE	BASE FAILURE	0.1 or 0.2 INCH	0.3 or 0.4 INCH	0.5 or GREATER		
6.4	72	✓	✓				2					✓	2																
6.6	72	1	✓				2					✓	2																
6.8	65	✓	✓				2					✓	2												✓				
Poor -	60																												

ate: June 7, 1995 | CONDITION RATING | Project Number: 2285

ocation: US-281 Major | FOR | Control Section:

ength: 6.0 | FLEXIBLE PAVEMENTS | Surveyed By: Stacy & Wilson

LEGEND FOR RATING CLASSES

1. 100-98% = EXCEL.
2. 97-90% = SUPER.
3. 89-80% = GOOD
4. 79-65% = AVER.
5. 64-50% = POOR
6. 50%-LESS= FAIL

1 = LESS THAN 5%
2 = 5% TO 15%
3 = 15% TO 30%
4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING 1-2-3-4						DISTORTION 1-2-3-4						RAVELING 1-2-3-4				SURFACE ROUGHNESS 1-2-3-4				BASE FAILURE 1-2-3-4			RUT DEPTH			TOTAL SURFACE AREA OF RATING INTERVAL	
		LONGITUDINAL	TRANSVERSE	RANDOM	BLOCK	ALLIGATOR	CRACKING	MINOR BLEEDING	INTER. BLEEDING	MAJOR BLEEDING	SHOVING	CORRUGATING	DISTORTION	MINOR	INTERMEDIATE	MAJOR	RAVELING	SMOOTH	MOD. ROUGH	ROUGH	SURFACE ROUGH	MODERATE	SEVERE	BASE FAILURE	0.1 or 0.2 INCH	0.3 or 0.4 INCH	0.5 or GREATER	PATCH FT²	COMMENTS
0.0	57		✓		✓	✓	4	✓				✓	1																
0.2	57		✓		✓		4					✓	1	✓			1												
0.4	57	✓	✓		✓		4					✓	1																
0.6	57	✓	✓		✓	✓	4	✓				✓	1																
0.8	68		✓		✓		3					✓	1																
1.0	68		✓		✓		3					✓	1															75×25 12×20 75×25	
1.2	65		✓		✓	✓	3					✓	1																
1.4	65		✓		✓	✓	3					✓	1																
1.6	40		✓		✓		3					✓	4																edge failure
1.8	35		✓		✓		3					✓	4															10×100	edge failure
2.0	50		✓		✓		3					✓	3																"
2.2	50		✓		✓		4					✓	3																"
2.4	52	✓	✓				4	✓				✓	2																"
2.6	53	✓	✓		✓		4					✓	2															5×150	"
2.8	52		✓		✓		4					✓	2															20×150	
3.0	52		✓		✓		4					✓	2																

Date: June 7, 1995

Location: US-281 Major

Length: 6.2

CONDITION RATING FOR FLEXIBLE PAVEMENTS

Project Number: 2285

Control Section:

Surveyed By: Stacy & Wilson

LEGEND FOR RATING CLASSES

CONDITION RATING	CRACKING	DISTORTION	RAVELING	SURFACE ROUGHNESS	BASE FAILURE	TOTAL SURFACE AREA OF RATING INTERVAL
1. 100-98% = EXCEL. 2. 97-90% = SUPER. 3. 89-80% = GOOD 4. 79-65% = AVER. 5. 64-50% = POOR 6. 50%-LESS= FAIL	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1 = LESS THAN 5% 2 = 5% TO 15% 3 = 15% TO 30% 4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING: LONGITUDINAL	TRANSVERSE	RANDOM	BLOCK	ALLIGATOR	CRACKING	DISTORTION: MINOR BLEEDING	INTER. BLEEDING	MAJOR BLEEDING	SHOVING	CORRUGATING	DISTORTION	RAVELING: MINOR	INTERMEDIATE	MAJOR	RAVELING	SURFACE ROUGHNESS: SMOOTH	MOD. ROUGH	ROUGH	SURFACE ROUGH	BASE FAILURE: MODERATE	SEVERE	BASE FAILURE	RUT DEPTH: 0.1 or 0.2 INCH	0.3 or 0.4 INCH	0.5 or GREATER	PATCH FT²	COMMENTS
3.2	40		✓		✓	✓	4				✓	✓	2									✓		2					
3.4	52		✓		✓		3				✓	✓	3																
3.6	57		✓		✓		4	✓				✓	1																
3.8	52		✓		✓	✓	4				✓	✓	2																edge failure
4.0	48		✓		✓	✓	4				✓	✓	3									✓		1					
4.2	65	✓	✓		✓		3				✓	✓	2																
4.4	57	✓	✓				3	✓				✓	1																
4.6	65	✓	✓		✓		3					✓	2																
4.8	47	✓	✓		✓		4					✓	1																
5.0	57		✓	✓	✓	✓	4					✓	1																
5.2	52		✓	✓	✓	✓	4					✓	1	✓			1												
5.4	52		✓	✓		✓	4				✓	✓	2	✓			1												
[illegible]	52		✓	✓	✓	✓	4					✓	2																
5.8	52		✓	✓	✓		4					✓	2																
6.0	52		✓	✓			3					✓	3																
6.2	48		✓	✓			3					✓	2									✓		1					

ite: 6-26-95 | CONDITION RATING | Project Number: 2285

ocation: SH-8 Alt. 14 Co | FOR | Control Section:

ength: 5.8 miles | FLEXIBLE PAVEMENTS | Surveyed By: Steve & Wilson

LEGEND FOR RATING CLASSES

CONDITION RATING	CRACKING	DISTORTION	RAVELING	SURFACE ROUGHNESS	BASE FAILURE	TOTAL SURFACE AREA OF RATING INTERVAL
	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	

1. 100-98% = EXCEL.
2. 97-90% = SUPER.
3. 89-80% = GOOD
4. 79-65% = AVER.
5. 64-50% = POOR
6. 50%-LESS= FAIL

1 = LESS THAN 5%
2 = 5% TO 15%
3 = 15% TO 30%
4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING: LONGITUDINAL	TRANSVERSE	RANDOM	BLOCK	ALLIGATOR	CRACKING	DISTORTION: MINOR BLEEDING	INTER. BLEEDING	MAJOR BLEEDING	SHOVING	CORRUGATING	DISTORTION	RAVELING: MINOR	INTERMEDIATE	MAJOR	RAVELING	SURFACE ROUGHNESS: SMOOTH	MOD. ROUGH	ROUGH	SURFACE ROUGH	BASE FAILURE: MODERATE	SEVERE	BASE FAILURE	RUT DEPTH: 0.1 or 0.25 INCH	0.3 or 0.4 INCH	0.5 or GREATER	PATCH FT²	COMMENTS
0.0	57	✓	✓	✓	✓		4							✓			1								✓			6x200 3x50	
0.2	80	✓	✓				2							✓			1								✓			8x70 6x100	6x100 8x50
0.4	57	✓	✓	✓	✓		4							✓			1								✓			10x100 8x300	
0.6	68	✓	✓	✓	✓		3							✓			1								✓			8x50 6x600	
0.8	80	✓	✓	✓	✓		2							✓			1								✓			6x50	
1.0	54	✓	✓	✓	✓		4							✓			1								✓			6x150 4x25	6x100
1.2	50	✓	✓	✓	✓		4							✓			2								✓				
1.4	50	✓	✓	✓	✓		4							✓			2								✓			12x500	
1.6	68	✓	✓	✓	✓		3							✓			1								✓				
1.8	50	✓	✓	✓	✓		4							✓			1					✓		1	✓				
2.0	57	✓	✓	✓	✓		4							✓			1								✓				
2.2	50	✓	✓	✓	✓		4							✓			2								✓				
2.4	50	✓	✓	✓	✓		4	✓					1	✓			2								✓				
2.6	48	✓	✓	✓	✓		4							✓			2					✓		1	✓				
2.8	48	✓	✓	✓	✓		4							✓			2					✓		1	✓			2x4 2x4	
3.0	54	✓	✓				4							✓			1								✓				

ate: 6-26-95 | CONDITION RATING | Project Number: 2285

ocation: SH-8 Alfalfa Co | FOR | Control Section:

ength: 5.8 miles | FLEXIBLE PAVEMENTS | Surveyed By: Steve & Wilson

LEGEND FOR RATING CLASSES

CONDITION RATING	CRACKING	DISTORTION	RAVELING	SURFACE ROUGHNESS	BASE FAILURE	TOTAL SURFACE AREA OF RATING INTERVAL
1. 100-98% = EXCEL. 2. 97-90% = SUPER. 3. 89-80% = GOOD 4. 79-65% = AVER. 5. 64-50% = POOR 6. 50%-LESS= FAIL	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1-2-3-4	1 = LESS THAN 5% 2 = 5% TO 15% 3 = 15% TO 30% 4 = 30% OR MORE

RATING INTERVAL (MI.)	CONDITION RATING (%)	CRACKING: LONGITUDINAL	CRACKING: TRANSVERSE	CRACKING: RANDOM	CRACKING: BLOCK	CRACKING: ALLIGATOR	CRACKING: CRACKING	DISTORTION: MINOR BLEEDING	DISTORTION: INTER. BLEEDING	DISTORTION: MAJOR BLEEDING	DISTORTION: SHOVING	DISTORTION: CORRUGATING	DISTORTION: DISTORTION	RAVELING: MINOR	RAVELING: INTERMEDIATE	RAVELING: MAJOR	RAVELING: RAVELING	SURFACE ROUGHNESS: SMOOTH	SURFACE ROUGHNESS: MOD. ROUGH	SURFACE ROUGHNESS: ROUGH	SURFACE ROUGHNESS: SURFACE ROUGH	BASE FAILURE: MODERATE	BASE FAILURE: SEVERE	BASE FAILURE: BASE FAILURE	RUT DEPTH: 0.1 or 0.25 INCH	RUT DEPTH: 0.3 or 0.4 INCH	RUT DEPTH: 0.5 or GREATER	PATCH FT²	COMMENTS
3.2	50	✓	✓	✓	✓	✓	4					✓		✓			1								✓				
3.4	67	✓	✓	✓	✓	✓	3							✓			1												
3.6	54	✓	✓	✓	✓	✓	4							✓			1												
3.8	50	✓	✓	✓	✓	✓	4							✓			2												
4.0	52	✓	✓	✓	✓	✓	4							✓			1								✓			12×50 6×50 12×100	
4.2	80	✓	✓		✓	✓	2	✓					1	✓			1											24×200	
4.4	80	✓	✓			✓	2							✓			1												
4.6	68	✓	✓	✓	✓	✓	3							✓			1												
4.8	82		✓		✓	✓	1	✓					1																
5.0	92		✓	✓			1							✓			1												
5.2	90	✓	✓				1								✓														
5.4	82	✓	✓				1							✓			1								✓				
5.6	80	✓	✓	✓	✓	✓	2							✓			1												
5.8	80	✓	✓	✓	✓	✓	2							✓			1											4×50 2×50	
Total	64 poor																												