CORRELATION OF CONSTRUCTION QUALITY CRITERIA WITH PERFORMANCE OF ASPHALTIC CONCRETE PAVEMENTS

FINAL REPORT

By

S. C. SHAH
RESEARCH & DEVELOPMENT ENGINEER

Research Report No. 208
Research Project No. 79-2G

Conducted by
LOUISIANA DEPARTMENT OF TRANSPORTATION
AND DEVELOPMENT
Louisiana Transportation Research Center
In Cooperation with
U. S. Department of Transportation
FEDERAL HIGHWAY ADMINISTRATION

AUGUST 1987

ABSTRACT

This report is concerned with the determination of relationship between asphaltic concrete surface course specifications and the level of performance of pavements constructed under these specifications. The relationship was investigated through comparative evaluation of deficient (in specification) and non-deficient sections using a combination of pavement condition rating and ride rating as the criteria for evaluation. The analysis and evaluation of the data indicated (1) a recognizable difference in the level of performance for the 100 percent pay or non-deficient sections and the deficient sections for stability and surface tolerance criteria of acceptance; (2) little difference in the performance level between the two groups of sections for compaction criteria deficiency; (3) pot hole patching for test or deficient sections to be much more than the corresponding control or non-deficient section (4) that majority of the sections (control or test) have not reached end of life according to PSI measure of serviceability.

METRIC CONVERSION FACTORS*

To Convert from	To	Multiply by
	Length	
foot	meter (m)	0.3048
inch	millimeter (mm)	25.4
yard	meter (m)	0.9144
mile (statute)	kilometer (km)	1.609
	Area	
square foot	square meter (m^2)	0.0929
square inch	square centimeter (cm^2)	6.451
square yard	square meter (m^2)	0.8361
	Volume (Capacity)	
cubic foot	cubic meter (m^3)	0.02832
gallon (U.S. liquid)**	cubic meter (m^3)	0.003785
gallon (Can. liquid)**	cubic meter (m^3)	0.004546
ounce (U.S. liquid)	cubic centimeter (cm^3)	29.57
	Mass	
ounce-mass (avdp)	gram (g)	28.35
pound-mass (avdp)	kilogram (kg)	0.4536
ton (metric)	kilogram (kg)	1000
ton (short, 2000 lbs)	kilogram (kg)	907.2
	Mass per Volume	
pound-mass/cubic foot	kilogram/cubic meter (kg/m^3)	16.02
pound-mass/cubic yard	kilogram/cubic meter (kg/m^3)	0.5933
pound-mass/gallon (U.S.)**	kilogram/cubic meter (kg/m^3)	119.8
pound-mass/gallon (Can.)**	kilogram/cubic meter (kg/m^3)	99.78
	Temperature	
deg Celsius (C)	kelvin (K)	$t_k=(t_c+273.15)$
deg Fahrenheit (F)	kelvin (K)	$t_k=(t_F+459.67)/1.8$
deg Fahrenheit (F)	deg Celsius (C)	$t_c=(t_F-32)/1.8$

*The reference source for information on SI units and more exact conversion factors is "Metric Practice Guide" ASTM E 380.

**One U.S. gallon equals 0.8327 Canadian gallon.

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INTRODUCTION

Most highway construction specifications prescribed can be categorized as design requirements or material requirements, as opposed to the current emphasis on performance requirements. The issue of quality with respect to performance has been the most complex and little, if any, information is available about the relationship between the presently used material 'quality indicator' type specifications and the real-life service performance.

Louisiana has been actively engaged in the development and implementation of statistically oriented end-result specifications (ERS) since the late 1960's (1, 2, 3, 4). Since implementation of the original ERS in 1971, changes have been made to accommodate material and equipment changes without affecting the basic concept of these specifications. Conceptually, the specifications contain the following features:

1. Definition of responsibilities of the contractor and the Department for control and/or acceptance of the product (who is required to do what?).

2. Identification of quality criteria for control and acceptance and their respective limiting values.

3. Random sampling techniques and statistically oriented acceptance sampling plans.

4. Disposition of non-conforming product (price adjustments).

Underlined numbers in parentheses refer to list of references.

After almost two decades of implementation of these specifications, the question as to what relationships, if any, exist between these specifications and long term performance still remains to be answered. This report attempts to answer this question through field evaluation of projects constructed under these specifications. However, in seeking this answer, there is an implied assumption that the construction criteria are performance oriented. Furthermore, the disincentives, or reduction in pay imposed on the producer or contractor due to non conforming product, are believed to offset a reduction in design life which may necessitate early maintenance and/or rehabilitation effort due to early manifestation of pavement surface distress.

OBJECTIVE & SCOPE

The specific objective of the study reported herein was to determine the relationships between construction acceptance criteria for asphaltic concrete pavements and the performance of such pavements.

The scope was limited to evaluation of the lots, deficient or otherwise, and not the individual subsections within these lots that may have contributed to the deficiency or non-deficiency. Thus, the non-deficient section may have a real low value and yet receive 100 percent pay because of higher than the required average values for the remaining samples. Likewise, a single low value may also render the entire lot defective because of the remaining sample values very close to the required average for conformance. This inability to delineate the subsections was a major constraint in the study.

The study involved evaluation of asphaltic concrete wearing course mixes only. Furthermore, no attempt was made to delineate the material and section layer characteristics underneath the surface course layer. However, care was exercised to assure that the binder course layer directly beneath the surface course sections was free of any specification deficiencies. In essence, to accomplish the stated objective, it was assumed that the pavement section is homogeneous in all respects except the deficient hot mix surface layer.

The scope did not include determination of the validity of the pay schedule. Furthermore, no control or constraint was placed on carrying out any routine maintenance of the sections during the evaluation period as was deemed appropriate by the districts.

STUDY METHOD

Selection of Projects

Two sources were used for selection of projects for data collection. One was reference 2 and the other was the Department's computerized material and construction test data file (MATT system). Although not much choice was available in the selection procedure, a combination of these two sources provided twenty-one projects across the state that had some deficiency in construction acceptance criteria as defined in Appendix Table 6, 7 and 8. Figure 1 on page 5 shows the location of the selected projects.

Appendix A contains excerpts from the Louisiana Standard Specifications for Roads and Bridges, 1977 which indicate levels of pay adjustment for the specified acceptance criteria of stability, compaction and surface tolerance for each lot. A lot was defined as one day's production in these specifications. In cases where a lot may be deficient in several criteria, the lowest percentage of contract price is used for final adjustment.

The selected projects represent new and overlay construction. Furthermore, most of these projects were at least three years old at the time. This was considered necessary in order to minimize the time to identification of recognizable (significant) distress. The ages of these projects varied from six to eleven years at the conclusion of the study. Table 1 on page 6 is a listing of the selected construction projects by type of construction and number of control and test sections available for evaluation. A control section is one which has met all construction acceptance requirements and thus merited full (100%) pay. A test section is one which failed to meet one or more construction acceptance requirements (as specified in Appendix A) and therefore merited less than 100% of scheduled pay.

The projects were distributed almost evenly between new construction, overlays over rigid pavements and overlays over

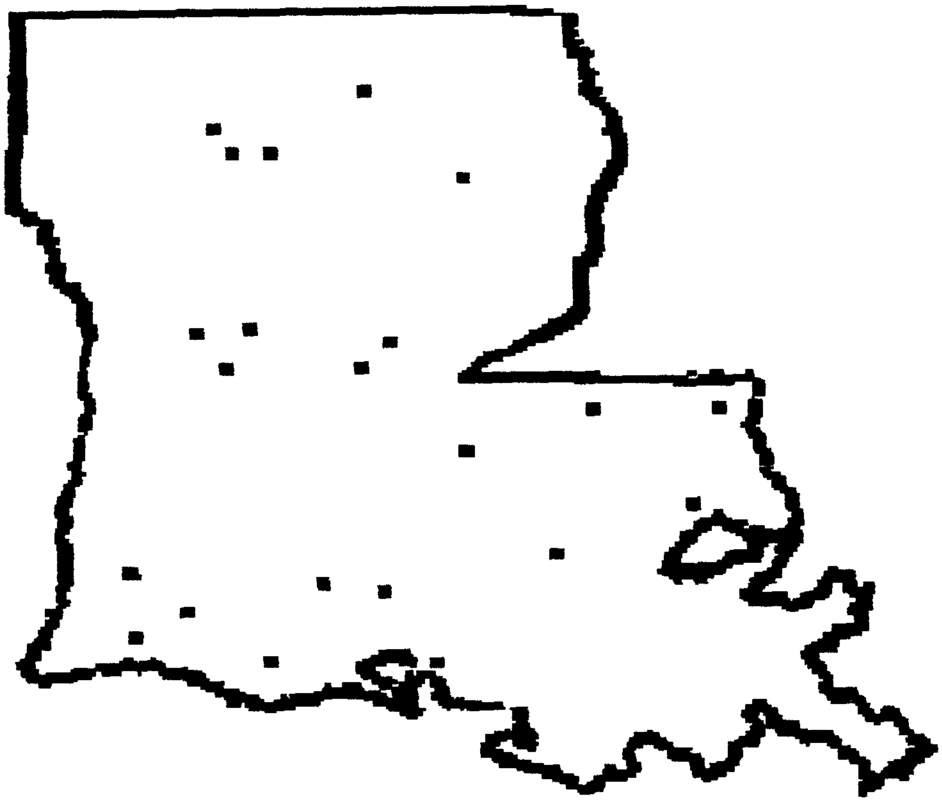


Figure 1: Location of Projects

TABLE 1: List of Projects Selected for Evaluation

Project Number	Date of Construction	Type of Construction	Number of Sections		
			Control	Test	Total
008-09-20*	10-76	New	7	20	27
013-10-34	06-76	Rigid Overlay	2	4	6
016-01-12*	09-76	Rigid Overlay	3	16	19
023-06-19	11-76	New	2	2	4
036-03-11	03-76	Flexible Overlay	2	8	10
047-03-09	03-76	Rigid Overlay	1	1	2
050-06-49	01-76	Rigid Overlay	2	10	12
052-08-24	05-76	Rigid Overlay	5	12	17
066-02-15	04-76	Flexible Overlay	3	7	10
067-05-15	10-75	New	2	4	6
124-03-16*	11-75	New	1	5	6
137-02-07	06-78	New	1	2	3
193-01-14	12-78	Flexible Overlay	3	7	10
194-02-27	07-78	Flexible Overlay	1	1	2
195-01-07	03-76	Flexible Overlay	1	3	4
243-01-09	10-75	Flexible Overlay	3	8	11
263-01-09*	11-76	Flexible Overlay	4	9	13
383-01-03	01-76	New	2	7	9
417-01-02	12-74	New	4	8	12
810-19-11	11-78	Rigid Overlay	2	5	7
850-08-06	03-76	Flexible Overlay	1	1	2
Totals			52	140	192

* 1985 data not available due to overlay of sections.

flexible pavements. These projects provided 52 control sections and 140 test sections for a total of 192 sections. The projects marked with an asterisk are those that had to be dropped sometime during the evaluation period because of heavy maintenance and/or rehabilitation.

Table 2 on page 8 shows the distribution of project test sections according to the acceptance criteria and percent of contract pay. Of the 140 test sections, more than half had deficiencies in compaction criteria. Some sections had multiple deficiencies.

Field Identification of Sections

The physical limits of construction lots, with and without deficiencies in acceptance criteria, were located and marked for identification. Random 1000-foot sections were then selected from these deficient and non-deficient lots. It was not possible to assign a control section for each test section as was originally planned for pairwise comparison. On the average, for every three test sections, a control section was available for comparison.

Data Collection

Data collection on the projects and sections consisted of the following:

Construction Information

The basic project information on asphaltic concrete mixes for the sections and other associated information is listed in Appendix B, Table 9.

Traffic Histories

Traffic data consisted of yearly ADT and 18k ESAL since hot mix construction. Table 3 on page 9 is a listing of the traffic history of the sections.

TABLE 2: List of Projects and Associated Deficiencies

PROJECT NUMBER	STABILITY Percent Pay			COMPACTION Percent Pay			TOLERANCE Percent Pay			COMPACTION & TOLERANCE Percent Pay			COMPACTION & STABILITY Percent Pay			TOTAL
	50	80	95	50	80	95	50	80	95	50	80	95	50	80	95	
008-09-20						16			4							20
013-10-34					3	1										4
016-01-12		2	4			5	1					4				16
023-06-19					2											2
036-03-11			6		2											8
047-03-09					1											1
050-06-49			3			5		2								10
052-08-24					2	10										12
066-02-15					4	3										7
067-05-15					2	2										4
124-03-16					2		1	2								5
137-02-07											2					2
193-01-14								7								7
194-02-27							1									1
195-01-07								3								3
243-01-09					4	4										8
263-01-09					9											9
383-01-03								4	3							7
417-01-02					1	3		1	2						1	8
810-19-11						3	1	1								5
850-08-06	1															1
Totals	1	2	13	0	32	52	4	20	9	0	2	4	0	0	1	140
Totals	16			84			33			6			1			140

TABLE 3: Traffic History of Projects

PROJECT NUMBER	18-KIP EQUIVALENT LOAD				AVERAGE DAILY TRAFFIC			
	80	82	84	85	80	82	84	85
008-09-20	712055	1015119	1341696		8900	9440	10160	
013-10-34	11688	18220	24647	30716	1550	1730	1820	2180
016-01-12	1113084	1686771	2290085		14050	15000	15800	
023-06-19	871265	1299513	1807583	2271663	9820	12140	13100	14740
036-03-11	79696	115600	164189	198442	1930	2610	2720	2810
047-03-09	66792	92223	119787	159858	3170	3020	3140	5770
050-06-49	320829	430343	543538	638346	7180	6960	7320	7530
052-08-24	174632	223098	281211	334033	2720	2730	2890	3330
066-02-15	94298	123797	154572	186005	1780	1350	1430	1940
067-05-15	396964	537444	694084	829291	3360	3000	3100	3430
124-03-16	218529	314632	404786		820	800	850	
137-02-07	9704	17074	25349	31943	330	350	380	350
193-01-14	78872	147452	256626	329804	2420	3520	3680	2690
194-02-27	62602	111394	158583	201022	1680	1960	2060	1540
195-01-07	13963	20663	27773	33254	1080	1100	1210	1050
243-01-09	22411	29295	36707	43283	800	700	760	840
263-01-09	34125	52668	70722		1190	980	950	
383-01-03	112439	146196	197264	240273	1100	1160	1220	1270
417-01-02	118560	167672	211645	248093	3050	2600	2760	2770
810-19-11	55600	126038	196288	255010	5280	6570	6970	7090
850-08-06	116616	152392	215704	263695	2310	3100	3280	2880

Field Measurements

Field measurements basically involved four separate condition evaluation of sections over a five year period; specifically in 1980, 1982, 1984 and 1985. Pavement condition indicators selected for evaluation were those hypothesized to relate to the acceptance criteria defined in the specifications (mix strength, density and surface profile). In essence, performance was measured by evaluating pavement condition indicators such as cracking, patching, rutting and roughness. Figure 2 on page 11 is an example of the condition survey form that was developed for the evaluation. The final rating, termed Basic Rating, is a combination of defect rating and ride rating. The rating ranges from zero (worst pavement condition) to 100 (best). The cracking and patching defects were noted by walking the entire length of the sections. The rutting defect was measured every 100 feet with the AASHO A-frame rut depth device in both wheel paths. The roughness defect was measured with the Mays Ride Meter.

Data Storage

All project and section data were stored in the computer for easy accessibility and analysis. Appendix B, Table 10 is a record layout of the stored data.

Method of Data Analysis

The study was not a statistically designed study in that not much choice was available in selection of either the projects with non conforming product, or the sections within the projects with specific reduction in pay category. The availability was the governing factor in selection. If a project had non conforming lots, it was in. Because of this scarcity of project sections for one-to-one comparison (a control section for each test section), graphical and/or numerical method using averages were applied to compare trends in performance between the control and test

PAVEMENT CONDITION SURVEY

Project Number :	______________	Date :	______________
Test Section :	______________	Rater :	______________
Deficiency :	______________	Ride :	______________
District :	______________	Defect :	______________
		Final :	______________

Ride Rating, RR = 20 x Mays psi

Defect Rating

Cracking Type % Up to 1 2 3	Patching Sq ft in 100' lane	Rutting Average Depth, inches
25 5 7 10 50 10 15 20 75 15 22 30 100 20 30 40	Light (< 50) - 5 Moderate (50 - 100) - 10 Heavy (> 100) - 15	.125 - 5 .675 - 25 .250 - 10 .750 - 30 .375 - 15 .875 - 40 .500 - 20 >= 1 - 50

Defect Value = Cracking + Patching + Rutting = ________

Defect Rating, DR = 100 - Defect Value = ________

Final Rating = √ (RR x DR) = ________

Figure 2: Condition Survey Form

sections. Whenever possible, statistical methods were used to determine the significance of the performance trends between the sections.

ANALYSIS & EVALUATION OF TEST RESULTS

The first condition evaluation was made in the fall of 1980 with subsequent ones in 1982, 1984 and 1985, all approximately the same time of the year. As was shown in Figure 2, the condition evaluation is expressed as Basic Rating which is a quantitative composite of ride and pavement distress values. Pavement distresses are in terms of cracking, patching and rutting. The final rating ranges from zero (worst pavement condition) to 100 (best).

All field data appear in Appendix B, Table 11. Table 4 on pages 14-16 lists the condition ratings by projects averaged over sections and specific deficiency. Only initial (1980) and final (1985) data are listed in this table and the associated percent change during the period. Several projects had to be taken off the evaluation during the study period because of major maintenance overlay. For these projects the final represents the last data available prior to maintenance overlay or other rehabilitation. These projects were identified with an asterisk in Table 1.

Performance Evaluation - Individual Projects

The data for Basic Rating and Mays PSI listed in Table 4 on pages 14-16 are graphically presented in Figures 3 and 4 on pages 17-28, respectively. The tabulated and charted values indicate the following:

+ Using Basic Rating as the performance evaluation criteria, more than two thirds of the projects show sections with no deficiency (control) to perform slightly better than the corresponding deficient sections (test). However, with the exception of project 263-01-09, the difference in the mean performance between the control and test section for the projects was not statistically significant as determined by the T-Test at a 0.05 significance level.

TABLE 4: Initial and Final Performance Data and Rate of Change on Sections

PROJECT NUMBER	DEFICIENCY AND PERCENT PAY	DEFECT RATING			MAYS RIDE METER			BASIC RATING			RUTTING IN MILLIMETERS			PATCHING IN SQUARE FEET	
		RATING YEAR		PERCENT CHANGE	RATING YEAR		PERCENT CHANGE	RATING YEAR		PERCENT CHANGE	RATING YEAR		PERCENT CHANGE	RATING YEAR	
		INITIAL	FINAL		INITIAL	FINAL		INITIAL	FINAL		INITIAL	FINAL		INITIAL	FINAL
008-09-20[1]	No Deficiency	91.4	86.4	- 5.5	4.3	4.4	2.3	88.8	88.0	- 0.9	2.5	4.7	88.0	0	11
	Compaction - 95%	90.6	87.5	- 3.4	4.1	4.3	4.9	87.0	87.3	0.3	2.9	3.8	31.0	15	19
	Tolerance - 95%	91.3	87.5	- 4.1	4.0	4.4	10.0	86.2	88.2	2.3	3.6	5.7	58.3	0	25
013-10-34	No Deficiency	90.0	87.5	- 2.8	4.2	4.4	4.8	87.4	87.7	0.3	2.5	4.2	68.0	0	0
	Compaction - 80%	86.7	85.0	- 1.9	4.1	4.3	4.9	84.3	85.8	1.8	3.4	4.4	29.4	0	0
	Compaction - 95%	90.0	85.0	- 5.6	4.5	4.6	2.2	90.0	88.4	- 1.8	2.4	3.2	33.3	0	0
016-01-12[2]	No Deficiency	90.0	86.7	- 3.7	3.8	3.7	- 2.6	82.7	80.4	- 2.8	2.6	2.4	- 7.7	0	15
	Comp & Tol - 95%	87.5	74.0	-15.4	3.5	2.8	-20.0	78.2	64.9	-17.0	3.4	3.2	- 5.9	0	1913
	Compaction - 95%	87.0	81.6	- 6.2	3.5	3.0	-14.3	78.7	70.2	-10.8	2.6	2.3	-11.5	113	991
	Stability - 80%	84.0	81.5	- 3.0	3.6	3.4	- 5.6	78.3	74.9	- 4.3	3.0	2.0	-33.3	0	150
	Stability - 95%	85.8	83.3	- 2.9	3.6	3.6	0.0	78.8	77.4	- 1.8	3.2	2.2	-31.3	0	211
	Tolerance - 50%	85.0	78.0	- 8.2	3.5	3.8	8.6	77.1	76.9	- 0.3	2.9	1.7	-41.4	120	120
023-06-19	No Deficiency	82.5	77.5	- 6.1	3.0	3.0	0.0	70.9	68.7	- 3.1	8.1	9.5	17.3	0	0
	Compaction - 80%	85.0	85.0	0.0	2.7	2.8	3.7	68.3	68.9	0.9	5.6	6.2	10.7	0	0
036-03-11	No Deficiency	86.5	87.5	1.2	3.1	3.1	0.0	73.8	74.2	0.5	1.2	3.0	150.0	0	0
	Compaction - 80%	80.5	85.0	5.6	2.6	2.3	-11.5	64.6	63.2	- 2.2	2.9	4.1	41.4	0	1185
	Stability - 95%	86.8	85.8	- 1.2	3.0	2.8	- 6.7	72.5	70.1	- 3.3	1.8	3.5	94.4	20	316
047-03-09	No deficiency	90.0	85.0	- 5.6	3.2	2.8	-12.5	75.8	68.9	- 9.1	1.8	4.5	150.0	0	0
	Compaction - 80%	90.0	85.0	- 5.6	3.3	2.7	-18.2	77.0	67.7	-12.1	2.6	4.4	69.2	0	0
050-06-49	No Deficiency	84.0	73.0	-13.1	2.6	2.7	3.8	66.0	62.7	- 5.0	1.7	2.0	17.6	150	163
	Compaction - 95%	86.2	78.4	- 9.0	3.0	2.8	- 6.7	72.8	67.2	- 7.7	2.6	1.8	-30.8	0	31
	Stability - 95%	90.0	73.0	-18.9	3.2	3.0	- 6.2	76.6	66.5	-13.2	2.9	2.2	-24.1	0	43
	Tolerance - 80%	87.5	70.5	-19.4	2.6	2.6	0.0	68.0	60.5	-11.0	2.6	2.5	- 3.8	0	13

1 - Final Rating in 1982; 2 - Final Rating in 1984

TABLE 4: (Cont'd): Initial and Final Performance Data and Rate of Changes on Sections

PROJECT NUMBER	DEFICIENCY AND PERCENT PAY	DEFECT RATING			MAYS RIDE METER			BASIC RATING			RUTTING IN MILLIMETERS			PATCHING IN SQUARE FEET	
		RATING YEAR		PERCENT CHANGE	RATING YEAR		PERCENT CHANGE	RATING YEAR		PERCENT CHANGE	RATING YEAR		PERCENT CHANGE	RATING YEAR	
		INITIAL	FINAL		INITIAL	FINAL		INITIAL	FINAL		INITIAL	FINAL		INITIAL	FINAL
243-01-09	No Deficiency	93.3	91.7	- 1.8	3.5	3.5	0.0	81.5	80.4	- 1.3	1.2	1.7	43.9	0	0
	Compaction - 80%	95.0	92.5	- 2.6	3.4	3.5	2.9	80.9	80.4	- 0.6	2.6	1.5	- 42.7	0	0
	Compaction - 95%	90.0	84.8	- 5.8	3.4	3.3	- 2.9	78.2	75.0	- 4.1	1.5	1.4	- 8.4	0	0
263-01-09[1]	No Deficiency	84.8	83.0	- 2.1	3.4	3.7	8.8	76.4	79.1	3.5	1.3	2.3	87.4	0	0
	Compaction - 80%	81.9	72.7	-11.3	3.0	3.2	6.7	70.2	68.4	- 2.6	2.1	2.8	35.7	120	1738
383-01-03	No Deficiency	90.0	78.0	-13.3	3.5	3.0	-14.3	79.9	68.9	-13.8	1.6	3.2	106.1	0	15
	Tolerance - 80%	87.0	71.8	-17.5	2.7	2.7	0.0	68.8	62.5	- 9.2	1.5	2.8	90.0	100	119
	Tolerance - 95%	90.0	80.3	-10.7	2.7	2.6	- 3.7	70.5	65.4	- 7.2	1.6	2.8	69.9	0	11
417-01-02	No Deficiency	90.0	86.3	- 4.2	3.8	3.4	-10.5	83.2	77.4	- 7.0	2.8	3.6	27.4	0	0
	Comp & Stab - 95%	90.0	85.0	- 5.6	4.3	3.9	- 9.3	87.9	81.4	- 7.4	3.7	3.6	- 3.3	0	0
	Compaction - 80%	90.0	85.0	- 5.6	4.1	3.5	-14.6	85.9	77.1	-10.2	3.0	3.6	16.7	0	0
	Compaction - 95%	95.0	90.0	- 5.3	4.1	3.7	- 9.8	88.2	81.9	- 7.1	2.0	2.5	27.6	0	0
	Tolerance - 80%	87.5	90.0	2.9	3.6	3.2	-11.1	79.4	75.9	- 4.4	3.5	3.8	8.6	0	0
	Tolerance - 95%	87.5	87.5	0.0	3.9	3.7	- 5.1	83.1	80.4	- 3.2	2.4	3.7	54.8	0	0
810-19-11	No Deficiency	92.5	79.0	-14.6	3.4	3.0	-11.8	79.8	68.8	-13.8	2.6	7.6	188.0	0	0
	Compaction - 95%	93.3	82.7	-11.4	3.5	3.1	-11.4	80.8	72.3	-10.5	2.7	6.9	154.0	0	0
	Tolerance - 50%	90.0	73.0	-18.9	2.3	3.0	30.4	64.3	66.1	2.8	3.7	6.9	86.4	0	0
	Tolerance - 80%	95.0	90.0	- 5.3	3.7	3.3	-10.8	83.8	77.0	- 8.1	2.3	5.8	146.0	0	0
850-08-06	No Deficiency	85.0	78.0	- 8.2	3.2	3.5	9.4	73.7	73.8	0.1	5.8	4.1	- 29.8	0	0
	Stability - 50%	78.0	68.0	-12.8	3.0	3.2	6.7	68.4	65.9	- 3.7	6.3	6.2	- 2.1	0	88

1 - Final Rating in 1982; 2 - Final Rating in 1984

TABLE 4: (Cont'd): Initial and Final Performance Data and Rate of Changes on Sections

PROJECT NUMBER	DEFICIENCY AND PERCENT PAY	DEFECT RATING			MAYS RIDE METER			BASIC RATING			RUTTING IN MILLIMETERS			PATCHING IN SQUARE FEET	
		RATING YEAR		PERCENT CHANGE	RATING YEAR		PERCENT CHANGE	RATING YEAR		PERCENT CHANGE	RATING YEAR		PERCENT CHANGE	RATING YEAR	
		INITIAL	FINAL		INITIAL	FINAL		INITIAL	FINAL		INITIAL	FINAL		INITIAL	FINAL
052-08-24	No Deficiency	87.6	86.0	- 1.8	3.9	3.5	-10.3	83.0	78.0	- 6.0	2.8	3.2	14.3	0	0
	Compaction - 80%	87.5	82.5	- 5.7	3.9	3.6	- 7.7	83.1	77.6	- 6.6	3.2	3.8	18.7	0	5
	Compaction - 95%	87.5	87.0	- 0.6	4.0	3.3	-17.5	83.9	76.8	- 8.5	2.9	3.2	10.3	76	2
066-02-15	No Deficiency	90.0	86.7	- 3.7	3.4	3.7	8.8	78.9	80.0	1.4	3.8	4.3	13.2	0	0
	Compaction - 80%	91.3	88.8	- 2.7	3.4	3.5	2.9	79.3	79.3	0.0	2.5	2.9	16.0	0	0
	Compaction - 95%	90.0	85.0	- 5.6	3.3	3.5	6.1	77.4	77.5	0.1	4.2	4.9	16.7	0	0
067-05-15	No Deficiency	90.0	90.0	0.0	3.8	3.9	2.6	83.2	83.7	0.6	2.4	1.7	-29.2	0	0
	Compaction - 80%	90.0	90.0	0.0	3.7	3.8	2.7	82.1	83.2	1.3	1.8	1.9	5.6	0	0
	Compaction - 95%	90.0	90.0	0.0	3.6	3.4	- 5.6	80.4	78.2	- 2.7	2.6	2.6	0.0	0	0
124-03-16[2]	No Deficiency	83.0	85.0	2.4	2.7	2.2	-18.5	66.9	61.1	- 8.7	1.2	2.0	66.7	0	360
	Compaction - 80%	71.5	75.0	4.9	1.9	1.8	- 5.3	52.1	51.9	- 0.4	2.9	2.8	- 1.1	1500	1500
	Tolerance - 50%	63.0	63.0	0.0	1.5	1.1	-26.7	43.4	37.2	-14.3	4.3	4.8	11.6	1840	6400
	Tolerance - 80%	71.5	69.0	- 3.5	1.5	1.9	26.7	46.3	51.2	10.6	4.5	3.6	-20.0	260	1500
137-02-07	No Deficiency	90.0	90.0	0.0	3.8	4.0	5.3	82.7	84.8	2.5	1.2	2.0	66.7	0	0
	Comp & Tol - 80%	89.0	90.0	1.1	3.7	4.3	16.2	81.1	88.4	9.0	1.2	2.2	83.3	0	0
193-01-14	No Deficiency	91.7	78.3	-14.5	3.2	3.0	- 6.2	77.3	68.9	-10.9	3.4	7.9	128.6	0	240
	Tolerance - 80%	92.1	80.4	-12.7	3.1	2.9	- 6.5	75.9	69.3	- 8.7	3.1	6.7	113.3	0	1
194-02-27	No Deficiency	95.0	83.0	-12.6	2.6	2.8	7.7	70.2	68.1	- 3.0	1.3	2.8	109.8	0	0
	Tolerance - 50%	95.0	90.0	- 5.3	2.0	2.1	5.0	61.6	61.4	- 0.3	1.4	2.5	81.4	0	0
195-01-07	No Deficiency	90.0	80.0	-11.1	2.8	2.7	- 3.6	70.9	65.7	- 7.3	2.8	7.4	164.2	0	0
	Tolerance - 80%	86.7	75.3	-13.1	2.9	2.9	0.0	71.3	66.4	- 6.9	3.8	8.7	126.2	0	0

1 - Final Rating in 1982; 2 - Final Rating in 1984

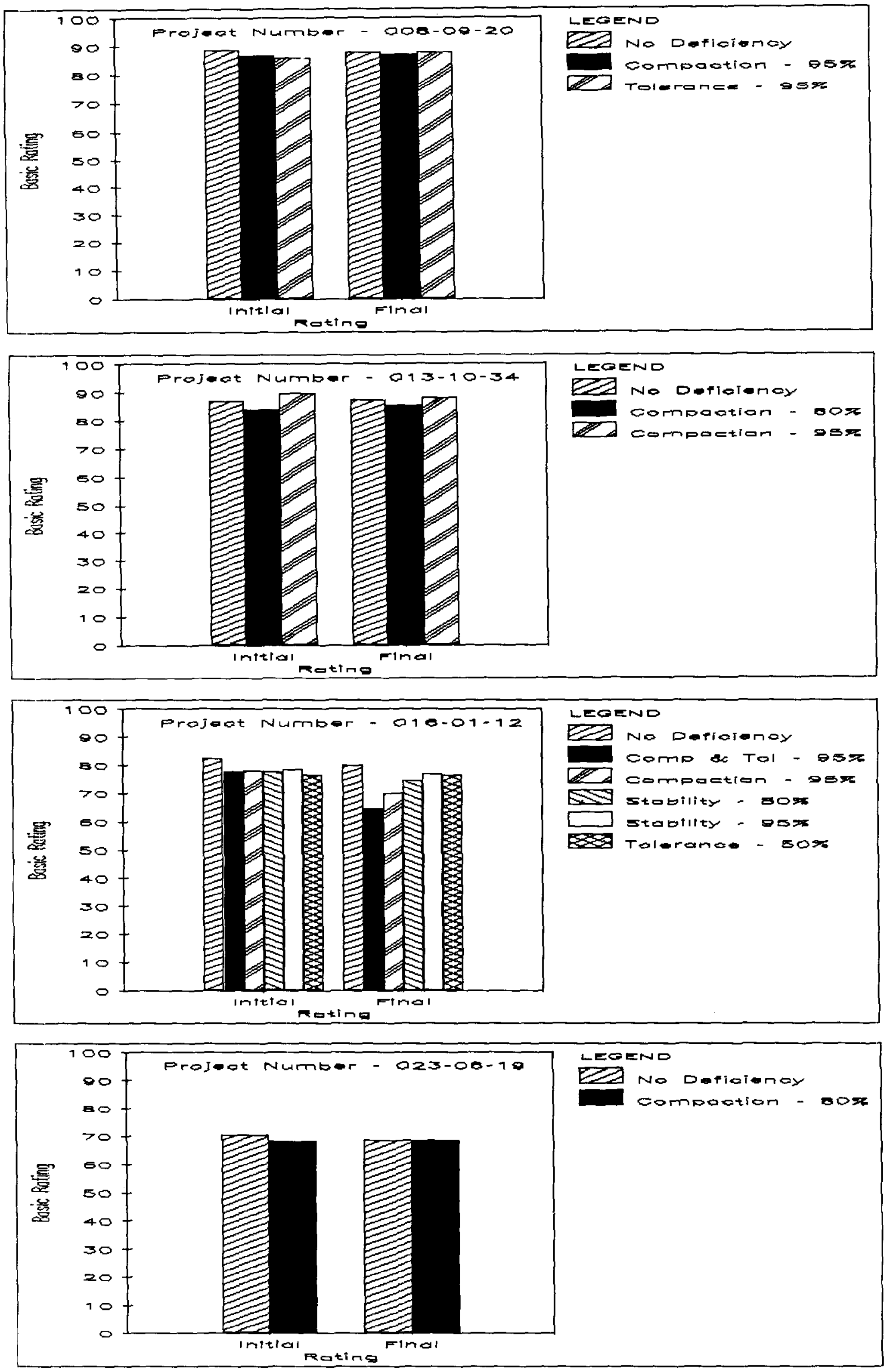
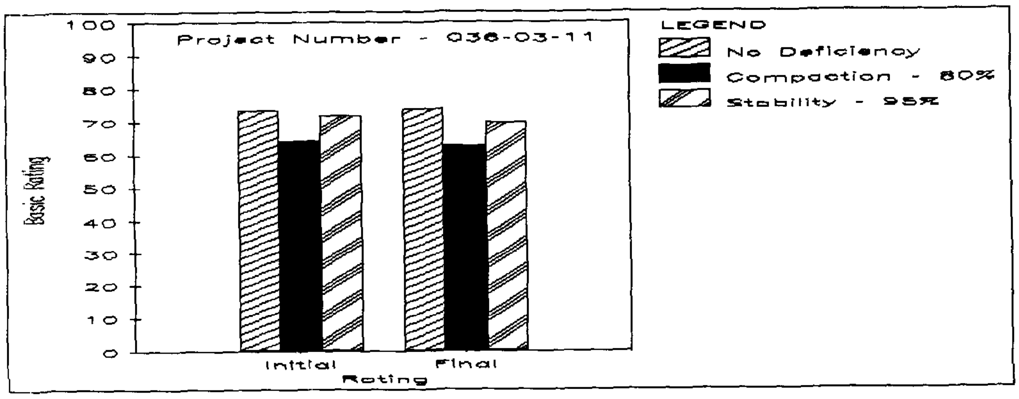
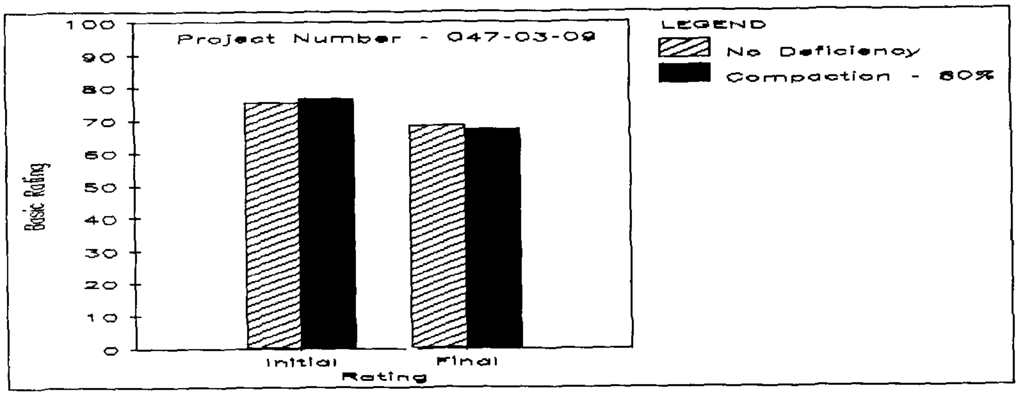
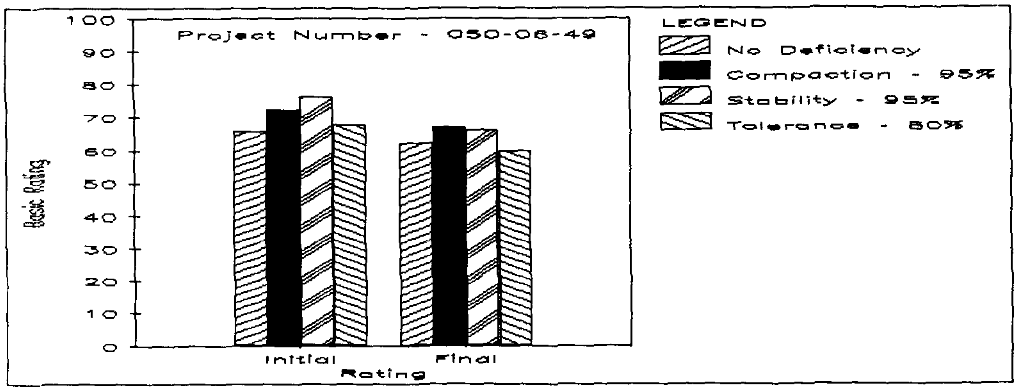


Figure 3: Comparison of Basic Rating Between Control (Non Deficient) and Test (Deficient) Sections for Individual Projects







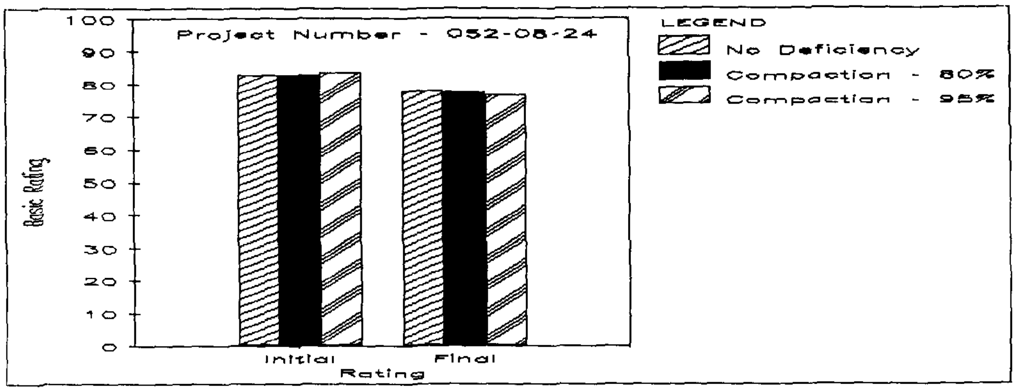


Figure 3 (Cont'd): Basic Rating Comparison

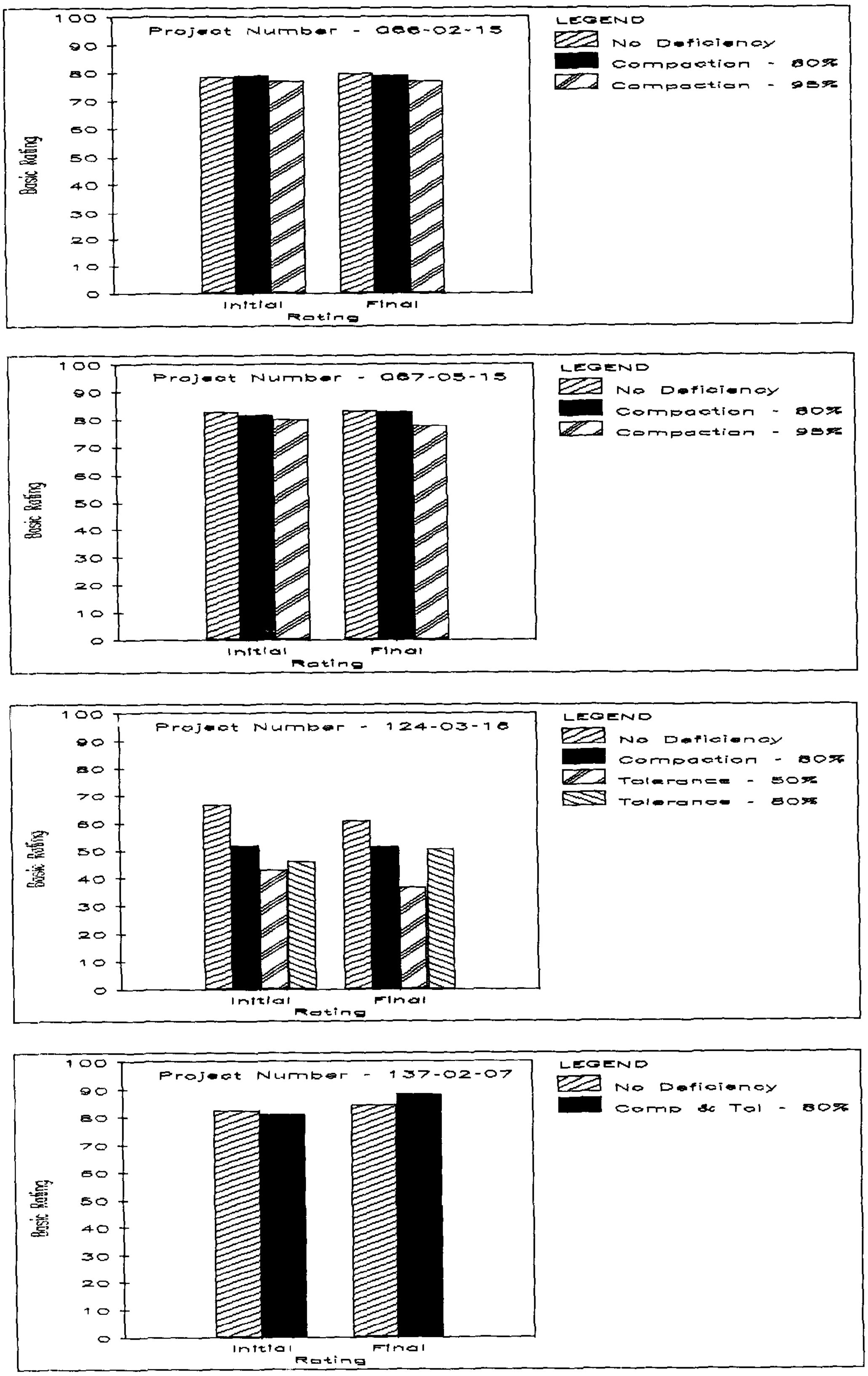


Figure 3 (Cont'd): Basic Rating Comparison

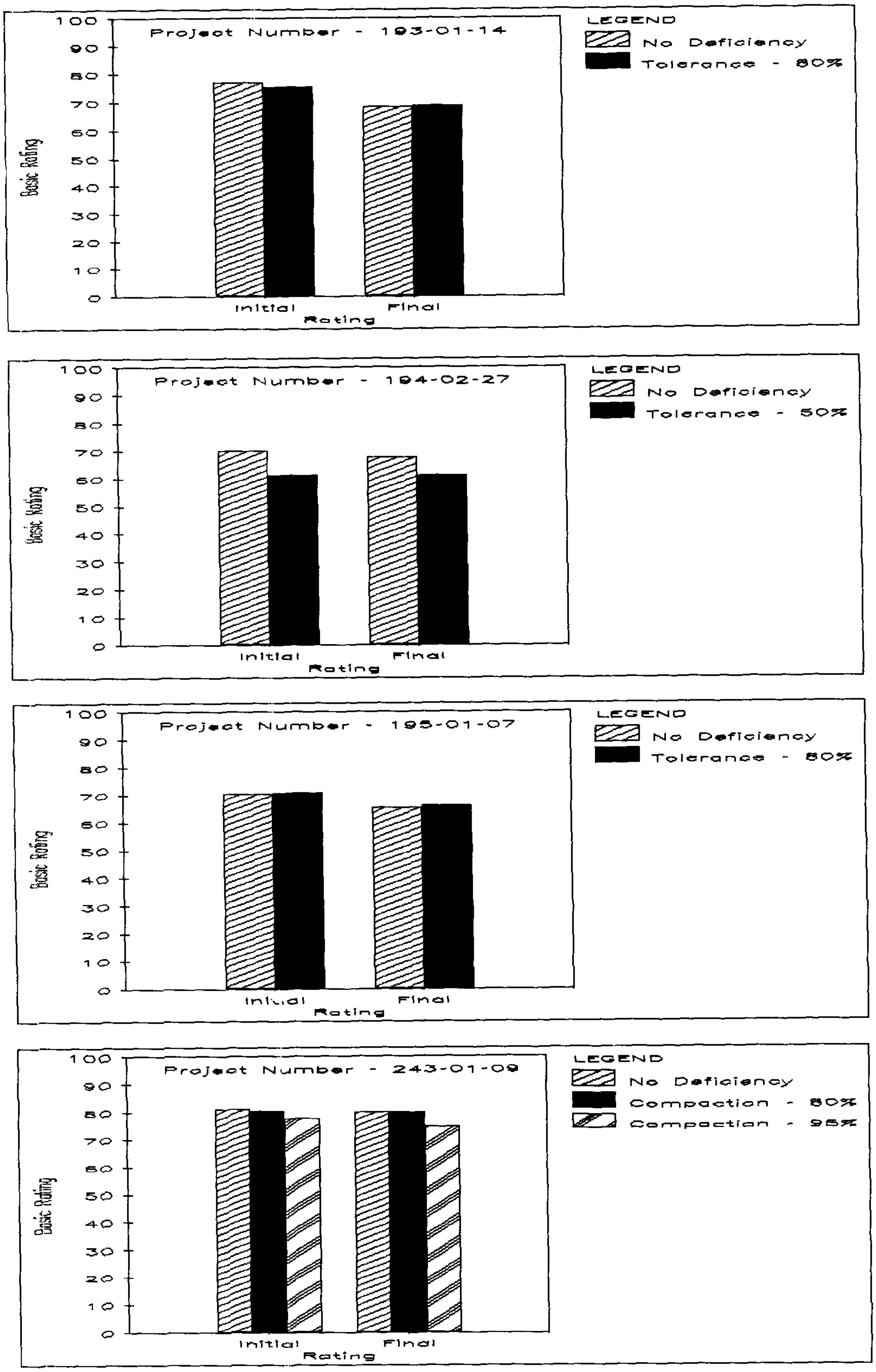
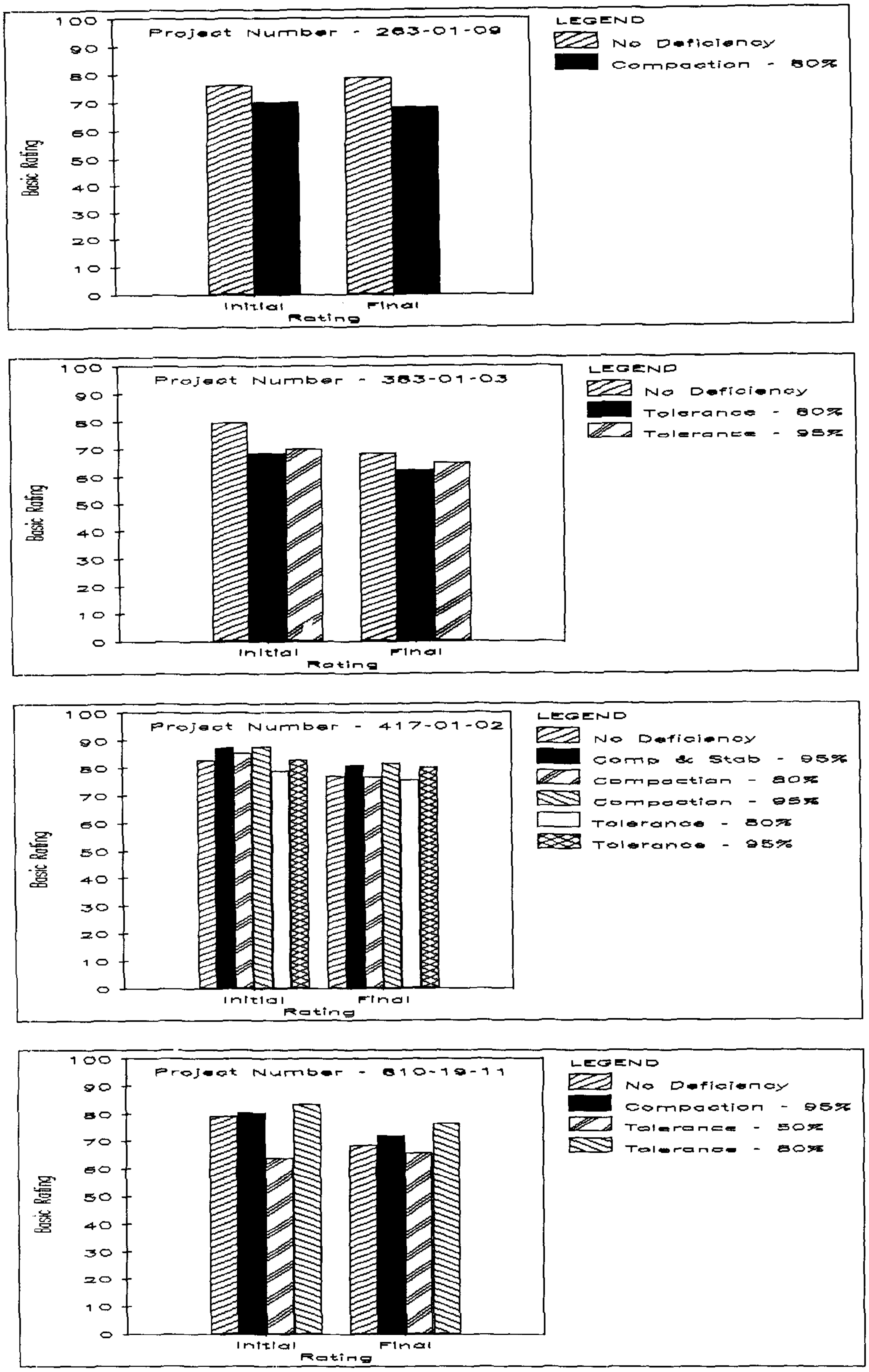


Figure 3 (Cont'd): Basic Rating Comparison



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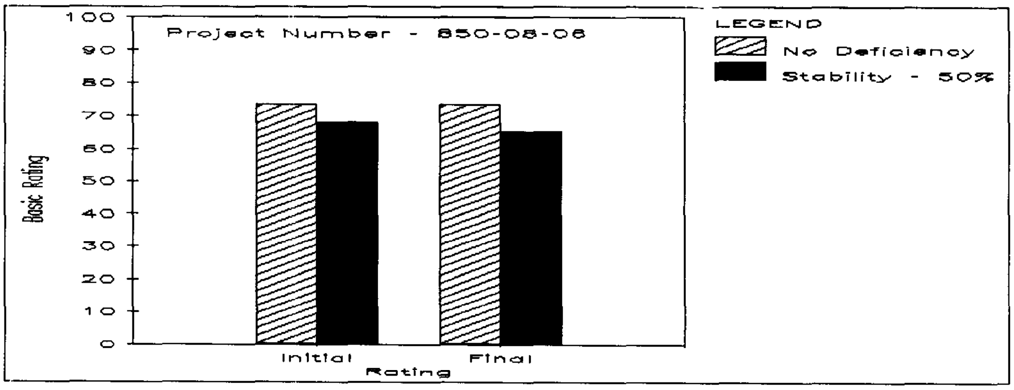


Figure 3 (Cont'd): Basic Rating Comparison

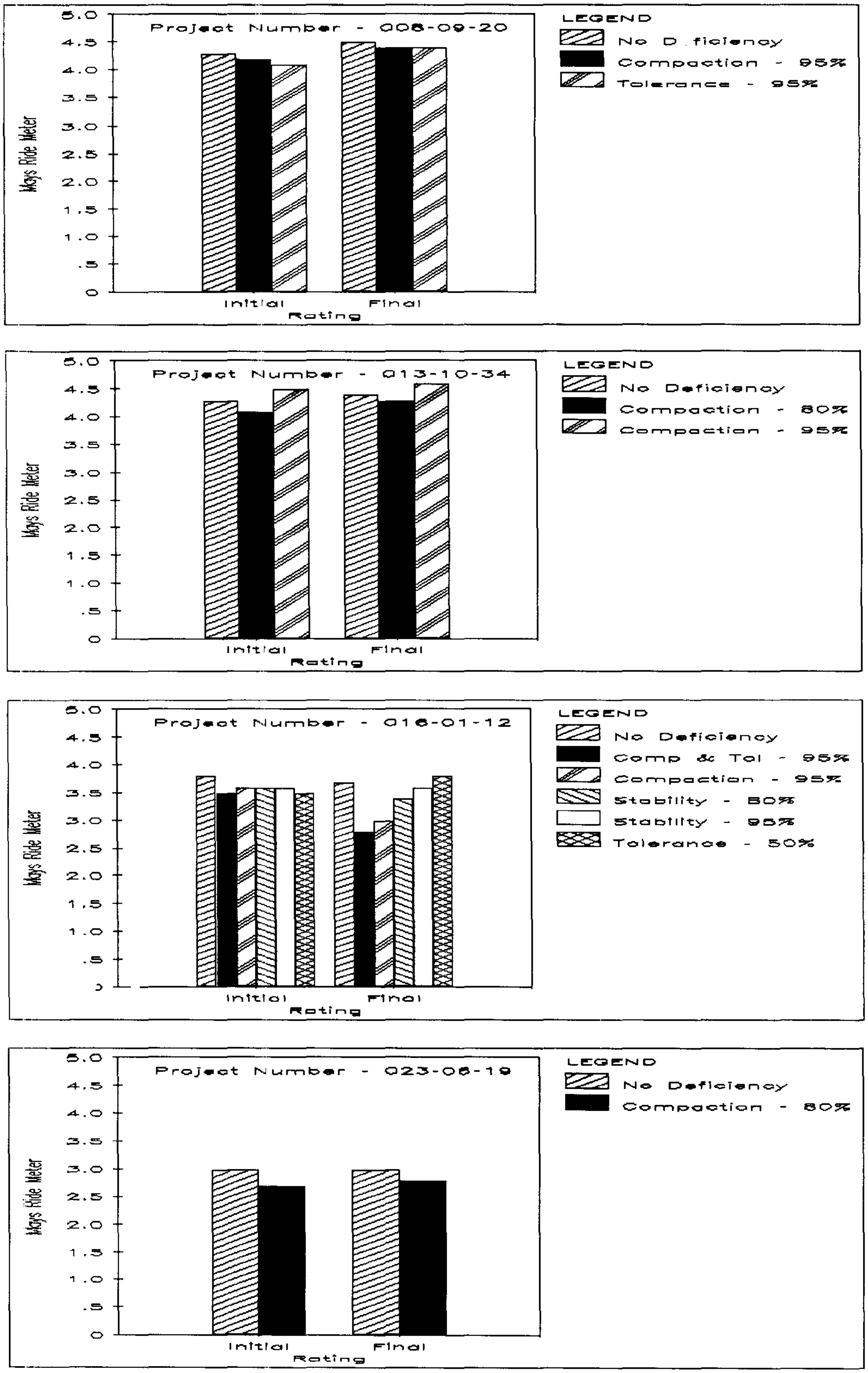


Figure 4: Comparison of Ride (PSI) Between Control and Test Sections for Individual Projects

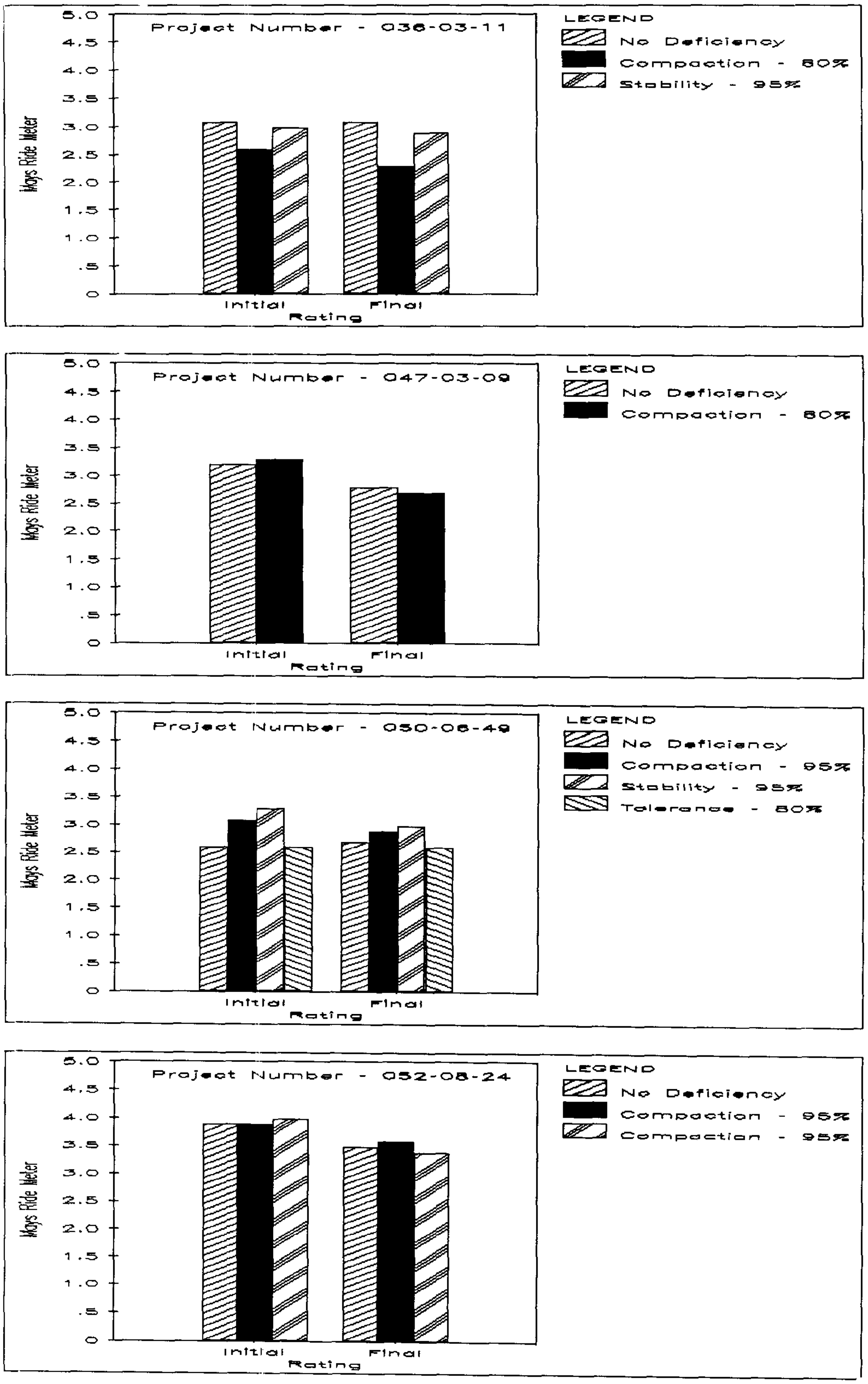


Figure 4 (Cont'd): Ride (PSI) Comparison

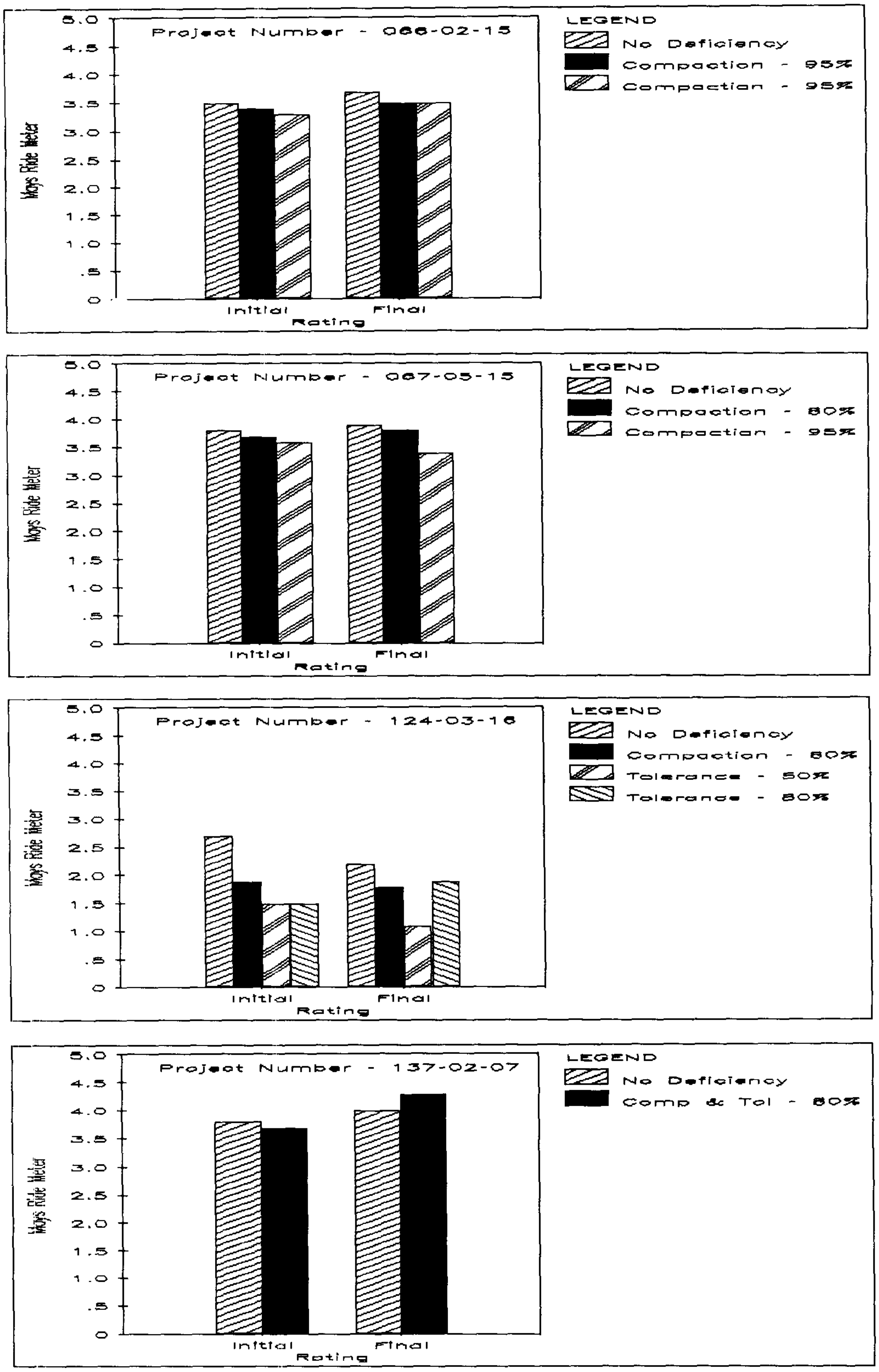


Figure 4 (Cont'd): Ride (PSI) Comparison

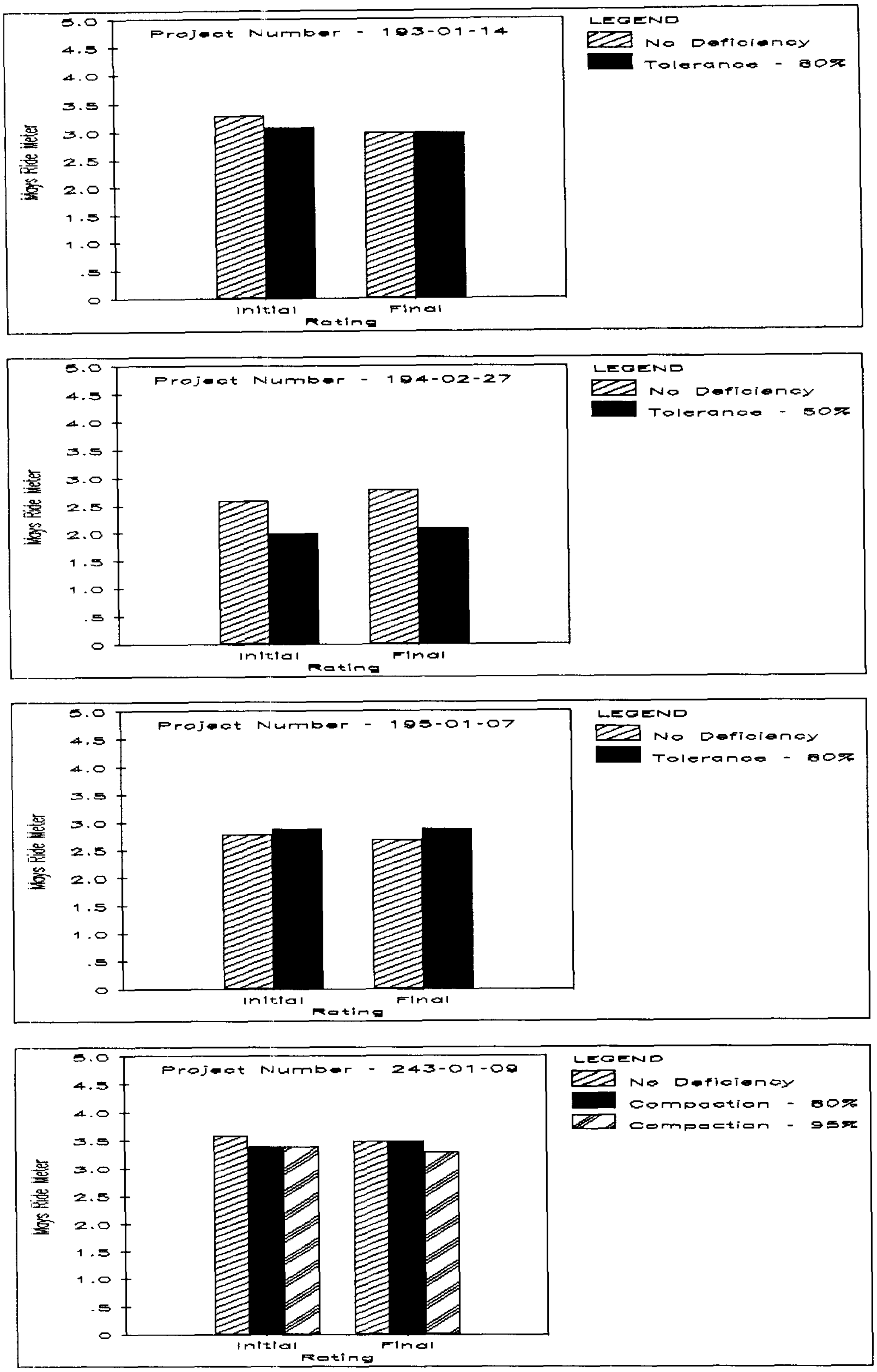
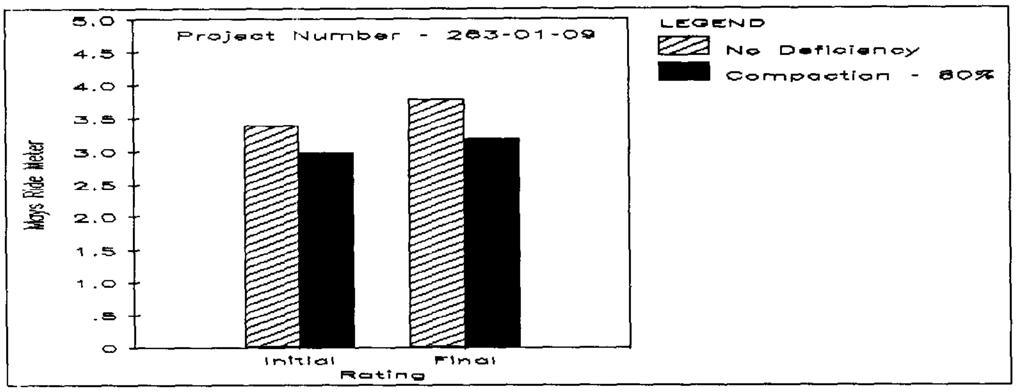
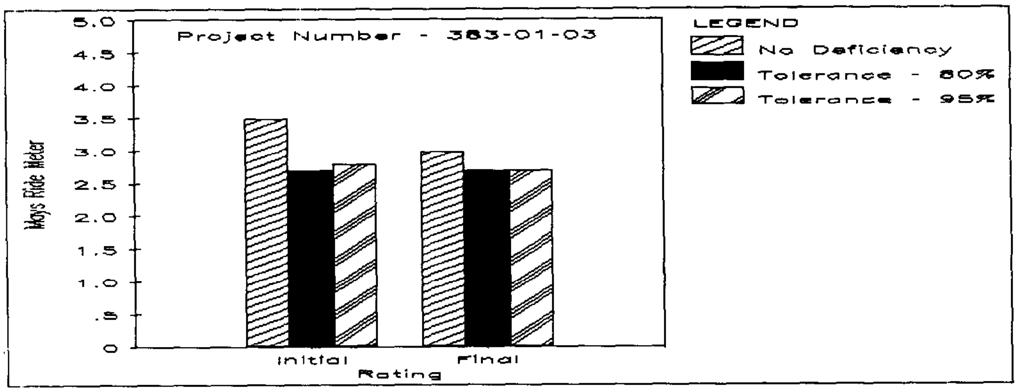
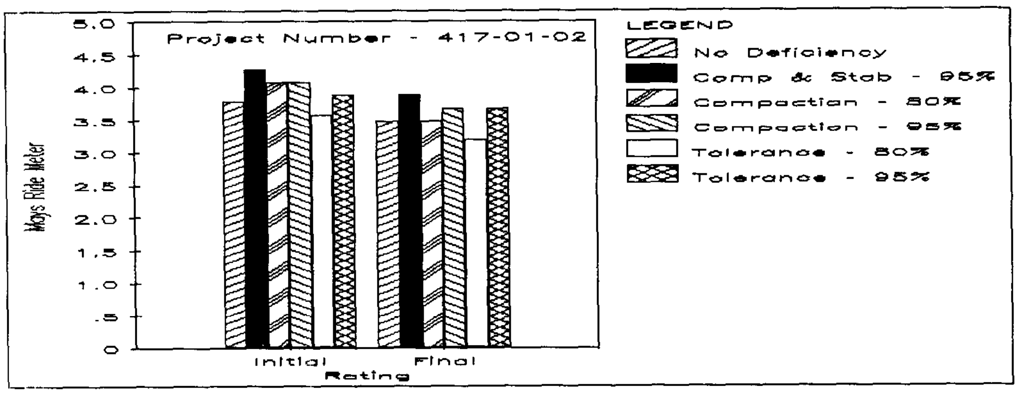


Figure 4 (Cont'd): Ride (PSI) Comparison







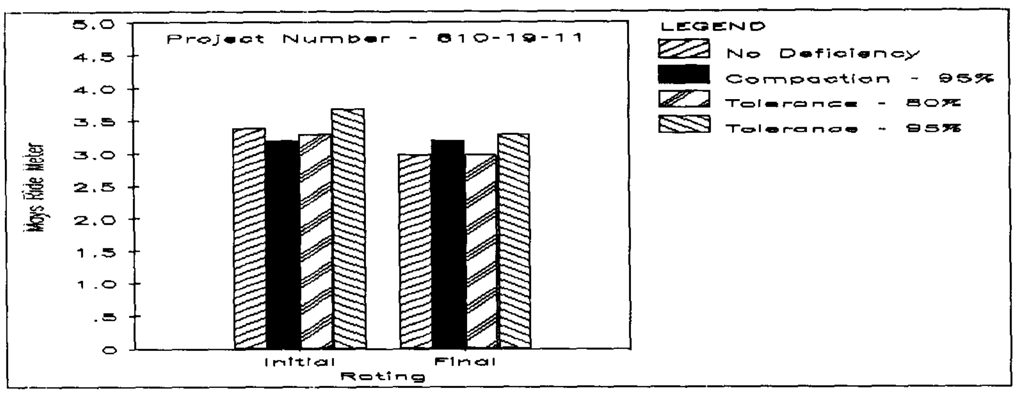


Figure 4 (Cont'd): Ride (PSI) Comparison

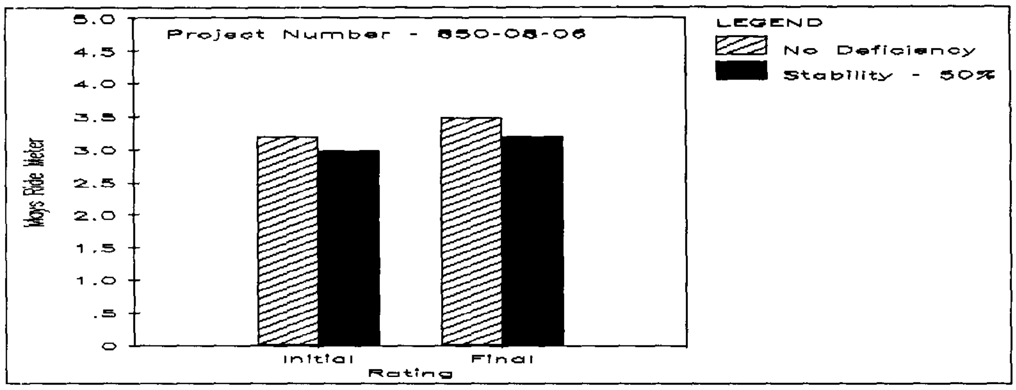


Figure 4 (Cont'd): Ride (PSI) Comparison

+ The Mays Ride Meter data do not show any discernible difference between the sections, either graphically of statistically.

+ Rutting does not seem to be an overall problem and, therefore, fails to indicate any recognizable differences. The largest magnitude of this distress was less than one centimeter or one-half inch.

+ On some projects, extensive pot hole patching on the deficient sections required major maintenance to bring the project to an adequate serviceability standard.

+ The majority of the projects show decay in performance during the period of evaluation. The rate of decay is more pronounced in half of the project test sections than the corresponding control sections.

Discussion - Individual Project Analysis

Lack of observed definitive trend in some cases can be attributed to several extraneous factors, the predominant being the performance of the section layers below the surface layer evaluated (although assumed to be uniform) and the interdependency of the materials and construction variables. Furthermore, the confounding of 'good' subsections in overall deficient lots and 'bad' subsections in non-deficient lots within the sections can not be overlooked. As was pointed out in the scope section of this report, the selection procedure for the control or the test sections did not (and could not) attempt to delineate the individual deficient mix (stability) and/or roadway cores (compaction) that may have contributed to the overall conformance or non conformance of the lot. Although the 1000-foot section for evaluation was randomly selected, it could not be ascertained that the particular segment did indeed represent all conformed material or all non conformed material.

The specifications applicable at the time of this study (Appendix A) did not have any provision for disposition of individual samples that may have undesirable low value or values. A single value in a sample size of four (such as for stability) or five (for roadway compaction) may render the lot acceptable or unacceptable depending on the magnitude of the remaining individual samples. (100 percent pay if the remaining values are considerably larger than the required average or reduction in pay if these values are close to the average). To circumvent this confounding it is necessary to specify acceptance limits on individual samples (in addition to limits on average) that make up the lot average.

Performance Evaluation - Pooled Data

In order to smooth out the erratic trends indicated by some of the project sections, analysis was performed on data averaged over certain variables. The data from Appendix B, Table 11 were used for this analysis.

Figure 5 is a comparison of the performance of the control section and the test section for various distress criteria averaged over all sections. Table 5 on page 32 is the result of the statistical T-Test. The missing data indicate either obvious erratic trends and/or lack of valid sample size for variables used in the hypothesis testing.

The differences in mean values between test and control sections as of 1.8 in Basic Rating and 0.13 in Mays PSI is not statistically significant at a 0.05 significance level (Table 5). Likewise, the rutting for both sections is less than 0.25 inches. The patching was seven times more for the test sections than the control section.

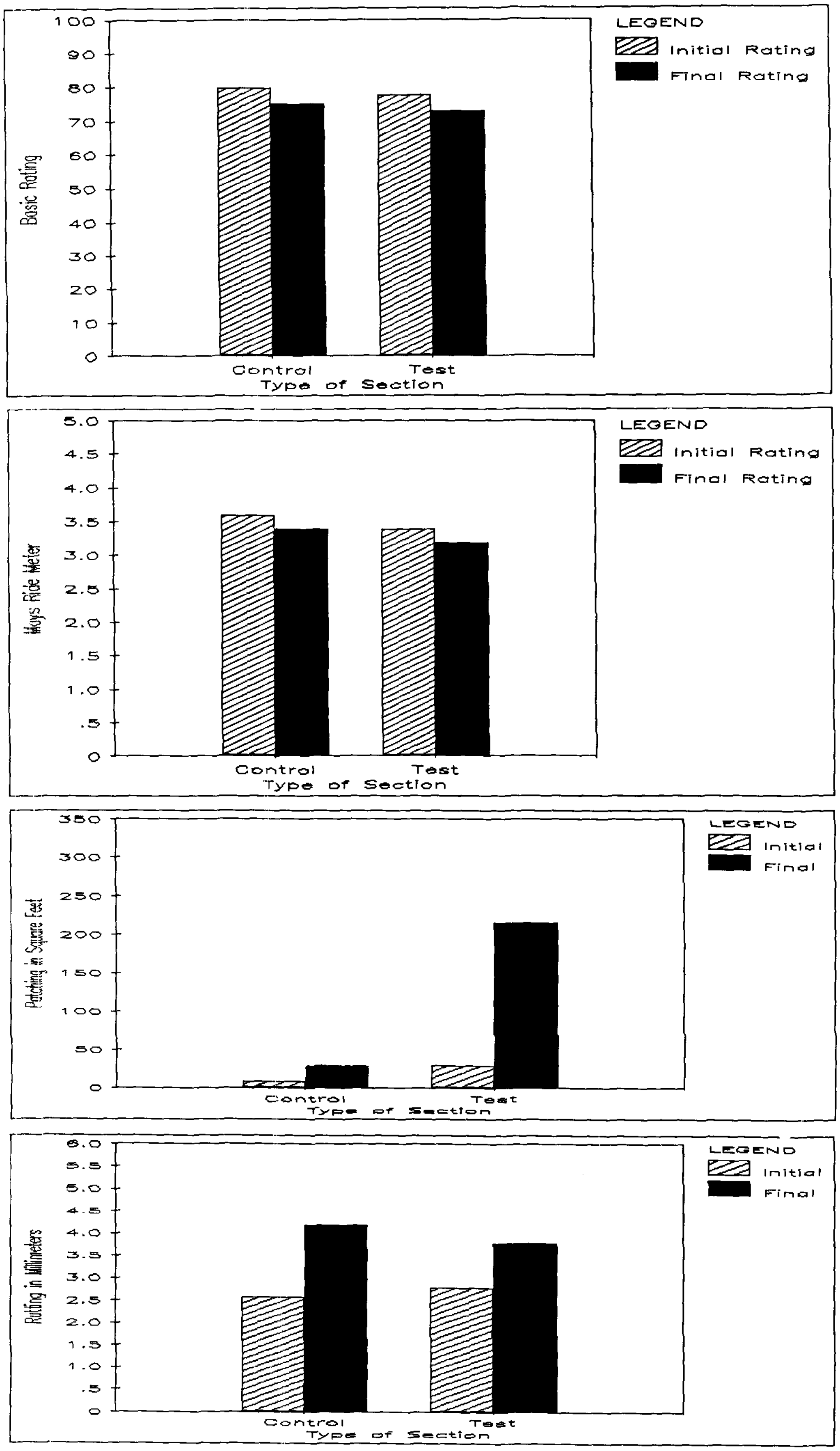


Figure 5: Comparison of Performance Between Control and Test Sections (Data pooled over all Sections)

TABLE 5: Statistical T-Test on Pooled Data

VARIABLE	MEAN		STD		DF UNEQUAL VARIANCE	T	PROB > |T|
	CONTROL	TEST	CONTROL	TEST			
MAYS PSI							
ALL	3.37	3.24	.52	.56	73	1.22	.22
STABILITY	3.37	2.95	.52	.54	14	2.22	.044
TOLERANCE	3.37	2.91	.52	.54	56	3.72	.0005
COMPACTION	3.37	3.40	.52	.50			
STAB @ 50%	3.37	3.20	.52				
STAB @ 80%	3.37	3.45	.52	.07	12	- 0.81	.43
STAB @ 95%	3.37	2.92	.52	.56	12	2.18	.05
TOL @ 50%	3.37	2.55	.52	.64	1	1.79	.32
TOL @ 80%	3.37	2.91	.52	.38	44	3.77	.0005
TOL @ 95%	3.37	3.08	.52	.62	5	1.00	.36
BASIC RATING							
ALL	75.1	73.3	7.88	8.33	71	1.13	.26
STABILITY	75.1	68.1	7.88	7.99	14	2.48	.026
TOLERANCE	75.1	67.6	7.88	6.92	56	3.98	.0002
COMPACTION	75.1	76.3	7.88	6.74			
STAB @ 50%	75.1	66.0	7.88				
STAB @ 80%	75.1	75.0	7.88	3.04	2	.06	.957
STAB @ 95%	75.1	68.3	7.88	8.44	12	2.20	.049
TOL @ 50%	75.1	63.9	7.88	3.32	2	4.20	.082
TOL @ 80%	75.1	66.9	7.88	6.32	41	4.15	.0002
TOL @ 95%	75.1	71.4	7.88	9.36	5	.97	.44

Further breakdown of the above data by various acceptance criteria (deficiency), developed Figure 6. With the exception of compaction deficient sections, there is a recognizable difference in the performance criteria between the non-deficient control sections and sections with stability and surface tolerance deficiency. Likewise, the difference was significant at .05 level as determined by the T-Test and shown in Table 5.

The average patching for the deficient sections was five to ten times more than the corresponding non-deficient sections. The rutting trend, although erratic, is of minor consequence, being less than 0.25 inches or 6.3 millimeters on most of the projects.

The data in Figure 6 was further broken down to show the relationship of each individual acceptance deficiency according to their level of pay. Figure 7 on pages 35-38 is the result of this analysis by level of pay. Table 5 shows results of the statistical T-Test.

The reduced pay level sections due to compaction deficiency are performing as good as the 100 percent pay section using the Basic Rating and Mays PSI criteria of performance evaluation. However, the patching on the 80 and 95 percent pay level sections is more than five times the 100 percent pay sections. The magnitude of rutting on all sections is too small to be of any significance.

The stability and surface tolerance deficient sections show more noticeable trend in performance with the latter showing the most pronounced difference in the test and control sections. The 80 percent level of pay for surface tolerance was statistically significant for both the Basic Rating and PSI criteria. The patching was quite pronounced on all deficient sections with reduced pay level than the corresponding full pay sections.

A final analysis of the data on the basis of construction type is provided in Figure 8 on pages 39-40. The bar charts in the figure

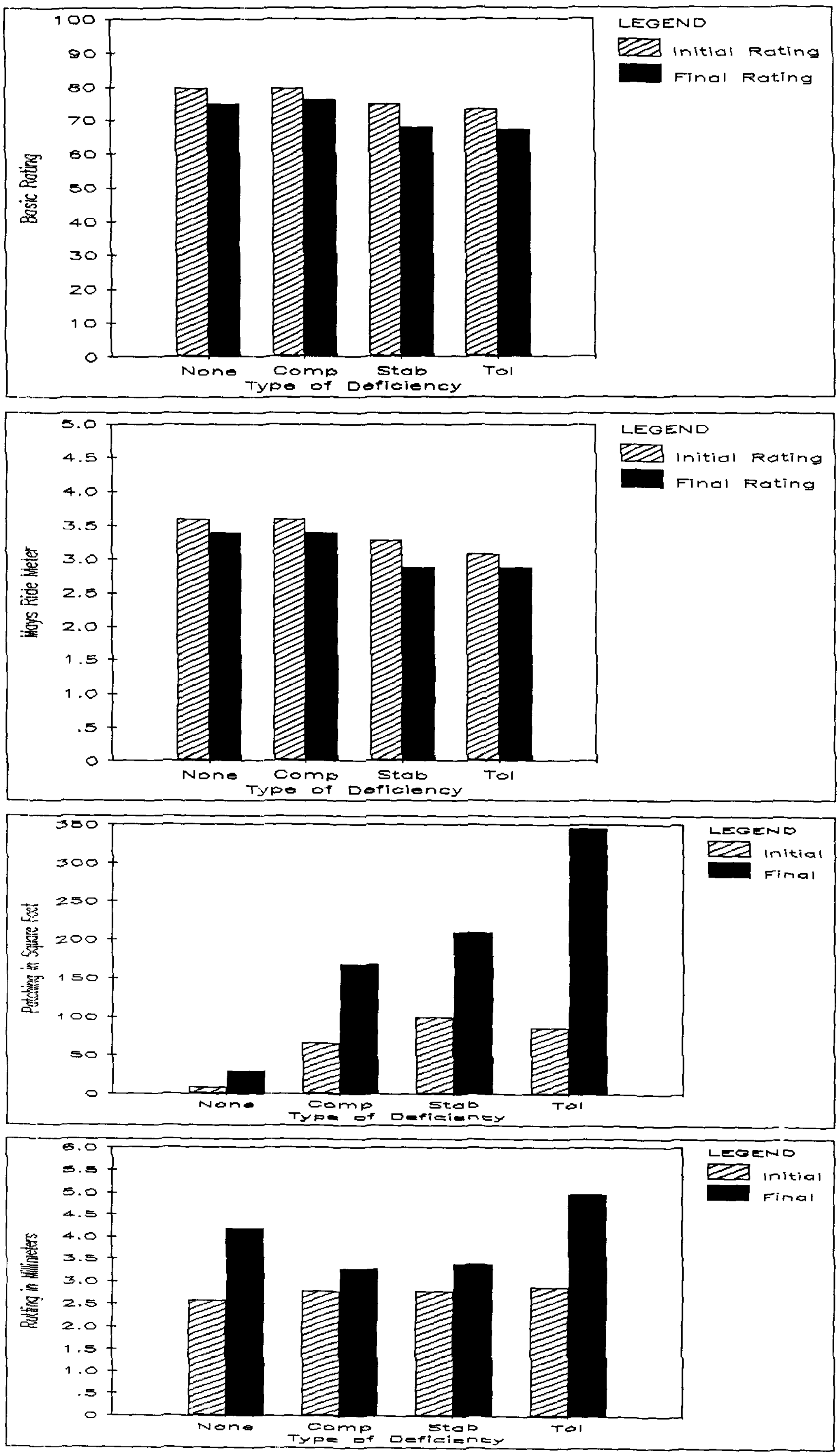


Figure 6: Comparison of Performance Between Control and Test Sections by Type of Deficiency

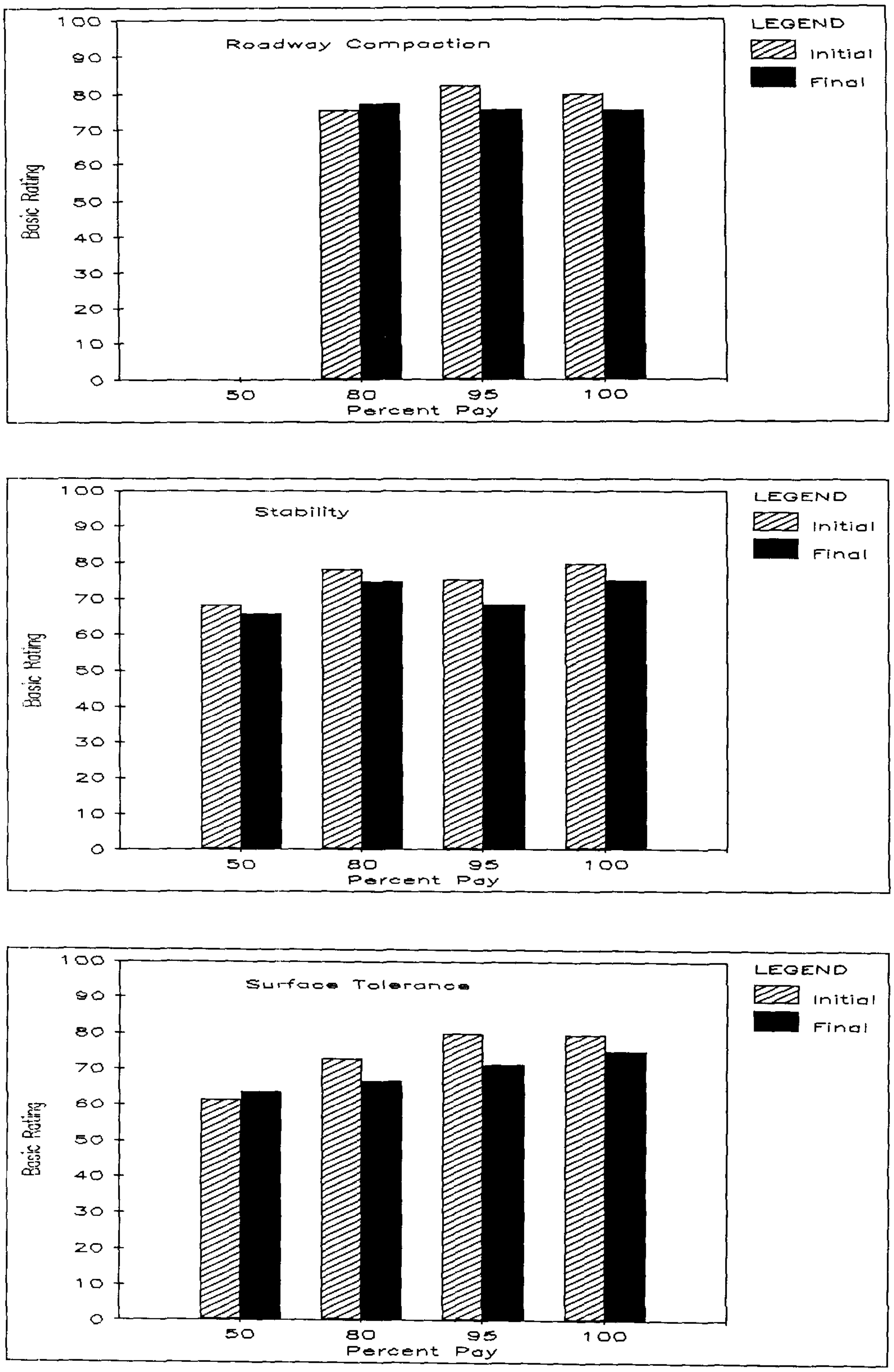
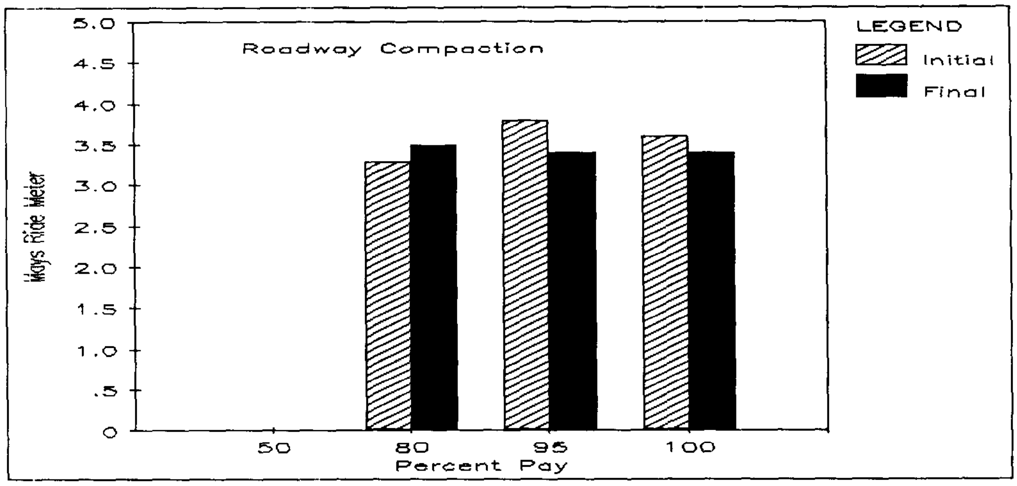
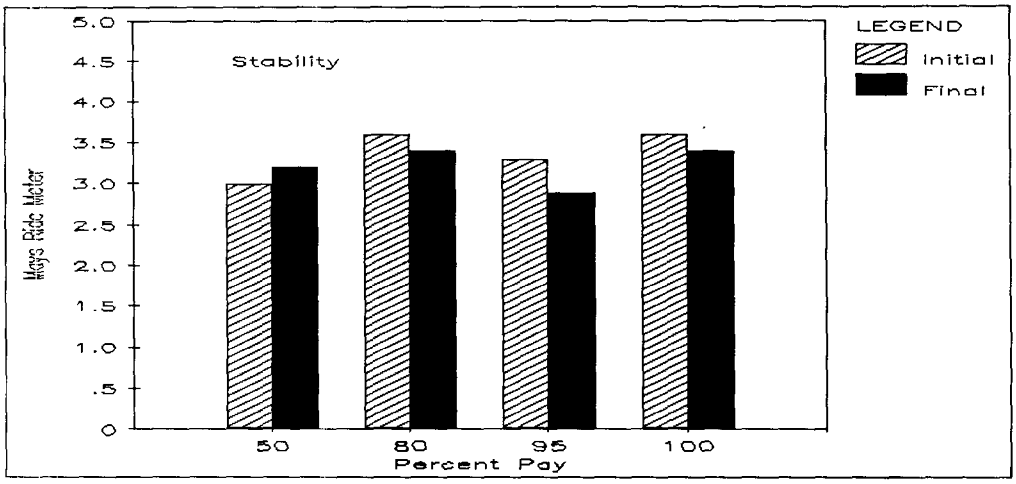


Figure 7: Comparison of Basic Rating by Type of Deficiency and Level of Pay





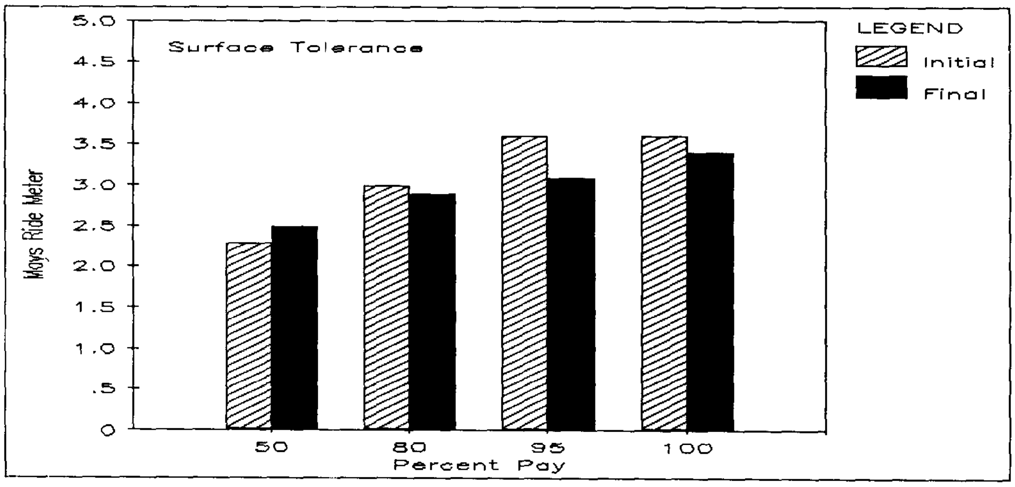
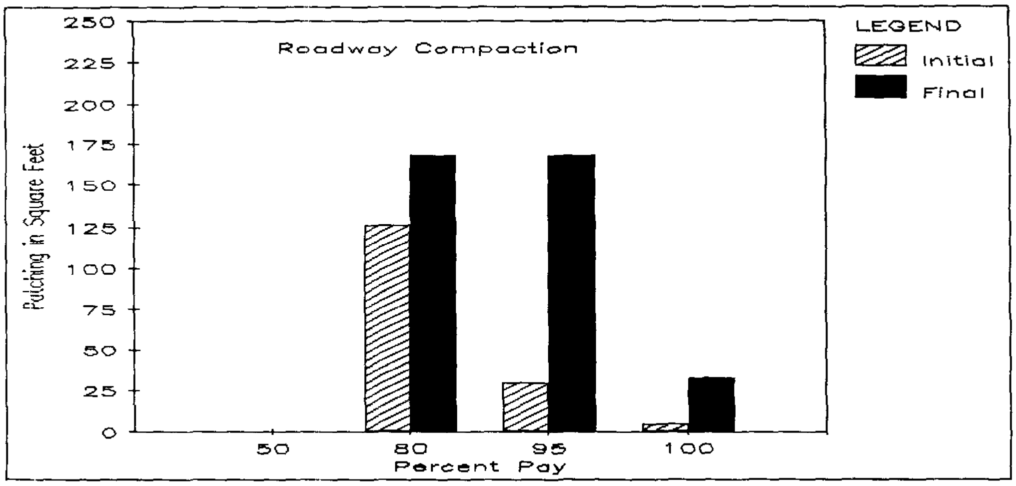
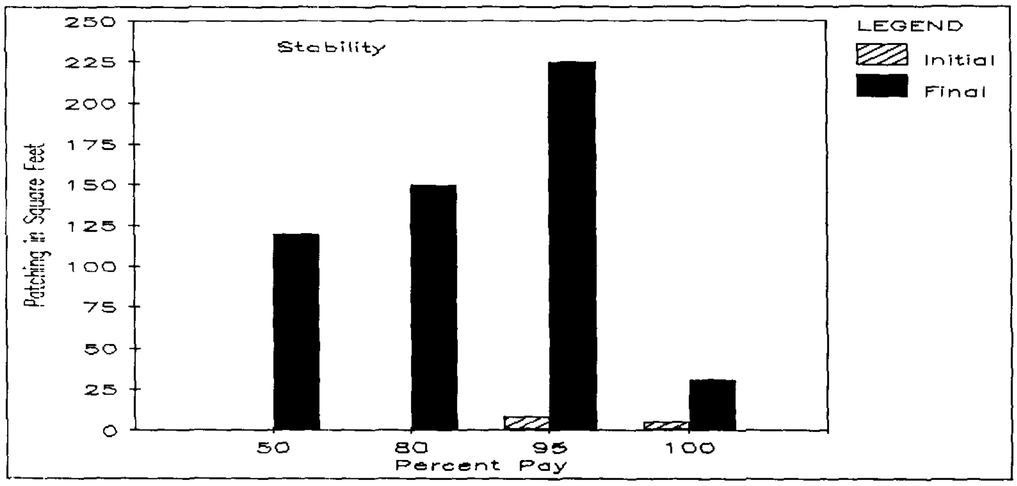


Figure 7 (Cont'd): Ride (PSI) Comparisons





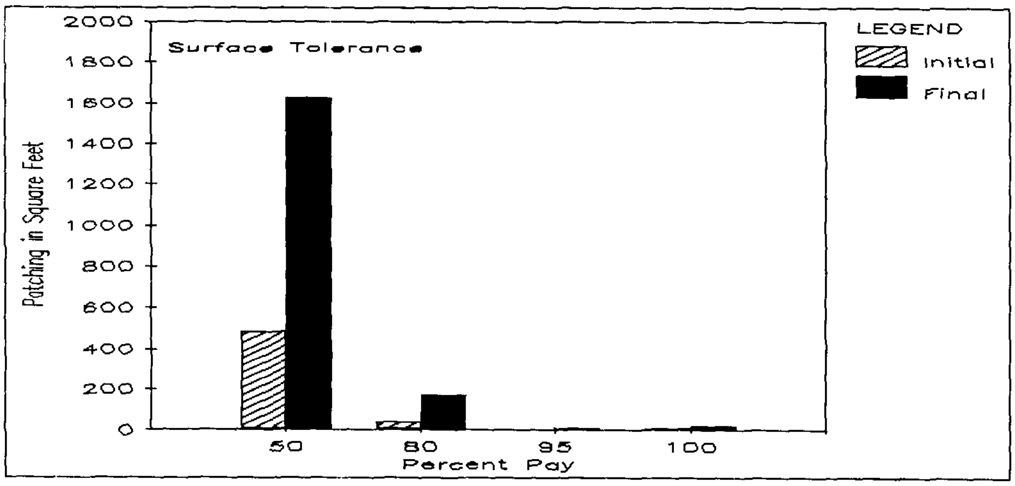
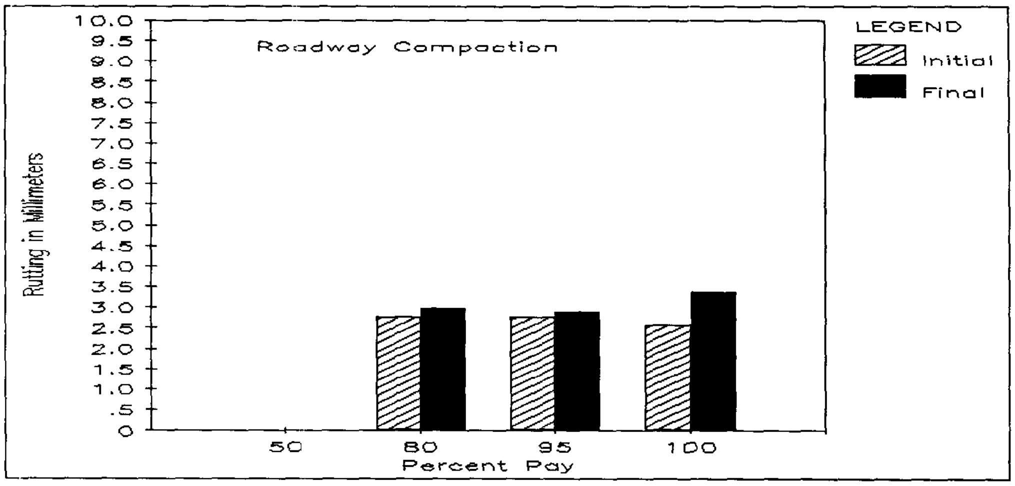
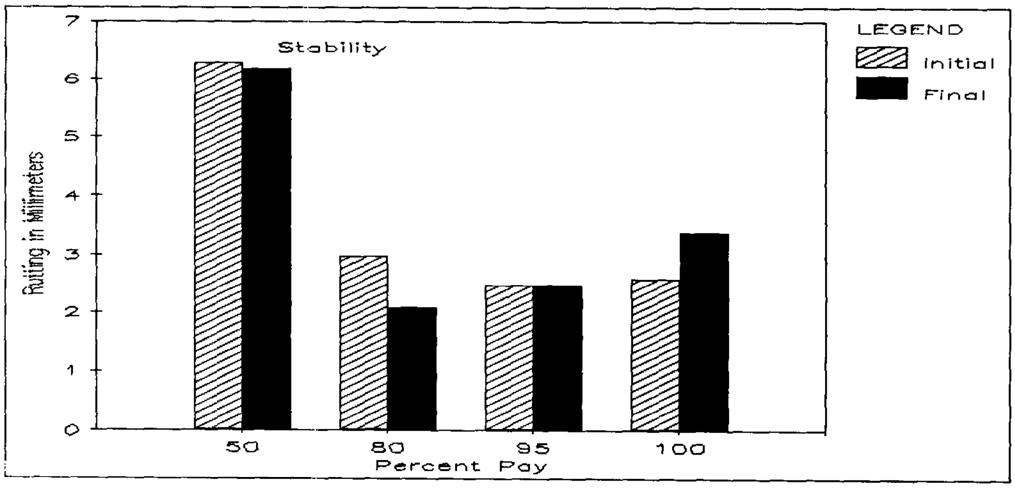


Figure 7 (Cont'd): Patching Comparison





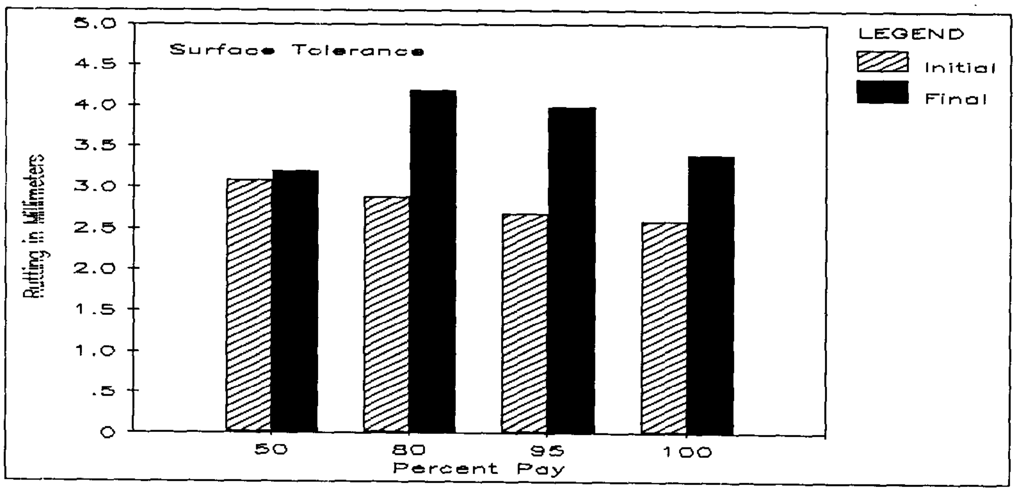


Figure 7 (Cont'd): Rutting Comparison

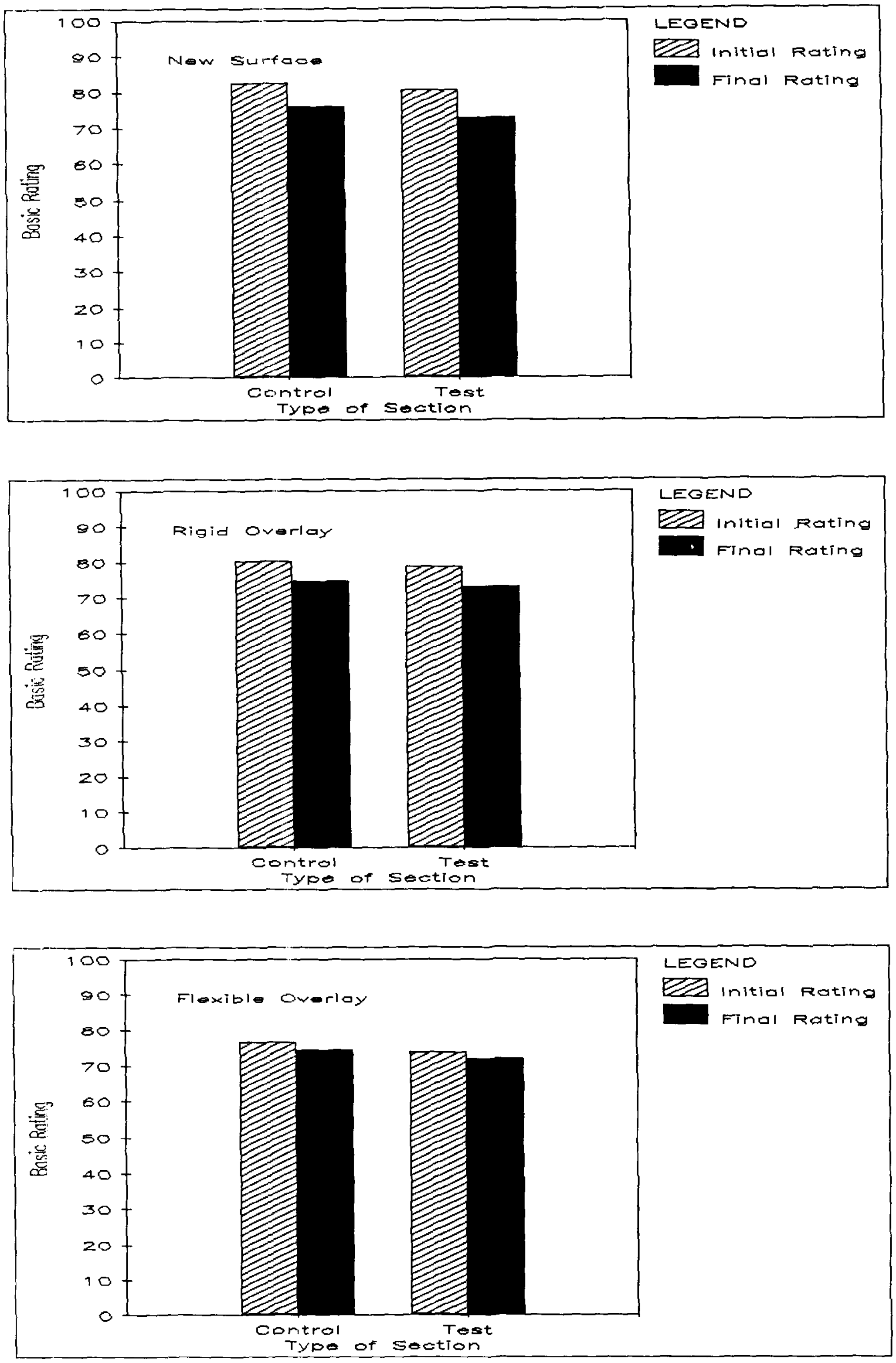


Figure 8: Comparison of Basic Rating by Type of Construction

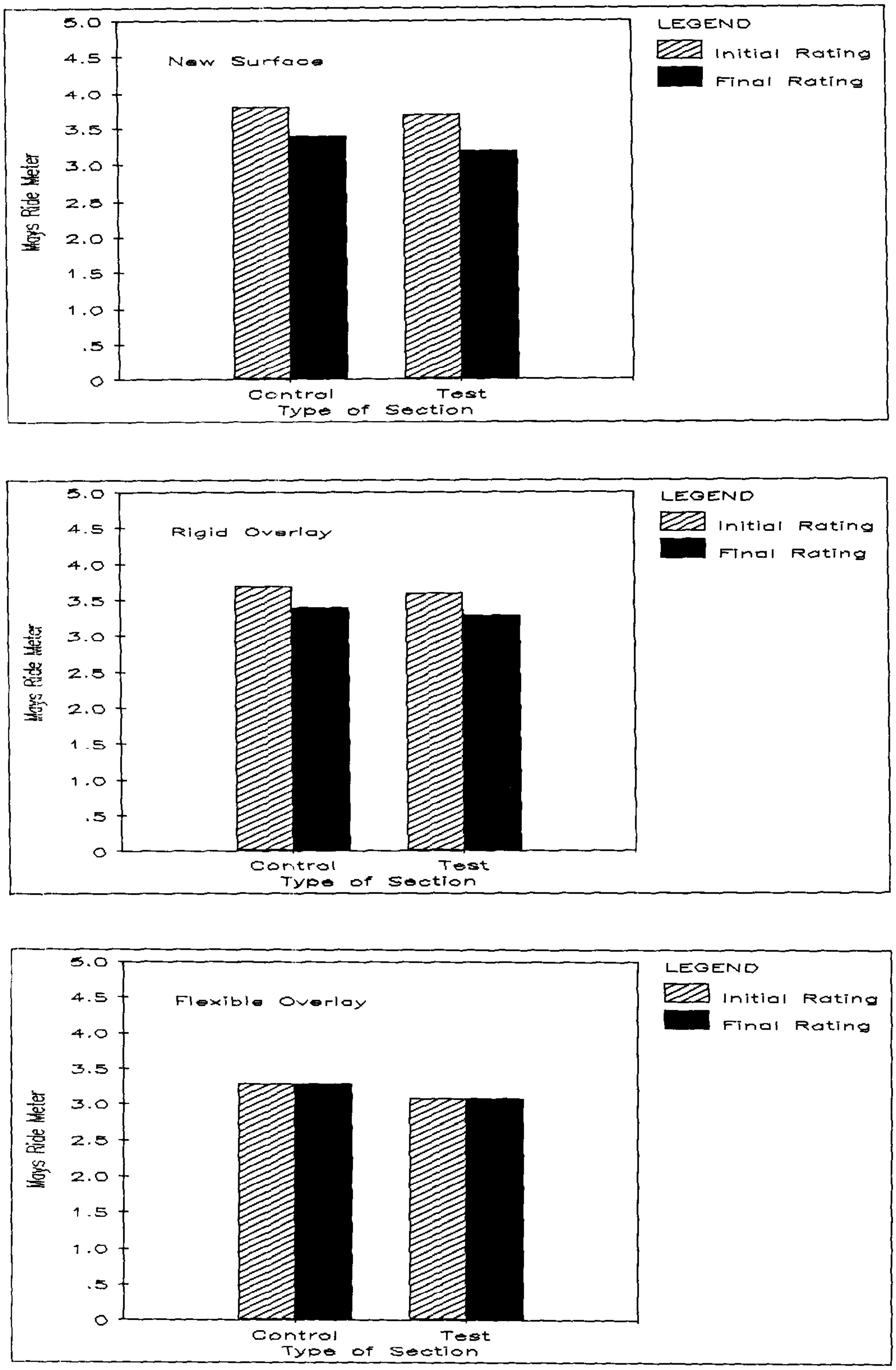


Figure 8 (cont'd): Ride (PSI) Comparison

clearly indicate the negligible effect of the construction type on the level of performance between the control and test sections. The average difference in Basic Rating for control sections (for the three construction types) was 1.5 and that for test sections was 1.4. Likewise, the average PSI difference for control and test section was 0.1 and 0.2, respectively.

The overall rate of deterioration in the measured performance for control and test sections is shown in Figure 9 on page 42. This overall rate is slightly lower for the control sections than the test sections with respect to Basic Rating and Mays. Again, the levels of rutting are generally less than 0.25 inch indicating additional compaction due to traffic and thus are insignificant. The apparent higher rate of rutting on control sections is misleading. As the deficient sections had higher initial void levels, those sections compacted more readily in the earlier years thus demonstrated a lower percentage change from the initial to final readings. Generally, the final amount of rutting within each project was the same at the final evaluation.

Supplementary Analysis of Pooled Data

The decay of PSI with time is shown in Figure 10 on page 43. Projects were pooled according to age groups to derive this figure. The effect of traffic since hot mix construction, expressed as log summation of 18-kip ESAL, on PSI is shown in Figure 11 on page 43. The fair to good PSI level, after almost 10 years or one million ESAL, should be attributed to adequate maintenance on the projects to maintain the level of service deemed appropriate. This fact is further demonstrated in Figure 12 on page 44 which show defect rating relationship to PSI. The data represents 1984 data. If the pavement is maintained around a defect value of 70-75, fair to good serviceability can be retained. The majority of the projects falling in the upper right quadrant show this to be the case.

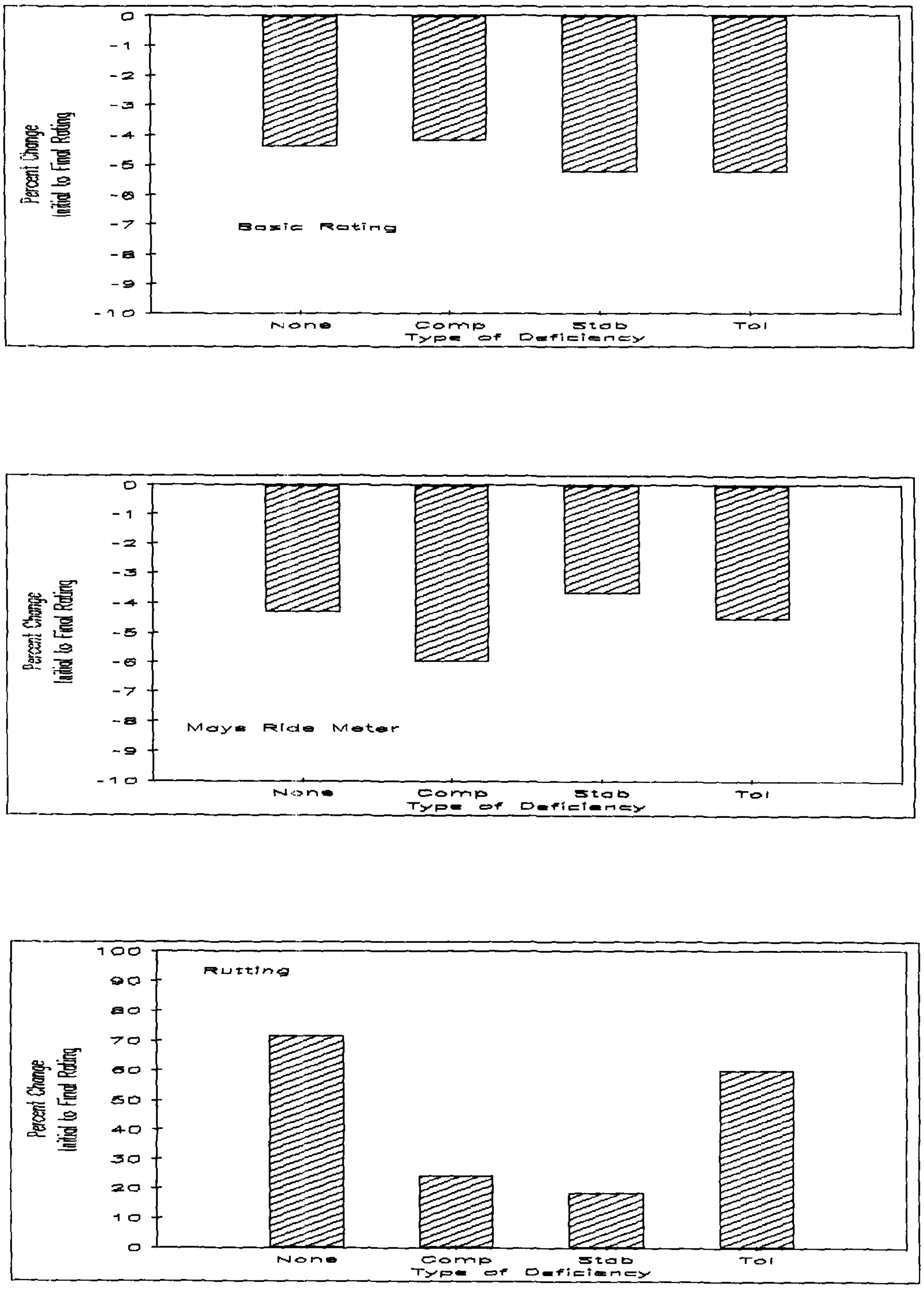


Figure 9: Rate of Deterioration of Several Performance Indicators

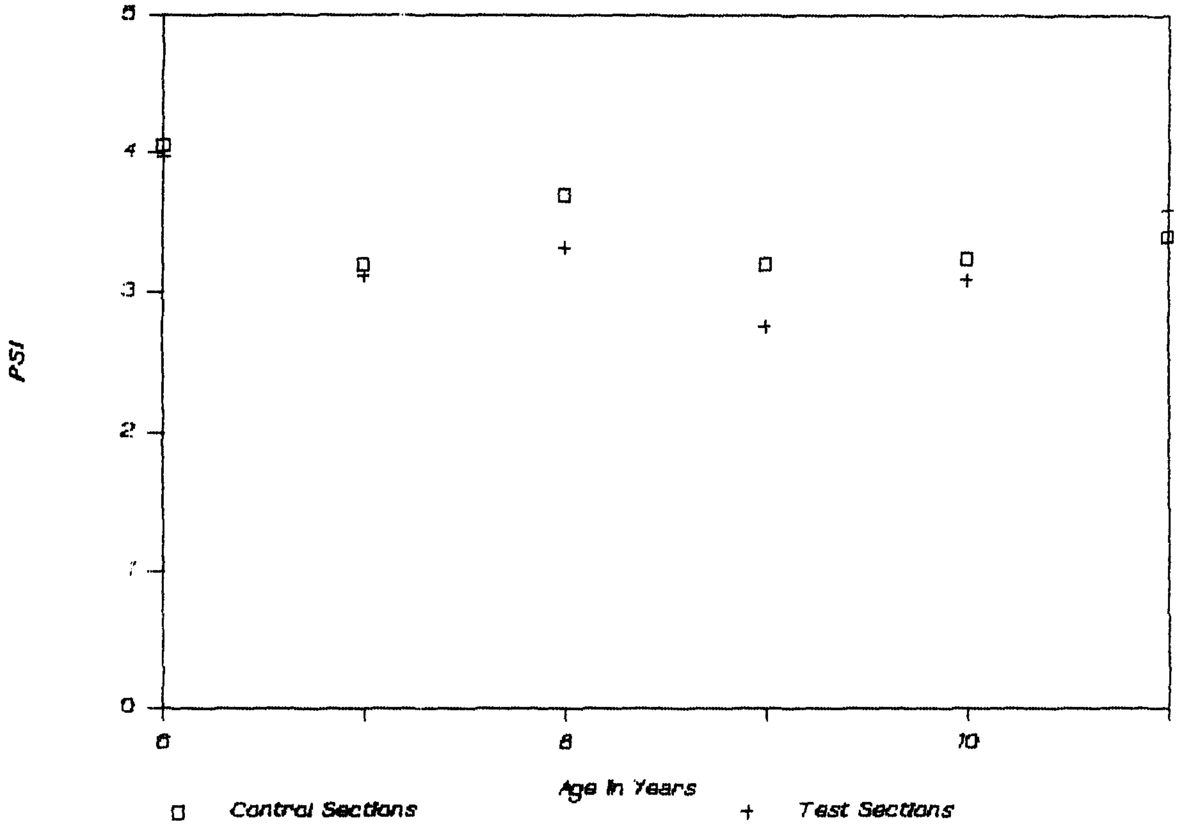


Figure 10: PSI Trend With Time (Pooled 1985 Data)

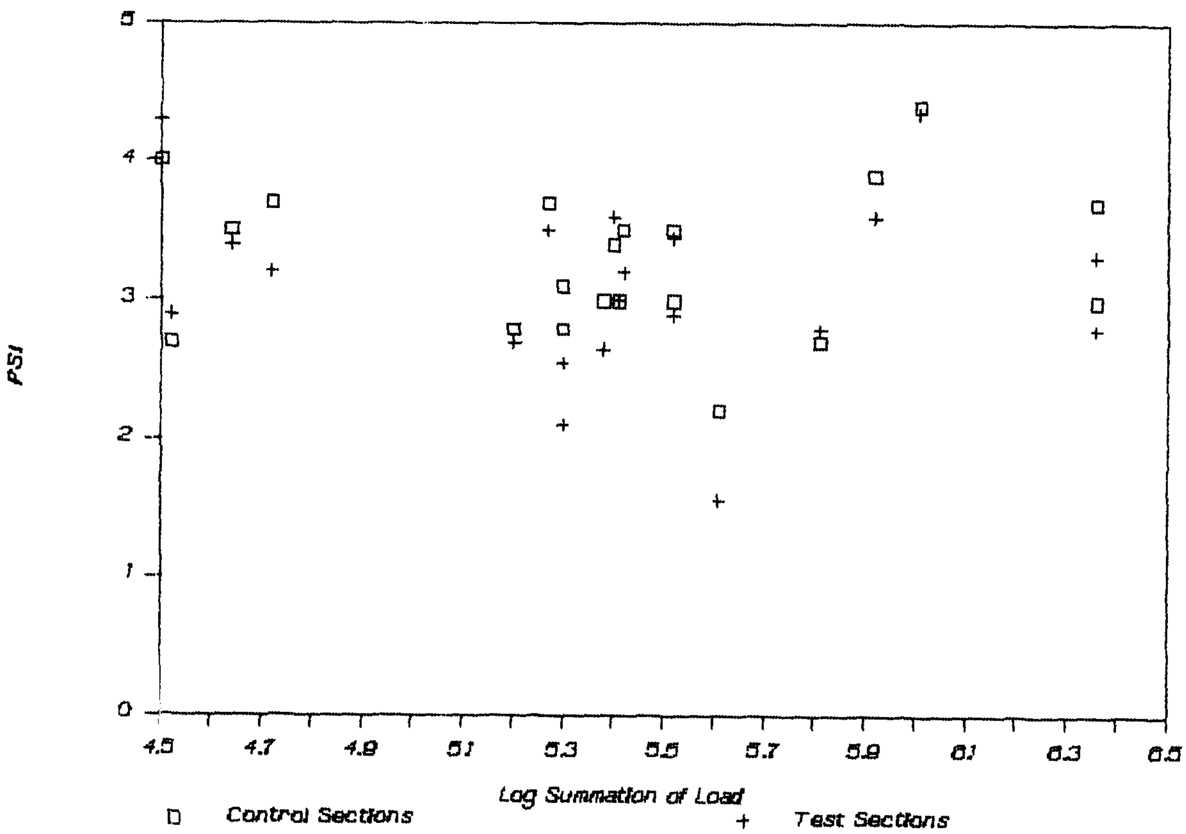


Figure 11: PSI Trend With Traffic Loading (Pooled 1985 Data)

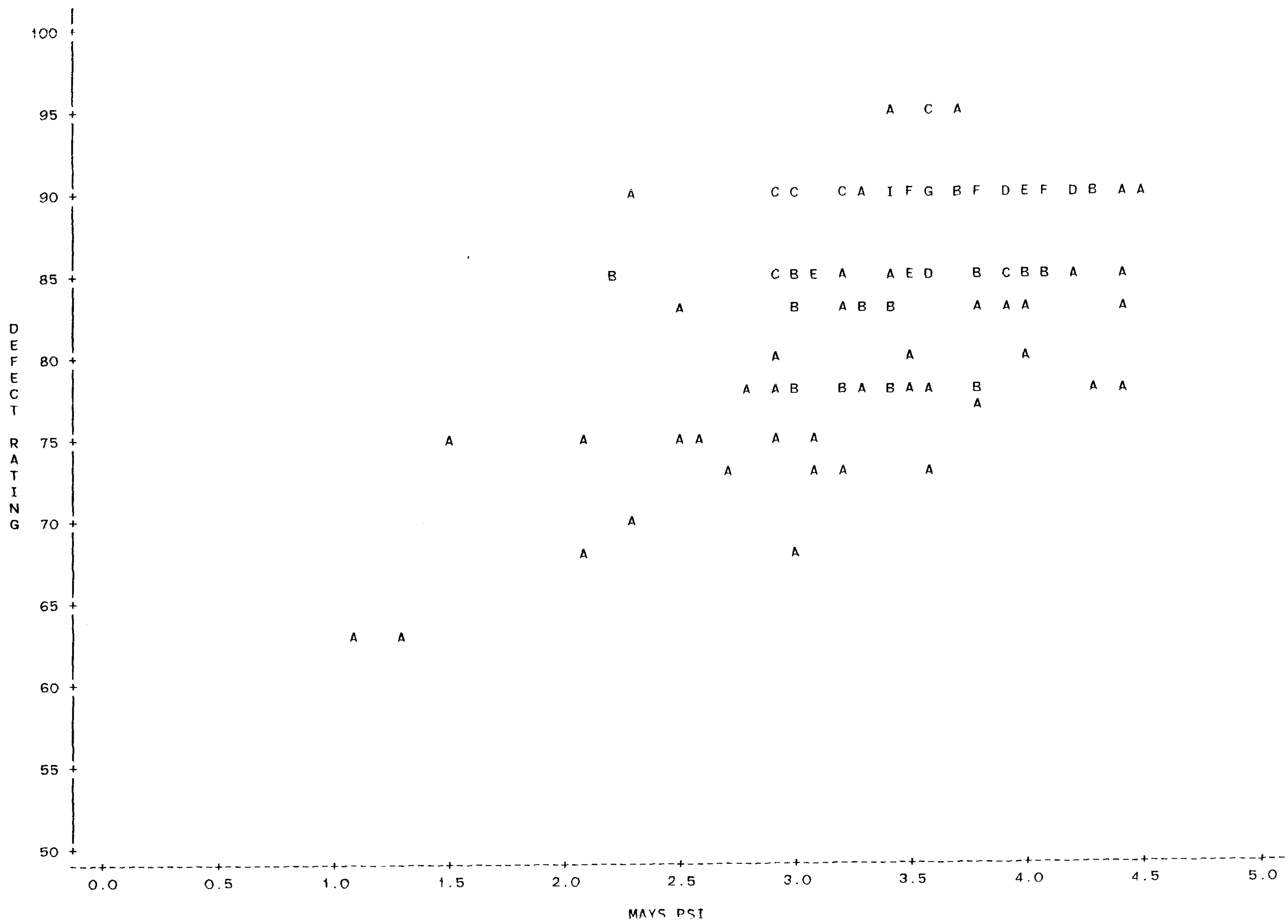


Figure 12: Defect Rating - PSI Relationship

Discussion - Pooled Analysis

Pavement performance is generally categorized into two classes: functional and structural. The former is usually defined in terms of pavement condition indicators such as roughness and skid resistance. Structural performance generally relates to deterioration in structural condition over time (or load). Examples of this class are cracking, patching and rutting.

Variables associated with materials and construction affect the above two classes of performance. Both roughness and cracking and rutting may be influenced by materials and construction variables. However, construction may have more pronounced effect in the long run than materials. This has been observed in this investigation. In fact, this particular criteria of acceptance indicated a pronounced difference in PSI roughness in the two systems, deficient and non-deficient.

The fact that the surface tolerance criteria showed a definitive trend can be attributed to the sampling plan used for its acceptance. The entire lot is tested for conformance rather than several segments of the lot as is done for compaction acceptance. Testing the entire lot provides a continuous longitudinal profile of the pavement lot. Thus a full pay lot assures its acceptability over the entire lot. There is very little confounding of 'good' segments in deficient lots or 'bad' segments in non-deficient lots as is generally encountered in acceptance of lots on the basis of compaction or stability.

Pavement condition indicators that define the structural integrity of the pavement are in most cases, influenced by materials variables relative to asphalt grade, content, and source, aggregate gradation and air voids. The construction variables that are assumed to influence rutting and cracking can be defined in terms of roadway density and thickness.

Most of the material and construction variables are hierarchical in nature and are often not independent of each other. In the present case, stability is used as an indirect measure of material variables defined above. This means that any deficiency in asphalt and/or aggregate material would be reflected in the stability. Likewise, air voids in the roadway compacted mix are determined largely by gradation, asphalt content and compactive effort. Thus, air voids in pavement would be an influential variable in the determination of performance. However, this hierarchical and interdependency of materials coupled with routine maintenance (not controlled on these projects) complicates the consideration of the materials and construction variables that may singly influence performance as has been the case in the study. The lack of specific trends in compaction criteria may be the result of the masking effects of these interpendencies.

SUMMARY, CONCLUSIONS, & RECOMMENDATIONS

In the preceding sections an attempt was made to present relationships, if any, between asphaltic concrete acceptance specifications for surface course and performance of pavements constructed under these specifications. This relationship was investigated through comparative evaluation of deficient (in specification compliance) and non-deficient segments of several projects throughout the state. Deficient sections were defined as those that failed to meet the specification requirement for Marshall stability, roadway compaction and surface tolerance. The performance criteria used for comparative evaluation of these sections related to a combination of condition rating and ride rating and expressed as Basic Rating. The following represent key findings from the statistical and graphical analysis of individual and pooled project data and are within the confines of the projects evaluated in this study.

1. The majority of the projects showed better performance, in terms of overall Basic Rating, of the control or non-deficient sections than the test or deficient sections. However, this difference was not statistically significant at a 0.05 level.

2. The magnitude of the rate of deterioration of the Basic Distress Rating and Mays Ride Meter was evenly distributed between the control and test sections. Generally, rutting was non-existent in the projects evaluated.

3. Analysis of pooled data according to acceptance criteria and level of pay showed better level of performance of the control sections (100 percent pay) than the sections with deficiency in stability and surface tolerance and the associated reduction in level of pay. This difference was also shown to be statistically significant

at the 0.05 level. However, the level of performance between the compaction deficient sections and the non-deficient sections was basically the same.

4. The extent of pot hole patching on the deficient sections was much more than the control sections.

5. The magnitude of rutting was too small to show any difference between the sections.

6. Construction type (overlay of flexible or rigid pavements and new construction) did not show any difference in the level of performance between the sections.

7. Most of the sections, control and test, have not reached end of life, based on magnitude of PSI, as of the last rating survey. Likewise, after almost ten years and close to an average application of one million 18-kip ESAL, the average PSI is 3.0 or better.

8. All in all, the findings seem to indicate a better level of performance of the non-deficient sections than the deficient sections. Lack of this difference for any specific specification criteria should be attributed to interpendencies of the several material and construction variables and routine maintenance. A possible confounding effect of individual 'good' samples in unacceptable lots and 'bad' samples in acceptable lots may have further masked the presence of the difference between the sections.

9. In view of the above last statement, the specifications should include a provision for acceptance limits on individual samples in the lot.

REFERENCES

1. Shah, S.C., "Asphaltic Concrete Pavement Survey," Research Report No. 3, Louisiana Department of Highways, Baton Rouge, April 1963.

2. Shah, S.C., "Quality Control Analysis, Part I -Asphaltic Concrete," Research Report No. 15, Louisiana Department of Highways, Baton Rouge, November 1964.

3. Shah, S.C., "Quality Control Analysis, Part IV - Field Simulation of Asphaltic Concrete Specifications," Research Report No. 36, Louisiana Department of Highways, Baton Rouge, March 1969.

4. Shah, S. C. and Yoches, V., "Quality control Analysis, Part V - Review of Data Generated by Statistical Specifications on Asphaltic Concrete," Research Report No. 94, Louisiana Department of Highways, Baton Rouge, December 1975.

APPENDIX A

TABLE 6: ADJUSTMENT IN CONTRACT PRICE PER UNIT OF MEASUREMENT FOR MARSHALL STABILITY

Type 1,2,4 WC, BC Type 5A Base AC-40	Type 1,2,4 WC, BC Type 5A Base AC-20	Type 3 Binder AC-40	Type 3 Wearing AC-40	Type 5B AC-20	Shoulder Mix AC-20	Payment Percent of Contract Unit Price/Lot)
A	Average of Four Marshall Stability Results					
1200 & higher	1100 & higher	1400 & higher	1700 & higher	800 & higher	1000 & higher	100%
1100 to 1199	1000 to 1099	1300 to 1399	1550 to 1699	750 to 799	950 to 999	95%
1000 to 1099	900 to 999	1150 to 1299	1350 to 1549	700 to 749	900 to 949	80%
Below 1000	Below 900	Below 1150	Below 1350	Below 700	Below 900	50% or Remove
B	Average of Three Marshall Stability Results					
1150 & higher	1050 & higher	1350 & higher	1600 & higher	750 & higher	950 & higher	100%
1100 to 1149	1000 to 1049	1300 to 1349	1525 to 1599	700 to 749	900 to 949	95%
1000 to 1099	900 to 999	1150 to 1299	1350 to 1524	650 to 699	850 to 899	80%
Below 1000	Below 900	Below 1150	Below 1350	Below 650	Below 850	50% of Remove
C	Average of Two Marshall Stability Results					
1050 & higher	1000 & higher	1250 & higher	1500 & higher	700 & higher	900 & higher	100%
1000 to 1049	950 to 999	1200 to 1249	1425 to 1499	650 to 699	850 to 899	95%
900 to 999	800 to 949	1050 to 1199	1250 to 1424	600 to 649	800 to 849	80%
Below 900	Below 800	Below 1050	Below 1250	Below 600	Below 800	50% or Remove
D	One Marshall Stability Test Result					
900 & higher	800 & higher	1050 & higher	1250 & higher	600 & higher	800 & higher	100 %
Below 900	Below 800	Below 1050	Below 1250	Below 600	Below 800	50% or Remove

TABLE 7: ADJUSTMENT IN CONTRACT PRICE PER UNIT OF MEASUREMENT FOR ROADWAY DENSITY

Average of Five Roadway Samples Minimum Density Requirement (% of Laboratory Density)				Payment (Percent of Contract Unit Price/Lot)
95%	94%	93%	92%	
95 & higher	94 & higher	93 & higher	92 & higher	100%
94 to 94.9	93 to 93.9	91 to 92.9	90 to 91.9	95%
92 to 93.9	91 to 92.9	90 to 90.9	89 to 89.9	80%
Below 92	Below 91	Below 90	Below 89	50% or Remove

TABLE 8: ADJUSTMENT IN CONTRACT PRICE PER UNIT OF MEASUREMENT FOR SURFACE TOLERANCE

Linear Percent of Roadway Exceeding Surface Tolerance		Payment (Percent of Contract Unit Price/Lot)
1/8" Tolerance*	3/16" Tolerance*	
0.0 to 1.0	0.0 to 0.50	100%
1.1 to 1.5	0.51 to 0.75	95%
1.6 to 2.5	0.76 to 1.5	80%
2.6 or More	1.6 or More	50% or Remove

*The individual surface tolerance requirements for various types of mixes are given in Subsection 501.21.

APPENDIX B

TABLE 9: Construction Data on Project Sections

PROJ=008-09-20

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
MEEKER-CHAMBERS	08	US71	NEW	C1	1WC	10-76	5.2	95.6	1498	99.5	NO DEFICIENCY	100
MEEKER-CHAMBERS	08	US71	NEW	C2	1WC	10-76	5.2	95.6	1498	99.5	NO DEFICIENCY	100
MEEKER-CHAMBERS	08	US71	NEW	C3	1WC	10-76	5.2	95.6	1498	99.5	NO DEFICIENCY	100
MEEKER-CHAMBERS	08	US71	NEW	C4	1WC	10-76	5.2	95.6	1498	99.5	NO DEFICIENCY	100
MEEKER-CHAMBERS	08	US71	NEW	C5	1WC	07-76	4.6	95.7	1974		NO DEFICIENCY	100
MEEKER-CHAMBERS	08	US71	NEW	C6	1WC	10-76	5.2	95.6	1498	99.5	NO DEFICIENCY	100
MEEKER-CHAMBERS	08	US71	NEW	C7	1WC	10-76	5.2	95.6	1498	99.5	NO DEFICIENCY	100
MEEKER-CHAMBERS	08	US71	NEW	29A	1WC	10-76	5.0	94.0	1477	99.9	COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	29B	1WC	10-76	5.0	94.0	1477	99.9	COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	29C	1WC	10-76	5.0	94.0	1477	99.9	COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	33A	1WC	10-76	4.8	94.0	1410	99.9	COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	33B	1WC	10-76	4.8	94.0	1410	99.9	COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	33C	1WC	10-76	4.8	94.0	1410	99.9	COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	4A	1WC	10-76	4.9	94.0	1716	99.9	COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	41A	1WC	10-76	4.9	94.0	1716	99.9	COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	41B	1WC	10-76	4.9	94.0	1716	99.9	COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	44A	1WC	10-76	5.3	94.8	1371	99.4	COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	5A	1WC	07-76	4.7	95.0	1388	98.7	TOLERANCE	95
MEEKER-CHAMBERS	08	US71	NEW	5B	1WC	07-76	4.7	95.0	1388	98.7	TOLERANCE	95
MEEKER-CHAMBERS	08	US71	NEW	5C	1WC	07-76	4.7	95.0	1388	98.7	TOLERANCE	95
MEEKER-CHAMBERS	08	US71	NEW	51A	1WC	07-76	4.7	95.0	1388	98.7	TOLERANCE	95
MEEKER-CHAMBERS	08	US71	NEW	74A	1WC	03-77	4.7	94.2	1385	98.9	COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	76A	1WC	03-77	4.8	94.5	1607		COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	761A	1WC	03-77	4.8	94.5	1607		COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	85A	1WC	03-77	5.2	94.5	1706	99.5	COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	85B	1WC	03-77	5.2	94.5	1706	99.5	COMPACTION	95
MEEKER-CHAMBERS	08	US71	NEW	851A	1WC	03-77	5.2	94.5	1706	99.5	COMPACTION	95

PROJ=013-10-34

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
TANG PL-COVINGTON	62	US190	O/R	C1W	1WC	06-76	5.2	96.3	1622		NO DEFICIENCY	100
TANG PL-COVINGTON	62	US190	O/R	C2E	1WC	06-76	5.2	96.3	1622		NO DEFICIENCY	100
TANG PL-COVINGTON	62	US190	O/R	3AE	1WC	06-76	5.3	93.8	1544		COMPACTION	80
TANG PL-COVINGTON	62	US190	O/R	3AW	1WC	06-76	5.3	93.8	1544		COMPACTION	80
TANG PL-COVINGTON	62	US190	O/R	3BW	1WC	06-76	5.3	93.8	1544		COMPACTION	80
TANG PL-COVINGTON	62	US190	O/R	8A	1WC	06-76	5.3	94.3	1715		COMPACTION	95

TABLE 9 (Cont'd): Construction Data on Project Sections

PROJ=016-01-12

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
MONROE-STERLINGTON	05	US165	O/R	C1	3WC	09-76	5.7	95.6	1652	99.7	NO DEFICIENCY	100
MONROE-STERLINGTON	05	US165	O/R	C2	3WC	09-76	5.7	95.6	1652	99.7	NO DEFICIENCY	100
MONROE-STERLINGTON	05	US165	O/R	C3	3WC	09-76	5.7	95.6	1652	99.7	NO DEFICIENCY	100
MONROE-STERLINGTON	05	US165	O/R	10A	3WC	09-76	5.4	95.0	1638	98.9	STABILITY	95
MONROE-STERLINGTON	05	US165	O/R	101A	3WC	09-76	5.4	95.0	1638	98.9	STABILITY	95
MONROE-STERLINGTON	05	US165	O/R	11A	3WC	09-76	5.1	94.5	1967	99.6	COMPACTION	95
MONROE-STERLINGTON	05	US165	O/R	11B	3WC	09-76	5.1	94.5	1967	99.6	COMPACTION	95
MONROE-STERLINGTON	05	US165	O/R	4A	3WC	09-76	4.7	94.9	1736	99.9	COMPACTION	95
MONROE-STERLINGTON	05	US165	O/R	4B	3WC	09-76	4.7	94.9	1736	99.9	COMPACTION	95
MONROE-STERLINGTON	05	US165	O/R	4C	3WC	09-76	4.7	94.9	1736	99.9	COMPACTION	95
MONROE-STERLINGTON	05	US165	O/R	5A	3WC	09-76	4.7	94.3	1656	99.9	COMP & STAB	95
MONROE-STERLINGTON	05	US165	O/R	5B	3WC	09-76	4.7	94.3	1656	99.9	COMP & STAB	95
MONROE-STERLINGTON	05	US165	O/R	6A	3WC	09-76	4.9	96.8	1646	100.0	STABILITY	95
MONROE-STERLINGTON	05	US165	O/R	6B	3WC	09-76	4.9	96.8	1646	100.0	STABILITY	95
MONROE-STERLINGTON	05	US165	O/R	7A	3WC	09-76	5.2	96.6	1506	99.9	STABILITY	80
MONROE-STERLINGTON	05	US165	O/R	71A	3WC	09-76	5.2	96.6	1506	99.9	STABILITY	80
MONROE-STERLINGTON	05	US165	O/R	9A	3WC	09-76	5.2	96.0	1954	94.9	TOLERANCE	50

PROJ=023-06-19

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
JONESBORO-HODGE	05	US167	NEW	C1	1WC	11-76	5.0	96.3	1735		NO DEFICIENCY	100
JONESBORO-HODGE	05	US167	NEW	C2	1WC	11-76	5.0	96.3	1735		NO DEFICIENCY	100
JONESBORO-HODGE	05	US167	NEW	18A	1WC	11-76	4.9	93.4	1657		COMPACTION	80
JONESBORO-HODGE	05	US167	NEW	24A	1WC	11-76	5.2	93.1	1597		COMPACTION	80

PROJ=036-03-11

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
WINNSBORO	58	LA4	O/F	C1	1WC	03-76	4.8	96.1	1344	99.8	NO DEFICIENCY	100
WINNSBORO	58	LA4	O/F	C2	1WC	03-76	4.8	96.1	1344	99.8	NO DEFICIENCY	100
WINNSBORO	58	LA4	O/F	11A	1WC	03-76	4.8	93.8	1253	99.8	COMPACTION	80
WINNSBORO	58	LA4	O/F	11B	1WC	03-76	4.8	93.8	1253	99.8	COMPACTION	80
WINNSBORO	58	LA4	O/F	7A	1WC	03-76	4.8	96.6	1081	99.9	STABILITY	95
WINNSBORO	58	LA4	O/F	71A	1WC	03-76	4.8	96.6	1081	99.9	STABILITY	95
WINNSBORO	58	LA4	O/F	71B	1WC	03-76	4.8	96.6	1081	99.9	STABILITY	95
WINNSBORO	58	LA4	O/F	9A	1WC	03-76	5.0	95.8	1022	99.8	STABILITY	95
WINNSBORO	58	LA4	O/F	91A	1WC	03-76	5.0	95.8	1022	99.8	STABILITY	95
WINNSBORO	58	LA4	O/F	91B	1WC	03-76	5.0	95.8	1022	99.8	STABILITY	95

TABLE 9 (Cont'd): Construction Data on Project Sections

PROJ=047-03-09

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
FRANKLINTON-SHERIDAN	62	LA10	O/R	C1N	1WC	03-76	5.6	96.5	1590	99.6	NO DEFICIENCY	100
FRANKLINTON-SHERIDAN	62	LA10	O/R	8A	1WC	03-76	5.1	93.9	1824		COMPACTION	80

PROJ=050-06-49

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
WHITE CASTLE	61	LA1	O/R	C1N	3WC	01-76	5.0	95.0	2269	99.2	NO DEFICIENCY	100
WHITE CASTLE	61	LA1	O/R	C1S	3WC	01-76	5.0	95.0	2269	99.2	NO DEFICIENCY	100
WHITE CASTLE	61	LA1	O/R	18A	3WC	01-76	4.8		1666		STABILITY	95
WHITE CASTLE	61	LA1	O/R	18B	3WC	01-76	4.8		1666		STABILITY	95
WHITE CASTLE	61	LA1	O/R	18C	3WC	01-76	4.8		1666		STABILITY	95
WHITE CASTLE	61	LA1	O/R	23A	3WC	01-76	4.8	95.3	1901	98.0	TOLERANCE	80
WHITE CASTLE	61	LA1	O/R	23B	3WC	01-76	4.8	95.3	1901	98.0	TOLERANCE	80
WHITE CASTLE	61	LA1	O/R	28A	3WC	01-76	5.0	94.4	2280	99.0	COMPACTION	95
WHITE CASTLE	61	LA1	O/R	28B	3WC	01-76	5.0	94.4	2280	99.0	COMPACTION	95
WHITE CASTLE	61	LA1	O/R	29A	3WC	01-76	5.0	94.7	2137	99.3	COMPACTION	95
WHITE CASTLE	61	LA1	O/R	29B	3WC	01-76	5.0	94.7	2137	99.3	COMPACTION	95
WHITE CASTLE	61	LA1	O/R	292A	3WC	01-76	5.0	94.7	2137	99.3	COMPACTION	95

PROJ=052-08-24

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
ALEX-MARKSVILLE	08	LA1	O/R	C1	1WC	05-76	4.6	98.8	1427		NO DEFICIENCY	100
ALEX-MARKSVILLE	08	LA1	O/R	C2	1WC	05-76	4.6	98.8	1427		NO DEFICIENCY	100
ALEX-MARKSVILLE	08	LA1	O/R	C3	1WC	05-76	4.6	98.8	1427		NO DEFICIENCY	100
ALEX-MARKSVILLE	08	LA1	O/R	C4	1WC	05-76	4.6	98.8	1427		NO DEFICIENCY	100
ALEX-MARKSVILLE	08	LA1	O/R	C5	1WC	05-76	4.6	98.8	1427		NO DEFICIENCY	100
ALEX-MARKSVILLE	08	LA1	O/R	10A	1WC	05-76	4.4	94.6	1631	99.7	COMPACTION	95
ALEX-MARKSVILLE	08	LA1	O/R	101A	1WC	05-76	4.4	94.6	1631	99.7	COMPACTION	95
ALEX-MARKSVILLE	08	LA1	O/R	102A	1WC	05-76	4.0	94.0	1933	99.8	COMPACTION	95
ALEX-MARKSVILLE	08	LA1	O/R	102AA	1WC	05-76	4.0	94.0	1933	99.8	COMPACTION	95
ALEX-MARKSVILLE	08	LA1	O/R	28A	1WC	05-76	4.6	93.8	1822	99.3	COMPACTION	80
ALEX-MARKSVILLE	08	LA1	O/R	28B	1WC	05-76	4.6	93.8	1822	99.3	COMPACTION	80
ALEX-MARKSVILLE	08	LA1	O/R	6A	1WC	05-76	4.1	94.5	1538	99.6	COMPACTION	95
ALEX-MARKSVILLE	08	LA1	O/R	6B	1WC	05-76	4.1	94.5	1538	99.6	COMPACTION	95
ALEX-MARKSVILLE	08	LA1	O/R	61A	1WC	05-76	4.1	94.5	1538	99.6	COMPACTION	95
ALEX-MARKSVILLE	08	LA1	O/R	8A	1WC	05-76	4.2	94.6	1661	99.5	COMPACTION	95
ALEX-MARKSVILLE	08	LA1	O/R	8B	1WC	05-76	4.2	94.6	1661	99.5	COMPACTION	95
ALEX-MARKSVILLE	08	LA1	O/R	81A	1WC	05-76	4.2	94.6	1661	99.5	COMPACTION	95

TABLE 9 (Cont'd): Construction Data on Project Sections

PROJ=066-02-15

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
WHISKEY CHITTO	08	LA10	O/F	C1	1WC	04-76	4.9	96.1	1606	100.0	NO DEFICIENCY	100
WHISKEY CHITTO	08	LA10	O/F	C2	1WC	04-76	4.9	96.1	1606	100.0	NO DEFICIENCY	100
WHISKEY CHITTO	08	LA10	O/F	C30A	1WC	04-76	4.9	96.1	1606	100.0	NO DEFICIENCY	100
WHISKEY CHITTO	08	LA10	O/F	19A	1WC	04-76	4.9	93.5	1596		COMPACTION	80
WHISKEY CHITTO	08	LA10	O/F	19B	1WC	04-76	4.9	93.5	1596		COMPACTION	80
WHISKEY CHITTO	08	LA10	O/F	19C	1WC	04-76	4.9	93.5	1596		COMPACTION	80
WHISKEY CHITTO	08	LA10	O/F	31A	1WC	04-76	4.9	94.3	1612	99.9	COMPACTION	95
WHISKEY CHITTO	08	LA10	O/F	31B	1WC	04-76	4.9	94.3	1612	99.9	COMPACTION	95
WHISKEY CHITTO	08	LA10	O/F	311A	1WC	04-76	4.9	94.3	1612	99.9	COMPACTION	95
WHISKEY CHITTO	08	LA10	O/F	32A	1WC	04-76	4.5	92.7	1702	99.8	COMPACTION	80

PROJ=067-05-15

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
BIENVILLE-JONESBORO	05	LA4	NEW	C1	1WC	10-75	4.9	96.1	1510		NO DEFICIENCY	100
BIENVILLE-JONESBORO	05	LA4	NEW	C2	1WC	10-75	4.9	96.1	1510		NO DEFICIENCY	100
BIENVILLE-JONESBORO	05	LA4	NEW	3A	1WC	10-75	4.7	94.7	1516	99.9	COMPACTION	95
BIENVILLE-JONESBORO	05	LA4	NEW	3B	1WC	10-75	4.7	94.7	1516	99.9	COMPACTION	95
BIENVILLE-JONESBORO	05	LA4	NEW	4A	1WC	10-75	5.1	93.5	1428		COMPACTION	80
BIENVILLE-JONESBORO	05	LA4	NEW	4B	1WC	10-75	5.1	93.5	1428		COMPACTION	80

PROJ=124-03-16

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
WINN PL-JCTLA810	05	LA34	NEW	C1	1WC	11-75	4.9	95.1	1553	99.8	NO DEFICIENCY	100
WINN PL-JCTLA810	05	LA34	NEW	1A	1WC	11-75	4.4	95.7	1186	98.0	TOLERANCE	50
WINN PL-JCTLA810	05	LA34	NEW	3A	1WC	11-75	5.0	93.3	1598	99.3	COMPACTION	80
WINN PL-JCTLA810	05	LA34	NEW	3B	1WC	11-75	5.0	93.3	1598	99.3	COMPACTION	80
WINN PL-JCTLA810	05	LA34	NEW	8A	1WC	11-75	5.0	96.4	1438	98.8	TOLERANCE	80
WINN PL-JCTLA810	05	LA34	NEW	8B	1WC	11-75	5.0	96.4	1438	98.8	TOLERANCE	80

PROJ=137-02-07

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
SIMPSON-SEIPER	08	LA465	NEW	C1	1WC	06-78	5.1	95.4	1203		NO DEFICIENCY	100
SIMPSON-SEIPER	08	LA465	NEW	9A	1WC	06-78	5.4	92.9	1120	99.4	COMP & STAB	80
SIMPSON-SEIPER	08	LA465	NEW	9B	1WC	06-78	5.4	92.9	1120	99.4	COMP & STAB	80

TABLE 9 (Cont'd): Construction Data on Project Sections

PROJ=193-01-14

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
CAMERON-CREOLE	07	LA27	O/F	C1	1WC	12-78	5.2	95.7	1652		NO DEFICIENCY	100
CAMERON-CREOLE	07	LA27	O/F	C2	1WC	12-78	5.2	95.7	1652		NO DEFICIENCY	100
CAMERON-CREOLE	07	LA27	O/F	C3	1WC	12-78	5.2	95.7	1652		NO DEFICIENCY	100
CAMERON-CREOLE	07	LA27	O/F	10A	1WC	12-78	5.2	95.7	1652	99.1	TOLERANCE	80
CAMERON-CREOLE	07	LA27	O/F	10B	1WC	12-78	5.2	95.7	1652	99.1	TOLERANCE	80
CAMERON-CREOLE	07	LA27	O/F	11A	1WC	12-78	4.7	95.3	1734	98.7	TOLERANCE	80
CAMERON-CREOLE	07	LA27	O/F	21A	1WC	12-78	5.0	96.2	1646	99.1	TOLERANCE	80
CAMERON-CREOLE	07	LA27	O/F	21B	1WC	12-78	5.0	96.2	1646	99.1	TOLERANCE	80
CAMERON-CREOLE	07	LA27	O/F	9A	1WC	12-78	5.0	95.1	1658	99.0	TOLERANCE	80
CAMERON-CREOLE	07	LA27	O/F	9B	1WC	12-78	5.0	95.1	1658	99.0	TOLERANCE	80

PROJ=194-02-27

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
GRAND CHENIER	07	LA82	O/F	C1	1WC	07-78	5.0	96.2	1525	99.7	NO DEFICIENCY	100
GRAND CHENIER	07	LA82	O/F	5A	1WC	07-78	5.3	97.6	1832	93.3	TOLERANCE	50

PROJ=195-01-07

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
SWEET LAKE	07	LA384	O/F	C1	1WC	03-76	5.1	95.3	1459	100.0	NO DEFICIENCY	100
SWEET LAKE	07	LA384	O/F	18A	1WC	03-76	5.0	96.6	1318	99.2	TOLERANCE	80
SWEET LAKE	07	LA384	O/F	18B	1WC	03-76	5.0	96.6	1318	99.2	TOLERANCE	80
SWEET LAKE	07	LA384	O/F	18C	1WC	03-76	5.0	96.6	1318	99.2	TOLERANCE	80

PROJ=243-01-09

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
BURNS POINT	03	LA317	O/F	C1	1WC	10-75	6.6	92.6	2343	100	NO DEFICIENCY	100
BURNS POINT	03	LA317	O/F	C2	1WC	10-75	6.6	92.6	2343	100	NO DEFICIENCY	100
BURNS POINT	03	LA317	O/F	C3	1WC	10-75	6.5	92.7	1856	100	NO DEFICIENCY	100
BURNS POINT	03	LA317	O/F	3A	1WC	10-75	6.2	89.8	2499	100	COMPACTION	80
BURNS POINT	03	LA317	O/F	3B	1WC	10-75	6.2	89.8	2499	100	COMPACTION	80
BURNS POINT	03	LA317	O/F	4A	1WC	10-75	6.4	89.5	2510	100	COMPACTION	80
BURNS POINT	03	LA317	O/F	4B	1WC	10-75	6.4	89.5	2510	100	COMPACTION	80
BURNS POINT	03	LA317	O/F	6A	1WC	10-75	6.5	91.6	2312	100	COMPACTION	95
BURNS POINT	03	LA317	O/F	6B	1WC	10-75	6.5	91.6	2312	100	COMPACTION	95
BURNS POINT	03	LA317	O/F	9A	1WC	10-75	6.2	91.7	2262	100	COMPACTION	95
BURNS POINT	03	LA317	O/F	9B	1WC	10-75	6.2	91.7	2262	100	COMPACTION	95

TABLE 9 (Cont'd): Construction Data on Project Sections

PROJ=263-01-09

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
CHIPOLA-LIVERPOOL	62	LA38	O/F	C1	1WC	11-76	5.2	95.7	1572		NO DEFICIENCY	100
CHIPOLA-LIVERPOOL	62	LA38	O/F	C2	1WC	11-76	5.2	95.7	1572		NO DEFICIENCY	100
CHIPOLA-LIVERPOOL	62	LA38	O/F	C3	1WC	11-76	5.2	95.7	1572		NO DEFICIENCY	100
CHIPOLA-LIVERPOOL	62	LA38	O/F	C4	1WC	11-76	5.2	95.7	1572		NO DEFICIENCY	100
CHIPOLA-LIVERPOOL	62	LA38	O/F	10A	1WC	11-76	5.1	93.4	1621		COMPACTION	80
CHIPOLA-LIVERPOOL	62	LA38	O/F	10B	1WC	11-76	5.1	93.4	1621		COMPACTION	80
CHIPOLA-LIVERPOOL	62	LA38	O/F	102A	1WC	11-76	5.1	93.4	1621		COMPACTION	80
CHIPOLA-LIVERPOOL	62	LA38	O/F	102B	1WC	11-76	5.1	93.4	1621		COMPACTION	80
CHIPOLA-LIVERPOOL	62	LA38	O/F	102C	1WC	11-76	5.1	93.4	1621		COMPACTION	80
CHIPOLA-LIVERPOOL	62	LA38	O/F	14A	1WC	11-76	5.2	93.0	1476		COMPACTION	80
CHIPOLA-LIVERPOOL	62	LA38	O/F	3A	1WC	11-76	5.2	92.0	1862	100	COMPACTION	80
CHIPOLA-LIVERPOOL	62	LA38	O/F	3B	1WC	11-76	5.2	92.0	1862	100	COMPACTION	80
CHIPOLA-LIVERPOOL	62	LA38	O/F	3C	1WC	11-76	5.2	92.0	1862	100	COMPACTION	80

PROJ=383-01-03

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
CHLOE	07	LA3059	NEW	C1	1WC	01-76	5.5	96.0	1772	100.0	NO DEFICIENCY	100
CHLOE	07	LA3059	NEW	C2	1WC	01-76	5.5	96.0	1772	100.0	NO DEFICIENCY	100
CHLOE	07	LA3059	NEW	3A	1WC	01-76	5.3	96.4	1663	99.4	TOLERANCE	95
CHLOE	07	LA3059	NEW	3B	1WC	01-76	5.3	96.4	1663	99.4	TOLERANCE	95
CHLOE	07	LA3059	NEW	31A	1WC	01-76	5.3	96.4	1663	99.4	TOLERANCE	95
CHLOE	07	LA3059	NEW	4A	1WC	01-76	5.3	96.1	1679	99.1	TOLERANCE	80
CHLOE	07	LA3059	NEW	4B	1WC	01-76	5.3	96.1	1679	99.1	TOLERANCE	80
CHLOE	07	LA3059	NEW	41A	1WC	01-76	5.3	96.1	1679	99.1	TOLERANCE	80
CHLOE	07	LA3059	NEW	41B	1WC	01-76	5.3	96.1	1679	99.1	TOLERANCE	80

PROJ=417-01-02

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
SLAGLE	08	LA28	NEW	C1	1WC	12-74	4.7	97.4	1479	99.8	NO DEFICIENCY	100
SLAGLE	08	LA28	NEW	C2	1WC	12-74	4.7	97.4	1479	99.8	NO DEFICIENCY	100
SLAGLE	08	LA28	NEW	C3	1WC	12-74	4.7	97.4	1479	99.8	NO DEFICIENCY	100
SLAGLE	08	LA28	NEW	C4	1WC	12-74	4.7	97.4	1479	99.8	NO DEFICIENCY	100
SLAGLE	08	LA28	NEW	12A	1WC	12-74	4.2	94.3	1643	100.0	COMPACTION	95
SLAGLE	08	LA28	NEW	13A	1WC	12-74	4.8	97.6	1593	97.6	TOLERANCE	80
SLAGLE	08	LA28	NEW	131A	1WC	12-74	4.7	97.4	1479	98.8	TOLERANCE	95
SLAGLE	08	LA28	NEW	141A	1WC	12-74	4.7	94.0	1629	98.9	COMP & TOL	95
SLAGLE	08	LA28	NEW	16A	1WC	12-74		95.5	1850	98.7	TOLERANCE	95
SLAGLE	08	LA28	NEW	21A	1WC	12-74	4.7	94.8	1762	99.9	COMPACTION	95
SLAGLE	08	LA28	NEW	3A	1WC	12-74	4.9	94.4	1583	99.7	COMPACTION	95
SLAGLE	08	LA28	NEW	41A	1WC	12-74	4.9	93.9	1657	99.9	COMPACTION	80

TABLE 9 (Cont'd): Construction Data on Project Sections

PROJ=810-19-11

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
HOLLYWOOD	07	LA108	O/R	C1	1WC	11-78	5.1	96.0	1371	99.4	NO DEFICIENCY	100
HOLLYWOOD	07	LA108	O/R	C2	1WC	11-78	5.1	96.0	1371	99.4	NO DEFICIENCY	100
HOLLYWOOD	07	LA108	O/R	15A	1WC	11-78	5.2	95.2	1345	98.4	TOLERANCE	80
HOLLYWOOD	07	LA108	O/R	18A	1WC	11-78	5.1	94.1	1388	99.7	COMPACTION	95
HOLLYWOOD	07	LA108	O/R	18B	1WC	11-78	5.1	94.1	1388	99.7	COMPACTION	95
HOLLYWOOD	07	LA108	O/R	181A	1WC	11-78	5.1	94.1	1388	99.7	COMPACTION	95
HOLLYWOOD	07	LA108	O/R	19A	1WC	11-78	5.0	97.5	1424	93.4	TOLERANCE	50

PROJ=850-08-06

NAME	DIST	ROUTE	TYPE	SECT	SURFACE	DATELAID	AC	COMP	STAB	TOL	DEF	PCTPAY
HENDERSON	03	LA352	O/F	C1	1WC	03-76	4.3	95.2	1592		NO DEFICIENCY	100
HENDERSON	03	LA352	O/F	7A	1WC	03-76	3.3	96.0	774		STABILITY	50

TABLE 10: Record Layout for Data File

Location	Variable	Format
1	Project Number	$ 9.
10	Project Location	$ 20.
30	District	$ 2.
32	Route	$ 6.
38	Type of Project	$ 3.
41	Section Number	$ 5.
48	Surface Type	$ 3.
51	Datelaid (MM/YY)	$ 5.
56	Percent Pay	3.0
59	Deficiency Code	$ 1.
60	Original Mays	2.1
62	Asphalt Content	2.1
64	Density	3.1
67	Stability	4.0
71	Surface Tolerance	4.1
75	Type of Section	$ 7.
82	Date Rated (MMYY)	$ 4.
88	Basic Rating	3.1
91	Mays Ride Meter	2.1
93	Type I Cracking	4.0
97	Type II & III Cracking	4.0
101	Reflective Cracking	4.0
105	Raveling	4.0
109	Patching	5.0
114	Rutting	4.3
118	Average Daily Traffic	5.0
123	18 Kip Equivalent Load	8.0

TABLE 11: Average & Variability of Performance Data on Selections by Year

YEAR=80

PROJECT NUMBER	DEFICIENCY	PERCENT PAY	NUMBER OF SECTIONS	DEFECT RATING MEAN	DEFECT RATING STD	BASIC RATING MEAN	BASIC RATING STD	MAYS MEAN	MAYS STD	PATCHING	RUTTING MEAN	RUTTING STD
008-09-20	NONE	100	7	91.4	3.8	88.8	4.6	4.3	0.3	0.0	2.6	1.2
008-09-20	COMPACTION	95	16	90.6	4.0	87.0	4.2	4.2	0.3	15.1	3.0	1.2
008-09-20	TOLERANCE	95	4	91.3	2.5	86.2	1.8	4.1	0.2	0.0	3.7	0.8
013-10-34	NONE	100	2	90.0	0.0	87.4	3.6	4.3	0.4	0.0	2.5	0.4
013-10-34	COMPACTION	95	1	90.0		90.0		4.5		0.0	2.5	
013-10-34	COMPACTION	80	3	86.7	5.8	84.3	3.0	4.1	0.1	0.0	3.4	0.3
016-01-12	NONE	100	3	90.0	0.0	82.7	3.3	3.8	0.3	0.0	2.7	0.4
016-01-12	COMP & TOL	95	2	87.5	3.5	78.3	1.6	3.5	0.0	0.0	3.4	0.8
016-01-12	COMPACTION	95	5	87.0	4.5	78.7	4.9	3.6	0.3	113.0	2.7	0.6
016-01-12	STABILITY	95	4	85.8	5.7	78.8	5.6	3.6	0.3	0.0	3.2	0.5
016-01-12	STABILITY	80	2	84.0	1.4	78.3	2.9	3.6	0.2	0.0	3.0	0.3
016-01-12	TOLERANCE	50	1	85.0		77.1		3.5		120.0	3.0	
023-06-19	NONE	100	2	82.5	3.5	70.9	7.3	3.0	0.5	0.0	8.1	0.2
023-06-19	COMPACTION	80	2	85.0		66.5		2.7	0.2	0.0	5.7	0.8
036-03-11	NONE	100	2	86.5	4.9	73.7	2.0	3.1	0.4	0.0	1.2	0.7
036-03-11	COMPACTION	80	2	80.5	3.5	64.7	4.9	2.6	0.3	0.0	2.9	0.5
036-03-11	STABILITY	95	6	86.8	5.2	72.4	9.3	3.0	0.6	20.0	1.8	0.9
047-03-09	NONE	100	1	90.0		75.9		3.2		0.0	1.8	
047-03-09	COMPACTION	80	1	90.0		77.1		3.3		0.0	2.7	
050-06-49	NONE	100	2	84.0	8.5	66.1	5.1	2.6	0.1	150.0	1.7	0.5
050-06-49	COMPACTION	95	5	86.2	3.6	72.9	2.8	3.1	0.1	0.0	2.7	0.5
050-06-49	STABILITY	95	3	90.0	0.0	76.6	3.0	3.3	0.3	0.0	3.0	0.5
050-06-49	TOLERANCE	80	2	87.5	3.5	68.1	4.1	2.6	0.2	0.0	2.6	1.4
052-08-24	NONE	100	5	87.6	3.4	83.1	2.9	3.9	0.2	0.0	2.9	0.6
052-08-24	COMPACTION	95	10	87.5	3.5	83.9	5.9	4.0	0.4	75.6	3.0	1.1
052-08-24	COMPACTION	80	2	87.5	3.5	83.1	0.9	3.9	0.1	0.0	3.2	0.5
066-02-15	NONE	100	3	90.0	5.0	78.9	8.6	3.5	0.6	0.0	3.8	3.0
066-02-15	COMPACTION	95	3	90.0	5.0	77.4	2.9	3.3	0.3	0.0	4.2	2.6
066-02-15	COMPACTION	80	4	91.3	4.8	79.2	6.4	3.4	0.5	0.0	2.6	0.9
067-05-15	NONE	100	2	90.0	0.0	83.2	0.8	3.8	0.1	0.0	2.4	1.0
067-05-15	COMPACTION	95	2	90.0	0.0	80.5	0.0	3.6	0.0	0.0	2.6	0.6
067-05-15	COMPACTION	80	2	90.0	0.0	82.2	0.8	3.7	0.1	0.0	1.9	0.4
124-03-16	NONE	100	1	83.0		66.9		2.7		0.0	0.8	
124-03-16	COMPACTION	80	1	71.5	4.9	53.4		1.9		1500.0	2.9	0.1
124-03-16	TOLERANCE	80	0	78.0	7.1					260.0	3.6	1.5
124-03-16	TOLERANCE	50	1	63.0		43.5		1.5		1840.0	4.3	
137-02-07	NONE	100	1	90.0		82.7		3.8		0.0	0.6	
137-02-07	COMP & TOL	80	1	89.0	1.4	80.7		3.7		0.0	0.4	0.4
193-01-14	NONE	100	3	91.7	2.9	77.4	1.3	3.3	0.1	0.0	3.4	1.4
193-01-14	TOLERANCE	80	7	92.1	2.7	75.7	7.5	3.1	0.6	0.0	3.1	1.1
194-02-27	NONE	100	1	95.0		70.3		2.6		0.0	1.3	
194-02-27	TOLERANCE	50	1	95.0		61.6		2.0		0.0	1.4	
195-01-07	NONE	100	1	90.0		71.0		2.8		0.0	2.8	
195-01-07	TOLERANCE	80	3	86.7	2.9	71.2	4.1	2.9	0.3	0.0	3.8	0.7
243-01-09	NONE	100	3	93.3	2.9	81.6	3.0	3.6	0.2	0.0	1.2	0.2
243-01-09	COMPACTION	95	4	90.0	0.0	78.0	7.2	3.4	0.6	0.0	1.5	0.4
243-01-09	COMPACTION	80	4	95.0	0.0	80.9	3.4	3.4	0.3	0.0	2.6	0.8

TABLE 11 (Cont'd): Average & Variability of Performance Data on Selections by Year

YEAR=80

PROJECT NUMBER	DEFICIENCY	PERCENT PAY	NUMBER OF SECTIONS	DEFECT RATING MEAN	DEFECT RATING STD	BASIC RATING MEAN	BASIC RATING STD	MAYS MEAN	MAYS STD	PATCHING	RUTTING MEAN	RUTTING STD
263-01-09	NONE	100	4	84.8	3.5	76.3	3.6	3.4	0.4	0.0	1.3	0.4
263-01-09	COMPACTION	80	9	81.9	3.3	70.0	6.8	3.0	0.6	119.6	2.1	1.0
383-01-03	NONE	100	2	90.0	0.0	79.9	4.0	3.5	0.4	0.0	1.6	0.9
383-01-03	TOLERANCE	95	3	90.0	0.0	70.5	4.5	2.8	0.4	0.0	1.6	0.7
383-01-03	TOLERANCE	80	4	87.0	6.0	68.8	3.1	2.7	0.1	100.0	1.5	0.6
417-01-02	NONE	100	4	90.0	4.1	83.2	4.6	3.8	0.3	0.0	2.8	0.8
417-01-02	COMP & STAB	95	1	90.0		88.0		4.3		0.0	3.7	
417-01-02	COMPACTION	95	3	95.0	0.0	88.2	2.9	4.1	0.3	0.0	2.0	0.2
417-01-02	COMPACTION	80	1	90.0		85.9		4.1		0.0	3.0	
417-01-02	TOLERANCE	95	2	87.5	3.5	83.1	8.4	3.9	0.6	0.0	2.4	0.5
417-01-02	TOLERANCE	80	1	95.0		82.7		3.6		0.0	3.5	
810-19-11	NONE	100	2	92.5	3.5	79.8	2.6	3.4	0.4	0.0	2.6	1.2
810-19-11	COMPACTION	95	3	93.3	2.9	80.8	3.3	3.5	0.2	0.0	2.7	0.5
810-19-11	TOLERANCE	80	1	95.0		83.8		3.7		0.0	2.3	
810-19-11	TOLERANCE	50	1	90.0		64.3		2.3		0.0	3.7	
850-08-06	NONE	100	1	85.0		73.8		3.2		0.0	5.8	
850-08-06	STABILITY	50	1	78.0		68.4		3.0		0.0	6.3	

TABLE 11 (Cont'd): Average & Variability of Performance Data on Selections by Year

YEAR=82

PROJECT NUMBER	DEFICIENCY	PERCENT PAY	NUMBER OF SECTIONS	DEFECT RATING MEAN	DEFECT RATING STD	BASIC RATING MEAN	BASIC RATING STD	MAYS MEAN	MAYS STD	PATCHING	RUTTING MEAN	RUTTING STD
008-09-20	NONE	100	7	86.4	3.8	88.1	3.4	4.5	0.2	10.7	4.7	1.5
008-09-20	COMPACTION	95	16	87.5	4.1	87.3	4.6	4.4	0.3	18.8	3.8	2.0
008-09-20	TOLERANCE	95	4	87.5	5.0	88.2	2.5	4.4	0.1	25.0	5.8	1.7
013-10-34	NONE	100	2	90.0	0.0	89.0	0.0	4.4	0.0	0.0	2.9	0.5
013-10-34	COMPACTION	95	1	90.0		89.0		4.4		0.0	2.6	
013-10-34	COMPACTION	80	3	90.0	0.0	87.6	0.6	4.3	0.1	0.0	3.7	0.5
016-01-12	NONE	100	3	88.3	2.9	87.8	4.3	4.4	0.3	0.0	3.2	0.8
016-01-12	COMP & TOL	95	2	71.5	2.1	73.3	3.2	3.7	0.2	1912.5	4.3	0.4
016-01-12	COMPACTION	95	5	82.0	4.5	78.1	8.4	3.7	0.7	538.8	3.2	0.5
016-01-12	STABILITY	95	4	82.0	5.4	82.5	4.5	4.1	0.2	175.0	3.7	0.9
016-01-12	STABILITY	80	2	85.0	0.0	84.0	0.7	4.1	0.1	150.0	3.2	0.3
016-01-12	TOLERANCE	50	1	80.0		81.0		4.1		120.0	3.4	
023-06-19	NONE	100	2	79.0	8.5	72.5	0.1	3.3	0.4	0.0	8.3	0.7
023-06-19	COMPACTION	80	2	80.0		73.7	6.3	3.3	0.4	0.0	7.3	0.5
036-03-11	NONE	100	2	84.0	8.5	77.0	0.1	3.5	0.4	0.0	3.4	0.6
036-03-11	COMPACTION	80	2	78.0	0.0	70.3	1.9	3.1	0.2	0.0	4.9	0.6
036-03-11	STABILITY	95	6	82.7	6.1	77.6	6.2	3.6	0.4	83.3	3.8	0.7
047-03-09	NONE	100	1	90.0		80.5		3.6		0.0	3.0	
047-03-09	COMPACTION	80	1	90.0		77.1		3.3		0.0	2.9	
050-06-49	NONE	100	2	81.5	4.9	69.9	2.1	3.0	0.0	225.0	4.0	0.2
050-06-49	COMPACTION	95	5	85.2	4.5	77.3	3.4	3.6	0.2	10.0	3.5	0.3
050-06-49	STABILITY	95	3	84.3	6.0	77.5	7.7	3.6	0.5	36.7	4.3	0.5
050-06-49	TOLERANCE	80	2	81.5	4.9	71.3	0.5	3.3	0.0	0.0	4.4	0.5
052-08-24	NONE	100	5	84.0	2.2	85.2	0.9	4.3	0.2	135.0	4.1	0.5
052-08-24	COMPACTION	95	10	84.0	3.2	84.8	3.1	4.3	0.2	102.5	4.2	0.9
052-08-24	COMPACTION	80	2	85.0	0.0	83.5	1.4	4.1	0.1	0.0	4.5	0.0
066-02-15	NONE	100	3	81.0	3.6	78.8	6.4	4.2	0.3	0.0	5.4	3.2
066-02-15	COMPACTION	95	3	82.7	8.7	80.2	5.0	3.9	0.2	0.0	5.4	2.7
066-02-15	COMPACTION	80	4	88.8	4.8	85.3	5.9	4.1	0.4	0.0	4.1	1.5
067-05-15	NONE	100	2	87.5	3.5	83.1	2.5	3.9	0.1	0.0	3.1	0.2
067-05-15	COMPACTION	95	2	87.5	3.5	82.6	1.7	3.9	0.0	0.0	3.5	0.6
067-05-15	COMPACTION	80	2	87.5	3.5	82.6	1.7	3.9	0.0	0.0	3.3	0.6
124-03-16	NONE	100	1	83.0		74.0		3.3		0.0	1.1	
124-03-16	COMPACTION	80	2	75.0	0.0	57.4	0.0	2.2	0.0	1500.0	2.4	0.2
124-03-16	TOLERANCE	80	2	71.5	4.9	43.8	15.3	1.5	1.0	1325.0	4.5	2.6
124-03-16	TOLERANCE	50	1	63.0		47.6		1.8		2625.0	3.6	
137-02-07	NONE	100	1	90.0		84.9		4.0		0.0	3.8	
137-02-07	COMP & TOL	80	2	84.0	8.5	82.4	3.5	4.0	0.1	0.0	4.2	0.0
193-01-14	NONE	100	3	85.0	8.7	79.6	5.4	3.7	0.2	2.7	5.8	1.6
193-01-14	TOLERANCE	80	7	87.6	5.4	76.7	4.9	3.4	0.4	0.0	4.6	1.9
194-02-27	NONE	100	1	90.0		75.9		3.2		0.0	1.6	
194-02-27	TOLERANCE	50	1	90.0		62.9		2.2		0.0	1.5	
195-01-07	NONE	100	1	85.0		76.0		3.4		0.0	3.7	
195-01-07	TOLERANCE	80	3	85.0	0.0	75.2	3.5	3.3	0.3	0.0	5.5	0.5
243-01-09	NONE	100	3	93.3	2.9	83.3	2.4	3.9	0.2	0.0	1.5	0.4
243-01-09	COMPACTION	95	4	90.0	0.0	81.8	4.9	3.6	0.4	0.0	1.7	0.2
243-01-09	COMPACTION	80	4	93.8	2.5	84.7	2.3	3.8	0.2	0.0	2.0	0.3

TABLE 11 (Cont'd): Average & Variability of Performance Data on Selections by Year

YEAR=82

PROJECT NUMBER	DEFICIENCY	PERCENT PAY	NUMBER OF SECTIONS	DEFECT RATING MEAN	DEFECT RATING STD	BASIC RATING MEAN	BASIC RATING STD	MAYS MEAN	MAYS STD	PATCHING	RUTTING MEAN	RUTTING STD
263-01-09	NONE	100	4	83.0	0.0	79.1	3.2	3.8	0.3	0.0	2.3	0.2
263-01-09	COMPACTION	80	9	72.7	7.3	68.3	4.8	3.2	0.3	1738.4	2.8	0.5
383-01-03	NONE	100	2	90.0	0.0	82.1	0.8	3.7	0.1	0.0	2.1	0.0
383-01-03	TOLERANCE	95	3	90.0	0.0	79.7	1.3	3.5	0.1	0.0	2.1	0.3
383-01-03	TOLERANCE	80	4	85.3	5.9	73.6	5.1	3.2	0.2	100.0	1.7	0.4
417-01-02	NONE	100	4	88.8	2.5	84.9	2.8	4.1	0.3	0.0	3.7	0.9
417-01-02	COMP & STAB	95	1	95.0		87.5		4.5		0.0	3.9	
417-01-02	COMPACTION	95	3	86.7	2.9	86.3	4.3	4.3	0.3	0.0	3.5	0.3
417-01-02	COMPACTION	80	1	85.0		85.5		4.3		0.0	3.6	
417-01-02	TOLERANCE	95	2	85.0	0.0	81.9	2.2	3.9	0.2	0.0	4.2	1.2
417-01-02	TOLERANCE	80	1	85.0		80.4		3.8		0.0	4.6	
810-19-11	NONE	100	2	90.0	0.0	81.0	0.8	3.6	0.1	0.0	4.5	0.3
810-19-11	COMPACTION	95	3	90.0	0.0	79.3	4.0	3.5	0.3	0.0	4.7	0.0
810-19-11	TOLERANCE	80	1	90.0		80.5		3.6		0.0	3.9	
810-19-11	TOLERANCE	50	1	90.0		75.9		3.2		0.0	4.9	
850-08-06	NONE	100	1	78.0		74.9		3.6		0.0	4.1	
850-08-06	STABILITY	50	1	78.0		71.7		3.3		0.0	4.5	

TABLE 11 (Cont'd): Average & Variability of Performance Data on Selections by Year

YEAR=84

PROJECT NUMBER	DEFICIENCY	PERCENT PAY	NUMBER OF SECTIONS	DEFECT RATING MEAN	DEFECT RATING STD	BASIC RATING MEAN	BASIC RATING STD	MAYS MEAN	MAYS STD	PATCHING	RUTTING MEAN	RUTTING STD
008-09-20	NONE	100	7					4.0	0.4		4.6	1.9
008-09-20	COMPACTION	95	16					3.7	0.7	0.0	3.9	1.8
008-09-20	TOLERANCE	95	4					3.9	0.6		5.8	1.8
013-10-34	NONE	100	2	87.5	3.5	87.3	3.9	4.3	0.2	0.0	3.7	1.4
013-10-34	COMPACTION	95	1	90.0		85.9		4.1		0.0	2.5	
013-10-34	COMPACTION	80	3	85.0	0.0	82.1	1.2	4.0	0.1	0.0	4.1	0.8
016-01-12	NONE	100	3	86.7	2.9	80.4	4.8	3.7	0.3	15.0	2.5	0.8
016-01-12	COMP & TOL	95	2	74.0	1.4	64.8	3.5	2.8	0.4	1912.5	3.2	0.2
016-01-12	COMPACTION	95	5	81.6	7.8	69.8	11.1	3.0	0.8	991.0	2.3	1.3
016-01-12	STABILITY	95	4	83.3	3.5	77.3	5.5	3.6	0.4	211.3	2.3	0.7
016-01-12	STABILITY	80	2	81.5	4.9	74.9	3.0	3.4	0.1	150.0	2.1	0.4
016-01-12	TOLERANCE	50	1	78.0		77.0		3.8		120.0	1.8	
023-06-19	NONE	100	2	74.0	1.4	70.3	3.0	3.3	0.4	0.0	9.3	0.8
023-06-19	COMPACTION	80	2	73.0		74.4	8.6	3.4	0.3	0.0	6.7	0.1
036-03-11	NONE	100	2	86.5	4.9	75.5	0.6	3.3	0.1	0.0	2.2	0.7
036-03-11	COMPACTION	80	2	75.5	3.5	65.6	4.0	2.8	0.2	440.0	3.1	0.6
036-03-11	STABILITY	95	6	84.7	8.5	72.4	10.4	3.1	0.6	206.7	2.6	1.2
047-03-09	NONE	100	1	90.0		80.5		3.6		0.0	3.2	
047-03-09	COMPACTION	80	1	85.0		72.6		3.1		0.0	3.4	
050-06-49	NONE	100	2	81.5	4.9	71.0	0.5	3.1	0.1	225.0	1.7	1.0
050-06-49	COMPACTION	95	5	87.2	3.8	76.4	4.1	3.4	0.4	10.0	1.7	0.6
050-06-49	STABILITY	95	3	81.3	2.9	73.2	0.7	3.3	0.1	40.0	2.4	0.6
050-06-49	TOLERANCE	80	2	83.0	0.0	72.3	2.4	3.1	0.2	0.0	1.9	0.4
052-08-24	NONE	100	5	86.2	5.5	85.0	3.0	4.2	0.2	175.0	1.9	0.3
052-08-24	COMPACTION	95	10	86.8	4.6	84.0	3.2	4.1	0.2	125.5	2.3	1.0
052-08-24	COMPACTION	80	2	90.0	0.0	83.8	1.6	3.9	0.1	0.0	2.3	0.5
066-02-15	NONE	100	3	84.3	5.1	77.8	8.7	3.6	0.6	0.0	3.8	3.4
066-02-15	COMPACTION	95	3	84.0	6.6	79.1	2.3	3.7	0.1	0.0	3.9	2.7
066-02-15	COMPACTION	80	4	88.8	2.5	80.4	3.9	3.6	0.3	0.0	2.6	0.8
067-05-15	NONE	100	2	90.0	0.0	82.1	2.3	3.7	0.2	0.0	3.1	0.0
067-05-15	COMPACTION	95	2	85.0	0.0	77.6	0.8	3.5	0.1	0.0	3.5	0.1
067-05-15	COMPACTION	80	2	87.5	3.5	82.6	0.1	3.9	0.1	0.0	3.1	0.4
124-03-16	NONE	100	1	85.0		61.2		2.2		360.0	2.0	
124-03-16	COMPACTION	80	2	75.0	0.0	51.7	6.2	1.8	0.4	1500.0	2.8	0.3
124-03-16	TOLERANCE	80	2	69.0	8.5	50.8	14.6	1.9	0.8	1500.0	3.6	1.8
124-03-16	TOLERANCE	50	1	63.0		37.2		1.1		6400.0	4.8	
137-02-07	NONE	100	1	90.0		82.7		3.8		0.0	0.8	
137-02-07	COMP & TOL	80	2	86.5	4.9	85.7	0.3	4.2	0.2	0.0	0.7	0.3
193-01-14	NONE	100	3	81.0	11.5	73.4	8.3	3.3	0.3	240.0	5.2	2.3
193-01-14	TOLERANCE	80	7	85.1	5.0	73.7	5.5	3.2	0.4	0.0	5.2	2.6
194-02-27	NONE	100	1	90.0		75.9		3.2		0.0	0.8	
194-02-27	TOLERANCE	50	1	90.0		64.3		2.3		0.0	1.0	
195-01-07	NONE	100	1	85.0		72.6		3.1		0.0	5.0	
195-01-07	TOLERANCE	80	3	81.7	5.8	71.4	4.1	3.1	0.3	0.0	6.4	0.9
243-01-09	NONE	100	3	91.7	2.9	79.7	2.6	3.5	0.1	0.0	1.5	0.3
243-01-09	COMPACTION	95	4	90.0	0.0	79.3	4.1	3.5	0.4	0.0	1.3	0.1
243-01-09	COMPACTION	80	4	93.8	2.5	81.8	1.7	3.6	0.1	0.0	1.4	0.3

TABLE 11 (Cont'd): Average & Variability of Performance Data on Selections by Year

YEAR=84

PROJECT NUMBER	DEFICIENCY	PERCENT PAY	NUMBER OF SECTIONS	DEFECT RATING MEAN	DEFECT RATING STD	BASIC RATING MEAN	BASIC RATING STD	MAYS MEAN	MAYS STD	PATCHING	RUTTING MEAN	RUTTING STD
263-01-09	NONE	100	0									
263-01-09	COMPACTION	80	0									
383-01-03	NONE	100	2	86.5	4.9	76.6	2.2	3.4	0.0	0.0	2.3	0.7
383-01-03	TOLERANCE	95	3	88.3	2.9	72.3	0.2	3.0	0.1	2.7	1.9	0.4
383-01-03	TOLERANCE	80	4	82.8	5.9	68.9	2.8	2.9	0.0	123.0	2.2	0.3
417-01-02	NONE	100	4	90.0	0.0	82.6	2.0	3.8	0.2	0.0	2.5	0.6
417-01-02	COMP & STAB	95	1	85.0		88.9		4.4		0.0	3.1	
417-01-02	COMPACTION	95	3	90.0	0.0	84.8	3.2	3.9	0.3	0.0	2.1	0.4
417-01-02	COMPACTION	80	1	90.0		84.9		4.0		0.0	2.1	
417-01-02	TOLERANCE	95	2	84.0	8.5	82.0	5.4	3.8	0.4	0.0	3.3	1.0
417-01-02	TOLERANCE	80	1	95.0		73.9		3.6		0.0	3.8	
810-19-11	NONE	100	2	87.5	3.5	77.6	0.8	3.4	0.1	0.0	4.8	1.3
810-19-11	COMPACTION	95	3	88.3	2.9	77.1	5.0	3.4	0.3	0.0	4.7	0.2
810-19-11	TOLERANCE	80	1	90.0		80.5		3.4		0.0	4.3	
810-19-11	TOLERANCE	50	1	90.0		75.9		3.2		0.0	5.3	
850-08-06	NONE	100	1	78.0		73.9		3.5		0.0	5.2	
850-08-06	STABILITY	50	1	78.0		70.7		3.2		120.0	6.2	

TABLE 11 (Cont'd): Average & Variability of Performance Data on Sections by Year

YEAR=85

PROJECT NUMBER	DEFICIENCY	PERCENT PAY	NUMBER OF SECTIONS	DEFECT RATING MEAN	DEFECT RATING STD	BASIC RATING MEAN	BASIC RATING STD	MAYS MEAN	MAYS STD	PATCHING	RUTTING MEAN	RUTTING STD
008-09-20	NONE	100	0									
008-09-20	COMPACTION	95	0									
008-09-20	TOLERANCE	95	0									
013-10-34	NONE	100	2	87.5	3.5	87.8	6.0	4.4	0.4	0.0	4.3	1.6
013-10-34	COMPACTION	95	1	85.0		88.4		4.6		0.0	3.2	
013-10-34	COMPACTION	80	3	85.0	0.0	85.8	2.3	4.3	0.2	0.0	4.4	0.5
016-01-12	NONE	100	0									
016-01-12	COMP & TOL	95	0									
016-01-12	COMPACTION	95	0									
016-01-12	STABILITY	95	0									
016-01-12	STABILITY	80	0									
016-01-12	TOLERANCE	50	0									
023-06-19	NONE	100	2	77.5	3.5	68.5	4.0	3.0	0.5	0.0	9.5	0.5
023-06-19	COMPACTION	80	2	85.0		68.9	1.8	2.8	0.1	0.0	6.2	0.2
036-03-11	NONE	100	2	87.5	3.5	74.1	2.7	3.1	0.4	0.0	3.0	1.1
036-03-11	COMPACTION	80	2	85.0	0.0	63.2	2.8	2.3	0.2	1185.0	4.2	0.2
036-03-11	STABILITY	95	6	85.8	4.9	69.2	9.1	2.9	0.7	316.0	3.6	1.6
047-03-09	NONE	100	1	85.0		69.0		2.8		0.0	4.6	
047-03-09	COMPACTION	80	1	85.0		67.7		2.7		0.0	4.4	
050-06-49	NONE	100	2	73.0	7.1	62.8	4.7	2.7	0.1	162.5	2.1	0.1
050-06-49	COMPACTION	95	5	78.4	6.6	67.1	5.9	2.9	0.4	30.8	1.9	0.4
050-06-49	STABILITY	95	3	73.0	8.7	66.5	8.4	3.0	0.4	43.3	2.3	0.6
050-06-49	TOLERANCE	80	2	70.5	3.5	60.5	0.1	2.6	0.1	12.5	2.6	0.0
052-08-24	NONE	100	5	86.0	2.2	78.0	4.0	3.5	0.3	0.0	3.3	1.0
052-08-24	COMPACTION	95	10	87.0	3.5	76.7	4.7	3.4	0.4	2.0	3.3	1.3
052-08-24	COMPACTION	80	2	82.5	3.5	77.6	2.4	3.6	0.1	5.0	3.8	0.7
066-02-15	NONE	100	3	86.7	5.8	80.0	9.3	3.7	0.6	0.0	4.3	3.6
066-02-15	COMPACTION	95	3	85.0	5.0	77.5	4.2	3.5	0.3	0.0	5.0	3.1
066-02-15	COMPACTION	80	4	88.8	2.5	79.3	2.9	3.5	0.3	0.0	2.9	1.1
067-05-15	NONE	100	2	90.0	0.0	83.7	3.0	3.9	0.3	0.0	1.8	0.0
067-05-15	COMPACTION	95	2	90.0	0.0	78.2	1.6	3.4	0.1	0.0	2.7	0.5
067-05-15	COMPACTION	80	2	90.0	0.0	83.2	0.8	3.8	0.1	0.0	1.9	0.5
124-03-16	NONE	100	0									
124-03-16	COMPACTION	80	0									
124-03-16	TOLERANCE	80	0									
124-03-16	TOLERANCE	50	0									
137-02-07	NONE	100	1	90.0		84.9		4.0		0.0	2.0	
137-02-07	COMP & TOL	80	2	90.0	0.0	88.4	0.7	4.3	0.1	0.0	2.2	0.5
193-01-14	NONE	100	3	78.3	7.6	68.9	9.5	3.0	0.6	240.0	7.9	3.1
193-01-14	TOLERANCE	80	7	80.4	5.0	69.1	5.2	3.0	0.4	0.9	6.7	1.6
194-02-27	NONE	100	1	83.0		68.2		2.8		0.0	2.8	
194-02-27	TOLERANCE	50	1	90.0		61.5		2.1		0.0	2.5	
195-01-07	NONE	100	1	80.0		65.7		2.7		0.0	7.4	
195-01-07	TOLERANCE	80	3	75.3	4.0	66.5	3.8	2.9	0.2	0.0	8.7	0.8
243-01-09	NONE	100	3	91.7	2.9	80.5	3.4	3.5	0.2	0.0	1.7	0.9
243-01-09	COMPACTION	95	4	84.8	3.5	75.0	3.5	3.3	0.2	0.0	1.4	0.6
243-01-09	COMPACTION	80	4	92.5	2.9	80.4	1.2	3.5	0.0	0.0	1.5	0.3

TABLE 11 (Cont'd): Average & Variability of Performance Data on Sections by Year

YEAR=85

PROJECT NUMBER	DEFICIENCY	PERCENT PAY	NUMBER OF SECTIONS	DEFECT RATING MEAN	DEFECT RATING STD	BASIC RATING MEAN	BASIC RATING STD	MAYS MEAN	MAYS STD	PATCHING	RUTTING MEAN	RUTTING STD
263-01-09	NONE	100	0									
263-01-09	COMPACTION	80	0									
383-01-03	NONE	100	2	78.0	0.0	69.0	2.4	3.0	0.2	15.0	3.2	0.6
383-01-03	TOLERANCE	95	3	80.3	8.7	65.4	4.3	2.7	0.2	11.3	2.8	0.5
383-01-03	TOLERANCE	80	4	71.8	4.8	62.3	6.7	2.7	0.5	118.8	2.8	0.1
417-01-02	NONE	100	4	86.3	2.5	77.4	4.4	3.5	0.3	0.0	3.6	1.2
417-01-02	COMP & STAB	95	1	85.0		83.8		3.9		0.0	3.6	
417-01-02	COMPACTION	95	3	90.0	0.0	81.9	5.3	3.7	0.5	0.0	2.5	0.3
417-01-02	COMPACTION	80	1	85.0		77.1		3.5		0.0	3.6	
417-01-02	TOLERANCE	95	2	87.5	3.5	80.4	6.3	3.7	0.4	0.0	3.7	1.6
417-01-02	TOLERANCE	80	1	90.0		73.8		3.2		0.0	3.8	
810-19-11	NONE	100	2	79.0	8.5	68.8	3.7	3.0	0.0	0.0	7.6	1.8
810-19-11	COMPACTION	95	3	82.7	4.0	72.3	5.4	3.2	0.3	0.0	6.9	0.5
810-19-11	TOLERANCE	80	1	90.0		77.1		3.3		0.0	5.8	
810-19-11	TOLERANCE	50	1	73.0		66.2		3.0		0.0	6.9	
850-08-06	NONE	100	1	78.0		73.9		3.5		0.0	4.1	
850-08-06	STABILITY	50	1	68.0		66.0		3.2		88.0	6.2	