

STATE OF FLORIDA



2006 RESILIENT MODULUS OF ROADBED SOILS FACTS & FIGURES

**Research Report
FL/DOT/SMO/07-502**

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STATE MATERIALS OFFICE

TABLE OF CONTENTS

TABLE OF CONTENTS.....	i
PAVEMENT MATERIAL SYSTEMS	ii
EXECUTIVE SUMMARY	iii
PART I: OVERVIEW.....	1
INTRODUCTION	2
Deflection-Based Techniques	2
USE OF DEFLECTION-BASED DEVICES: FLORIDA HISTORICAL PERSPECTIVE.....	2
Benkelman Beam.....	2
Dynalect.....	3
Falling Weight Deflectometer.....	4
FLORIDA TESTING PROCEDURE.....	5
Deflection Testing.....	5
Prediction of In-Place Moduli of Embankment Material	6
PROJECT TESTING REQUESTS.....	7
Field Testing Requirements	7
PART II:.....	8
REFERENCES	30

PAVEMENT MATERIAL SYSTEMS

The Pavement Material Systems provides the Department with the technical expertise to ensure safe and durable pavement systems. This section interacts and partners with other central and district offices, the Federal Highway Administration, pavement industry, and other stakeholders. To support these goals, presented are the Pavement Material System's Mission, Vision, and Value Statements.

Mission

Make Florida's pavements safer, last longer, and perform better.

Vision

The best pavements in the country.

Values

Do it R.I.T.E (Respect, Integrity, Teamwork, and Excellence), Now!

To learn more about our people, functions, and services, we invite you to visit us at:

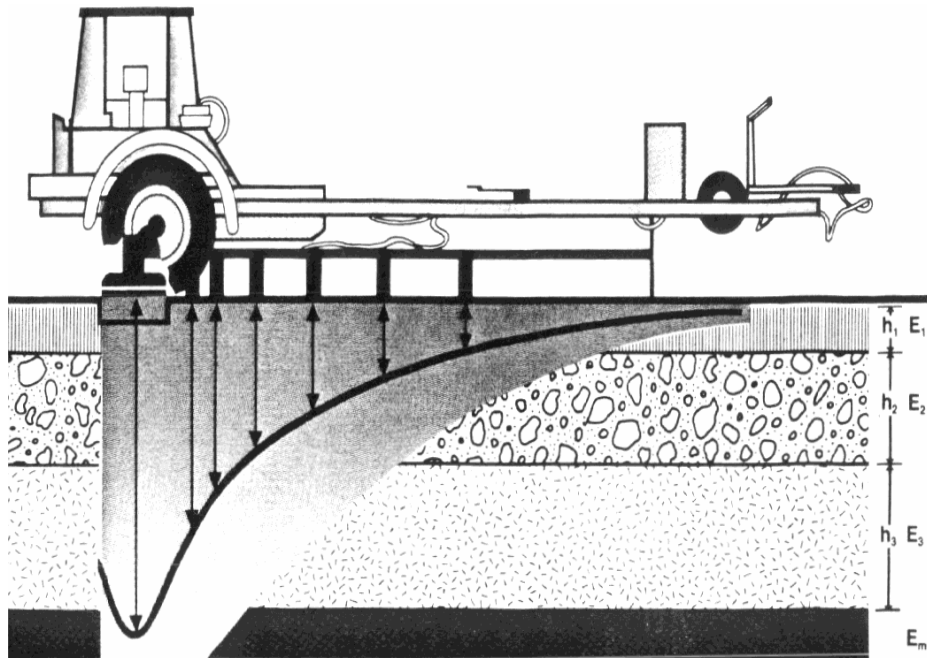
<http://www.dot.state.fl.us/statematerialsoffice/pavement/pavementhome.htm>

EXECUTIVE SUMMARY

One of the primary functions of the Non-Destructive Testing Group, a unit of the State Materials Office in Gainesville, Florida, is to characterize the in-situ properties of Florida's roadbed materials for pavement design purposes. The basis for such a characterization is the resilient modulus (M_R). The resilient modulus is a measure of the material elastic property recognizing its certain nonlinear characteristics. It is estimated, in our case, in-place from deflection measurements. This information has been critical to the Department's effort to support informed highway planning, as well as policy and decision making. This requires the apportionment and allocation of funds as well as the determination of appropriate cost-effective strategies to rehabilitate and preserve existing highway transportation infrastructure.

This report is intended to provide information regarding our program testing procedures, to report current and past M_R values on a statewide basis, and to identify historical regional M_R trends in the various Districts.

PART I: OVERVIEW



INTRODUCTION

One of the primary functions of the Non-Destructive Testing (NDT) program is to characterize the in-situ properties of the Florida's roadbed (embankment) materials for pavement design purposes. The basis for such a characterization is the resilient modulus (M_R). The resilient modulus is a measure of a material's elastic property recognizing its nonlinear characteristics. It is directly estimated, in our case, in-place using deflection-based techniques.

Deflection-Based Techniques

Due to their speed and ease of operation deflection-based techniques are being widely used in the evaluation of the structural integrity and for estimating the elastic moduli of in-place pavement systems. The deflections can be non-destructively induced and measured using various commercially available devices. These devices are designed based on a variety of loading modes and measuring sensors. The loading modes include static, steady-state vibratory, and impulse loading; while the resulting responses are measured with sensors that include geophones, accelerometers, and linear voltage differential transducers (LVDT).

USE OF DEFLECTION-BASED DEVICES: FLORIDA HISTORICAL PERSPECTIVE

The Department implemented the use of the Falling Weight Deflectometer (FWD) in the early 1980s. It has, however for pavement design purposes, initially specified the use of a Benkelman Beam, and then the use of a vibratory-type device (Dynalect).

Benkelman Beam

The Benkelman Beam was the first deflection-based device used in Florida for pavement design purposes. It was developed by A.C. Benkelman during the Western Association of State Highway Officials (WASHO) Road Test. It consists of a measurement probe hinged to a three-legged reference beam, as schematically illustrated in Figure 1. The probe is positioned between the rear dual tires of a truck, and the rebound deflection is measured by a dial placed on the reference beam when the truck is slowly driven away. Although this method is simple and relatively inexpensive, it is also slow and labor intensive. In addition, the measurements are usually limited to maximum deflections only and are produced under unrealistic load durations. Furthermore, the leveled position of the reference beam may, in some cases, be unduly influenced by the deflection basin.

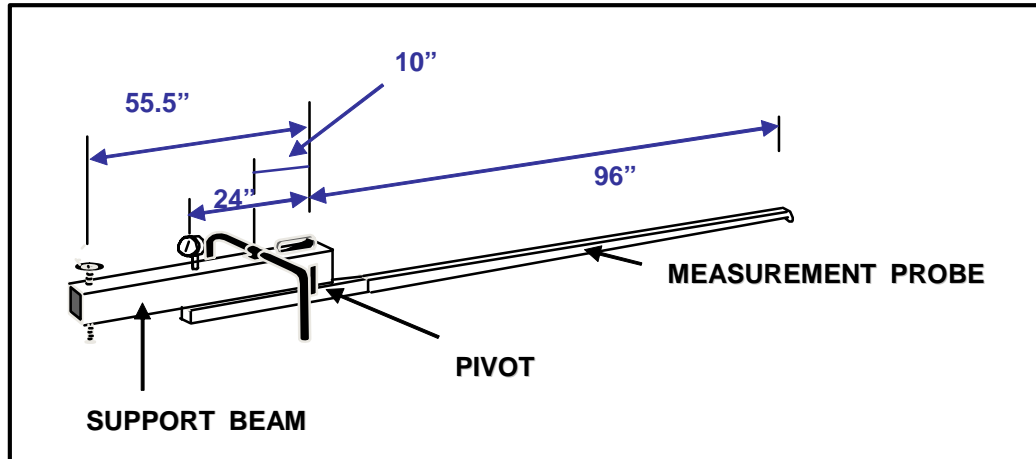


Figure 1. Schematic Illustration of a Benkelman Beam

Dynaflect

In mid-1980s, the Department switched to a steady-state vibratory device, known as Dynaflect. The Dynaflect consists of a relatively lightweight (2,000 lbs.) two-wheel trailer equipped with an automated data acquisition and control system. The deflections are generated by a combination of a sinusoidal dynamic load and the static weight of the trailer. The dynamic loading of a pavement surface is done using two counter-rotating eccentric steel weights. These steel weights, rotating at a constant frequency of eight cycles per second (8 Hz), generate a peak-to-peak dynamic load of approximately 1000 pounds in magnitude. The resulting deflections of a pavement system are measured with geophones. The geophones are electromechanical devices that use a magnetic field to produce an electrical impulse. These geophones are suspended, at set intervals, from the tongue of the trailer.

A primary advantage of the Dynaflect over a static-loading device, such as Benkelman beam, is that a reference frame is not required. In addition, the Dynaflect generates a complete deflection basin at each test location. However, the fixed magnitude and the loading frequency are its major limitations. A photographic illustration of a Dynaflect is given in Figure 2.



Figure 2. Dynaflect Device

Falling Weight Deflectometer

The Falling Weight Deflectometer (FWD) consists of a trailer mounted, falling weight system capable of loading a pavement in a manner that simulates actual wheel loads in both magnitude and duration. An impulse load is generated by dropping a mass from a specified height. The mass is raised hydraulically, then released by an electrical signal and dropped with a buffer system on a 12-inch diameter rigid steel plate. A set of springs between the falling mass and hit bracket mounted above the load cell buffers the impact by decelerating the mass. A thin, neoprene pad rests between the plate and the pavement surface to allow for an even load distribution. When a weight is dropped, an impulse load enters the pavement system creating body and surface waves. The resulting vertical velocity of the pavement surface is picked up through a series of sensors located along the centerline of the trailer. These signals are then used to obtain the maximum deflection from each geophone through analog integrations. A single analog integration of a signal generates the deflection-time trace. The deflection measurements are recorded by the data acquisition system typically located in the tow vehicle. Figure 3 provides a schematic illustration of the FWD loading principle.

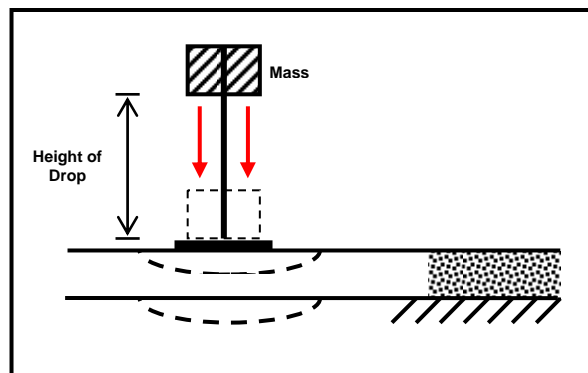


Figure 3. FWD Loading Principle

The use of the Falling Weight Deflectometer (FWD) testing for pavement design and rehabilitation purposes was first introduced by AASHTO in the 1993 Pavement Design Guide. In recent years, the FWD has gained further acceptance among highway agencies because of its versatility, reliability, and ease of use. The FWD loading is believed to better simulate the effects of traffic on pavement structures. Therefore as of March 2001, the Department has implemented the use of FWD for all pavement-related evaluations, including design activities. A photographic illustration of the FWD is shown in Figure 4.



Figure 4. Falling Weight Deflectometer

FLORIDA TESTING PROCEDURE

Deflection Testing

When testing with the FWD for pavement design purposes, two 9-kip load drops are used. However, only the deflection data resulting from the last loadings are considered for roadbed soil characterization. It is generally believed that the deflection data produced under the first impact load may not always be representative of the true pavement response (2). Therefore, the first load is mainly used for the loading plate “seating” purposes. All the deflection data are obtained using the sensor configuration shown in Figure 5.

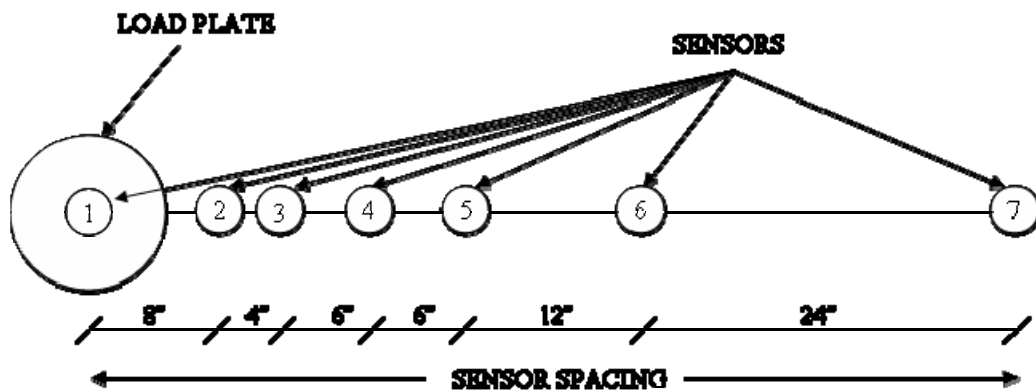


Figure 5. Schematic Illustration of Sensor Configuration

Prediction of In-Place Moduli of Embankment Material

The current procedure for predicting the insitu strength of the embankment material of a pavement system is based on the procedure described in the *AASHTO Guide for Design of Pavements Structures* calibrated to Florida conditions (3). This method was originally proposed by Ullidtz (4), and is based on Boussinesq's theory on a concentrated load applied on an elastic half-space (5). In this procedure, the modulus of an embankment material is estimated as follows:

$$E_r = 0.24P / d_r \cdot r \quad (2)$$

Where:

E_r = Subgrade modulus, in psi;

P = Applied load, in pounds;

d_r = Deflection measured at a radial distance r , in inches; and

r = Radial distance at which the deflection is measured, in inches.

The *AASHTO Design Guide* suggests the deflection used in the above equation be measured as close as possible to the loading plate and yet be sufficiently far from the load. This is suggested to satisfy the assumption that, at points sufficiently distant from the load, the deflections measured at the pavement surface are mainly due to the embankment deformation, and are also independent of the load plate size. Florida's previous experience with non-destructive deflection testing has shown that the pavement deflections measured at 36 inches away from the load are appropriate for the determination of the embankment moduli. Therefore, only the pavement deflections measured at 36 inches ($r = 36$ inches in equation 2) away from the load are considered for design purposes in the Florida procedure. Furthermore, within a project limits, the resilient modulus (M_r) value is reported based on the mean deflection plus two standard deviations ($d_r = \text{mean deflection} + 2 \sigma$).

PROJECT TESTING REQUESTS

To request a project to be tested, simply contact:

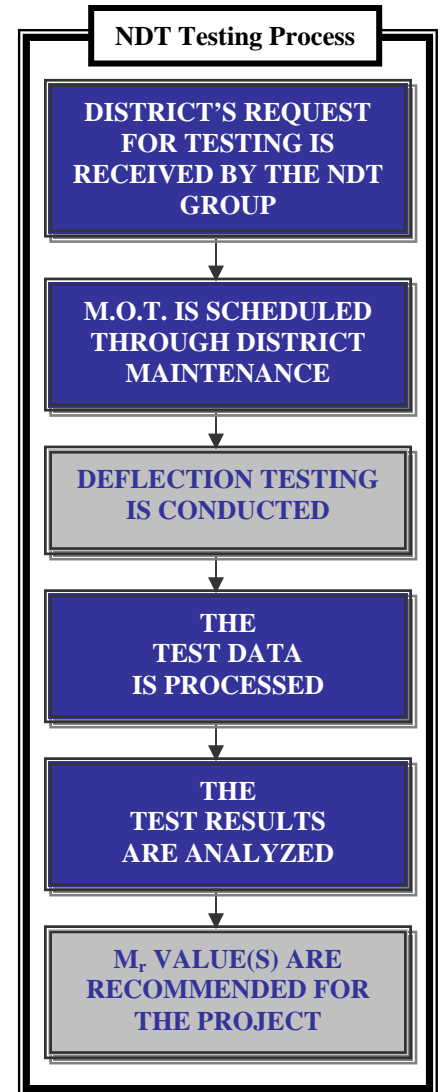
Charles Holzschuher
Nondestructive Testing
charles.holzschuher@dot.state.fl.us
Fax: (352) 955-6345

NOTE: *Please Carbon Copy your District Maintenance Engineer for Maintenance of Traffic.*

Include the following information within the body of the request:

- 1.) Roadway Id
(e.g. SR 91, 91470000, FL Turnpike)
- 2.) County Name
(e.g. Okeechobee)
- 3.) Project Limits
(e.g. MP 181.7 to MP 188.9)
- 4.) Exceptional Needs
(e.g. Extend testing 1000 ft past Begin/End segment limits.)
- 5.) Project Location Map
- 6.) Recommended Due Date
- 7.) MOT, Traffic Restrictions

After the request has been received by the NDT group, the District Maintenance Office will schedule the maintenance of traffic at the request of the SMO and deflection testing will be conducted. The flow chart to the right details the project testing process.



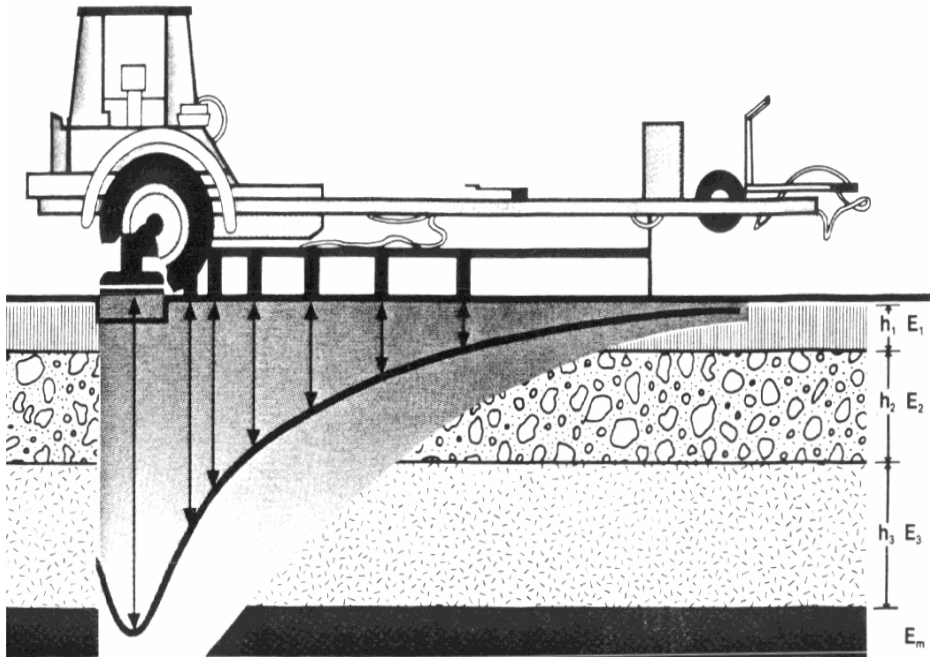
For coordination purposes, it is best to provide the State Materials Office with as much time as possible by submitting any testing requests immediately after the work program has been updated and the project schedules are set. In order to ensure that all requests may be dealt with in a timely and efficient manner, a minimum of 6 months is required by the State Materials Office for testing. Furthermore, an annual district-wide listing of test projects is preferred to properly schedule crew travel times and equipment.

Field Testing Requirements

Generally testing is only conducted on 2-lane projects greater than 1 mile long, or on multi-lane projects greater than 0.5 mile long.

Testing frequency for 2-lane projects is conducted at 28 tests / mile in one direction. For multi-lane projects testing is conducted at 14 tests / mile / each direction.

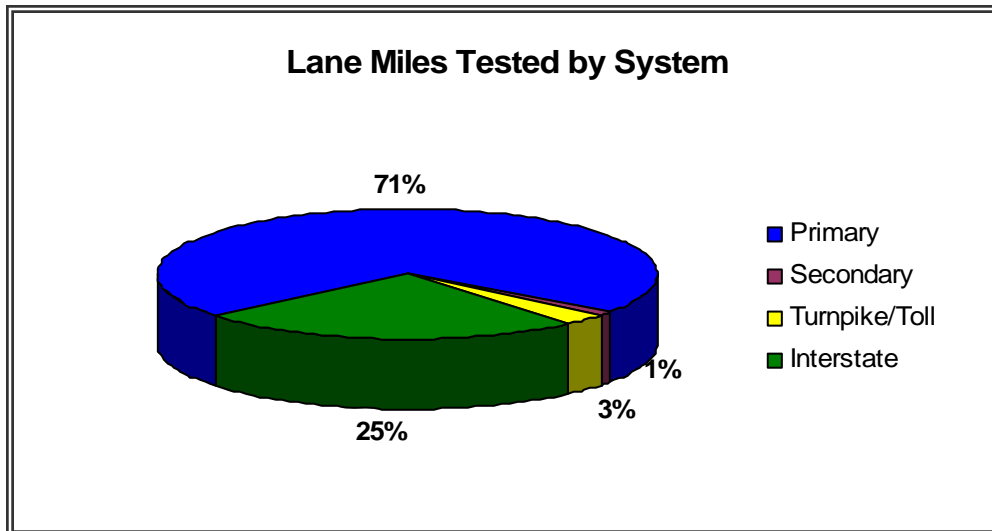
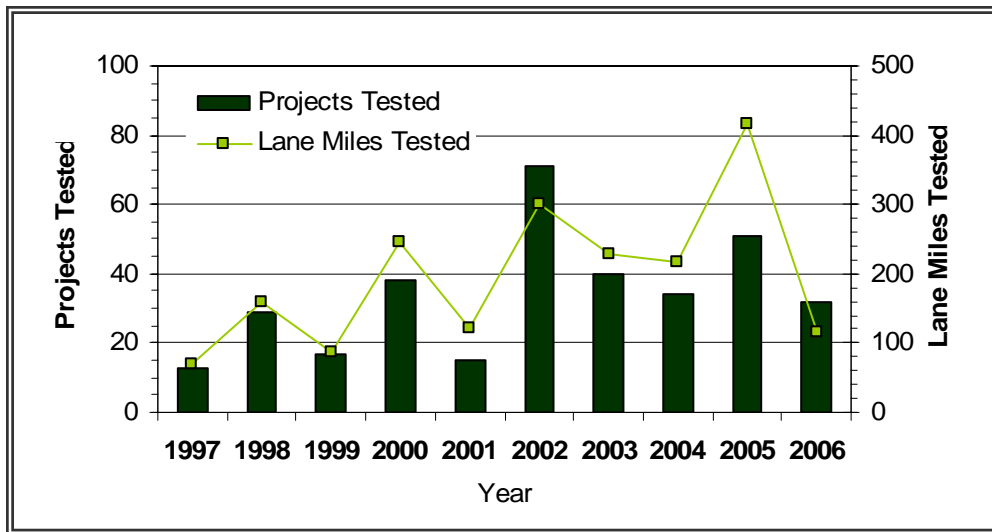
PART II:
FACTS & FIGURES¹



¹ Project resilient modulus values presented are the lowest values recommended for each project. Some projects may have multiple resilient modulus values.

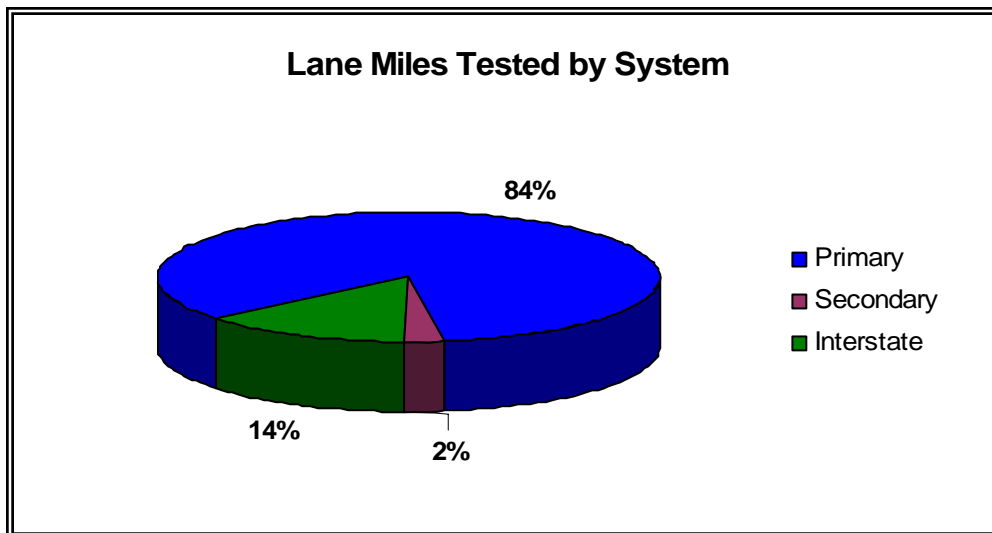
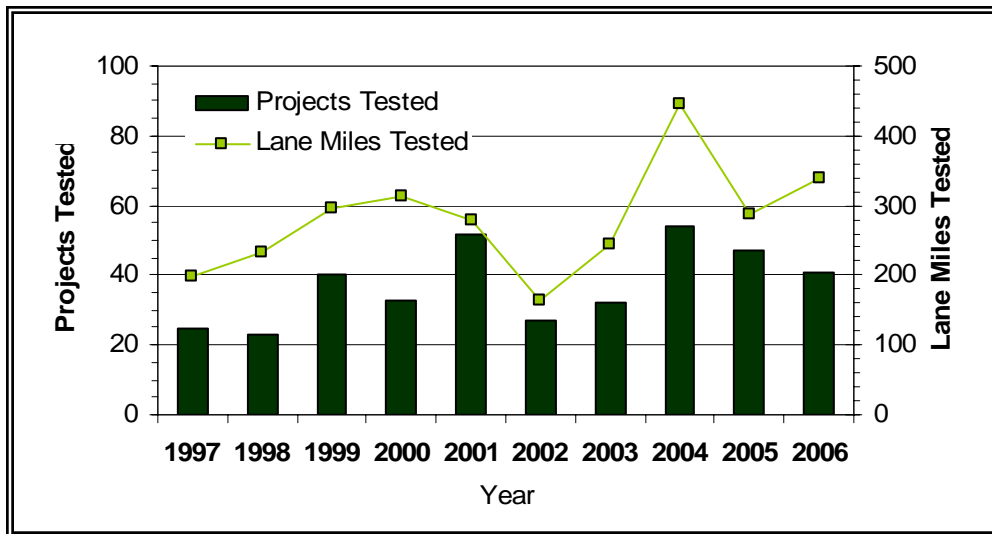
DISTRICT 1 TEN YEAR PRODUCTION SUMMARY

	Primary		Secondary		Turnpike/Toll		Interstate		All Systems	
	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles
1997	12	61.473	0	0.000	0	0.000	1	8.692	13	70.165
1998	27	129.431	0	0.000	0	0.000	2	29.940	29	159.371
1999	15	74.338	2	11.510	0	0.000	0	0.000	17	85.848
2000	33	201.881	0	0.000	0	0.000	5	44.240	38	246.121
2001	11	57.697	0	0.000	1	14.000	3	48.970	15	120.667
2002	68	243.512	0	0.000	0	0.000	3	58.212	71	301.724
2003	32	154.144	0	0.000	0	0.000	8	74.998	40	229.142
2004	31	174.207	1	3.711	0	0.000	2	38.752	34	216.670
2005	41	258.518	0	0.000	1	42.842	9	115.278	51	416.638
2006	28	42.635	0	0.000	0	0.000	4	74.100	32	116.735
Total	298	1397.836	3	15.221	2	56.842	37	493.182	340	1963.081



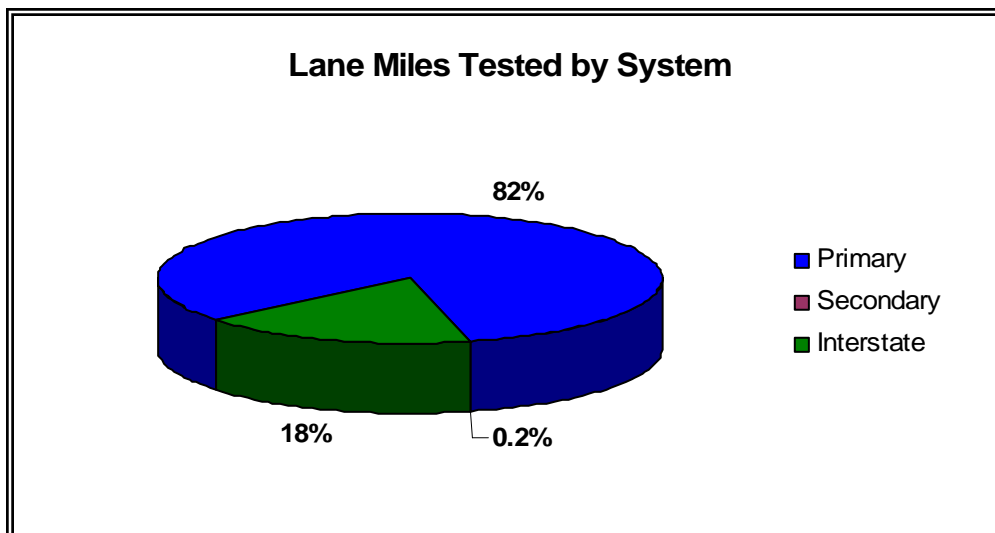
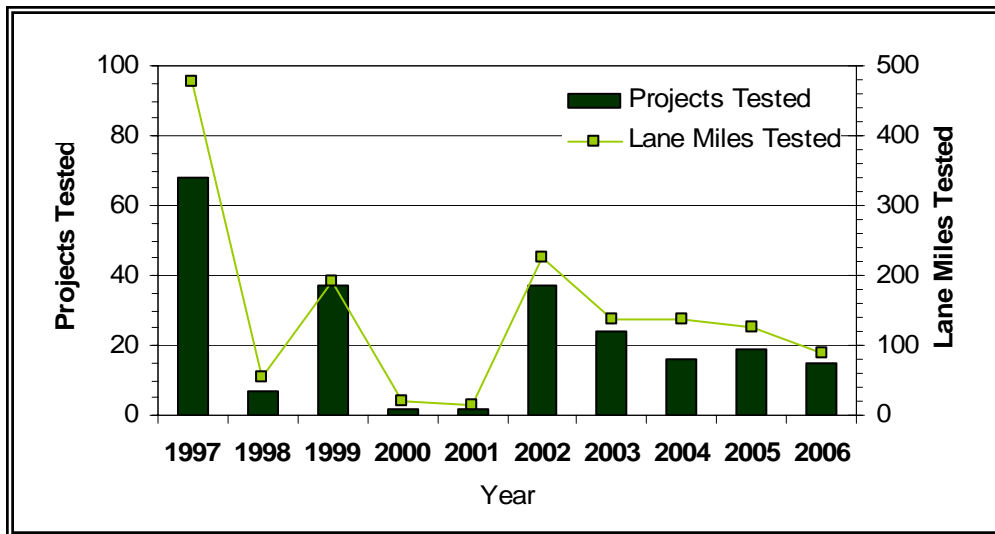
DISTRICT 2 TEN YEAR PRODUCTION SUMMARY

	Primary		Secondary		Turnpike/Toll		Interstate		All Systems	
	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles
1997	17	101.431	0	0.000	0	0.000	8	89.808	25	199.239
1998	22	223.610	0	0.000	0	0.000	1	9.160	23	233.770
1999	40	296.747	0	0.000	0	0.000	0	0.000	40	296.747
2000	30	254.138	1	6.156	0	0.000	2	49.812	33	313.106
2001	49	243.803	1	6.034	0	0.000	2	27.224	52	280.061
2002	26	153.046	0	0.000	0	0.000	1	8.734	27	162.780
2003	27	166.176	2	8.105	0	0.000	3	65.040	32	244.321
2004	47	332.541	0	0.000	0	0.000	7	105.366	54	444.907
2005	40	250.477	6	27.071	0	0.000	1	1.420	47	285.968
2006	34	292.598	3	19.062	0	0.000	4	20.554	41	339.214
Total	332	2314.567	13	66.428	0	0.000	29	377.118	374	2800.113



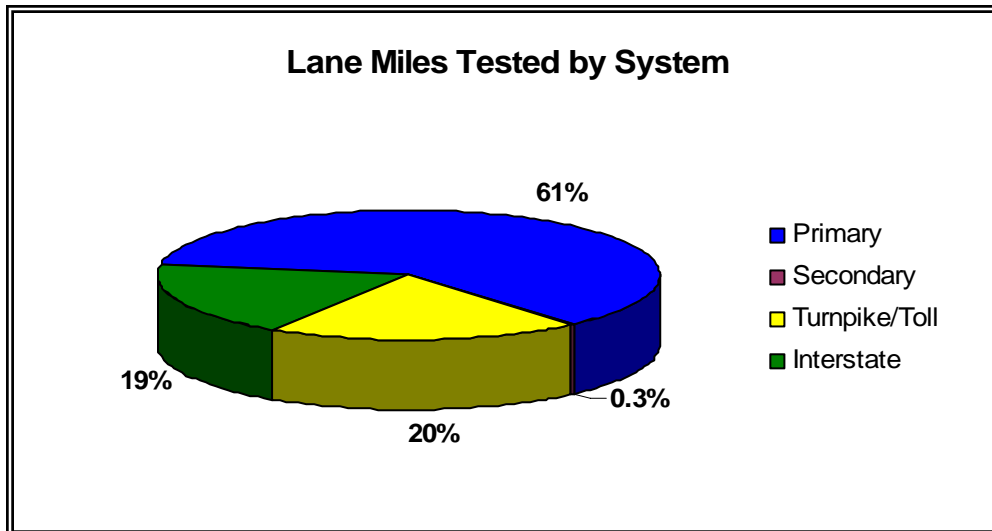
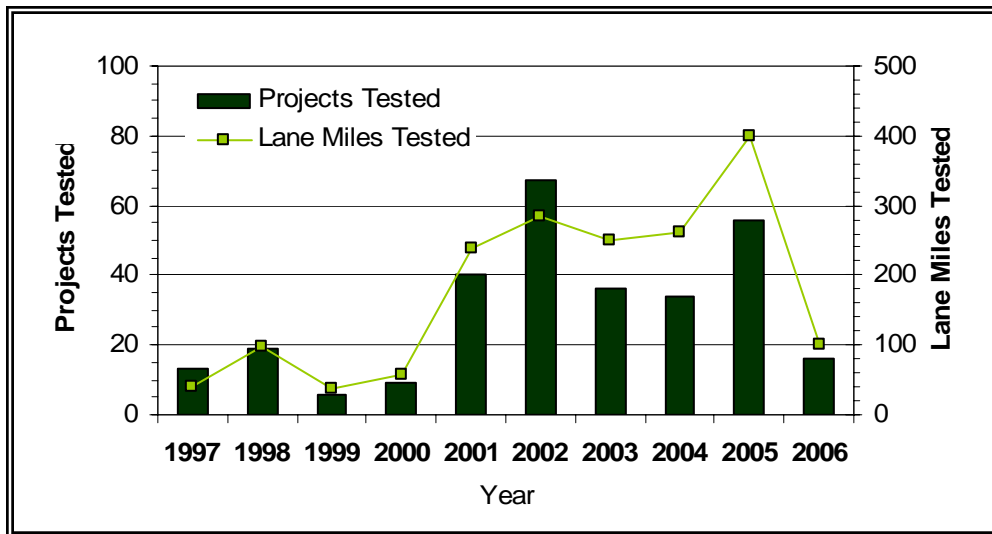
DISTRICT 3 TEN YEAR PRODUCTION SUMMARY

	Primary		Secondary		Turnpike/Toll		Interstate		All Systems	
	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles
1997	59	348.556	0	0.000	0	0.000	9	118.860	68	476.416
1998	7	55.061	0	0.000	0	0.000	0	0.000	7	55.061
1999	31	146.909	0	0.000	0	0.000	6	37.440	37	190.349
2000	2	20.376	0	0.000	0	0.000	0	0.000	2	20.376
2001	2	15.036	0	0.000	0	0.000	0	0.000	2	15.036
2002	37	225.450	0	0.000	0	0.000	0	0.000	37	225.450
2003	23	116.972	0	0.000	0	0.000	1	18.332	24	136.304
2004	13	87.816	1	2.857	0	0.000	2	42.910	16	136.583
2005	17	101.852	0	0.000	0	0.000	2	23.222	19	127.074
2006	14	73.388	0	0.000	0	0.000	1	15.158	15	89.546
Total	205	1191.416	1	2.857	0	0.000	21	255.922	227	1472.195



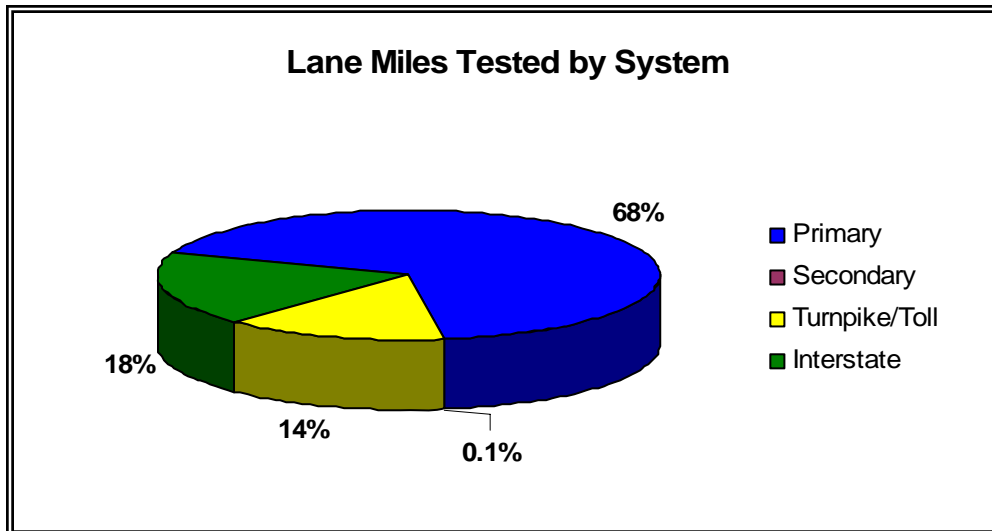
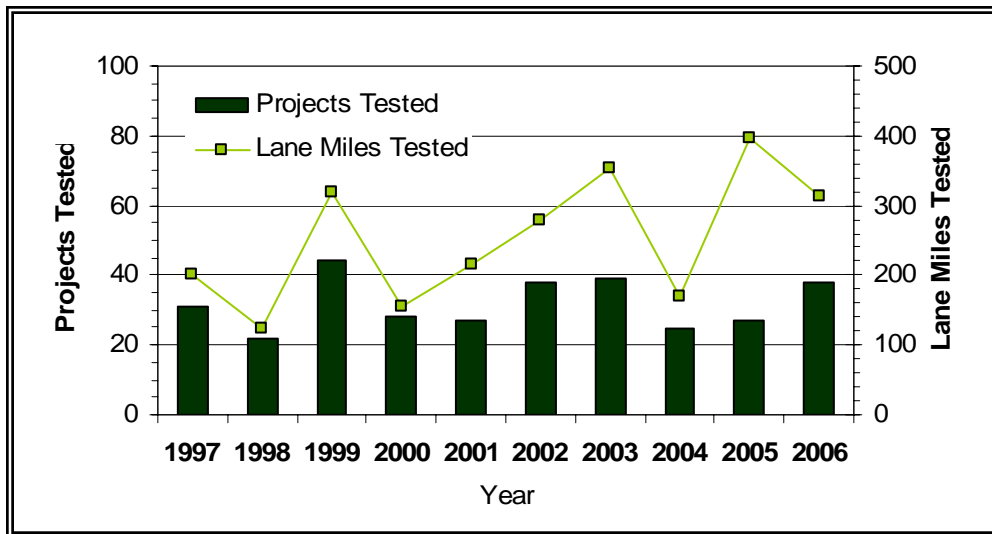
DISTRICT 4 TEN YEAR PRODUCTION SUMMARY

	Primary		Secondary		Turnpike/Toll		Interstate		All Systems	
	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles
1997	13	38.976	0	0.000	0	0.000	0	0.000	13	38.976
1998	15	76.506	0	0.000	2	15.963	2	0.693	19	97.162
1999	5	19.405	0	0.000	1	16.938	0	0.000	6	37.343
2000	6	20.856	0	0.000	0	0.000	3	33.492	9	57.348
2001	28	123.333	0	0.000	5	32.678	7	69.074	40	237.085
2002	58	207.308	1	0.997	2	26.000	6	40.722	67	284.027
2003	28	119.843	0	0.000	3	62.200	5	60.570	36	250.613
2004	29	157.283	0	0.000	5	99.708	0	0.000	34	261.991
2005	50	249.376	1	0.864	2	92.252	3	52.102	56	400.594
2006	9	27.138	2	2.992	0	0.000	5	62.794	16	99.924
Total	241	1040.024	4	4.853	20	345.739	31	319.447	296	1765.063



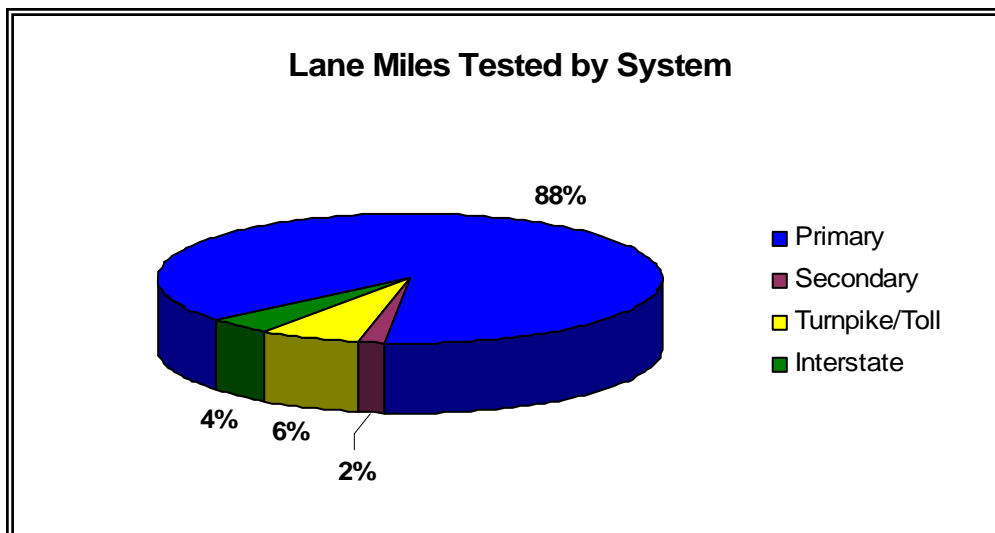
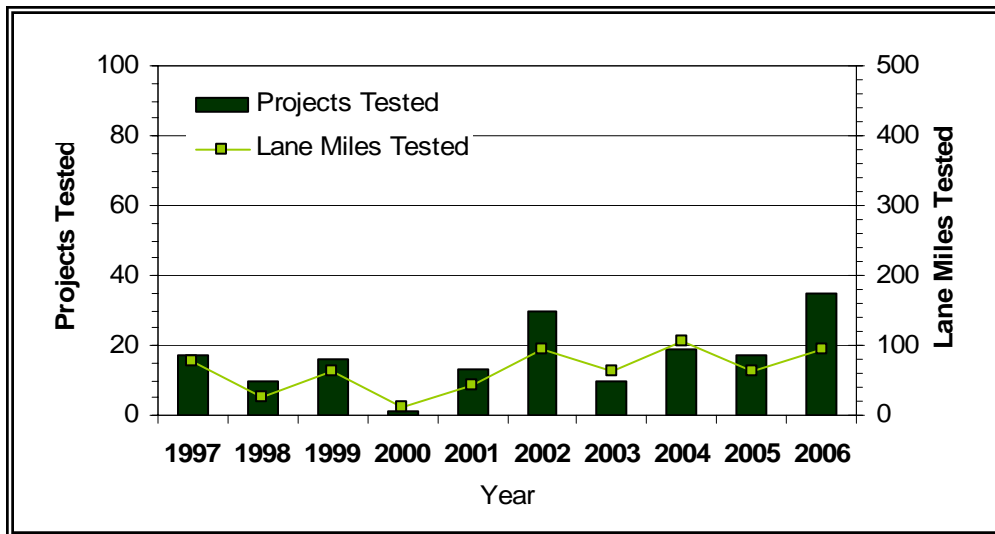
DISTRICT 5 TEN YEAR PRODUCTION SUMMARY

	Primary		Secondary		Turnpike/Toll		Interstate		All Systems	
	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles
1997	29	182.183	0	0.000	0	0.000	2	15.900	31	200.083
1998	18	105.613	0	0.000	0	0.000	4	15.012	22	124.625
1999	32	218.163	0	0.000	7	36.439	5	51.556	44	318.158
2000	18	92.273	1	1.754	5	20.160	4	30.416	28	154.603
2001	20	146.606	0	0.000	3	10.960	4	52.092	27	216.658
2002	35	251.763	0	0.000	3	23.568	0	0.000	38	278.331
2003	28	155.280	1	0.554	4	73.914	6	111.872	39	352.620
2004	24	140.590	0	0.000	0	0.000	1	27.890	25	169.480
2005	23	193.776	0	0.000	2	167.434	2	32.714	27	397.924
2006	30	169.53	0	0.000	1	21.340	7	115.096	38	313.966
Total	257	1655.777	2	2.308	25	353.815	35	452.548	319	2526.448



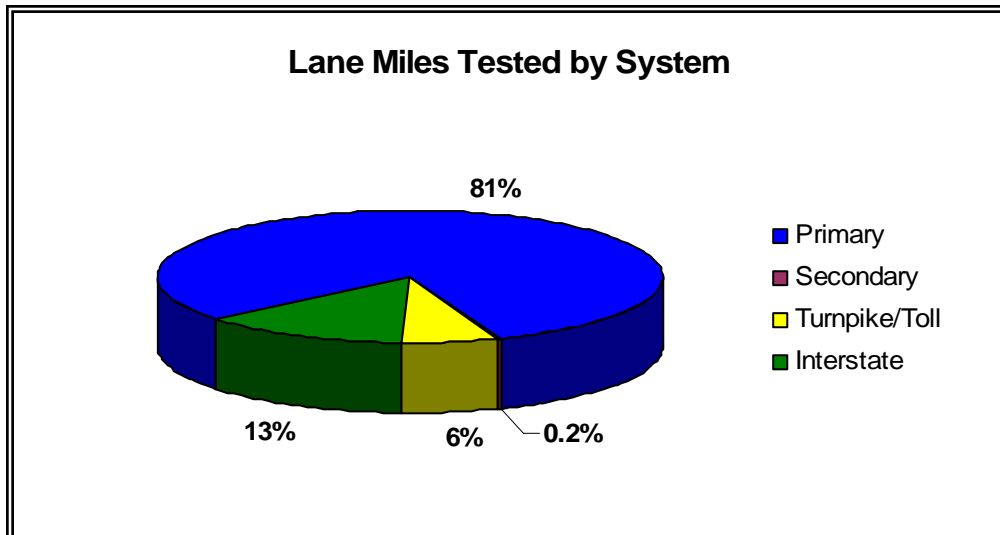
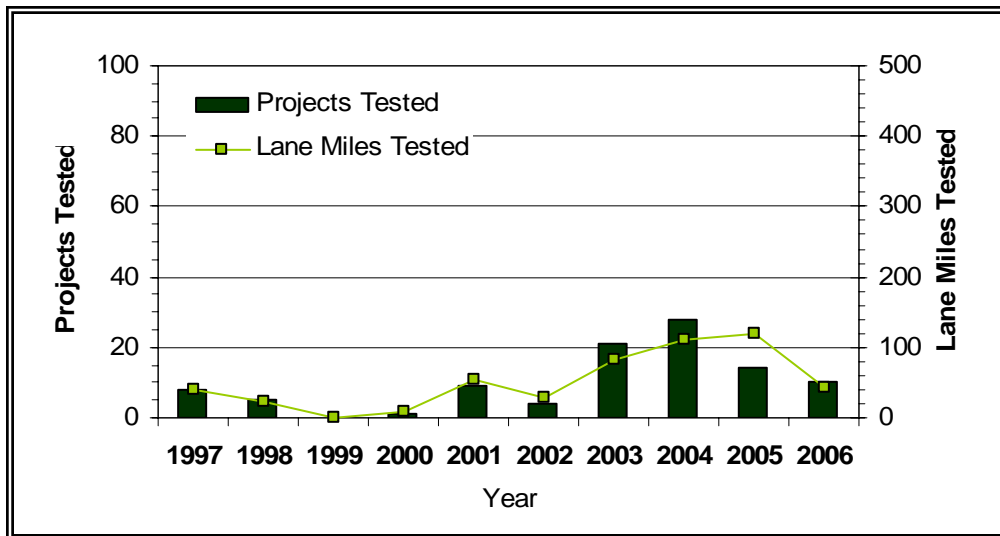
DISTRICT 6 TEN YEAR PRODUCTION SUMMARY

	Primary		Secondary		Turnpike/Toll		Interstate		All Systems	
	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles
1997	17	78.077	0	0.000	0	0.000	0	0.000	17	78.077
1998	10	25.904	0	0.000	0	0.000	0	0.000	10	25.904
1999	16	62.036	0	0.000	0	0.000	0	0.000	16	62.036
2000	1	12.715	0	0.000	0	0.000	0	0.000	1	12.715
2001	12	38.662	0	0.000	0	0.000	1	4.414	13	44.076
2002	29	82.816	1	11.065	0	0.000	0	0.000	30	94.881
2003	8	53.317	0	0.000	0	0.000	2	8.806	10	64.123
2004	18	64.316	0	0.000	1	40.150	0	0.000	19	105.466
2005	16	51.723	0	0.000	0	0.000	1	10.844	17	63.567
2006	34	91.219	0	0.000	0	0.000	1	2.484	35	94.703
Total	161	560.785	1	11.065	1	40.150	5	26.548	168	645.548



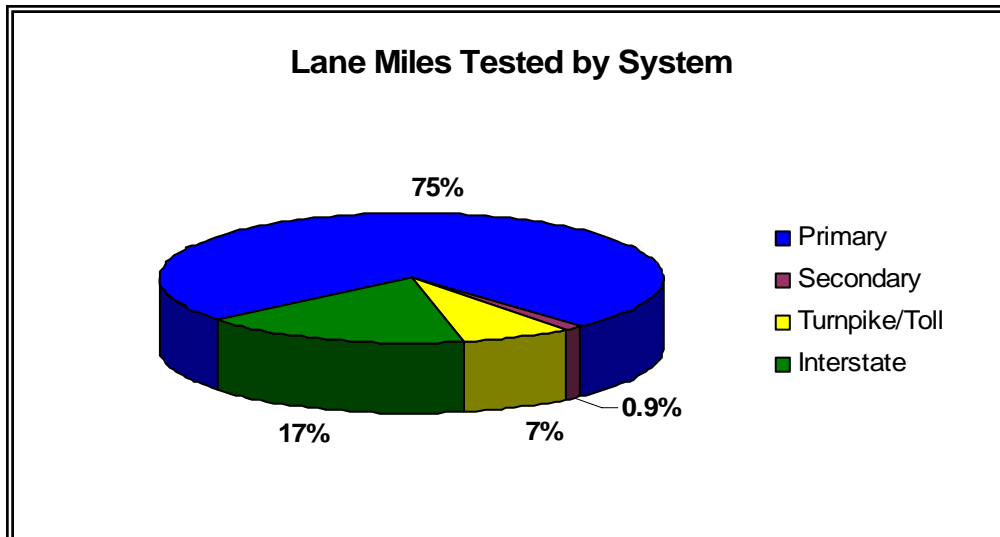
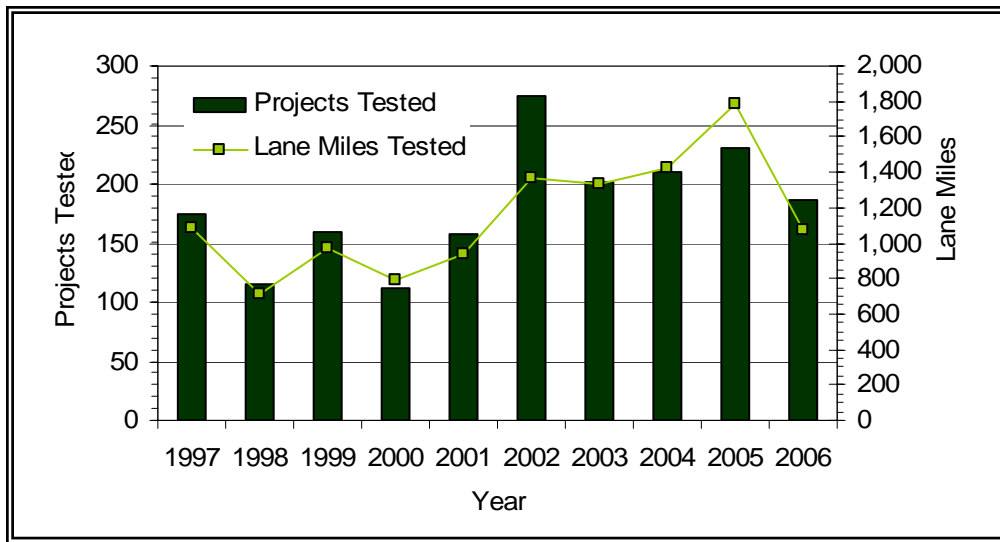
DISTRICT 7 TEN YEAR PRODUCTION SUMMARY

	Primary		Secondary		Turnpike/Toll		Interstate		All Systems	
	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles
1997	8	40.358	0	0.000	0	0.000	0	0.000	8	40.358
1998	5	21.722	0	0.000	0	0.000	0	0.000	5	21.722
1999	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
2000	1	7.746	0	0.000	0	0.000	0	0.000	1	7.746
2001	7	33.069	0	0.000	0	0.000	2	19.464	9	54.533
2002	3	9.433	0	0.000	0	0.000	1	19.232	4	29.665
2003	19	60.655	0	0.000	0	0.000	2	18.898	21	81.553
2004	27	109.088	1	0.800	0	0.000	0	0.000	28	110.888
2005	12	77.517	0	0.000	1	30.660	1	9.400	14	119.577
2006	10	42.635	0	0.000	0	0.000	0	0.000	10	42.635
Total	92	402.223	1	0.800	1	30.660	6	66.994	100	508.677



STATEWIDE TEN YEAR PRODUCTION SUMMARY

	Primary		Secondary		Turnpike/Toll		Interstate		All Systems	
	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles	Projects	Lane Miles
1997	155	851.054	0	0.000	0	0.000	20	233.260	175	1,084.314
1998	104	637.847	0	0.000	2	15.963	9	54.805	115	708.615
1999	139	817.598	2	11.510	8	53.377	11	88.996	160	971.481
2000	91	609.985	2	7.910	5	20.160	14	157.960	112	796.015
2001	129	658.206	1	6.034	9	57.638	19	221.238	158	943.116
2002	256	1173.328	2	12.062	5	49.568	11	126.900	274	1,361.858
2003	165	826.387	3	8.659	7	136.114	27	358.516	202	1,329.676
2004	189	1065.841	3	7.368	6	139.858	12	214.918	210	1,427.985
2005	199	1183.239	7	27.935	6	333.188	19	244.980	231	1,789.342
2006	159	739.143	5	22.054	1	21.340	22	290.186	187	1,072.723
Total	1586	8562.628	25	103.532	49	827.206	164	1991.759	1824	11,485.125



2006 PROJECT LISTING BY DISTRICT

District 1

County Section	Financial Project Number	County	State Road	Travel Direction	Beginning Milepost	Ending Milepost	Test Date	Mr (psi)	Comments
01075	413042-2	Charlotte	93/ I-75	NT	0.000	8.102	10/11/06	32,000	
01075	413042-3	Charlotte	93/ I-75	NTST	8.102	11.700	10/11/06	31,000	
01075	413042-2	Charlotte	93/ I-75	ST	0.000	1.700	10/11/06	26,000	
01075	413042-2	Charlotte	93/ I-75	ST	1.700	8.102	10/11/06	30,000	
03175	N/A	Collier	93	NTST	48.711	54.463	12/27/06	32,000	
05040	193959-2	Glades	78	EB	4.786	9.381	1/31/06	20,000	
05040	193959-3	Glades	78	EB	9.381	13.000	1/31/06	25,000	32K north
05040	193959-3	Glades	78	EB	13.000	14.858	1/31/06	32,000	25K south
05090	193976-2	Glades	29	NB/SB	0.000	2.664	1/10/06	19,000	
06080	194069-2	Hardee	66	EB	0.000	7.770	2/20/06	21,000	
09030001	194425-2	Highlands	17	NB/SB	0.000	1.058	1/31/06	12,000	
12005	195676-2	Lee	884	EB/WB	2.750	6.460	2/21/06	31,000	
12075	413041-2	Lee	93/ I-75	NT	28.390	34.138	10/11/06	32,000	
12075	413041-2	Lee	93/ I-75	ST	28.390	32.400	10/11/06	28,000	
12075	413041-2	Lee	93/ I-75	ST	32.400	34.138	10/11/06	32,000	
13120001	195970-3	Manatee	70A	NB	1.557	3.030	1/30/06	8,000	
91070	196904-2	Okeechobee	70	WT	11.600	13.800	10/10/06	23,000	
91070	196904-3	Okeechobee	70	WT	15.120	20.008	10/10/06	20,000	
91070	196904-2	Okeechobee	70	WT	13.800	15.120	10/10/06	17,000	
91090	196869-2	Okeechobee	700	WB	10.863	17.727	3/30/06	19,000	
16020	196912-2	Polk	600	EB/WB	11.941	14.370	2/1/06	15,000	Westbound mp 11.941 to 13.7 may be AC overlaid PCC
16020	197457-2	Polk	92	EB/WB	2.249	3.056	2/1/06	18,000	
16030	197043-2	Polk	555	NB	26.714	26.900	2/1/06	7,000	Limited deflection data available
16030	197043-2	Polk	555	NB	26.900	27.768	2/1/06	21,000	
16030	197043-2	Polk	555	SB	26.714	27.768	2/1/06	21,000	
16030	197013-2	Polk	35	NB	0.000	2.000	2/1/06	21,000	Also tested in Feb 05
16030	197013-2	Polk	35	NB	2.000	3.170	2/1/06	32,000	Also tested in Feb 05
16030	197013-2	Polk	35	SB	0.000	3.170	2/1/06	25,000	Also tested in Feb 05

2006 PROJECT LISTING BY DISTRICT
District 1

County Section	Financial Project Number	County	State Road	Travel Direction	Beginning Milepost	Ending Milepost	Test Date	Mr (psi)	Comments
16090	197498-2	Polk	17	SB	28.656	29.386	2/2/06	15,000	
16160	197356-2	Polk	559	NB	0.000	2.718	2/2/06	13,000	
16210	197231-2	Polk	700	SB	8.649	10.000	2/27/06	24,000	
16210	197231-2	Polk	700	SB	10.000	14.000	2/27/06	18,000	
16210	197231-2	Polk	700	SB	14.000	16.000	2/27/06	24,000	
16210	197231-2	Polk	700	SB	16.000	17.750	2/27/06	18,000	
16280	197396-2	Polk	542	WB	0.380	3.395	2/1/06	12,000	
16003001	197316-2	Polk	563	NB/SB	8.484	10.000	2/1/06	22,000	
17020	197987-2	Sarasota	45	NB/SB	4.209	7.370	2/21/06	22,000	
17020	197837-2	Sarasota	45	NB/SB	7.370	12.147	2/21/06	20,000	
17030	197883-2	Sarasota	789	NB/SB	0.000	1.500	2/22/06	18,000	
17030	197883-2	Sarasota	789	NB/SB	1.500	2.000	2/22/06	10,000	
17030	197883-2	Sarasota	789	NB/SB	2.000	2.670	2/22/06	22,000	
17080	197834-2	Sarasota	758	WB	1.649	3.052	2/23/06	18,000	
17080	197862-2	Sarasota	758	WB	3.052	5.771	2/23/06	17,000	
17180	198017-3	Sarasota	45A	NB/SB	0.400	3.074	2/21/06	24,000	
17030401	197883-3	Sarasota	789	NB	0.000	0.178	2/23/06	15,000	
17040000	197753-2	Sarasota	780	EB/WB	0.381	4.200	2/22/06	20,000	
17040000	197753-2	Sarasota	780	EB/WB	4.200	5.692	2/22/06	25,000	
17040401	197753-3	Sarasota	780	EB/WB	0.000	0.325	2/22/06	19,000	

2006 PROJECT LISTING BY DISTRICT

District 2

County Section	Financial Project Number	County	State Road	Travel Direction	Beginning Milepost	Ending Milepost	Test Date	Mr (psi)	Comments
26003	207700-2	Alachua	120	ETWT	0.000	2.544	11/30/06	21,000	MP 0.000 to 1.322 was tested on 9/19/05
26020	207745-3	Alachua	329	NB/SB	1.000	1.504	3/30/06	27,000	
26060	207831-1	Alachua	200	NB/SB	20.000	20.600	3/30/06	32,000	
26070	207665-2	Alachua	26	ET	18.890	20.300	8/2/06	23,000	
26070	207665-2	Alachua	26	ET	20.300	21.120	8/2/06	29,000	
26070	207665-2	Alachua	26	WT	18.890	20.500	8/2/06	23,000	
26070	207665-2	Alachua	26	WT	20.500	21.120	8/2/06	18,000	
26080	207355-2	Alachua	20	ETWT	0.000	0.256	8/2/06	20,000	
26090	207669-3	Alachua	24	ETWT	9.953	12.455	11/30/06	20,000	
26130	207831-1	Alachua	26	WB	11.200	12.000	3/30/06	15,000	
26130	207831-1	Alachua	26	WB	12.000	12.200	3/30/06	32,000	
27010	207914-4	Baker	10	ETWT	18.504	21.000	11/8/06	18,000	HMA/PCC from SLMP 11.890 to 18.500, 20.930 to 21.300 and 21.500 to 25.448
27090	213003-4	Baker	8	EB	20.153	22.500	3/1/06	29,000	
27090	213003-4	Baker	8	WB	20.153	22.500	3/1/06	24,000	
27090	213003-4	Baker	8	EB/WB	20.153	22.500	3/1/06	18,000	
27515	406168-2	Baker	CR 250A	NB	0.000	3.500	4/18/06	19,000	
27515	406168-2	Baker	CR 250A	NB	3.500	4.741	4/18/06	14,000	
27560	406167-2	Baker	CR 250	NB	4.936	6.000	4/18/06	11,000	
27560	406167-2	Baker	CR 250	NB	6.000	15.862	4/18/06	11,000	
28020	207956-6	Bradford	100	NT	0.000	11.600	7/25/06	23,000	
71070	208211-5	CLAY	21	NTST	1.855	3.106	7/20/06	24,000	
29010	208366-3	Columbia	10	ETWT	11.954	14.664	10/26/06	22,000	Composite Pavements were present in WBTL from MP12.900 to 13.490 and from MP 13.750 to 14.664. These sections were excluded from the analysis
29070	208402-4	Columbia	25	ST	0.000	4.010	8/15/06	20,000	
72001	213259-1	Duval	9A	NB/SB	20.614	22.189	4/10/06	25,000	

2006 PROJECT LISTING BY DISTRICT
District 2

County Section	Financial Project Number	County	State Road	Travel Direction	Beginning Milepost	Ending Milepost	Test Date	Mr (psi)	Comments
72002	213346-3	Duval	9A	NT	0.000	2.140	11/15/06	32,000	
72002	213346-3	Duval	9A	NT	2.140	5.410	11/15/06	25,000	
72002	213346-3	Duval	9A	ST	0.000	2.140	11/15/06	27,000	
72002	213346-3	Duval	9A	ST	2.140	5.410	11/15/06	21,000	
72016	209250-3	Duval	23	NB	0.000	0.489	5/2/06	21,000	
72017	209138-3	Duval	128	ETWT	0.000	0.600	12/14/06	23,000	
72017	209138-3	Duval	128	ETWT	0.600	1.000	12/14/06	8,000	
72017	209138-3	Duval	128	ET	1.000	1.490	12/14/06	15,000	
72017	209138-3	Duval	128	WT	1.000	1.490	12/14/06	20,000	
72020	213323-5	Duval	9	NB/SB	5.048	5.400	4/10/06	22,000	Also tested 72090 (mp 2.000 to 3.000)
72090	213323-5	Duval	15	EB	2.000	3.000	4/10/06	21,000	Also tested 72020 (mp 5.048 to 5.400)
72090	213323-5	Duval	15	WB	2.000	3.000	4/10/06	15,000	Also tested 72020 (mp 5.048 to 5.400)
72120	209566-2	Duval	228	ET	9.792	12.800	8/3/06	29,000	
72120	209566-2	Duval	228	ET	12.800	16.590	8/3/06	22,000	
72120	209566-2	Duval	228	WT	9.792	16.590	8/3/06	16,000	
72190	209513-3	Duval	212	EB/WB	14.062	14.826	4/10/06	16,000	
72240	208512-2	Duval	A1A	NT	0.000	1.600	9/20/06	16,000	
72240	208512-2	Duval	A1A	NT	1.600	3.451	9/20/06	11,000	
72250	209129-2	Duval	105	ETWT	0.560	1.405	8/3/06	28,000	
72250	209336-5	Duval	105	ETWT	5.975	7.538	12/11/06	14,000	
32010	209804-2	Hamilton	24	NT	0.000	16.538	10/25/06	17,000	
34080	210379-2	Levy	121	NT	0.000	7.130	8/14/06	20,000	
35060	210531-2	Madison	53	NT	1.050	6.700	6/20/06	21,000	
74040	210683-6	Nassau	200	SB	8.513	14.621	11/14/06	15,000	MP 0.000 to 8.513 was tested on 4/26/05, under 210683-4
74110	210597-2	Nassau	A1A	SB	0.000	5.693	5/22/06	16,000	
74130	210597-2	Nassau	A1A	ST	0.807	5.821	9/21/06	16,000	
76050	210024-4	Putnam	20	EB	0.000	6.089	5/23/06	17,000	

2006 PROJECT LISTING BY DISTRICT
District 2

County Section	Financial Project Number	County	State Road	Travel Direction	Beginning Milepost	Ending Milepost	Test Date	Mr (psi)	Comments
76050	210024-5	Putnam	20	EB	6.089	10.785	6/27/06	19,000	
76110	210014-2	Putnam	100	EB	0.000	7.000	6/27/06	19,000	
76110	210014-2	Putnam	100	EB	7.000	8.000	6/27/06	8,000	
76110	210014-2	Putnam	100	EB	8.000	14.000	6/27/06	19,000	
76110	210014-2	Putnam	100	EB	14.000	18.000	6/27/06	10,000	
76110	210014-2	Putnam	100	EB	18.000	21.425	6/27/06	22,000	
78005	409076-1	St Johns	CR A1A	NB	0.000	3.395	4/11/06	17,000	
78001	210404-3	ST. JOHNS	A1A	NT	2.437	7.136	10/30/06	20,000	
78001	210404-3	ST. JOHNS	A1A	ST	2.437	5.700	10/30/06	27,000	
78001	210404-3	ST. JOHNS	A1A	ST	5.700	7.136	10/30/06	20,000	
37070	210776-2	Suwannee	49	ST	0.000	2.760	8/17/06	14,000	
37130	213554-2	Suwannee	93	NTST	0.000	3.656	8/17/06	31,000	
38020	210878-3	Taylor	30	NT	1.780	15.000	10/5/06	19,000	
38020	210878-3	Taylor	30	NT	15.000	17.400	10/5/06	24,000	
38020	210878-3	Taylor	30	ST	1.780	10.500	10/5/06	19,000	
38020	210878-3	Taylor	30	ST	10.500	17.400	10/5/06	28,000	
39050	210955-3	Union	238	ET	0.000	3.600	10/23/06	17,000	
39050	210955-3	Union	238	ET	3.600	6.300	10/23/06	29,000	
39050	210955-3	Union	238	ET	6.300	13.887	10/23/06	23,000	

2006 PROJECT LISTING BY DISTRICT

District 3

County Section	Financial Project Number	County	State Road	Travel Direction	Beginning Milepost	Ending Milepost	Test Date	Mr (psi)	Comments
48205	419292-1	Escambia	173	NT	2.595	7.000	8/22/06	22,000	
48205	419292-1	Escambia	173	NT	7.000	9.728	8/22/06	15,000	
51010	415380-1	Gulf	30	EB/WB	1.742	3.360	1/24/06	13,000	
51020	419293-1	Gulf	71	SB	23.377	24.592	1/24/06	31,000	
53090	219378-2	Jackson	71	NT	1.300	1.700	8/24/06	32,000	
53090	219378-2	Jackson	71	NT	5.400	5.601	8/24/06	30,000	
53130	419294-1	Jackson	69	ST	0.000	0.400	8/24/06	19,000	
53130	419294-1	Jackson	69	ST	0.400	2.400	8/24/06	29,000	
53130	419294-1	Jackson	69	ST	2.400	3.000	8/24/06	23,000	
53130	419294-1	Jackson	69	ST	3.000	4.400	8/24/06	32,000	
53130	419294-1	Jackson	69	ST	4.400	6.000	8/24/06	19,000	
53130	419294-1	Jackson	69	ST	6.000	8.432	8/24/06	24,000	
54110	419295-1	Jefferson	30	EB	0.000	3.000	1/17/06	7,000	Lots of cracking, ravelling
54110	419295-1	Jefferson	30	EB	3.000	5.000	1/17/06	15,000	
54110	419295-1	Jefferson	30	EB	5.000	7.412	1/17/06	21,000	
55040	419296-1	Leon	61	NB/SB	8.735	9.476	1/25/06	16,000	
55100	419350-1	Leon	363	NB	0.000	0.710	1/25/06	29,000	Did not test full limits due to traffic/intersections
55100	419350-1	Leon	363	SB	0.000	0.710	1/25/06	24,000	Did not test full limits due to traffic/intersections
55120	419350-1	Leon	319	NB/SB	6.865	7.060	1/25/06	18,000	
56040	416945-1	Liberty	65	NB	0.000	25.525	1/23/06	9,000	
57002	419291-1	Okaloosa	8	ETWT	16.975	24.554	8/31/06	19,000	
58050	419297-1	Santa Rosa	87	ST	20.320	27.362	8/22/06	25,000	
60010	416947-1	Walton	10	ET	16.640	16.792	8/31/06	13,000	
60010	416947-1	Walton	10	WT	16.640	16.792	8/31/06	25,000	
60020	419298-1	Walton	30	ETWT	3.168	3.500	8/23/06	15,000	
60020	419298-1	Walton	30	ETWT	3.500	5.121	8/23/06	21,000	
60050	416947-1	Walton	83	NTST	13.611	16.104	8/31/06	25,000	

2006 PROJECT LISTING BY DISTRICT
District 4

County Section	Financial Project Number	County	State Road	Travel Direction	Beginning Milepost	Ending Milepost	Test Date	Mr (psi)	Comments
86000	230730-1	Broward	Copans Rd	EB/WB	0.000	0.381	2/8/06	22,000	Also tested N Andrews Ave
86000	230730-1	Broward	Andrews Ave Ext	NB/SB	0.000	0.213	2/8/06	22,000	Also tested Copans Rd
86000	403984-1	Broward	Eller Drive	EB/WB	0.000	0.902	2/8/06	29,000	From McIntosh to US-1
86010	413794-1	Broward	5	NT	2.713	4.145	10/18/06	28,000	
86010	413794-1	Broward	5	ST	2.713	4.145	10/18/06	32,000	
86070	231733-1	Broward	9	NTST	8.750	10.960	7/11/06	32,000	
86095	420232-1	Broward	862	ETWT	9.967	11.166	7/11/06	32,000	
86095	420809-1	Broward	862	ETWT	0.500	10.410	10/19/06	32,000	MP 0.500 to 9.036 tested on 10/19/06 MP 9.967 to 10.410 was tested on 7/11/06. See 420232-1
86100	421662-1	Broward	7	NTST	21.100	23.400	10/18/06	32,000	
86080500	419651-1A	Broward	84	ET	0.000	4.108	7/11/06	32,000	Test Data Available for MP 0.000 to 12.360
86080550	419651-1A	Broward	84	WT	8.300	12.360	7/11/06	15,000	Test Data Available for MP 0.000 to 12.360
N/A	414561-1	Broward	N/A	ETWT	0.000	0.502	10/18/06	32,000	
88081	413072-1	Indian River	9 / I-95	NTST	16.500	19.198	12/12/06	31,000	
93010	416526-1	Palm Beach	SR 5 / US 1	NT	2.904	3.150	7/13/06	16,000	
93010	416526-1	Palm Beach	SR 5 / US 1	ST	2.904	3.150	7/13/06	22,000	
93310	419652-1	Palm Beach	710	ET	0.000	1.580	7/13/06	23,000	May be a composite pavement (HMA/PCC)
94001	419715-1	St Lucie	9	NTST	0.000	15.380	7/18/06	32,000	
94010	230289-1	St Lucie	5	NB/SB	10.763	11.760	2/7/06	15,000	
94050	419653-1	St Lucie	A1A	NT	0.000	1.400	7/19/06	19,000	
94050	419653-1	St Lucie	A1A	NT	1.400	3.080	7/19/06	32,000	

2006 PROJECT LISTING BY DISTRICT
District 5

County Section	Financial Project Number	County	State Road	Travel Direction	Beginning Milepost	Ending Milepost	Test Date	Mr (psi)	Comments
70030	419592-1	Brevard	5	NTST	8.828	17.528	12/18/06	17,000	
70070	419563-1	Brevard	528	EB	7.175	10.750	3/6/06	23,000	
70070	419563-1	Brevard	528	EB	10.750	12.968	3/6/06	32,000	
70120	411997-1	Brevard	518	EB	5.715	8.398	3/6/06	23,000	
70120	411997-1	Brevard	518	WB	5.715	7.000	3/6/06	15,000	
70120	411997-1	Brevard	518	EB	7.000	8.398	3/6/06	23,000	
70225	406869-3	Brevard	9	NT/ST	13.900	22.700	5/24/06	21,000	
70225	406869-5	Brevard	9	NB/SB	22.700	31.190	3/15/06	22,000	
70120001	411997-1	Brevard	518	WB	0.000	0.156	3/6/06	17,000	
11040	419591-1	Lake	25	NB	0.000	2.500	3/28/06	22,000	
11040	419591-1	Lake	25	NB	2.500	4.150	3/28/06	17,000	
11040	419591-1	Lake	25	SB	0.000	4.150	3/28/06	22,000	
11100	419564-1	Lake	19	SB	7.612	11.800	2/14/06	12,000	
11100	419564-1	Lake	19	SB	11.800	12.100	2/14/06	7,000	Localized area of weaker pavement
11100	419564-1	Lake	19	SB	12.100	12.772	2/14/06	12,000	
11210	419581-1	Lake	530	EB	0.447	1.275	3/28/06	32,000	
11210	419581-1	Lake	530	WB	0.447	1.275	3/28/06	27,000	
11683	419561-1	Lake	44	SB	0.000	2.110	2/14/06	15,000	
11050101	411612-1	Lake	19	NB	0.000	1.563	2/14/06	14,000	
36009	419586-1	Marion	35	SB	3.910	5.126	3/13/06	24,000	
36030	419585-1	Marion	500	NB/SB	0.000	2.606	5/17/06	23,000	
36050	419557-1	Marion	35	SB	0.000	2.000	3/13/06	20,000	
36050	419557-1	Marion	35	SB	2.000	3.750	3/13/06	15,000	
36050	419557-1	Marion	35	NB/SB	3.750	6.866	3/13/06	26,000	
36060	417179-1	Marion	45	NB	4.792	11.928	2/13/06	16,000	
36060	419584-1	Marion	45	NB	1.650	3.500	2/13/06	16,000	
36060	419584-1	Marion	45	NB	3.500	4.792	2/13/06	10,000	
36090	419583-1	Marion	19	NB	15.735	17.448	3/13/06	22,000	

2006 PROJECT LISTING BY DISTRICT

District 5

County Section	Financial Project Number	County	State Road	Travel Direction	Beginning Milepost	Ending Milepost	Test Date	Mr (psi)	Comments
36210	419437-1	Marion	93 / I-75	NTST	13.945	18.436	11/15/06	32,000	
75002	407143-3	Orange	482	ET	-0.379	0.700	12/20/06	19,000	
75002	407143-3	Orange	482	ET	0.700	2.830	12/20/06	29,000	
75002	407143-3	Orange	482	WT	-0.379	2.830	12/20/06	23,000	
75011	419582-1	Orange	414	ET/WT	0.000	2.485	6/28/06	29,000	
75030	239442-1	Orange	600	WT	6.200	7.099	6/28/06	21,000	EB is entirely rigid pavement. Only portion of the WB with asphalt surface tested
75080	419587-1	Orange	15	NB	17.608	19.911	6/7/06	15,000	
75080	239266-3	Orange	15	NT	9.100	11.700	11/13/06	20,000	
92010	419562-1	Osecola	15	NBTL/SBTL	12.234	13.700	6/28/06	26,000	
18010	419593-1	Sumter	35	NB/SB	21.700	24.033	4/17/06	24,000	
18010	419593-1	Sumter	35	SB	24.033	25.000	4/17/06	24,000	
18010	419593-1	Sumter	35	SB	25.000	30.255	4/17/06	18,000	
18130	416939-1	Sumter	93	NB/SB	21.500	25.500	3/21/06	26,000	
18130	416939-1	Sumter	93	NB/SB	25.500	28.996	3/21/06	18,000	
18130	242626-2	Sumter	93	NB/SB	0.000	4.500	2/21/06	30,000	
18130	242626-2	Sumter	93	NB/SB	4.500	10.000	2/21/06	21,000	
18130	242626-2	Sumter	93	NB/SB	10.000	14.475	2/21/06	32,000	
18130	242626-3	Sumter	93	NB/SB	14.475	21.500	3/21/06	24,000	
18470	419572-1	Sumter	91	NB/SB	0.000	10.670	1/19/06	25,000	
79002	406869-4	Volusia	9	NT/ST	0.000	6.771	5/30/06	32,000	
79030	419588-1	Volusia	5	SB	5.868	12.803	3/16/06	15,000	Possibly asphalt overlaid concrete
79040	419594-1	Volusia	15	NTST	14.345	15.172	12/6/06	18,000	
79050	419596-1	Volusia	15	NTST	0.000	5.951	12/11/06	18,000	
79060	419595-1	Volusia	600	ETWT	15.444	18.666	12/6/06	18,000	
79070	419589-1	Volusia	44	ET	0.000	3.200	10/31/06	19,000	
79070	419589-1	Volusia	44	ET	3.200	4.113	10/31/06	10,000	
79080	411985-1	Volusia	A1A	NB/SB	2.691	6.790	3/16/06	20,000	

2006 PROJECT LISTING BY DISTRICT

District 5

County Section	Financial Project Number	County	State Road	Travel Direction	Beginning Milepost	Ending Milepost	Test Date	Mr (psi)	Comments
79180	411781-1	Volusia	A1A	NTST	0.000	6.615	7/26/06	17,000	
79190	419556-1	Volusia	5A	NB	8.208	9.619	3/16/06	26,000	
79190	419556-1	Volusia	5A	SB	8.208	9.619	3/16/06	12,000	

2006 PROJECT LISTING BY DISTRICT
District 6

County Section	Financial Project Number	County	State Road	Travel Direction	Beginning Milepost	Ending Milepost	Test Date	Mr (psi)	Comments
87008	419856-1	Dade	916	ETWT	3.114	4.888	8/8/06	29,000	
87016	419824-1	Dade	112	EB/WB	0.000	0.814	5/10/06	7,000	Extremely weak embankment near beginning of project
87030	414623-1	Dade	5	NB	10.854	11.314	1/23/06	20,000	SB 25K
87030	414623-1	Dade	5	SB	10.854	11.314	1/23/06	25,000	NB 20K
87044	418093-1	Dade	976	EB/WB	6.218	8.119	5/9/06	32,000	
87047	414627-1	Dade	973	NB	2.399	4.000	4/4/06	20,000	
87047	414627-1	Dade	973	NB	4.000	5.945	4/4/06	32,000	
87047	414627-1	Dade	973	SB	2.399	5.945	4/4/06	32,000	
87047	418090-1	Dade	973	NB/SB	8.500	9.505	4/4/06	32,000	
87047	419852-1	Dade	973	NB	8.110	8.535	4/4/06	20,000	
87047	419852-1	Dade	973	SB	8.110	8.535	4/4/06	32,000	
87053	414629-1	Dade	968	EB/WB	1.400	1.800	4/4/06	28,000	
87053	419850-1	Dade	968	EB/WB	0.000	1.400	4/4/06	32,000	
87060	418067-1	Dade	A1A	NB/SB	4.555	4.820	5/10/06	31,000	
87060	418089-1	Dade	A1A	NB	5.649	6.713	5/10/06	18,000	
87060	419858-1	Dade	A1A	NT	9.846	11.733	8/9/06	32,000	
87060	419861-1	Dade	A1A	NT	8.439	9.846	8/9/06	32,000	
87066	419857-1	Dade	922	ETWT	4.546	5.548	8/9/06	5,000	
87080	419825-1	Dade	934	EB	3.720	4.175	8/9/06	20,000	Short Section. Informed the requestor through the memo
87085	414643-1	Dade	933	NB/SB	0.656	2.255	5/10/06	21,000	
87090	418098-1	Dade	25	NB/SB	15.000	15.255	5/9/06	32,000	Beginning is one lane roadway (mp 14.982)
87140	418094-1	Dade	7	NTST	12.157	14.680	8/8/06	24,000	
87240	419847-1	Dade	9	NB/SB	1.739	2.981	5/9/06	30,000	
87260	418088-1	Dade	826	ETWT	24.190	24.572	8/8/06	24,000	
87270	420316-1	Dade	9A	NTST	13.669	17.260	9/26/06	32,000	
87053001	418096-1	Dade	968	EB	2.198	2.500	5/11/06	26,000	Only able to test 11 points (not typical 28)

2006 PROJECT LISTING BY DISTRICT
District 6

County Section	Financial Project Number	County	State Road	Travel Direction	Beginning Milepost	Ending Milepost	Test Date	Mr (psi)	Comments
87053002	414634-1	Dade	968	WB	0.000	0.772	5/11/06	21,000	
87060001	419823-1	Dade	A1A	ST	0.000	0.306	8/9/06	16,000	
87060002	418089-1	Dade	A1A	SB	0.000	1.034	5/10/06	18,000	
87080347	418095-1	Dade	934	WB	0.000	0.300	8/9/06	16,000	Recommended 8000 psi for all sections. Requestor wanted the section splitted. Mailed again on 9/26/06
87080347	418095-1	Dade	934	WB	0.300	1.042	8/9/06	6,000	Recommended 8000 psi for all sections. Requestor wanted the section splitted. Mailed again on 9/26/06
87080900	419826-1	Dade	934	ETWT	34.192	34.645	8/8/06	30,000	
87080900	419855-1	Dade	934	ETWT	37.968	38.580	8/8/06	31,000	
90010	419851-1	Monroe	5	NT	3.927	4.531	9/27/06	25,000	
90010	419851-1	Monroe	5	ST	3.927	4.531	9/27/06	20,000	
90040	419854-1	Monroe	5	NTST	1.039	5.032	9/27/06	32,000	
90060	419846-1	Monroe	5	NTST	29.171	32.624	9/27/06	32,000	
90060	419859-1	Monroe	5	NTST	25.894	29.171	10/17/06	32,000	
90060	419848-1	Monroe	5	NTST	19.170	23.133	9/27/06	32,000	
90060001	419853-1	Monroe	5	NT	0.000	3.026	9/27/06	32,000	
90060002	419849-1	Monroe	5	NT	0.000	0.772	9/27/06	32,000	

2006 PROJECT LISTING BY DISTRICT
District 7

County Section	Financial Project Number	County	State Road	Travel Direction	Beginning Milepost	Ending Milepost	Test Date	Mr (psi)	Comments
08050	419257-1	Hernando	50A	WT	11.630	12.536	10/3/06	19,000	
08120	416833-2	Hernando	700	SB	0.000	2.041	4/20/06	22,000	
10002	258415-1	Hillsborough	618	ETWT	7.120	9.122	8/14/06	32,000	
10010	416841-1	Hillsborough	43	NB/SB	15.576	18.445	5/15/06	31,000	
10010	415489-1	Hillsborough	43	NT	5.767	12.000	8/14/06	19,000	
10010	415489-1	Hillsborough	43	NT	12.000	15.554	8/14/06	27,000	
10200	419258-1	Hillsborough	39	ST	1.400	10.910	10/3/06	20,000	
14080	416833-1	Pasco	700	SB	1.400	1.814	4/19/06	22,000	
14110	419256-1	Pasco	39	SB	0.000	3.561	4/19/06	19,000	
15030	415190-1	Pinellas	686	EB/WB	5.667	6.683	5/1/06	31,000	
15240	256931-2	Pinellas	694	EB/WB	1.575	3.896	4/20/06	26,000	

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3. *AASHTO Guide for the Design of Pavement Structures*. American Association of State Highway and Transportation Officials, Washington, D.C., March 1993.
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