JACKSON DRIVE – UNION ROAD TO SHANNON HILL DRIVE

RECOMMENDATIONS

Pavement Maintenance Options (Short-Term)

For Option 1, we recommend 4 inch digouts for base failures and placing a 1-1/4 inch TMO (thin maintenance overlay).

Estimated Cost: $70,372 Estimated Life Expectancy: 5-7 Years

Pavement Rehabilitation Options (Long-Term)

Overlay Options

For option 1, we recommend 4 inch digouts for base failures, placing a 1/2 inch HMA leveling course and a 1-3/4 inch HMA overlay.

Estimated Cost: $89,000 Estimated Life Expectancy: 10-12 Years

For option 2, we recommend 4 inch digouts for base failures, placing a 1/2 inch HMA leveling course and a 1-3/4 inch RHMA overlay.

Estimated Cost: $94,000 Estimated Life Expectancy: 10-12 Years

Recycle and Mill and Replace Options

These options are not available for this street because of the structural deficiencies and thin pavement layer.

Reconstruction Options

For option 1, we recommend removing the pavement to a depth of 10-1/2 inches and placing 10-1/2 inches of new HMA. The HMA should be placed in 4 lifts.

Estimated Cost: $366,000 Estimated Life Expectancy: 20 Years

For option 2, we recommend removing 4 inches of the existing structure, lime treating the native soil to a depth of 13 inches and placing 4 inches of new HMA in 2 lifts.

Estimated Cost: $170,000 Estimated Life Expectancy: 20 Years

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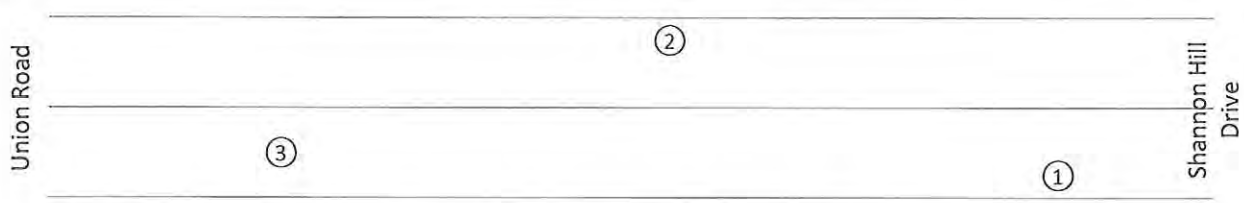

NOTES:
- NTS
- ACTUAL ROAD MAY NOT BE STRAIGHT
- NOT ALL ROADS CONNECTING TO THIS STREET ARE SHOWN
- WIDTH OF ROAD MAY VARY WITHIN THE BOUNDARY SECTION
- ALL LOCATIONS SHOWN ARE APPROXIMATED

Jackson Drive

[Section of Road ≈ 1500ft]

TRAFFIC LAYOUT:
- 2-WAY STREET
- 1 LANE EACH WAY

VISUAL DESCRIPTION FOR THIS SECTION OF ROAD
The pavement exhibits longitudinal cracking, severe weathering and raveling and block cracking progressing to alligator cracking. The edges are unimproved.

CORING LOG

Symbol	Location	Core Data	R-value
1	North of Shannon Hill Drive 200ft	AC 2.25" AB 6.25"	53
2	North of Shannon Hill Drive 700ft	AC 1.75" AB 8.25"	11
3	North of Shannon Hill Drive 1200ft	AC 2.00" AB 9.00"	-

DEFLECTION ANALYSIS

Lane	Tolerable	TI	80th Percentile	Percent Reduction	HMA Overlay
North Bound	32	7.0	32.71	2.18	0.12 - inches
South Bound	32	7.0	40.45	20.90	0.72 - inches
				Overlay Required by Reflective Cracking	1.00 - inches

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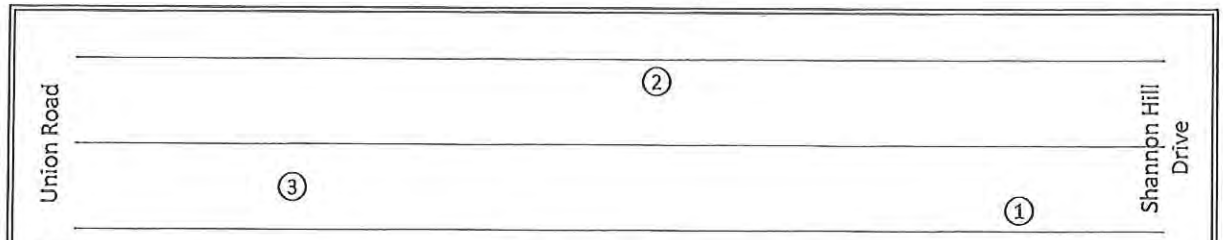

NOTES:
- NTS
- ACTUAL ROAD MAY NOT BE STRAIGHT
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- WIDTH OF ROAD MAY VARY WITHIN THE BOUNDARY SECTION
- ALL LOCATIONS SHOWN ARE APPROXIMATED

Jackson Drive (N)

[Section of Road ≈ 1500ft]

TRAFFIC LAYOUT:
- 2-WAY STREET
- 1 LANE EACH WAY

VISUAL DESCRIPTION FOR THIS SECTION OF ROAD

CORING LOG			
Symbol	Location	Core Data	R-value
①	North of Shannon Hill Drive 200ft	AC 2.25" AB 6.25"	53
②	North of Shannon Hill Drive 700ft	AC 1.75" AB 8.25"	11
③	North of Shannon Hill Drive 1200ft	AC 2.00" AB 9.00"	-

PHOTO LOG		
Symbol	Location	Comments
Ⓐ	_____ of _____ _____ ft	
Ⓑ	_____ of _____ _____ ft	
Ⓒ	_____ of _____ _____ ft	

DEFLECTION ANALYSIS					
Lane	Tolerable	TI	80th Percentile	Percent Reduction	HMA Overlay
North Bound	32	7.0	32.71	2.18	0.12 - Inches
South Bound	32	7.0	40.45	20.90	0.72 - Inches
				Overlay Required by Reflective Cracking	1.00 - Inches

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03/27/13

City of Paso Robles

Road: Jackson
From: Shannon Hill
To: Union
Lane/Line: NB

Survey Date: 03/14/13
Thickness: 0.17
Traffic Index: 7.00
Project Number: 130065

Deflection Data Analysis

Deflection Readings (Equivalent Deflectometer Units)

No. of Tests	Low	Mean	High	Std. Dev.
15	18.78	28.39	35.80	5.15

Road Surface

Thickness	Traffic Index
0.17	7.00

Structural Design

Tolerable	80th Percentile	90th Percentile	% Reduction	GE Deficient
32.00	32.71	34.98	2.18	0.01

HMA Overlay
0.01

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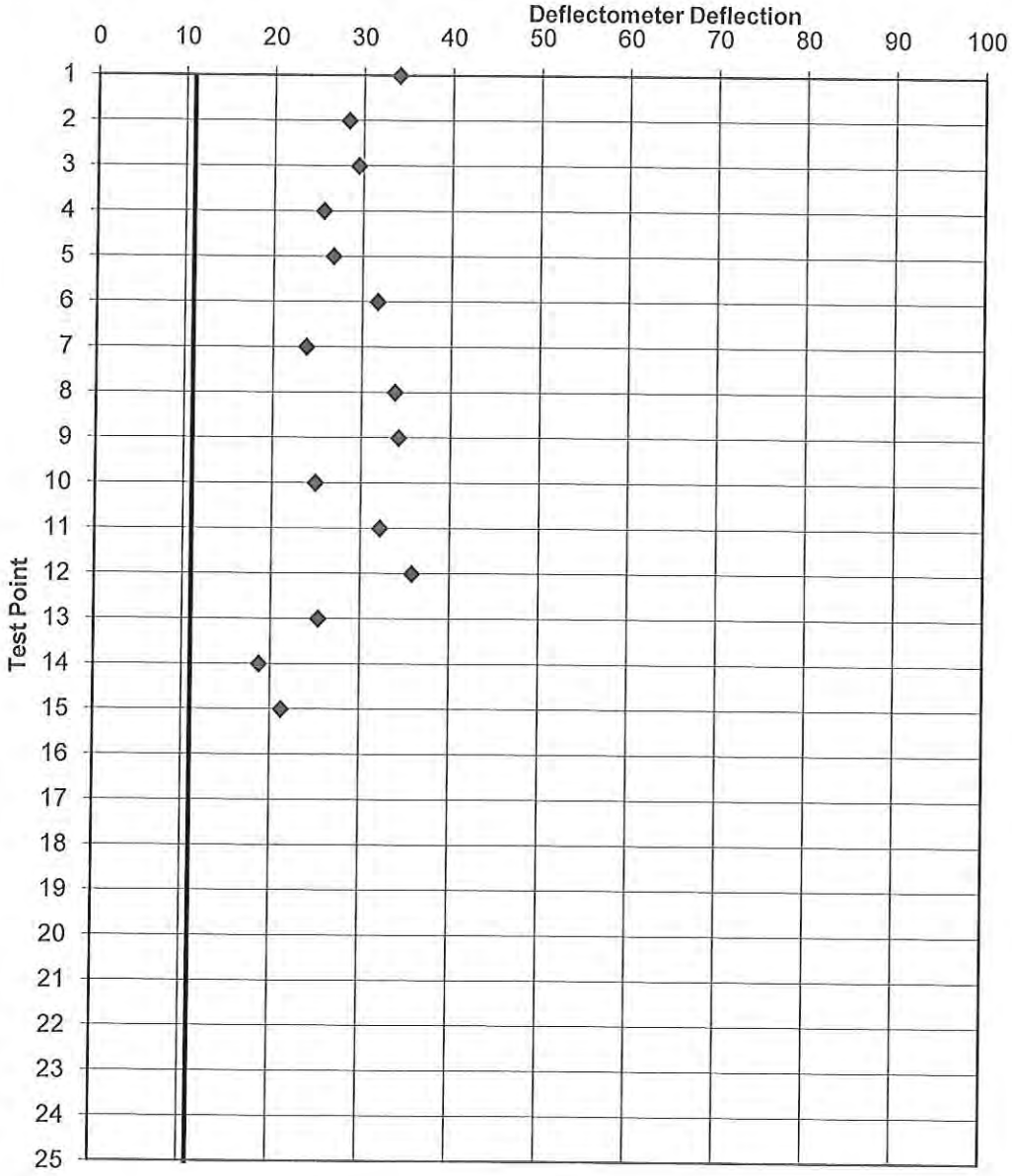
City of Paso Robles

Road: Jackson
From: Shannon Hill
To: Union
Lane/Line: NB

Survey Date: 03/14/13
Thickness: 0.17
Traffic Index: 7.00
Project Number: 130065



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Date: 3/27/2013

Client:	City of Paso Robles	Interval:	100
Road:	Jackson	Survey Date:	3/14/13
From:	Shannon Hill	Thickness:	0.17
To:	Union	Traffic Index:	7.00
Lane/Line:	NB	Project Number:	130065

Test Points	Dynaflect	Conditions	Comments	Deflection	Exclude
1	1.52			33.984	
2	1.27			28.312	
3	1.32			29.446	
4	1.15			25.590	
5	1.20			26.724	
6	1.42			31.715	
7	1.07			23.775	
8	1.51			33.757	
9	1.53			34.211	
10	1.12			24.909	
11	1.44			32.169	
12	1.60			35.799	
13	1.14			25.363	
14	0.85			18.784	
15	0.96			21.279	

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03/27/13

City of Paso Robles

Road: Jackson
From: Union
To: Shannon Hill
Lane/Line: SB

Survey Date: 03/14/13
Thickness: 0.17
Traffic Index: 7.00
Project Number: 130065

Deflection Data Analysis

Deflection Readings (Equivalent Deflectometer Units)

No. of Tests	Low	Mean	High	Std. Dev.
15	20.37	33.17	51.68	8.67

Road Surface

Thickness	Traffic Index
0.17	7.00

Structural Design

Tolerable	80th Percentile	90th Percentile	% Reduction	GE Deficient
32.00	40.45	44.27	20.90	0.12

HMA Overlay
0.06

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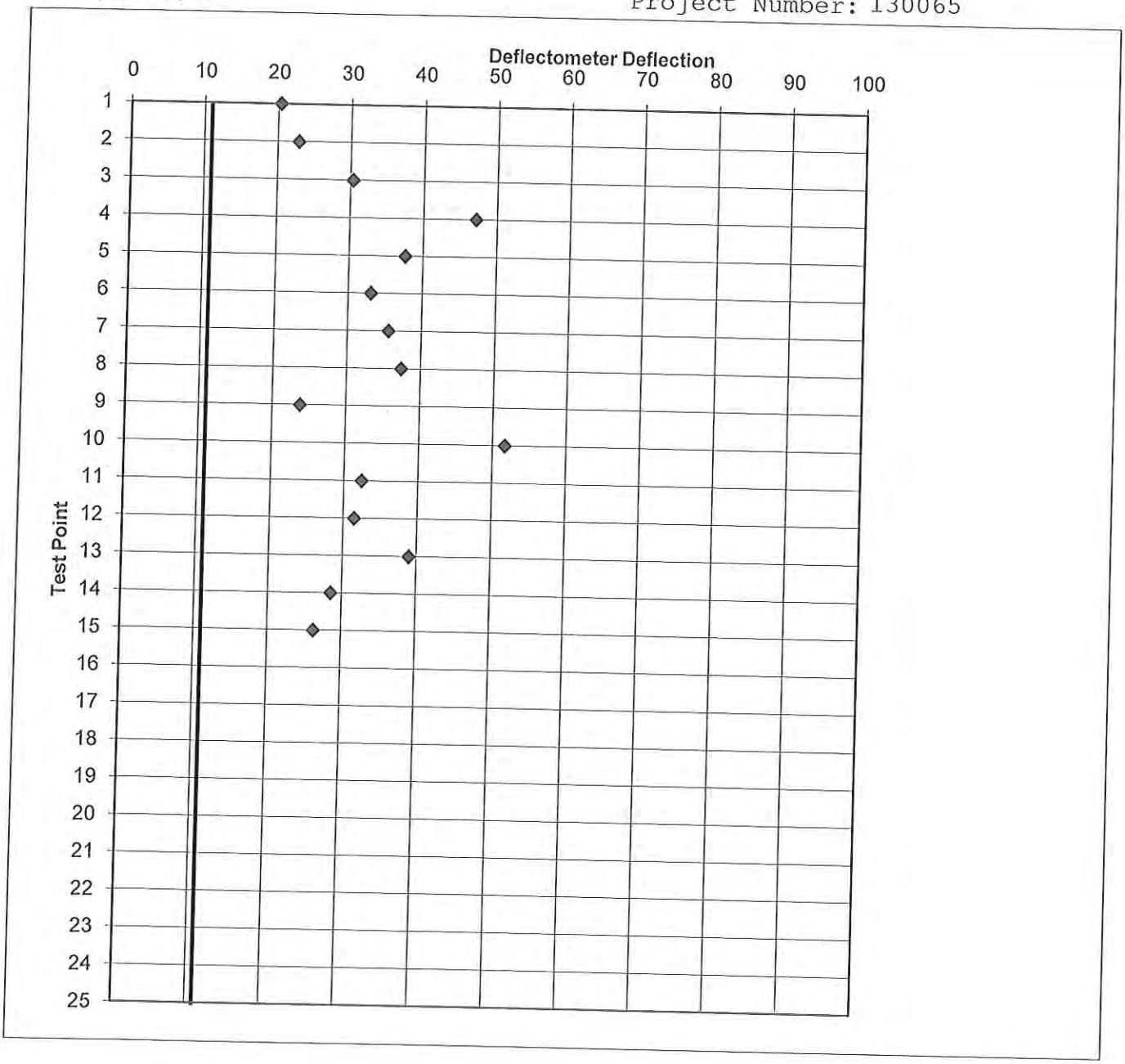
03/27/13

City of Paso Robles

Road: Jackson
From: Union
To: Shannon Hill
Lane/Line: SB

Survey Date: 03/14/13
Thickness: 0.17
Traffic Index: 7.00
Project Number: 130065



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Date: 3/27/2013

Client: City of Paso Robles
Road: Jackson
From: Union
To: Shannon Hill
Lane/Line: SB

Interval: 100
Survey Date: 3/14/13
Thickness: 0.17
Traffic Index: 7.00
Project Number: 130065

Test Points	Dynaflect	Conditions	Comments	Deflection	Exclude
1	0.92			20.372	
2	1.03			22.867	
3	1.36			30.354	
4	2.10			47.142	
5	1.68			37.613	
6	1.48			33.076	
7	1.59			35.572	
8	1.67			37.387	
9	1.07			23.775	
10	2.30			51.679	
11	1.45			32.396	
12	1.41			31.488	
13	1.74			38.975	
14	1.28			28.539	
15	1.18			26.270	

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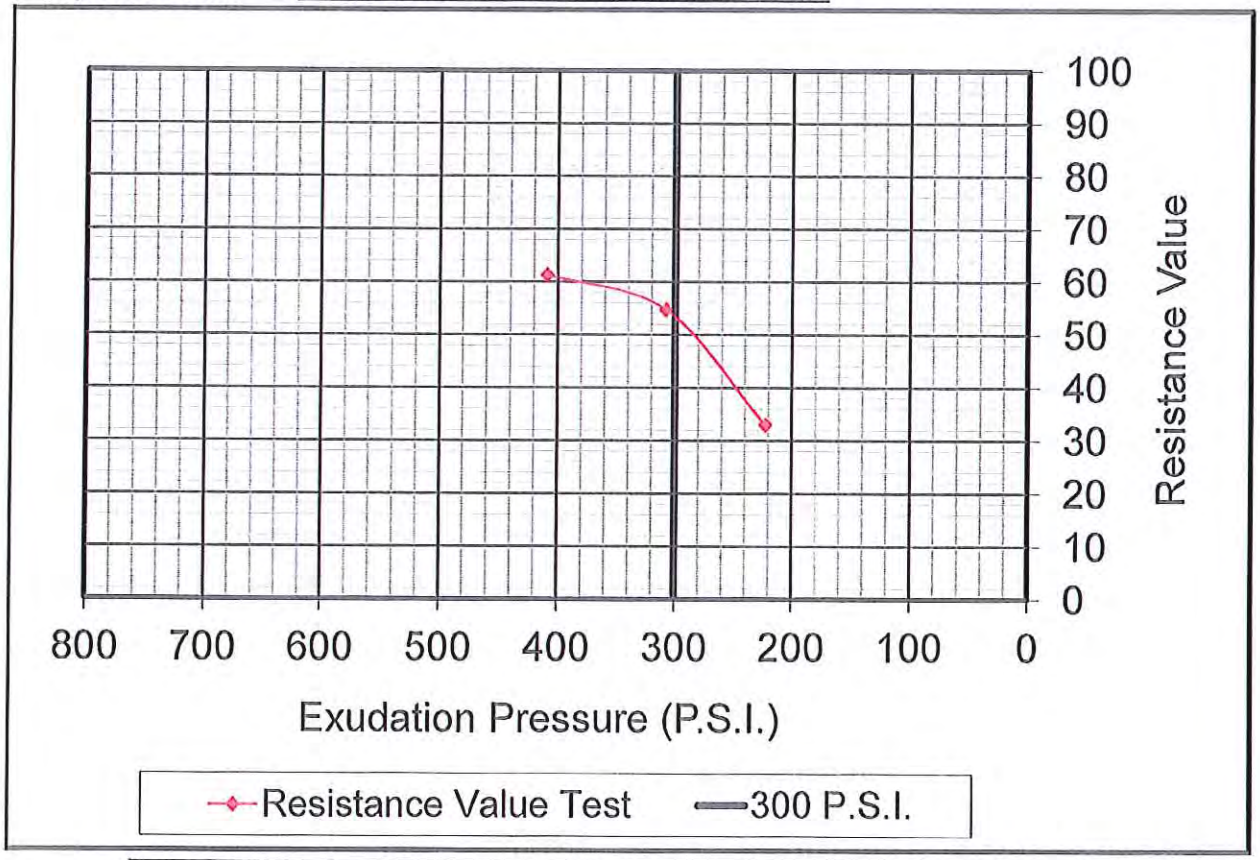
RESISTANCE (R) VALUE TEST

ASTM D 2844

Laboratory No.:	L130083AJ
Project No.:	130065
Sample Date:	March 15, 2013
Report Date:	April 9, 2013
Client:	City of Paso Robles
Project Name:	City of Paso Robles 2013 Pavement Analysis
Sample Description:	Brown Clayey Sand with Gravel
Sample Location:	Jackson Drive - 200' North of Shannon Hill Drive



Specimen No.	1	2	3
Moisture Content (%)	14.3	14.8	13.9
Dry Density (PCF)	118.2	117.3	118.8
Resistance Value (R)	55	33	61
Exudation Pressure (PSI)	308	223	409
Expansion Pressure	121	61	221

RESISTANCE VALUE AT 300 P.S.I. 53

AASHTO R18

Reviewed By: Craig Long

Craig W. Long
Laboratory Operations Manager

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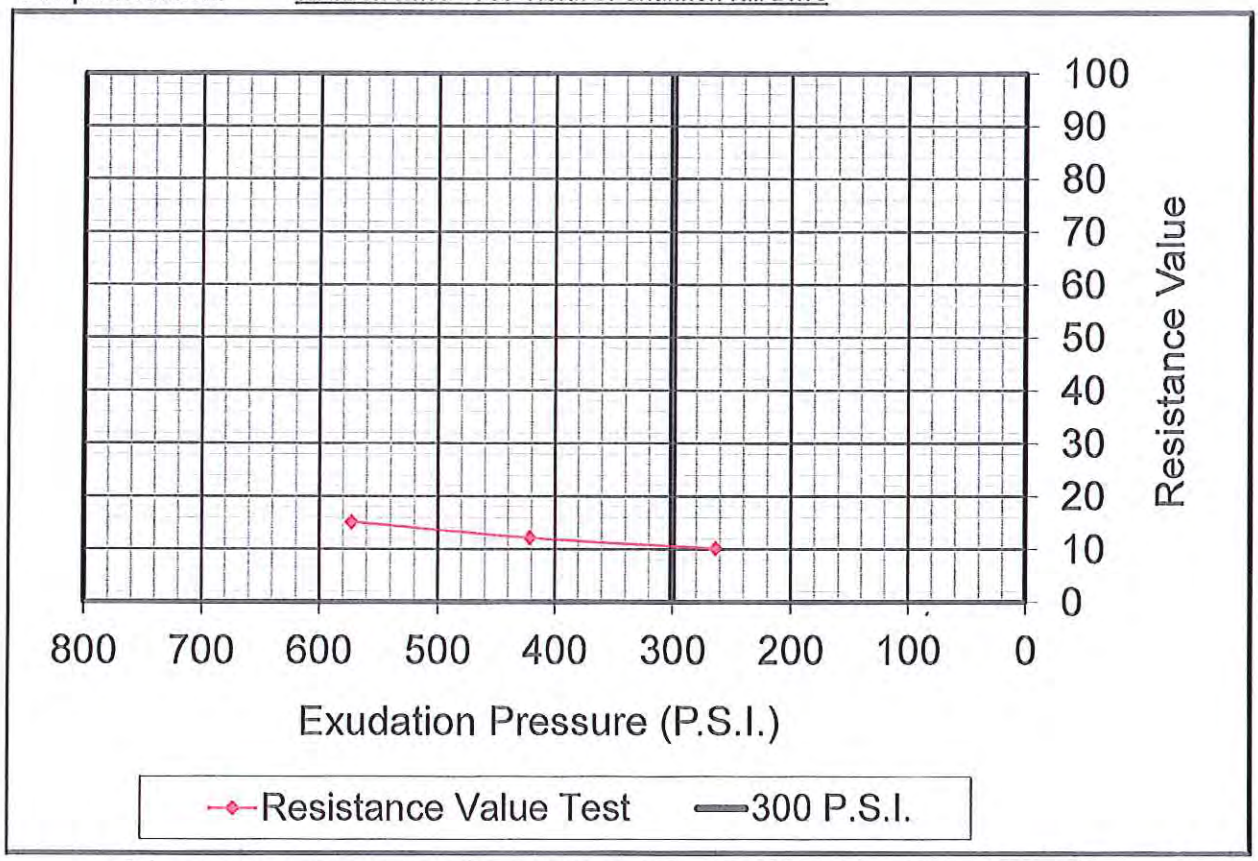
RESISTANCE (R) VALUE TEST
ASTM D 2844

Laboratory No.:	L130083AZ
Project No.:	130065
Sample Date:	March 15, 2013
Report Date:	April 11, 2013
Client:	City of Paso Robles
Project Name:	City of Paso Robles 2013 Pavement Analysis
Sample Description:	Brown Silty Clay with Sand
Sample Location:	Jackson Drive - 700' North of Shannon Hill Drive



Specimen No.	1	2	3
Moisture Content (%)	20.0	21.5	22.5
Dry Density (PCF)	105.3	103.5	102.0
Resistance Value (R)	15	12	10
Exudation Pressure (PSI)	573	422	264
Expansion Pressure	139	87	56

RESISTANCE VALUE AT 300 P.S.I. 11

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Craig W. Long
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JACKSON DRIVE – UNION ROAD TO SHANNON HILL DRIVE
Union Road looking Southbound

JACKSON DRIVE – UNION ROAD TO SHANNON HILL DRIVE
Shannon Hill Drive looking Northbound