COUNTRY CLUB DRIVE – NIBLICK ROAD TO PARKING LOT

RECOMMENDATIONS

Pavement Maintenance Options (Short-Term)

These options are not available for this street because of structural deficiencies and/or pavement cracking condition.

Pavement Rehabilitation Options (Long-Term)

Overlay Options

For option 1, we recommend 5 inch digouts for base failures, placing a 1/2 inch HMA leveling course and a 1-3/4 inch HMA overlay.

Estimated Cost: $197,000 Estimated Life Expectancy: 10-12 Years

For option 2, we recommend 5 inch digouts for base failures, placing a 1/2 inch HMA leveling course and a 1-3/4 inch RHMA overlay.

Estimated Cost: $209,000 Estimated Life Expectancy: 10-12 Years

Recycle and Mill and Replace Options

For option 1, we recommend milling 2 inches of the existing pavement, 4 inch digouts of base failures and placing a 2 inch HMA surface course.

Estimated Cost: $187,000 Estimated Life Expectancy: 12-15 Years

For option 2, we recommend milling 1-3/4 inches, 4 inch digouts of base failure and placing a 1-3/4 RHMA surface course.

Estimated Cost: $180,000 Estimated Life Expectancy: 12-15 Years

Recycling is not provided for an option because there is limited base under the existing asphalt concrete and the native soil R-value is below 20.

Reconstruction Options

For option 1, we recommend removing the pavement to a depth of 10-3/4 inches and placing 10-3/4 inches of new HMA. The HMA should be placed in 4 lifts.

Estimated Cost: $794,000 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 14-1/2 inches and placing 4 inches of new HMA in 2 lifts.

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

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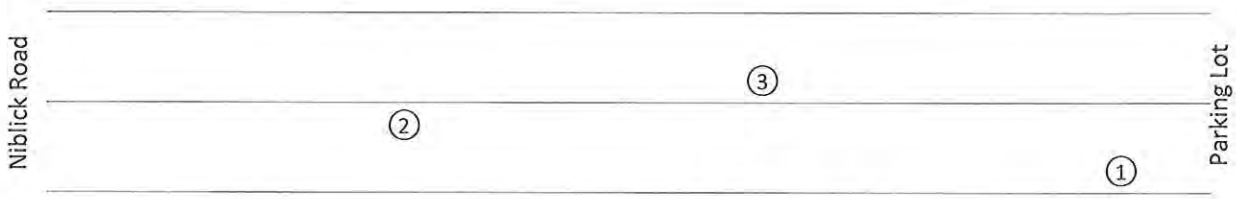

NOTES:
- NTS
- ACTUAL ROAD MAY NOT BE STRAIGHT
- NOT ALL ROADS CONNECTING TO THIS STREET ARE SHOWN
- WIDTH OF ROAD MAY VARY WITHIN THE BOUNDARY SECTION
- ALL LOCATIONS SHOWN ARE APPROXIMATED

Country Club Drive

[Section of Road ≈ 1300ft]

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

VISUAL DESCRIPTION FOR THIS SECTION OF ROAD

The pavement exhibits moderate alligator cracking progressing to base failure. Previous maintance includes a slurry seal. The slurry seal is in poor condition.

CORING LOG

Symbol	Location	Core Data		R-value
1	South of Niblick Road 1200ft	AC AB	5.00" 19.00"+	-
2	South of Niblick Road 400ft	AC AB	5.00" NO BASE	4
3	South of Niblick Road 800ft	AC AB	5.25" 2.00"	10

DEFLECTION ANALYSIS

Lane	Tolerable	TI	80th Percentile	Percent Reduction	HMA Overlay
North Bound	22	7.0	28.74	23.46	1.00 - inches
South Bound	22	7.0	28.66	23.24	1.00 - inches
				Overlay Required by Reflective Cracking	2.50 - inches

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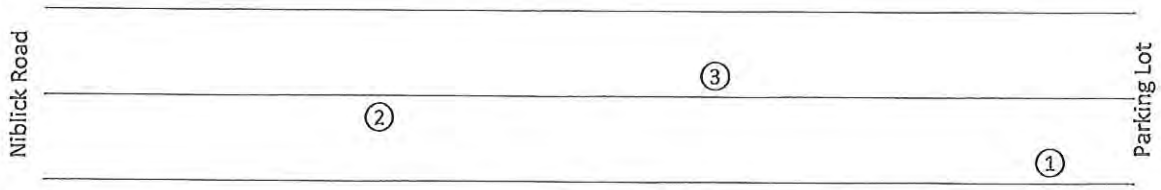

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Country Club Drive

[Section of Road ≈ 1300ft]

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- 2-WAY STREET
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VISUAL DESCRIPTION FOR THIS SECTION OF ROAD

CORING LOG

Symbol	Location	Core Data		R-value
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2	South of Niblick Road 400ft	AC AB	5.00" NO BASE	4
3	South of Niblick Road 800ft	AC AB	5.25" 2.00"	10

PHOTO LOG

Symbol	Location	Comments
A	_____ of _____ _____ft	
B	_____ of _____ _____ft	
C	_____ of _____ _____ft	

DEFLECTION ANALYSIS

Lane	Tolerable	TI	80th Percentile	Percent Reduction	HMA Overlay
North Bound	22	7.0	28.74	23.46	1.00 - Inches
South Bound	22	7.0	28.66	23.24	1.00 - Inches
				Overlay Required by Reflective Cracking	2.50 - Inches

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03/27/13

City of Paso Robles

Road: Country Club
From: Golf Course Parking Lot
To: Niblick
Lane/Line: NB

Survey Date: 03/13/13
Thickness: 0.42
Traffic Index: 7.00
Project Number: 130065

Deflection Data Analysis

Deflection Readings (Equivalent Deflectometer Units)

No. of Tests	Low	Mean	High	Std. Dev.
12	18.33	25.17	33.53	4.25

Road Surface

Thickness	Traffic Index
0.42	7.00

Structural Design

Tolerable	80th Percentile	90th Percentile	% Reduction	GE Deficient
22.00	28.74	30.61	23.46	0.16

HMA Overlay
0.08

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03/27/13

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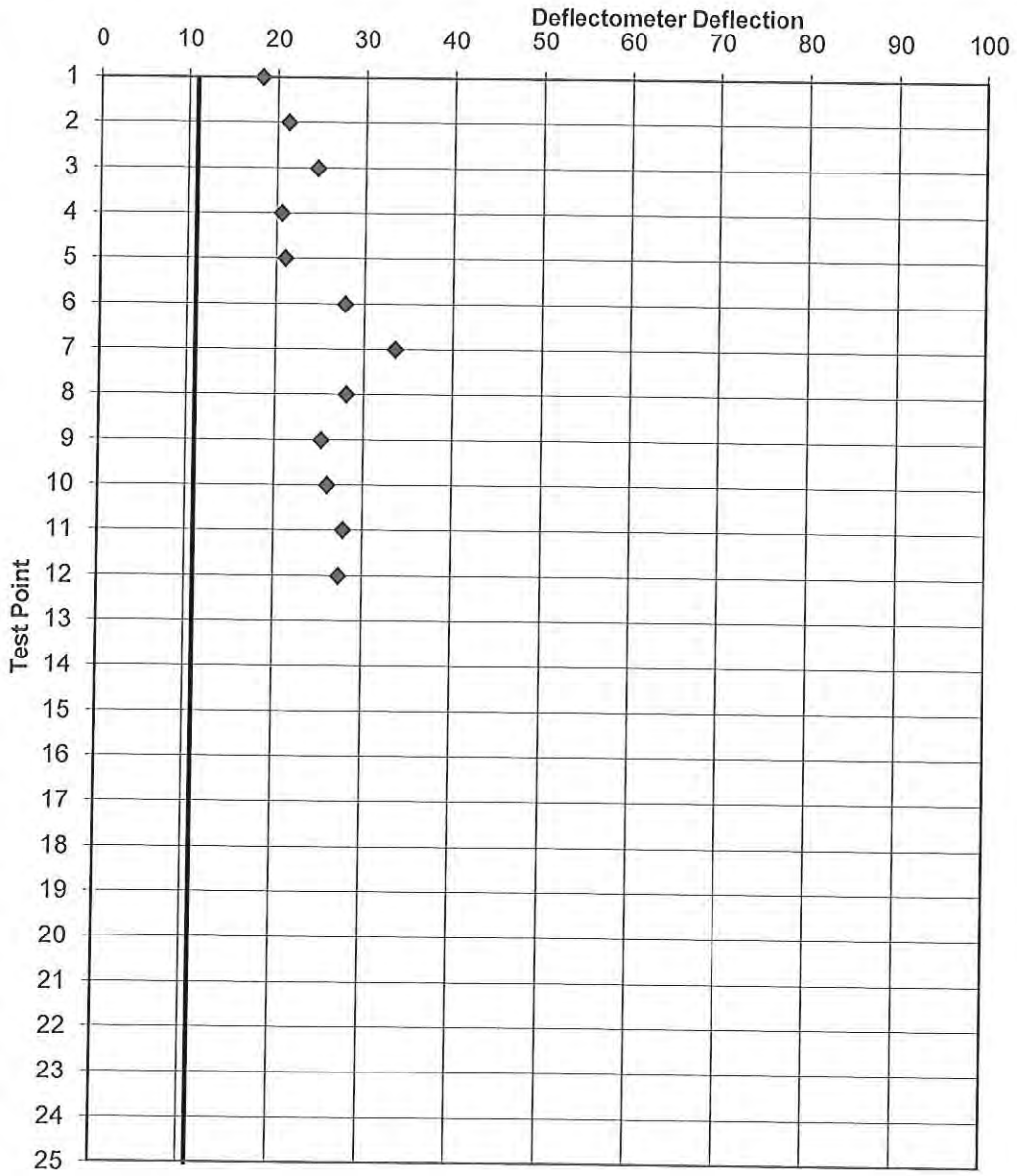

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Date: 3/27/2013

Client: City of Paso Robles
Road: Country Club
From: Golf Course Parking Lot
To: Niblick
Lane/Line: NB

Interval: 100
Survey Date: 3/13/13
Thickness: 0.42
Traffic Index: 7.00
Project Number: 130065

Test Points	Dynaflect	Conditions	Comments	Deflection	Exclude
1	0.83			18.330	
2	0.96			21.279	
3	1.11			24.682	
4	0.93			20.599	
5	0.95			21.052	
6	1.25		Birdie	27.858	
7	1.50			33.530	
8	1.26		Bogie	28.085	
9	1.14			25.363	
10	1.17		Par	26.043	
11	1.25		Fairway	27.858	
12	1.23			27.405	

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03/27/13

City of Paso Robles

Road:	Country Club	Survey Date:	03/13/13
From:	Niblick	Thickness:	0.42
To:	Golf Course Parking Lot	Traffic Index:	7.00
Lane/Line:	SB	Project Number:	130065

Deflection Data Analysis

Deflection Readings (Equivalent Deflectometer Units)

No. of Tests	Low	Mean	High	Std. Dev.
12	18.78	25.29	31.71	4.01

Road Surface

Thickness	Traffic Index
0.42	7.00

Structural Design

Tolerable	80th Percentile	90th Percentile	% Reduction	GE Deficient
22.00	28.66	30.43	23.24	0.15

HMA Overlay
0.08

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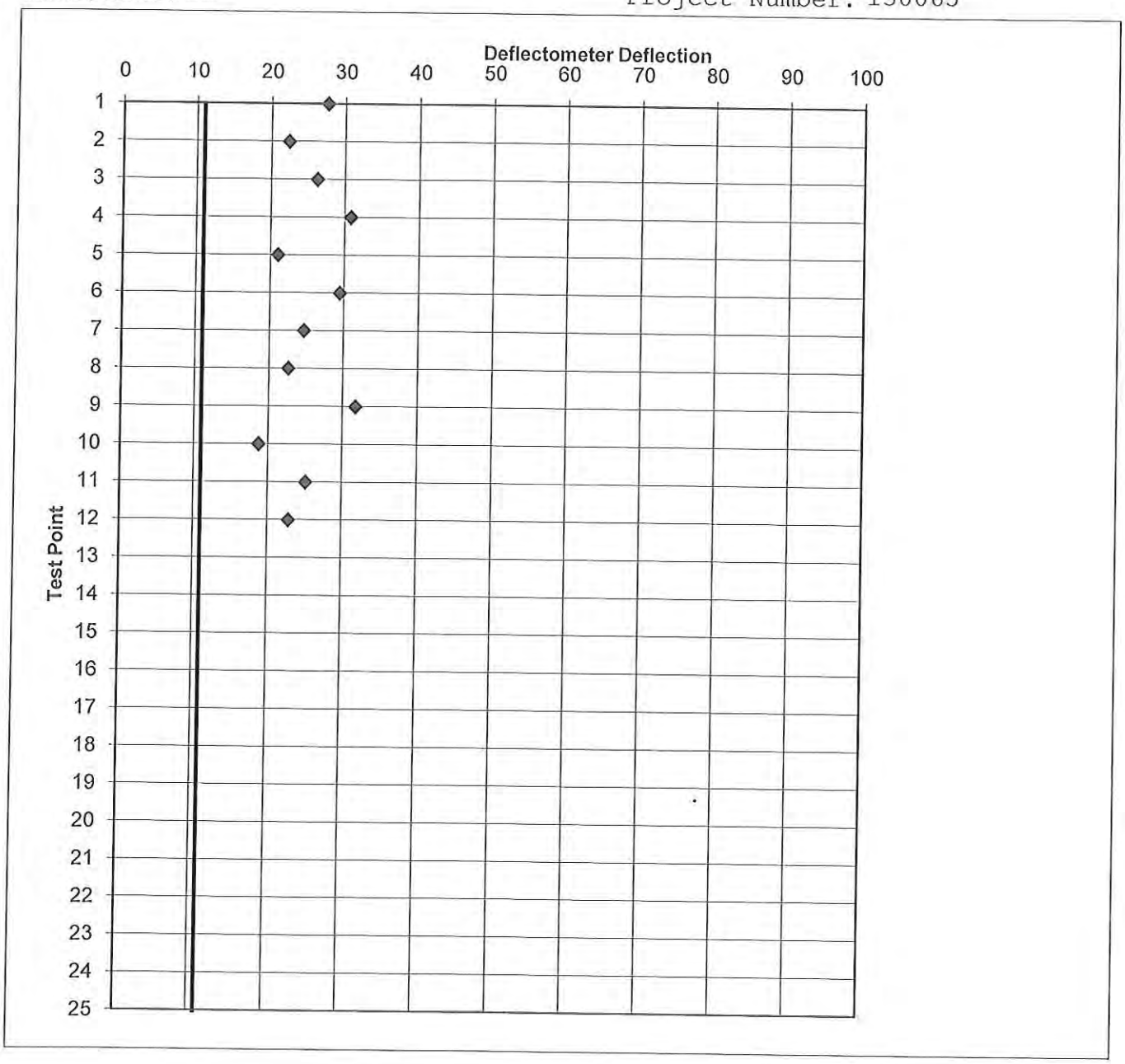
03/27/13

City of Paso Robles

Road: Country Club
From: Niblick
To: Golf Course Parking Lot
Lane/Line: SB

Survey Date: 03/13/13
Thickness: 0.42
Traffic Index: 7.00
Project Number: 130065



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Date: 3/27/2013

Client: City of Paso Robles
Road: Country Club
From: Niblick
To: Golf Course Parking Lot
Lane/Line: SB

Interval: 100
Survey Date: 3/13/13
Thickness: 0.42
Traffic Index: 7.00
Project Number: 130065

Test Points	Dynaflect	Conditions	Comments	Deflection	Exclude
1	1.24		Fairway	27.631	
2	1.01		Par	22.413	
3	1.18			26.270	
4	1.38			30.808	
5	0.95		Bogie	21.052	
6	1.32			29.446	
7	1.11		Birdie	24.682	
8	1.02			22.640	
9	1.42			31.715	
10	0.85			18.784	
11	1.13			25.136	
12	1.03			22.867	

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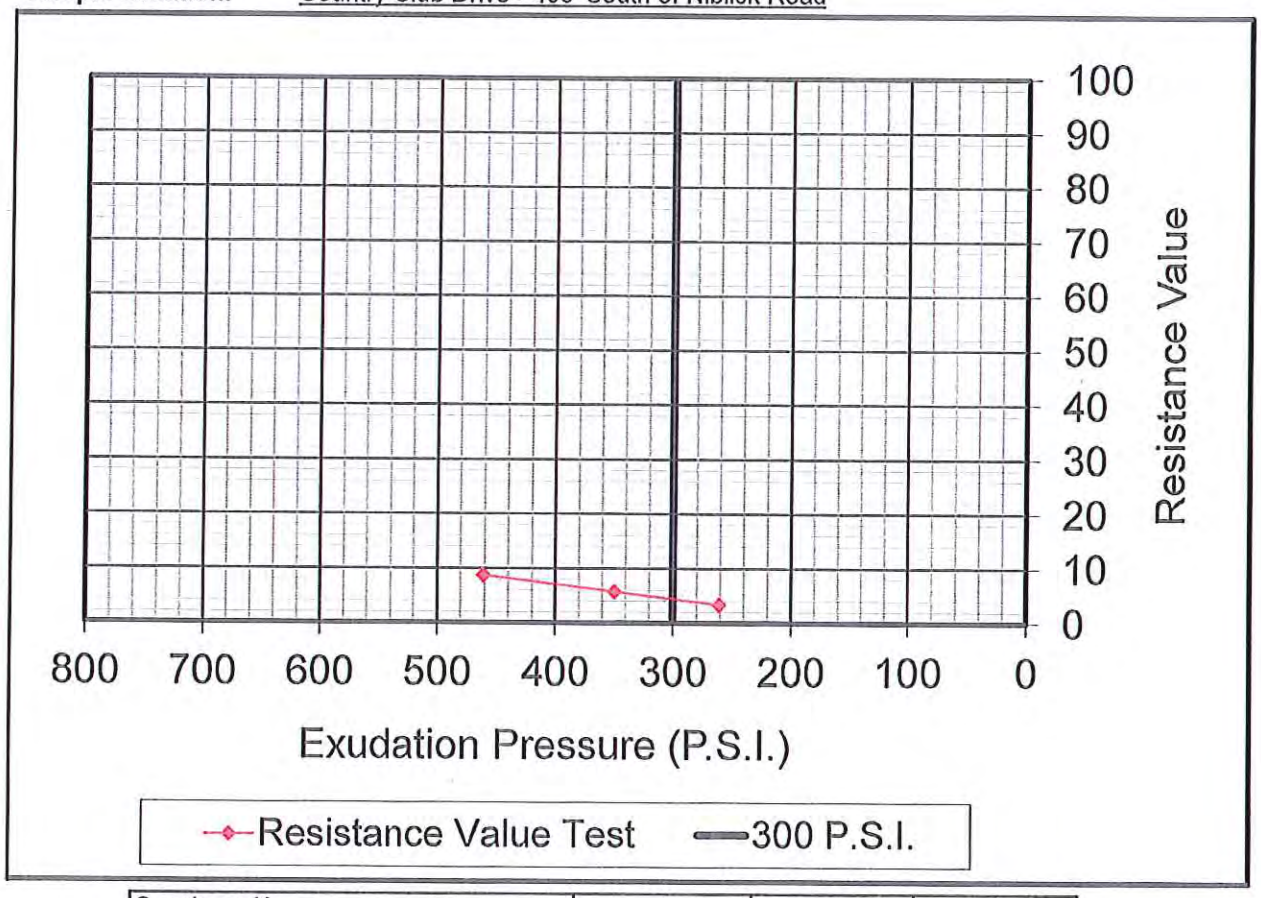
RESISTANCE (R) VALUE TEST
ASTM D 2844

Laboratory No.: L130083R
Project No.: 130065
Sample Date: March 17, 2013
Report Date: March 28, 2013
Client: City of Paso Robles
Project Name: City of Paso Robles 2013 Pavement Analysis
Sample Description: Brown Clay with Sand and Gravel
Sample Location: Country Club Drive - 400' South of Niblick Road



Specimen No.	1	2	3
Moisture Content (%)	11.4	12.4	12.8
Dry Density (PCF)	126.5	124.8	123.3
Resistance Value (R)	9	6	3
Exudation Pressure (PSI)	462	351	261
Expansion Pressure	13	0	0

RESISTANCE VALUE AT 300 P.S.I. 4

AASHTO R18

Reviewed By: Craig Long
Craig W. Long
Laboratory Operations Manager

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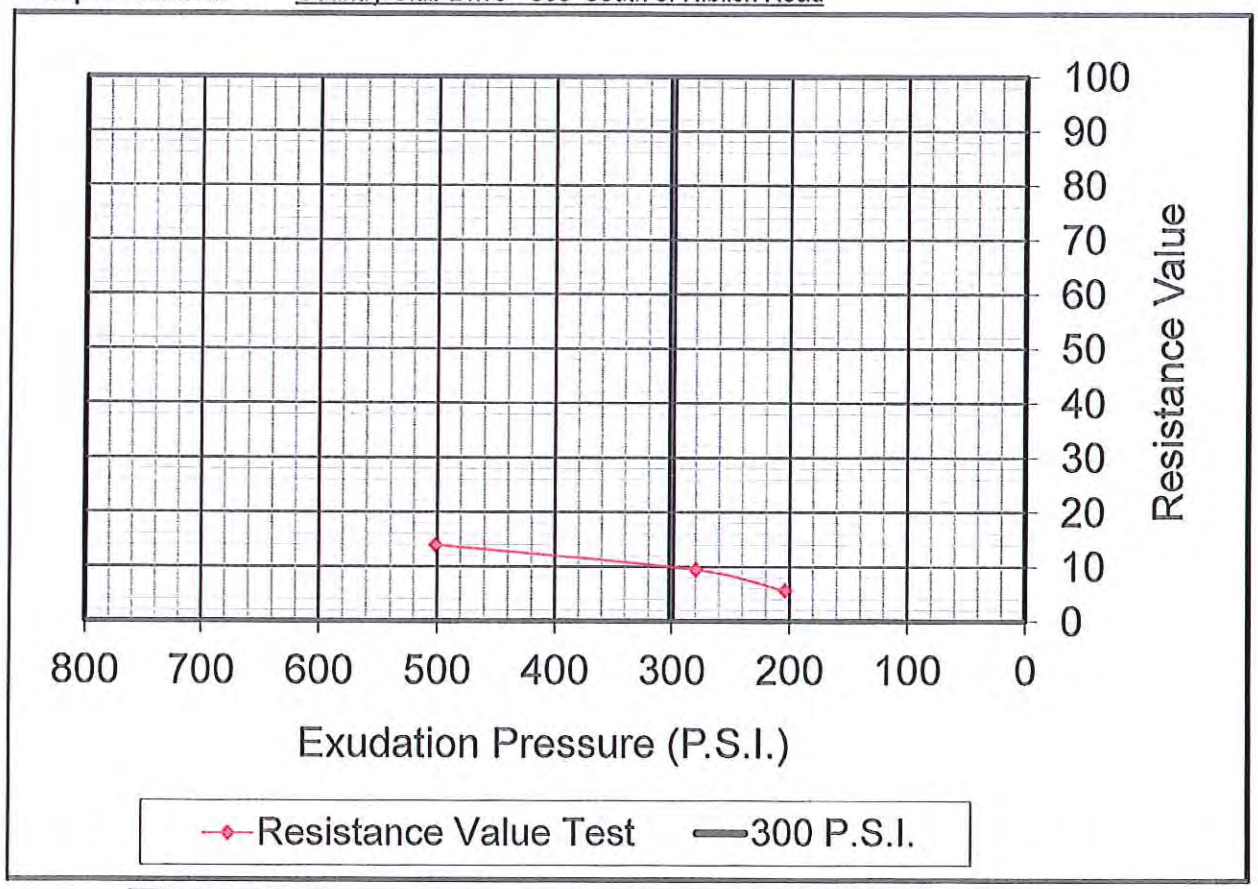
RESISTANCE (R) VALUE TEST
ASTM D 2844

Laboratory No.: L130083T
Project No.: 130065
Sample Date: March 14, 2013
Report Date: March 28, 2013
Client: City of Paso Robles
Project Name: City of Paso Robles 2013 Pavement Analysis
Sample Description: Light Brown Sandy Clay
Sample Location: Country Club Drive - 800' South of Niblick Road



Specimen No.	1	2	3
Moisture Content (%)	17.9	19.4	16.9
Dry Density (PCF)	112.5	110.1	116.3
Resistance Value (R)	9	6	14
Exudation Pressure (PSI)	280	204	502
Expansion Pressure	74	9	225

RESISTANCE VALUE AT 300 P.S.I. 10

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COUNTRY CLUB DRIVE – NIBLICK ROAD TO PARKING LOT
Niblick Road looking Southbound

COUNTRY CLUB DRIVE – NIBLICK ROAD TO PARKING LOT
Bogie Lane looking Southbound

COUNTRY CLUB DRIVE – NIBLICK ROAD TO PARKING LOT
Par Avenue looking Northbound