SHANNON HILL DRIVE – CRESTON ROAD TO JACKSON DRIVE

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 4 inch digouts for base failures, placing a 1/2 inch HMA leveling course and a 2 inch HMA overlay.

Estimated Cost: $162,000 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 : $159,000 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 : $618,000 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 13-1/2 inches and placing 4 inches of new HMA in 2 lifts.

Estimated Cost : $288,000 Estimated Life Expectancy: 20 Years

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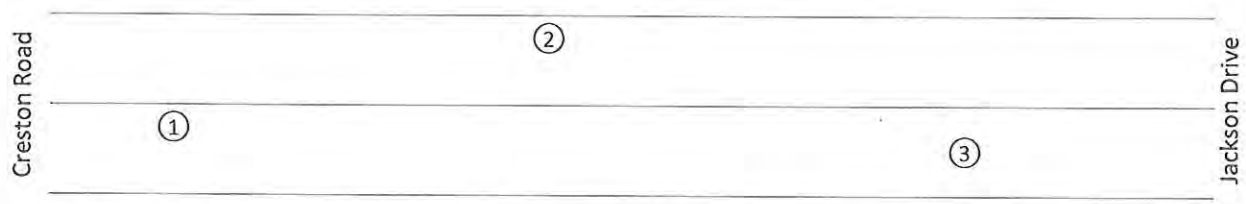

NOTES:
- NTS
- ACTUAL ROAD MAY NOT BE STRAIGHT
- NOT ALL ROADS CONNECTING TO THIS STREET ARE SHOWN
- WIDTH OF ROAD MAY VARY WITHIN THE BOUNDARY SECTION
- ALL LOCATIONS SHOWN ARE APPROXIMATED

Shannon Hill Drive

[Section of Road ≈ 1400ft]

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

VISUAL DESCRIPTION FOR THIS SECTION OF ROAD

The pavement exhibits moerate block shrinkage cracking progressing to alligator cracking. Much of the road is unimproved. Previous maintance includes a slurry seal.

CORING LOG

Symbol	Location	Core Data		R-value
1	North of Creston Road 150ft	AC AB	4.00" 6.50"	10
2	North of Creston Road 600ft	AC AB	4.25" 5.25"	-
3	North of Creston Road 1100ft	AC AB	3.75" 7.50"	24

DEFLECTION ANALYSIS

Lane	Tolerable	TI	80th Percentile	Percent Reduction	HMA Overlay
North Bound	25	7.0	35.87	30.30	1.56 - inches
South Bound	25	7.0	39.57	36.82	2.28 - inches
				Overlay Required by Reflective Cracking	2.00 - inches

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03/27/13

City of Paso Robles

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

Survey Date: 03/14/13
Thickness: 0.33
Traffic Index: 7.00
Project Number: 130065

Deflection Data Analysis

Deflection Readings (Equivalent Deflectometer Units)

No. of Tests	Low	Mean	High	Std. Dev.
14	23.09	31.62	39.88	5.06

Road Surface

Thickness	Traffic Index
0.33	7.00

Structural Design

Tolerable	80th Percentile	90th Percentile	% Reduction	GE Deficient
25.00	35.87	38.10	30.30	0.25

HMA Overlay
0.13

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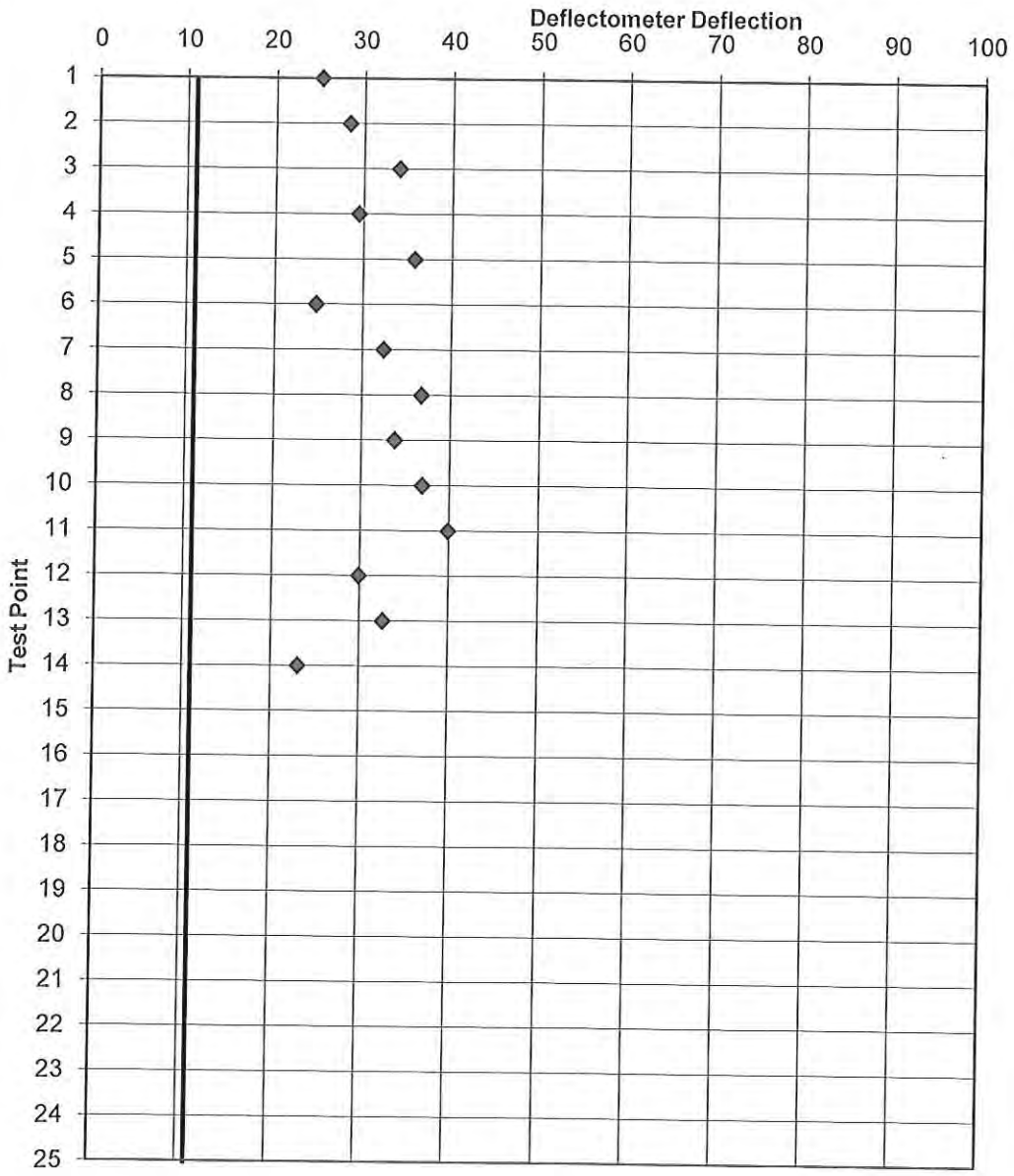

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Date: 3/27/2013

Client: City of Paso Robles
Road: Shannon Hill
From: Creston
To: Jackson
Lane/Line: NB

Interval: 100
Survey Date: 3/14/13
Thickness: 0.33
Traffic Index: 7.00
Project Number: 130065

Test Points	Dynaflect	Conditions	Comments	Deflection	Exclude
1	1.13			25.136	
2	1.27		Tanner	28.312	
3	1.52			33.984	
4	1.32			29.446	
5	1.60			35.799	
6	1.11			24.682	
7	1.45			32.396	
8	1.64			36.706	
9	1.51			33.757	
10	1.65			36.933	
11	1.78		Palm Court	39.882	
12	1.34			29.900	
13	1.46			32.622	
14	1.04			23.094	

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03/27/13

City of Paso Robles

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

Survey Date: 03/14/13
Thickness: 0.33
Traffic Index: 7.00
Project Number: 130065

Deflection Data Analysis

Deflection Readings (Equivalent Deflectometer Units)

No. of Tests	Low	Mean	High	Std. Dev.
14	22.19	33.76	44.87	6.92

Road Surface

Thickness	Traffic Index
0.33	7.00

Structural Design

Tolerable	80th Percentile	90th Percentile	% Reduction	GE Deficient
25.00	39.57	42.61	36.82	0.36

HMA Overlay
0.19

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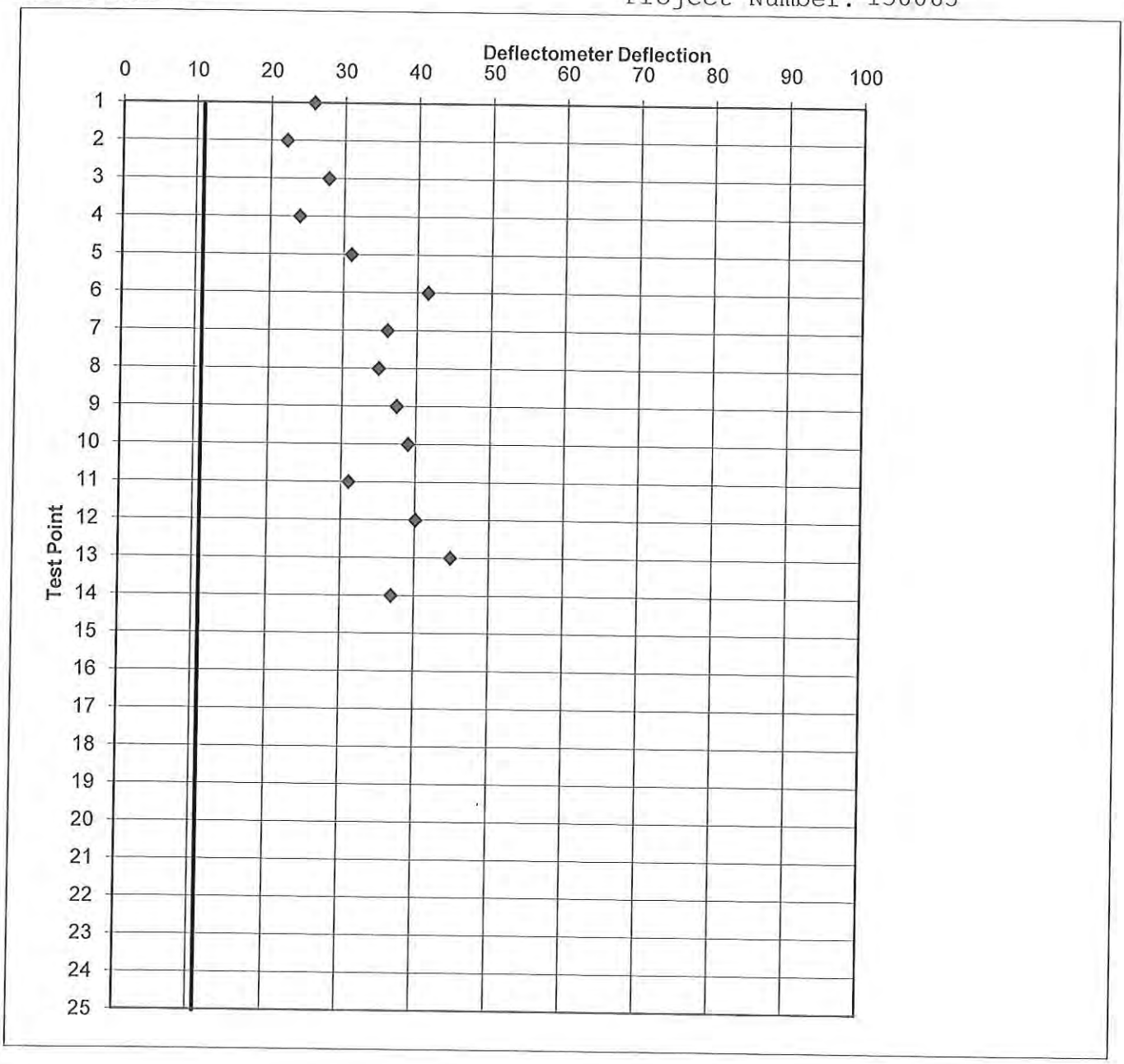
City of Paso Robles

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

Survey Date: 03/14/13
Thickness: 0.33
Traffic Index: 7.00
Project Number: 130065



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Date: 3/27/2013

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

Interval: 100
Survey Date: 3/14/13
Thickness: 0.33
Traffic Index: 7.00
Project Number: 130065

Test Points	Dynaflect	Conditions	Comments	Deflection	Exclude
1	1.16			25.816	
2	1.00			22.187	
3	1.25			27.858	
4	1.08		Palm Court	24.002	
5	1.39			31.034	
6	1.85			41.470	
7	1.61			36.025	
8	1.56			34.891	
9	1.67			37.387	
10	1.74			38.975	
11	1.39			31.034	
12	1.79			40.109	
13	2.00		Tanner	44.873	
14	1.65			36.933	

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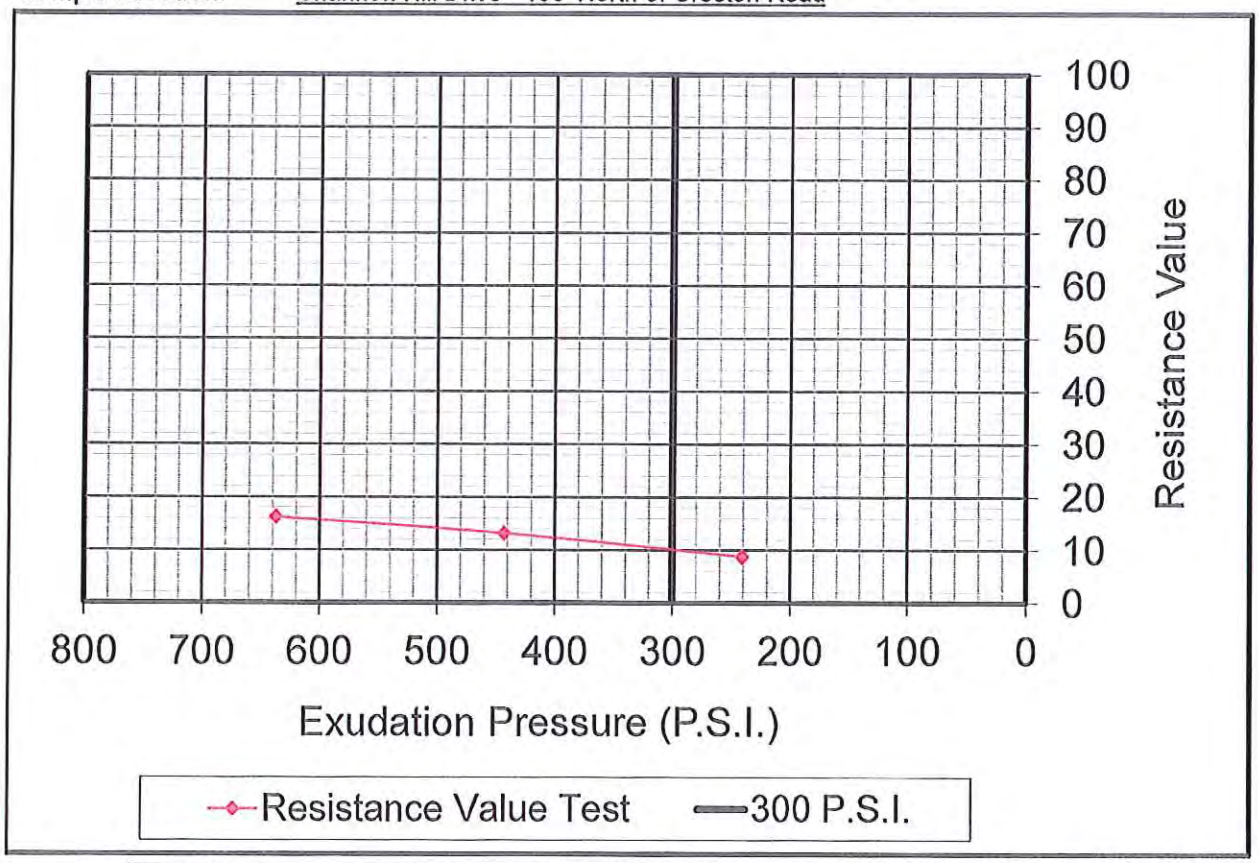
RESISTANCE (R) VALUE TEST
ASTM D 2844

Laboratory No.: L130083BB
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 Sandy Clay
Sample Location: Shannon Hill Drive - 150' North of Creston Road



Specimen No.	1	2	3
Moisture Content (%)	21.6	23.1	24.1
Dry Density (PCF)	105.1	103.1	101.3
Resistance Value (R)	16	13	9
Exudation Pressure (PSI)	638	443	241
Expansion Pressure	130	104	61

RESISTANCE VALUE AT 300 P.S.I. 10

AASHTO R18

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

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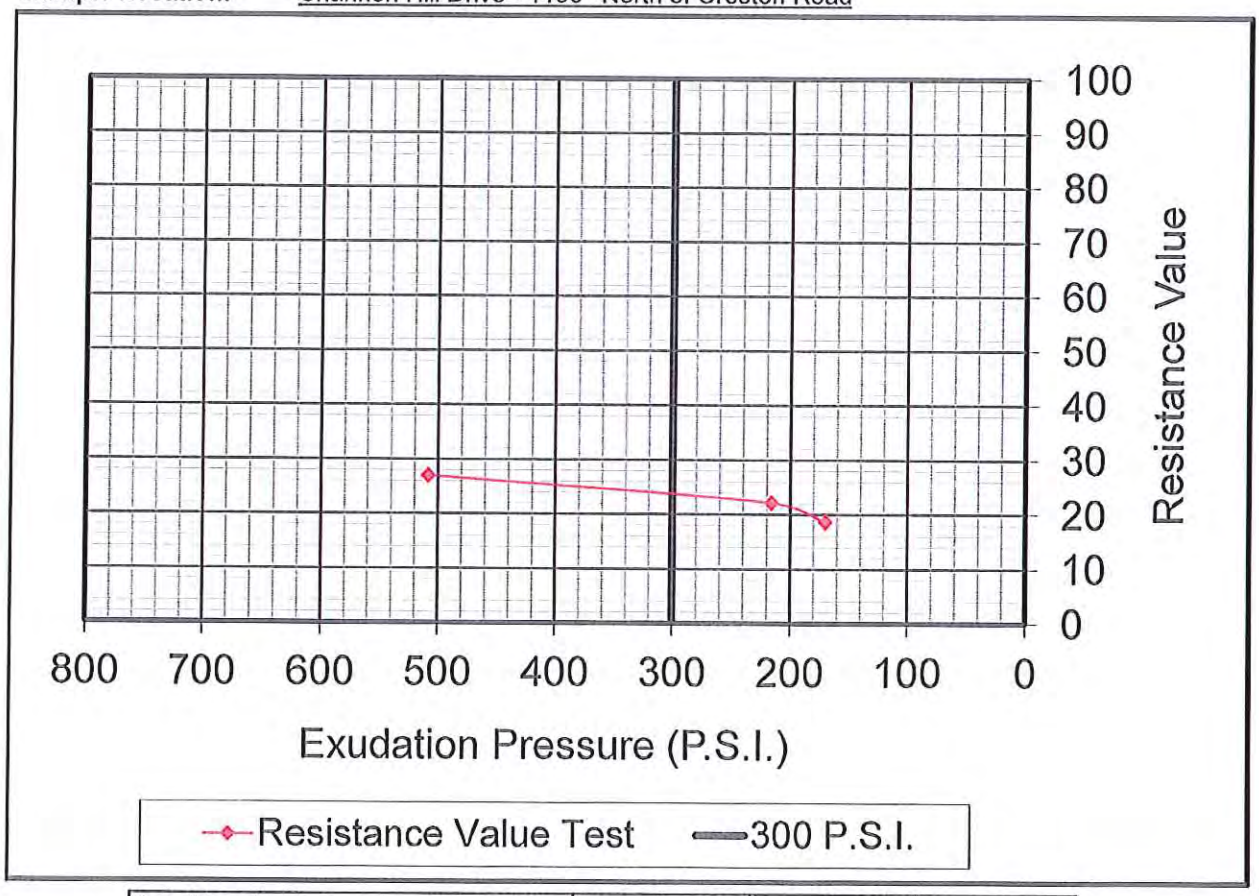
RESISTANCE (R) VALUE TEST
ASTM D 2844

Laboratory No.: L130083AF
Project No.: 130065
Sample Date: March 15, 2013
Report Date: April 4, 2013
Client: City of Paso Robles
Project Name: City of Paso Robles 2013 Pavement Analysis
Sample Description: Brown Clayey Silt
Sample Location: Shannon Hill Drive - 1100' North of Creston Road



Specimen No.	1	2	3
Moisture Content (%)	19.2	20.2	19.7
Dry Density (PCF)	109.4	106.0	106.3
Resistance Value (R)	27	19	22
Exudation Pressure (PSI)	509	170	216
Expansion Pressure	173	26	74

RESISTANCE VALUE AT 300 P.S.I. 24

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SHANNON HILL DRIVE – CRESTON ROAD TO JACKSON DRIVE
Creston Road looking Northbound

SHANNON HILL DRIVE – CRESTON ROAD TO JACKSON DRIVE
Jackson Drive looking Westbound

SHANNON HILL DRIVE – CRESTON ROAD TO JACKSON DRIVE
Walnut Drive looking Westbound