SPRING STREET – 24TH STREET TO 36TH STREET

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

Overlay options are not recommended because of the 7 inch overlay requirement for reflective cracking exceeds the feasible overlay thickness to meet geometric constraints.

Recycle and Mill and Replace Options

For option 1, we recommend milling off 3-1/2 inches of the existing asphalt concrete, 4 inch digouts of base failures, placing a 1 inch HMA leveling course and a 2-1/2 inch RHMA surface course.

Estimated Cost: $1,400,000 Estimated Life Expectancy: 12-15 Years

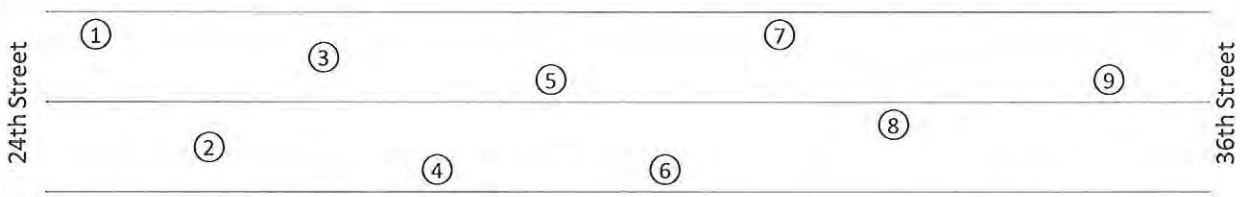
For option 2, we recommend milling off 3 inches of the existing HMA, cold in-place recycle to a depth of 5 inches, and place 3 inches of new HMA.

Estimated Cost: $1,267,000 Estimated Life Expectancy: 12-15 Years

Reconstruction Options

Reconstructing alternative was not evaluated for this street segment.

Pavement Engineering Inc.
Civil Engineering • Landscape Architecture
CalTrans/AMRL QC/QA • Construction Management



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

Spring Street

[Section of Road ≈ 4600ft]

TRAFFIC LAYOUT:
- 2-WAY STREET
- LANE NUMBER VARIES EACH WAY

VISUAL DESCRIPTION FOR THIS SECTION OF ROAD

The pavement exhibits slight to moderate raveling and block shrinkage cracking progressing to alligator cracking in the wheel paths. The travel lanes are much more distressed. Trench failure was observed in the northbound lane.

CORING LOG

Symbol	Location	Core Data		R-value
1	North of 24th Street 200ft	AC	12.00"	N.A.
2	North of 24th Street 650ft	AC PCC	11.50" 3.50"	N.A.
3	North of 24th Street 1100ft	AC PCC	12.00" 3.50"	N.A.
4	North of 24th Street 1550ft	AC	11.50"	N.A.
5	North of 24th Street 2000ft	AC PCC	10.50" 3.50"	N.A.
6	North of 24th Street 2450ft	AC PCC	11.00" 3.00"	N.A.
7	North of 24th Street 2900ft	AC	12.00"	N.A.
8	North of 24th Street 3350ft	AC PCC	9.00" 4.50"	N.A.
9	North of 24th Street 3800ft	AC PCC	10.75" 3.50"	N.A.

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24th Street

36th Street

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Spring Street

[Section of Road ≈ 4600ft]

TRAFFIC LAYOUT:
- 2-WAY STREET
- LANE NUMBER VARIES EACH WAY

DEFLECTION ANALYSIS

Lane	Tolerable	TI	80th Percentile	Percent Reduction	HMA Overlay
North Bound	17	8.0	31.80	46.53	3.48 - inches
South Bound	17	8.0	28.15	39.60	2.64 - inches
				Overlay Required by Reflective Cracking	7.00 - inches

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City of Paso Robles

Road: Spring
From: 24th
To: 36th
Lane/Line: NB

Survey Date: 03/15/13
Thickness: 1.20
Traffic Index: 8.00
Project Number: 130065

Deflection Data Analysis

Deflection Readings (Equivalent Deflectometer Units)

No. of Tests	Low	Mean	High	Std. Dev.
42	5.17	24.01	41.47	9.27

Road Surface

Thickness	Traffic Index
1.20	8.00

Structural Design

Tolerable	80th Percentile	90th Percentile	% Reduction	GE Deficient
17.00	31.80	35.87	46.53	0.56

HMA Overlay
0.29

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City of Paso Robles

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From: 24th
To: 36th
Lane/Line: NB

Survey Date: 03/15/13
Thickness: 1.20
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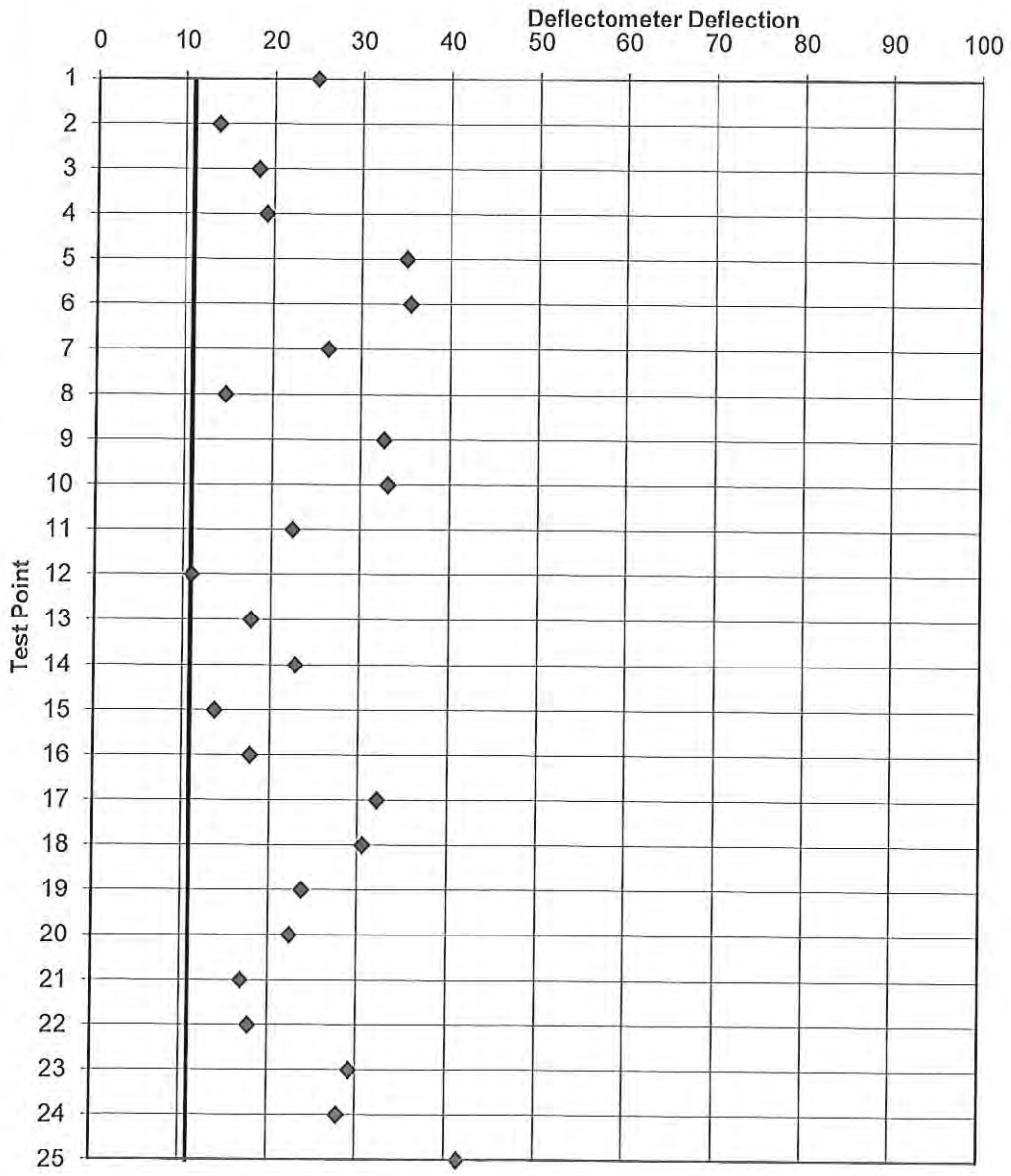

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Date: 4/1/2013

Client: City of Paso Robles
Road: Spring
From: 24th
To: 36th
Lane/Line: NB

Interval: 100
Survey Date: 3/15/13
Thickness: 1.20
Traffic Index: 8.00
Project Number: 130065

Test Points	Dynaflect	Conditions	Comments	Deflection	Exclude
1	1.12			24.909	
2	0.63			13.793	
3	0.83			18.330	
4	0.87			19.237	
5	1.57			35.118	
6	1.59			35.572	
7	1.18			26.270	
8	0.67		26th	14.700	
9	1.46			32.622	
10	1.48			33.076	
11	1.01			22.413	
12	0.51			11.070	
13	0.81			17.876	
14	1.03		28th	22.867	
15	0.63			13.793	
16	0.81			17.876	
17	1.44			32.169	
18	1.37			30.581	
19	1.07			23.775	
20	1.01			22.413	
21	0.77			16.969	
22	0.81		30th	17.876	
23	1.31			29.219	
24	1.25			27.858	
25	1.85			41.470	
26	1.33			29.673	
27	1.28			28.539	
28	1.22			27.178	
29	1.65			36.933	
30	0.96		32nd	21.279	
31	0.47			10.163	

32	0.72			15.834	
33	0.56			12.205	
34	1.58			35.345	
35	1.53			34.211	
36	1.54			34.437	
37	1.84		34th	41.243	
38	1.29			28.766	
39	0.68			14.927	
40	0.25			5.172	
41	0.43			9.255	
42	0.97			21.506	

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City of Paso Robles

Road: Spring
From: 36th
To: 24th
Lane/Line: SB

Survey Date: 03/15/13
Thickness: 1.20
Traffic Index: 8.00
Project Number: 130065

Deflection Data Analysis

Deflection Readings (Equivalent Deflectometer Units)

No. of Tests	Low	Mean	High	Std. Dev.
42	5.40	20.88	46.69	8.65

Road Surface

Thickness	Traffic Index
1.20	8.00

Structural Design

Tolerable	80th Percentile	90th Percentile	% Reduction	GE Deficient
17.00	28.15	31.95	39.60	0.41

HMA Overlay
0.22

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City of Paso Robles

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From: 36th
To: 24th
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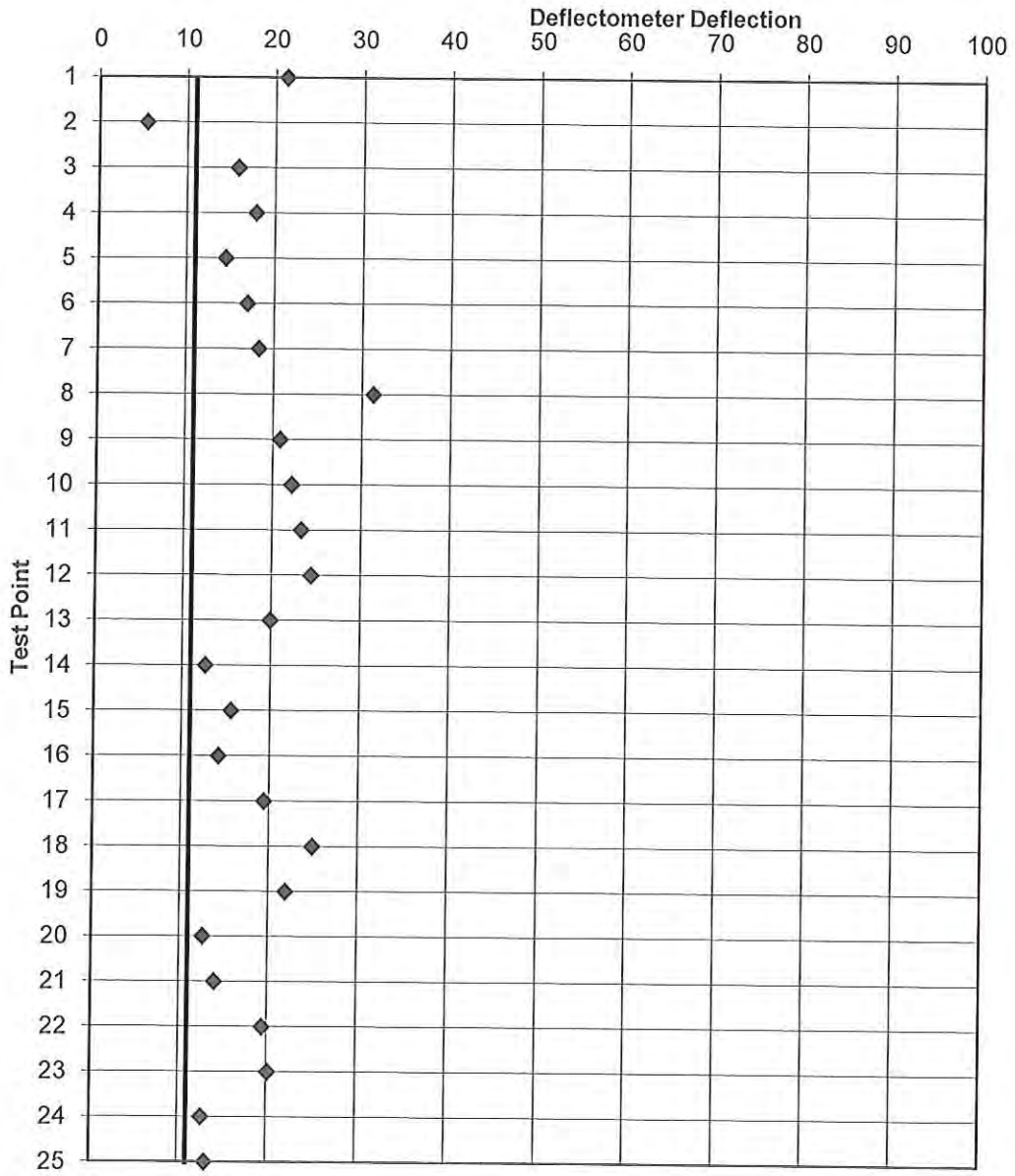

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From: 36th
To: 24th
Lane/Line: SB

Interval: 100
Survey Date: 3/15/13
Thickness: 1.20
Traffic Index: 8.00
Project Number: 130065

Test Points	Dynaflect	Conditions	Comments	Deflection	Exclude
1	0.96			21.279	
2	0.26			5.399	
3	0.72			15.834	
4	0.81			17.876	
5	0.66			14.473	
6	0.77			16.969	
7	0.83		34th	18.330	
8	1.40			31.261	
9	0.94			20.825	
10	1.00			22.187	
11	1.05			23.321	
12	1.10			24.455	
13	0.90			19.918	
14	0.58		32nd	12.658	
15	0.71			15.608	
16	0.65			14.246	
17	0.88			19.464	
18	1.12			24.909	
19	0.99			21.960	
20	0.58			12.658	
21	0.64			14.019	
22	0.88		30th	19.464	
23	0.91			20.145	
24	0.58			12.658	
25	0.60			13.112	
26	0.70			15.381	
27	0.65			14.246	
28	0.74			16.288	
29	0.58		28th	12.658	
30	0.88			19.464	
31	0.81			17.876	

32	0.64			14.019	
33	0.73			16.061	
34	1.25			27.858	
35	1.00			22.187	
36	0.96		26th	21.279	
37	1.31			29.219	
38	1.67			37.387	
39	1.88			42.151	
40	1.57			35.118	
41	2.08			46.688	
42	1.62			36.252	

SPRING STREET – 24TH STREET TO 36TH STREET
24th Street looking Northbound

SPRING STREET – 24TH STREET TO 36TH STREET
28th Street looking Northbound

SPRING STREET – 24TH STREET TO 36TH STREET
32nd Street looking Northbound

SPRING STREET – 24TH STREET TO 36TH STREET
36th Street looking Southbound