FOR CONTRACT NO.: 09-338104

INFORMATION HANDOUT

MATERIALS INFORMATION

EXISTING STRUCTURAL SECTION

ROUTE: Mno-270-0.0/9.8

Summary of Investigations

Investigations carried out on the existing highway, SR 270 in Mono County, the road to the historic mining site of Bodie and Bodie State Park, indicate the existing roadway structural section is suitable for recycling. Laboratory tests conducted on samples extracted from four test-pits indicate the engineering properties of these materials may be improved to provide sufficient strength to extend the life of the structural section for 20 years. Addition of foamed bitumen and cementitious material in a full-depth reclamation process will be used to provide a durable base course. Lastly, application of a 0.2-ft thick Hot Mix Asphalt wearing course will complete the roadway rehabilitation.

The general structural section, from the bottom up is basement material, aggregate base and asphaltic concrete. Aggregate base material is non-plastic, brown, moist, and sandy with gravel (max size 1.5"). Native materials were designated GS (gravel & sand) under the Unified Soil Classification system.

The entire roadway, except for sections with recent grader blankets, exhibits surface alligator cracking and major transverse thermal cracking. The transverse thermal cracking occurs at intervals of 20 feet; many of the cracks are as large as 4 inches wide. Several sections of the roadway show alligator cracking edge distress.

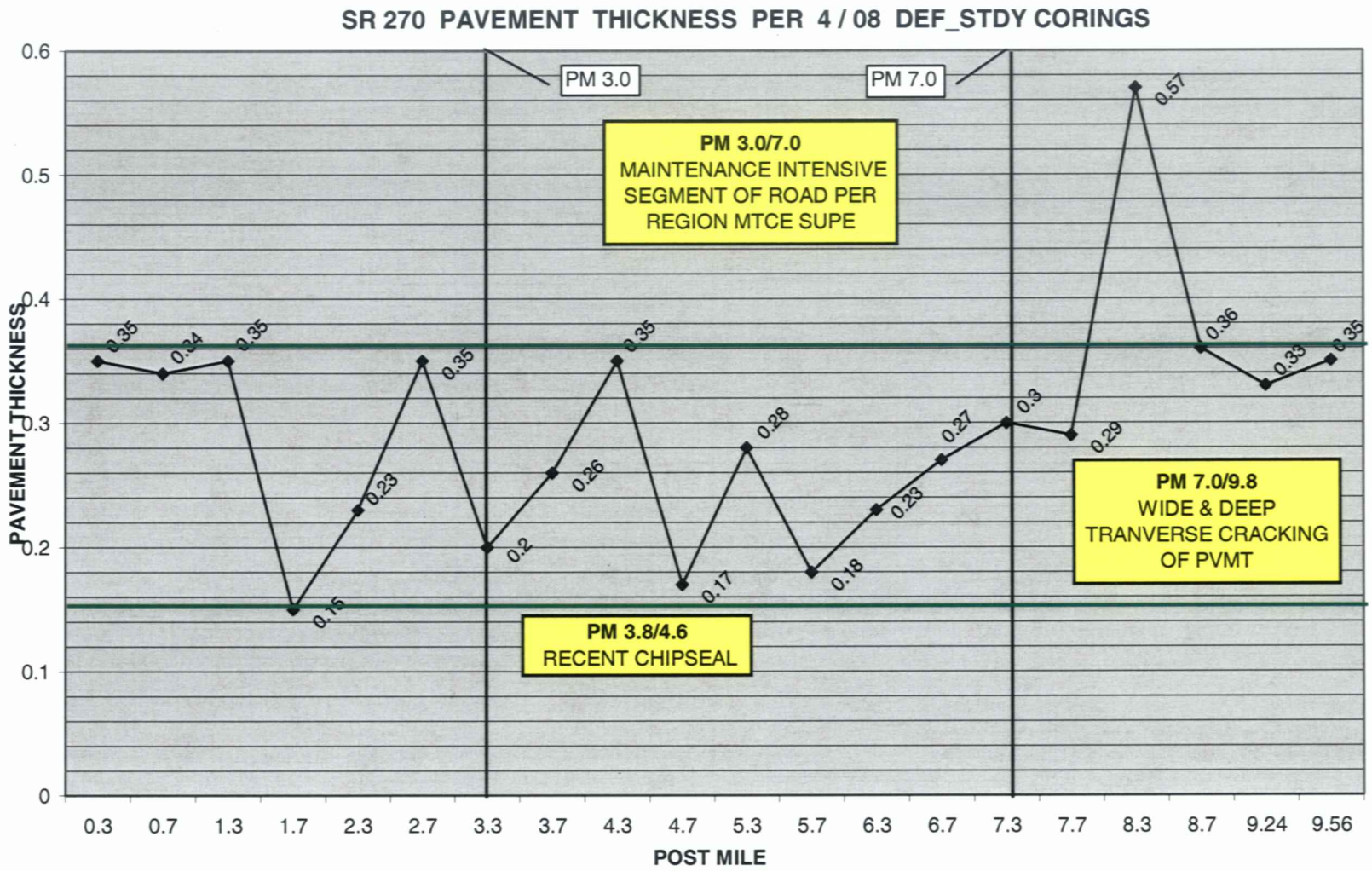
Coring data collected in June 2010 shows the existing pavement thickness varies in thickness between 2.5-in. and 7.3-in. on average. The pavement thickness is not uniform and varies throughout the length of the project. Refer to the attached Pavement Corings Table.

A foam mix design has been performed that used samples of the existing structural section material collected from test pits on the roadway throughout the length of the project. Using a foamed asphalt content of 2.5% and a cement content of 2%, the average tensile strengths of test specimens was 324 Kpa dry and 385 Kpa wet. The TSR is 81.

Pavement Corings Table
(June 2010
(core depths in inches)

Item	Station	EB LN	Center	WB LN	Average	Thickest	Thinnest	Variance
1	1+00	6.5	9	6.5	7.3	9	6.5	2.5
2	16+00	4	3.5	4	3.8	4	3.5	0.5
3	30+00	5	4	7	5.3	5	4	1
4	45+00	5	6	6	5.7	6	5	1
5	60+00	4	5	3.5	4.2	5	3.5	1.5
6	75+00	4	5	5	4.7	5	4	1
7	90+00	4.5	2	4.5	3.7	4.5	2	2.5
8	105+00	3	4	4	3.7	4	3	1
9	120+00	3	4.5	6	4.5	4.5	3	1.5
10	135+00	5.5	5.5	4.5	5.2	5.5	4.5	1
11	150+00	4	4.5	4.5	4.3	4.5	4	0.5
12	165+00	3	4	4	3.7	4	3	1
13	180+00	5.5	4	4	4.5	5.5	4	1.5
14	195+00	4	5.5	5	4.8	5.5	4	1.5
15	210+00	5.5	7	5.5	6.0	7	5.5	1.5
16	225+00	5	4	6	5.0	5	4	1
17	240+00	6	3.5	2.5	4.0	6	2.5	3.5
18	255+00	6	2	6	4.7	6	2	4
19	270+00	3.5	3.5	3	3.3	3.5	3	0.5
20	205+00	2.5	8	2.5	4.3	8	2.5	5.5
21	300+00	3	3	3	3.0	3	3	0
22	315+00	2.5	3	2	2.5	3	2	1
23	330+00	3	3	3.5	3.2	3	3	0
24	345+00	4	4	4	4.0	4	4	0
25	360+00	4	4	4	4.0	4	4	0
26	375+00	4	4	4	4.0	4	4	0
27	390+00	6	5.5	7	6.2	6	5.5	0.5
28	405+00	5	5	5.5	5.2	5	5	0
29	420+00	6	5	6	5.7	6	5	1
30	435+00	6.5	5.5	6	6.0	6.5	5.5	1
31	450+00	4.5	4	4.5	4.3	4.5	4	0.5
32	465+00	4	4	4.5	4.2	4	4	0
33	480+00	5	5	4	4.7	5	4	1
34	495+00	4.5	4	4	4.2	4.5	4	0.5
35	510+00	4	4.5	4.5	4.3	4.5	4	0.5
36	517+80	4	4	4.5	4.2	4	4	0
					Average	Thickest	Thinnest	Variance
				Average	4.5	5.0	3.8	1.1
				Thinnest	2.5	3.0	2.0	0.0
				Thickest	7.3	9.0	6.5	5.5

Any reliance placed by the Contractor on this information shall be at his own risk. The Contractor shall undertake his own testing program to determine the materials present and conditions prevailing at the time of construction.


SR 270 PAVEMENT THICKNESS PER 4 / 08 DEF_STDY CORINGS
PAVEMENT THICKNESS
POST MILE
0.6
0.5
0.4
0.3
0.2
0.1
0
0.3
0.7
1.3
1.7
2.3
2.7
3.3
3.7
4.3
4.7
5.3
5.7
6.3
6.7
7.3
7.7
8.3
8.7
9.24
9.56
PM 3.0
PM 7.0
PM 3.0/7.0
MAINTENANCE INTENSIVE
SEGMENT OF ROAD PER
REGION MTCE SUPE
PM 7.0/9.8
WIDE & DEEP
TRANVERSE CRACKING
OF PVMT
PM 3.8/4.6
RECENT CHIPSEAL
0.35
0.34
0.35
0.15
0.23
0.35
0.2
0.26
0.35
0.17
0.28
0.18
0.23
0.27
0.3
0.29
0.57
0.36
0.33
0.35