1/5/2009

2879

SPEC. YEAR "2009" (with longitudinal joint density)

DENSITY INCENTIVE / DISINCENTIVE WORKSHEET

S.P. 199-102-06 HWY LOCATION 167th Ave-Ramsey

CONTRACTOR North Valley,Inc. MARSHALL DESIGN

PAVED 10/20/2009
CORED 10/21/2009
BID PRICE= $8.15
MIX TYPE MV
Ave.Gmm.= 2.489
TON TYPE ENGLISH

SAMPLE NUMBER	313	314							
SAMPLE TON #	250	1050							
TONS REPRESENTED	1050	925							
DENSITY TONS	1050	925							
INDIVIDUAL VOIDS	3.2	2.8							
IND. MAX SP.G.	2.488	2.485							
MVNG AVG MX SP.G.	2.492	2.489							

DESIGN AIR VOIDS = 3.5 MIN. AIR VOIDS = 3.0 REQ'D DENSITY= 92.0

Square Yard Inch Project

TOTAL TONS PAVED 1975
MAT THICKNESS = 2.5
TOTAL AREA PAVED = 12107
MAX. DENSITY AREA = 12107
INCENT/DISINC RATIO= 1.00
OVERRIDE # LOTS = 3
LOTS REQUIRED = 3

SQ YARDS PER LOT = 4035.67
Max Density Tons = 1975.00

LOT	CORE #	CORE THICKNESS	AIR DRY	CORE/PAN (or dry wt.)	PAN WT.	DRY WT.	SSD WT.	IMM WT.	% WATER ABSORBED	Gmb / BULK SP.G	BULK SpG. USED	% DENSITY	AIR VOID USED	TONS REPRESENT.	Sq Yd REPRESENT	MAT DENSITY PAY FACTOR	TOTAL PAY FACTOR	INCENTIVE DISINCENTIVE
1	1.1	2.33	1146.5	1369.1	223.4	1145.7	1147.1	666.3	0.1	2.383	2.383	95.0	3.0	658	4036	1.04	1.08	$2,697.52
	1.2	2.52	1212.0	1436.8	226.0	1210.8	1213.2	697.1	0.2	2.346	2.346							
COMP	1.1C																	
	1.2C										2.364	= Ave.Gmb.						
2	2.1	2.29	1056.6	1283.5	229.4	1054.1	1058.4	602.6	0.4	2.313	2.313	94.5	3.0	392	2401	1.04	1.04	$782.70
	2.2	1.78	845.3	1072.7	227.8	844.9	845.9	492.8	0.2	2.393	2.393		3.0	267	1635	1.04	1.04	$532.91
COMP	2.1C																	
	2.2C										2.353	= Ave.Gmb.						
3	3.1	2.21	1044.4	1289.7	246.7	1043.0	1045.4	598.4	0.2	2.333	2.333	94.3	3.0	658	4036	1.04	1.04	$1,315.61
	3.2	2.09	986.5	1233.7	248.0	985.7	987.5	570.3	0.2	2.363	2.363							
COMP	3.1C																	
	3.2C										2.348	= Ave.Gmb.						

LOT	CORE #	THICKNESS	AIR DRY	CORE/PAN	PAN WT.	DRY WT.	SSD WT.	IMM WT.	Longitudinal Joint Density				Confined?	Companion to Mat Core#	Edge Pay Factor	Combined Edge Pay Factor
1	1.3L	2.17	1038.3	1288.4	251.4	1037.0	1039.9	592.6	0.4	2.318	2.318	93.1	confined	1.2	1.02	104%
	1.4R	2.09	984.4	1229.7	249.1	980.6	986.7	556.3	0.5	2.278	2.278	91.5	unconfined		1.02	
COMP 1	1.3LC															
COMP 2	1.4RC										2.298	= Ave.Gmb.				
													no core			100%
													no core			

3.0 DATA BY:
MIX DESIGNATION:
NOTES

Average Density = 146.7
lbs.per square yd in.= 110.0

INCENTIVE THIS SHEET TOTAL = $5,328.74

DISINCENTIVE THIS SHEET TOTAL = $0.00

INCENTIVE / DISINCENTIVE
NET Total = **$5,328.74**

Weighted Average Air Voids

CHK'D BY DATE:
PLANT #: MDR.#:

PLANT: RAMSEY 906 ENGINEER: CITY OF RAMSEY

MAXIMUM DENSITY METHOD

DATE 10/22/09

S.P. SP 199-102-006 TH 167 AVE MIX TYPE: MVNW35035® MDR # 2009-106 SPEC: 2360

PAVED: 10/20/09 CORED: 10/21/09 TEST #'s 313,314 TONS: 1975 # LOTS: 3 CONTRACTOR: N. VALLEY

LOT	CORE #	AIR DRY	CORE/PAN	PAN I.D.	PAN WT.	DRY WT.	SSD WT.	IMM. WT.	HEIGHT (MM)	VOLUME	%WATER ABSORB	GMB	AVE. GMB	GMM	FINAL DENSITY
1	1.1	1146.5	1369.1	G	223.4	1145.7	1147.1	668.3	59	480.8	0.1	2.383			
	1.2	1212.0	1436.8	H	226.0	1210.8	1213.2	697.1	64	516.1	0.2	2.346	2.364	2.485	95.1%
**	COMP														
2	2.1	1056.6	1283.5	I	229.4	1054.1	1058.4	602.6	58	455.8	0.4	2.313			
	2.2	845.3	1072.7	J	227.8	844.9	845.9	492.8	45	353.1	0.2	2.393	2.353	2.485	94.7%
**	COMP														
3	3.1	1044.4	1289.7	101.0	246.7	1043	1045.4	598.4	56	447.0	0.2	2.333			
	3.2	986.5	1233.7	102.0	248.0	985.7	987.5	570.3	53	417.2	0.2	2.363	2.348	2.485	94.5%
**	COMP														
						0				0.0					
						0				0.0				2.485	
**	COMP														
						0				0.0					
						0				0.0				2.485	
**	COMP														
						0				0.0					
						0				0.0				2.485	
**	COMP														
LONGITUDINAL JOINT CORES															
1	1.2L	1038.3	1288.4	103.0	251.4	1037	1039.9	582.6	55	447.3	0.4	2.318		2.485	93.3%
**	COMP														
1	1.2R	984.4	1229.7	104.0	249.1	980.6	986.7	556.3	53	430.4	0.5	2.278		2.485	91.7%
**	COMP														
						0				0.0				2.485	
**	COMP														
						0				0.0				2.485	
**	COMP														

R = RIGHT L = LEFT

C = CONFINED U = UNCONFINED

** COMPANION CORE TESTED BY AGENCY

TIME IN OVEN 12:25 PM

TIME OUT OVEN 3:25 PM

COMMERCIAL ASPHALT

TILLER CORPORATION

2360 (MARSHALL) TEST SUMMARY SHEET

MIX DESIGNATION: MVWE/NW35035(R) MDR # 2009-106

PLANT# 906 - RAMSEY TECHNICIAN: TIM PHILLIPS

			Cont	MN/Dot	Cont	MN/Dot	Cont	MN/Dot	Cont	MN/Dot
		TEST #	313		314		315		316	
		DAY#	8		8					
		DATE	10/20/09		10/20/09					
		S.P.	199-102-06		199-102-06					
1" Sieve			100							
Mov. Avg.	100	100	100							
3/4" Sieve			100							
Mov. Avg.	100	100	100							
1/2" Sieve			95							
Mov. Avg.	87	100	96							
3/8" Sieve			85							
Mov. Avg.	75	89	86							
#4 Sieve			66							
Mov. Avg.	56	70	69							
#8 Sieve			53							
Mov. Avg.	48	60	56							
#16 Sieve			42							
#30 Sieve			29							
#50 Sieve			14							
#100 Sieve			7							
#200 Sieve			4.0							
Mov. Avg.	2.0	5.6	3.8							
+4 %Crushing		55.0%	92%							
-4 %Cr. / FAA			31%		31%		91%		31%	
%AC (Spot Check)		4.6%			4.3%					
%AC (Incineration)		5.6%	5.5%		5.6%					
%AC Avg.(Incineration)		5.2%min.	5.6%		5.6%					
F/Pbe		0.6-1.4	0.8							
Max. Sp.G (Gmm)			2.488		2.485					
Mov. Avg. (Gmm)			2.492		2.489		1.867		1.243	
Bulk Sp.G. (Gmb)			2.412		2.420					
Voids Isolated			3.1		2.6					
Voids Individual		1.5-5.5	3.2		2.8					
Voids Mov. Avg.		2.5-4.5	3.3		3.1					
VMA (Design)		14.0	15.1		9.9					
VMA Mov. Avg.(JMF)		13.7	15.3		13.9					
Mix Moisture Content										
Tons Represented			1050.00		911.46					
Sample Tons			250.00		1050.00					
Cumulative Tons			8038.63		8950.09		8950.09		8950.09	