

# LaPave Walkthrough

Asphalt 501/502

# Basics

- File is locked down to prevent overwriting of formulas
- Light blue cells are for user inputs, some may be drop downs
- One file per Lot

# Reporting Tab

<b>Print All</b>		<b>Check for Latest Version</b>	<b>Update Material Codes from Server</b>
Project	H.Test.6	<b>Upload This File to Server</b>	<b>Import Material Codes from File</b>
Lot	2		
<b>Print Design Report</b>	Y	Optimum AC and Verification Samples data	<b>SMM codes updated</b> 11/7/2016
	Y	Optimum AC charts	
	Y	Combined Gradation	
	N	0.45 Curve	
	N	Ignition Oven Correction Factors and Verification Gradations	
<b>Print JMF Report</b>	N	JMF Input	<b>Export Material Codes to File</b>
	Y	JMF	
	N	JMF Check	
<b>Print Validation Report</b>	N	Validation Input	<b>Admin / Unlocked</b>
	Y	Validation Report	
	Y	Validation Plant Report	
<b>Print Plant Report</b>	Y	Plant Report	
	N	Plant Acceptance	
	N	Plant QC	
	N	Plant Verification	
<b>Print Plant Report</b>	Y	Roadway Core Data	
	Y	Roadway Pay	

[Import Mat Code] – imports SiteManager codes from server or another file

[Check Latest Version] – checks for newer version on the shared location [internal only]

[Upload File to Server] – uploads to shared location on DOTD network [internal only]

[Print]s – can select Y/N on sections to print

# Material Setup Tab

		*	= expired material			
<b>Asphalt Prodr</b>	PS00000520-Contractor Supplied					
<b>Anti-Strips</b>	<b>Producer/Supplier</b>	<b>1</b>	<b>Material</b>	<b>Custom Name/Identifier</b>	<b>Anti-Strip %</b>	
1	APS00003910-AkzoNobel Surface Chemistry - Chicago, IL		1002M00220-Anti-Strip Additive-Kling Beta 2550 (HM) - Akzo Nobel	Example Anti-Strip	0.7	
2						
3						
4						
<b>Warm Mix Ad</b>	<b>Producer/Supplier</b>	<b>1</b>	<b>Material</b>	<b>Custom Name/Identifier</b>	<b>Method</b>	<b>Rate</b>
1	APS00003910-AkzoNobel Surface Chemistry - Chicago, IL		1002M00270-Warm Mix Asphalt Chemical Additive-Rediset WMX -	Example Warm Mix	Chemical	2.0%
2						
3						
4						
<b>Fibers/Rubber</b>	<b>Producer/Supplier</b>	<b>0</b>	<b>Material</b>	<b>Custom Name/Identifier</b>	<b>Fiber Type</b>	<b>Rate %</b>
1						
2						
3						
4						
<b>Asphalt Bind</b>	<b>Producer/Supplier</b>	<b>2</b>	<b>Material</b>	<b>Custom Name/Identifier</b>	<b>Grade</b>	
1	APS00010660-Martin Asphalt Company - South Houston, TX		1002M00035-Binder PG 67-22-Binder PG 67-22 MartinAsphaltSHouston	Example Binder 67-22	67-22	
2	APS00000340-Blacklidge Emulsions, Inc. - Gulfport, MS		1002M00035-Binder PG 67-22-Binder PG 67-22 Blacklidge	Example Binder 2 67-22	67-22	
3						
4						
5						
6						
7						
8						
<b>Coarse Agg</b>	<b>Producer/Supplier</b>	<b>4</b>	<b>Material</b>	<b>Custom Name/Identifier</b>	<b>Bulk Gravity</b>	<b>Absorption</b>
1	APS00006890-Pine Bluff Sand & Gravel-Salem,KY		1003M00120-Agg, Coarse - HMAC-Agg-CoarseHMAC-	Example Coarse LS67	2.661	0.5
2	APS00006890-Pine Bluff Sand & Gravel-Salem,KY		1003M00120-Agg, Coarse - HMAC-Agg-CoarseHMAC-	Example Coarse LS8	2.660	0.7
3	APS00006560-Lafarge Aggregates-SandStn-Cave-In-Rock, IL		1003M00120-Agg, Coarse - HMAC-Agg-CoarseHMAC-LafargeAggs-	Example Coarse LS5	2.664	0.6
4	APS00006560-Lafarge Aggregates-SandStn-Cave-In-Rock, IL		1003M00120-Agg, Coarse - HMAC-Agg-CoarseHMAC-LafargeAggs-	Example Coarse SST78	2.560	1.4
5						

- Users select materials typically used in their plant, some values can be completed here, these will populate throughout the file.
- Custom name set by user to distinguish if two aggregates from same source.
- Options to import/export materials setup too

# JMF Input Tab

## SUPERPAVE ASPHALTIC CONCRETE MIXTURES

Project No.	H.Test.6	Mix Code	26-English	JMF No.	1	Traffic (ADT)	25,000	ESAL	0
Project Name	Test			Design Level	1	Plant Type	3-dryer drum	Prod. Rate	350
Project Eng.	DOTD Eng.	Mix Type	Binder Course	Nom Agg Size	0.75 in.	Mix Temp	295	Date	11/7/2016
Contractor	Example Contractor	Use	ML - Binder	Specs	2016	AC Corr Factor	0.11	Design LWT Rut	4.10
Contr. Mix #	1	SMM P/S	PS00000520-Contractor Supplied	SMM ID				No. Passes	20000

GET SMM ID

IMPORT

P/S Code	Aggregate Type	%	Bulk Gravity	Absorption	FAA Method A	Sand Eq. - 4.75 mm	Flat & Elong %5:1	CAA	Friction Rating	%Ret No.8	%Ret No.4	Aggr. Class
APS00006890	1003M00120-Example Coarse LS67	25.0	2.661	0.5			0.6	100	II	93.0	86.0	Coarse
APS00006890	1003M00120-Example Coarse LS8	16.0	2.660	0.7			0.7	100	II	97.0	95.0	Coarse
APS00006560	1003M00120-Example Coarse LS5	20.0	2.664	0.6			0.5	100	II	98.0	97.0	Coarse
APS00006890	1003M00110-Example Sand	15.3	2.639	0.5	44	75				0.0	0.0	Fine
PS00003960	1003M01000-Example RAP	23.7	2.547	1						59.0	41.0	Rap

Source Code	Material	%	Sp. Gravity	Warm Mix Asphalt	Gyr. Rev
Asphalt	APS00010660 1002M00035-Example Binder 67-22	3.3	1.03	Warm Mix Method	Yes
Alt. Asphalt	APS00000340 1002M00035-Example Binder 2 67-22			Rate	2.00%
Alt. Asphalt				If Chemical - Brand Name:	
Asphalt Content from RAP					
Anti-strip	APS00003910 1002M00220-Example Anti-Strip	0.7			
Draindown Control					
Type					
Rate					
If Chemical - Brand Name:					
%Nat Sand					
PSG					
%Design AC					
%Crushed					
G <sub>sp</sub> avg					
Comp Temp					
SCB Jc					
Type					
Rap 1					
Rap 2					
% MixRapTotal					
% AC in RAP					
% MixRap Agg					
% MixRap AC					
Remarks: JMF input comment					

correct rap agg% n

[Import] button will import JMF data from another LaPave file of similar type (includes material setup)

# JMF Input Tab

SUPERPAVE ASPHALTIC CONCRETE MIXTURES											
Project No.	H.Test.6	Mix Code	26-English	JMF No	1	Traffic (ADT)	25,000	ESAL	0		
Project Name	Test	Design Level	1	Plant Type	3-dryer drum	Prod. Rate	350	Adj.Fac	1.00		
Project Eng.	DOTD Eng.	Mix Type	Binder Course	Nom Agg Size	0.75 in.	Mix Temp	295	Date	11/7/2016		
Contractor	Example Contractor	Use	ML - Binder	Specs	2016	AC Corr Factor	0.11	Design LWT Rut	4.10		
Contr. Mix #	1	SMM P/S	PS00000520-Contractor Supplied	SMM ID				No. Passes	20000		

## JMF header info

- Mix Type, Use, and Nom Agg Size will set limits for other parts of the application
- Project and mix info will be populated to other sheets

# JMF Input Tab

P/S Code	Aggregate Type	%	Bulk Gravity	Absorption	FAA Method A	Sand Eq. - 4.75 mm	Flat & Elong %5:1	CAA	Friction Rating	%Ret No.8	%Ret No.4	Aggr. Class
APS00006890	1003M00120-Example Coarse LS67	25.0	2.661	0.5			0.6	100	II	93.0	86.0	Coarse
APS00006890	1003M00120-Example Coarse LS8	16.0	2.660	0.7			0.7	100	II	97.0	95.0	Coarse
APS00006560	1003M00120-Example Coarse LS5	20.0	2.664	0.6			0.5	100	II	98.0	97.0	Coarse
APS00006890	1003M00110-Example Sand	15.3	2.639	0.5	44	75				0.0	0.0	Fine
PS00003960	1003M01000-Example RAP	23.7 100.0	2.547	1						59.0	41.0	Rap

## Aggregate entry

- Select Aggregate class (this will update aggregate type dropdowns to match materials setup)
- Select Aggregate Types (if material setup value are filled, sheet will populate with these)
- Aggregate % will be transferred to the aggregate design tab
- %Ret No.8 and No.4 are populated from the aggregate design tab
- Flags will show if entry does not meet spec for selected mix type

23.7	2.547	1							59.0	41.0	Rap	
100.0			FAA check				CAA check					

# JMF Input Tab

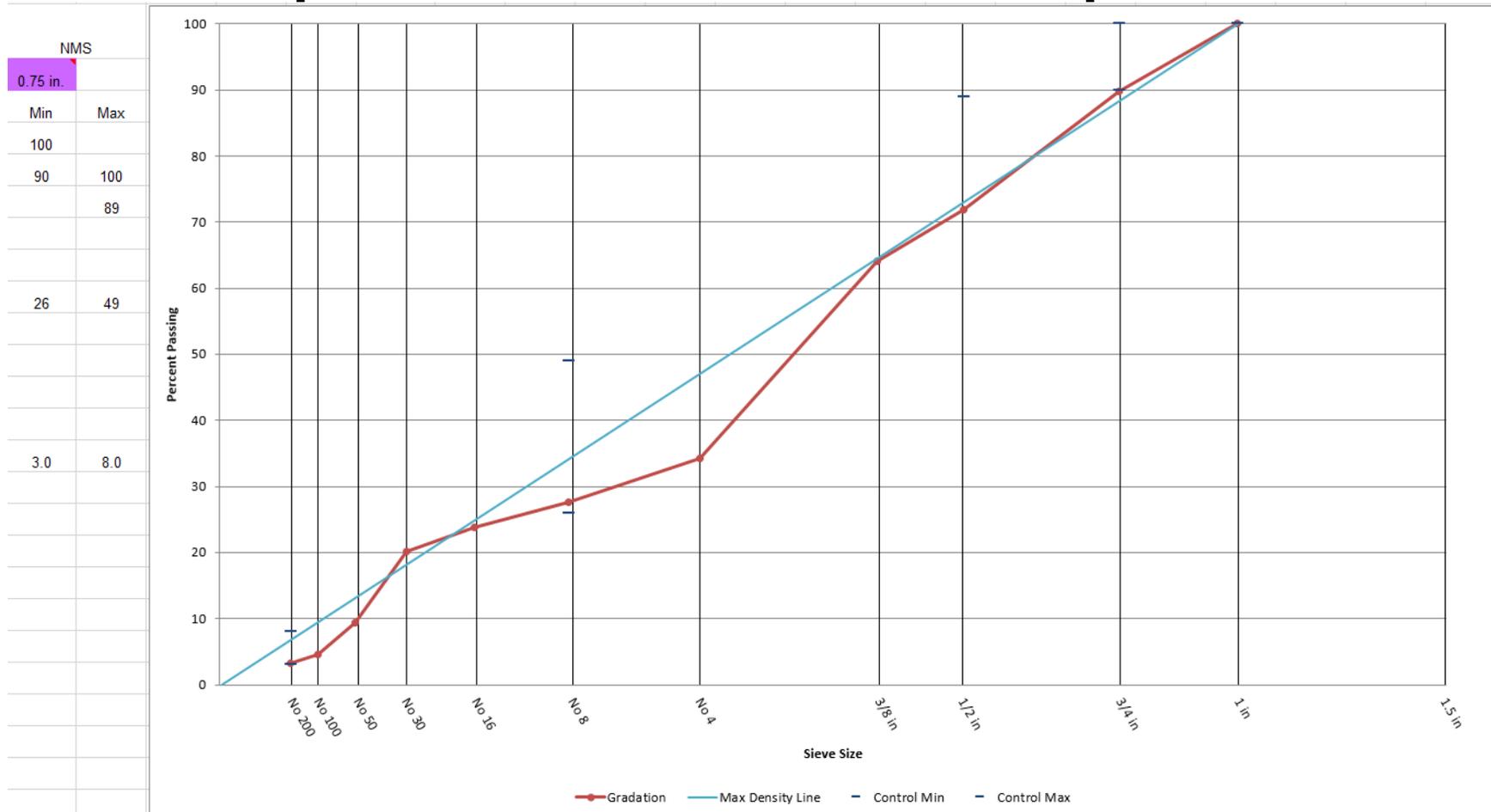
Source Code		Material		%	Sp. Gravity	Warm Mix Asphalt		Gyr. Rev	
Asphalt	APS00010660	1002M00035-Example Binder 67-22		3.3	1.03	Warm Mix	Yes	Nini	7
Alt. Asphalt	APS00000340	1002M00035-Example Binder 2 67-22				Method	Water	Ndes	65
Alt. Asphalt						Rate	2.00%	Nmax	100
Asphalt Content from RAP				1.3	1.03	If Chemical -			
Anti-strip	APS00003910	1002M00220-Example Anti-Strip		0.7		Brand Name:			
Cold Feed		Avg Oven Extract		Validated Results		Draindown Control			
Sieve	% Passing	% Passing		% Passing	Tolerance	Type			
1.5"	37.5	100		100	96 -- 100	Rate			
1"	25	100		100	96 -- 100	If Chemical -			
3/4"	19	90		97	93 -- 100	Brand Name:			
1/2"	12.5	72		86	82 -- 90	%Nat Sand	0		
3/8"	9.5	64		71	71 -- 79	PSG	1.03		
#4	4.75	34		36	37 -- 45	%Design AC	4.6		
#8	2.36	28		27	26 -- 32	%Crushed	99		
#16	1.18	24		23	22 -- 26	G <sub>sb</sub> avg	2.630		
#30	0.6	20		20	19 -- 23	Comp Temp	290		
#50	0.3	9		11	8 -- 12	SCB Jc	0.86		
#100	0.15	5		6	4 -- 8				
#200	0.075	3.3		4.6	3.1 -- 4.5				
Extracted %AC		4.6		4.6	4.4 -- 4.8				
Remarks: JMF input comment									

## Enter Asphalt Information

- Warm mix and Rap information are here also
- Gradations are populated from design and validation



# Comp. Grad. And FAA Input Tab



The composite gradation will be plotted with the spec limits of the mix type selected on the JMF input tab  
 Flags show if out of spec

# Comp. Grad. And FAA Input Tab

No Oven Temp Corr.

## IGNITION OVEN - TR 323-02 (Ignition Oven Correction Factors and Verification Gradations)

Each JMF must have an Ignition Oven Correction Factor for AC in accordance with TR 323-02. A total of two (2) burns must be performed and the results averaged for the determination of the correction factor. If the difference between the two samples is greater than 0.015%, then a 3rd and 4th burn must be performed as well. Then the High and low values are discarded, and remaining two values are averaged for the correct correction factor.

Test 1 - Burn		GRADATION OF THE AGGREGATE				
Tr. Baskets	2814.1	SIEVE	WT.	PERCENT	Per.Coar	Per.Pass
Baskets+Mix w/AC	4348.1	1"	0.0	0.00	0.00	100.0
Baskets minus AC	4248.3	3/4"	0.0	0.00	0.00	100.0
% LOSS	6.51	1/2"	114.0	7.95	7.95	92.0
Virgin AC - Added	6.5	3/8"	382.5	26.69	34.64	65.4
RAP(AC) - From JMF	0.0	NO. 4	631.2	44.04	78.68	21.3
Target AC	6.5	NO. 8	138.5	9.66	88.34	11.7
Corr. Factor	0.01	NO.16	40.6	2.83	91.17	8.8
Int.DryWt	1434.2	NO.30	24.0	1.67	92.85	7.2
AfterWash	1395.2	NO.50	15.6	1.09	93.94	6.1
Decant.	39.0	NO.100	20.0	1.40	95.33	4.7
Sieve Tot	1433.3	NO.200	19.6	1.37	96.70	3.3
% Diff.	0.06	PAN	8.3	1		
		DECANT	39.0		WT.CRUSH	
		ACC.TOTAL	1433.3		WT.+#4	
					PERCENT CRUSHED	

Test 2 - Burn		GRADATION OF THE AGGREGATE				
Tr. Baskets	2814.1	SIEVE	WT.	PERCENT	Per.Coar	Per.Pass
Baskets+Mix w/AC	4356.1	1"	0.0	0.00	0.00	100.0
Baskets minus AC	4255.2	3/4"	0.0	0.00	0.00	100.0
% LOSS	6.54	1/2"	114.3	7.93	7.93	92.1
Virgin AC - Added	6.5	3/8"	372.3	25.82	33.75	66.3
RAP(AC) - From JMF	0.0	NO. 4	645.3	44.76	78.51	21.5
Total AC	6.5	NO. 8	139.6	9.68	88.19	11.8
Corr. Factor	0.04	NO.16	42.0	2.91	91.10	8.9
Int.DryWt	1442.1	NO.30	25.0	1.73	92.84	7.2
AfterWash	1401.3	NO.50	15.1	1.05	93.88	6.1
Decant.	40.8	NO.100	19.4	1.35	95.23	4.8
Sieve Tot	1441.8	NO.200	20.1	1.39	96.62	3.4
% Diff.	0.02	PAN	7.9			
		DECANT	40.8		WT.CRUSH	
		ACC.TOTAL	1441.8		WT.+#4	
					PERCENT CRUSHED	

## IGNITION OVEN - TR 323-02 (Ignition Oven Correction Factors and Verification Gradations)

	Test # 1	Test # 2	Test # 3	Test # 4	Average	Composite
1"	100.0	100.0			100.0	0.0
3/4"	100.0	100.0			100.0	100.0
1/2"	92.0	92.1			92.1	92.8
3/8"	65.4	66.3			65.8	71.5
NO. 4	21.3	21.5			21.4	24.2
NO. 8	11.7	11.8			11.7	12.9
NO.16	8.8	8.9			8.9	9.5
NO.30	7.2	7.2			7.2	7.7
NO.50	6.1	6.1			6.1	6.6
NO.100	4.7	4.8			4.7	0.0
NO.200	3.3	3.4			3.3	2.8
% AC						
Correction	0.01	0.04			0.0	
Difference		0.04				
Min Value	0.04					
Max Value	0.01					

A	If Difference less than 0.15	Correction Factor =	0.02
B	If Difference greater than 0.15	Correction Factor =	
	Factor to be used on JMF Input		0.02
	LaPave 501 2013 v13.10.28.15		11/3/2015

Ignition oven test entries can be found below the gradation entry

Entry fields will change depending on the oven temperature correction selection

# Optimum AC Test Results Tab

## LADOTD Superpave Mix Design

Mix Type:	BINDER
Contractor Mix # :	1

### Optimum AC Points and Curves

Design Point #	1	2	3	4	Design Rice				
% AC (Total)	4.0	4.5	5.0		Asphalt Content for Rice		4.5		
Gsb (Total Aggregate)	2.630				Rice Gravities	A	B		
Gse (Total Aggregate)	2.658				Mix	2156.1	2033.2	Design Voids	3.5
Specific Gravity AC	1.03				Pyc&Water	1458.2	1472.3		
Calculated Rice Gravity	2.500	2.482	2.463		Pyc,Water&Mix	2745.8	2685.7	Avg Gmm	
					Gmm	2.483	2.480	2.482	

	Design Point # 1 - % AC = 4.0				Design Point # 2 - % AC = 4.5				Design Point # 3 - % AC = 5.0				Design Point # 4 - % AC =			
Sample #	1	2	3	AVG	1	2	3	AVG	1	2	3	AVG	1	2	3	AVG
Height @ N-int (mm)	126.7	126.5			126.6	126.6			125.3	125.1						
Height @ N-des (mm)	116.6	116.5			116.0	116.0			115.2	115.0						
Wt. in Air	4804.8	4807.8			4796.1	4798.1			4800.3	4805.3						
Wt. Water	2811.1	2811.5			2807.1	2808.5			2803.1	2811.2						
Wt. SSD	4819.6	4820.2			4813.8	4813.9			4810.6	4812.6						
Sp. Gravity	2.392	2.393		2.393	2.390	2.393		2.392	2.391	2.401		2.396				
Gmb (Est. @ N-int)	2.146	2.151			2.144	2.145			2.168	2.174						
Gmb (Corr. @ N-int)	2.201	2.204			2.190	2.193			2.198	2.208						
%Gmm @ N-int	88.0	88.2		88.1	88.2	88.4		88.3	89.2	89.6		89.4				
Gmb (Est. @ N-des)	2.332	2.335			2.340	2.341			2.358	2.365						
Gmb (Corr. @ N-des)	2.392	2.393			2.390	2.393			2.391	2.401						
% Gmm @ N-des	95.7	95.7		95.7	96.3	96.4		96.4	97.1	97.5		97.3				
% VMA @ N-des	12.7	12.7		12.7	13.2	13.1		13.2	13.6	13.3		13.5				
% Voids @ N-des	4.3	4.3		4.3	3.7	3.6		3.7	2.9	2.5		2.7				
% VFA @ N-des	66.1	66.1		66.1	72.0	72.5		72.3	78.7	81.2		80.0				

Enter design rice and design brick information

# Optimum AC Test Results Tab

Mix Verification Samples									
Design Point #	Verification			Rec Opt AC from Chart					
% AC (Optimum)	4.6			4.6					
Gsb (Total Aggregate)	2.630			Calc Rice at Opt AC			2.478		
Gse (Total Aggregate)	2.659								
Specific Grvity - AC	1.030								
*Verification Rice	2.479								
<b>Specimens Compacted to N-Max</b>									
Verification Point - % AC = 4.6				Verification Point - % AC = 4.6					
Sample #	1	2	3	AVG	1	2	3	AVG	
Height @ N-int (mm)	125.4	126.5			125.3	125.3			
Height @ N-des (mm)	115.3	116.3			115.2	115.2			
Height @ N-max (mm)					113.9	113.9			
Wt. in Air	4801.3	4800.1			4800.8	4800.8			
Wt. Water	2809.6	2809.5			2834.6	2834.6			
Wt. SSD	4813.9	4813.8			4819.2	4819.2			
Sp. Gravity (Gmb,ND)	2.395	2.395		2.395	2.419	2.419		2.419	
Gmb (Est. @ N-int)	2.167	2.147			2.168	2.168			
Gmb (Corr. @ N-Int)	2.202	2.202			2.199	2.199			
%Gmm @ N-int	88.8	88.8		88.8	88.7	88.7		88.7	
Gmb (Est. @ N-Des)	2.356	2.336							
Gmb (Corr. @ N-Des)	2.395	2.395							
% Gmm @ N-des	96.6	96.6		96.6					
Gmb (Est. @ N-Max)					2.385	2.385			
Gmb (Corr. @ N-max)					2.419	2.419			
% Gmm @ N-Max					97.6	97.6		97.6	
% VMA @ N-des	13.1	13.1		13.1	12.2	12.2			
% Voids @ N-des	3.4	3.4		3.4	2.4	2.4			
% VFA @ N-des	74.0	74.0		74.0	80.3	80.3			

Design Data				
Design Point #	1	2	3	4
% AC (Total)	4.0	4.5	5.0	
Gsb (Total Aggregate)	2.630			
Gse (Total Aggregate)	2.659			
Specific Grvity - AC	1.030			
Calculated Rice Gravity	2.500	2.482	2.463	

Average Test Values				
Sp. Gravity	2.393	2.392	2.396	
%Gmm @ N-int	88.1	88.3	89.4	
% Gmm @ N-des	95.7	96.4	97.3	
% VMA @ N-des	12.7	13.2	13.5	
% Voids @ N-des	4.3	3.7	2.7	
% VFA @ N-des	66.1	72.3	80.0	

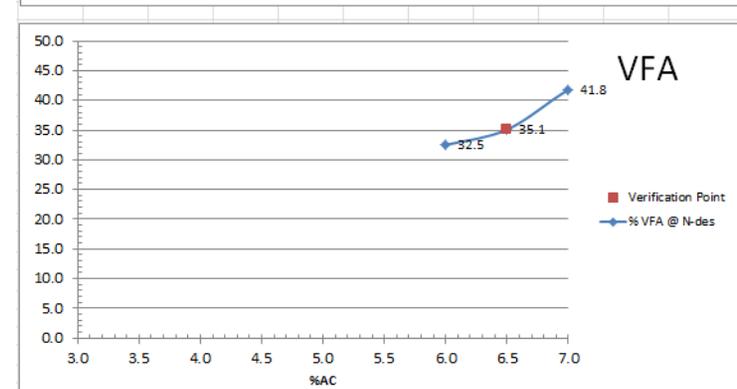
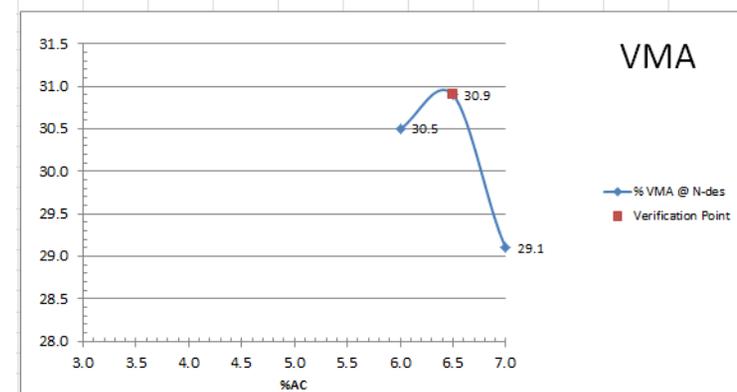
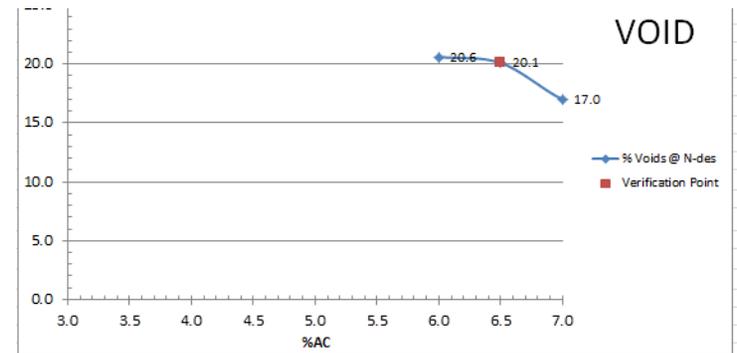
*Verification Rice		
Asphalt Content for Rice	4.6	
Rice Gravities	A	B
Mix	1840.4	1860.3
Pyc&Water	1458.2	1472.3
Pyc,Water&Mix	2556.1	2582.1
Gmm	2.479	2.479
		Avg Gmm
		2.479

\*This Rice must be performed on the Lab Verification Sample and separate from the "Design" Rice.

Enter design verification brick information in the section below

# Optimum AC Test Results Tab

Some parameters will be plotted with design data vs. verification data



# Moisture Susceptibility Design Tab

LOADED WHEEL TEST (LWT) -- AASHTO T 324					
Design Test					
Mix Type	OGFC		Date Sampled	06/16/15	
Contractor Mix Number	1		JMF Seq. No.	14	
Plant / Plant Code	Gilchrist	H142	Max. Sp. Grav.	2.420	
	1	2	3	4	
Height @ N-des (mm)	60.0	60.1			<b>Left</b>
Diameter (mm)	150.0	150.0			Bricks: 1 & 2
Dry Wt.	2475.0	2475.0			Avg. Voids: 3.3
					<b>Right</b>
Gmb	2.341	2.337			Bricks: 3 & 4
% Air Voids	3.2	3.4			Avg. Voids: #DIV/0!
Temp(°C):	50		Pass	Left	Pass
Avg Rut (mm):	7.33		5000	7.33	5000
At Pass:	5000		7500	9.35	7500
Results(Pass/Fail):	PASS		10000		10000
			12000		12000
Date Tested:	6/16/2015		15000		15000
			20000		20000
Remarks:					
Tested by:	M Poole				
Checked by:					
LaPave 501 2013 v13.10.28.15					11/3/2015

Enter LWT or TSR data for design and verification here

# JMF Check Tab

- Summary sheet to check values
- A flag checklist is located here that will show any JMF related flags
- Signature lines
- There is a dropdown to select if JMF parameters are computed off design %air or the verification briq

JMF SUPERPAVE FORM														
Project No.	H.Test.6	Mix Code	26	JMF No.	1	SMM ID	0	Traffic (ADT)	25000					
Project Name	Test			Design Level	1	Plant Type	3-dryer drum	Prod. Rate	350					
Project Eng.	DOTD Eng.			Mix Type	Binder Course	Nom Agg Size	0.75 in.	Mix Temp	295					
Submitted	Example Contractor			Mix Use	ML - Binder	Specs	2016	Date	11/7/2016					
Contractor Mix #	1	SMM P/S	PS00000520-Contractor Supplied					AC Corr Factor	0.11					
Source Code	Aggregate Type	%	Apparent Gravity	Bulk Gravity	Abs.	FAA Method A	Sand Eq. - 4.75 mm	Flat & Elong %5:1	CAA	FR	%Ret No.8	%Ret No.4		
APS00006890	1003M00120-Example Coarse LS67	25.0	2.697	2.661	0.50			0.6	100	II	93	86	Coarse	
APS00006890	1003M00120-Example Coarse LS8	16.0	2.710	2.660	0.70			0.7	100	II	97	95	Coarse	
APS00006560	1003M00120-Example Coarse LS5	20.0	2.707	2.664	0.60			0.5	100	II	98	97	Coarse	
APS00006890	1003M00110-Example Sand	15.3	2.674	2.639	0.50	44	75				0	0	Fine	
PS00003960	1003M01000-Example RAP	23.7	2.614	2.547	1.00						59	41	Rap	
Combined Aggregates Properties		100.0	2.677	2.630	0.67	44	75	0.6	100.0					
Code/Grade	Material	%	Sp. Gravity	Warm Mix Asphalt										
Asphalt	APS00010660 1002M00035-Example Binder 67-22	3.3	1.03	Warm Mix	Yes									Flag Checklist
Alt. Asphalt	APS00000340 1002M00035-Example Binder 2 67-22			Method	Water									
Alt. Asphalt				Rate	2.00%									
Asphalt Content from RAP		1.3	1.03	If Chemical										
Anti-strip	APS00003910 1002M00220-Example Anti-Strip	0.7		Brand Name										
Design Submitted by Contractor				Draindown Control										
Average Volumetrics				Fibers	0									
Gmm	2.479			Rate										
%Gmm,Nini	88.8			If Chemical										
%Gmm,Nmax	97.6			Brand Name										
Gmb@Des,cor	2.395	Sieve	Cold Feed	Avg Oven Extract	Validated Results									
VMA	13.1	1.5"	37.5	100	100	100	96 -- 100							
VFA	74	1"	25	100	100	100	96 -- 100							
%Voids	3.4	3/4"	19	90	97	97	93 -- 100							
%DesignAC	4.6	1/2"	12.5	72	86	86	82 -- 90							
Gsb agg	2.630	3/8"	9.5	64	71	75	71 -- 79							
Comp Temp	290	#4	4.75	34	36	41	37 -- 45							
%Crushed	99	#8	2.36	28	27	29	26 -- 32							
dust@Peff	1.10	#16	1.18	24	23	24	22 -- 26							
Gse	2.659	#30	0.6	20	20	21	19 -- 23							
Pabsorb	0.43	#50	0.3	9	11	10	8 -- 12							
Pbe	4.2	#100	0.15	5	6	6	4 -- 8							
SCB	0.9	#200	0.075	3.3	4.6	3.8	3.1 -- 4.5							
		% Extracted AC		4.6	4.6	4.6	4.4 -- 4.8							
								Rap 1	Rap 2					
								Type						
								Percent	25.0					
								Residual%	5.0					
								Agg %	23.7					
								Rap AC%	1.3					

# JMF Tab

Printable JMF page in DOTD format  
Populates from design and validation  
tabs

Louisiana Department of Transportation and Development												
JMF SUPERPAVE ASPHALTIC CONCRETE MIXTURES												
Project No.	2016	Plant Type	3-dryer drum	Mix Type	Binder Course	Mix Use	ML - Binder	Des. Level	1	SMM ID	0	
ESAI	0	Prod. Rate	350	Mix Temp	295			Seq No	1			
Adj. Factor	1.00	ADT/lane	25000	Nom. Agg. Size	0.75 in.		AC Corr Factor	0.11				
Project Name	Test	Project Cont.	Example Contractor	Project Eng.	DOTD Eng.							
		Mix Type	Binder Course	Mix Use	ML - Binder							
<b>Aggregate</b>												
Material	Source Code	Aggr. Type		Aggr. %	Bulk Sp Gr, Gsb	Abs.	FAA	Sand Eq	Flat & Elong	CAA	Fr. Rate	% Ret #8
Cr. Aggr	APS00006890	1003M00120-Example Coarse LS67		25.0	2.661	0.5			0.6	100	II	93
Cr. Aggr	APS00006890	1003M00120-Example Coarse LS8		16.0	2.660	0.7			0.7	100	II	97
Cr. Aggr	APS00006560	1003M00120-Example Coarse LS5		20.0	2.664	0.6			0.5	100	II	98
RAP Aggr	PS00003960	1003M01000-Example RAP		23.7	2.547	1						59
Fine Aggr	APS00006890	1003M00110-Example Sand		15.3	2.639	0.5	44	75				0
<b>Composite</b>				GSB	2.630	0.67	44	75	0.6	100		
<b>Asphalt Cement and Additives</b>						<b>Loaded Wheel Test</b>						
Material	Source Code	Material Name		% of Mix		Design:		No. Passes	20000			
Asphalt Cement	APS00010660	1002M00035-Example Binder 67-22		3.3		Rut		4.10				
Alternate Asphalt	APS00000340	1002M00035-Example Binder 2 67-22				Validation:		No. Passes	0			
Alternate Asphalt						Rut						
Rap Asphalt				1.3		SCB Jc:		0.86				
Anti Strip	APS00003910	1002M00220-Example Anti-Strip		0.7								
<b>DESIGN DATA</b>			<b>VALIDATION DATA</b>			<b>JMF Limits</b>						
Parameter	Submittal	Average	Std. Dev	PWL	(per valid. avg)							
Gmm	2.479	2.481	0.00249	100	2.457	--	2.505	Submitted for Contractor By: [Signature]				
%Gmm, Nini	88.8	87.4	0.358	100			91	Date Submitted: 11/07/16				
%Gmm, Nmax	97.6	97.6	0.192	100			98					
YMA	13.1	13.3	0.110	100	12.5	--						
YFA	74	72	0.89	100	69	--	80					
% Voids	3.4	3.6	0.167	100	2.5	--	4.5					
% Design AC	4.6							Technician				
Comp Temp	290	290	0.00	--	265	--	315	Proposal Approved Y=Yes N=No				
% DF Crushed	99	97	5.37		75	--		By: [Signature]				
1 1/2 (37.5mm)	100	100	0.00	--	96	--	100	Date: [Date]				
1 in (25mm)	100	100	0.00	--	96	--	100	Signature				
3/4 (19mm)	97	97	1.32	100	93	--	100					
1/2 in (12.5mm)	86	86	1.76	100	82	--	90					
3/8 in (9.5mm)	71	75	1.30	100	71	--	79					
No. 4 (4.75mm)	36	41	0.83	100	37	--	45					
No. 8 (2.38mm)	27	29	0.37	100	26	--	32	Validation Approved Y=Yes N=No				
No. 16 (1.18mm)	23	24	0.50	100	22	--	26	By: [Signature]				
No. 30 (600um)	20	21	1.09	100	19	--	23	Date: [Date]				
No. 50 (300um)	11	10	0.49	100	8	--	12					
No. 100 (150um)	6	6	0.52	100	4	--	8					
No. 200 (75um)	4.6	3.8	0.474	92	3.1	--	4.5	Number of Validation Attempts				
% AC Extracted	4.6	4.6	0.055	100	4.4	--	4.8	(y/n)				

# Validation Input Tab

VALIDATION																	
Proj. No.	H010602			Design level	1	Mix Type	Binder Course		Purp.Code	3-Accept.	DATE	6/27/2016					
Proj. Name.	Test		JMF No.	1	Lot No.	1	Mix Use	ML - Binder									
Lot Size	2029.18	Start Date	7/5/2016		End Date	7/5/2016											
No. Sublots	5	%AC	4.6		G <sub>sb</sub>	2.630		P <sub>s</sub>	95.4	AC Corr Factor	0.11						
SMM P/S	PS00000520-Contractor Supplied				SMM ID	0											
Theoretical Maximum Specific Gravity, Gmm "Rice" Sample 1						Theoretical Maximum Specific Gravity, Gmm "Rice" Sample 2											
		A	B	C	D	E			A	B	C	D	E				
Wt of Mix		1582.1	1842.3	1734.7	1861.0	1798.4	Wt of Mix		1527.2	1957.3	1689.2	2045.5	1832.7				
Wt of Pyc & H2O		1458.2	1458.2	1458.2	1458.2	1458.2	Wt of Pyc & H2O		1472.3	1472.3	1472.3	1472.3	1472.3				
Wt of Pyc, H2O & Mix		2401.8	2559.2	2492.1	2570.1	2533.5	Wt of Pyc, H2O & Mix		2384.0	2640.8	2479.7	2692.0	2565.8				
<b>SUBLOT#A</b>	<b>SUBLOT #B</b>						<b>SUBLOT #C</b>										
<b>Gradation</b>	<b>Wt. Retained</b>	<b>% Passing</b>	<b>Volumetrics</b>			<b>Gradation</b>	<b>Wt. Retained</b>	<b>% Passing</b>	<b>Volumetrics</b>			<b>Gradation</b>	<b>Wt. Retained</b>	<b>% Passing</b>	<b>Volumetrics</b>		
2" 50		100.0	Rice 1	2.478		2" 50		100.0	Rice 1	2.485		2" 50		100.0	Rice 1	2.475	
1.5" 37.5		100.0	Rice 2	2.481		1.5" 37.5		100.0	Rice 2	2.481		1.5" 37.5		100.0	Rice 2	2.478	
1" 25		100.0				1" 25		100.0				1" 25		100.0			
3/4" 19	14.3	99.1	Brick 1	Brick 2		3/4" 19	53.4	97.0	Brick 1	Brick 2		3/4" 19	66.9	96.0	Brick 1	Brick 2	
1/2" 12.5	153.5	89.5	Air	4805.2 4798.9		1/2" 12.5	203.2	85.8	Air	4802.6 4798.1		1/2" 12.5	178.4	85.5	Air	4804.0 4794.1	
3/8" 9.5	201.1	76.8	Water	2814.4 2828.3		3/8" 9.5	206.4	74.3	Water	2805.7 2817.9		3/8" 9.5	180.1	74.8	Water	2801.4 2815.6	
#4 4.75	577.3	40.6	SSD	4821.6 4806.8		#4 4.75	607.6	40.7	SSD	4813.2 4804.9		#4 4.75	582.0	40.3	SSD	4814.3 4800.4	
#8 2.36	196.3	28.2	N@int(mm)	127.6 126.4		#8 2.36	218.5	28.6	N@int(mm)	129.2 127.5		#8 2.36	185.9	29.2	N@int(mm)	128.6 127.3	
#16 1.18	81.0	23.1	N@des(mm)	116.2 115.3		#16 1.18	87.9	23.7	N@des(mm)	117.2 116.0		#16 1.18	85.6	24.2	N@des(mm)	116.0 115.7	
#30 0.6	60.2	19.4	N@max(mm)	113.8		#30 0.6	27.6	22.2	N@max(mm)	114.5		#30 0.6	49.5	21.2	N@max(mm)	114.2	
#50 0.3	153.3	9.7				#50 0.3	208.8	10.6				#50 0.3	178.5	10.6			
#100 0.15	74.4	5.1	%AC Meter	4.6		#100 0.15	80.1	6.1	%AC Meter	4.5		#100 0.15	71.6	6.4	%AC Meter	4.6	
#200 0.075	29.6	3.2	Comp Temp	290		#200 0.075	42.4	3.8	Comp Temp	290		#200 0.075	41.4	3.9	Comp Temp	290	
Pass	11.8		Sample Taken-Tons			Pass	18.5		Sample Taken-Tons			Pass	31.7		Sample Taken-Tons		
Dec Loss	39.2		Mix Temp	305		Dec Loss	50.0		Mix Temp	300		Dec Loss	34.8		Mix Temp	300	
Cum. Total	1592.0		Antistrip	0.7		Cum. Total	1804.4		Antistrip	0.7		Cum. Total	1686.4		Antistrip	0.7	
%AC	4.6					%AC	4.5					%AC	4.5				
Crushed	99		Crushed	87		Crushed	87		Crushed	99		Crushed	99		Crushed	99	
Initial Wt	1676.9	Wt of Mix	1676.9	Int.DryWt	1595.1	Initial Wt	1894.8	Wt of Mix	1894.8	Int.DryWt	1804.8	Initial Wt	1773.9	Wt of Mix	1773.9	Int.DryWt	1689.5
Final Wt	1675.9	Wt. Loss	81.8	AfterWash	1555.9	Final Wt	1892.8	Wt. Loss	90	AfterWash	1754.8	Final Wt	1772.4	Wt. Loss	84.4	AfterWash	1654.7
% Moisture	0.00	Temp. Corr.	0.18	% Diff	0.2	% Moisture	0.00	Temp. Corr.	0.16	% Diff	0	% Moisture	0.00	Temp. Corr.	0.17	% Diff	0.2
		LOSS-Tmp.Corr.	4.70	Wt. Crush	936.3			SS-Tmp. Cor.	4.59	Wt. Crush	936.3			SS-Tmp. Cor.	4.59	Wt. Crush	998.3
		%Loss - Moisture	4.70					%Loss - Moisture	4.59					%Loss - Moisture	4.59		

- Input for sublots for validation of JMF
- Users can select burn oven options, entry fields change depending on selection
- Roadway cores can be entered at the bottom

# Validation Tab

Summary for validation inputs

- Runs statistics for validation
- Flags if parameters are not meeting spec of selected mix type in JMF
- show PWL and %pay

SUPERPAVE VALIDATION FORM													
Project	H010602		Mix Type	Binder Course	JMF No.	1	Date	6/27/2016					
			Lot	1	Lot Size	2029							
SMM P/S	PS00000520-Contractor Supplied						SMM ID	0					
	#1	#2	#3	#4	#5	Mean	StDev	Q <sub>L</sub>	Q <sub>U</sub>	PWL <sub>L</sub>	PWL <sub>U</sub>	PWL	Validate?
Gmm	2.480	2.483	2.477	2.481	2.483	2.4808	0.002490	9.64	9.64	100	100	100	OK
Gmb, ND	2.394	2.392	2.387	2.394	2.387	2.3908	0.003564	--	--	--	--	--	
%Gmm, NI	87.9	87.4	86.9	87.3	87.3	87.36	0.3578	--	10.17	--	100	100	OK
%Gmm, ND	96.5	96.3	96.4	96.5	96.1	96.36	0.1673	5.14	6.81	100	100	100	OK
%Voids	3.5	3.7	3.6	3.5	3.9	3.64	0.1673	6.81	5.14	100	100	100	OK
VMA	13.2	13.2	13.4	13.2	13.4	13.28	0.1095	7.12	--	100	--	100	OK
VFA	73	72	73	73	71	72.4	0.894	3.80	8.50	100	100	100	OK
Gmb, NM	2.426	2.415	2.415	2.422	2.427	2.4210	0.005788	--	--	--	--	--	
%Gmm, NM	97.8	97.3	97.5	97.6	97.7	97.58	0.1924	--	2.18	--	100	100	OK
slope	8.890	9.200	9.820	9.510	9.090	9.3020	0.366292	--	--	--	--	--	
correction factor	1.023	1.196	1.194	1.197	1.194	1.16	0.0769	--	--	--	--	--	
Gsb agg	2.630	2.630	2.630	2.630	2.630	2.6300	0.000000	--	--	--	--	--	
2" 50	100.0	100.0	100.0	100.0	100.0	100.00	0.0000	--	--	--	--	--	
1.5" 37.5	100.0	100.0	100.0	100.0	100.0	100.00	0.0000	--	--	--	--	--	
1" 25	100.0	100.0	100.0	100.0	100.0	100.00	0.0000	--	--	--	--	--	OK
3/4" 19	99.1	97.0	96.0	97.4	95.8	97.06	1.3221	3.03	2.22	100	100	100	OK
1/2" 12.5	89.5	85.8	85.5	86.4	85.1	86.46	1.7644	2.27	2.27	100	100	100	OK
3/8" 9.5	76.8	74.3	74.8	74.2	73.3	74.68	1.3027	3.07	3.07	100	100	100	
#4 4.75	40.6	40.7	40.3	42.2	40.1	40.78	0.8289	4.83	4.83	100	100	100	
#8 2.36	28.2	28.6	29.2	28.9	28.7	28.72	0.3701	8.11	8.11	100	100	100	OK
#16 1.18	23.1	23.7	24.2	24.3	23.5	23.76	0.4980	4.02	4.02	100	100	100	
#30 0.60	19.4	22.2	21.2	20.0	20.9	20.74	1.0854	1.84	1.84	100	100	100	
#50 0.30	9.7	10.6	10.6	9.7	9.7	10.06	0.4930	4.06	4.06	100	100	100	
#100 0.15	5.1	6.1	6.4	5.8	5.4	5.76	0.5225	3.83	3.83	100	100	100	
#200 0.075	3.2	3.8	3.9	4.5	3.6	3.80	0.4743	1.48	1.48	96	96	92	OK
%AC	4.6	4.5	4.5	4.6	4.6	4.56	0.0548	3.65	3.65	100	100	100	
dust/Peff	0.78	0.93	0.93	1.10	0.88	0.924	0.11589	2.80	5.83	100	100	100	OK
Gse	2.661	2.664	2.657	2.662	2.664	2.6616	0.002881	--	--	--	--	--	
Pba	0.5	0.5	0.4	0.5	0.5	0.480	0.04470	--	--	--	--	--	
Pbe	4.1	4.1	4.2	4.1	4.1	4.12	0.04470	--	--	--	--	--	
%Antistrip	0.7	0.7	0.7	0.7	0.6	0.68	0.0447	--	--	--	--	--	
%Crushed	99.0	87.0	99.0	99.0	99.0	96.6	5.367	--	--	--	--	--	
Comp Temp	290	290	290	290	290	290.00	0.0	--	--	--	--	--	
Mix Temp	305	300	300	295	300	300.00	3.5	--	--	--	--	--	
Meter AC	4.6	4.5	4.6	4.6	4.5	4.60	0.1	--	--	--	--	--	

Roadway Density Cores					Tonnage	% Pay
Core A	Core B	Core C	Core D	Core E		
--	--	--	--	--		
--	--	--	--	--		

Mainline		
Minor A		
Minor B		
Minor C		
Minor D		
Minor E		

\*uses PWL for Mainline if 3 or more sublots are Mainline use  
 \*\*Mainline = WC, Binder, Base, Ramp >300ft, Ints. Acc/Dec, Airport Center  
 \*\*\* %Pay weighted by tonnage associated with cores

	Ct.	Mean	StDev	Q <sub>L</sub>	Q <sub>U</sub>	PWL
Mainline Dens	0					

Total Tons Gmm	0	2.481
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Final % Pay	--
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# Plant Tabs

- Plant acceptance – up to 6 sublots for DOTD submission
- Plant report pulls from Plant acceptance
- Plant QC – up to 6 sublots for contractor use
- Plant Verification up to 3 sublots for DOTD use

# Plant Tabs

## Data for Plant Acceptance

DATE	9/28/2016	Plant	PS00000520-Contractor Supplied			Mix Type	Binder Course		Gyr. Rev		
Start Date		JMF No.	1			Design level	1		Nini	7	
End Date		LOT	2			%AC	4.6	G <sub>sb</sub>	2.630	Ndes	65
						P <sub>s</sub>	95.4	AC Corr Factor	0.11	Nmax	100

With Oven Temp Corr.

### Theoretical Maximum Specific Gravity, Gmm "Rice" 1

	1	2	3	4	5
Wt of Mix	2344.0	2244.3	2301.5	1950.9	1961.9
Wt of Pyc & Water	1457.9	1457.9	1457.9	1457.9	1457.9
Wt of Pyc, Water & Mix	2860.1	2800.0	2832.1	2623.3	2629.9

### Theoretical Maximum Specific Gravity, Gmm "Rice" 2

	1	2	3	4	5
Wt of Mix	2295.6	2259.3	2310.5	2008.5	2004.3
Wt of Pyc & Water	1471.0	1471.0	1471.0	1471.0	1471.0
Wt of Pyc, Water & Mix	2841.9	2818.3	2850.1	2671.2	2667.1

Sublot #	1		Tons	1008.57	Sublot #	2		Tons	1005.65	Sublot #	3		Tons	1025.54	
	Gradation	% Pass	Volumetrics			Gradation	% Pass	Volumetrics			Gradation	% Pass	Volumetrics		
2"	50	100	Rice 1	2.489	2"	50	100	Rice 1	2.488	2"	50	100	Rice 1	2.482	
1.5"	37.5	100	Rice 2	2.483	1.5"	37.5	100	Rice 2	2.477	1.5"	37.5	100	Rice 2	2.481	
1"	25	100			1"	25	100			1"	25	100			
3/4"	19	13.8	Air	4788.4	3/4"	19	33.6	Air	4794.1	3/4"	19	36.7	Air	4786.4	
1/2"	12.5	267.7	Water	2799.7	1/2"	12.5	252.3	Water	2804.7	1/2"	12.5	243.6	Water	2805.1	
3/8"	9.5	309.7	SSD	4799.2	3/8"	9.5	213.1	SSD	4808.5	3/8"	9.5	227.2	SSD	4796.8	
#4	4.75	777.8	Ht@Ni	126.1	#4	4.75	741.5	Ht@Ni	127.5	#4	4.75	695.2	Ht@Ni	124.9	
#8	2.36	258.4	Ht@Nd	115.9	#8	2.36	239.3	Ht@Nd	117.0	#8	2.36	230.0	Ht@Nd	115.3	
#16	1.18	98.1	Ht@Nmax		#16	1.18	142.7	Ht@Nmax		#16	1.18	141.7	Ht@Nmax		
#30	0.6	69.5			#30	0.6	43.9			#30	0.6	55.0			
#50	0.3	220.1	Meter AC	4.6	#50	0.3	210.6	Meter AC	4.5	#50	0.3	195.5	Meter AC	4.6	
#100	0.15	110.3	Comp Temp	290	#100	0.15	104.2	Comp Temp	290	#100	0.15	105.8	Comp Temp	290	
#200	0.075	42.4	Mix Temp	300	#200	0.075	46.2	Mix Temp	295	#200	0.075	42.3	Mix Temp	310	
Pass	12.1		AntiStrip	0.7	Pass	15.4		AntiStrip	0.7	Pass	14.5		AntiStrip	0.7	
Dec Loss	66.6				Dec Loss	67.3				Dec Loss	63.6				
Cum. Total	2246.5		Sample Taken-Tons	175	Cum. Total	2110.1		Sample Taken-Tons	220	Cum. Total	2051.1		Sample Taken-Tons	165	
%AC	4.6				%AC	4.7				%AC	4.5				
%Crushed	99				%Crushed	100				%Crushed	99				
MC Pan Wt		Wt of Mix	2360.8	Int.DryWt	2247.2	MC Pan Wt		Wt of Mix	2217.2	Int.DryWt	2110.3	MC Pan Wt		Wt of Mix	2154
MC Initial Wt		Wt. Loss	113.6	AfterWash	2180.6	MC Initial Wt		Wt. Loss	106.9	AfterWash	2043	MC Initial Wt		Wt. Loss	102
MC Final Wt		Temp. Corr.	0.13	% Diff	0	MC Final Wt		Temp. Corr.	0.17	% Diff	0	MC Final Wt		Temp. Corr.	0.17
%MC	0.00	% LOSS-Tmp. Cor.	4.68	Wt. Crush	1351.2	%MC	0.00	% LOSS-Tmp. Cor.	4.65	Wt. Crush	1240.5	%MC	0.00	% LOSS-Tmp. Cor.	4.57
		%Loss - Moisture	4.68					%Loss - Moisture	4.65					%Loss - Moisture	4.57

- Typical plant entry fields
- Sublot 6 will activate if tonnage is entered

# Plant Tabs

LWT (one per JMF, project, or every 20,000 tons)					Sublot	1	Drain Down (AASHTO T 305)			Sublot
	1	2	3	4						
A Wt in air (dry)	2299.1	2343.1	2398.3	2401.2	<b>Left</b>		Wt. of Mix Before			
B Wt in water	1318.9	1346.9	1378.6	1385.6	Bricks:	1 & 2	Wt. of Mix After			
C Wt in air (SSD)	2318.5	2363.7	2420.6	2429.1	Avg AV	7.4	Wt. of Plate			
v Volume (C-B)	999.6	1016.8	1042.0	1043.5			Wt. of Plate+Mix After			
D Bk SpGr (A/v)	2.300	2.304	2.302	2.301	<b>Right</b>		Wt. of Drained Mix		<b>Avg % Draindown</b>	
F %MxThGr 100D/E	92.5	92.7	92.6	92.6	Bricks:	3 & 4	% Draindown			
H % Voids (100-F)	7.5	7.3	7.4	7.4	Avg AV	7.4				
Temp(°C):	50		<b>Pass</b>	<b>Left</b>	<b>Right</b>					
Avg Rut (mm):	4.32		5000	3.17	3.17					
At Pass:	20000		7500	3.52	3.52					
(Pass/Fail):	PASS		10000	3.77	3.77					
			15000	4.10	4.10					
Date Tested:			20000	4.32	4.32					
Remarks	Plant Acceptance Comment									
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- Entry for LWT and drain down testing below sublots

# Plant Tabs

- Lot statistics below
- flags will show for items out of spec

Averages for Lot												
Sublot No.	Sublots					JMF	MEAN	StDev	QL	QU	PWL	
	1	2	3	4	5							
Sublot Ton	1008.57	1005.65	1025.5	1003.88	1010.14							
Gmm	2.486	2.483	2.482	2.485	2.482	2.4808	2.4836	0.001817	13.21	13.21	100	OK
Gmb,ND	2.395	2.393	2.403	2.406	2.401	2.3908	2.3996	0.005459	4.40	4.40	100	
%Gmm,NI	88.5	88.4	89.4	89.3	89.6	87.36	89.04	0.5505	--	3.56	100	OK
%Gmm,ND	96.3	96.4	96.8	96.8	96.7	96.36	96.6	0.2345	4.69	3.84	100	
VFA	72	73	75	75	74	72.4	73.8	1.304	3.68	4.75	100	OK
VMA	13.1	13.2	12.8	12.7	12.9	13.28	12.94	0.2074	2.12	--	100	OK
%Voids	3.7	3.6	3.2	3.2	3.3	3.64	3.40	0.2345	3.84	4.69	100	OK
Extracted AC	4.6	4.7	4.5	4.8	4.7	4.60	4.66	0.1140	1.75	1.75	100	OK
Comp Temp	290	290	290	290	290	290	290.0	0.0	--	--	--	
<b>Gradation</b>												
						JMF	MEAN	StDev	QL	QU	PWL	
2" 50	100.0	100.0	100.0	100.0	100.0	100.00	100.00	0.0000	--	--	--	
1.5" 37.5	100.0	100.0	100.0	100.0	100.0	100.00	100.00	0.0000	--	--	--	
1" 25	100.0	100.0	100.0	100.0	100.0	100.00	100.00	0.0000	--	--	--	
3/4" 19	99.4	98.4	98.2	93.3	98.4	97.06	97.54	2.4162	1.66	1.02	83	OK
1/2" 12.5	87.5	86.5	86.3	84.5	86.5	86.46	86.26	1.0900	3.67	3.67	100	OK
3/8" 9.5	73.7	76.4	75.3	72.7	76.4	74.68	74.90	1.6538	2.42	2.42	100	
#4 4.75	39.1	41.2	41.4	42.0	41.2	40.78	40.98	1.1009	3.63	3.63	100	
#8 2.36	27.6	29.9	30.1	29.9	29.9	28.72	29.48	1.0545	2.84	2.84	100	OK
#16 1.18	23.2	23.1	23.2	24.9	23.1	23.76	23.50	0.7842	2.55	2.55	100	
#30 0.6	20.1	21.0	20.6	21.3	21.0	20.74	20.80	0.4637	4.31	4.31	100	
#50 0.3	10.3	11.0	11.0	10.6	11.1	10.06	10.80	0.3391	5.90	5.90	100	
#100 0.15	5.4	6.1	5.9	5.7	6.1	5.76	5.84	0.2966	6.74	6.74	100	
#200 0.075	3.5	3.9	3.8	3.4	3.9	3.80	3.70	0.2345	2.99	2.99	100	OK
<b>Other Factors (Informational Tools Only)</b>												
						JMF	MEAN	StDev	QL	QU	PWL	
GmbEst,ND	2.338	2.319	2.349	2.335	2.136	--	2.2954	0.089751	--	--	--	
Gmb,Nmax						2.421			--	--	--	
%Gmm,Nmax						97.58			--	--	--	
Design AC	4.6	4.6	4.6	4.6	4.6	--	4.60	0.0000	--	--	--	
%Antistrip	0.7	0.7	0.7	0.7	0.7	0.68	0.70	0.0000	--	--	--	
Meter AC	4.6	4.5	4.6	4.6	4.6	--	4.58	0.0447	--	--	--	
%Crushed	99	100	99	99	99	96.6	99.2	0.447	--	--	--	
Mix Temp	300	295	310	305	290	290	300.0	7.9	--	--	--	
Gse	2.668	2.664	2.663	2.667	2.663	2.662	2.665	0.002345	--	--	--	
Pba	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.045	--	--	--	
Pbe	4	4.1	4.1	4.1	4.1	4.1	4.1	0.045	--	--	--	
dust/Peff	0.88	0.95	0.93	0.83	0.95	0.92	0.91	0.0522	--	--	--	
slope	8.06	8.27	7.65	7.75	7.34		7.81	0.362	--	--	--	
corrctn factor	1.0244	1.0319	1.023	1.0304	1.1241	1.0209	1.0468	0.04340	--	--	--	



# Roadway Tab

- If resolution Gmm is filled, the average resolution Gmm will become the Gmm used for all core calculation for the lot
- If resolution cores is filled, the core values will be used to calculate pay

Data for Roadway -- Lot 2 Resolution						
	Resolution					
	1	2	3	4	5	6
Sublot						
Core Name						
Mix						
Pyc&Water						
Pyc,Wtr&Mix						
Core G <sub>mm</sub>						
Diff from JMF						
	Resolution					
	1	2	3	4	5	6
Mix Use	Binder	Binder	Binder	Patching		
Station						
Location						
Random						
Thickness	2.27	1.98	1.98	5.00		
Air	2041.3	1818.8	1818.8	1750.0		
Water	1177.4	1046.3	1046.3	900.0		
SSD	2056.5	1827.2	1827.2	1800.0		
Gmb	2.322	2.329	2.329	1.944		
Density	93.4	93.8	93.8	78.2	--	--
Gmm	2.486	2.483	2.482	2.485	2.482	

# Roadway Tab

- Pay sheet determines count for ML/minor uses
- Tonnage summary
- All Mainline cores are used for PWL for pay
- If ML Resolution cores, resolution cores used for PWL for pay
- Average of Minor cores for each subplot is used for pay, then weighted average by tons to determined final pay
- If Minor Resolution cores, the core will replace the subplot average for pay
- Final pay computed with weighted average by tons

Data for Roadway -- Lot 2 Pay										
<b>Core Counts</b>	<b>ML Acc</b>	<b>ML Ver</b>	<b>Min Acc</b>	<b>Min Ver</b>	<b>Min NoD</b>		<b>Sublot Tons</b>	<b>Mainline</b>	<b>Minor W/Density</b>	<b>Minor No Density</b>
Sublot #1	3	1	1				Sublot #1	800	200	
Sublot #2	2	1	1				Sublot #2	950	50	
Sublot #3	3	1			1		Sublot #3	950		50
Sublot #4			3	1			Sublot #4		1000	
Sublot #5					2		Sublot #5			200
Sublot #							Sublot #			
<b>Mainline Density</b>						<b>Mainline Acceptance Density PWL</b>				
<b>Mainline</b>	<b>Acc1</b>	<b>Acc2</b>	<b>Acc3</b>	<b>Ver</b>	<b>Res</b>	<b>Res Count</b>	3	QL	7.22	
Sublot #1	93.5	93.7	88.7	93.6	93.4	<b>Res Mean</b>	93.7	QU	--	
Sublot #2	93.5	93.8	--	93.8	93.8	<b>Res Stdev</b>	0.231	PWL	100	
Sublot #3	95.6	93.2	94.8	93.2	93.8	<b>Mainline Min</b>	92			
Sublot #4	--	--	--	--	--	<b>Mainline Pay %</b>				100
Sublot #5	--	--	--	--	--					
Sublot #	--	--	--	--	--					
<b>Minor Density</b>						<b>Minor Acceptance Density (Averages)</b>				
<b>Minor</b>	<b>Acc1</b>	<b>Acc2</b>	<b>Acc3</b>	<b>Acc Avg</b>	<b>Ver</b>	<b>Res</b>	<b>Sublot #1</b>	<b>Acc Avg</b>	<b>% Pay</b>	<b>Tonnage</b>
Sublot #1	97.1	--	--	97.1	--	--	Sublot #1	97.1	100	200
Sublot #2	78.3	--	--	78.3	--	--	Sublot #2	78.3	50 or remove	50
Sublot #3	--	--	--	--	--	--	Sublot #3	--	--	--
Sublot #4	95.3	93.8	93.9	94.3	90.5	78.2	Sublot #4	78.2	50 or remove	1000
Sublot #5	--	--	--	--	--	--	Sublot #5	--	--	--
Sublot #	--	--	--	--	--	--	Sublot #	--	--	--
<b>Minor With Density Pay %</b>										<b>58</b>
							<b>% Pay</b>	<b>Tonnage</b>	<b>Adj Tons</b>	
<b>Mainline</b>							100	2700	2700	
<b>Minor With Density</b>							58	1250	1250	
<b>Minor No Density</b>							100	250	250	
<b>Weighted Lot Final Pay</b>							<b>88</b>		<b>4200</b>	