Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-102

Sample Date: 7/8/24

Concrete Grade: **S2M, 3500HP**

Dates Test Represents: 7/9/2024 through 7/15/2024

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1550	9.23	2.69	50.0
26A	58-003	Stoneco	350	2.09	2.69	11.3
2NS	63-114	Highland	1200	7.26	2.65	38.7
		Total Wt	**3100**	**18.58**		100.0

<----- Verify this number is 100%

Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	79.4	100.0	100.0	89.7	10.3	10.3
1/2"	27.5	99.8	100.0	63.7	26.0	36.3
3/8"	9.4	89.7	100.0	53.5	10.2	46.5
#4	1.5	6.4	98.9	39.8	13.8	60.2
#8	0.9	1.8	85.2	33.6	6.1	66.4
#16	0.7	1.3	68.0	26.8	6.8	73.2
#30	0.7	1.2	48.3	19.2	7.6	80.8
#50	0.6	1.1	18.4	7.5	11.6	92.5
#100	0.6	1.1	3.6	1.8	5.7	98.2
LBW	0.5	0.9	0.6	0.6	1.2	99.4

*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

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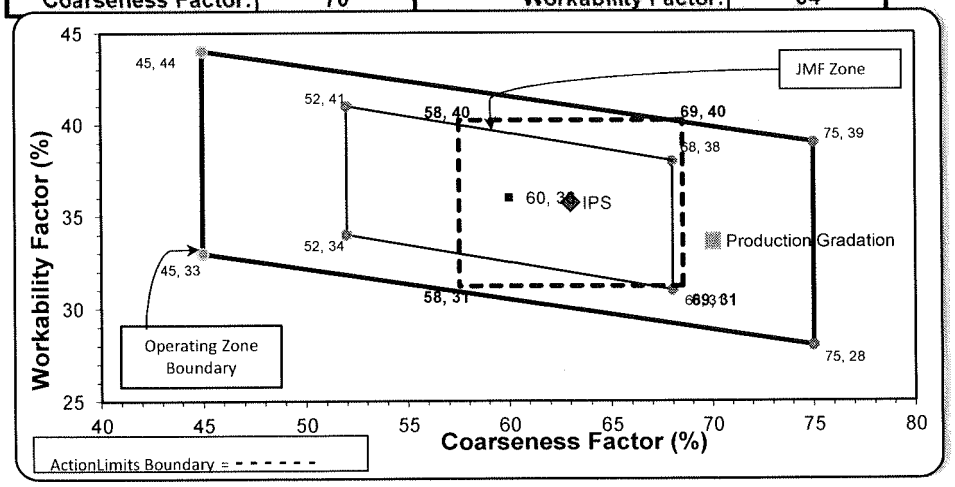
Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	70	Workability Factor:	34



Intial Production Sample (IPS)

Coarseness Factor:	63
Workability Factor:	36

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.5	11.8	40.5
#4	43.8	15.7	56.2
#8	35.7	8.1	64.3
#16	27.0	8.7	73.0
#30	18.6	8.4	81.4
#50	6.8	11.8	93.2
#100	1.4	5.4	98.6
LBW	0.6	0.8	99.4

PREPARED BY:
SM, LLC Technical Service

Approved By:

SUPERIOR MATERIALS

Plant S102-Superior Novi

Product 1051-6AA LS

Period: 07/07/2024 - 07/13/2024

Name/Title Casey Smith / QC Manager

Report Date 07/14/2024

Procedure	Sieve/Test	Result	Unit	6AA LS
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	100.0	%	95-100
	3/4" (19mm)	79.4	%	
	1/2" (12.5mm)	27.5	%	30-60
	3/8" (9.5mm)	9.4	%	
	#4 (4.75mm)	1.5	%	0-8
	#8 (2.36mm)	0.9	%	
	#16 (1.18mm)	0.7	%	
	#30 (.6mm)	0.7	%	
	#50 (.3mm)	0.6	%	
	#100 (.15mm)	0.6	%	
	#200 (75µm)	0.57	%	
	Wash Loss (#200/75um)	0.5	%	0-2
	Total Moisture	4.21	%	

SUPERIOR MATERIALS

Plant S102-Superior Novi

Product 1067-26A Mod LS

Period: 07/07/2024 - 07/13/2024

Name/Title Casey Smith / QC Manager

Report Date 07/14/2024

Procedure	Sieve/Test	Result	Unit	26A Mod LS Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	100.0	%	100-100
	1/2" (12.5mm)	99.8	%	95-100
	3/8" (9.5mm)	89.7	%	60-95
	#4 (4.75mm)	6.4	%	5-30
	#8 (2.36mm)	1.8	%	0-12
	#16 (1.18mm)	1.3	%	
	#30 (.6mm)	1.2	%	
	#50 (.3mm)	1.1	%	
	#100 (.15mm)	1.1	%	
	#200 (75µm)	1.0	%	
	Wash Loss (#200/75um)	0.9	%	0-3
	Total Moisture	9.68	%	

SUPERIOR MATERIALS

Plant S102-Superior Novi

Product 1022-2NS GR

Period: 07/07/2024 - 07/13/2024

Name/Title Casey Smith / QC Manager

Report Date 07/14/2024

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	98.9	%	95-100
	#8 (2.36mm)	85.2	%	65-95
	#16 (1.18mm)	68.0	%	35-75
	#30 (.6mm)	48.3	%	20-55
	#50 (.3mm)	18.4	%	10-30
	#100 (.15mm)	3.6	%	0-10
	#200 (75µm)	0.9	%	
	FM	2.78		2.6-3
	Wash Loss (#200/75um)	0.6	%	0-3
	Total Moisture	14.84	%	