

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Sample Date: 5/5/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 5/6/2025 through 5/12/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1350	8.04	2.69	45.8
26A	58-003	Stoneco	450	2.68	2.69	15.3
2NS	63-114	Highland	1150	6.95	2.65	39.0
Total Wt			2950	17.68		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"	83.4	100.0	100.0	92.4	7.6	7.6
1/2"	35.1	99.6	100.0	70.2	22.2	29.8
3/8"	17.4	85.1	100.0	59.9	10.3	40.1
#4	2.3	3.7	99.1	40.2	19.7	59.8
#8	1.2	1.5	80.4	32.1	8.1	67.9
#16	1.0	1.2	59.3	23.8	8.4	76.2
#30	0.9	1.1	41.2	16.6	7.1	83.4
#50	0.9	1.0	18.8	7.9	8.7	92.1
#100	0.9	1.0	2.8	1.7	6.2	98.3
LBW	0.8	0.9	0.5	0.7	1.0	99.3

*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.



Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

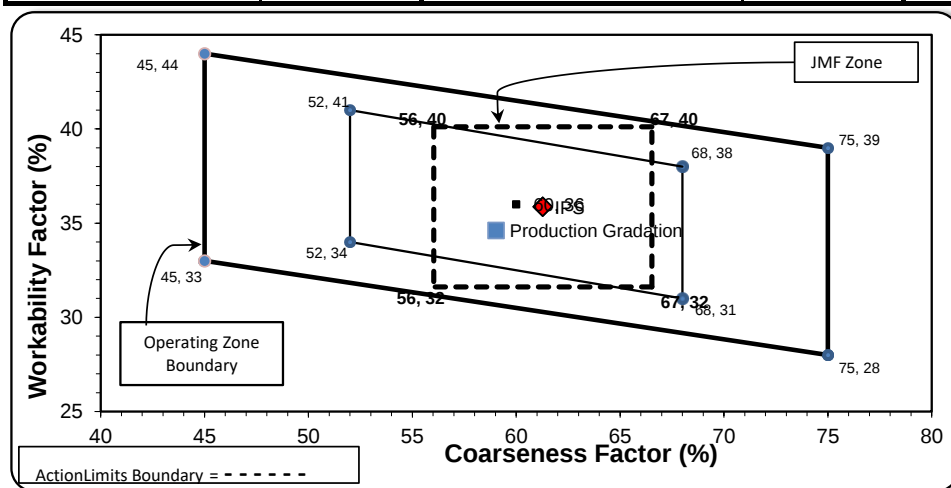
Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	59	Workability Factor:	32	34.6
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Coarseness Factor:	61
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Workability Factor:	36
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Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.3	0.7	0.7
3/4"	89.2	10.1	10.8
1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
#4	44.4	16.3	55.6
#8	35.9	8.5	64.1
#16	27.3	8.6	72.7
#30	19.1	8.2	80.9
#50	7.4	11.7	92.6
#100	1.9	5.6	98.1
LBW	0.7	1.2	99.3

PREPARED BY:
SM, LLC Technical Service

Approved BY:

[Signature]



Daily Summary Report

Date Tuesday, May 6, 2025

Sample Id	-674909364	-1989641211	-674910955
Plant	S103 Superior Brighton	S103 Superior Brighton	S103 Superior Brighton
Product	1022 2NS GR	1051 6AA LS	1067 26A Mod LS
Specification	2NS GR Spec	6AA LS	26A Mod LS Spec
Sample Type	QA	QA	QA
2" (50mm)		100.0	100.0
1 1/2" (37.5mm)		100.0	100.0
1" (25mm)		100.0	100.0
3/4" (19mm)		83.4	100.0
1/2" (12.5mm)		35.1	99.6
3/8" (9.5mm)	100.0	17.4	85.1
#4 (4.75mm)	99.1	2.3	3.7
#8 (2.36mm)	80.4	1.2	1.5
#16 (1.18mm)	59.3	1.0	1.2
#30 (.6mm)	41.2	0.9	1.1
#50 (.3mm)	18.8	0.9	1.0
#100 (.15mm)	2.8	0.9	1.0
#200 (75µm)	0.6	0.84	1.0
Pan	0.0	0.00	0.0
FM	2.98		
Wash Loss (#200/75um)	0.5	0.8	0.9
Total Moisture	9.62	4.99	5.45

Aggregate Optimization Chart

Production Gradation Report

PLANT #: p11

Sample Date: 5/5/25

Dates Test Represents: 5/6/2025 through 5/12/2025

Concrete Grade: DM, 4500HP

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1600	9.79	2.62	55.1
26A	71-47	Presque Isle	155	0.95	2.62	5.3
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
Total Wt			2905	17.69		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"	96.0	100.0	100.0	97.8	2.2	2.2
3/4"	67.7	100.0	100.0	82.2	15.6	17.8
1/2"	20.0	95.5	100.0	55.7	26.5	44.3
3/8"	8.1	81.0	100.0	48.4	7.3	51.6
#4	1.4	16.5	95.0	39.3	9.1	60.7
#8	1.2	5.2	77.7	31.7	7.6	68.3
#16	1.1	3.4	61.2	25.0	6.7	75.0
#30	1.0	2.9	45.6	18.8	6.3	81.2
#50	1.0	2.5	23.6	10.0	8.7	90.0
#100	0.9	2.2	5.6	2.8	7.2	97.2
LBW	0.5	1.6	1.0	0.8	2.1	99.2

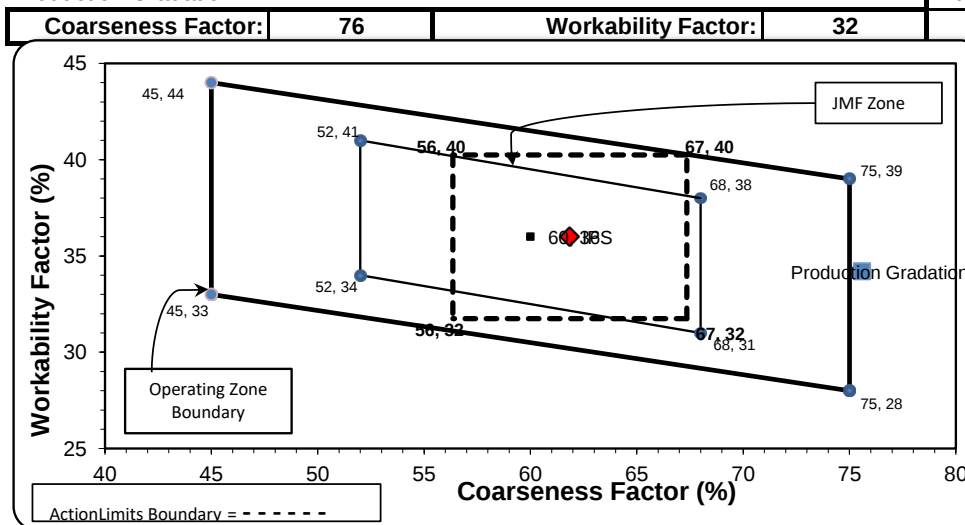
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size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



Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
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Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)



Coarseness Factor: 62		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"	100.0	0.0	0.0
3/4"	95.0	5.0	5.0
1/2"	72.3	22.8	27.7
3/8"	60.4	11.8	39.6
#4	42.6	17.8	57.4
#8	36.0	6.6	64.0
#16	29.5	6.5	70.5
#30	20.3	9.2	79.7
#50	9.5	10.8	90.5
#100	3.4	6.1	96.6
LBW	1.3	2.1	98.7

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Daily Summary Report

Date Monday, May 5, 2025

Sample Id	-674980868	-1989647806	-674946367
Plant	Superior Onsite	Superior Onsite	Superior Onsite
Product	1022 2NS GR	1051 6AA LS	1067 26A Mod LS
Specification	2NS GR Spec		26A Mod LS Spec
Sample Type	QA	QA	QA
2" (50mm)		100.0	100.0
1 1/2" (37.5mm)		100.0	100.0
1" (25mm)		96.0	100.0
3/4" (19mm)		67.7	100.0
1/2" (12.5mm)		20.0	95.5
3/8" (9.5mm)	100.0	8.1	81.0
#4 (4.75mm)	95.0	1.4	16.5
#8 (2.36mm)	77.7	1.2	5.2
#16 (1.18mm)	61.2	1.1	3.4
#30 (.6mm)	45.6	1.0	2.9
#50 (.3mm)	23.6	1.0	2.5
#100 (.15mm)	5.6	0.9	2.2
#200 (75µm)	1.2	0.67	1.8
Pan	0.0	0.00	0.0
FM	2.91		
-#200 (75um)	1.2		
Wash Loss (#200/75um)	1.0	0.5	1.6
Total Moisture	4.8	3.1	3.9