Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Contractor: _____

Sample Date: 6/23/25

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 6/24/2025 through 6/30/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1530	9.11	2.69	51.9
26A	58-003	Stoneco	270	1.61	2.69	9.2
2NS	63-114	Highland	1150	6.95	2.65	39.0
		Total Wt	**2950**	**17.68**		100.0

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

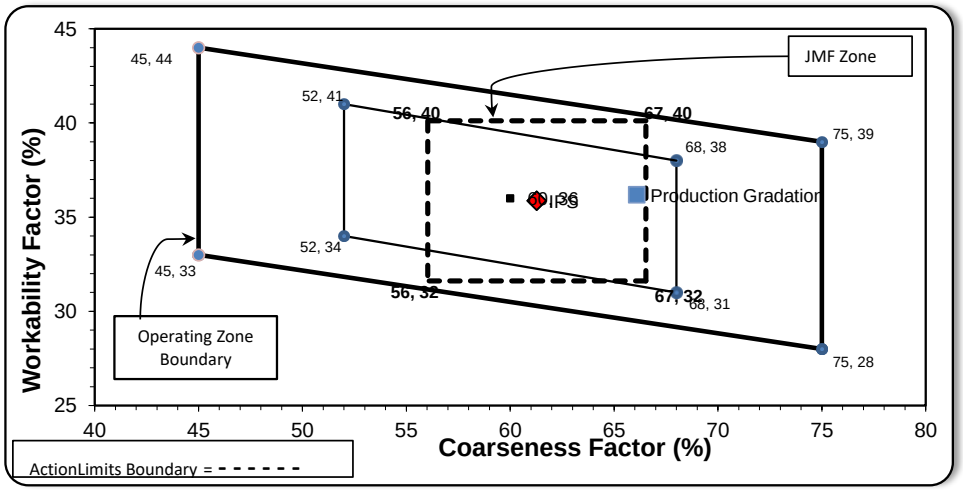
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	82.8	100.0	100.0	91.1	8.9	8.9
1/2"	37.8	98.2	100.0	67.6	23.5	32.4
3/8"	18.6	82.5	100.0	56.2	11.4	43.8
#4	2.1	11.5	98.7	40.6	15.6	59.4
#8	1.0	3.0	84.4	33.7	6.9	66.3
#16	0.8	1.7	69.1	27.5	6.2	72.5
#30	0.7	1.4	50.4	20.1	7.4	79.9
#50	0.7	1.2	24.4	10.0	10.2	90.0
#100	0.7	1.0	4.6	2.2	7.7	97.8
LBW	0.6	0.9	0.8	0.7	1.5	99.3

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

*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.

Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	66	Workability Factor:	34	Adjusted WF 36.2



Intial Production Sample (IPS)

Coarseness Factor:	61
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"	99.3	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:

Daily Summary Report

Date	Thursday, June 26, 2025		
Sample Id	-315824071	-847327949	-1989643035
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)		82.8	100.0
1/2" (12.5mm)		37.8	98.2
3/8" (9.5mm)	100.0	18.6	82.5
#4 (4.75mm)	98.7	2.1	11.5
#8 (2.36mm)	84.4	1.0	3.0
#16 (1.18mm)	69.1	0.8	1.7
#30 (.6mm)	50.4	0.7	1.4
#50 (.3mm)	24.4	0.7	1.2
#100 (.15mm)	4.6	0.7	1.0
#200 (75µm)	0.8	0.64	1.0
Pan	0.0	0.00	0.0
FM	2.68		
Wash Loss (#200/75um)	0.8	0.6	0.9
Total Moisture	5.42	3.84	3.96

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **p11**

Contractor: _____

Sample Date: 6/23/25

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 6/24/2025 through 6/30/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1450	8.87	2.62	49.9
26A	71-47	Presque Isle	305	1.87	2.62	10.5
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"	98.3	100.0	100.0	99.2	0.8	0.8
3/4"	75.7	100.0	100.0	87.9	11.3	12.1
1/2"	29.5	97.0	100.0	64.5	23.4	35.5
3/8"	15.2	85.1	100.0	56.1	8.4	43.9
#4	3.4	21.7	96.7	42.3	13.9	57.7
#8	2.2	8.1	79.1	33.3	9.0	66.7
#16	1.9	4.9	61.2	25.7	7.6	74.3
#30	1.8	4.1	44.1	18.8	6.9	81.2
#50	1.7	3.6	22.1	10.0	8.8	90.0
#100	1.6	3.3	4.7	3.0	7.0	97.0
LBW	1.4	2.9	0.5	1.2	1.8	98.8

Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
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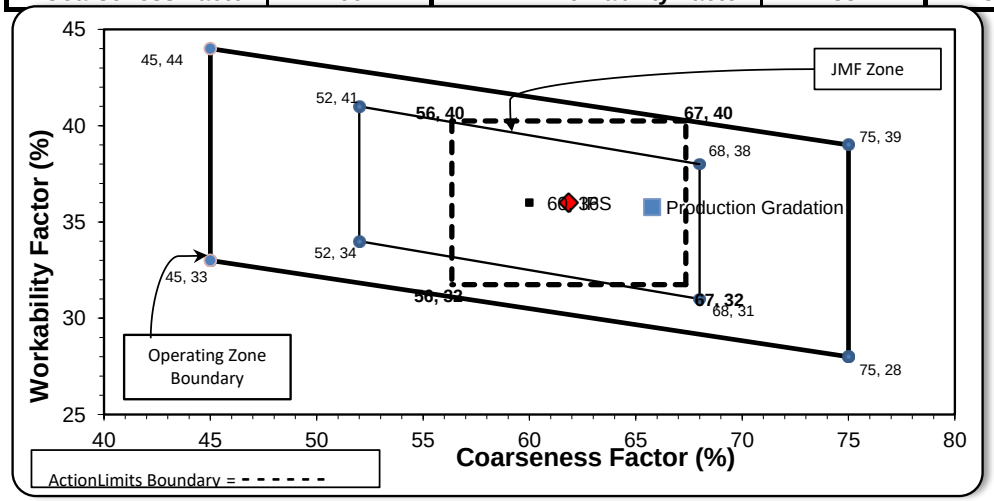
*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	66	Workability Factor:	33	Adjusted WF: 35.8



Intial 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

Approved By:

PREPARED BY:
SM, LLC Technical Service

EDW. C. LEVY CO.
8800 Dix Avenue, Detroit, MI 48209
(313) 843-7200

Daily Summary Report

Date	Friday, June 27, 2025				
Sample Id	-674915034	-674951312	-1989652759	-1097071210	-1989622716
Plant	Superior Onsite	Superior Onsite	Superior Onsite	Superior Onsite	Superior Onsite
Product	7919 COARSE AGG P1M LS	1067 26A Mod LS	1051 6AA LS	7920 INTERMED AGG P1M LS	1022 2NS GR
Specification	Coarse Agg P1M LS Target	26A Mod LS Spec		Intermed Agg P1M LS Target	2NS GR Spec
Sample Type	QA	QA	QA	QA	QA
2" (50mm)	100.0	100.0	100.0	100.0	
1 1/2" (37.5mm)	93.5	100.0	100.0	100.0	
1" (25mm)	42.6	100.0	98.3	100.0	
3/4" (19mm)	14.3	100.0	75.7	95.7	
1/2" (12.5mm)	6.1	97.0	29.5	72.2	
3/8" (9.5mm)	4.4	85.1	15.2	50.0	100.0
#4 (4.75mm)	3.6	21.7	3.4	9.1	96.7
#8 (2.36mm)	3.0	8.1	2.2	4.0	79.1
#16 (1.18mm)	2.5	4.9	1.9	3.2	61.2
#30 (.6mm)	2.2	4.1	1.8	3.0	44.1
#50 (.3mm)	2.1	3.6	1.7	2.8	22.1
#100 (.15mm)	1.8	3.3	1.6	2.6	4.7
#200 (75µm)	1.6	3.0	1.50	2.3	0.9
Pan	0.0	0.0	0.00	0.0	0.0
FM					2.92
-#200 (75um)					0.9
Wash Loss (#200/75um)	1.5	2.9	1.4	2.1	0.5
Total Moisture	0.6	1.2	2.1	2.6	3.7