

Aggregate Optimization Chart

PLANT #: P-103

Contractor: _____

Sample Date: 8/4/25

Concrete Grade: **P1M, 3500HP, 4000HP**

Dates Test Represents: 8/5/2025 through 8/11/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1350	8.04	2.69	43.3
IA	58-003	Stoneco	570	3.40	2.69	18.3
2NS	63-114	Highland	1200	7.26	2.65	38.5
Total Wt			3120	18.70		100.0

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



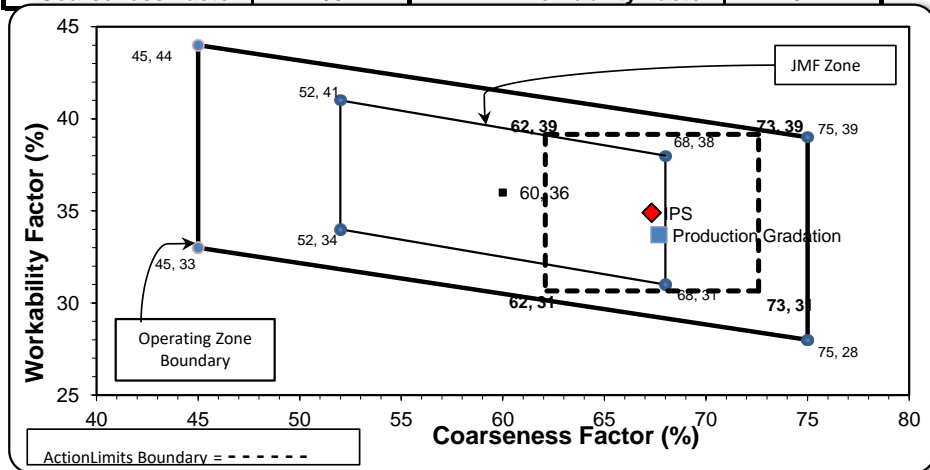
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	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"	47.6	100.0	100.0	77.3	22.7	22.7
3/4"	20.2	100.0	100.0	65.5	11.9	34.5
1/2"	11.3	91.5	100.0	60.1	5.4	39.9
3/8"	7.1	74.4	100.0	55.1	4.9	44.9
#4	1.8	16.2	99.0	41.8	13.3	58.2
#8	1.6	4.9	83.5	33.7	8.1	66.3
#16	1.6	2.7	66.0	26.6	7.1	73.4
#30	1.6	2.3	46.4	19.0	7.6	81.0
#50	1.6	2.0	18.1	8.0	10.9	92.0
#100	1.5	1.9	3.4	2.3	5.7	97.7
LBW	1.4	1.8	0.8	1.2	1.1	98.8

*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 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor:	68	Workability Factor:	34
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Initial Production Sample (IPS)

Coarseness Factor:	67
Workability Factor:	35

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	85.5	14.5	14.5
3/4"	73.4	12.1	26.6
1/2"	61.0	12.4	39.0
3/8"	56.2	4.8	43.8
#4	43.1	13.1	56.9
#8	34.9	8.2	65.1
#16	29.4	5.5	70.6
#30	21.6	7.8	78.4
#50	8.1	13.4	91.9
#100	2.2	5.9	97.8
LBW	1.4	0.8	98.6

PREPARED BY:
 SM, LLC Technical Service

Approved BY:



Daily Summary Report

Date Tuesday, August 5, 2025

Sample Id	-674933910	-1989628123	-1989626629	-674923383	-674962746
Plant	S103 Superior Brighton	S103 Superior Brighton	S103 Superior Brighton	S103 Superior Brighton	S103 Superior Brighton
Product	7920 INTERMED AGG P1M LS	7919 COARSE AGG P1M LS	1022 2NS GR	1051 6AA LS	1067 26A Mod LS
Specification	Intermed Agg P1M LS Target	Coarse Agg P1M LS Target	2NS GR Spec	6AA LS	26A Mod LS Spec
Sample Type	QA	QA	QA	QA	QA
2" (50mm)	100.0	100.0		100.0	100.0
1 1/2" (37.5mm)	100.0	100.0		100.0	100.0
1" (25mm)	100.0	47.6		99.2	100.0
3/4" (19mm)	100.0	20.2		76.2	100.0
1/2" (12.5mm)	91.5	11.3		34.9	99.3
3/8" (9.5mm)	74.4	7.1	100.0	19.8	89.3
#4 (4.75mm)	16.2	1.8	99.0	3.8	11.1
#8 (2.36mm)	4.9	1.6	83.5	1.9	3.0
#16 (1.18mm)	2.7	1.6	66.0	1.5	1.9
#30 (.6mm)	2.3	1.6	46.4	1.4	1.6
#50 (.3mm)	2.0	1.6	18.1	1.3	1.4
#100 (.15mm)	1.9	1.5	3.4	1.3	1.4
#200 (75µm)	1.8	1.5	1.0	1.24	1.3
Pan	0.0	0.0	0.0	0.00	0.0
FM			2.84		
Wash Loss (#200/75um)	1.8	1.4	0.8	1.2	1.3
Total Moisture	1.54	1.96	2.89	2.32	3.25

Aggregate Optimization Chart

PLANT #: P11

Contractor: _____

Sample Date: 8/4/25

Concrete Grade: **P1M, 3500HP, 4000HP**

Dates Test Represents: 8/5/2025 through 8/11/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	900	5.50	2.62	29.3
IA	71-47	Presque Isle	970	5.93	2.62	31.6
2NS	63-115	Ray Rd	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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



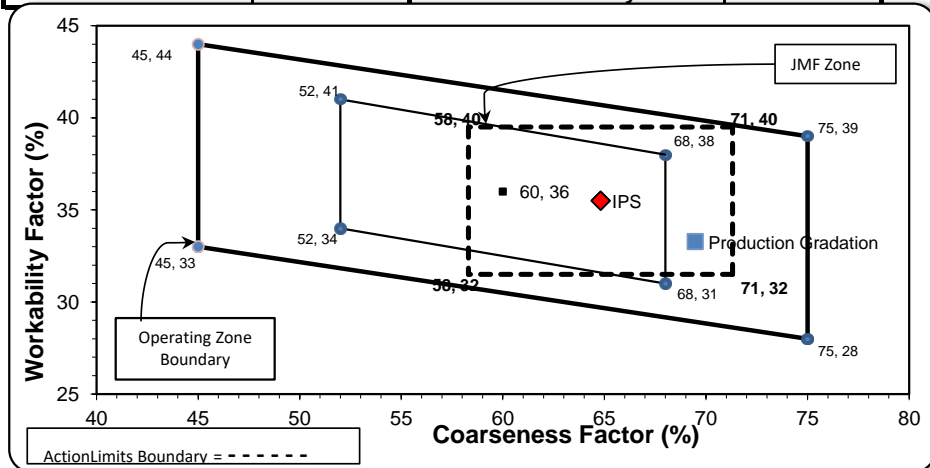
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 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	94.6	100.0	100.0	98.4	1.6	1.6
1"	40.5	100.0	100.0	82.6	15.9	17.4
3/4"	9.1	99.0	100.0	73.0	9.5	27.0
1/2"	3.6	69.2	100.0	62.0	11.0	38.0
3/8"	2.9	43.4	100.0	53.7	8.4	46.3
#4	2.4	9.4	96.7	41.5	12.2	58.5
#8	2.1	4.4	80.0	33.3	8.2	66.7
#16	2.0	3.5	64.1	26.7	6.5	73.3
#30	1.9	3.2	48.6	20.6	6.2	79.4
#50	1.8	3.0	25.4	11.4	9.2	88.6
#100	1.7	2.9	6.6	4.0	7.4	96.0
LBW	1.3	2.5	1.2	1.6	2.4	98.4

*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 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 69 **Workability Factor:** 33



Initial Production Sample (IPS)

Coarseness Factor: 65
Workability Factor: 36

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.0	0.6	0.6
1"	84.0	15.3	16.0
3/4"	73.5	10.5	26.5
1/2"	65.2	8.2	34.8
3/8"	58.2	7.1	41.8
#4	44.1	14.1	55.9
#8	35.5	8.6	64.5
#16	29.1	6.4	70.9
#30	21.9	7.3	78.1
#50	9.6	12.2	90.4
#100	2.6	7.1	97.4
LBW	1.0	1.6	99.0

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Daily Summary Report

Date Friday, August 8, 2025

Sample Id	-674907781	-674897171	-1989618480	-674985972	-674968789
Plant	Onsite Jefferson	Onsite Jefferson	Onsite Jefferson	Onsite Jefferson	Onsite Jefferson
Product	1022 2NS GR	1051 6AA LS	1067 26A Mod LS	7919 COARSE AGG P1M LS	7920 INTERMED AGG P1M LS
Specification	2NS GR Spec		26A Mod LS Spec	Coarse Agg P1M LS Target	Intermed Agg P1M LS Target
Sample Type	QA	QA	QA	QA	QA
2" (50mm)		100.0	100.0	100.0	100.0
1 1/2" (37.5mm)		100.0	100.0	94.6	100.0
1" (25mm)		99.4	100.0	40.5	100.0
3/4" (19mm)		84.3	100.0	9.1	99.0
1/2" (12.5mm)		42.6	98.7	3.6	69.2
3/8" (9.5mm)	100.0	22.8	84.5	2.9	43.4
#4 (4.75mm)	96.7	3.7	21.0	2.4	9.4
#8 (2.36mm)	80.0	2.0	7.5	2.1	4.4
#16 (1.18mm)	64.1	1.7	4.1	2.0	3.5
#30 (.6mm)	48.6	1.6	3.4	1.9	3.2
#50 (.3mm)	25.4	1.5	3.2	1.8	3.0
#100 (.15mm)	6.6	1.5	3.0	1.7	2.9
#200 (75µm)	1.3	1.36	2.9	1.4	2.7
Pan	0.0	0.00	0.0	0.0	0.0
FM	2.79				
-#200 (75um)	1.3				
Wash Loss (#200/75um)	1.2	1.3	2.8	1.3	2.5
Total Moisture	3.6	2.6	3.0	0.3	1.8

Aggregate Optimization Chart

PLANT #: **P-39**

Contractor: _____

Sample Date: 8/4/25

Concrete Grade: **P1M, 3500HP, 4000HP**

Dates Test Represents: 8/5/2025 through 8/11/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	900	5.50	2.62	29.3
IA	71-47	Presque Isle	970	5.93	2.62	31.6
2NS	63-009	Koenig Oxford	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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



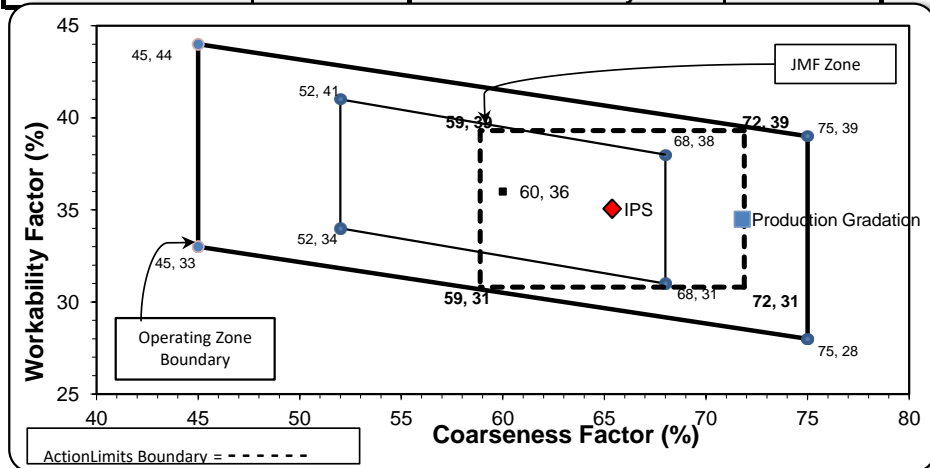
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	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"	41.7	100.0	100.0	82.9	17.1	17.1
3/4"	13.4	98.0	100.0	74.0	8.9	26.0
1/2"	6.6	67.4	100.0	62.3	11.7	37.7
3/8"	4.9	39.4	100.0	53.0	9.3	47.0
#4	3.2	6.3	97.3	41.0	12.0	59.0
#8	2.8	3.4	83.4	34.5	6.5	65.5
#16	2.6	3.2	69.3	28.9	5.6	71.1
#30	2.5	3.0	51.9	22.0	6.9	78.0
#50	2.3	2.7	24.3	11.0	10.9	89.0
#100	1.9	2.3	4.9	3.2	7.8	96.8
LBW	1.4	1.8	0.8	1.3	1.9	98.7

*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 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **72** **Workability Factor:** **34**



Initial Production Sample (IPS)

Coarseness Factor: **65**
Workability Factor: **35**

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.6	0.4	0.4
1"	83.9	15.7	16.1
3/4"	74.1	9.8	25.9
1/2"	64.3	9.7	35.7
3/8"	57.5	6.8	42.5
#4	44.5	13.1	55.5
#8	35.1	9.4	64.9
#16	27.9	7.2	72.1
#30	21.7	6.2	78.3
#50	12.6	9.1	87.4
#100	3.5	9.1	96.5
LBW	1.2	2.4	98.8

PREPARED BY:
 SM, LLC Technical Service

Approved By:



Daily Summary Report

Date Friday, August 8, 2025

Sample Id	-674932206	-674919179	-674900095
Plant	S39	S39	S39
Product	Superior Sterling Heights 7919 COARSE AGG P1M LS	Superior Sterling Heights 7920 INTERMED AGG P1M LS	Superior Sterling Heights 1022 2NS GR
Specification	Coarse Agg P1M LS Target	Intermed Agg P1M LS Target	2NS GR Spec
Sample Type	QA	QA	QA
2" (50mm)	100.0	100.0	
1 1/2" (37.5mm)	100.0	100.0	
1" (25mm)	41.7	100.0	
3/4" (19mm)	13.4	98.0	
1/2" (12.5mm)	6.6	67.4	
3/8" (9.5mm)	4.9	39.4	100.0
#4 (4.75mm)	3.2	6.3	97.3
#8 (2.36mm)	2.8	3.4	83.4
#16 (1.18mm)	2.6	3.2	69.3
#30 (.6mm)	2.5	3.0	51.9
#50 (.3mm)	2.3	2.7	24.3
#100 (.15mm)	1.9	2.3	4.9
#200 (75µm)	1.5	2.0	0.9
Pan	0.0	0.0	0.0
FM			2.69
Wash Loss (#200/75um)	1.4	1.8	0.8
Total Moisture	1.47	2.15	2.75