

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **12**

Contractor: _____

Sample Date: **10/28/24**

Concrete Grade: **DM, 4500HP**

Dates Test Represents: **10/29/2024** through **11/4/2024**

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
GAA	71-47	Presque Isle	1500	9.17	2.62	51.6
26A	71-47	Presque Isle	255	1.56	2.62	8.8
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
Total Wt:						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"	99.5	100.0	100.0	99.7	0.3	0.3
3/4"	87.1	100.0	100.0	93.3	6.4	6.7
1/2"	40.7	97.0	100.0	69.1	24.2	30.9
3/8"	22.4	85.3	100.0	58.6	10.5	41.4
#4	4.1	14.5	95.4	41.2	17.5	58.8
#8	2.6	3.5	79.5	33.1	8.0	66.9
#16	2.2	2.6	65.3	27.2	5.9	72.8
#30	2.0	2.5	50.2	21.1	6.1	78.9
#50	1.9	2.3	26.3	11.6	9.5	88.4
#100	1.7	2.1	6.1	3.5	8.1	96.5
LBW	1.5	1.8	0.5	1.1	2.3	98.9

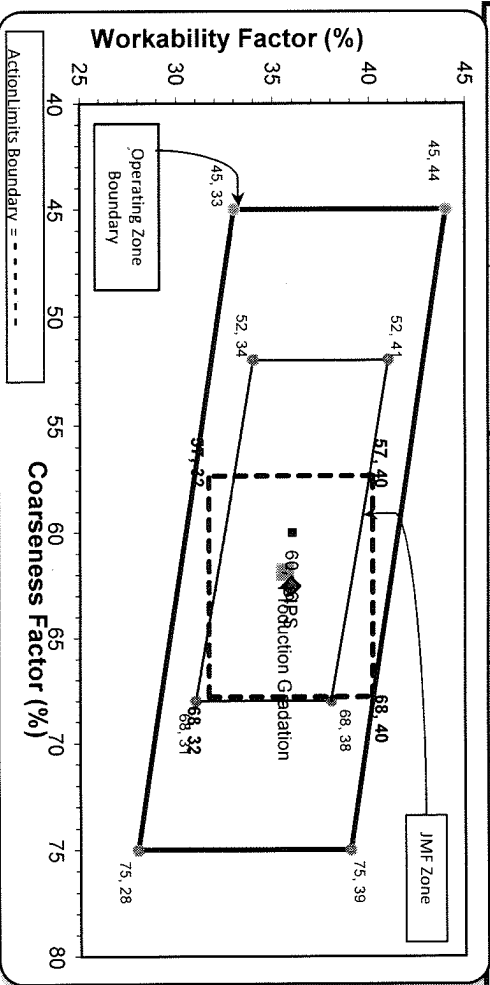
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max.
 nom. max. #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max.
 nom. max. #100 and #200 sieves.
 *% Retained must be at least 4% for the 3/4" sieve when
 a 1.5" max size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

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Initial Production Sample (IPS)

Coarseness Factor:	62	Workability Factor:	33	Adjusted WF	35.6
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Coarseness Factor:	63
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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"	89.0	10.3	11.0
1/2"	70.3	18.7	29.7
3/8"	59.9	10.4	40.1
#4	41.9	18.0	58.1
#8	35.9	6.0	64.1
#16	27.8	8.2	72.2
#30	18.9	8.8	81.1
#50	6.3	12.6	93.7
#100	1.7	4.6	98.3
LBW	1.0	0.7	99.0

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



EDW. C. LEVY CO.
8800 Dix Avenue, Detroit, MI 48225
(313) 843-7200

Daily Summary Report

Date Friday, November 1, 2024

Sample Id	-1989640696	-1989642423	-674891540
Plant	Onsite Southfield	Onsite Southfield	Onsite Southfield
Product	1051 6AA LS	1067 26A Mod LS	1022 2NS GR
Specification		26A Mod LS Spec	2NS GR Spec
Sample Type	QA	QA	QA
Time	17:07	17:08	17:09
2" (50mm)	100.0	100.0	100.0
1 1/2" (37.5mm)	100.0	100.0	95.4
1" (25mm)	99.5	100.0	79.5
3/4" (19mm)	87.1	100.0	65.3
1/2" (12.5mm)	40.7	97.0	50.2
3/8" (9.5mm)	22.4	85.3	26.3
#4 (4.75mm)	4.1	14.5	6.1
#8 (2.36mm)	2.6	3.5	1.1
#16 (1.18mm)	2.2	2.6	0.0
#30 (.6mm)	2.0	2.5	2.77
#50 (.3mm)	1.9	2.3	1.1
#100 (.15mm)	1.7	2.1	0.5
#200 (75µm)	1.59	1.9	0.5
Pan	0.00	0.0	0.5
FM			1.1
-#200 (75µm)			1.1
Wash Loss (#200/75µm)	1.5	1.8	0.5
Total Moisture	1.4	1.6	3.5

Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-102

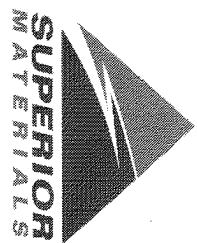
Sample Date: 10/28/24

Dates Test Represents: 10/29/2024 through 11/4/2024

Concrete Grade: DM, 4500HP

Contractor: _____

MDOT No.: _____



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

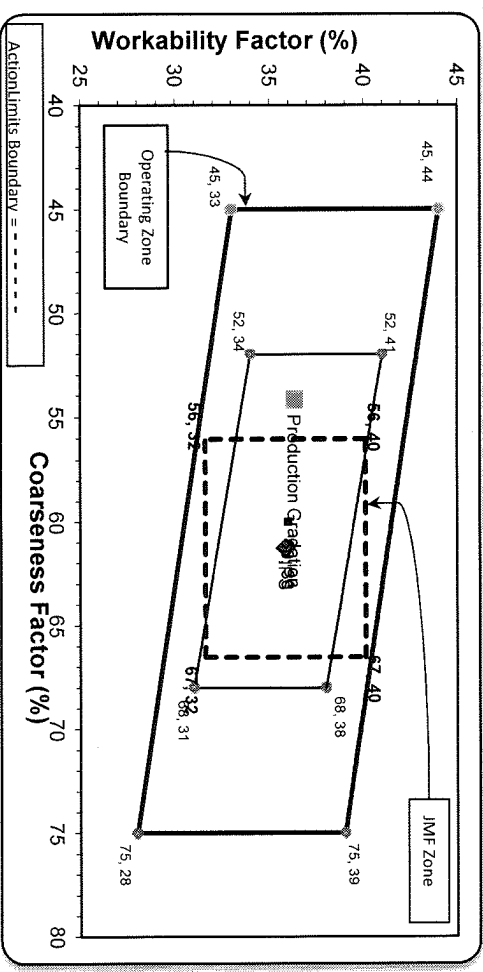
Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
6AA	58-003	Stoneco	1450	8.64	2.69	49.2
26A	58-003	Stoneco	350	2.09	2.69	11.9
2NS	63-114	Highland	1150	6.95	2.65	39.0
Total Wt			2950	17.68		100.0

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"	92.0	100.0	100.0	96.1	3.9	3.9
1/2"	55.2	99.8	100.0	78.0	18.1	22.0
3/8"	29.9	88.3	100.0	64.2	13.8	35.8
#4	3.8	8.8	98.7	41.4	22.8	58.6
#8	1.6	2.7	84.0	33.9	7.5	66.1
#16	1.3	2.1	66.3	26.7	7.1	73.3
#30	1.1	1.9	45.7	18.6	8.2	81.4
#50	1.0	1.7	21.0	8.9	9.7	91.1
#100	1.0	1.6	4.8	2.6	6.3	97.4
LBW	0.9	1.5	1.0	1.0	1.5	99.0

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 54 **Workability Factor:** 34 **Adjusted WF:** 36.4

Initial Production Sample (IPS): _____

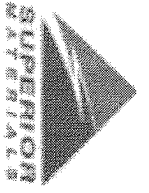


Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.3	0.7	0.7
3/4"	89.2	10.1	10.8
1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
#4	44.4	16.3	55.6
#8	35.9	8.5	64.1
#16	27.3	8.6	72.7
#30	19.1	8.2	80.9
#50	7.4	11.7	92.6
#100	1.9	5.6	98.1
LBW	0.7	1.2	99.3

*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.

PREPARED BY:
 SM, LLC Technical Service

Approved By: _____



Daily Summary Report

Date Tuesday, October 29, 2024

Sample Id	-224824212	-674951603	-1989623596
Plant	S102 Superior Novi	S102 Superior Novi	S102 Superior Novi
Product	1022 ZNS GR	1051 6AA LS	1067 26A Mod LS
Specification	ZNS GR Spec	6AA LS	26A Mod LS Spec
Sample Type	QA	QA	QA
Time	09:19	10:08	10:09
2" (50mm)	100.0	100.0	100.0
1 1/2" (37.5mm)	100.0	100.0	100.0
1" (25mm)	100.0	100.0	100.0
3/4" (19mm)	92.0	100.0	100.0
1/2" (12.5mm)	55.2	55.2	99.8
3/8" (9.5mm)	100.0	29.9	88.3
#4 (4.75mm)	98.7	3.8	8.8
#8 (2.36mm)	84.0	1.6	2.7
#16 (1.18mm)	66.3	1.3	2.1
#30 (.6mm)	45.7	1.1	1.9
#50 (.3mm)	21.0	1.0	1.7
#100 (.15mm)	4.8	1.0	1.6
#200 (75µm)	1.1	0.93	1.6
Pan	0.0	0.00	0.0
FM	2.80		
Wash Loss (#200/75µm)	1.0	0.9	1.5
Total Moisture	4.01	3.25	2.69

Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-103

Sample Date: 10/28/24

Dates Test Represents: 10/29/2024 through 11/4/2024

Concrete Grade: DM, 4500HP

Contractor:

MDOT No.:

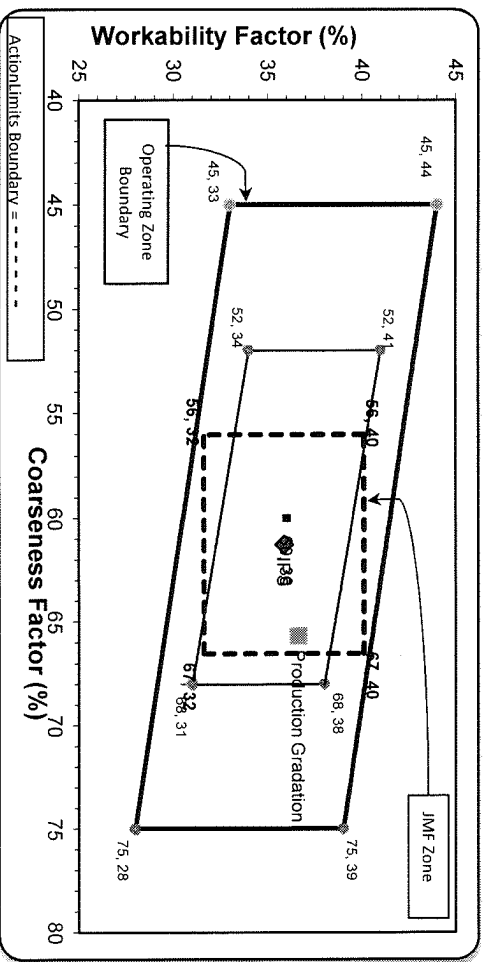
Agg. Class	Pit #	Source	Weight (ssu)	ft ³	Specific Gravity	Contribution %
6AA	58-003	Stoneco	1450	8.64	2.69	49.2
26A	58-003	Stoneco	350	2.09	2.69	11.9
2NS	63-114	Highland	1150	6.95	2.65	39.0
Total Wt			2950	17.68		100.0

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"	98.6	100.0	100.0	99.3	0.7	0.7
3/4"	81.6	100.0	100.0	91.0	8.4	9.0
1/2"	39.0	98.8	100.0	69.9	21.1	30.1
3/8"	15.1	87.1	100.0	56.7	13.1	43.3
#4	2.5	7.8	98.7	40.6	16.1	59.4
#8	2.0	3.4	84.0	34.1	6.5	65.9
#16	1.7	2.8	66.3	27.0	7.1	73.0
#30	1.6	2.6	45.7	18.9	8.1	81.1
#50	1.5	2.3	21.0	9.2	9.7	90.8
#100	1.4	2.2	4.8	2.8	6.4	97.2
LBW	1.3	2.0	1.0	1.3	1.6	98.7

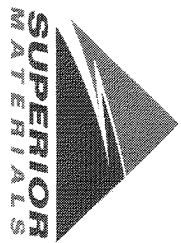
Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 66 **Workability Factor:** 34 **Adjusted WF:** 36.6

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

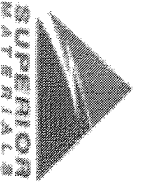


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*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max.
 nom. max. #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max.
 nom. max. #100 and #200 sieves.
 *% Retained must be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

PREPARED BY:
 SM, LLC Technical Service

Approved BY:



Daily Summary Report

Date Tuesday, October 29, 2024

Sample Id	-674975221	-1989646889	-674935756	-34335758	-1989638413
Plant	S103 Superior Brighton	S103 Superior Brighton	S103 Superior Brighton	S103 Superior Brighton	S103 Superior Brighton
Product	7919 COARSE AGG P1M LS	1051 6AA LS	7920 INTERMED AGG P1M LS	1067 26A Mod LS	1022 2NS GR
Specification	Coarse Agg P1M LS Target	6AA LS	Intermed Agg P1M LS Target	26A Mod LS Spec	2NS GR Spec
Sample Type	QA	QA	QA	QA	QA
Time	09:15	09:16	09:17	09:18	17:22
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)	49.1	98.6	100.0	100.0	
3/4" (19mm)	27.3	81.6	100.0	100.0	
1/2" (12.5mm)	17.0	39.0	92.6	98.8	100.0
3/8" (9.5mm)	12.0	15.1	74.9	87.1	98.7
#4 (4.75mm)	2.3	2.5	15.5	7.8	84.0
#8 (2.36mm)	1.4	2.0	5.2	3.4	66.3
#16 (1.18mm)	1.1	1.7	3.0	2.8	45.7
#30 (.6mm)	1.1	1.6	2.4	2.6	21.0
#50 (.3mm)	1.0	1.5	2.1	2.3	4.8
#100 (.15mm)	0.9	1.4	1.9	2.2	1.1
#200 (75um)	0.8	1.31	1.9	2.2	0.0
Pan	0.0	0.00	0.0	0.0	2.80
FM					1.0
Wash Loss (#200/75um)	0.7	1.3	1.8	2.0	1.0
Total Moisture	2.62	3.41	3.15	3.25	4.01