

Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-02

Contractor: _____

Sample Date: 9/9/24

Concrete Grade: S2M, 3500HP

Dates Test Represents: 9/10/2024 through 9/16/2024

MIDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1470	8.99	2.62	48.2
26A	71-47	Presque Isle	350	2.14	2.62	11.5
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3
		Total Wt	3050	18.57		100.0

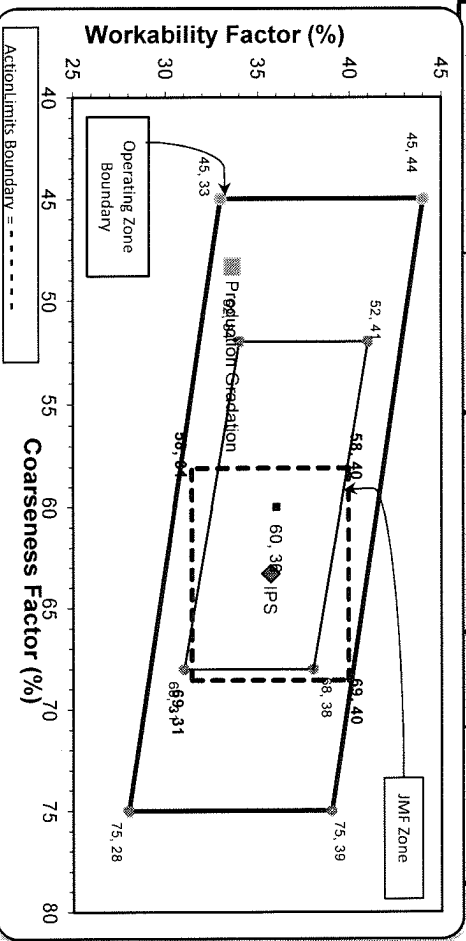
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	90.3	100.0	100.0	95.3	4.7	4.7
1/2"	57.1	93.1	100.0	78.5	16.8	21.5
3/8"	37.7	82.3	100.0	67.9	10.6	32.1
#4	8.8	19.0	94.6	44.6	23.4	55.4
#8	3.5	4.8	77.9	33.7	10.9	66.3
#16	2.8	2.7	60.2	25.9	7.7	74.1
#30	2.5	2.2	44.1	19.2	6.7	80.8
#50	2.4	2.0	22.0	10.3	9.0	89.7
#100	2.2	1.9	5.5	3.5	6.8	96.5
LBW	1.8	1.7	1.0	1.5	2.0	98.5

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

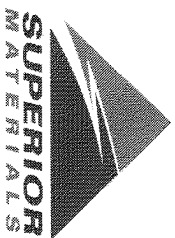
Initial Production Sample (IPS) _____

Coarseness Factor: **48** Workability Factor: **34**

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"	100.0	0.0	0.0
3/4"	95.6	4.4	4.4
1/2"	73.1	22.6	26.9
3/8"	59.3	13.8	40.7
#4	42.8	16.5	57.2
#8	35.7	7.1	64.3
#16	28.9	6.8	71.1
#30	20.7	8.2	79.3
#50	9.9	10.8	90.1
#100	2.1	7.8	97.9
LBW	0.9	1.2	99.1



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.

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



Daily Summary Report

Date Thursday, September 12, 2024

Sample Id	Plant	Product	Specification	Sample Type	Time
-674924609	S02	1054 6AA LS PI	6AA LS	QA	18:37
-674989579	S02	1067 26A Mod LS	26A Mod LS Spec	QA	19:07
-674933642	S02	1022 2NS GR	2NS GR Spec	QA	19:09
2" (50mm)					100.0
1 1/2" (37.5mm)					100.0
1" (25mm)					100.0
3/4" (19mm)					90.3
1/2" (12.5mm)					57.1
3/8" (9.5mm)					37.7
#4 (4.75mm)					8.8
#8 (2.36mm)					3.5
#16 (1.18mm)					2.8
#30 (.6mm)					2.5
#50 (.3mm)					2.4
#100 (.15mm)					2.2
#200 (75µm)					1.97
Pan					0.00
FM					2.96
Wash Loss (#200/75µm)					1.8
Total Moisture					3.74
					1.7
					2.24
					100.0
					94.6
					77.9
					60.2
					44.1
					22.0
					5.5
					1.2
					0.0
					1.0
					4.87

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Sample Date: **9/9/24**

Dates Test Represents: **9/10/2024** through **9/16/2024**

Concrete Grade: **S2M, 3500HP**

Contractor: _____

MDOT No.: _____

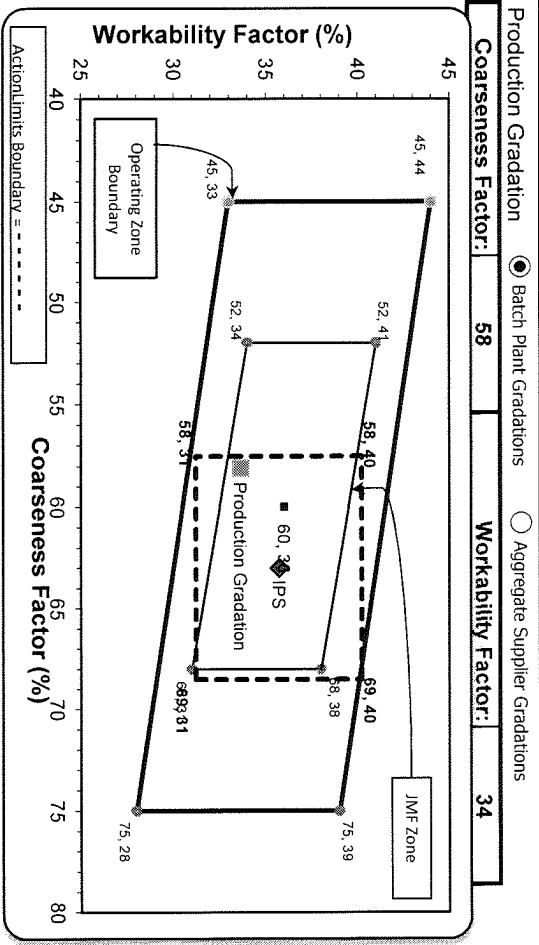
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
6AA	58-003	Stoneco	1600	9.53	2.69	51.6
26A	58-003	Stoneco	300	1.79	2.69	9.7
2NS	63-114	Highland	1200	7.26	2.65	38.7
Total Wt			3100	18.58		100.0

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"	92.8	100.0	100.0	96.3	3.7	3.7
1/2"	48.2	99.7	100.0	73.2	23.0	26.8
3/8"	27.3	89.4	100.0	61.5	11.8	38.5
#4	6.5	6.8	98.0	41.9	19.5	58.1
#8	2.3	1.8	83.4	33.6	8.3	66.4
#16	1.6	1.3	62.1	25.0	8.7	75.0
#30	1.5	1.1	40.6	16.6	8.4	83.4
#50	1.4	1.0	17.5	7.6	9.0	92.4
#100	1.3	1.0	3.9	2.3	5.3	97.7
LBW	1.1	0.9	0.9	1.0	1.3	99.0



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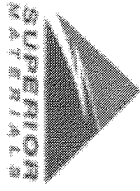
*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max., nom. max. #100 and #200 sieves.
*% Retained must be at least 4% for each sieve except max., nom. max. #100 and #200 sieves.
*% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom.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



Sieve	Initial Production Sample (IPS)	Coarseness Factor:	Workability Factor:
2"	0.0	63	36
1.5"	0.0		
1"	0.8		
3/4"	8.3		
1/2"	19.6		
3/8"	40.5		
#4	56.2		
#8	64.3		
#16	73.0		
#30	81.4		
#50	93.2		
#100	98.6		
LBW	99.4		

PREPARED BY:
SM, LLC Technical Service

Approved BY:



Daily Summary Report

Date Thursday, September 12, 2024

Sample Id	-674911912	-1097072124	-674904504
Plant	Superior Brighton	Superior Brighton	Superior Brighton
Product	1051 6AA LS	1022 ZNS GR	1067 26A Mod LS
Specification	6AA LS	ZNS GR Spec	26A Mod LS Spec
Sample Type	QA	QA	QA
Time	19:47	19:49	19:49
2" (50mm)	100.0		100.0
1 1/2" (37.5mm)	100.0		100.0
1" (25mm)	100.0		100.0
3/4" (19mm)	92.8		100.0
1/2" (12.5mm)	48.2		99.7
3/8" (9.5mm)	27.3	100.0	89.4
#4 (4.75mm)	6.5	98.0	6.8
#8 (2.36mm)	2.3	83.4	1.8
#16 (1.18mm)	1.6	62.1	1.3
#30 (.6mm)	1.5	40.6	1.1
#50 (.3mm)	1.4	17.5	1.0
#100 (.15mm)	1.3	3.9	1.0
#200 (75µm)	1.24	1.1	0.9
Pan	0.00	0.0	0.0
FM		2.94	
Wash Loss (#200/75µm)	1.1	0.9	0.9
Total Moisture	1.51	2.86	0.65