

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Sample Date: 3/31/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 4/1/2025 through 4/7/2025

MDOT No.: _____

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

<----- 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"	84.2	100.0	100.0	92.2	7.8	7.8
1/2"	34.5	100.0	100.0	67.8	24.4	32.2
3/8"	19.4	91.6	100.0	59.4	8.4	40.6
#4	5.9	8.3	99.0	42.5	16.9	57.5
#8	2.4	2.6	84.4	34.4	8.1	65.6
#16	1.5	1.9	67.1	27.1	7.3	72.9
#30	1.3	1.7	47.7	19.4	7.7	80.6
#50	1.1	1.5	20.8	8.8	10.6	91.2
#100	1.0	1.5	4.2	2.3	6.5	97.7
LBW	0.8	1.3	1.0	0.9	1.4	99.1

*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.



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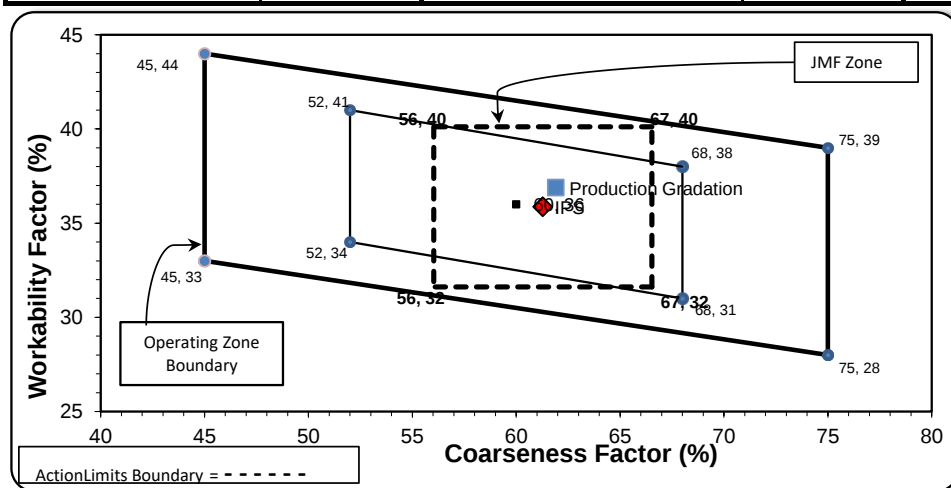
Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	62	Workability Factor:	34	36.9
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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 Thursday, April 3, 2025

Sample Id	-719224368	-1590545513	-674957670
Plant	S103 Superior Brighton	S103 Superior Brighton	S103 Superior Brighton
Product	1051 6AA LS	1067 26A Mod LS	1022 2NS GR
Specification	6AA LS	26A Mod LS Spec	2NS GR Spec
Sample Type	QA	QA	QA
Time	16:29	16:30	16:31
2" (50mm)	100.0	100.0	
1 1/2" (37.5mm)	100.0	100.0	
1" (25mm)	100.0	100.0	
3/4" (19mm)	84.2	100.0	
1/2" (12.5mm)	34.5	100.0	
3/8" (9.5mm)	19.4	91.6	100.0
#4 (4.75mm)	5.9	8.3	99.0
#8 (2.36mm)	2.4	2.6	84.4
#16 (1.18mm)	1.5	1.9	67.1
#30 (.6mm)	1.3	1.7	47.7
#50 (.3mm)	1.1	1.5	20.8
#100 (.15mm)	1.0	1.5	4.2
#200 (75µm)	0.86	1.4	1.2
Pan	0.00	0.0	0.0
FM			2.77
Wash Loss (#200/75µm)	0.8	1.3	1.0
Total Moisture	3.59	5.07	5.37

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **p11**

Sample Date: **3/31/25**

Dates Test Represents: **4/1/2025** through **4/7/2025**

Concrete Grade: **DM, 4500HP**

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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"	99.4	100.0	100.0	99.7	0.3	0.3
3/4"	83.9	100.0	100.0	92.0	7.7	8.0
1/2"	49.9	93.2	100.0	74.3	17.7	25.7
3/8"	30.4	77.4	100.0	62.9	11.4	37.1
#4	7.0	14.8	96.2	43.1	19.8	56.9
#8	3.7	5.9	79.8	34.1	9.1	65.9
#16	3.0	4.1	64.3	27.4	6.7	72.6
#30	2.8	3.6	47.7	20.7	6.7	79.3
#50	2.5	3.2	23.4	10.8	9.8	89.2
#100	2.2	2.9	4.8	3.3	7.5	96.7
LBW	1.8	2.3	0.8	1.5	1.8	98.5

*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.

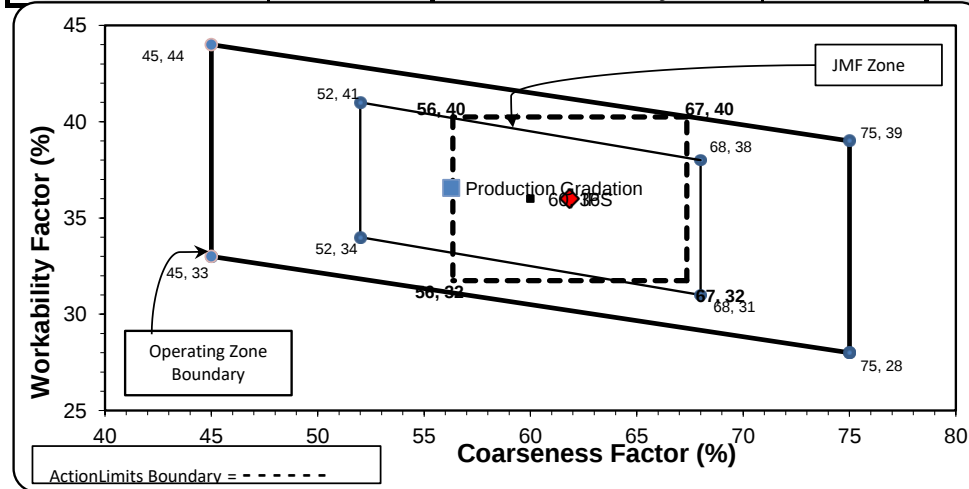


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Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	56	Workability Factor:	34	36.6
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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:

[Signature]

Daily Summary Report

Date Thursday, April 3, 2025

Sample Id	-674902261	-674929006	-1989658463	-674967398	-1989649121
Plant	S000 Superior Onsite	S000 Superior Onsite	S000 Superior Onsite	S000 Superior Onsite	S000 Superior Onsite
Product	7919 COARSE AGG P1M LS	7920 INTERMED AGG P1M LS	1051 6AA LS	1067 26A Mod LS	1022 2NS GR
Specification	Coarse Agg P1M LS Target	Intermed Agg P1M LS Target		26A Mod LS Spec	2NS GR Spec
Sample Type	QA	QA	QA	QA	QA
Time	14:39	14:39	14:41	14:43	14:47
2" (50mm)	100.0	100.0	100.0	100.0	
1 1/2" (37.5mm)	95.9	100.0	100.0	100.0	
1" (25mm)	36.3	100.0	99.4	100.0	
3/4" (19mm)	8.4	97.0	83.9	100.0	
1/2" (12.5mm)	2.9	66.0	49.9	93.2	
3/8" (9.5mm)	2.0	37.4	30.4	77.4	100.0
#4 (4.75mm)	1.9	5.8	7.0	14.8	96.2
#8 (2.36mm)	1.8	3.1	3.7	5.9	79.8
#16 (1.18mm)	1.8	2.6	3.0	4.1	64.3
#30 (.6mm)	1.7	2.4	2.8	3.6	47.7
#50 (.3mm)	1.6	2.3	2.5	3.2	23.4
#100 (.15mm)	1.4	2.2	2.2	2.9	4.8
#200 (75µm)	1.3	2.1	1.98	2.5	1.0
Pan	0.0	0.0	0.00	0.0	0.0
FM					2.84
-#200 (75um)					1.0
Wash Loss (#200/75um)	1.2	2.0	1.8	2.3	0.8
Total Moisture	0.1	0.8	3.0	3.3	3.5

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-02**

Sample Date: 3/31/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 4/1/2025 through 4/7/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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"	98.8	100.0	100.0	99.4	0.6	0.6
3/4"	84.7	100.0	100.0	92.4	7.0	7.6
1/2"	47.7	93.9	100.0	73.3	19.1	26.7
3/8"	29.9	79.8	100.0	62.9	10.4	37.1
#4	4.8	18.3	96.6	42.6	20.3	57.4
#8	2.7	5.8	80.5	33.8	8.7	66.2
#16	2.3	3.6	64.8	27.2	6.6	72.8
#30	2.2	3.0	48.8	20.7	6.4	79.3
#50	2.1	2.8	24.3	11.0	9.8	89.0
#100	2.0	2.5	5.0	3.2	7.7	96.8
LBW	1.6	2.2	0.9	1.4	1.9	98.6

*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.



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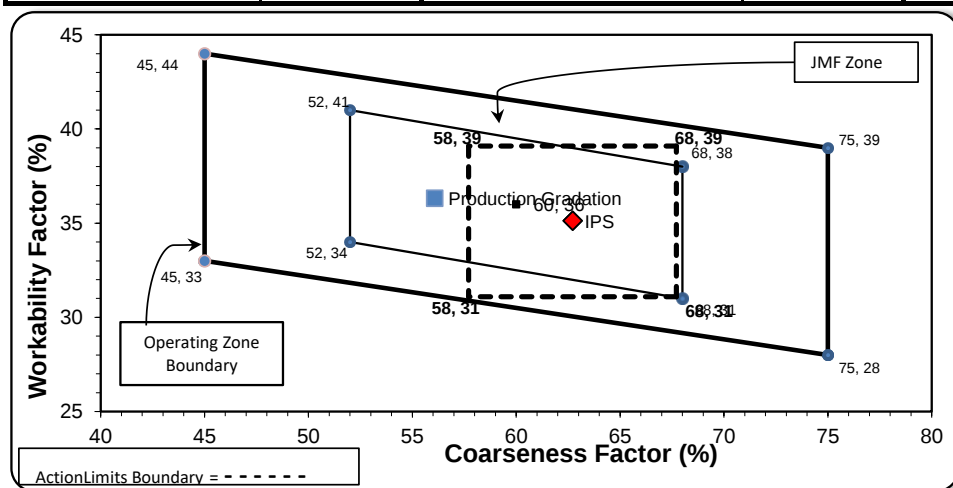
Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	56	Workability Factor:	34	36.3
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Coarseness Factor:	63
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Workability Factor:	35
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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"	100.0	0.0	0.0
3/4"	95.1	4.9	4.9
1/2"	74.6	20.5	25.4
3/8"	59.3	15.3	40.7
#4	42.1	17.2	57.9
#8	35.1	7.1	64.9
#16	29.2	5.9	70.8
#30	21.9	7.3	78.1
#50	9.6	12.4	90.4
#100	2.4	7.2	97.6
LBW	0.9	1.5	99.1

PREPARED BY:
SM, LLC Technical Service

Approved By:

[Signature]



Daily Summary Report

Date Friday, April 4, 2025

Sample Id	-1989616807	-674898368	-1989623805
Plant	S20 Superior Hoover	S20 Superior Hoover	S20 Superior Hoover
Product	1054 6AA LS PI	1067 26A Mod LS	1022 2NS GR
Specification	6AA LS	26A Mod LS Spec	2NS GR Spec
Sample Type	QA	QA	QA
Time	12:00	12:01	12:02
2" (50mm)	100.0	100.0	
1 1/2" (37.5mm)	100.0	100.0	
1" (25mm)	98.8	100.0	
3/4" (19mm)	84.7	100.0	
1/2" (12.5mm)	47.7	93.9	
3/8" (9.5mm)	29.9	79.8	100.0
#4 (4.75mm)	4.8	18.3	96.6
#8 (2.36mm)	2.7	5.8	80.5
#16 (1.18mm)	2.3	3.6	64.8
#30 (.6mm)	2.2	3.0	48.8
#50 (.3mm)	2.1	2.8	24.3
#100 (.15mm)	2.0	2.5	5.0
#200 (75µm)	1.81	2.3	1.0
Pan	0.00	0.0	0.0
FM			2.80
Wash Loss (#200/75µm)	1.6	2.2	0.9
Total Moisture	2.74	3.26	3.62