

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **p11**

Sample Date: **4/21/25**

Dates Test Represents: **4/22/2025** through **4/28/2025**

Concrete Grade: **DM, 4500HP**

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1600	9.79	2.62	55.1
26A	71-47	Presque Isle	155	0.95	2.62	5.3
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"	97.4	100.0	100.0	98.6	1.4	1.4
3/4"	82.2	100.0	100.0	90.2	8.4	9.8
1/2"	41.2	95.2	100.0	67.4	22.8	32.6
3/8"	23.5	83.0	100.0	57.0	10.4	43.0
#4	3.0	21.0	97.7	41.4	15.5	58.6
#8	1.8	6.6	78.4	32.4	9.1	67.6
#16	1.6	4.2	62.0	25.6	6.7	74.4
#30	1.5	3.5	46.6	19.5	6.2	80.5
#50	1.4	3.2	24.8	10.8	8.7	89.2
#100	1.4	3.0	4.8	2.8	7.9	97.2
LBW	1.2	2.4	0.7	1.1	1.8	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.

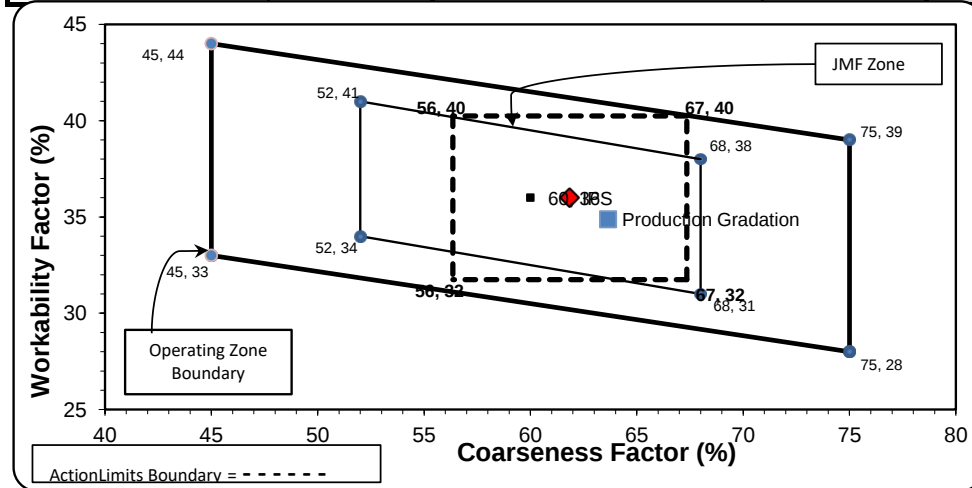


Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
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Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	64	Workability Factor:	32	34.9
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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]

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-02**

Sample Date: 4/21/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 4/22/2025 through 4/28/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1600	9.79	2.62	55.1
26A	71-47	Presque Isle	155	0.95	2.62	5.3
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"	97.4	100.0	100.0	98.6	1.4	1.4
3/4"	82.2	100.0	100.0	90.2	8.4	9.8
1/2"	41.2	95.2	100.0	67.4	22.8	32.6
3/8"	23.5	83.0	100.0	57.0	10.4	43.0
#4	3.0	21.0	97.7	41.4	15.5	58.6
#8	1.8	6.6	78.4	32.4	9.1	67.6
#16	1.6	4.2	62.0	25.6	6.7	74.4
#30	1.5	3.5	46.6	19.5	6.2	80.5
#50	1.4	3.2	24.8	10.8	8.7	89.2
#100	1.4	3.0	4.8	2.8	7.9	97.2
LBW	1.2	2.4	0.7	1.1	1.8	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.



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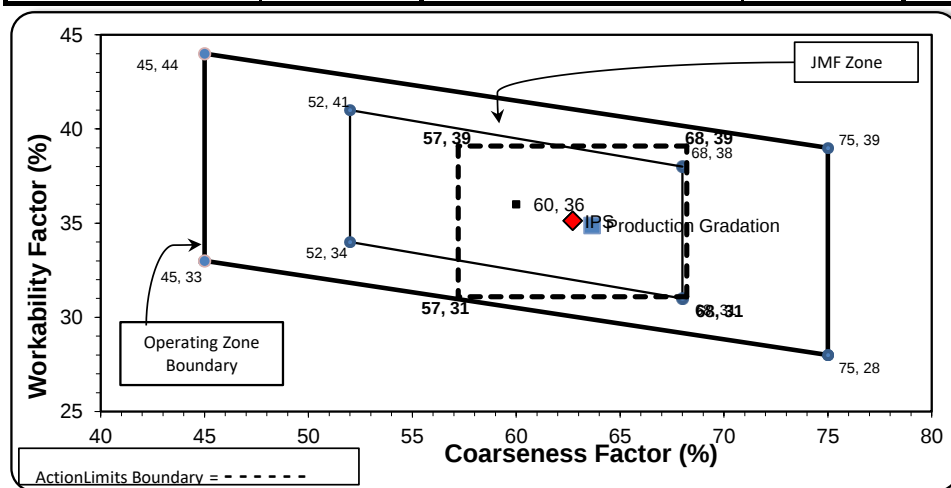
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	64	Workability Factor:	32	34.9
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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]