

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Sample Date: 5/5/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 5/6/2025 through 5/12/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1350	8.04	2.69	45.8
26A	58-003	Stoneco	450	2.68	2.69	15.3
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"	76.3	100.0	100.0	89.2	10.8	10.8
1/2"	34.6	98.8	100.0	69.9	19.3	30.1
3/8"	9.7	87.7	100.0	56.8	13.1	43.2
#4	1.3	10.6	99.1	40.8	16.0	59.2
#8	0.9	1.7	83.7	33.3	7.5	66.7
#16	0.8	0.9	63.3	25.2	8.1	74.8
#30	0.8	0.7	44.2	17.7	7.5	82.3
#50	0.7	0.7	18.5	7.6	10.1	92.4
#100	0.7	0.6	2.4	1.3	6.3	98.7
LBW	0.6	0.6	0.3	0.5	0.9	99.5

*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.



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

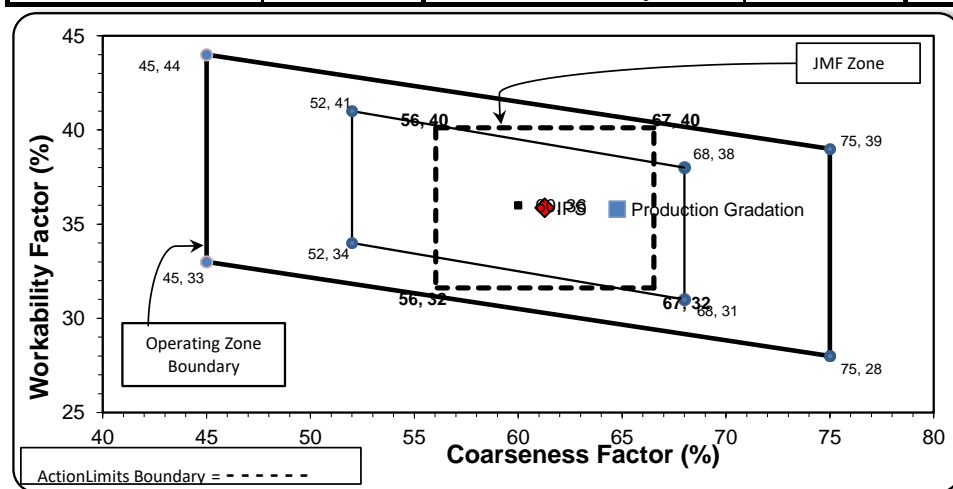
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	65	Workability Factor:	33	35.8
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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]

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **p11**

Sample Date: **5/5/25**

Dates Test Represents: **5/6/2025** through **5/12/2025**

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"	98.9	100.0	100.0	99.4	0.6	0.6
3/4"	88.3	100.0	100.0	93.6	5.8	6.4
1/2"	50.1	95.6	100.0	72.3	21.3	27.7
3/8"	31.4	82.9	100.0	61.3	11.0	38.7
#4	4.4	24.6	98.2	42.6	18.7	57.4
#8	1.9	8.4	80.0	33.2	9.4	66.8
#16	1.6	4.6	62.9	26.0	7.1	74.0
#30	1.6	3.6	46.9	19.6	6.4	80.4
#50	1.5	3.2	24.8	10.8	8.8	89.2
#100	1.4	2.9	5.1	2.9	7.9	97.1
LBW	1.2	2.6	0.9	1.2	1.8	98.8

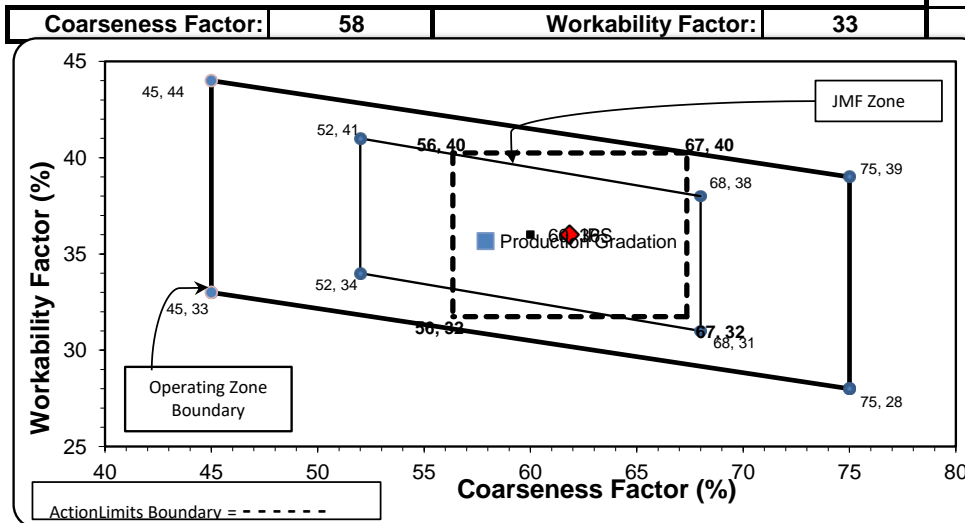
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size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