

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-2**

Sample Date: 9/30/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 10/1/2026 through 10/7/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.35	2.57	52.3
26A	71-47	Presque Isle	220	1.37	2.57	7.7
2NS	63-115	Ray Rd	1150	6.90	2.67	40.1
Total Wt			2870	17.63		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"	90.1	100.0	100.0	94.8	5.2	5.2
1/2"	43.4	97.1	100.0	70.2	24.6	29.8
3/8"	24.2	81.3	100.0	58.9	11.2	41.1
#4	5.0	14.3	95.7	42.1	16.9	57.9
#8	2.8	5.1	79.7	33.8	8.3	66.2
#16	2.2	2.9	64.1	27.1	6.7	72.9
#30	2.1	2.5	48.6	20.8	6.3	79.2
#50	2.0	2.4	28.3	12.6	8.2	87.4
#100	1.9	2.3	8.2	4.5	8.1	95.5
LBW	1.7	2.1	1.4	1.6	2.8	98.4



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.

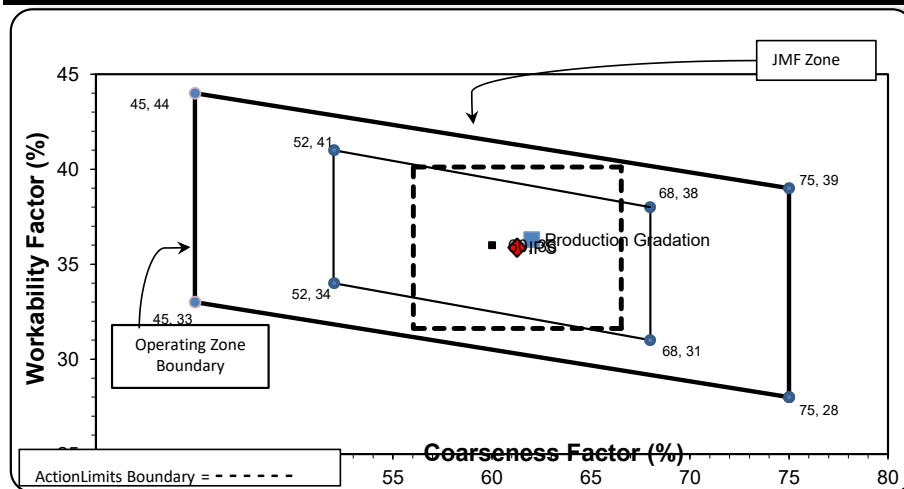
Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	62	Workability Factor:	34	36.3
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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:
Nancy Donahue

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Sample Date: 9/30/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 10/1/2026 through 10/7/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1200	7.15	2.69	40.7
1A	58-003	StoneCo	550	3.28	2.69	18.6
2NS	63-114	Highland	1200	7.23	2.66	40.7
Total Wt			2950	17.66		100.0

<----- Verify this number is 100%

Sieve	6AA	1A	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"	99.2	100.0	100.0	99.7	0.3	0.3
3/4"	81.9	100.0	100.0	92.6	7.0	7.4
1/2"	42.1	81.5	100.0	73.0	19.6	27.0
3/8"	26.2	56.3	100.0	61.8	11.2	38.2
#4	4.7	15.4	98.3	44.8	17.1	55.2
#8	1.6	7.3	83.1	35.8	9.0	64.2
#16	1.1	4.1	65.5	27.9	8.0	72.1
#30	1.0	2.9	44.8	19.2	8.7	80.8
#50	0.9	2.4	19.1	8.6	10.6	91.4
#100	0.8	2.2	4.1	2.4	6.2	97.6
LBW	0.8	2.0	0.7	1.0	1.4	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.

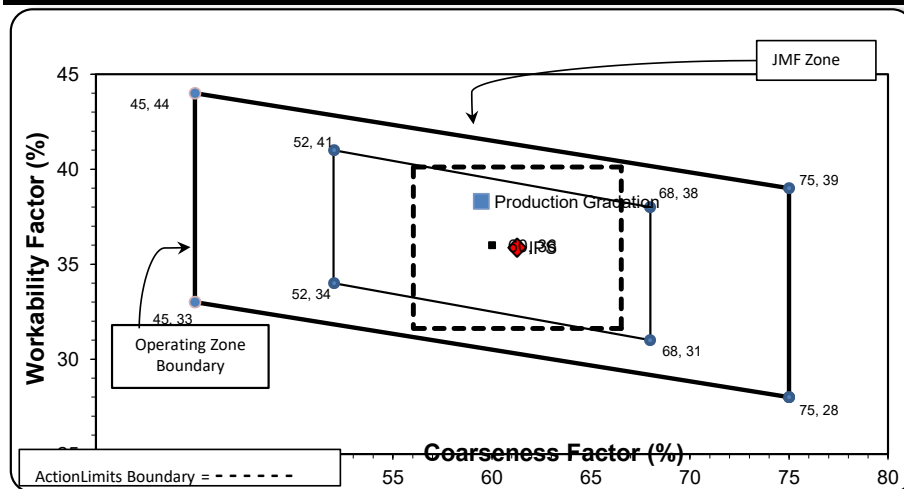
Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	59	Workability Factor:	36	38.3
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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:
Nancy Donahue

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Sample Date: 9/30/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 10/1/2026 through 10/7/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1420	8.46	2.69	47.3
1A	58-003	StoneCo	400	2.38	2.69	13.3
2NS	63-114	Highland	1180	7.11	2.66	39.3
Total Wt			3000	17.95		100.0

<----- Verify this number is 100%



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Sieve	6AA	1A	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	99.5	0.5	0.5
3/4"	83.5	100.0	100.0	92.2	7.3	7.8
1/2"	43.5	85.9	100.0	71.4	20.8	28.6
3/8"	24.4	68.8	100.0	60.1	11.3	39.9
#4	5.1	19.6	97.7	43.5	16.6	56.5
#8	2.3	4.2	82.2	34.0	9.5	66.0
#16	1.5	2.5	64.2	26.3	7.7	73.7
#30	1.2	2.1	44.1	18.2	8.1	81.8
#50	1.1	1.9	20.2	8.7	9.5	91.3
#100	1.0	1.8	3.9	2.2	6.5	97.8
LBW	0.9	1.7	0.7	0.9	1.3	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

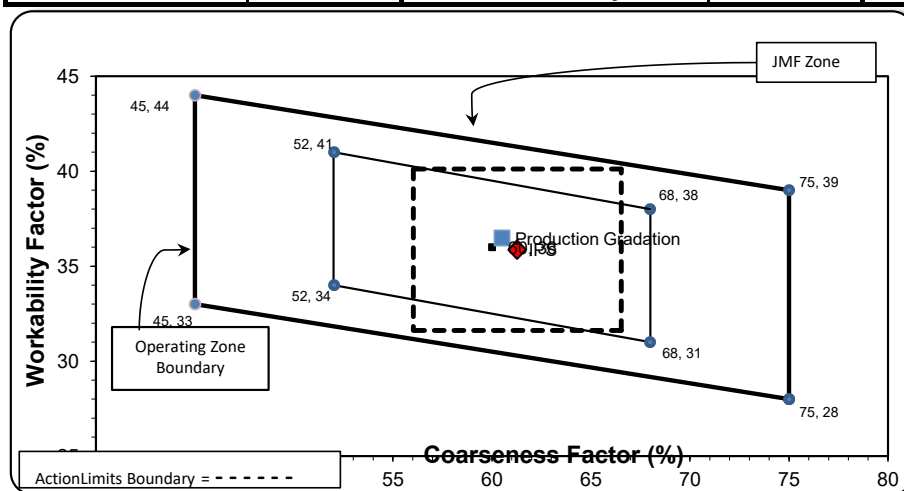
a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	61	Workability Factor:	34	36.5
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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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