Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-2**

Contractor: _____

Sample Date: 9/23/26

Concrete Grade: **DM-4500HP**

Dates Test Represents: 9/24/2026 through 9/30/2026

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%

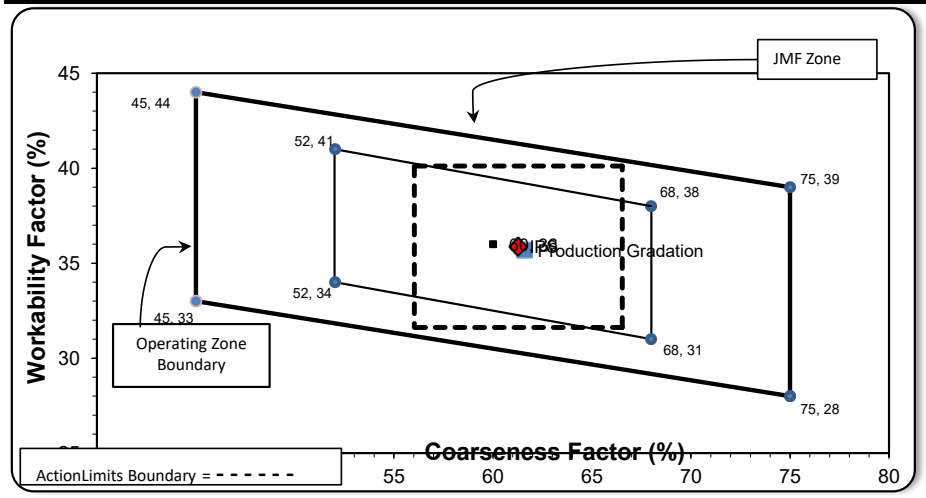
Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

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"	98.0	100.0	100.0	99.0	1.0	1.0
3/4"	82.5	100.0	100.0	90.9	8.1	9.1
1/2"	43.8	97.7	100.0	70.5	20.4	29.5
3/8"	23.2	86.7	100.0	58.8	11.6	41.2
#4	4.0	18.5	95.6	41.8	17.0	58.2
#8	2.1	5.1	79.1	33.2	8.6	66.8
#16	1.9	2.6	62.2	26.1	7.1	73.9
#30	1.8	2.1	45.7	19.4	6.7	80.6
#50	1.7	1.9	24.3	10.8	8.6	89.2
#100	1.6	1.7	6.7	3.7	7.1	96.3
LBW	1.4	1.3	1.1	1.3	2.4	98.7

*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

Coarseness Factor:	62	Workability Factor:	33	Adjusted WF 35.7



Intial Production Sample (IPS)

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

PREPARED BY:
SM, LLC Technical Service

Approved By:
Nancy Donahue

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Contractor:

Sample Date: 9/23/26

Concrete Grade: **DM-4500HP**

Dates Test Represents: 9/24/2026 through 9/30/2026

5" Slump

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1350	8.04	2.69	45.8
IA	58-003	StoneCo	400	2.38	2.69	13.6
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	IA	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"	84.9	100.0	100.0	93.1	6.9	6.9
1/2"	40.6	87.4	100.0	71.1	22.0	28.9
3/8"	25.1	70.2	100.0	61.7	9.4	38.3
#4	4.4	16.5	98.6	44.4	17.3	55.6
#8	1.6	2.0	84.0	35.2	9.2	64.8
#16	1.5	1.6	66.0	27.8	7.4	72.2
#30	1.3	1.4	46.5	19.7	8.1	80.3
#50	1.3	1.4	21.7	9.6	10.1	90.4
#100	1.3	1.2	4.2	2.5	7.1	97.5
LBW	1.0	1.1	0.6	0.9	1.6	99.1

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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.

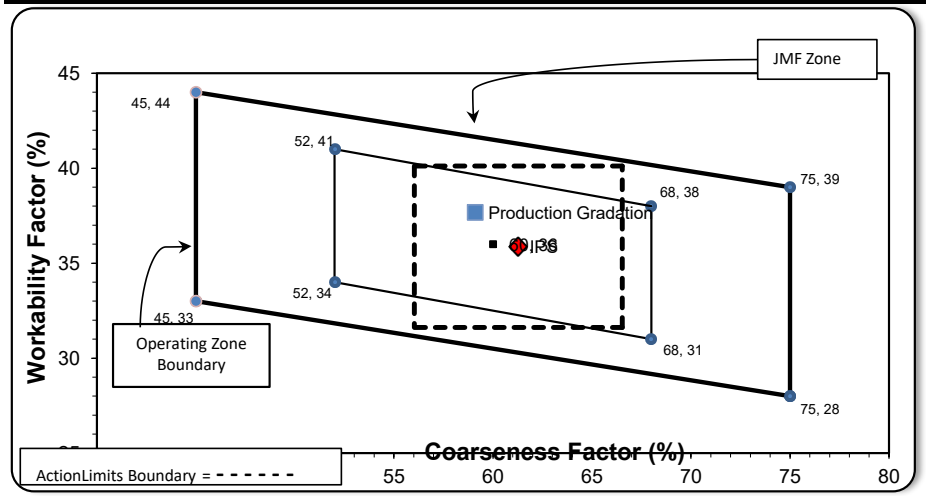
Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	59	Workability Factor:	35	Adjusted WF 37.7

Intial Production Sample (IPS)

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



PREPARED BY:
SM, LLC Technical Service

Approved By:
Nancy Donahue

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Contractor: _____

Sample Date: 9/23/26

Concrete Grade: **DM-4500HP**

Dates Test Represents: 9/24/2026 through 9/30/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1350	8.04	2.69	45.8
IA	58-003	StoneCo	400	2.38	2.69	13.6
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	IA	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"	84.9	100.0	100.0	93.1	6.9	6.9
1/2"	40.6	87.4	100.0	71.1	22.0	28.9
3/8"	25.1	70.2	100.0	61.7	9.4	38.3
#4	4.4	16.5	98.6	44.4	17.3	55.6
#8	1.6	2.0	84.0	35.2	9.2	64.8
#16	1.5	1.6	66.0	27.8	7.4	72.2
#30	1.3	1.4	46.5	19.7	8.1	80.3
#50	1.3	1.4	21.7	9.6	10.1	90.4
#100	1.3	1.2	4.2	2.5	7.1	97.5
LBW	1.0	1.1	0.6	0.9	1.6	99.1

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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.

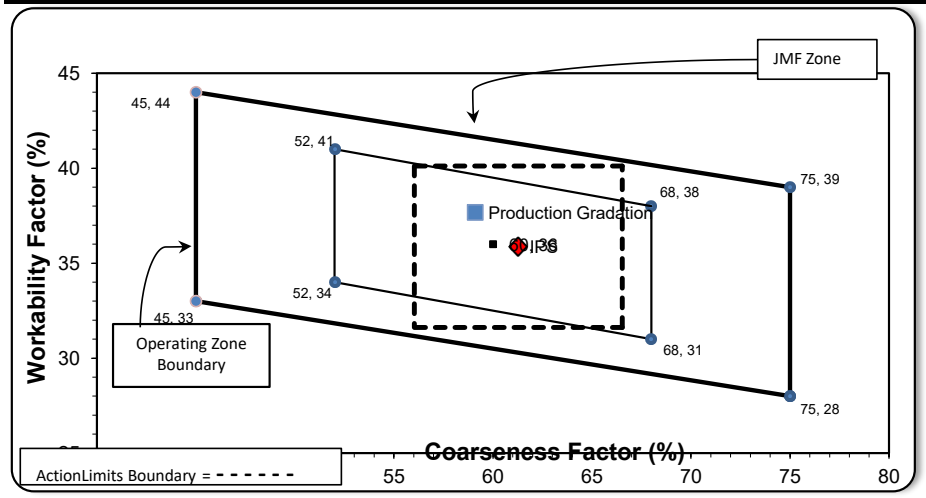
Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	59	Workability Factor:	35	Adjusted WF 37.7

Intial Production Sample (IPS)

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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