Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Contractor:

Sample Date: 7/9/26

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 7/10/2026 through 7/16/2026

1 inch slump

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1500	8.94	2.69	50.0
IA	58-003	StoneCo	300	1.79	2.69	10.0
2NS	63-114	Highland	1200	7.23	2.66	40.0
		Total Wt	**3000**	**17.95**		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	92.5	7.6	7.6
1/2"	44.0	90.2	100.0	71.0	21.4	29.0
3/8"	27.5	76.1	100.0	61.4	9.7	38.6
#4	5.0	18.4	98.8	43.9	17.5	56.1
#8	2.0	2.6	85.2	35.3	8.5	64.7
#16	1.4	1.8	68.6	28.3	7.0	71.7
#30	1.3	1.6	49.2	20.5	7.8	79.5
#50	1.2	1.6	22.5	9.8	10.7	90.2
#100	1.2	1.5	4.3	2.5	7.3	97.5
LBW	1.0	1.3	0.4	0.8	1.7	99.2

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.

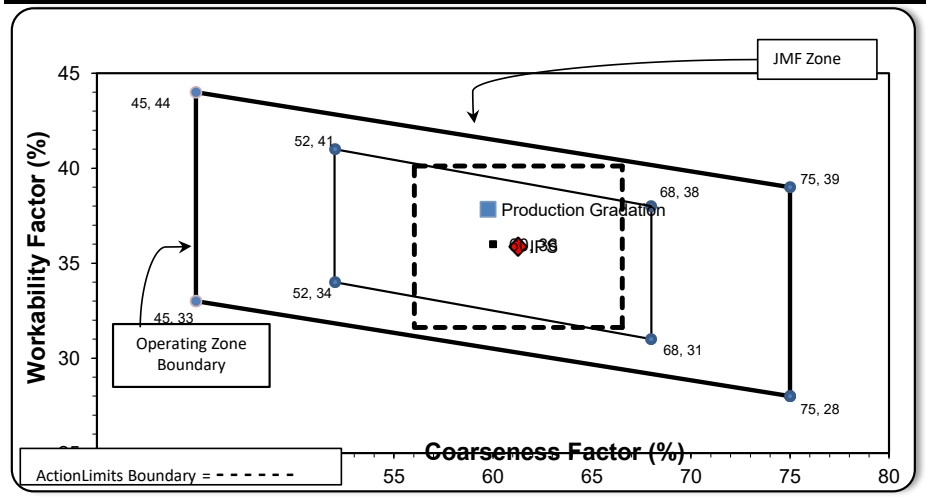
Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	60	Workability Factor:	35	Adjusted WF 37.8

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: 7/9/26

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 7/10/2026 through 7/16/2026

5 inch slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1500	8.94	2.69	50.8
IA	58-003	StoneCo	300	1.79	2.69	10.2
2NS	63-114	Highland	1150	6.93	2.66	39.0
		Total Wt	**2950**	**17.65**		100.0

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

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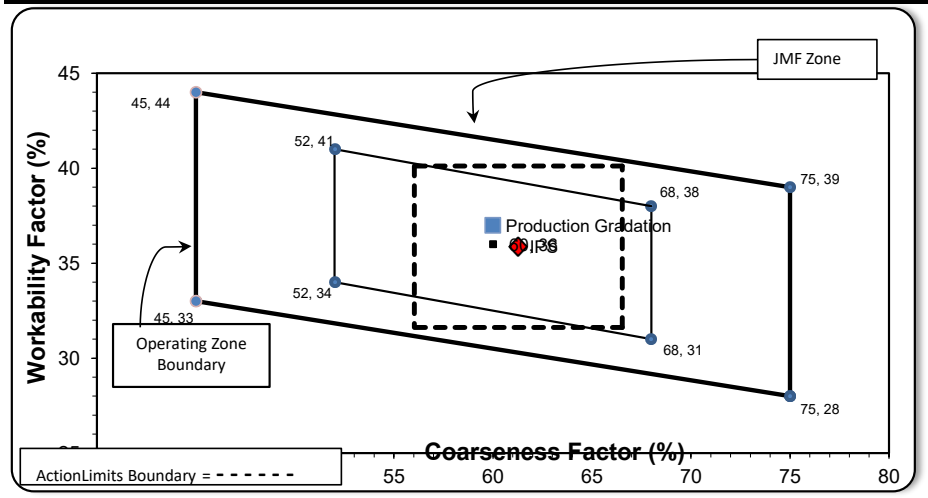
Sieve	6AA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	84.9	100.0	100.0	92.3	7.7	7.7
1/2"	44.0	90.2	100.0	70.5	21.8	29.5
3/8"	27.5	76.1	100.0	60.7	9.8	39.3
#4	5.0	18.4	98.8	42.9	17.8	57.1
#8	2.0	2.6	85.2	34.5	8.4	65.5
#16	1.4	1.8	68.6	27.6	6.9	72.4
#30	1.3	1.6	49.2	20.0	7.6	80.0
#50	1.2	1.6	22.5	9.5	10.5	90.5
#100	1.2	1.5	4.3	2.4	7.1	97.6
LBW	1.0	1.3	0.4	0.8	1.6	99.2

*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:	60	Workability Factor:	34	Adjusted WF 37.0



Intial Production Sample (IPS)

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Workability Factor:	36

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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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Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Contractor:

Sample Date: 7/9/26

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 7/10/2026 through 7/16/2026

1 inch slump

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1500	8.94	2.69	50.0
IA	58-003	StoneCo	300	1.79	2.69	10.0
2NS	63-114	Highland	1200	7.23	2.66	40.0
		Total Wt	**3000**	**17.95**		100.0

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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	92.5	7.6	7.6
1/2"	44.0	90.2	100.0	71.0	21.4	29.0
3/8"	27.5	76.1	100.0	61.4	9.7	38.6
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#30	1.3	1.6	49.2	20.5	7.8	79.5
#50	1.2	1.6	22.5	9.8	10.7	90.2
#100	1.2	1.5	4.3	2.5	7.3	97.5
LBW	1.0	1.3	0.4	0.8	1.7	99.2

*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
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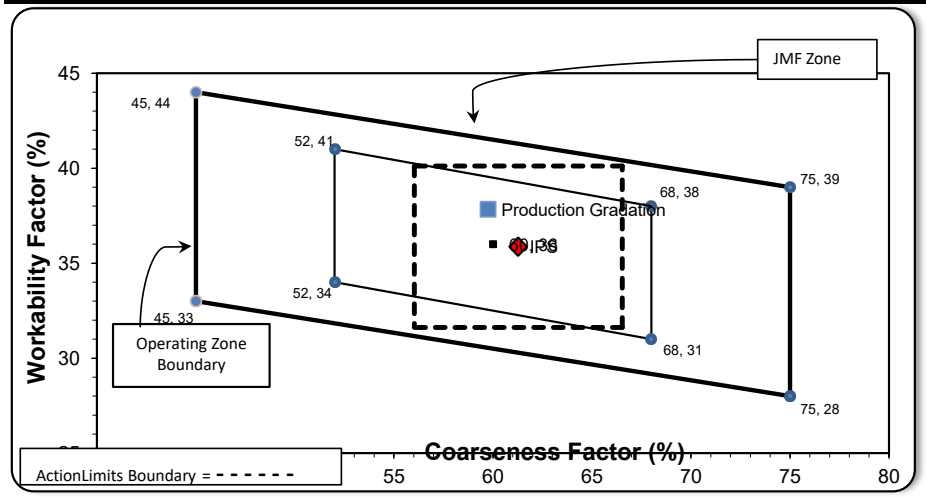

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1.5"	100.0	100.0	100.0	100.0	0.0	0.0
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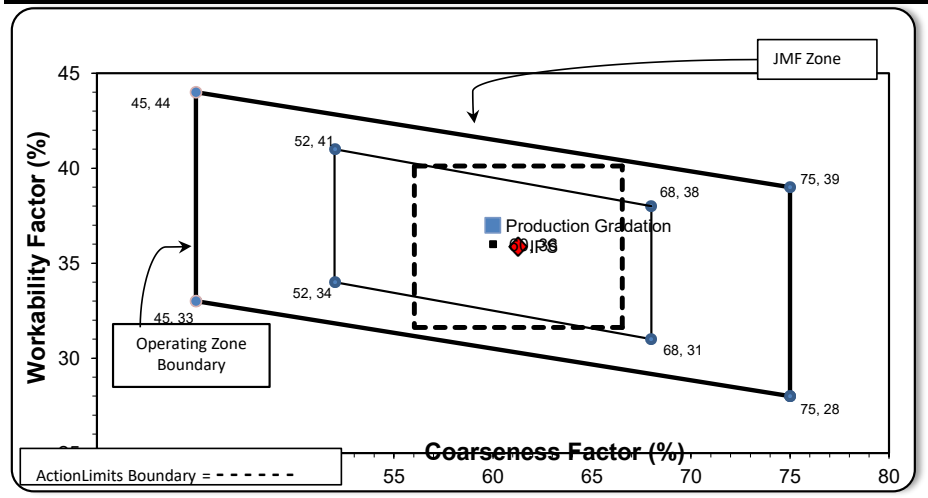

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