

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Contractor: _____

Sample Date: 7/21/25

Concrete Grade: **P1M, 3500HP, 4000HP**

Dates Test Represents: 7/22/2025 through 7/28/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1300	7.74	2.69	41.7
IA	58-003	Stoneco	620	3.69	2.69	19.9
2NS	63-114	Highland	1200	7.26	2.65	38.5
Total Wt			3120	18.70		100.0

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

Sieve	CA	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"	63.7	100.0	100.0	84.9	15.1	15.1
3/4"	37.6	100.0	100.0	74.0	10.9	26.0
1/2"	15.7	91.3	100.0	63.1	10.9	36.9
3/8"	10.7	74.0	100.0	57.6	5.5	42.4
#4	3.1	18.0	98.7	42.8	14.8	57.2
#8	1.9	4.9	84.8	34.4	8.4	65.6
#16	1.6	2.3	67.3	27.0	7.4	73.0
#30	1.4	1.7	48.3	19.5	7.5	80.5
#50	1.3	1.4	19.4	8.3	11.2	91.7
#100	1.2	1.3	3.4	2.1	6.2	97.9
LBW	1.1	1.1	0.4	0.8	1.2	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 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.



Superior Materials, LLC

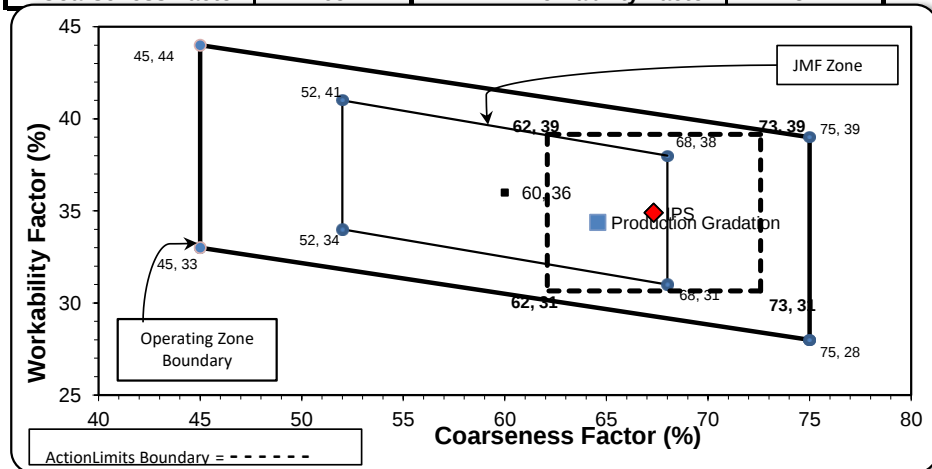
30701 W. 10 Mile Rd.

Suite 500

Farmington Hills, MI 48336

Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Coarseness Factor:	65	Workability Factor:	34
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Initial Production Sample (IPS)

Coarseness Factor:		67	
Workability Factor:		35	
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	85.5	14.5	14.5
3/4"	73.4	12.1	26.6
1/2"	61.0	12.4	39.0
3/8"	56.2	4.8	43.8
#4	43.1	13.1	56.9
#8	34.9	8.2	65.1
#16	29.4	5.5	70.6
#30	21.6	7.8	78.4
#50	8.1	13.4	91.9
#100	2.2	5.9	97.8
LBW	1.4	0.8	98.6

PREPARED BY:
SM, LLC Technical Service

Approved BY:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P11**

Contractor: _____

Sample Date: 7/21/25

Concrete Grade: **P1M, 3500HP, 4000HP**

Dates Test Represents: 7/22/2025 through 7/28/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	900	5.50	2.62	29.3
IA	71-47	Presque Isle	970	5.93	2.62	31.6
2NS	63-115	Ray Rd	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.2	100.0	100.0	98.6	1.4	1.4
1"	31.2	100.0	100.0	79.8	18.8	20.2
3/4"	6.7	98.0	100.0	72.0	7.8	28.0
1/2"	1.8	71.8	100.0	62.3	9.7	37.7
3/8"	1.5	43.4	100.0	53.2	9.1	46.8
#4	1.4	6.5	97.0	40.4	12.9	59.6
#8	1.4	2.7	82.0	33.3	7.1	66.7
#16	1.2	2.0	64.1	26.0	7.3	74.0
#30	1.2	1.9	45.9	18.9	7.1	81.1
#50	1.1	1.8	22.9	9.8	9.1	90.2
#100	1.0	1.7	5.0	2.8	7.1	97.2
LBW	0.8	1.4	0.9	1.0	1.8	99.0

*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 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.



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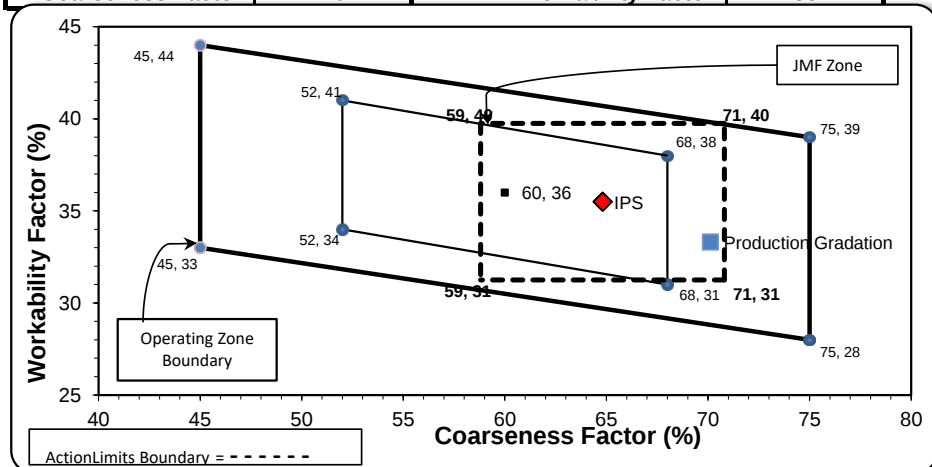
30701 W. 10 Mile Rd.

Suite 500

Farmington Hills, MI 48336

Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Coarseness Factor: **70** **Workability Factor:** **33**



Initial Production Sample (IPS)

Coarseness Factor:		65	
Workability Factor:		36	
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.0	0.6	0.6
1"	84.0	15.3	16.0
3/4"	73.5	10.5	26.5
1/2"	65.2	8.2	34.8
3/8"	58.2	7.1	41.8
#4	44.1	14.1	55.9
#8	35.5	8.6	64.5
#16	29.1	6.4	70.9
#30	21.9	7.3	78.1
#50	9.6	12.2	90.4
#100	2.6	7.1	97.4
LBW	1.0	1.6	99.0

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