

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Sample Date: 11/3/25

Dates Test Represents: 11/4/2025 through 11/10/2025

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

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1350	8.04	2.69	43.3
IA	58-003	Stoneco	570	3.40	2.69	18.3
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"	62.8	100.0	100.0	83.9	16.1	16.1
3/4"	35.6	100.0	100.0	72.1	11.8	27.9
1/2"	17.2	91.0	100.0	62.5	9.6	37.5
3/8"	12.4	75.8	100.0	57.7	4.9	42.3
#4	2.9	16.4	98.8	42.3	15.4	57.7
#8	2.3	2.0	84.5	33.9	8.4	66.1
#16	1.9	1.7	67.0	26.9	7.0	73.1
#30	1.6	1.4	46.2	18.7	8.2	81.3
#50	1.4	1.2	22.2	9.4	9.4	90.6
#100	1.2	1.1	4.4	2.4	7.0	97.6
LBW	1.0	1.0	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 8% for the 1" sieve when

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



Superior Materials, LLC

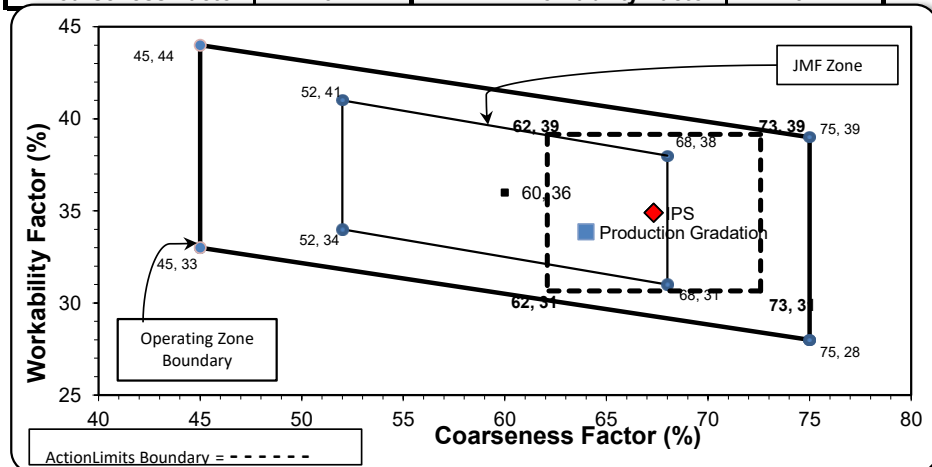
30701 W. 10 Mile Rd.

Suite 500

Farmington Hills, MI 48336

Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Coarseness Factor:	64	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 #: **P-103**

Contractor: _____

Sample Date: 11/3/25

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

Dates Test Represents: 11/4/2025 through 11/10/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1350	8.04	2.69	43.3
IA	58-003	Stoneco	570	3.40	2.69	18.3
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"	62.8	100.0	100.0	83.9	16.1	16.1
3/4"	35.6	100.0	100.0	72.1	11.8	27.9
1/2"	17.2	91.0	100.0	62.5	9.6	37.5
3/8"	12.4	75.8	100.0	57.7	4.9	42.3
#4	2.9	16.4	98.8	42.3	15.4	57.7
#8	2.3	2.0	84.5	33.9	8.4	66.1
#16	1.9	1.7	67.0	26.9	7.0	73.1
#30	1.6	1.4	46.2	18.7	8.2	81.3
#50	1.4	1.2	22.2	9.4	9.4	90.6
#100	1.2	1.1	4.4	2.4	7.0	97.6
LBW	1.0	1.0	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 8% for the 1" sieve when

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



Superior Materials, LLC

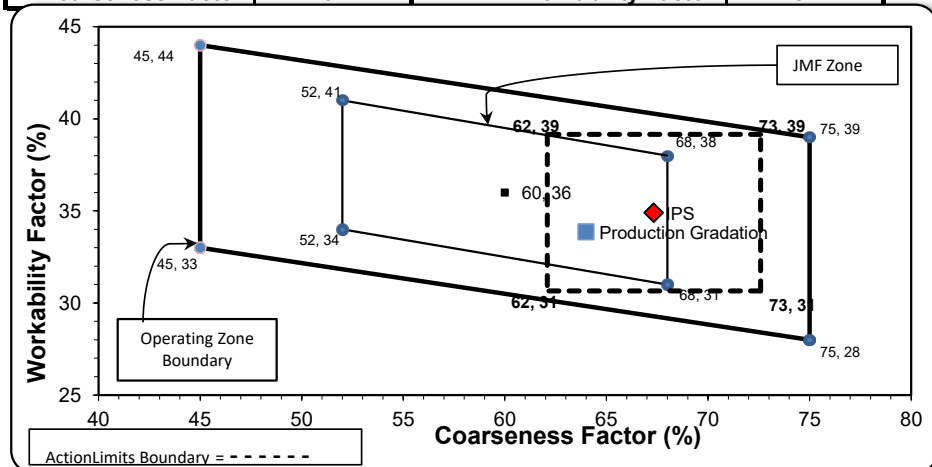
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Farmington Hills, MI 48336

Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Coarseness Factor:	64	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**

Sample Date: 11/3/25

Dates Test Represents: 11/4/2025 through 11/10/2025

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

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	820	5.02	2.62	26.7
IA	71-47	Presque Isle	1050	6.42	2.62	34.2
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"	93.6	100.0	100.0	98.3	1.7	1.7
1"	37.1	100.0	100.0	83.2	15.1	16.8
3/4"	7.7	97.4	100.0	74.5	8.7	25.5
1/2"	1.6	70.7	100.0	63.7	10.8	36.3
3/8"	1.5	41.4	100.0	53.6	10.0	46.4
#4	1.5	5.0	97.6	40.3	13.4	59.7
#8	1.4	2.3	84.9	34.3	5.9	65.7
#16	1.3	1.9	66.8	27.1	7.2	72.9
#30	1.3	1.7	48.4	19.8	7.3	80.2
#50	1.2	1.7	23.0	9.9	10.0	90.1
#100	1.1	1.6	4.9	2.8	7.1	97.2
LBW	1.0	1.4	1.0	1.1	1.6	98.9

*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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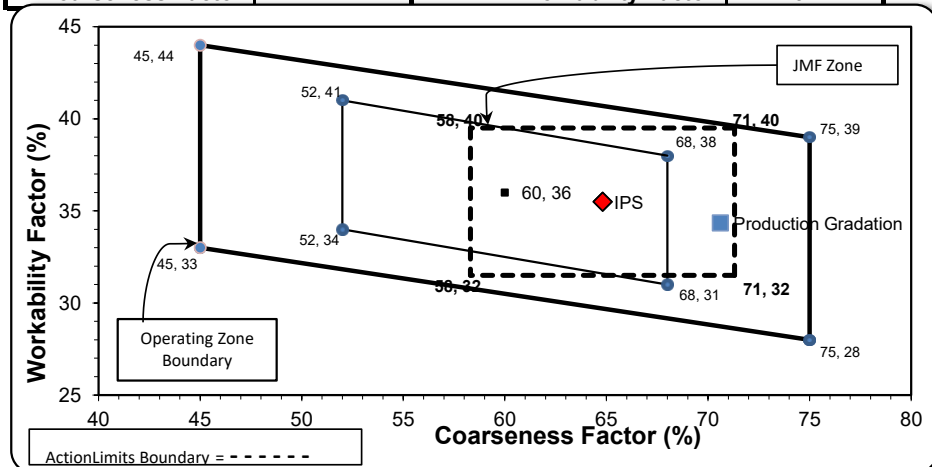
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Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Coarseness Factor:	71	Workability Factor:	34
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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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Approved By: