

Aggregate Optimization Chart

PLANT #: **P-102**

Sample Date: 4/29/24

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: 4/30/2024 through 5/6/2024

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	550	3.28	2.69	17.6
2NS	63-114	Highland	1200	7.26	2.65	38.5
Total Wt			3120	18.70		100.0

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



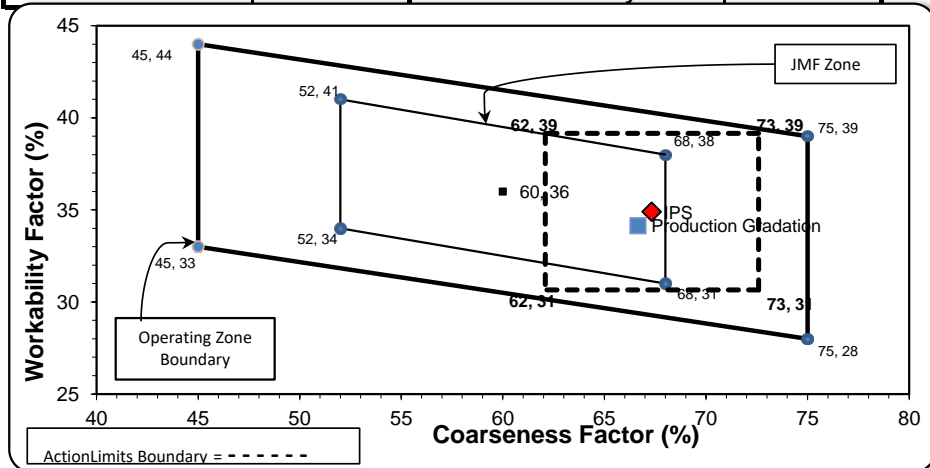
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	65.2	100.0	100.0	84.7	15.3	15.3
3/4"	41.2	100.0	100.0	74.2	10.5	25.8
1/2"	17.2	93.2	100.0	62.4	11.7	37.6
3/8"	9.4	76.7	100.0	56.1	6.3	43.9
#4	4.4	14.4	99.0	42.5	13.6	57.5
#8	2.0	3.5	84.9	34.1	8.4	65.9
#16	1.8	1.8	66.4	26.6	7.5	73.4
#30	1.7	1.4	47.6	19.3	7.3	80.7
#50	1.6	1.2	20.4	8.8	10.5	91.2
#100	1.5	1.2	3.8	2.3	6.4	97.7
LBW	1.2	1.0	0.9	1.0	1.3	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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **67** **Workability Factor:** **34**



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

PLANT #: **P-103**

Sample Date: 4/29/24

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: 4/30/2024 through 5/6/2024

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	550	3.28	2.69	17.6
2NS	63-114	Highland	1200	7.26	2.65	38.5
Total Wt			3120	18.70		100.0

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



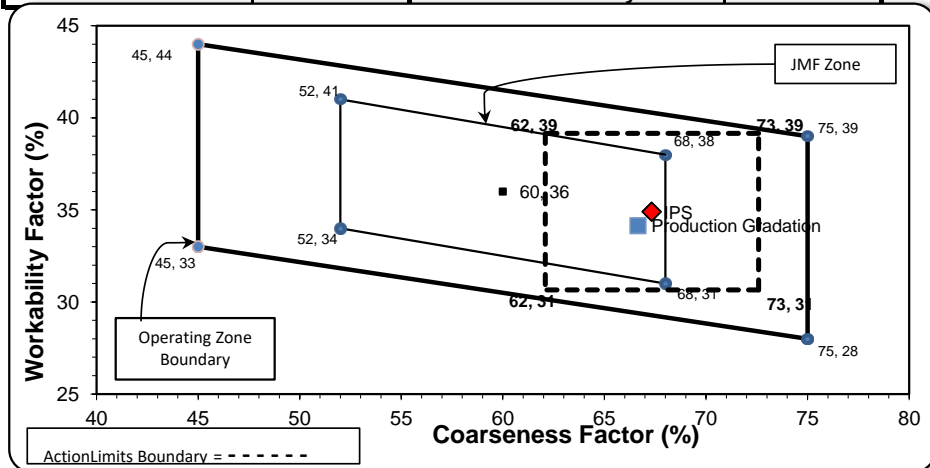
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 Suite 500
 Farmington Hills, MI 48336

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"	65.2	100.0	100.0	84.7	15.3	15.3
3/4"	41.2	100.0	100.0	74.2	10.5	25.8
1/2"	17.2	93.2	100.0	62.4	11.7	37.6
3/8"	9.4	76.7	100.0	56.1	6.3	43.9
#4	4.4	14.4	99.0	42.5	13.6	57.5
#8	2.0	3.5	84.9	34.1	8.4	65.9
#16	1.8	1.8	66.4	26.6	7.5	73.4
#30	1.7	1.4	47.6	19.3	7.3	80.7
#50	1.6	1.2	20.4	8.8	10.5	91.2
#100	1.5	1.2	3.8	2.3	6.4	97.7
LBW	1.2	1.0	0.9	1.0	1.3	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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **67** **Workability Factor:** **34**



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

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Aggregate Optimization Chart

PLANT #: 12

Sample Date: 4/29/24

Concrete Grade: **P1M, 3500HP**

Contractor: _____

Dates Test Represents: 4/30/2024 through 5/6/2024

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1070	6.54	2.62	34.9
IA	71-47	Presque Isle	800	4.89	2.62	26.1
2NS	63-115	Ray Rd	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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



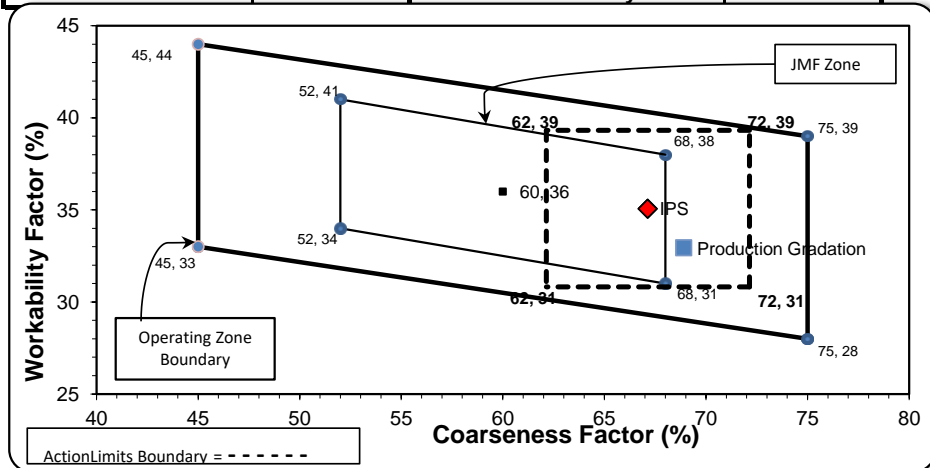
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 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	93.8	100.0	100.0	97.8	2.2	2.2
1"	23.4	100.0	100.0	73.3	24.5	26.7
3/4"	3.5	99.5	100.0	66.2	7.1	33.8
1/2"	2.1	77.1	100.0	59.9	6.3	40.1
3/8"	1.9	53.9	100.0	53.8	6.1	46.2
#4	1.8	8.5	96.0	40.4	13.4	59.6
#8	1.7	2.2	81.3	32.9	7.4	67.1
#16	1.6	1.5	65.1	26.4	6.5	73.6
#30	1.6	1.3	49.0	20.0	6.3	80.0
#50	1.6	1.3	24.9	10.6	9.4	89.4
#100	1.5	1.2	4.1	2.4	8.2	97.6
LBW	1.1	1.0	0.5	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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor:	69	Workability Factor:	33
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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"	99.6	0.4	0.4
1"	83.9	15.7	16.1
3/4"	74.0	9.8	26.0
1/2"	63.7	10.3	36.3
3/8"	56.4	7.3	43.6
#4	43.0	13.4	57.0
#8	35.1	7.9	64.9
#16	29.0	6.1	71.0
#30	20.9	8.0	79.1
#50	8.1	12.8	91.9
#100	1.6	6.5	98.4
LBW	0.9	0.8	99.1

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Aggregate Optimization Chart

PLANT #: 20

Sample Date: 4/29/24

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: 4/30/2024 through 5/6/2024

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	950	5.81	2.62	30.9
IA	71-47	Presque Isle	920	5.63	2.62	30.0
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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



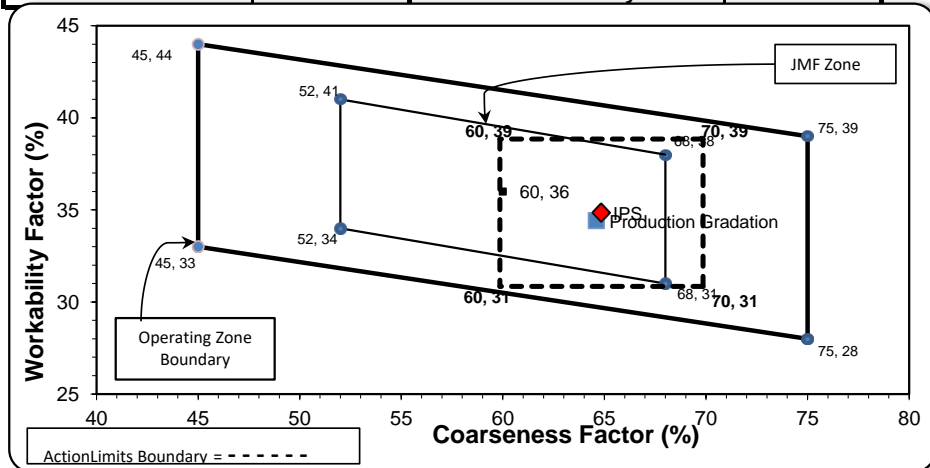
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Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.9	100.0	100.0	99.0	1.0	1.0
1"	43.1	100.0	100.0	82.4	16.6	17.6
3/4"	12.8	99.2	100.0	72.8	9.6	27.2
1/2"	3.6	82.2	100.0	64.8	7.9	35.2
3/8"	2.8	59.0	100.0	57.6	7.2	42.4
#4	2.1	12.2	97.9	42.6	15.1	57.4
#8	1.8	4.2	83.4	34.4	8.2	65.6
#16	1.8	2.4	68.8	28.2	6.2	71.8
#30	1.7	2.0	51.2	21.1	7.0	78.9
#50	1.7	1.8	22.6	9.9	11.2	90.1
#100	1.5	1.7	3.7	2.4	7.5	97.6
LBW	1.3	1.5	0.4	1.0	1.4	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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 65 **Workability Factor:** 34



Initial Production Sample (IPS)

Coarseness Factor: 65
Workability Factor: 35

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.1	0.9	0.9
1"	80.8	18.2	19.2
3/4"	71.3	9.6	28.7
1/2"	64.0	7.3	36.0
3/8"	57.7	6.2	42.3
#4	42.8	15.0	57.2
#8	34.8	7.9	65.2
#16	28.4	6.4	71.6
#30	20.2	8.2	79.8
#50	7.6	12.6	92.4
#100	1.6	6.0	98.4
LBW	1.0	0.6	99.0

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: P11

Sample Date: 4/29/24

Concrete Grade: P1M, 3500HP

Dates Test Represents: 4/30/2024 through 5/6/2024

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	950	5.81	2.62	30.9
IA	71-47	Presque Isle	920	5.63	2.62	30.0
2NS	95-013	Smelter Bay	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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



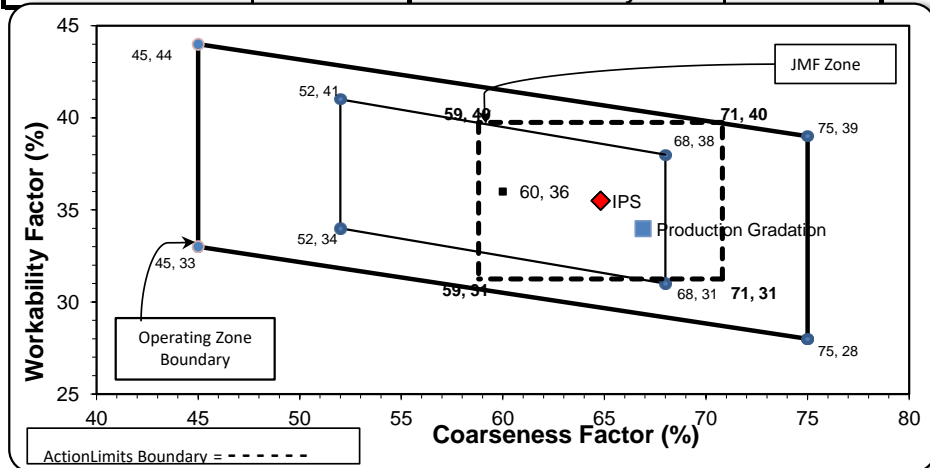
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 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	93.8	100.0	100.0	98.1	1.9	1.9
1"	23.4	100.0	100.0	76.3	21.8	23.7
3/4"	3.5	99.5	100.0	70.0	6.3	30.0
1/2"	2.1	77.1	100.0	62.8	7.1	37.2
3/8"	1.9	53.9	100.0	55.8	7.0	44.2
#4	1.8	8.5	96.5	40.8	15.0	59.2
#8	1.7	2.2	83.9	34.0	6.8	66.0
#16	1.6	1.5	69.3	28.0	5.9	72.0
#30	1.6	1.3	49.6	20.3	7.8	79.7
#50	1.6	1.3	23.1	9.9	10.4	90.1
#100	1.5	1.2	6.8	3.5	6.4	96.5
LBW	1.1	1.0	1.4	1.2	2.3	98.8

*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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 67 **Workability Factor:** 34



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

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-35**

Sample Date: 4/29/24

Concrete Grade: **P1M, 3500HP**

Contractor: _____

Dates Test Represents: 4/30/2024 through 5/6/2024

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	550	3.28	2.69	17.6
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.5
Total Wt			3120	18.70		100.0

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



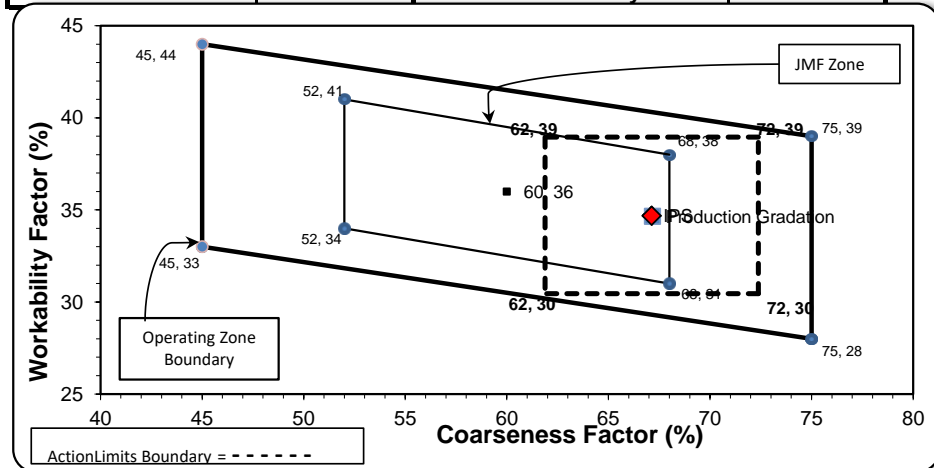
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	65.2	100.0	100.0	84.7	15.3	15.3
3/4"	41.2	100.0	100.0	74.2	10.5	25.8
1/2"	17.2	93.2	100.0	62.4	11.7	37.6
3/8"	9.4	76.7	100.0	56.1	6.3	43.9
#4	4.4	14.4	98.6	42.4	13.7	57.6
#8	2.0	3.5	86.2	34.6	7.7	65.4
#16	1.8	1.8	66.7	26.8	7.9	73.2
#30	1.7	1.4	44.3	18.0	8.7	82.0
#50	1.6	1.2	20.8	8.9	9.1	91.1
#100	1.5	1.2	4.2	2.5	6.4	97.5
LBW	1.2	1.0	0.8	1.0	1.5	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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor:	67	Workability Factor:	35
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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"	86.9	13.1	13.1
3/4"	76.1	10.8	23.9
1/2"	63.7	12.4	36.3
3/8"	56.2	7.5	43.8
#4	43.2	13.0	56.8
#8	34.7	8.5	65.3
#16	27.5	7.2	72.5
#30	20.6	7.0	79.4
#50	9.0	11.6	91.0
#100	2.1	6.9	97.9
LBW	1.0	1.1	99.0

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-36**

Sample Date: 4/29/24

Concrete Grade: **P1M, 3500HP**

Contractor: _____

Dates Test Represents: 4/30/2024 through 5/6/2024

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1070	6.54	2.62	34.9
IA	71-47	Presque Isle	800	4.89	2.62	26.1
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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



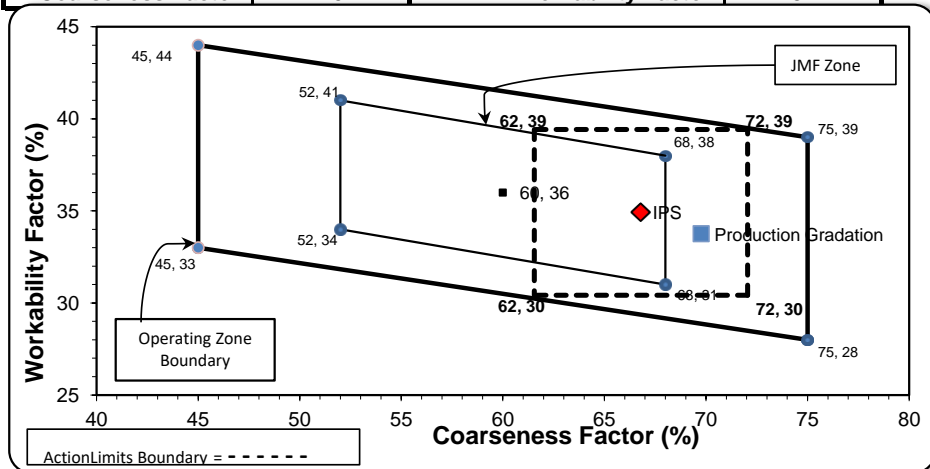
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	93.8	100.0	100.0	97.8	2.2	2.2
1"	23.4	100.0	100.0	73.3	24.5	26.7
3/4"	3.5	99.5	100.0	66.2	7.1	33.8
1/2"	2.1	77.1	100.0	59.9	6.3	40.1
3/8"	1.9	53.9	100.0	53.8	6.1	46.2
#4	1.8	8.5	97.9	41.1	12.7	58.9
#8	1.7	2.2	83.4	33.8	7.3	66.2
#16	1.6	1.5	68.8	27.8	5.9	72.2
#30	1.6	1.3	51.2	20.9	6.9	79.1
#50	1.6	1.3	22.6	9.7	11.2	90.3
#100	1.5	1.2	3.7	2.3	7.4	97.7
LBW	1.1	1.0	0.4	0.8	1.5	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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor:	70	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"	85.0	15.0	15.0
3/4"	72.1	12.9	27.9
1/2"	64.5	7.6	35.5
3/8"	56.5	8.0	43.5
#4	42.7	13.8	57.3
#8	34.9	7.8	65.1
#16	29.0	5.9	71.0
#30	21.0	8.0	79.0
#50	8.2	12.8	91.8
#100	1.6	6.5	98.4
LBW	0.7	0.9	99.3

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-39**

Sample Date: 4/29/24

Concrete Grade: **P1M, 3500HP**

Contractor: _____

Dates Test Represents: 4/30/2024 through 5/6/2024

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1020	6.24	2.62	33.2
IA	71-47	Presque Isle	800	4.89	2.62	26.1
2NS	44-051	Krake Willis Rd	1250	7.56	2.65	40.7
Total Wt			3070	18.69		100.0

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



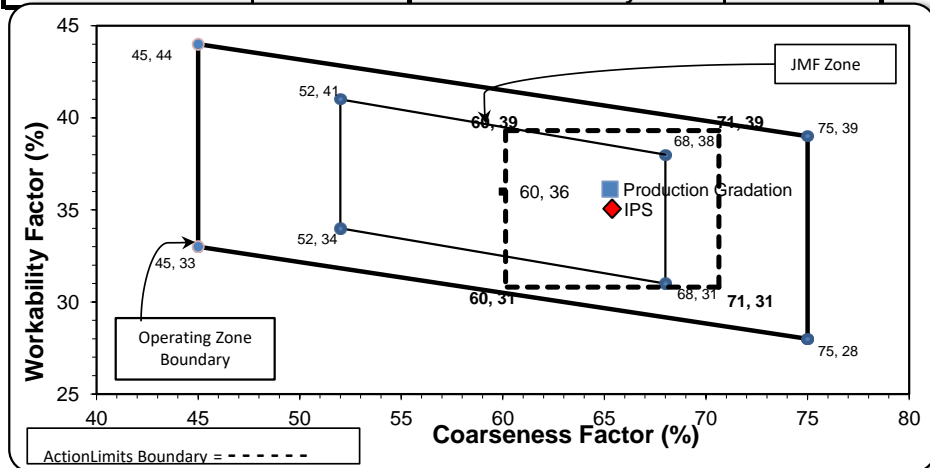
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	94.0	100.0	100.0	98.0	2.0	2.0
1"	34.6	100.0	100.0	78.3	19.7	21.7
3/4"	8.8	98.5	100.0	69.3	9.0	30.7
1/2"	3.2	83.2	100.0	63.5	5.8	36.5
3/8"	3.0	63.7	100.0	58.3	5.1	41.7
#4	2.5	17.3	99.4	45.8	12.5	54.2
#8	2.4	4.5	83.9	36.1	9.7	63.9
#16	2.4	2.7	67.2	28.9	7.3	71.1
#30	2.3	2.3	48.5	21.1	7.8	78.9
#50	2.2	2.1	21.5	10.0	11.1	90.0
#100	2.0	1.9	4.7	3.1	7.0	96.9
LBW	1.6	1.7	0.3	1.1	2.0	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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **65** **Workability Factor:** **36**



Initial Production Sample (IPS)

Coarseness Factor: **65**
Workability Factor: **35**

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.6	0.4	0.4
1"	83.9	15.7	16.1
3/4"	74.1	9.8	25.9
1/2"	64.3	9.7	35.7
3/8"	57.5	6.8	42.5
#4	44.5	13.1	55.5
#8	35.1	9.4	64.9
#16	27.9	7.2	72.1
#30	21.7	6.2	78.3
#50	12.6	9.1	87.4
#100	3.5	9.1	96.5
LBW	1.2	2.4	98.8

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-02**

Sample Date: 4/29/24

Concrete Grade: **P1M, 3500HP**

Contractor: _____

Dates Test Represents: 4/30/2024 through 5/6/2024

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1070	6.54	2.62	34.9
IA	71-47	Presque Isle	800	4.89	2.62	26.1
2NS	63-115	Ray Rd	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

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



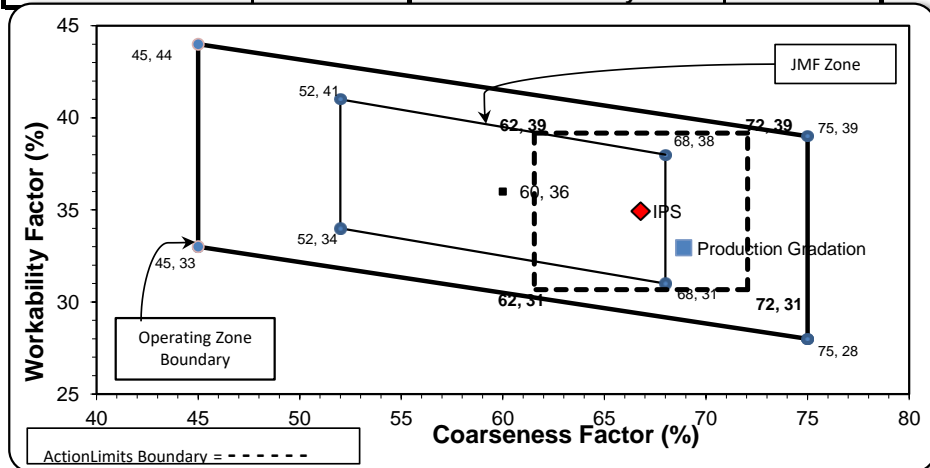
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	93.8	100.0	100.0	97.8	2.2	2.2
1"	23.4	100.0	100.0	73.3	24.5	26.7
3/4"	3.5	99.5	100.0	66.2	7.1	33.8
1/2"	2.1	77.1	100.0	59.9	6.3	40.1
3/8"	1.9	53.9	100.0	53.8	6.1	46.2
#4	1.8	8.5	96.0	40.4	13.4	59.6
#8	1.7	2.2	81.3	32.9	7.4	67.1
#16	1.6	1.5	65.1	26.4	6.5	73.6
#30	1.6	1.3	49.0	20.0	6.3	80.0
#50	1.6	1.3	24.9	10.6	9.4	89.4
#100	1.5	1.2	4.1	2.4	8.2	97.6
LBW	1.1	1.0	0.5	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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **69** **Workability Factor:** **33**



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"	85.0	15.0	15.0
3/4"	72.3	12.7	27.7
1/2"	64.5	7.8	35.5
3/8"	56.5	8.0	43.5
#4	42.7	13.8	57.3
#8	34.9	7.8	65.1
#16	29.0	5.9	71.0
#30	21.0	8.0	79.0
#50	8.2	12.8	91.8
#100	1.6	6.5	98.4
LBW	0.7	0.9	99.3

PREPARED BY:
 SM, LLC Technical Service

Approved By: