

# Aggregate Optimization Chart

**PLANT #:** **P-101**

Sample Date: 8/17/20

Concrete Grade: **P1M**

Contractor: \_\_\_\_\_

Dates Test Represents: 8/18/2020 through 8/24/2020

MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	920	5.63	2.62	30.0
IA	71-47	Presque Isle	950	5.81	2.62	30.9
2NS	75-051	Mid-Michigan	1200	7.23	2.66	39.1
<b>Total Wt</b>			<b>3070</b>	<b>18.67</b>		<b>100.0</b>

<---- 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"	95.4	100.0	100.0	98.6	1.4	1.4
1"	46.6	100.0	100.0	84.0	14.6	16.0
3/4"	17.0	98.5	100.0	74.7	9.3	25.3
1/2"	2.4	78.2	100.0	64.0	10.7	36.0
3/8"	2.0	54.4	100.0	56.5	7.5	43.5
#4	1.6	14.2	98.2	43.3	13.3	56.7
#8	1.6	4.2	80.9	33.4	9.9	66.6
#16	1.6	2.6	64.0	26.3	7.1	73.7
#30	1.4	2.3	47.8	19.8	6.5	80.2
#50	1.4	2.0	24.3	10.5	9.3	89.5
#100	1.4	1.8	5.8	3.2	7.3	96.8
LBW	1.1	1.6	0.8	1.1	2.1	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.

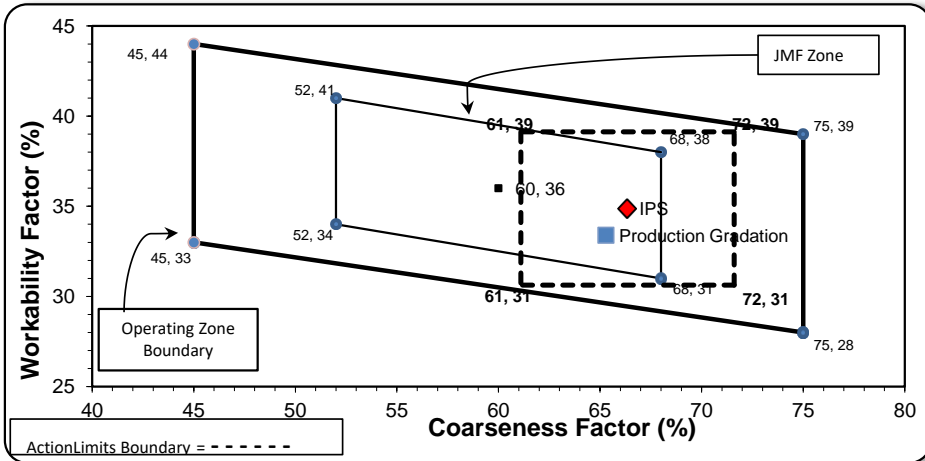
Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

<b>Coarseness Factor:</b>	<b>65</b>	<b>Workability Factor:</b>	<b>33</b>
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Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>66</b>
<b>Workability Factor:</b>	<b>35</b>

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.6	0.4	0.4
1"	84.3	15.3	15.7
3/4"	74.8	9.6	25.2
1/2"	64.3	10.4	35.7
3/8"	56.8	7.5	43.2
#4	43.0	13.8	57.0
#8	34.9	8.1	65.1
#16	26.4	8.5	73.6
#30	19.9	6.5	80.1
#50	10.4	9.5	89.6
#100	3.4	7.0	96.6
LBW	1.2	2.2	98.8



PREPARED BY:  
 SM, LLC Technical Service

Approved By:

# Aggregate Optimization Chart

**PLANT #:** **P-102**

Sample Date: 8/17/20

Concrete Grade: **P1M**

Contractor: \_\_\_\_\_

Dates Test Represents: 8/18/2020 through 8/24/2020

MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	58-003	Stoneco	1420	8.46	2.69	45.5
IA	58-003	Stoneco	500	2.98	2.69	16.0
2NS	63-114	Highland	1200	7.26	2.65	38.5
<b>Total Wt</b>			<b>3120</b>	<b>18.70</b>		<b>100.0</b>

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



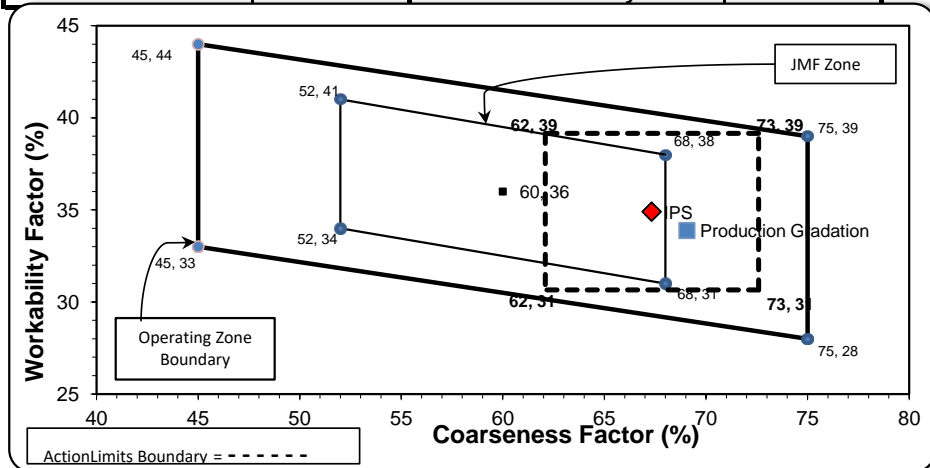
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

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"	68.5	100.0	100.0	85.7	14.3	14.3
3/4"	33.6	100.0	100.0	69.8	15.9	30.2
1/2"	10.6	93.7	100.0	58.3	11.5	41.7
3/8"	5.1	84.6	100.0	54.3	4.0	45.7
#4	1.5	27.8	99.3	43.3	11.0	56.7
#8	1.4	6.8	83.6	33.9	9.4	66.1
#16	1.3	2.4	65.0	26.0	7.9	74.0
#30	1.1	1.8	47.2	18.9	7.0	81.1
#50	1.1	1.6	21.9	9.2	9.8	90.8
#100	1.0	1.5	5.3	2.7	6.4	97.3
LBW	1.0	1.3	0.5	0.9	1.9	99.1

\*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

<b>Coarseness Factor:</b>	<b>69</b>	<b>Workability Factor:</b>	<b>34</b>
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Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>67</b>		
<b>Workability Factor:</b>	<b>35</b>		
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-12**

Sample Date: 8/17/20

Concrete Grade: **P1M**

Contractor: \_\_\_\_\_

Dates Test Represents: 8/18/2020 through 8/24/2020

MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	920	5.63	2.62	30.0
IA	71-47	Presque Isle	900	5.50	2.62	29.3
2NS	63-115	Ray Rd	1250	7.56	2.65	40.7
<b>Total Wt</b>			<b>3070</b>	<b>18.69</b>		<b>100.0</b>

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



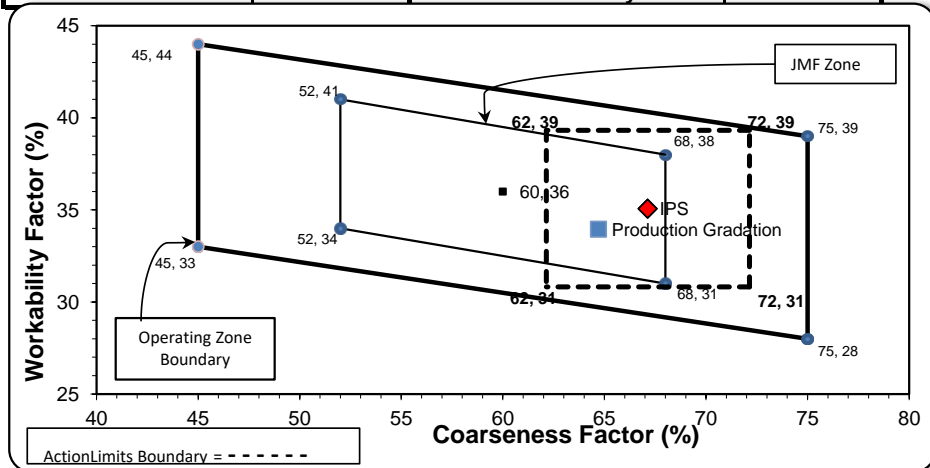
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.4	100.0	100.0	98.6	1.4	1.4
1"	46.6	100.0	100.0	84.0	14.6	16.0
3/4"	17.0	98.5	100.0	74.7	9.3	25.3
1/2"	2.4	78.2	100.0	64.4	10.3	35.6
3/8"	2.0	54.4	100.0	57.3	7.1	42.7
#4	1.6	14.2	97.6	44.4	12.9	55.6
#8	1.6	4.2	79.2	34.0	10.4	66.0
#16	1.6	2.6	62.0	26.5	7.5	73.5
#30	1.4	2.3	46.9	20.2	6.3	79.8
#50	1.4	2.0	25.2	11.3	8.9	88.7
#100	1.4	1.8	5.3	3.1	8.2	96.9
LBW	1.1	1.6	0.7	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

<b>Coarseness Factor:</b>	<b>65</b>	<b>Workability Factor:</b>	<b>34</b>
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Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>67</b>		
<b>Workability Factor:</b>	<b>35</b>		
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

PREPARED BY:  
 SM, LLC Technical Service

Approved By:

# Aggregate Optimization Chart

**PLANT #:** **P-20**

Sample Date: 8/17/20

Concrete Grade: **P1M**

Contractor: \_\_\_\_\_

Dates Test Represents: 8/18/2020 through 8/24/2020

MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1000	6.12	2.62	32.6
IA	71-47	Presque Isle	870	5.32	2.62	28.3
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1
<b>Total Wt</b>			<b>3070</b>	<b>18.70</b>		<b>100.0</b>

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



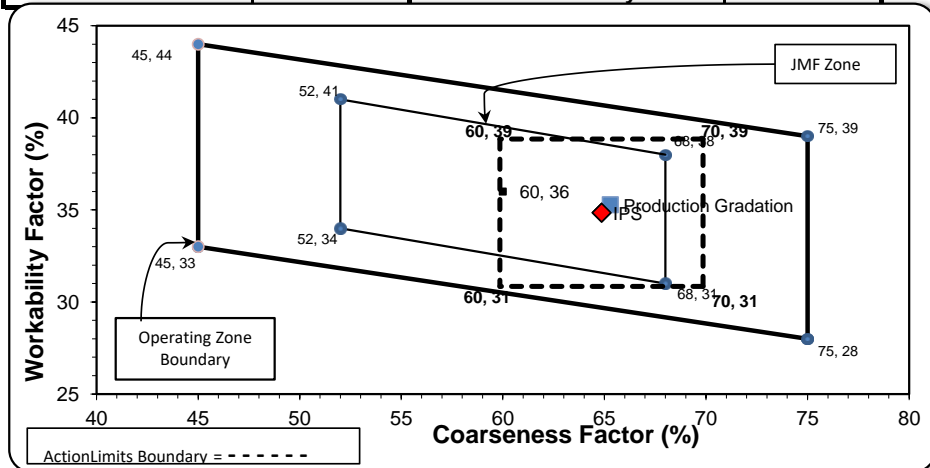
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	97.2	100.0	100.0	99.1	0.9	0.9
1"	41.2	100.0	100.0	80.8	18.2	19.2
3/4"	12.2	99.5	100.0	71.3	9.6	28.7
1/2"	2.6	84.8	100.0	64.0	7.3	36.0
3/8"	1.6	64.0	100.0	57.7	6.2	42.3
#4	1.2	15.7	97.6	43.0	14.8	57.0
#8	1.1	5.7	85.2	35.3	7.7	64.7
#16	1.1	3.0	70.9	28.9	6.4	71.1
#30	1.1	2.4	49.2	20.3	8.7	79.7
#50	1.0	2.2	15.8	7.1	13.1	92.9
#100	0.9	2.1	1.6	1.5	5.6	98.5
LBW	0.8	1.9	0.2	0.9	0.6	99.1

\*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

<b>Coarseness Factor:</b>	<b>65</b>	<b>Workability Factor:</b>	<b>35</b>
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Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>65</b>
<b>Workability Factor:</b>	<b>35</b>

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 #:** **P-32**

Sample Date: 8/17/20

Concrete Grade: **P1M**

Contractor: \_\_\_\_\_

Dates Test Represents: 8/18/2020 through 8/24/2020

MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	920	5.63	2.62	30.0
IA	71-47	Presque Isle	900	5.50	2.62	29.3
2NS	95-013	Smelter Bay	1250	7.56	2.65	40.7
<b>Total Wt</b>			<b>3070</b>	<b>18.69</b>		<b>100.0</b>

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



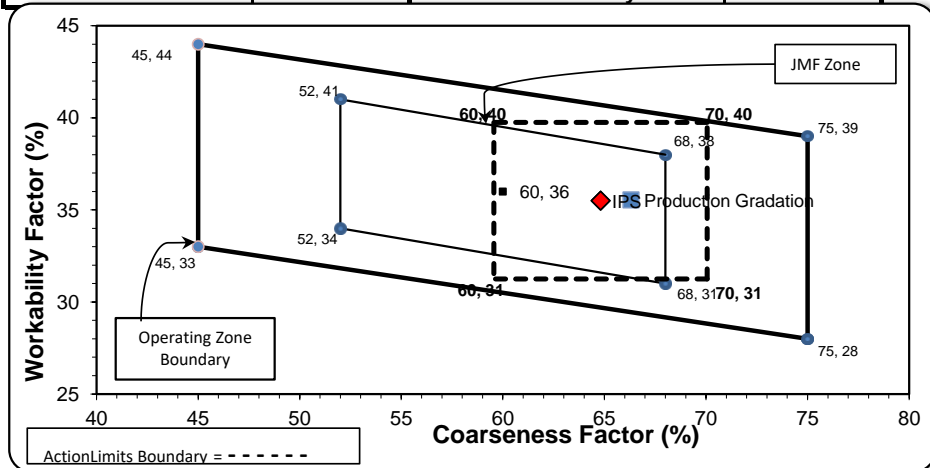
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.4	100.0	100.0	98.6	1.4	1.4
1"	46.6	100.0	100.0	84.0	14.6	16.0
3/4"	17.0	98.5	100.0	74.7	9.3	25.3
1/2"	2.4	78.2	100.0	64.4	10.3	35.6
3/8"	2.0	54.4	100.0	57.3	7.1	42.7
#4	1.6	14.2	96.7	44.0	13.2	56.0
#8	1.6	4.2	83.1	35.5	8.5	64.5
#16	1.6	2.6	67.2	28.6	6.9	71.4
#30	1.4	2.3	45.7	19.7	8.9	80.3
#50	1.4	2.0	21.3	9.7	10.0	90.3
#100	1.4	1.8	5.4	3.1	6.5	96.9
LBW	1.1	1.6	0.8	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

<b>Coarseness Factor:</b>	<b>66</b>	<b>Workability Factor:</b>	<b>36</b>
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Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>65</b>
<b>Workability Factor:</b>	<b>36</b>

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-36**

Sample Date: 8/17/20

Concrete Grade: **P1M**

Contractor: \_\_\_\_\_

Dates Test Represents: 8/18/2020 through 8/24/2020

MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	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
<b>Total Wt</b>			<b>3070</b>	<b>18.70</b>		<b>100.0</b>

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



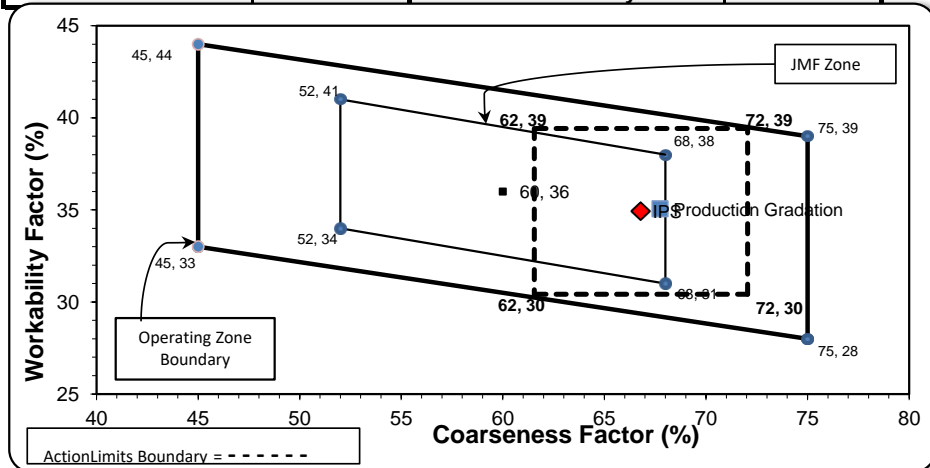
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.4	100.0	100.0	98.6	1.4	1.4
1"	46.6	100.0	100.0	83.5	15.1	16.5
3/4"	17.0	98.5	100.0	73.9	9.6	26.1
1/2"	2.4	78.2	100.0	63.3	10.6	36.7
3/8"	2.0	54.4	100.0	56.0	7.3	44.0
#4	1.6	14.2	97.6	42.9	13.1	57.1
#8	1.6	4.2	85.2	35.1	7.8	64.9
#16	1.6	2.6	70.9	29.0	6.1	71.0
#30	1.4	2.3	49.2	20.4	8.6	79.6
#50	1.4	2.0	15.8	7.2	13.1	92.8
#100	1.4	1.8	1.6	1.6	5.6	98.4
LBW	1.1	1.6	0.2	0.9	0.7	99.1

\*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

<b>Coarseness Factor:</b>	<b>68</b>	<b>Workability Factor:</b>	<b>35</b>
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Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>67</b>		
<b>Workability Factor:</b>	<b>35</b>		
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: 8/17/20

Concrete Grade: **P1M**

Contractor: \_\_\_\_\_

Dates Test Represents: 8/18/2020 through 8/24/2020

MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	950	5.81	2.62	30.9
IA	71-47	Presque Isle	900	5.50	2.62	29.3
2NS	44-051	Krake Willis Rd	1220	7.38	2.65	39.7
<b>Total Wt</b>			<b>3070</b>	<b>18.69</b>		<b>100.0</b>

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



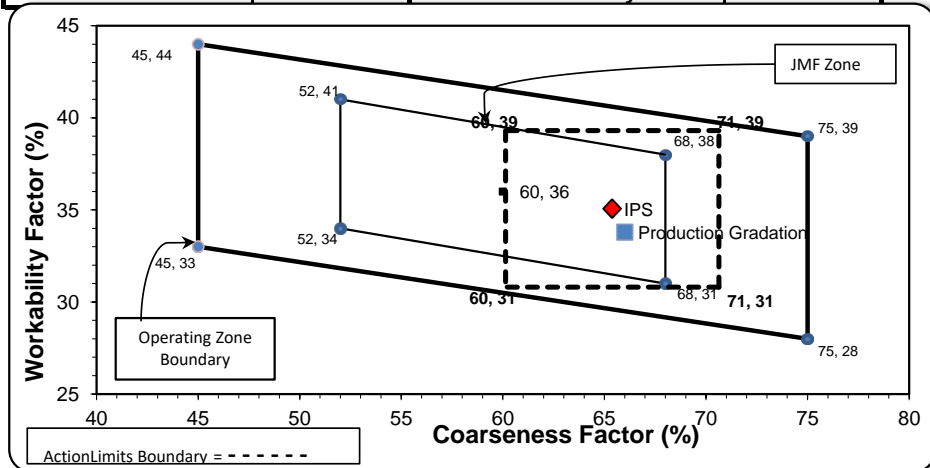
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.4	100.0	100.0	98.6	1.4	1.4
1"	46.6	100.0	100.0	83.5	15.1	16.5
3/4"	17.0	98.5	100.0	73.9	9.6	26.1
1/2"	2.4	78.2	100.0	63.4	10.5	36.6
3/8"	2.0	54.4	100.0	56.3	7.1	43.7
#4	1.6	14.2	95.8	42.7	13.6	57.3
#8	1.6	4.2	80.7	33.8	8.9	66.2
#16	1.6	2.6	66.3	27.6	6.2	72.4
#30	1.4	2.3	51.2	21.5	6.2	78.5
#50	1.4	2.0	25.8	11.3	10.2	88.7
#100	1.4	1.8	7.1	3.8	7.5	96.2
LBW	1.1	1.6	1.2	1.3	2.5	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 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

<b>Coarseness Factor:</b>	<b>66</b>	<b>Workability Factor:</b>	<b>34</b>
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Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>65</b>		
<b>Workability Factor:</b>	<b>35</b>		
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: 8/17/20

Concrete Grade: **P1M**

Contractor: \_\_\_\_\_

Dates Test Represents: 8/18/2020 through 8/24/2020

MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	920	5.63	2.62	30.0
IA	71-47	Presque Isle	900	5.50	2.62	29.3
2NS	63-115	Ray Rd	1250	7.56	2.65	40.7
<b>Total Wt</b>			<b>3070</b>	<b>18.69</b>		<b>100.0</b>

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



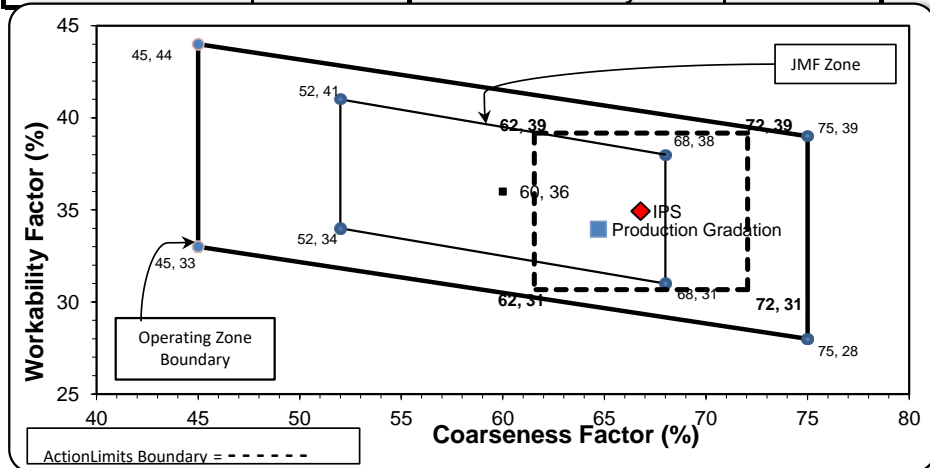
**Superior Materials, LLC**  
 30701 W. 10 Mile Rd.  
 Suite 500  
 Farmington Hills, MI 48336

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.4	100.0	100.0	98.6	1.4	1.4
1"	46.6	100.0	100.0	84.0	14.6	16.0
3/4"	17.0	98.5	100.0	74.7	9.3	25.3
1/2"	2.4	78.2	100.0	64.4	10.3	35.6
3/8"	2.0	54.4	100.0	57.3	7.1	42.7
#4	1.6	14.2	97.6	44.4	12.9	55.6
#8	1.6	4.2	79.2	34.0	10.4	66.0
#16	1.6	2.6	62.0	26.5	7.5	73.5
#30	1.4	2.3	46.9	20.2	6.3	79.8
#50	1.4	2.0	25.2	11.3	8.9	88.7
#100	1.4	1.8	5.3	3.1	8.2	96.9
LBW	1.1	1.6	0.7	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:** **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"	85.0	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: