

# Aggregate Optimization Chart

**PLANT #:** P-02

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

Sample Date: 5/30/26 (Holiday Weekend no production) Concrete Grade: **DM, 4500HP**

Dates Test Represents: 5/31/2026 through 6/7/2026 **1" SLUMP**

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.35	2.57	50.3
26A	71-47	Presque Isle	400	2.49	2.57	13.4
2NS	63-115	Ray Rd	1080	6.48	2.67	36.2
<b>Total Wt</b>			<b>2980</b>	<b>18.33</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	6AA	26A	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"	99.4	100.0	100.0	99.7	0.3	0.3
3/4"	87.3	100.0	100.0	93.6	6.1	6.4
1/2"	38.7	99.3	100.0	69.1	24.6	30.9
3/8"	18.9	85.5	100.0	57.2	11.8	42.8
#4	3.1	12.2	98.3	38.8	18.4	61.2
#8	2.1	3.3	87.9	33.4	5.5	66.6
#16	2.0	2.3	66.1	25.3	8.1	74.7
#30	1.8	1.9	46.1	17.9	7.4	82.1
#50	1.7	1.7	21.1	8.7	9.1	91.3
#100	1.6	1.5	4.1	2.5	6.2	97.5
LBW	1.3	1.3	1.0	1.2	1.3	98.8

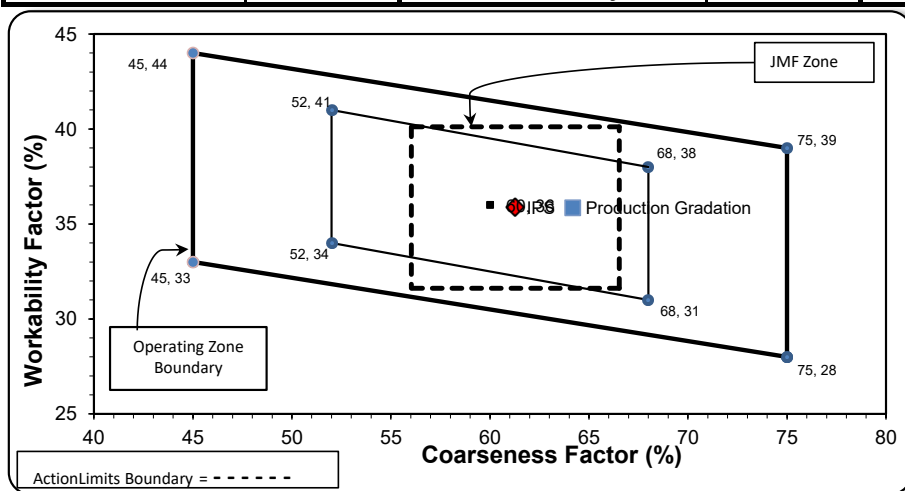
\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.  
 \*\*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.  
 \*\*\*% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations  Adjusted WF Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>64</b>	<b>Workability Factor:</b>	<b>33</b>	<b>35.9</b>
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<b>Coarseness Factor:</b>	<b>61</b>
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<b>Workability Factor:</b>	<b>36</b>
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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

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

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

Sample Date: 5/30/26 (Holiday Weekend no production) Concrete Grade: **DM, 4500HP**

Dates Test Represents: 5/31/2026 through 6/7/2026 **1" SLUMP**

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	58-003	Stone Co	1680	10.01	2.69	54.9
26A	58-003	Stone Co	200	1.19	2.69	6.5
2NS	63-114	Levy Highland	1180	7.11	2.66	38.6
<b>Total Wt</b>			<b>3060</b>	<b>18.31</b>		<b>100.0</b>

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



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Sieve	6AA	26A	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"	99.9	100.0	100.0	99.9	0.1	0.1
3/4"	87.3	100.0	100.0	93.0	6.9	7.0
1/2"	48.4	99.2	100.0	71.6	21.4	28.4
3/8"	30.8	85.3	100.0	61.0	10.6	39.0
#4	4.1	10.1	98.8	41.0	20.0	59.0
#8	1.6	2.2	83.6	33.3	7.8	66.7
#16	1.1	1.8	65.2	25.9	7.4	74.1
#30	1.0	1.7	43.5	17.4	8.4	82.6
#50	1.0	1.5	21.1	8.8	8.7	91.2
#100	0.9	1.4	4.6	2.4	6.4	97.6
LBW	0.9	1.3	0.3	0.7	1.7	99.3

\*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.

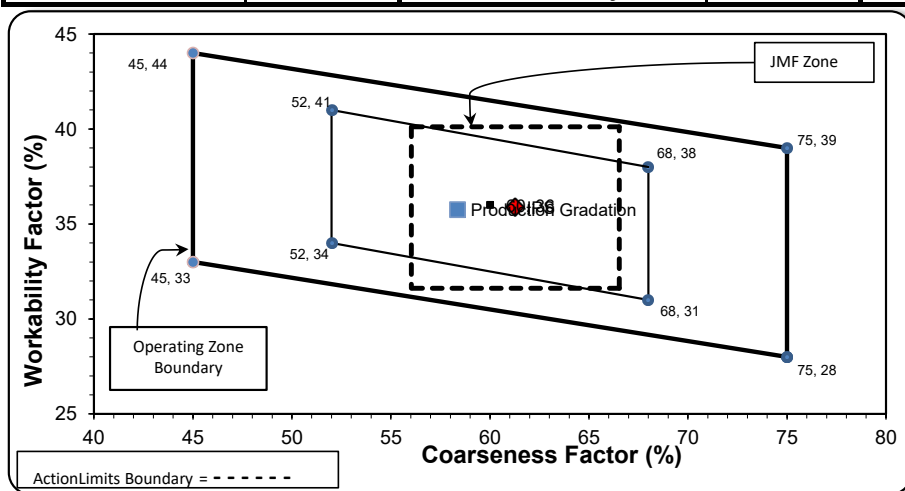
Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>58</b>	<b>Workability Factor:</b>	<b>33</b>	<b>35.8</b>
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<b>Coarseness Factor:</b>	<b>61</b>
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<b>Workability Factor:</b>	<b>36</b>
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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

# Aggregate Optimization Chart

**PLANT #:** P-103

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

Sample Date: 5/30/26 (Holiday Weekend no production) Concrete Grade: **DM, 4500HP**

Dates Test Represents: 5/31/2026 through 6/7/2026 **1" SLUMP**

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	58-003	Stone Co	1680	10.01	2.69	54.9
26A	58-003	Stone Co	200	1.19	2.69	6.5
2NS	63-114	Levy Highland	1180	7.11	2.66	38.6
<b>Total Wt</b>			<b>3060</b>	<b>18.31</b>		<b>100.0</b>

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



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Sieve	6AA	26A	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"	99.9	100.0	100.0	99.9	0.1	0.1
3/4"	87.3	100.0	100.0	93.0	6.9	7.0
1/2"	48.4	99.2	100.0	71.6	21.4	28.4
3/8"	30.8	85.3	100.0	61.0	10.6	39.0
#4	4.1	10.1	98.8	41.0	20.0	59.0
#8	1.6	2.2	83.6	33.3	7.8	66.7
#16	1.1	1.8	65.2	25.9	7.4	74.1
#30	1.0	1.7	43.5	17.4	8.4	82.6
#50	1.0	1.5	21.1	8.8	8.7	91.2
#100	0.9	1.4	4.6	2.4	6.4	97.6
LBW	0.9	1.3	0.3	0.7	1.7	99.3

\*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.

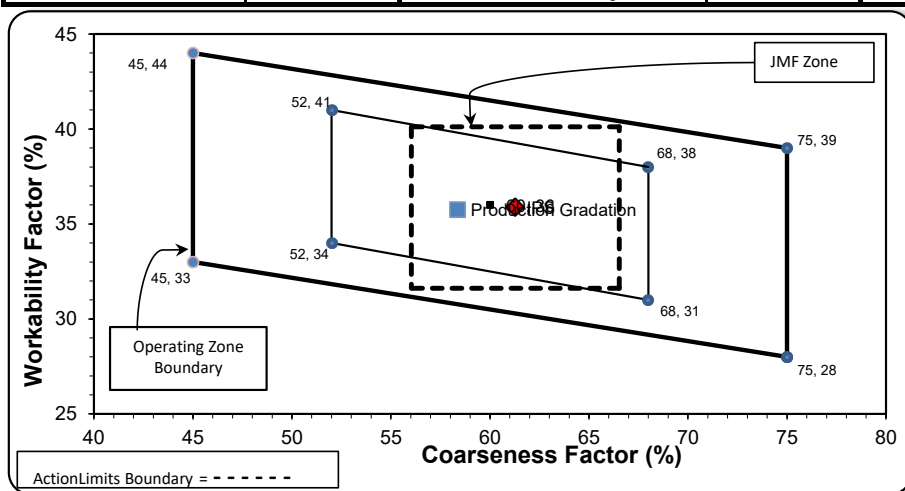
Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

<b>Coarseness Factor:</b>	<b>58</b>	<b>Workability Factor:</b>	<b>33</b>	<b>35.8</b>
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<b>Coarseness Factor:</b>	<b>61</b>
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<b>Workability Factor:</b>	<b>36</b>
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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
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1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
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#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