

# Aggregate Optimization Chart

**PLANT #:** p11

Sample Date: 8/25/25

Concrete Grade: **S2M, 3500HP**

Dates Test Represents: 8/26/2025 through 9/1/2025

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1420	8.69	2.62	46.6
26A	71-47	Presque Isle	400	2.45	2.62	13.1
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3
<b>Total Wt</b>			<b>3050</b>	<b>18.57</b>		<b>100.0</b>

<---- Verify this number is 100%

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"	99.6	100.0	100.0	99.8	0.2	0.2
3/4"	80.3	100.0	100.0	90.8	9.0	9.2
1/2"	31.2	99.0	100.0	67.8	23.0	32.2
3/8"	11.6	84.4	100.0	56.8	11.0	43.2
#4	2.3	19.2	98.1	43.2	13.6	56.8
#8	1.9	6.1	84.3	35.7	7.5	64.3
#16	1.8	3.3	64.3	27.2	8.5	72.8
#30	1.8	2.7	45.0	19.3	7.9	80.7
#50	1.8	2.4	21.8	9.9	9.4	90.1
#100	1.7	2.3	4.7	3.0	7.0	97.0
LBW	1.4	2.1	0.6	1.2	1.8	98.8

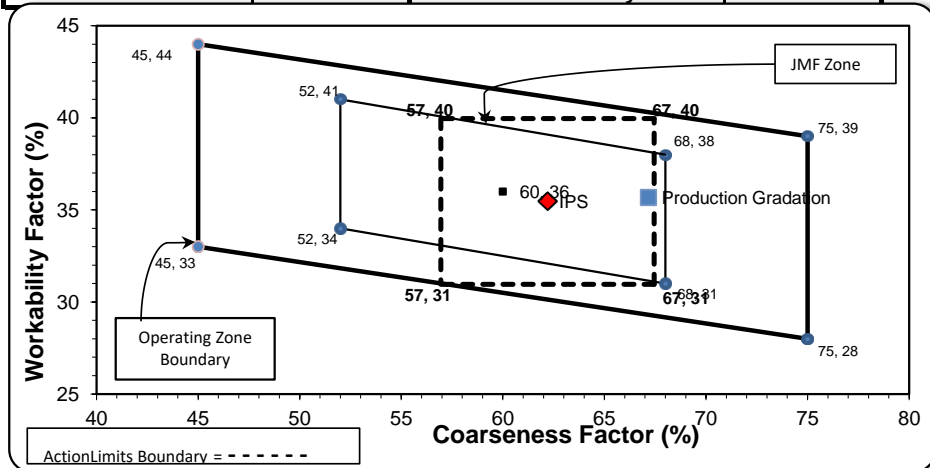
\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 4% for the 3/4" sieve when a 1.5"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



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

Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

**Coarseness Factor:** 67      **Workability Factor:** 36



Initial Production Sample (IPS)

**Coarseness Factor:** 62  
**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"	100.0	0.0	0.0
3/4"	94.0	6.0	6.0
1/2"	70.2	23.7	29.8
3/8"	59.9	10.4	40.1
#4	42.7	17.2	57.3
#8	35.5	7.2	64.5
#16	28.4	7.0	71.6
#30	19.2	9.2	80.8
#50	8.9	10.3	91.1
#100	3.1	5.9	96.9
LBW	1.4	1.7	98.6

PREPARED BY:  
 SM, LLC Technical Service

Approved By:

# Aggregate Optimization Chart

**PLANT #:** **P-O2**

Sample Date: 8/25/25

Concrete Grade: **S2M, 3500HP**

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

Dates Test Represents: 8/26/2025 through 9/1/2025

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1420	8.69	2.62	46.6
26A	71-47	Presque Isle	400	2.45	2.62	13.1
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3
<b>Total Wt</b>			<b>3050</b>	<b>18.57</b>		<b>100.0</b>

<---- Verify this number is 100%



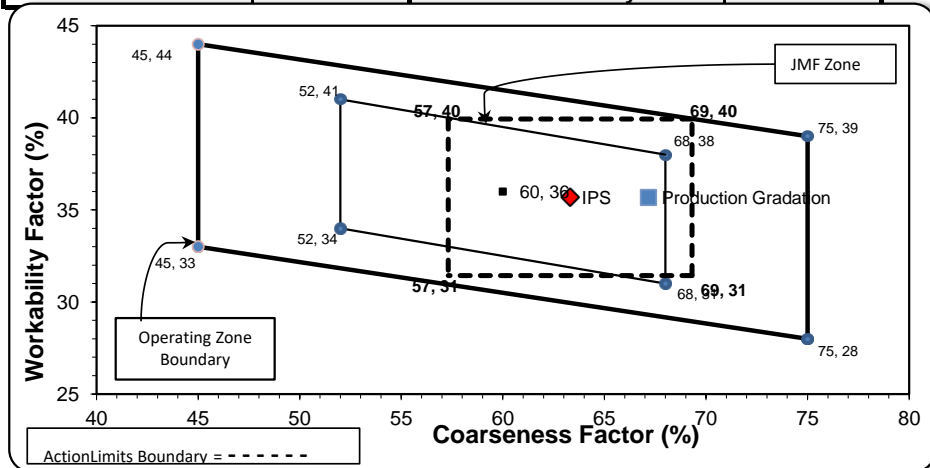
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 30701 W. 10 Mile Rd.  
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Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	99.6	100.0	100.0	99.8	0.2	0.2
3/4"	80.3	100.0	100.0	90.8	9.0	9.2
1/2"	31.2	99.0	100.0	67.8	23.0	32.2
3/8"	11.6	84.4	100.0	56.8	11.0	43.2
#4	2.3	19.2	98.1	43.2	13.6	56.8
#8	1.9	6.1	84.3	35.7	7.5	64.3
#16	1.8	3.3	64.3	27.2	8.5	72.8
#30	1.8	2.7	45.0	19.3	7.9	80.7
#50	1.8	2.4	21.8	9.9	9.4	90.1
#100	1.7	2.3	4.7	3.0	7.0	97.0
LBW	1.4	2.1	0.6	1.2	1.8	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

**Coarseness Factor:** **67**      **Workability Factor:** **36**



Initial Production Sample (IPS)

<b>Coarseness Factor:</b> <b>63</b>		<b>Workability Factor:</b> <b>36</b>	
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	100.0	0.0	0.0
3/4"	95.6	4.4	4.4
1/2"	73.1	22.6	26.9
3/8"	59.3	13.8	40.7
#4	42.8	16.5	57.2
#8	35.7	7.1	64.3
#16	28.9	6.8	71.1
#30	20.7	8.2	79.3
#50	9.9	10.8	90.1
#100	2.1	7.8	97.9
LBW	0.9	1.2	99.1

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