

# Aggregate Optimization Chart

**PLANT #:** P11

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

Sample Date: 12/1/25

Concrete Grade: P1M, 3500HP, 4000HP

Dates Test Represents: 12/2/2025 through 12/8/2025

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	900	5.50	2.62	29.3
IA	71-47	Presque Isle	970	5.93	2.62	31.6
2NS	63-115	Ray Rd	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%

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	93.7	100.0	100.0	98.2	1.8	1.8
1"	41.8	100.0	100.0	82.9	15.2	17.1
3/4"	12.5	99.0	100.0	74.0	8.9	26.0
1/2"	3.8	75.4	100.0	64.0	10.0	36.0
3/8"	3.0	50.6	100.0	56.0	8.1	44.0
#4	2.4	12.0	97.1	42.4	13.5	57.6
#8	2.2	4.9	80.1	33.5	8.9	66.5
#16	2.1	3.6	62.4	26.1	7.4	73.9
#30	2.0	3.3	45.1	19.3	6.9	80.7
#50	1.9	3.2	22.7	10.4	8.8	89.6
#100	1.8	2.0	5.9	3.5	7.0	96.5
LBW	1.5	2.6	0.9	1.6	1.9	98.4

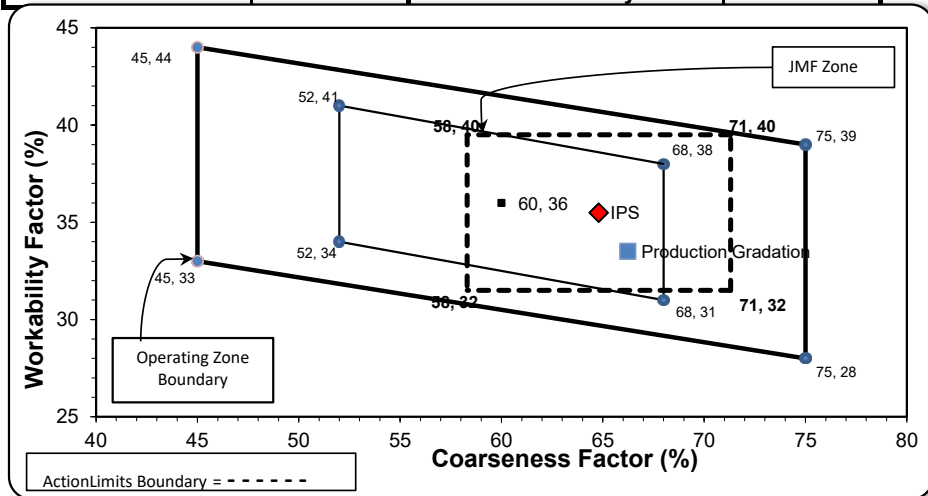
\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 8% for the 1" sieve when a 2" 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

<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>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:  
 Nancy Donahue

## Daily Summary Report

Date Friday, December 5, 2025

Sample Id	-1989643404	-1989643416	-1989643414
Plant	S000 Superior Onsite	S000 Superior Onsite	S000 Superior Onsite
Product	1022 2NS GR	7919 COARSE AGG P1M LS	7920 INTERMED AGG P1M LS
Specification	2NS GR Spec	Coarse Agg P1M LS Target	Intermed Agg P1M LS Target
Sample Type	QA	QA	QA
Time	14:00	14:00	14:00
2" (50mm)		100.0	100.0
1 1/2" (37.5mm)		93.7	100.0
1" (25mm)		41.8	100.0
3/4" (19mm)		12.5	99.0
1/2" (12.5mm)		3.8	75.4
3/8" (9.5mm)	100.0	3.0	50.6
#4 (4.75mm)	97.1	2.4	12.0
#8 (2.36mm)	80.1	2.2	4.9
#16 (1.18mm)	62.4	2.1	3.6
#30 (.6mm)	45.1	2.0	3.3
#50 (.3mm)	22.7	1.9	3.2
#100 (.15mm)	5.9	1.8	3.0
#200 (75µm)	1.2	1.6	2.8
Pan	0.0	0.0	0.0
FM	2.87		
Wash Loss (#200/75um)	0.9	1.5	2.6
Total Moisture	3.5	2.6	2.5

# Aggregate Optimization Chart

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

1020

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

Sample Date: 12/1/25

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

Dates Test Represents: 12/2/2025 through 12/8/2025

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	825	5.05	2.62	26.9
IA	71-47	Presque Isle	1045	6.39	2.62	34.0
2NS	63-115	Ray Rd	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%

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	96.8	100.0	100.0	99.1	0.9	0.9
1"	35.8	100.0	100.0	82.7	16.4	17.3
3/4"	8.9	96.9	100.0	74.5	8.3	25.5
1/2"	3.8	71.2	100.0	64.3	10.1	35.7
3/8"	3.1	44.9	100.0	55.2	9.1	44.8
#4	2.4	7.4	97.4	41.2	14.0	58.8
#8	2.1	3.4	81.1	33.4	7.8	66.6
#16	2.0	2.6	63.6	26.3	7.1	73.7
#30	1.9	2.3	46.6	19.5	6.8	80.5
#50	1.8	2.1	22.9	10.1	9.4	89.9
#100	1.6	1.8	5.6	3.2	6.9	96.8
LBW	1.3	1.6	1.1	1.3	1.9	98.7

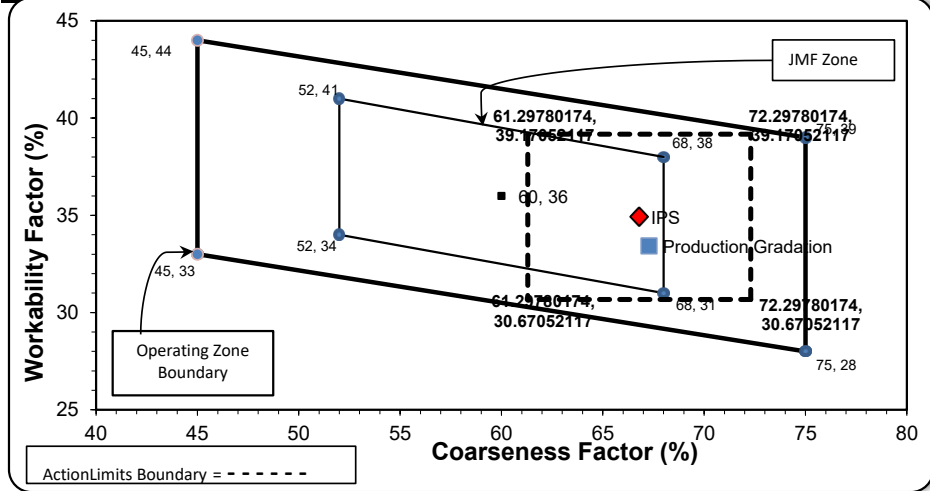
\*Maximum % Retained must be above the 3/8" sieve.  
 \*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.  
 \*% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.



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Production Gradation  Batch Plant Gradations  Aggregate Supplier Gradations

<b>Coarseness Factor:</b>	<b>67</b>	<b>Workability Factor:</b>	<b>33</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"	72.3	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:  
 Nancy Donahue



## Daily Summary Report

Date Wednesday, December 3, 2025

Sample Id	-674968235	-674951714	-1989643419
Plant	S02 Superior Hoover	S02 Superior Hoover	S02 Superior Hoover
Product	1022 2NS GR	7919 COARSE AGG P1M LS	7920 INTERMED AGG P1M LS
Specification	2NS GR Spec	Coarse Agg P1M LS Target	Intermed Agg P1M LS Target
Sample Type	QA	QA	QA
Time	07:00	07:00	07:00
2" (50mm)		100.0	100.0
1 1/2" (37.5mm)		96.8	100.0
1" (25mm)		35.8	100.0
3/4" (19mm)		8.9	96.9
1/2" (12.5mm)		3.8	71.2
3/8" (9.5mm)	100.0	3.1	44.9
#4 (4.75mm)	97.4	2.4	7.4
#8 (2.36mm)	81.1	2.1	3.4
#16 (1.18mm)	63.6	2.0	2.6
#30 (.6mm)	46.6	1.9	2.3
#50 (.3mm)	22.9	1.8	2.1
#100 (.15mm)	5.6	1.6	1.8
#200 (75µm)	1.2	1.4	1.7
Pan	0.0	0.0	0.0
FM	2.83		
Wash Loss (#200/75um)	1.1	1.3	1.6
Total Moisture	2.17	1.79	2.41



## Daily Summary Report

Comments

Query Selections  
Date Created 12/06/2025  
Date Range 11/30/2025 - 12/06/2025  
Plant Superior Hoover  
Sample Type QA