Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-02**

Contractor:

Sample Date: 6/20/26

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 6/21/2026 through 6/28/2026

1 inch slump

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1300	8.11	2.57	43.8
IA	71-47	Presque Isle	450	2.81	2.57	15.2
2NS	63-115	Ray Rd	1220	7.32	2.67	41.1
		Total Wt	**2970**	**18.23**		100.0

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

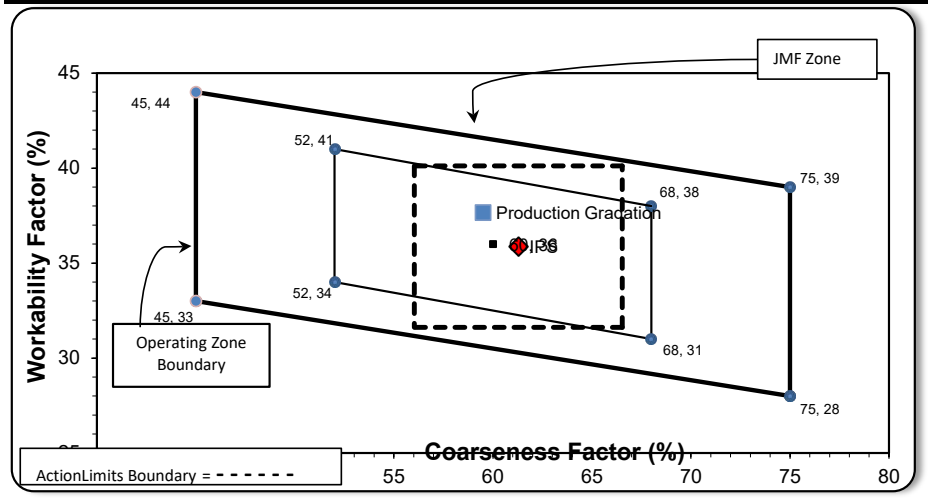
Sieve	6AA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	97.6	100.0	100.0	98.9	1.1	1.1
3/4"	84.2	100.0	100.0	93.1	5.9	6.9
1/2"	35.6	98.2	100.0	71.5	21.5	28.5
3/8"	17.7	83.1	100.0	61.4	10.1	38.6
#4	3.1	21.1	95.9	43.9	17.5	56.1
#8	2.3	6.6	80.7	35.2	8.8	64.8
#16	2.1	3.1	65.9	28.5	6.7	71.5
#30	2.0	2.4	49.7	21.7	6.8	78.3
#50	1.9	2.2	25.9	11.8	9.9	88.2
#100	1.9	2.0	7.0	4.0	7.8	96.0
LBW	1.6	1.9	1.0	1.4	2.6	98.6

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

*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:	60	Workability Factor:	35	Adjusted WF 37.7



Intial Production Sample (IPS)

Coarseness Factor:	61
Workability Factor:	36

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

Production Gradation Report

PLANT #: **P-02**

Contractor: _____

Sample Date: 6/20/26

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 6/21/2026 through 6/28/2026

5 inch slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1230	7.67	2.57	42.7
IA	71-47	Presque Isle	450	2.81	2.57	15.6
2NS	63-115	Ray Rd	1200	7.20	2.67	41.7
		Total Wt	**2880**	**17.68**		100.0

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

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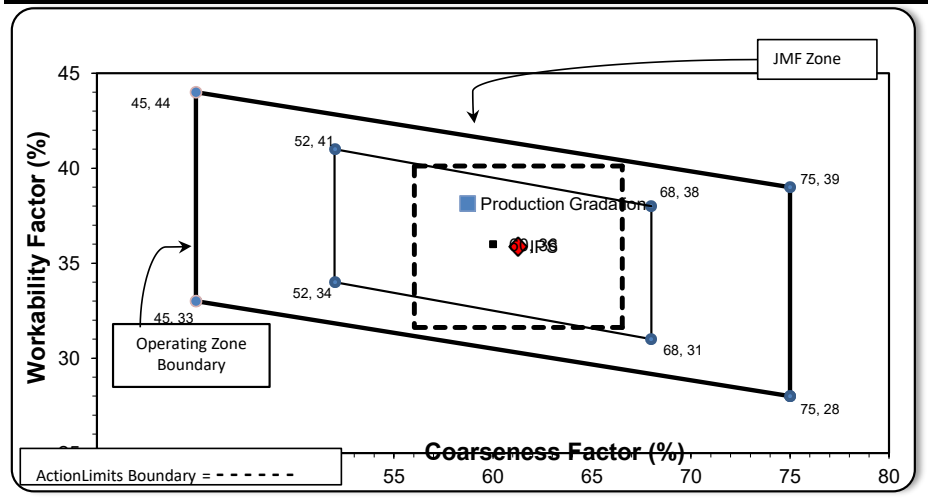
Sieve	6AA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	97.6	100.0	100.0	99.0	1.0	1.0
3/4"	84.2	100.0	100.0	93.3	5.7	6.7
1/2"	35.6	98.2	100.0	72.2	21.0	27.8
3/8"	17.7	83.1	100.0	62.2	10.0	37.8
#4	3.1	21.1	95.9	44.6	17.6	55.4
#8	2.3	6.6	80.7	35.6	8.9	64.4
#16	2.1	3.1	65.9	28.8	6.8	71.2
#30	2.0	2.4	49.7	21.9	6.9	78.1
#50	1.9	2.2	25.9	11.9	10.0	88.1
#100	1.9	2.0	7.0	4.0	7.9	96.0
LBW	1.6	1.9	1.0	1.4	2.6	98.6

*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:	59	Workability Factor:	36	Adjusted WF 38.1



Intial Production Sample (IPS)

Coarseness Factor:	61
Workability Factor:	36

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
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#4	44.4	16.3	55.6
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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

Daily Summary Report

Date	Saturday, June 20 2026		
Sample Id	-1989637039	-674917692	-1989637040
Plant	Superior Hoover	Superior Hoover	Superior Hoover
Product	1022 2NS GR	1054 6AA LS PI	1067 26A Mod LS
Specification	2NS GR Spec	6AA LS	26A Mod LS Spec
Sample Type	QA	QA	QA
Time	13:00	13:00	13:00
2" (50mm)		100.0	100.0
1 1/2" (37.5mm)		100.0	100.0
1" (25mm)		97.6	100.0
3/4" (19mm)		84.2	100.0
1/2" (12.5mm)		35.6	98.2
3/8" (9.5mm)	100.0	17.7	83.1
#4 (4.75mm)	95.9	3.1	21.1
#8 (2.36mm)	80.7	2.3	6.6
#16 (1.18mm)	65.9	2.1	3.1
#30 (.6mm)	49.7	2.0	2.4
#50 (.3mm)	25.9	1.9	2.2
#100 (.15mm)	7.0	1.9	2.0
#200 (75µm)	1.2	1.76	1.9
Pan	0.0	0.00	0.0
FM	2.75		
Wash Loss (#200/75um)	1.0	1.6	1.9
Total Moisture	4.44	3.74	3.34

Daily Summary Report

Comments

Query Selections
Date Created 06/2020026
Date Range 06/21/2026 - 06/28/2026
Plant Superior Hoover
Sample Type QA