

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-36**

Contractor: _____

Sample Date: 4/21/25

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

Dates Test Represents: 4/22/2025 through 4/28/2025

MDOT No.: _____

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

<----- 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"	100.0	100.0	100.0	100.0	0.0	0.0
1"	39.1	100.0	100.0	82.7	17.3	17.3
3/4"	6.7	99.2	100.0	73.3	9.4	26.7
1/2"	1.4	77.9	100.0	64.9	8.4	35.1
3/8"	1.2	50.3	100.0	55.8	9.0	44.2
#4	1.1	7.9	98.2	41.3	14.5	58.7
#8	1.1	2.6	82.3	33.3	7.9	66.7
#16	1.1	1.9	64.4	26.1	7.2	73.9
#30	1.1	1.7	43.2	17.8	8.4	82.2
#50	1.0	1.6	17.2	7.5	10.2	92.5
#100	0.9	1.5	2.9	1.9	5.7	98.1
LBW	0.8	1.4	0.7	1.0	0.9	99.0

*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

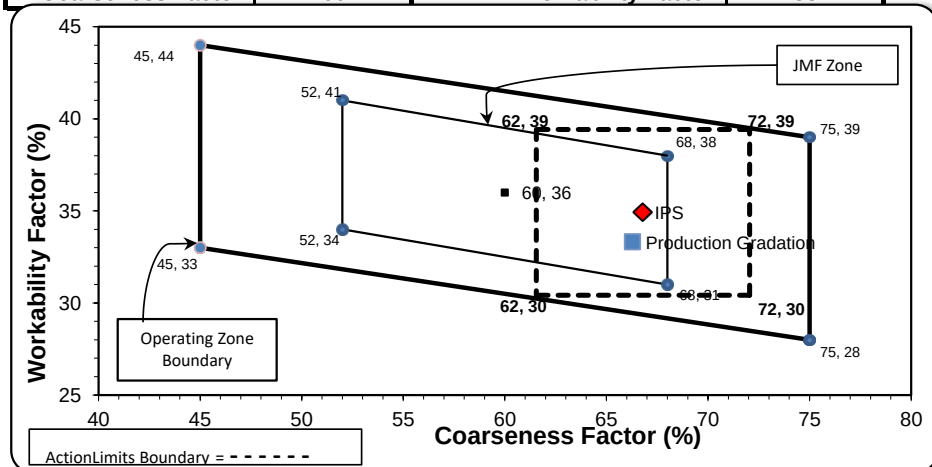
30701 W. 10 Mile Rd.

Suite 500

Farmington Hills, MI 48336

Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Coarseness Factor:	66	Workability Factor:	33
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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"	72.1	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:

[Signature]



Daily Summary Report

Date Tuesday, April 22, 2025

Sample Id	-674915712	-1989658120	-674919653
Plant	S36	S36	S36
Product	Superior Auburn Hills 7919 COARSE AGG P1M LS	Superior Auburn Hills 7920 INTERMED AGG P1M LS	Superior Auburn Hills 1022 2NS GR
Specification	Coarse Agg P1M LS Target	Intermed Agg P1M LS Target	2NS GR Spec
Sample Type	QA	QA	QA
Time	11:05	11:06	11:07
2" (50mm)	100.0	100.0	
1 1/2" (37.5mm)	100.0	100.0	
1" (25mm)	39.1	100.0	
3/4" (19mm)	6.7	99.2	
1/2" (12.5mm)	1.4	77.9	
3/8" (9.5mm)	1.2	50.3	100.0
#4 (4.75mm)	1.1	7.9	98.2
#8 (2.36mm)	1.1	2.6	82.3
#16 (1.18mm)	1.1	1.9	64.4
#30 (.6mm)	1.1	1.7	43.2
#50 (.3mm)	1.0	1.6	17.2
#100 (.15mm)	0.9	1.5	2.9
#200 (75µm)	0.8	1.4	0.9
Pan	0.0	0.0	0.0
FM			2.92
Wash Loss (#200/75um)	0.8	1.4	0.7
Total Moisture	0.13	1.11	2.55

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-O2**

Sample Date: 4/21/25

Dates Test Represents: 4/22/2025 through 4/28/2025

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

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	870	5.32	2.62	28.3
IA	71-47	Presque Isle	1000	6.12	2.62	32.6
2NS	63-115	Ray Rd	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

<----- 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"	98.4	100.0	100.0	99.5	0.5	0.5
1"	33.0	100.0	100.0	81.0	18.5	19.0
3/4"	5.7	99.0	100.0	73.0	8.1	27.0
1/2"	1.4	79.5	100.0	65.4	7.6	34.6
3/8"	1.2	52.9	100.0	56.7	8.7	43.3
#4	1.2	8.7	96.0	40.7	16.0	59.3
#8	1.2	3.5	78.5	32.2	8.5	67.8
#16	1.2	2.6	61.2	25.1	7.1	74.9
#30	1.2	2.4	44.8	18.6	6.5	81.4
#50	1.1	2.3	19.8	8.8	9.8	91.2
#100	1.1	2.1	3.2	2.2	6.6	97.8
LBW	0.9	1.9	0.5	1.1	1.2	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.



Superior Materials, LLC

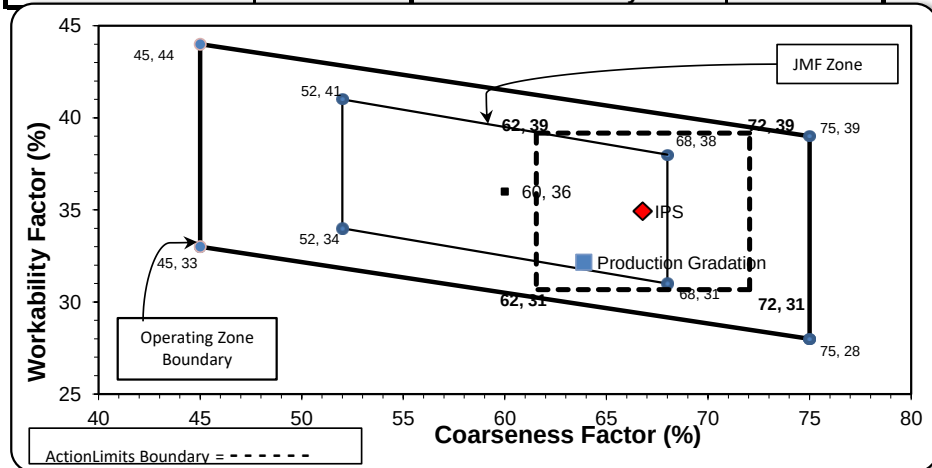
30701 W. 10 Mile Rd.

Suite 500

Farmington Hills, MI 48336

Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Coarseness Factor:	64	Workability Factor:	32
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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
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#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:



Daily Summary Report

Date Wednesday, April 23, 2025

Sample Id	-674897534	-674932992	-1989658119	-674972481	-674961602
Plant	Superior Hoover	Superior Hoover	Superior Hoover	Superior Hoover	Superior Hoover
Product	1054 6AA LS PI	1022 2NS GR	1067 26A Mod LS	7920 INTERMED AGG P1M LS	7919 COARSE AGG P1M LS
Specification	6AA LS	2NS GR Spec	26A Mod LS Spec	Intermed Agg P1M LS Target	Coarse Agg P1M LS Target
Sample Type	QA	QA	QA	QA	QA
2" (50mm)	100.0		100.0	100.0	100.0
1 1/2" (37.5mm)	100.0		100.0	100.0	98.4
1" (25mm)	98.6		100.0	100.0	33.0
3/4" (19mm)	82.3		100.0	99.0	5.7
1/2" (12.5mm)	35.6		95.0	79.5	1.4
3/8" (9.5mm)	15.1	100.0	84.7	52.9	1.2
#4 (4.75mm)	1.7	96.0	20.2	8.7	1.2
#8 (2.36mm)	1.3	78.5	6.4	3.5	1.2
#16 (1.18mm)	1.2	61.2	4.0	2.6	1.2
#30 (.6mm)	1.2	44.8	3.2	2.4	1.2
#50 (.3mm)	1.1	19.8	2.8	2.3	1.1
#100 (.15mm)	1.1	3.2	2.6	2.1	1.1
#200 (75µm)	1.03	0.7	2.3	1.9	1.0
Pan	0.00	0.0	0.0	0.0	0.0
FM		2.96			
Wash Loss (#200/75um)	1.0	0.5	2.2	1.9	0.9
Total Moisture	1.85	3.99	2.55	1.44	0.52