

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-2**

Sample Date: 8/6/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/7/2026 through 8/13/2026

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1400	8.73	2.57	46.7
26A	71-47	Presque Isle	500	3.12	2.57	16.7
2NS	63-115	Ray Rd	1100	6.60	2.67	36.7
Total Wt			3000	18.45		100.0

<----- 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"	96.8	100.0	100.0	98.5	1.5	1.5
3/4"	83.6	100.0	100.0	92.3	6.2	7.7
1/2"	36.3	96.0	100.0	69.6	22.7	30.4
3/8"	20.7	81.3	100.0	59.9	9.7	40.1
#4	4.3	20.1	95.9	40.5	19.4	59.5
#8	2.1	7.2	82.5	32.4	8.1	67.6
#16	1.9	4.1	62.3	24.4	8.0	75.6
#30	1.8	3.2	46.1	18.3	6.1	81.7
#50	1.7	2.8	24.3	10.2	8.1	89.8
#100	1.7	2.6	6.2	3.5	6.7	96.5
LBW	1.3	2.4	0.8	1.3	2.2	98.7



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.

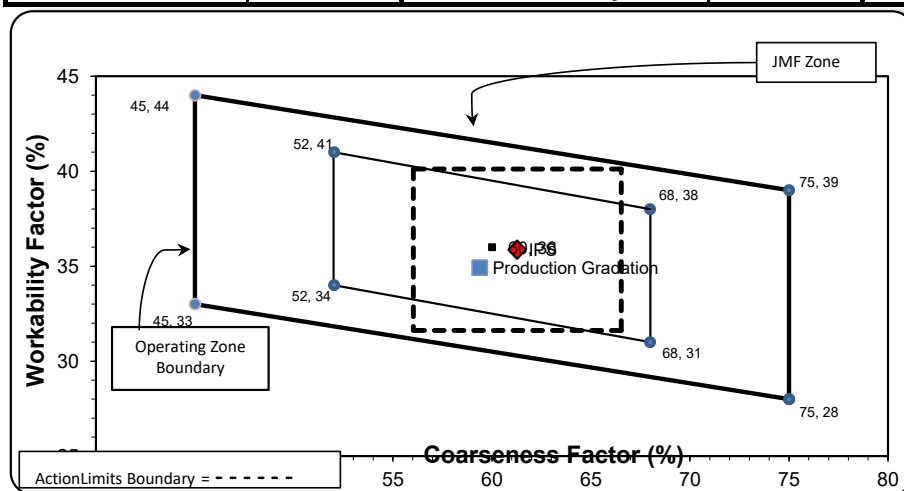
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	59	Workability Factor:	32	34.9
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Coarseness Factor:	61
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Workability Factor:	36
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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

Production Gradation Report

PLANT #: **P-2**

Sample Date: 8/6/26

Concrete Grade: **D2M-4500HP**

Dates Test Represents: 8/7/2026 through 8/13/2026

5" Slump

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1350	8.42	2.57	46.6
26A	71-47	Presque Isle	450	2.81	2.57	15.5
2NS	63-115	Ray Rd	1100	6.65	2.65	37.9
Total Wt			2900	17.88		100.0

<----- 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"	96.8	100.0	100.0	98.5	1.5	1.5
3/4"	83.6	100.0	100.0	92.4	6.1	7.6
1/2"	36.3	96.0	100.0	69.7	22.6	30.3
3/8"	20.7	81.3	100.0	60.2	9.5	39.8
#4	4.3	20.1	97.5	42.1	18.1	57.9
#8	2.1	7.2	84.1	34.0	8.1	66.0
#16	1.9	4.1	69.4	27.8	6.2	72.2
#30	1.8	3.2	50.6	20.5	7.3	79.5
#50	1.7	2.8	24.8	10.6	9.9	89.4
#100	1.7	2.6	2.5	2.1	8.5	97.9
LBW	1.3	2.4	0.2	1.1	1.1	98.9



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*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.

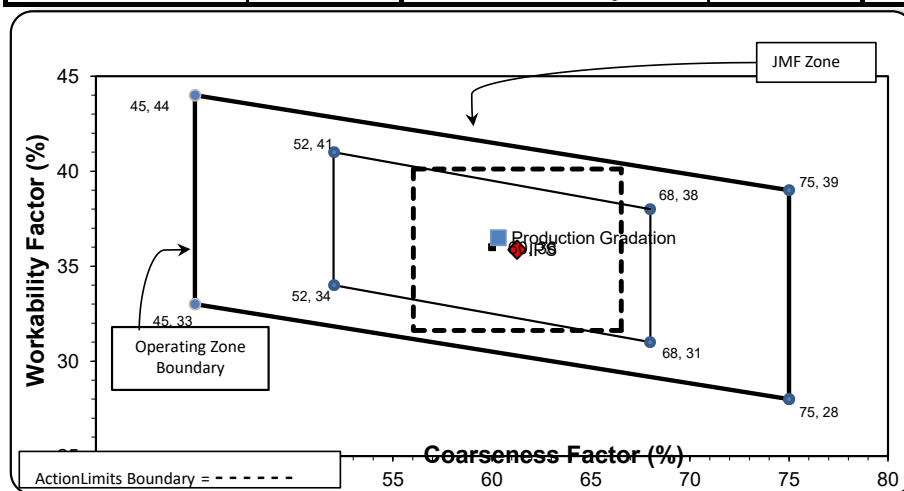
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	60	Workability Factor:	34	36.5
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Coarseness Factor:	61
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Workability Factor:	36
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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

Production Gradation Report

PLANT #: **P-36**

Sample Date: 8/6/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/7/2026 through 8/13/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1250	7.79	2.57	43.9
26A	71-47	Presque Isle	450	2.81	2.57	15.8
2NS	63-115	Ray Rd	1150	6.90	2.67	40.4
Total Wt			2850	17.50		100.0

<----- 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"	96.8	100.0	100.0	98.6	1.4	1.4
3/4"	83.6	100.0	100.0	92.8	5.8	7.2
1/2"	36.3	96.0	100.0	71.4	21.4	28.6
3/8"	20.7	81.3	100.0	62.3	9.2	37.7
#4	4.3	20.1	95.9	43.8	18.5	56.2
#8	2.1	7.2	82.5	35.3	8.4	64.7
#16	1.9	4.1	62.3	26.6	8.7	73.4
#30	1.8	3.2	46.1	19.9	6.7	80.1
#50	1.7	2.8	24.3	11.0	8.9	89.0
#100	1.7	2.6	6.2	3.7	7.3	96.3
LBW	1.3	2.4	0.8	1.3	2.4	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 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.

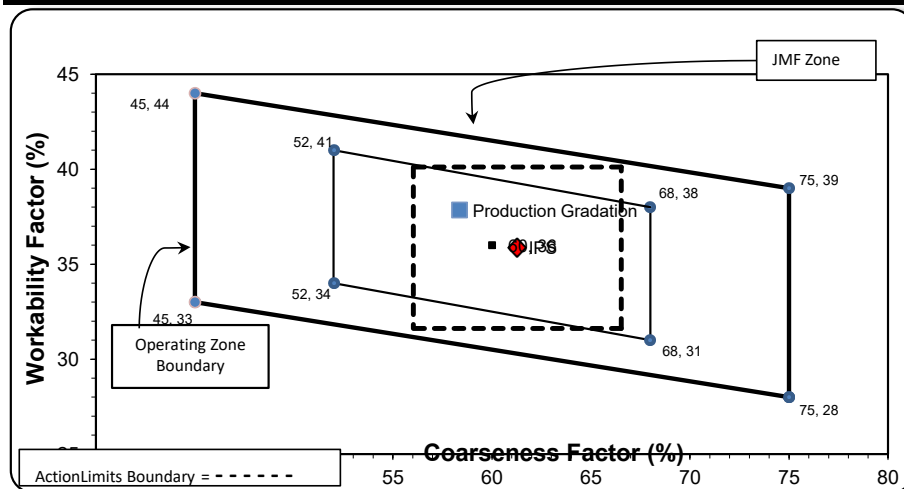
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	58	Workability Factor:	35	37.8
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Coarseness Factor:	61
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Workability Factor:	36
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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

Production Gradation Report

PLANT #: **P-102**

Sample Date: 8/6/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/7/2026 through 8/13/2026

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	Stone Co	1550	9.23	2.69	50.8
1A	58-003	Stone Co	350	2.09	2.69	11.5
2NS	63-114	Highland	1150	6.93	2.66	37.7
Total Wt			3050	18.25		100.0

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

Sieve	6AA	1A	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"	99.8	100.0	100.0	99.9	0.1	0.1
3/4"	83.7	100.0	100.0	91.7	8.2	8.3
1/2"	42.1	90.8	100.0	69.5	22.2	30.5
3/8"	24.3	76.6	100.0	58.8	10.7	41.2
#4	3.9	17.9	98.2	41.1	17.8	58.9
#8	1.7	2.3	84.0	32.8	8.3	67.2
#16	1.1	1.7	67.0	26.0	6.8	74.0
#30	1.0	1.5	47.4	18.6	7.5	81.4
#50	0.9	1.3	23.9	9.6	8.9	90.4
#100	0.9	1.3	7.4	3.4	6.2	96.6
LBW	0.9	1.1	1.4	1.1	2.3	98.9



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*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

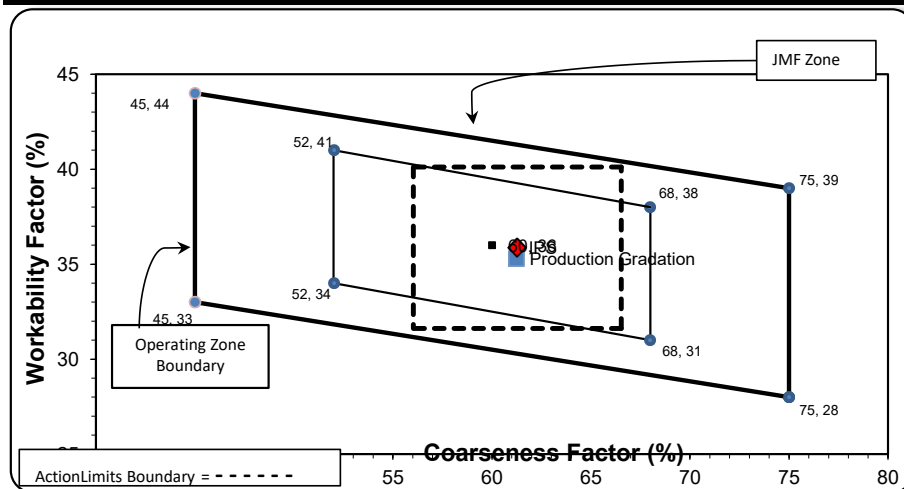
a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	61	Workability Factor:	33	35.3
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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-102**

Sample Date: 8/6/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/7/2026 through 8/13/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	Stone Co	1500	8.94	2.69	50.8
1A	58-003	Stone Co	300	1.79	2.69	10.2
2NS	63-114	Highland	1150	6.93	2.66	39.0
Total Wt			2950	17.65		100.0

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



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Sieve	6AA	1A	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"	99.8	100.0	100.0	99.9	0.1	0.1
3/4"	83.7	100.0	100.0	91.7	8.2	8.3
1/2"	42.1	90.8	100.0	69.6	22.1	30.4
3/8"	24.3	76.6	100.0	59.1	10.5	40.9
#4	3.9	17.9	98.2	42.1	17.0	57.9
#8	1.7	2.3	84.0	33.8	8.2	66.2
#16	1.1	1.7	67.0	26.9	7.0	73.1
#30	1.0	1.5	47.4	19.1	7.7	80.9
#50	0.9	1.3	23.9	9.9	9.2	90.1
#100	0.9	1.3	7.4	3.5	6.4	96.5
LBW	0.9	1.1	1.4	1.1	2.4	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 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.

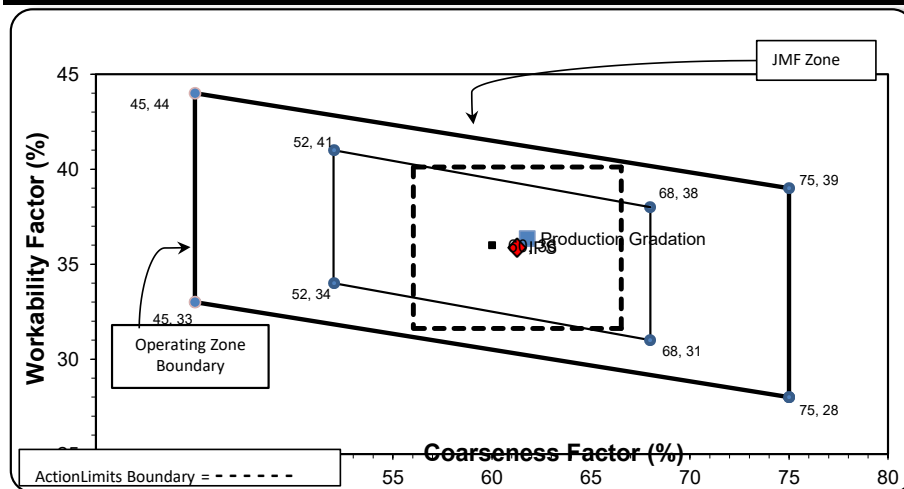
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	62	Workability Factor:	34	36.3
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Coarseness Factor:	61
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Workability Factor:	36
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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

Production Gradation Report

PLANT #: **P-103**

Sample Date: 8/6/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/7/2026 through 8/13/2026

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	Stone Co	1550	9.23	2.69	50.8
1A	58-003	Stone Co	350	2.09	2.69	11.5
2NS	63-114	Highland	1150	6.93	2.66	37.7
Total Wt			3050	18.25		100.0

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



Superior Materials, LLC

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Suite 500

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Sieve	6AA	1A	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"	99.8	100.0	100.0	99.9	0.1	0.1
3/4"	83.7	100.0	100.0	91.7	8.2	8.3
1/2"	42.1	90.8	100.0	69.5	22.2	30.5
3/8"	24.3	76.6	100.0	58.8	10.7	41.2
#4	3.9	17.9	98.2	41.1	17.8	58.9
#8	1.7	2.3	84.0	32.8	8.3	67.2
#16	1.1	1.7	67.0	26.0	6.8	74.0
#30	1.0	1.5	47.4	18.6	7.5	81.4
#50	0.9	1.3	23.9	9.6	8.9	90.4
#100	0.9	1.3	7.4	3.4	6.2	96.6
LBW	0.9	1.1	1.4	1.1	2.3	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 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.

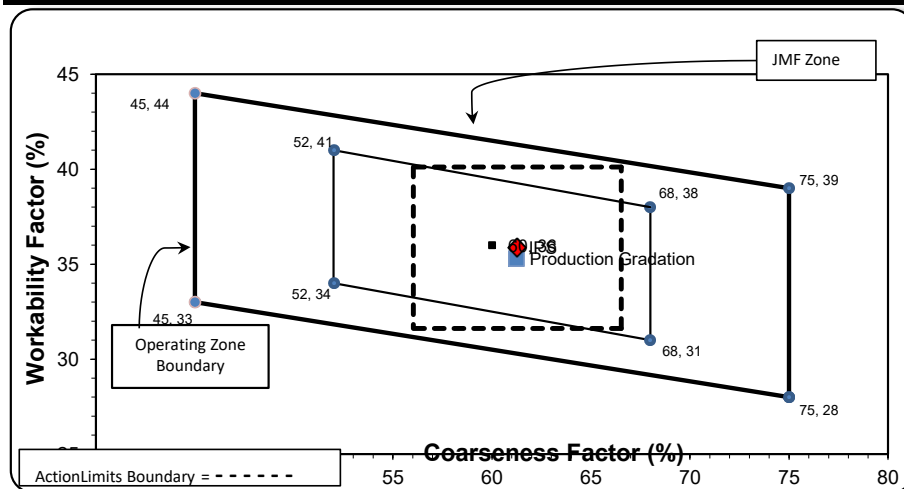
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	61	Workability Factor:	33	35.3
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Coarseness Factor:	61
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Workability Factor:	36
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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

Production Gradation Report

PLANT #: **P-103**

Sample Date: 8/6/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 8/7/2026 through 8/13/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	Stone Co	1500	8.94	2.69	50.8
1A	58-003	Stone Co	300	1.79	2.69	10.2
2NS	63-114	Highland	1150	6.93	2.66	39.0
Total Wt			2950	17.65		100.0

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



Superior Materials, LLC

30701 W. 10 Mile Rd.

Suite 500

Farmington Hills, MI 48336

Sieve	6AA	1A	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"	99.8	100.0	100.0	99.9	0.1	0.1
3/4"	83.7	100.0	100.0	91.7	8.2	8.3
1/2"	42.1	90.8	100.0	69.6	22.1	30.4
3/8"	24.3	76.6	100.0	59.1	10.5	40.9
#4	3.9	17.9	98.2	42.1	17.0	57.9
#8	1.7	2.3	84.0	33.8	8.2	66.2
#16	1.1	1.7	67.0	26.9	7.0	73.1
#30	1.0	1.5	47.4	19.1	7.7	80.9
#50	0.9	1.3	23.9	9.9	9.2	90.1
#100	0.9	1.3	7.4	3.5	6.4	96.5
LBW	0.9	1.1	1.4	1.1	2.4	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 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.

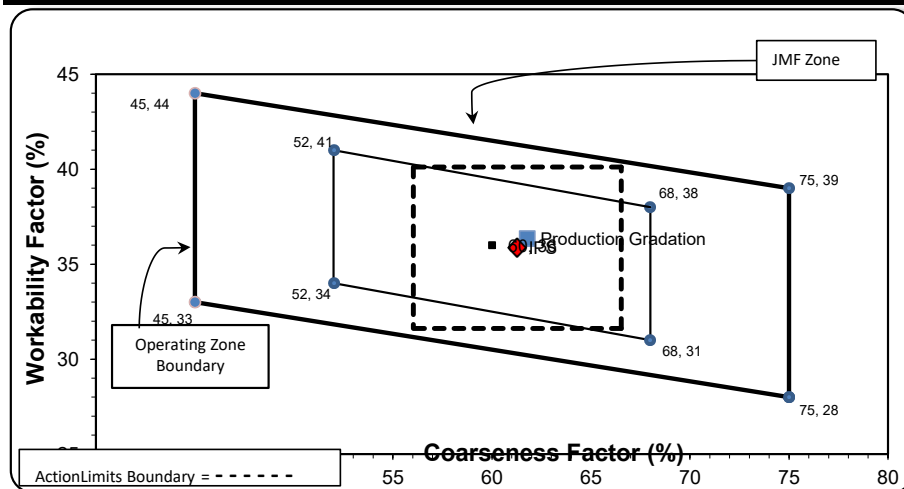
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	62	Workability Factor:	34	36.3
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Coarseness Factor:	61
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Workability Factor:	36
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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:
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