

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Sample Date: 11/24/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 11/25/2025 through 12/1/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1500	8.94	2.69	50.8
26A	58-003	Stoneco	300	1.79	2.69	10.2
2NS	63-114	Highland	1150	6.95	2.65	39.0
Total Wt			2950	17.68		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"	98.9	100.0	100.0	99.4	0.6	0.6
3/4"	81.6	100.0	100.0	90.6	8.8	9.4
1/2"	39.7	99.4	100.0	69.3	21.4	30.7
3/8"	22.5	82.4	100.0	58.8	10.5	41.2
#4	2.4	10.4	99.1	40.9	17.9	59.1
#8	1.2	3.0	85.1	34.1	6.8	65.9
#16	1.2	2.2	68.1	27.4	6.7	72.6
#30	1.0	1.8	49.8	20.1	7.3	79.9
#50	1.0	1.6	23.5	9.8	10.3	90.2
#100	0.9	1.4	4.2	2.2	7.6	97.8
LBW	0.7	1.0	0.8	0.8	1.5	99.2

*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
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Suite 500
Farmington Hills, MI 48336

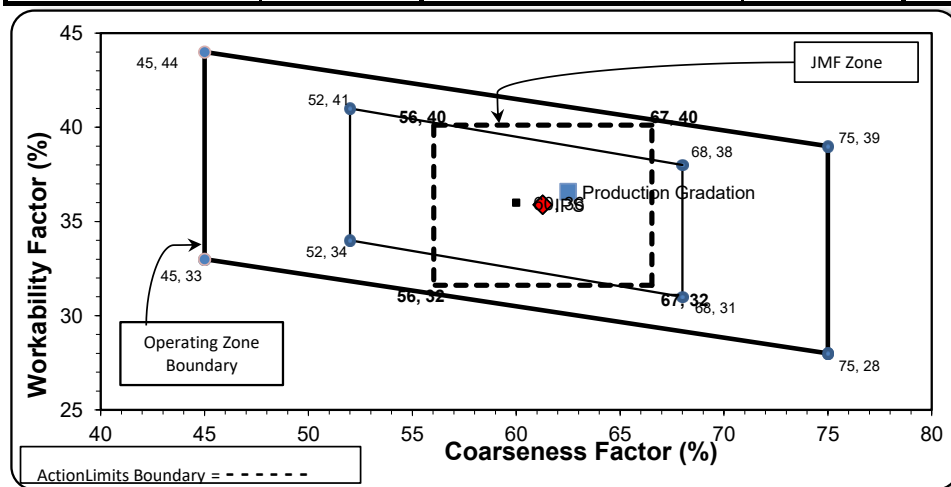
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	63	Workability Factor:	34	36.6
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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:

[Signature]

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **p11**

Sample Date: 11/24/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 11/25/2025 through 12/1/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1455	8.90	2.62	50.1
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
Total Wt			2905	17.69		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"	97.6	100.0	100.0	98.8	1.2	1.2
3/4"	80.2	100.0	100.0	90.1	8.7	9.9
1/2"	37.8	98.7	100.0	68.7	21.4	31.3
3/8"	19.7	86.5	100.0	58.4	10.3	41.6
#4	3.5	17.6	98.0	42.4	16.0	57.6
#8	2.1	4.7	83.9	34.8	7.6	65.2
#16	1.8	2.5	62.9	26.1	8.7	73.9
#30	1.7	2.1	44.1	18.5	7.5	81.5
#50	1.6	1.9	20.8	9.2	9.3	90.8
#100	1.6	1.8	4.7	2.8	6.4	97.2
LBW	1.3	1.6	1.0	1.2	1.6	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.

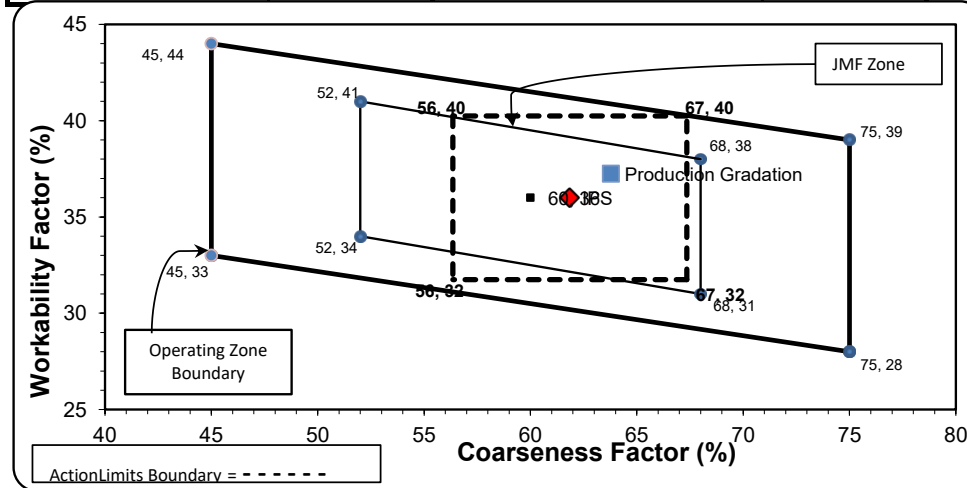


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Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	64	Workability Factor:	35	37.3
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Coarseness Factor:		62	
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"	100.0	0.0	0.0
3/4"	95.0	5.0	5.0
1/2"	72.3	22.8	27.7
3/8"	60.4	11.8	39.6
#4	42.6	17.8	57.4
#8	36.0	6.6	64.0
#16	29.5	6.5	70.5
#30	20.3	9.2	79.7
#50	9.5	10.8	90.5
#100	3.4	6.1	96.6
LBW	1.3	2.1	98.7

PREPARED BY:
 SM, LLC Technical Service

Approved By:

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Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-02**

Sample Date: 11/24/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 11/25/2025 through 12/1/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1455	8.90	2.62	50.1
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
Total Wt			2905	17.69		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"	97.6	100.0	100.0	98.8	1.2	1.2
3/4"	80.2	100.0	100.0	90.1	8.7	9.9
1/2"	37.8	98.7	100.0	68.7	21.4	31.3
3/8"	19.7	86.5	100.0	58.4	10.3	41.6
#4	3.5	17.6	98.0	42.4	16.0	57.6
#8	2.1	4.7	83.9	34.8	7.6	65.2
#16	1.8	2.5	62.9	26.1	8.7	73.9
#30	1.7	2.1	44.1	18.5	7.5	81.5
#50	1.6	1.9	20.8	9.2	9.3	90.8
#100	1.6	1.8	4.7	2.8	6.4	97.2
LBW	1.3	1.6	1.0	1.2	1.6	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.



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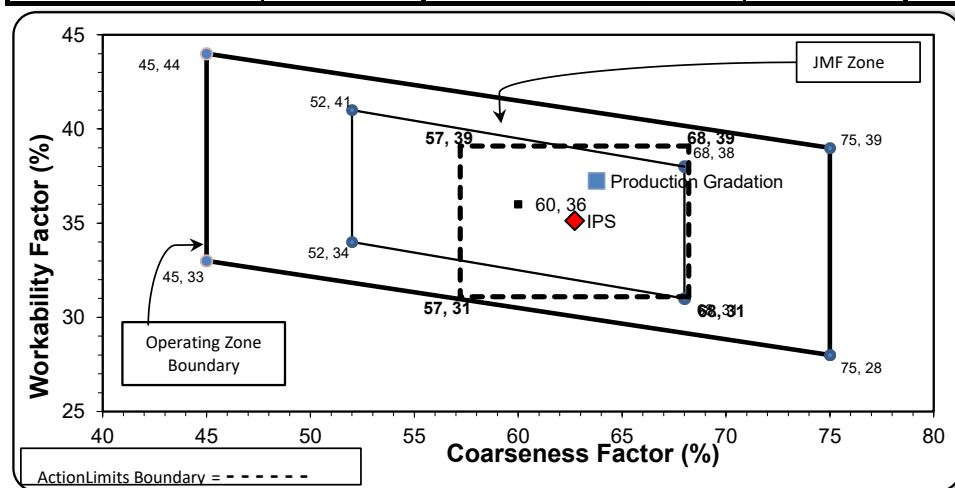
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	64	Workability Factor:	35	37.3
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Coarseness Factor:	63
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Workability Factor:	35
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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"	100.0	0.0	0.0
3/4"	95.1	4.9	4.9
1/2"	74.6	20.5	25.4
3/8"	59.3	15.3	40.7
#4	42.1	17.2	57.9
#8	35.1	7.1	64.9
#16	29.2	5.9	70.8
#30	21.9	7.3	78.1
#50	9.6	12.4	90.4
#100	2.4	7.2	97.6
LBW	0.9	1.5	99.1

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