Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-11**

Contractor: _____

Sample Date: 11/11/26

Concrete Grade: **S2M-3500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1400	8.73	2.57	45.9
26A	71-47	Presque Isle	500	3.12	2.57	16.4
2NS	63-115	Ray Rd	1150	6.90	2.67	37.7
		Total Wt	**3050**	**18.75**		100.0

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

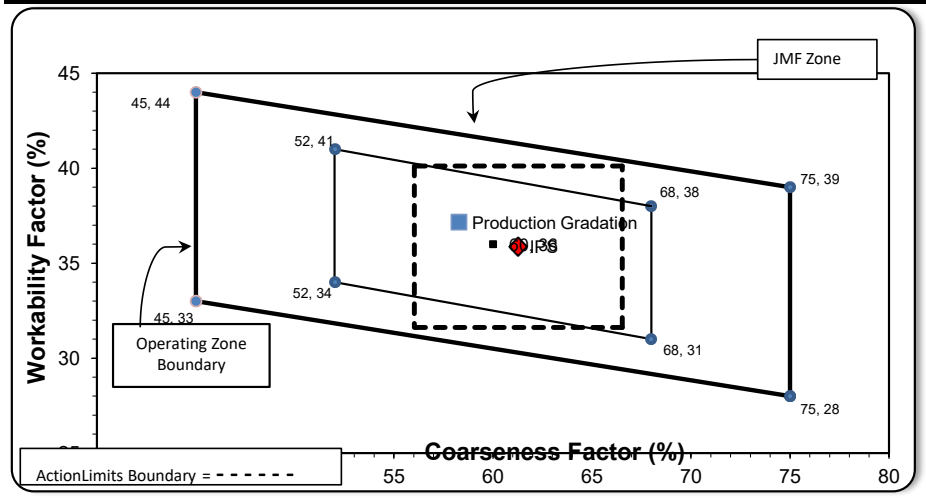
Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

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"	99.3	100.0	100.0	99.7	0.3	0.3
3/4"	87.8	100.0	100.0	94.4	5.3	5.6
1/2"	41.6	97.6	100.0	72.8	21.6	27.2
3/8"	23.0	83.3	100.0	61.9	10.9	38.1
#4	4.8	20.2	97.4	42.2	19.7	57.8
#8	2.4	6.7	86.1	34.7	7.6	65.3
#16	1.8	3.3	65.1	25.9	8.8	74.1
#30	1.6	2.4	48.2	19.3	6.6	80.7
#50	1.5	2.2	22.2	9.4	9.9	90.6
#100	1.3	2.1	4.3	2.6	6.9	97.4
LBW	1.0	1.7	0.9	1.1	1.5	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

Coarseness Factor:	58	Workability Factor:	35	Adjusted WF 37.2



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-21**

Contractor: _____

Sample Date: 11/11/26

Concrete Grade: **S2M-3500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1400	8.73	2.57	45.9
26A	71-47	Presque Isle	500	3.12	2.57	16.4
2NS	81-019	Pleasant Lk	1150	6.95	2.65	37.7
		Total Wt	**3050**	**18.80**		100.0

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

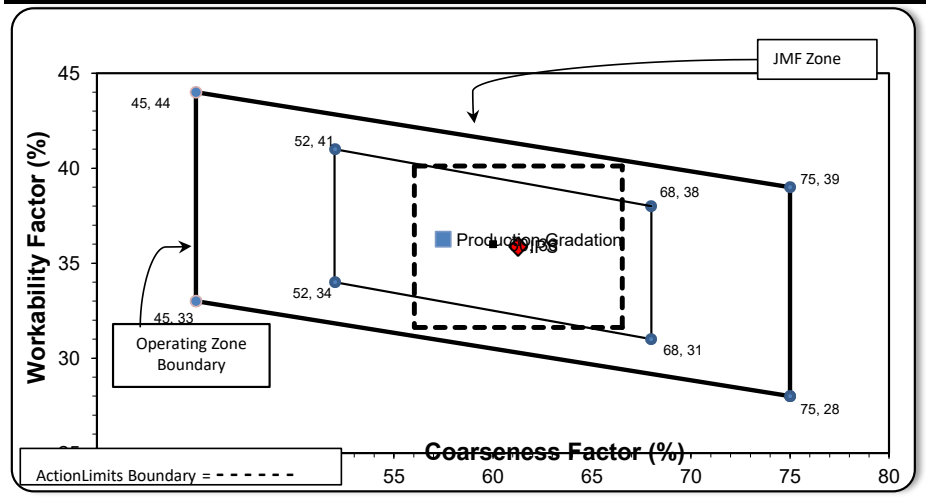
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Suite 500
Farmington Hills, MI 48336

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"	99.3	100.0	100.0	99.7	0.3	0.3
3/4"	87.8	100.0	100.0	94.4	5.3	5.6
1/2"	41.6	97.6	100.0	72.8	21.6	27.2
3/8"	23.0	83.3	100.0	61.9	10.9	38.1
#4	4.8	20.2	97.2	42.2	19.8	57.8
#8	2.4	6.7	83.7	33.8	8.4	66.2
#16	1.8	3.3	62.7	25.0	8.8	75.0
#30	1.6	2.4	43.1	17.4	7.6	82.6
#50	1.5	2.2	18.9	8.2	9.2	91.8
#100	1.3	2.1	4.6	2.7	5.5	97.3
LBW	1.0	1.7	1.0	1.1	1.6	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

Coarseness Factor:	57	Workability Factor:	34	Adjusted WF 36.3



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-35**

Contractor: _____

Sample Date: 11/11/26

Concrete Grade: **S2M-3500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1600	9.53	2.69	50.8
26A	58-003	StoneCo	370	2.20	2.69	11.7
2NS	81-019	Pleasant Lk	1180	7.14	2.65	37.5
		Total Wt	**3150**	**18.87**		100.0

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

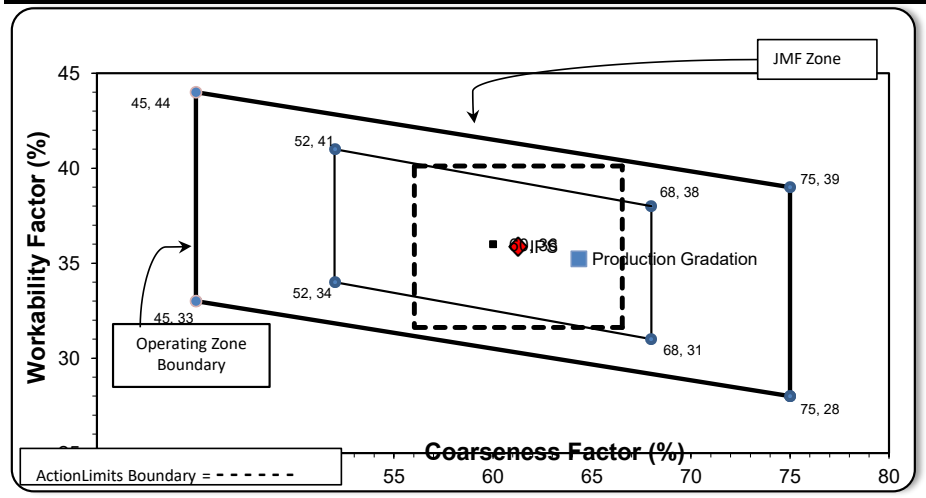
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	99.4	100.0	100.0	99.7	0.3	0.3
3/4"	77.2	100.0	100.0	88.4	11.3	11.6
1/2"	38.5	98.5	100.0	68.6	19.8	31.4
3/8"	20.5	75.3	100.0	56.7	11.9	43.3
#4	2.6	5.7	98.0	38.7	18.0	61.3
#8	1.7	1.5	84.6	32.7	6.0	67.3
#16	1.5	1.3	65.4	25.4	7.3	74.6
#30	1.4	1.2	46.0	18.1	7.3	81.9
#50	1.3	1.1	21.3	8.8	9.3	91.2
#100	1.2	1.0	5.0	2.6	6.2	97.4
LBW	1.1	0.9	1.1	1.1	1.5	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

Coarseness Factor:	64	Workability Factor:	33	Adjusted WF 35.2



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-36**

Contractor: _____

Sample Date: 11/11/26

Concrete Grade: **S2M-3500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1520	9.48	2.57	49.7
26A	71-47	Presque Isle	320	2.00	2.57	10.5
2NS	63-115	Ray Rd	1220	7.32	2.67	39.9
		Total Wt	**3060**	**18.80**		100.0

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

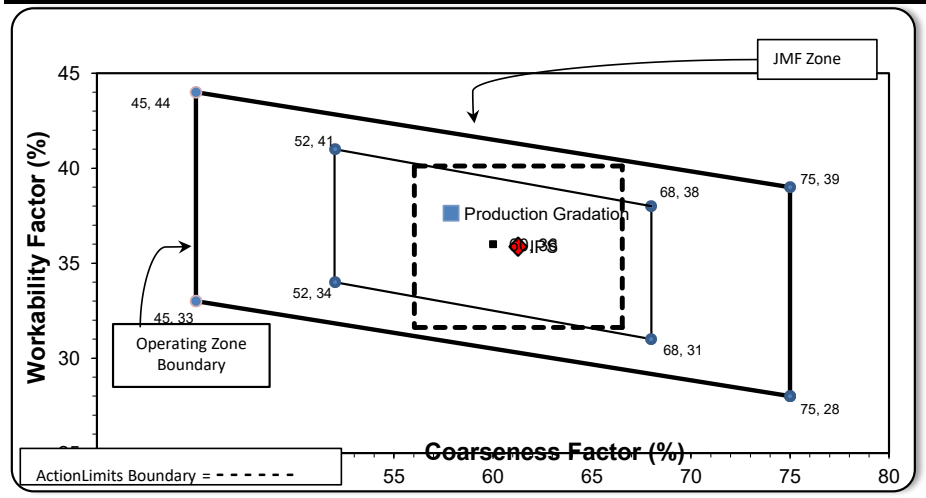
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	88.8	100.0	100.0	94.4	5.6	5.6
1/2"	45.6	97.6	100.0	72.7	21.7	27.3
3/8"	27.8	83.9	100.0	62.5	10.3	37.5
#4	5.5	21.2	96.7	43.5	18.9	56.5
#8	2.4	7.0	83.3	35.1	8.4	64.9
#16	1.8	3.2	62.4	26.1	9.0	73.9
#30	1.7	2.4	47.6	20.1	6.0	79.9
#50	1.5	2.1	23.8	10.5	9.6	89.5
#100	1.4	1.9	5.3	3.0	7.4	97.0
LBW	1.1	1.7	0.9	1.1	1.9	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

Coarseness Factor:	58	Workability Factor:	35	Adjusted WF 37.6



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-39**

Contractor: _____

Sample Date: 11/11/26

Concrete Grade: **S2M-3500HP**

Dates Test Represents: 11/12/2026 through 11/18/2026

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1360	8.48	2.57	44.4
26A	71-47	Presque Isle	500	3.12	2.57	16.3
2NS	63-0009	Koenig	1200	7.26	2.65	39.2
		Total Wt	**3060**	**18.86**		100.0

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

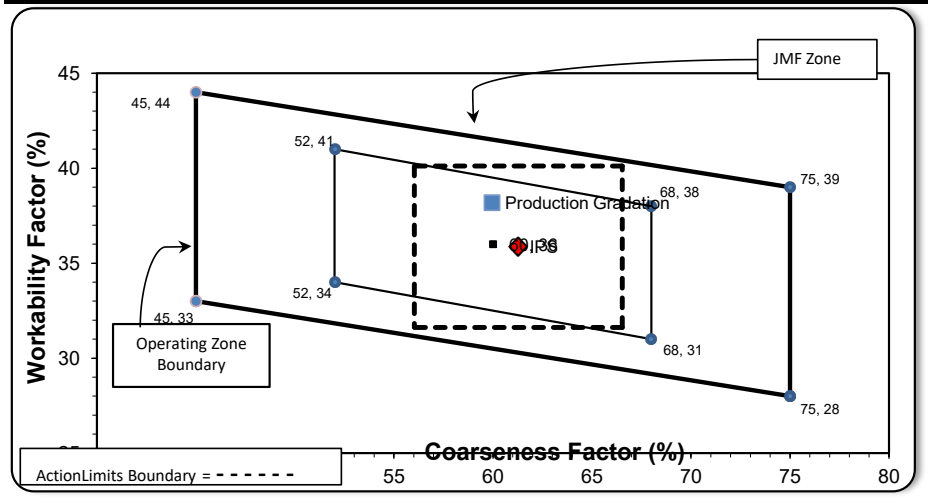
Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

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"	98.5	100.0	100.0	99.3	0.7	0.7
3/4"	82.0	100.0	100.0	92.0	7.3	8.0
1/2"	36.8	97.2	100.0	71.5	20.5	28.5
3/8"	19.6	82.7	100.0	61.4	10.0	38.6
#4	2.9	24.4	97.6	43.6	17.9	56.4
#8	2.0	8.7	85.1	35.7	7.9	64.3
#16	1.7	8.7	71.1	30.1	5.6	69.9
#30	1.6	2.9	51.6	21.4	8.6	78.6
#50	1.5	2.5	22.4	9.9	11.6	90.1
#100	1.3	2.2	4.5	2.7	7.2	97.3
LBW	1.2	1.8	0.9	1.2	1.5	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.

Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	60	Workability Factor:	36	Adjusted WF: 38.2



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