Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-101**

Contractor:

Sample Date: 3/21/22

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 3/22/2022 through 3/28/2022

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1460	8.93	2.62	50.2
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	63-115	Ray Rd	1150	6.95	2.65	39.5
		Total Wt	**2910**	**17.72**		100.0

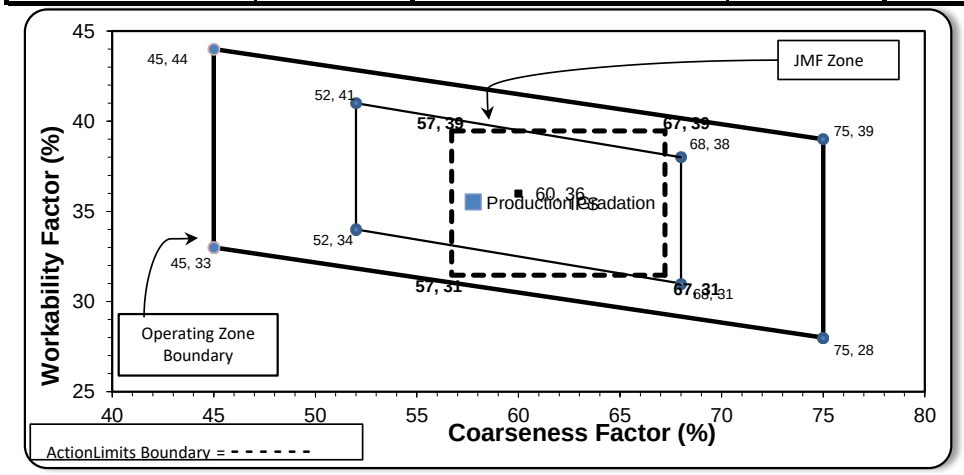
<----- Verify this number is 100%

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"	98.8	100.0	100.0	99.4	0.6	0.6
3/4"	87.0	100.0	100.0	93.5	5.9	6.5
1/2"	44.4	96.5	100.0	71.7	21.7	28.3
3/8"	25.8	85.8	100.0	61.3	10.4	38.7
#4	5.0	16.2	97.0	42.5	18.8	57.5
#8	2.5	4.1	79.4	33.0	9.5	67.0
#16	2.0	2.6	63.2	26.2	6.8	73.8
#30	1.9	2.2	47.0	19.8	6.5	80.2
#50	1.8	2.0	26.2	11.5	8.3	88.5
#100	1.7	1.9	4.3	2.7	8.7	97.3
LBW	1.6	1.7	0.6	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 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	58	Workability Factor:	33	Adjusted WF 35.5



Initial Production Sample (IPS)

Coarseness Factor:	62
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"	100.0	0.0	0.0
3/4"	95.0	5.0	5.0
1/2"	70.5	24.5	29.5
3/8"	60.0	10.5	40.0
#4	44.4	15.6	55.6
#8	35.5	9.0	64.5
#16	28.5	7.0	71.5
#30	21.5	7.0	78.5
#50	10.2	11.3	89.8
#100	3.1	7.1	96.9
LBW	1.3	1.8	98.7

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

PREPARED BY:
SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Contractor: _____

Sample Date: 3/21/22

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 3/22/2022 through 3/28/2022

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1400	8.34	2.69	47.4
26A	58-003	Stoneco	405	2.41	2.69	13.7
2NS	81-019	Pleasant Lake	1150	6.95	2.65	38.9
		Total Wt	**2955**	**17.71**		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"	90.0	100.0	100.0	95.3	4.7	4.7
1/2"	47.8	99.9	100.0	75.3	20.0	24.7
3/8"	25.0	89.8	100.0	63.1	12.2	36.9
#4	7.6	13.2	99.4	44.1	19.0	55.9
#8	3.4	6.4	85.5	35.8	8.3	64.2
#16	2.3	4.6	67.7	28.1	7.7	71.9
#30	1.9	3.8	48.8	20.4	7.7	79.6
#50	1.7	3.4	23.8	10.5	9.9	89.5
#100	1.6	3.2	6.5	3.7	6.8	96.3
LBW	1.4	2.9	2.0	1.8	1.9	98.2

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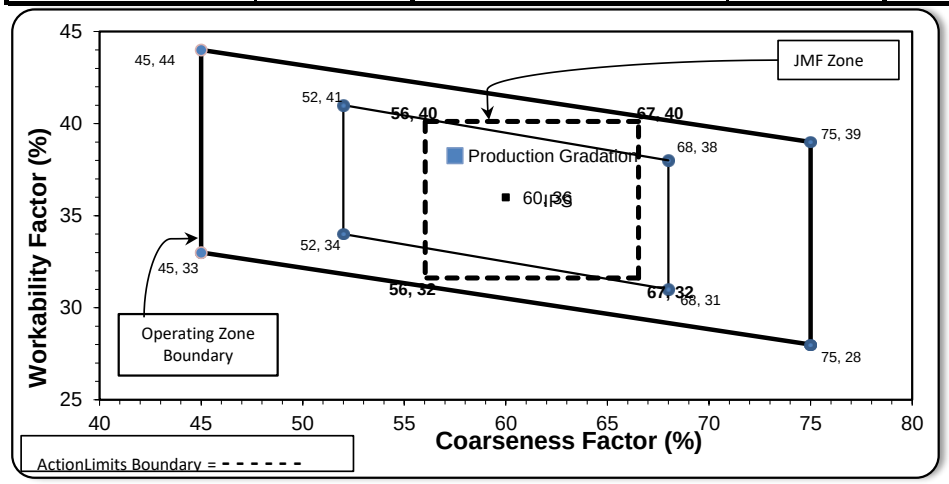
Suite 500
Farmington Hills, MI 48336

*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 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	57	Workability Factor:	36	Adjusted WF 38.3



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:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Contractor: _____

Sample Date: 3/21/22

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 3/22/2022 through 3/28/2022

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1400	8.34	2.69	47.4
26A	58-003	Stoneco	405	2.41	2.69	13.7
2NS	81-019	Pleasant Lake	1150	6.95	2.65	38.9
		Total Wt	**2955**	**17.71**		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"	90.0	100.0	100.0	95.3	4.7	4.7
1/2"	47.8	99.9	100.0	75.3	20.0	24.7
3/8"	25.0	89.8	100.0	63.1	12.2	36.9
#4	7.6	13.2	99.4	44.1	19.0	55.9
#8	3.4	6.4	85.5	35.8	8.3	64.2
#16	2.3	4.6	67.7	28.1	7.7	71.9
#30	1.9	3.8	48.8	20.4	7.7	79.6
#50	1.7	3.4	23.8	10.5	9.9	89.5
#100	1.6	3.2	6.5	3.7	6.8	96.3
LBW	1.4	2.9	2.0	1.8	1.9	98.2

*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 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

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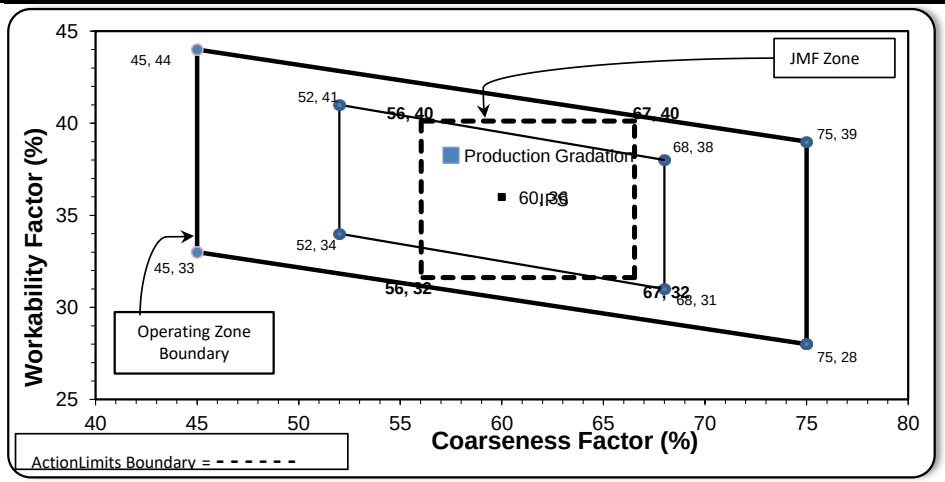
Suite 500
Farmington Hills, MI 48336

Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	57	Workability Factor:	36	Adjusted WF 38.3



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:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-12**

Contractor:

Sample Date: 3/21/22

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 3/22/2022 through 3/28/2022

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft^3	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1400	8.56	2.62	48.2
26A	71-47	Presque Isle	355	2.17	2.62	12.2
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
		Total Wt	**2905**	**17.69**		100.0

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

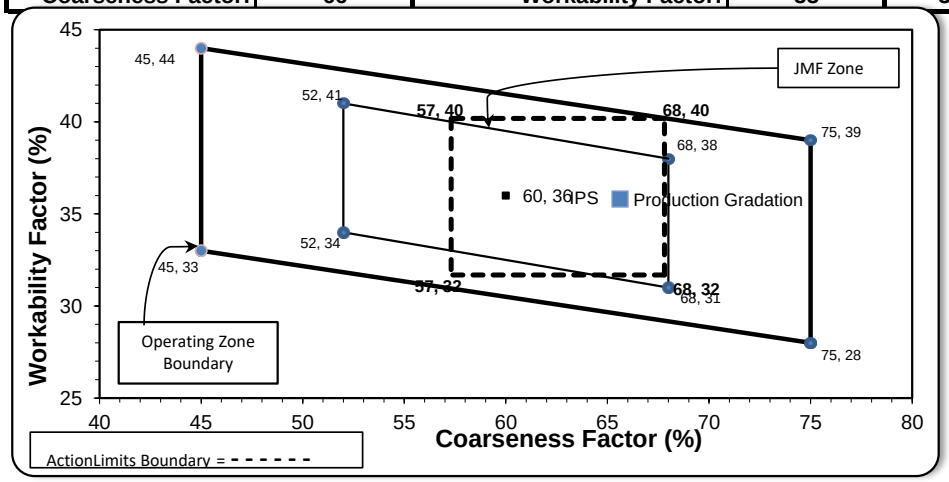
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	99.3	100.0	100.0	99.7	0.3	0.3
3/4"	80.3	100.0	100.0	90.5	9.2	9.5
1/2"	31.4	97.6	100.0	66.6	23.9	33.4
3/8"	11.8	89.7	100.0	56.2	10.4	43.8
#4	1.6	29.7	97.0	42.8	13.4	57.2
#8	1.4	9.8	79.4	33.3	9.5	66.7
#16	1.2	3.9	63.2	26.1	7.2	73.9
#30	1.2	2.8	47.0	19.5	6.5	80.5
#50	1.1	2.5	26.2	11.2	8.3	88.8
#100	1.0	2.3	4.3	2.5	8.7	97.5
LBW	0.6	2.0	0.6	0.8	1.7	99.2

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 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	66	Workability Factor:	33	Adjusted WF 35.8



Intial Production Sample (IPS)

Coarseness Factor:	63
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"	89.0	10.3	11.0
1/2"	70.3	18.7	29.7
3/8"	59.9	10.4	40.1
#4	41.9	18.0	58.1
#8	35.9	6.0	64.1
#16	27.8	8.2	72.2
#30	18.9	8.8	81.1
#50	6.3	12.6	93.7
#100	1.7	4.6	98.3
LBW	1.0	0.7	99.0

PREPARED BY:
SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Contractor:

Sample Date: 3/21/22

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 3/22/2022 through 3/28/2022

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft^3	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1505	9.21	2.62	51.8
26A	71-47	Presque Isle	250	1.53	2.62	8.6
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
		Total Wt	**2905**	**17.69**		100.0

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

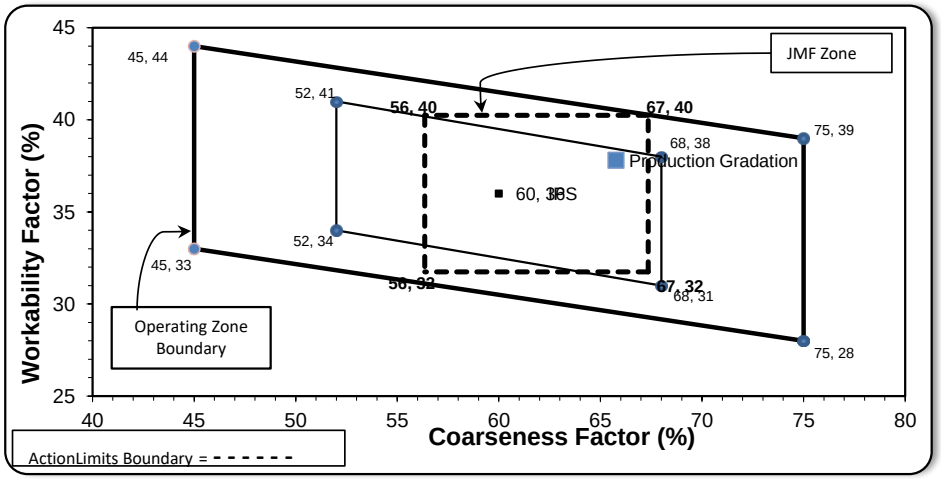
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	98.2	100.0	100.0	99.1	0.9	0.9
3/4"	75.0	100.0	100.0	87.0	12.0	13.0
1/2"	34.9	97.6	100.0	66.1	21.0	33.9
3/8"	19.6	89.7	100.0	57.5	8.6	42.5
#4	4.2	29.7	96.1	42.8	14.7	57.2
#8	2.8	9.8	83.4	35.3	7.5	64.7
#16	2.4	3.9	68.2	28.6	6.7	71.4
#30	2.3	2.8	48.9	20.8	7.8	79.2
#50	2.2	2.5	24.7	11.1	9.7	88.9
#100	2.1	2.3	7.8	4.4	6.8	95.6
LBW	1.8	2.0	1.9	1.9	2.5	98.1

*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:	35	Adjusted WF 37.8



Intial Production Sample (IPS)

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:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-35**

Contractor:

Sample Date: 3/21/22

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 3/22/2022 through 3/28/2022

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft^3	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1450	8.64	2.69	49.1
26A	58-003	Stoneco	405	2.41	2.69	13.7
2NS	81-019	Pleasant Lake	1100	6.65	2.65	37.2
		Total Wt	**2955**	**17.70**		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"	90.0	100.0	100.0	95.1	4.9	4.9
1/2"	47.8	99.9	100.0	74.4	20.7	25.6
3/8"	25.0	89.8	100.0	61.8	12.6	38.2
#4	7.6	13.2	99.4	42.5	19.3	57.5
#8	3.4	6.4	85.5	34.4	8.2	65.6
#16	2.3	4.6	67.7	27.0	7.4	73.0
#30	1.9	3.8	48.8	19.6	7.3	80.4
#50	1.7	3.4	23.8	10.2	9.5	89.8
#100	1.6	3.2	6.5	3.6	6.5	96.4
LBW	1.4	2.9	2.0	1.8	1.8	98.2

*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 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Superior Materials, LLC
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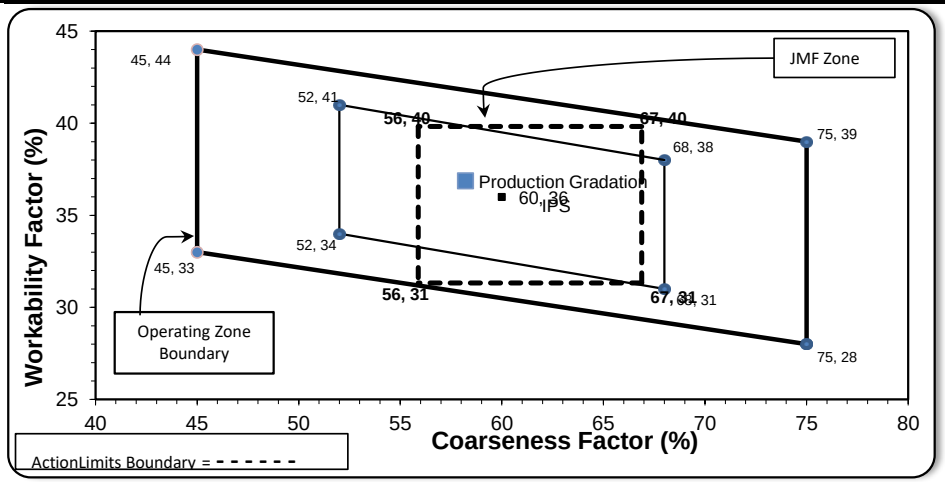
Suite 500
Farmington Hills, MI 48336

Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	58	Workability Factor:	34	Adjusted WF 36.9



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"	89.1	10.2	10.9
1/2"	70.5	18.6	29.5
3/8"	60.5	10.0	39.5
#4	44.1	16.4	55.9
#8	35.6	8.5	64.4
#16	27.7	7.9	72.3
#30	20.6	7.1	79.4
#50	8.7	11.8	91.3
#100	1.6	7.1	98.4
LBW	1.1	0.6	98.9

PREPARED BY:
SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-36**

Contractor:

Sample Date: 3/21/22

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 3/22/2022 through 3/28/2022

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft^3	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1400	8.56	2.62	48.2
26A	71-47	Presque Isle	405	2.48	2.62	13.9
2NS	63-92	Grange Hall	1100	6.65	2.65	37.9
		Total Wt	**2905**	**17.69**		100.0

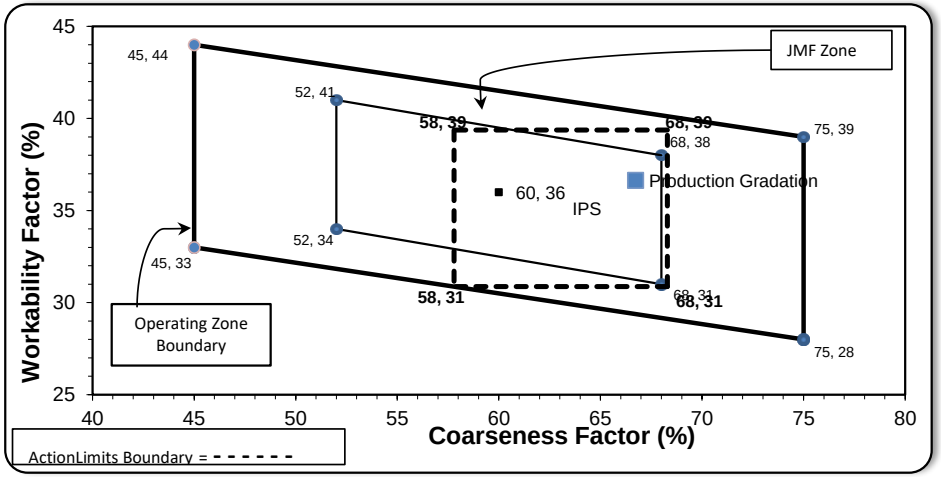
<----- Verify this number is 100%

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"	99.3	100.0	100.0	99.7	0.3	0.3
3/4"	80.3	100.0	100.0	90.5	9.2	9.5
1/2"	31.4	97.6	100.0	66.6	23.9	33.4
3/8"	11.8	89.7	100.0	56.1	10.5	43.9
#4	1.6	29.7	98.0	42.0	14.0	58.0
#8	1.4	9.8	84.8	34.2	7.9	65.8
#16	1.2	3.9	68.0	26.9	7.3	73.1
#30	1.2	2.8	48.8	19.4	7.4	80.6
#50	1.1	2.5	20.6	8.7	10.8	91.3
#100	1.0	2.3	3.6	2.2	6.5	97.8
LBW	0.6	2.0	0.7	0.8	1.3	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 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	67	Workability Factor:	34	Adjusted WF 36.7



Intial Production Sample (IPS)

Coarseness Factor:	63
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"	99.1	0.9	0.9
3/4"	90.3	8.8	9.7
1/2"	69.2	21.1	30.8
3/8"	59.1	10.1	40.9
#4	41.8	17.3	58.2
#8	35.1	6.6	64.9
#16	28.5	6.6	71.5
#30	21.2	7.3	78.8
#50	8.7	12.5	91.3
#100	1.8	7.0	98.2
LBW	0.7	1.0	99.3

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

PREPARED BY:
SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-39**

Contractor:

Sample Date: 3/21/22

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 3/22/2022 through 3/28/2022

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1505	9.21	2.62	51.8
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	44-051	Krake Willis Rd	1100	6.65	2.65	37.9
		Total Wt	**2905**	**17.69**		100.0

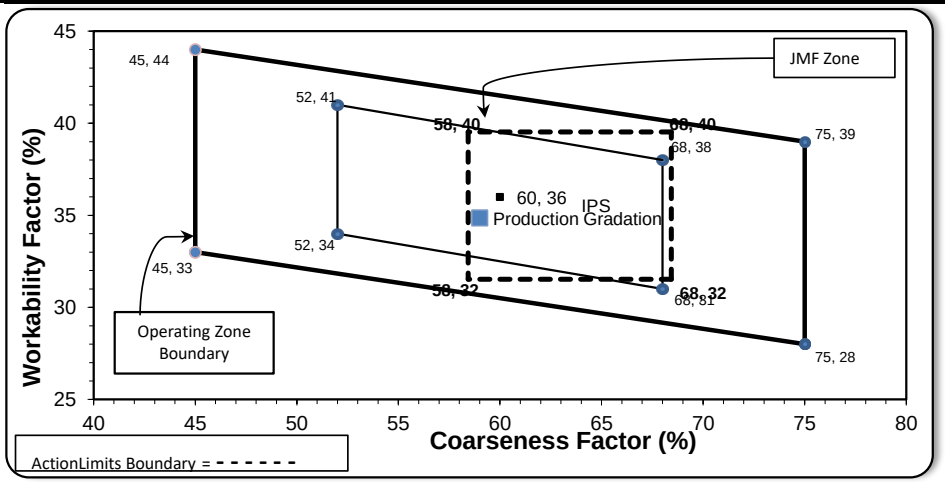
<----- Verify this number is 100%

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"	98.8	100.0	100.0	99.4	0.6	0.6
3/4"	87.0	100.0	100.0	93.3	6.1	6.7
1/2"	44.4	96.5	100.0	70.8	22.4	29.2
3/8"	25.8	85.8	100.0	60.1	10.7	39.9
#4	5.0	16.2	97.4	41.1	18.9	58.9
#8	2.5	4.1	81.0	32.4	8.8	67.6
#16	2.0	2.6	65.3	26.0	6.3	74.0
#30	1.9	2.2	48.2	19.5	6.6	80.5
#50	1.8	2.0	22.6	9.7	9.8	90.3
#100	1.7	1.9	6.0	3.3	6.3	96.7
LBW	1.6	1.7	0.9	1.3	2.0	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 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	59	Workability Factor:	32	Adjusted WF 34.9



Intial Production Sample (IPS)

Coarseness Factor:	63
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"	89.7	10.3	10.3
1/2"	70.3	19.4	29.7
3/8"	59.1	11.2	40.9
#4	42.8	16.3	57.2
#8	35.5	7.3	64.5
#16	29.0	6.5	71.0
#30	21.2	7.7	78.8
#50	9.8	11.5	90.2
#100	3.7	6.1	96.3
LBW	1.2	2.5	98.8

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

PREPARED BY:
SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-O2**

Contractor: _____

Sample Date: 3/21/22

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 3/22/2022 through 3/28/2022

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1455	8.90	2.62	50.1
26A	71-47	Presque Isle	350	2.14	2.62	12.0
2NS	63-115	Ray Rd	1100	6.65	2.65	37.9
		Total Wt	**2905**	**17.69**		100.0

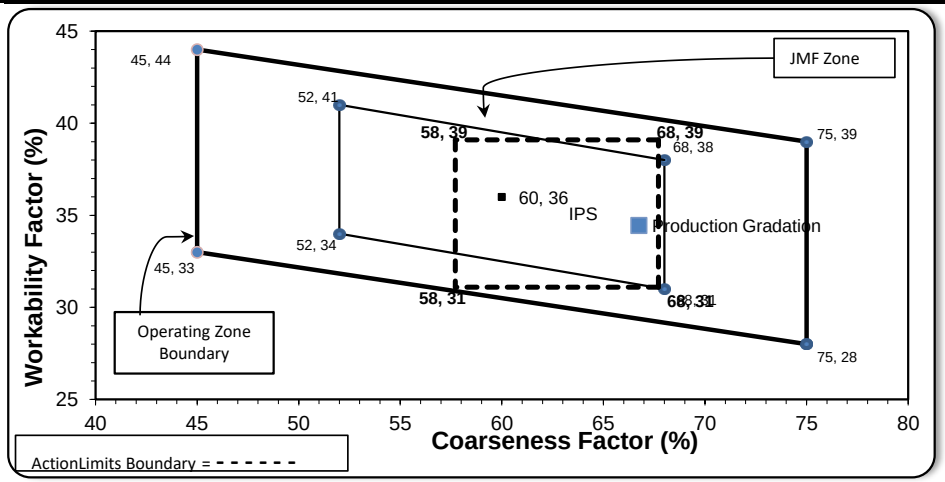
<----- Verify this number is 100%

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"	99.3	100.0	100.0	99.6	0.4	0.4
3/4"	80.3	100.0	100.0	90.1	9.5	9.9
1/2"	31.4	97.6	100.0	65.4	24.8	34.6
3/8"	11.8	89.7	100.0	54.6	10.8	45.4
#4	1.6	29.7	97.0	41.1	13.5	58.9
#8	1.4	9.8	79.4	31.9	9.2	68.1
#16	1.2	3.9	63.2	25.0	6.9	75.0
#30	1.2	2.8	47.0	18.7	6.3	81.3
#50	1.1	2.5	26.2	10.8	8.0	89.2
#100	1.0	2.3	4.3	2.4	8.4	97.6
LBW	0.6	2.0	0.6	0.8	1.6	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 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation ○ Batch Plant Gradations ◉ Aggregate SupplierGradations

Coarseness Factor:	67	Workability Factor:	32	Adjusted WF 34.4



Intial Production Sample (IPS)

Coarseness Factor:	63
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"	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

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

PREPARED BY:
SM, LLC Technical Service

Approved By: