Sample Date:

7/10/23 Concrete Grade: **P1M**, **3500HP** 

Jates Test F	represents:	7/11/2023	tnrougn	7/17/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1070	6.54	2.62	34.9
IA	71-47	Presque Isle	800	4.89	2.62	26.1
2NS	75-051	Mid Michigan	1200	7.23	2.66	39.1
		Total Wt	3070	18.67		100.0

Contractor:

MDOT No.:



---- Verify this number is 100%

ulative tained	Superior Materials, LLC
	30701 W. 10 Mile Rd.
0.0	Suite 500

Farmington Hills, MI 48336

\*Maximum % Retained must be above the 3/8" sieve.

\*Any two adjacent sieves must equal 10% except max.,

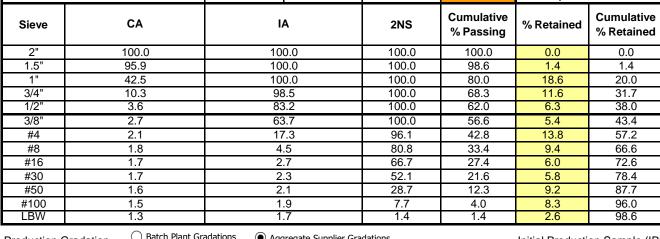
nom. max., #100 and #200 sieves.

 $^{*}\%$  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

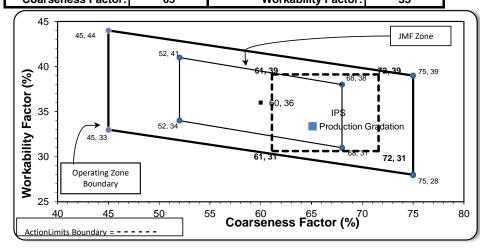
Aggregate Supplier Gradations

Coarseness Factor:

65

Workability Factor:

33



Initial Production Sample (IPS)

Coarseness Factor:		66	
Workability Factor:		35	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	99.6	0.4	0.4
1"	84.3	15.3	15.7
3/4"	74.8	9.6	25.2
1/2"	64.3	10.4	35.7
3/8"	56.8	7.5	43.2
#4	43.0	13.8	57.0
#8	34.9	8.1	65.1
#16	26.4	8.5	73.6
#30	19.9	6.5	80.1
#50	10.4	9.5	89.6
#100	3.4	7.0	96.6
LBW	1.2	2.2	98.8

PREPARED BY: SM, LLC Technical Service

1.3

Sample Date:

#100

7/10/23 Concrete Grade: P1M, 3500HP

Dates Test F	Represents:	7/11/2023	through	7/17/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	550	3.28	2.69	17.6
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.5
		Total Wt	2120	19.70		100.0

Contractor:

MDOT No.:

	Total Wt	3120	18.70		100.0	< Verify this n	umber is 100%
Sieve	CA	1,	4	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	10	0.0	100.0	100.0	0.0	0.0
1.5"	100.0	10	0.0	100.0	100.0	0.0	0.0
1"	67.2	10	0.0	100.0	85.6	14.4	14.4
3/4"	43.8	10	0.0	100.0	75.3	10.3	24.7
1/2"	18.8	91	.4	100.0	62.8	12.5	37.2
3/8"	10.1	75	5.0	100.0	56.1	6.7	43.9
#4	2.5	16	5.4	98.3	41.8	14.3	58.2
#8	1.7	3.	.8	83.2	33.4	8.4	66.6
#16	1.5	1.	5	65.4	26.1	7.3	73.9
#30	1.5	1.	2	45.9	18.5	7.6	81.5
#50	1.4	1.	.0	22.2	9.3	9.2	90.7

1.0



**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.,

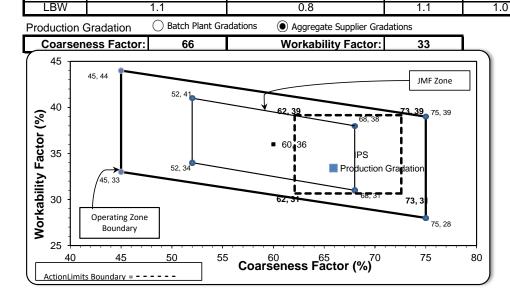
nom. max., #100 and #200 sieves.

\*% 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.



Intial Production Sample (IPS)

96.9

99.0

6.3

2.0

3.1

6.0

Coars	eness Factor:	67	
Work	Workability Factor:		
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	85.5	14.5	14.5
3/4"	73.4	12.1	26.6
1/2"	61.0	12.4	39.0
3/8"	56.2	4.8	43.8
#4	43.1	13.1	56.9
#8	34.9	8.2	65.1
#16	29.4	5.5	70.6
#30	21.6	7.8	78.4
#50	8.1	13.4	91.9
#100	2.2	5.9	97.8
LBW	1.4	0.8	98.6

PREPARED BY: SM, LLC Technical Service

Total Wt

PLANT #: P-103

Sample Date:

7/10/23 Concrete Grade: **P1M**, **3500HP** 

18.70

Dates Test F	Represents:	7/11/2023	through	7/17/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	550	3.28	2.69	17.6
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.5

3120

Contractor:

MDOT No.:



---- Verify this number is 100%

ed	Cumulative % Retained	Superior Materials, LLC
	0.0	Suite 500
	0.0	Farmington Hills, MI 48336

Cumulative CA IΑ % Retaine Sieve 2NS % Passing 2" 100.0 100.0 100.0 100.0 0.0 1.5" 100.0 100.0 100.0 100.0 0.0 0.0 67.2 100.0 100.0 85.6 14.4 14.4 3/4" 43.8 100.0 100.0 75.3 10.3 24.7 1/2' 18.8 91.4 100.0 62.8 12.5 37.2 3/8' 75.0 100.0 43.9 10.1 56.1 6.7 #4 2.5 16.4 98.3 41.8 14.3 58.2 #8 1.7 3.8 83.2 33.4 8.4 66.6 #16 1.5 1.5 65.4 26.1 7.3 73.9 #30 1.2 1.5 45.9 18.5 7.6 81.5 #50 1.4 1.0 22.2 9.3 9.2 90.7 #100 1.3 1.0 6.0 3.1 6.3 96.9 LBW 0.8 1.0 2.0

\*Maximum % Retained must be above the 3/8" sieve.

\*Any two adjacent sieves must equal 10% except max.,

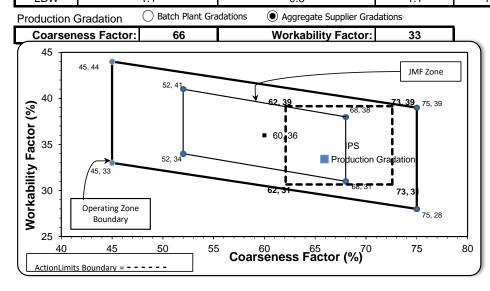
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$  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.



Intial Production Sample (IPS)

Coars	Coarseness Factor:		
Work	Workability Factor:		
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	85.5	14.5	14.5
3/4"	73.4	12.1	26.6
1/2"	61.0	12.4	39.0
3/8"	56.2	4.8	43.8
#4	43.1	13.1	56.9
#8	34.9	8.2	65.1
#16	29.4	5.5	70.6
#30	21.6	7.8	78.4
#50	8.1	13.4	91.9
#100	2.2	5.9	97.8
LBW	1.4	0.8	98.6

PREPARED BY: SM, LLC Technical Service

7/11/2023

CA

100.0

100.0

67.2

43.8

18.8

10.1

2.5

1.7

1.5

1.5

1.4

1.3

Dates Test Represents:

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

#50

#100

PLANT #: Contractor: Contractor: Concrete Grade: P1M, 3500HP

Cumulative

% Passing

100.0

100.0

85.6

75.3

62.8

56.1

42.4

36.1

27.6

18.0

6.3

1.8

2NS

100.0

100.0

100.0

100.0

100.0

100.0

99.9

90.1

69.4

44.5

14.3

2.7

% Retained

0.0

0.0

14.4

10.3

12.5

6.7

13.7

6.3

8.5

9.6

11.7

4.5

7/17/2023

Dated Foot i	toproconto.	.,,_0_0	unougn	171172020		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	550	3.28	2.69	17.6
2NS	19-04	Schlegel	1200	7.20	2.67	38.5
		Total Wt	3120	18 64		100.0

IΑ

100.0

100.0

100.0

100.0

91.4

75.0

16.4

3.8

1.5

1.2

1.0

1.0

through

MDOT No.:

---- Verify this number is 100%

Cumulative

% Retained

0.0

0.0

14.4

24.7

37.2

43.9

57.6

63.9

72.4

82.0

93.7

98.2

99.3

Builders'
Finish First With Builders*

## Builders Redi-Mix 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.,

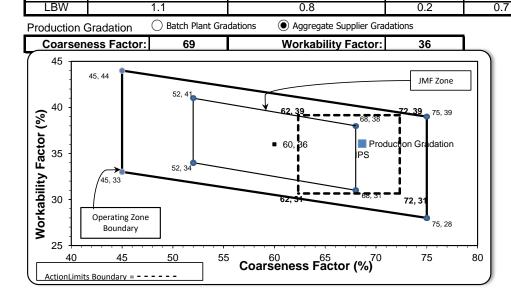
nom. max., #100 and #200 sieves.

 $^{\star}\%$  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



Intial Production Sample (IPS)

Coars	Coarseness Factor:		
Workability Factor:		35	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	85.5	14.5	14.5
3/4"	73.4	12.1	26.6
1/2"	61.0	12.4	39.0
3/8"	56.2	4.8	43.8
#4	43.1	13.1	56.9
#8	34.9	8.2	65.1
#16	29.4	5.5	70.6
#30	21.6	7.8	78.4
#50	8.1	13.4	91.9
#100	2.2	5.9	97.8
LBW	1.4	0.8	98.6

PREPARED BY: SM, LLC Technical Service

PLANT #: 12

Sample Date:

7/10/23 Concrete Grade: **P1M**, **3500HP** 

Dates Test F	Represents:	7/11/2023	through	7/17/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1020	6.24	2.62	33.2
IA	71-47	Presque Isle	850	5.20	2.62	27.7
2NS	63-115	Ray Rd	1200	7.26	2.65	39.1
		Total Wt	3070	18.70		100.0

Contractor:

MDOT No.:

---- Verify this number is 100%

SUPERI	

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

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.1	100.0	100.0	98.4	1.6	1.6
1"	37.9	100.0	100.0	79.4	19.0	20.6
3/4"	4.8	98.7	100.0	68.0	11.4	32.0
1/2"	1.8	86.0	100.0	63.5	4.5	36.5
3/8"	1.6	65.1	100.0	57.6	5.9	42.4
#4	1.5	13.3	96.2	41.8	15.9	58.2
#8	1.5	3.1	80.4	32.8	9.0	67.2
#16	1.4	2.0	65.5	26.6	6.2	73.4
#30	1.4	1.9	49.9	20.5	6.1	79.5
#50	1.3	1.8	26.4	11.2	9.2	88.8
#100	1.2	1.7	6.9	3.6	7.7	96.4
I R\M	1.0	1 /	1.2	1.2	2.4	00.0

\*Maximum % Retained must be above the 3/8" sieve.

\*Any two adjacent sieves must equal 10% except max.,

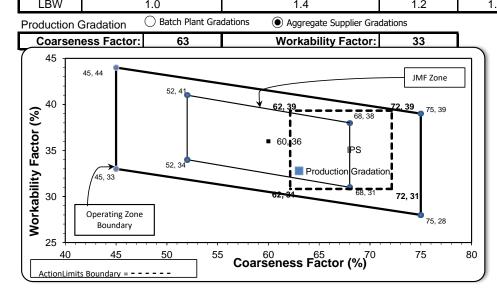
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$  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.



Intial Production Sample (IPS)

Coarseness Factor:		67	
Work	ability Factor:	35	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	99.6	0.4	0.4
1"	83.9	15.7	16.1
3/4"	74.0	9.8	26.0
1/2"	63.7	10.3	36.3
3/8"	56.4	7.3	43.6
#4	43.0	13.4	57.0
#8	35.1	7.9	64.9
#16	29.0	6.1	71.0
#30	20.9	8.0	79.1
#50	8.1	12.8	91.9
#100	1.6	6.5	98.4
LBW	0.9	0.8	99.1

PREPARED BY: SM, LLC Technical Service

PLANT #: 20

Sample Date:

7/10/23

Contractor:

Concrete Grade: P1M, 3500HP

Dates Test F	Represents:	7/11/2023	through	7/17/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	970	5.93	2.62	31.6
IA	71-47	Presque Isle	900	5.50	2.62	29.3
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1

MDOT No.:

SUPE	RIOR

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

\*Maximum % Retained must be above the 3/8" sieve.

nom. max., #100 and #200 sieves.

\*% Retained must be at least 4% for each sieve except max.,

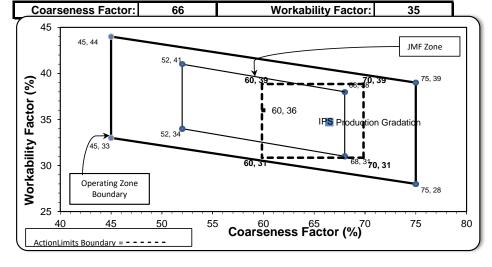
\*Any two adjacent sieves must equal 10% except max.,

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.

-	Total Wt	3070	18.70		100.0	< Verify this n	umber is 100%
Sieve	CA	1/	4	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100	0.0	100.0	100.0	0.0	0.0
1.5"	97.9	100	0.0	100.0	99.3	0.7	0.7
1"	36.3	100	0.0	100.0	79.9	19.5	20.1
3/4"	12.8	98	.3	100.0	71.9	7.9	28.1
1/2"	3.9	80	.1	100.0	63.8	8.1	36.2
3/8"	2.7	56	.8	100.0	56.6	7.2	43.4
#4	1.8	12	.4	97.5	42.3	14.3	57.7
#8	1.6	4.	4	84.2	34.7	7.6	65.3
#16	1.6	3.	0	71.2	29.2	5.5	70.8
#30	1.5	2.	6	52.6	21.8	7.4	78.2
#50	1.5	2.	5	23.3	10.3	11.5	89.7
#100	1.4	2.	3	4.4	2.8	7.5	97.2
LBW	1.1	2.	0	0.6	1.2	1.7	98.8



Intial Production Sample (IPS)

Coarseness Factor:		65	
Worl	kability Factor:	35	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	99.1	0.9	0.9
1"	80.8	18.2	19.2
3/4"	71.3	9.6	28.7
1/2"	64.0	7.3	36.0
3/8"	57.7	6.2	42.3
#4	42.8	15.0	57.2
#8	34.8	7.9	65.2
#16	28.4	6.4	71.6
#30	20.2	8.2	79.8
#50	7.6	12.6	92.4
#100	1.6	6.0	98.4
LBW	1.0	0.6	99.0

Sample Date:

Concrete Grade: P1M, 3500HP 7/10/23 7/11/2023

Dates Test F	Represents:	7/11/2023	through	7/17/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1020	6.24	2.62	33.2
IA	71-47	Presque Isle	850	5.20	2.62	27.7
2NS	95-013	Smelter Bay	1200	7.26	2.65	39.1

Contractor:

MDOT No.:



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

	Total Wt	3070	18.70		100.0	< Verify this n	umber is 100%
Sieve	CA	1/	4	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100	0.0	100.0	100.0	0.0	0.0
1.5"	95.1	100	0.0	100.0	98.4	1.6	1.6
1"	37.9	100	0.0	100.0	79.4	19.0	20.6
3/4"	4.8	98	3.7	100.0	68.0	11.4	32.0
1/2"	1.8	86	5.0	100.0	63.5	4.5	36.5
3/8"	1.6	65	5.1	100.0	57.6	5.9	42.4
#4	1.5	13	3.3	96.7	42.0	15.7	58.0
#8	1.5	3.	.1	85.1	34.6	7.4	65.4
#16	1.4	2.	.0	70.2	28.5	6.2	71.5
#30	1.4	1.	9	50.6	20.8	7.7	79.2
#50	1.3	1.	.8	25.0	10.7	10.1	89.3
#100	1.2	1.	7	7.6	3.8	6.9	96.2
LBW	1.0	1.	.4	1.3	1.2	2.6	98.8

\*Maximum % Retained must be above the 3/8" sieve.

\*Any two adjacent sieves must equal 10% except max.,

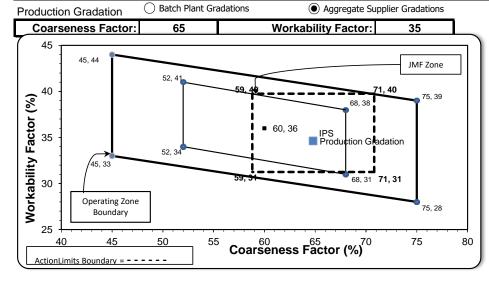
nom. max., #100 and #200 sieves.

\*% Retained must be at least 4% for each sieve except max.,

nom. max., #100 and #200 sieves.

\*% Retained must be at least 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.



Intial Production Sample (IPS)

Coarseness Factor:		65	
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	99.0	0.6	0.6
1"	84.0	15.3	16.0
3/4"	73.5	10.5	26.5
1/2"	65.2	8.2	34.8
3/8"	58.2	7.1	41.8
#4	44.1	14.1	55.9
#8	35.5	8.6	64.5
#16	29.1	6.4	70.9
#30	21.9	7.3	78.1
#50	9.6	12.2	90.4
#100	2.6	7.1	97.4
LBW	1.0	1.6	99.0

Sample Date:

Concrete Grade: P1M, 3500HP 7/10/23

Dates Test F	Represents:	7/11/2023	through	7/17/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1020	6.24	2.62	33.2
IA	71-47	Presque Isle	850	5.20	2.62	27.7
2NS	95-013	Smelter Bay	1200	7.26	2.65	39.1

Contractor:

MDOT No.:



Suj	perior Materials, LLC
307	701 W. 10 Mile Rd.
Sui	te 500
Far	mington Hills MI 18336

	Total Wt	3070	18.70		100.0	< Verify this n	umber is 100%
Sieve	CA	1,	4	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	10	0.0	100.0	100.0	0.0	0.0
1.5"	95.1	10	0.0	100.0	98.4	1.6	1.6
1"	37.9	10	0.0	100.0	79.4	19.0	20.6
3/4"	4.8	98	3.7	100.0	68.0	11.4	32.0
1/2"	1.8	86	5.0	100.0	63.5	4.5	36.5
3/8"	1.6	65	5.1	100.0	57.6	5.9	42.4
#4	1.5	13	3.3	96.7	42.0	15.7	58.0
#8	1.5	3	.1	85.1	34.6	7.4	65.4
#16	1.4	2	.0	70.2	28.5	6.2	71.5
#30	1.4	1.	9	50.6	20.8	7.7	79.2
#50	1.3	1.	.8	25.0	10.7	10.1	89.3
#100	1.2	1.	7	7.6	3.8	6.9	96.2
LBW	1.0	1.	.4	1.3	1.2	2.6	98.8

\*Maximum % Retained must be above the 3/8" sieve.

\*Any two adjacent sieves must equal 10% except max.,

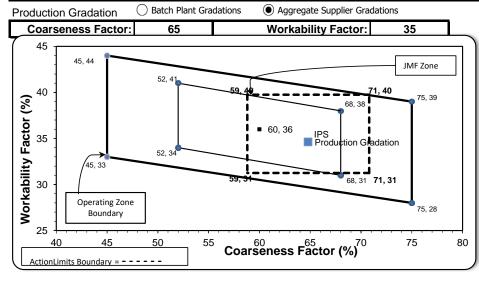
nom. max., #100 and #200 sieves.

\*% Retained must be at least 4% for each sieve except max.,

nom. max., #100 and #200 sieves.

\*% Retained must be at least 8% for the 1" sieve when

a 2" max. size (nom. Max. 1.5") aggregate is used.



Intial Production Sample (IPS)

Coars	eness Factor:	65	
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	99.0	0.6	0.6
1"	84.0	15.3	16.0
3/4"	73.5	10.5	26.5
1/2"	65.2	8.2	34.8
3/8"	58.2	7.1	41.8
#4	44.1	14.1	55.9
#8	35.5	8.6	64.5
#16	29.1	6.4	70.9
#30	21.9	7.3	78.1
#50	9.6	12.2	90.4
#100	2.6	7.1	97.4
LBW	1.0	1.6	99.0

PREPARED BY: SM, LLC Technical Service

Sample Date:

**Dates Test Represents:** 

7/10/23 Concrete Grade: P1M, 3500HP

7/11/2023	through	7/17/2023		
Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
Stoneco	1370	8.16	2.69	43.9
Stoneco	550	3.28	2.69	17.6

Contractor:

MDOT No.:

Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	550	3.28	2.69	17.6
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.5
		Total Wt	3120	18.70		100.0

--- Verify this number is 100%

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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"	67.2	100.0	100.0	85.6	14.4	14.4
3/4"	43.8	100.0	100.0	75.3	10.3	24.7
1/2"	18.8	91.4	100.0	62.8	12.5	37.2
3/8"	10.1	75.0	100.0	56.1	6.7	43.9
#4	2.5	16.4	98.3	41.8	14.3	58.2
#8	1.7	3.8	83.2	33.4	8.4	66.6
#16	1.5	1.5	65.4	26.1	7.3	73.9
#30	1.5	1.2	45.9	18.5	7.6	81.5
#50	1.4	1.0	22.2	9.3	9.2	90.7
#100	1.3	1.0	6.0	3.1	6.3	96.9
LBW	1.1	0.8	1.1	1.0	2.0	99.0

\*Maximum % Retained must be above the 3/8" sieve.

\*Any two adjacent sieves must equal 10% except max.,

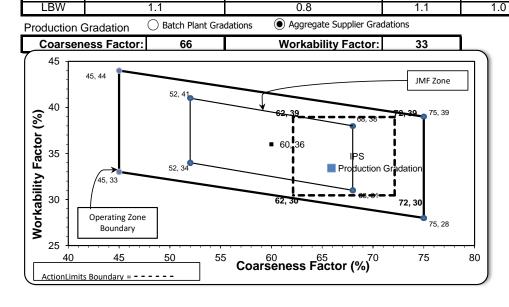
nom. max., #100 and #200 sieves.

\*% 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.



Intial Production Sample (IPS)

Coars	eness Factor:	67	
Work	ability Factor:	35	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	86.9	13.1	13.1
3/4"	76.1	10.8	23.9
1/2"	63.7	12.4	36.3
3/8"	56.2	7.5	43.8
#4	43.2	13.0	56.8
#8	34.7	8.5	65.3
#16	27.5	7.2	72.5
#30	20.6	7.0	79.4
#50	9.0	11.6	91.0
#100	2.1	6.9	97.9
LBW	1.0	1.1	99.0

Sample Date:

7/10/23 Concrete Grade: P1M, 3500HP

Dates Test F	Represents:	7/11/2023	through	7/17/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1020	6.24	2.62	33.2
IA	71-47	Presque Isle	850	5.20	2.62	27.7

Contractor:

MDOT No.:

Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1020	6.24	2.62	33.2
IA	71-47	Presque Isle	850	5.20	2.62	27.7
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1
		Total Wt	3070	18.70		100.0

SUPERIOR MATERIALS	
Superior Materials, LLC	
20704 M/ 40 Mil- D-I	-

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	Total Wt	3070 18.70		100.0	< Verify this n	umber 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"	95.1	100.0	100.0	98.4	1.6	1.6
1"	37.9	100.0	100.0	79.4	19.0	20.6
3/4"	4.8	98.7	100.0	68.0	11.4	32.0
1/2"	1.8	86.0	100.0	63.5	4.5	36.5
3/8"	1.6	65.1	100.0	57.6	5.9	42.4
#4	1.5	13.3	97.5	42.3	15.4	57.7
#8	1.5	3.1	84.2	34.3	8.0	65.7
#16	1.4	2.0	71.2	28.8	5.4	71.2
#30	1.4	1.9	52.6	21.6	7.3	78.4
#50	1.3	1.8	23.3	10.0	11.5	90.0
#100	1.2	1.7	4.4	2.6	7.4	97.4
LBW	1.0	1.4	0.6	1.0	1.6	99.0

\*Maximum % Retained must be above the 3/8" sieve.

\*Any two adjacent sieves must equal 10% except max.,

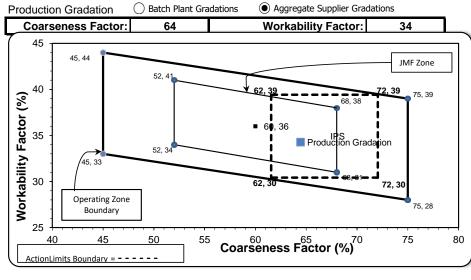
nom. max., #100 and #200 sieves.

\*% 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.



Intial Production Sample (IPS)

Coarseness Factor:		67	
Workability Factor:		35	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% 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

Sample Date:

Concrete Grade: P1M, 3500HP 7/10/23

Dates Test F	Represents:	7/11/2023	through	7/17/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1020	6.24	2.62	33.2
IA	71-47	Presque Isle	800	4.89	2.62	26.1

Contractor:

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific	%
7.99. 0.000		00000	110.9.11 (002)	.,	Gravity	Contribution
CA	71-47	Presque Isle	1020	6.24	2.62	33.2
IA	71-47	Presque Isle	800	4.89	2.62	26.1
2NS	44-051	Krake Willis Rd	1250	7.56	2.65	40.7
		Total Wt	3070	18.69		100.0

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

	i otai vvt	3070 18.69		100.0	< Verify this n	umber 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"	95.9	100.0	100.0	98.6	1.4	1.4
1"	42.5	100.0	100.0	80.9	17.7	19.1
3/4"	10.3	98.5	100.0	69.8	11.1	30.2
1/2"	3.6	83.2	100.0	63.6	6.2	36.4
3/8"	2.7	63.7	100.0	58.2	5.4	41.8
#4	2.1	17.3	95.9	44.3	14.0	55.7
#8	1.8	4.5	82.4	35.3	8.9	64.7 r
#16	1.7	2.7	68.2	29.0	6.3	71.0
#30	1.7	2.3	51.0	21.9	7.1	<b>78.1</b> r
#50	1.6	2.1	23.0	10.4	11.5	89.6
#100	1.5	1.9	5.6	3.3	7.2	96.7
LBW	1.3	1.7	1.1	1.3	2.0	98.7

\*Maximum % Retained must be above the 3/8" sieve.

\*Any two adjacent sieves must equal 10% except max.,

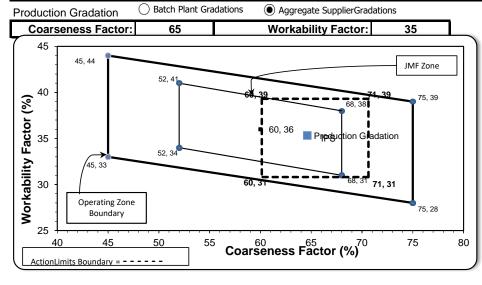
nom. max., #100 and #200 sieves.

\*% 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.



Intial Production Sample (IPS)

Coars	eness Factor:	65	
Workability Factor:		35	
Siovo	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	99.6	0.4	0.4
1"	83.9	15.7	16.1
3/4"	74.1	9.8	25.9
1/2"	64.3	9.7	35.7
3/8"	57.5	6.8	42.5
#4	44.5	13.1	55.5
#8	35.1	9.4	64.9
#16	27.9	7.2	72.1
#30	21.7	6.2	78.3
#50	12.6	9.1	87.4
#100	3.5	9.1	96.5
LBW	1.2	2.4	98.8

CA

100.0

95.1

37.9

4.8

1.8

1.6

1.5

1.5

1.4

1.4

1.3

1.2

Sample Date:

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

#50

#100

7/10/23

Contractor:

MDOT No.:

Concrete Grade: P1M, 3500HP

3.6

2NS

100.0

100.0

100.0

100.0

100.0

100.0

96.2

80.4

65.5

49.9

26.4

6.9

Dates Test F	Represents:	7/11/2023	through	7/17/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1020	6.24	2.62	33.2
IA	71-47	Presque Isle	850	5.20	2.62	27.7
2NS	63-115	Ray Rd	1200	7.26	2.65	39.1
		Total W/A	2070	10.70		100.0

Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
CA	71-47	Presque Isle	1020	6.24	2.62	33.2
IA	71-47	Presque Isle	850	5.20	2.62	27.7
2NS	63-115	Ray Rd	1200	7.26	2.65	39.1
		Total Wt	3070	18.70		100.0

IΑ

100.0

100.0

100.0

98.7

86.0

65.1

13.3

3.1

2.0

1.9

1.8

1.7

100.0	< Verify this number is 100%				
Cumulative % Passing	% Retained	Cumulative % Retained			
100.0	0.0	0.0			
98.4	1.6	1.6			
79.4	19.0	20.6			
68.0	11.4	32.0			
63.5	4.5	36.5			
57.6	5.9	42.4	*Ma		
41.8	15.9	58.2	*Any		
32.8	9.0	67.2	nom.		
26.6	6.2	73.4	*% F		
20.5	6.1	79.5	nom.		
11.2	9.2	88.8	*% F		



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aximum % Retained must be above the 3/8" sieve.

y two adjacent sieves must equal 10% except max.,

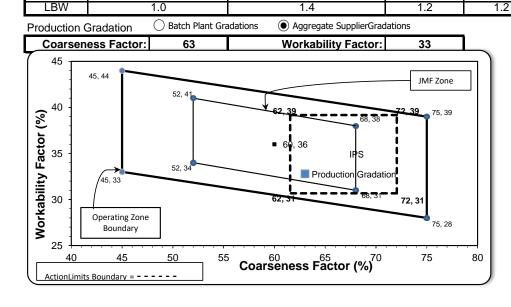
. max., #100 and #200 sieves.

Retained must be at least 4% for each sieve except max.,

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.



## Intial Production Sample (IPS)

96.4

98.8

7.7

Coars	eness Factor:	67	
Workability Factor:		35	
Siovo	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% 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
#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

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