CA

100.0

95.9

42.5

10.3

3.6

2.7

2.1

1.8

1.7

1.7

1.6

1.5

Sample Date:

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

#50

#100

LBW

7/3/23 Concrete Grade: P1M, 3500HP 7/10/2023

2NS

100.0

100.0

100.0

100.0

100.0

100.0

96.4

80.1

64.8

50.1

26.9

7.1

11.6

3.8

1.4

Dates Test Represents:		7/4/2023	through	7/10/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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

IΑ

100.0

100.0

100.0

98.5

83.2

63.7

17.3

4.5

2.7

2.3

2.1

1.9

1.7

Contractor:

MDOT No.:



<---- Verify this number is 100%

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

Cumulative % Passing	% Retained	Cumulative % Retained	
100.0	0.0	0.0	
98.6	1.4	1.4	
80.0	18.6	20.0	
68.3	11.6	31.7	
62.0	6.3	38.0	
56.6	5.4	43.4	*M
42.9	13.7	57.1	*Aı
33.1	9.8	66.9	nom
26.6	6.5	73.4	*%
20.8	5.9	79.2	nom

9.2

7.8

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

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

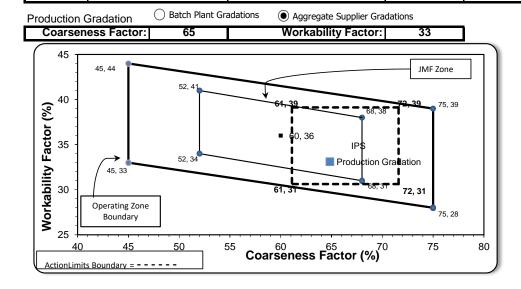
m. max., #100 and #200 sieves.

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

m. 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.



Initial Production Sample (IPS)

88.4

96.2

98.6

Coars	eness Factor:	66	
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"	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

Sample Date:

7/3/23 Concrete Grade: P1M, 3500HP

Dates Test Represents:		7/4/2023	through	7/10/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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

Contractor:

MDOT No.:



_

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

Farmington Hills, MI 48336

Total Wt		3120	18.70		100.0	< Verify this number is 100%	
Sieve	CA	L	A	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"	60.3	10	0.0	100.0	82.6	17.4	17.4
3/4"	38.0	10	0.0	100.0	72.8	9.8	27.2
1/2"	15.1	90).1	100.0	61.0	11.8	39.0
3/8"	7.3	71	.8	100.0	54.3	6.7	45.7
#4	1.7	15	5.0	98.7	41.4	13.0	58.6
#8	1.2	3	.5	84.1	33.5	7.9	66.5
#16	1.1	1	.9	66.6	26.4	7.1	73.6
#30	1.0	1.5		47.3	18.9	7.5	81.1
#50	1.0	1.4		23.4	9.7	9.2	90.3
#100	0.9	1.2		6.3	3.0	6.7	97.0
LBW	0.9	1	.1	1.2	1.1	2.0	98.9

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

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

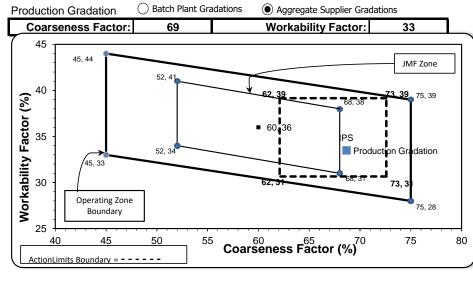
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$ 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	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"	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	8.0	98.6

PREPARED BY:
SM, LLC Technical Service

Sample Date:

Concrete Grade: P1M, 3500HP 7/3/23

Dates Test Represents:		1/4/2023	through	7/10/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific	%
Ayy. Class	FIL#	Source	Weight (SSD)	11	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

Contractor:

MDOT No.:

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

Total Wt		3120	3120 18.70		100.0	< Verify this number is 100%	
Sieve	CA	I.	A	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"	60.3	10	0.0	100.0	82.6	17.4	17.4
3/4"	38.0	10	0.0	100.0	72.8	9.8	27.2
1/2"	15.1	90	0.1	100.0	61.0	11.8	39.0
3/8"	7.3	7′	1.8	100.0	54.3	6.7	45.7
#4	1.7	15	5.0	98.7	41.4	13.0	58.6
#8	1.2	3	.5	84.1	33.5	7.9	66.5
#16	1.1	1	1.9		26.4	7.1	73.6
#30	1.0	1.5		47.3	18.9	7.5	81.1
#50	1.0	1.4		23.4	9.7	9.2	90.3
#100	0.9	1.2		6.3	3.0	6.7	97.0
LBW	0.9	1	.1	1.2	1.1	2.0	98.9

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

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

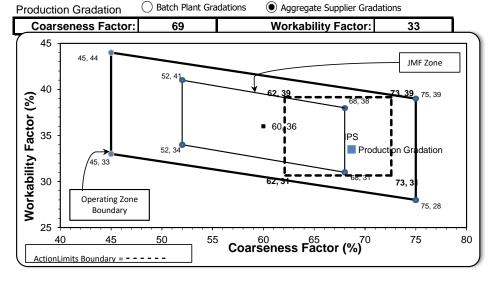
nom. max., #100 and #200 sieves.

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

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

*% Retained must be at least 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"	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

7/4/2023

CA

100.0

100.0

60.3

38.0

15.1

7.3

1.7

1.2

1.1

1.0

1.0

0.9

Dates Test Represents:

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

#50

#100

 PLANT #:
 14
 Contractor:

 Sample Date:
 7/3/23
 Concrete Grade: P1M, 3500HP

7/10/2023

Batto Foot I	toproconto.	., .,_0_0	unougn	171072020		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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
	<u> </u>	Total Wt	3120	18.64		100.0

IΑ

100.0

100.0

100.0

100.0

90.1

71.8

15.0

3.5

1.9

1.5

1.4

1.2

through

MDOT No.:

---- Verify this

11.8

6.7

12.5

6.0

8.3

9.7

11.6

4.5

1.0

Cumulative

% Passing

100.0

100.0

82.6

72.8

61.0

54.3

41.8

35.8

27.5

17.8

6.2

1.6

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

number is 100%	Builders'
	Finish First With Builders*

% Retained Cumulative % Retained 0.0 0.0 0.0 0.0 17.4 17.4 9.8 27.2

39.0

45.7

58.2

64.2

72.5

82.2

93.8

98.4

99.3

Farmington Hills, MI 48336

Builders Redi-Mix

30701 W. 10 Mile Rd.

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

Suite 500

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

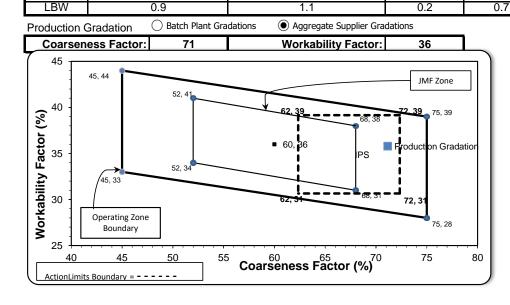
nom. max., #100 and #200 sieves.

 $^{*}\%$ 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"	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

Pit#

71-47

71-47

63-115

CA

100.0

100.0

42.4

15.3

5.1

3.8

2.6

2.3

2.2

2.1

2.0

1.8

Sample Date:

Agg. Class CA

IΑ

2NS

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

#50

#100

Dates Test Represents:

7/3/23

Total Wt

3070

IΑ

100.0

100.0

100.0

97.9

76.0

55.4

10.9

3.3

2.5

2.3

2.2

2.1

Contractor:

Cumulative

% Retained

88.3

96.7

Concrete Grade: P1M, 3500HP

2NS

100.0

100.0

100.0

100.0

100.0

100.0

96.6

81.1

66.4

50.4

25.6

5.4

Cumulative

% Passing

100.0

100.0

79.9

70.0

61.1

55.6

42.9

34.6

28.4

21.8

11.7

3.3

7/4/2023	tnrougn	7/10/2023		
Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
Presque Isle	1070	6.54	2.62	34.9
Presque Isle	750	4.59	2.62	24.4
Ray Rd	1250	7.56	2.65	40.7

18.69

MDOT No.:

----- Verify this number is 100%

% Retained

0.0

0.0

20.1

10.0

8.9

5.5

12.7

8.3

6.2

6.6

10.2

8.3

2.2

SUPERIO	RS

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

0.0 0.0 20.1 30.0 38.9 44.4 *Maxin 57.1 *Any tv 65.4 nom. ma 71.6 *% Ref

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

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

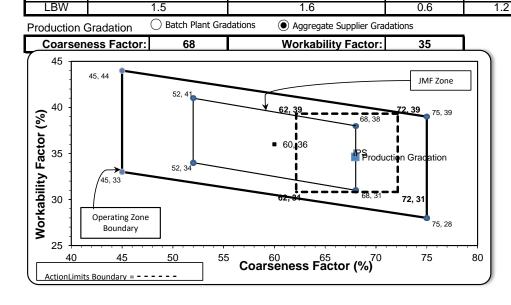
nom. max., #100 and #200 sieves.

 $^{\star}\%$ 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)

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

Grange Hall

CA

100.0

97.9

36.3

12.8

3.9

2.7

1.8

1.6

1.6

1.5

1.5

1.4

Total Wt

PLANT #: 20

Pit#

71-47

71-47

63-92

Sample Date:

Agg. Class CA

IΑ

2NS

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

#50

#100

Dates Test Represents:

7/3/23 Concrete Grade: P1M, 3500HP

7/4/2023	through	7/10/2023		
Source	Weight (SSD)	ft ³	Specific	%
Source	weight (SSD)	It	Gravity	Contribution
Presque Isle	970	5.93	2.62	31.6
Presque Isle	900	5.50	2.62	29.3

IΑ

100.0

100.0

100.0

98.3

80.1

56.8

12.4

4.4

3.0

2.6

2.5

2.3

MDOT No.:

14.2

7.4

5.6

7.3

11.8

7.2

Cumulative

% Passing

100.0

99.3

79.9

71.9

63.8

56.6

42.4

35.0

29.4

22.1

10.4

3.2

Contractor:

ight (CCD)	ft ³	Specific	%
eight (SSD)	π	Gravity	Contribution
970	5.93	2.62	31.6
900	5.50	2.62	29.3
1200	7.26	2.65	39.1
3070	18.70		100.0

2NS

100.0

100.0

100.0

100.0

100.0

100.0

97.7

85.0

71.7

53.4

23.4

5.3

---- Verify this number is 100%

% Retained	Cumulative % Retained	
0.0	0.0	
0.7	0.7	
19.5	20.1	
7.9	28.1	
8.1	36.2	
7.2	43.4	*Maximum % F

57.6

65.0

70.6

77.9

89.6

96.8

Superior Materials, LLC 30701 W. 10 Mile Rd.

Farmington Hills, MI 48336

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

Suite 500

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

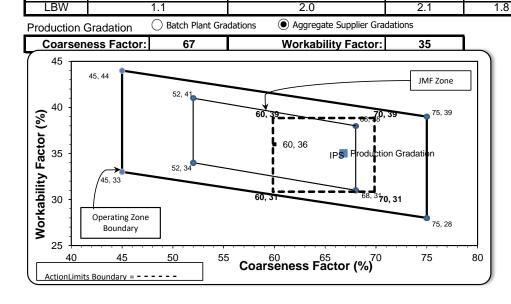
nom. max., #100 and #200 sieves.

*% 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:	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:

7/3/23 Concrete Grade: P1M, 3500HP

Dates Test Represents:		7/4/2023	through	7/10/2023			
Agg. Class Pit #		Source	urce Weight (SSD)	ft ³	Specific	%	
	Agg. Class	110#	Source	Weight (33b)	11	Gravity	Contribution
	CA	71-47	Presque Isle	1070	6.54	2.62	34.9
	IA	71-47	Presque Isle	750	4.59	2.62	24.4
	2NS	95-013	Smelter Bay	1250	7.56	2.65	40.7
			Total Wt	3070	18.69		100.0

Contractor:

MDOT No.:



---- Verify this number is 100%

Cumulative	
% Retained	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.

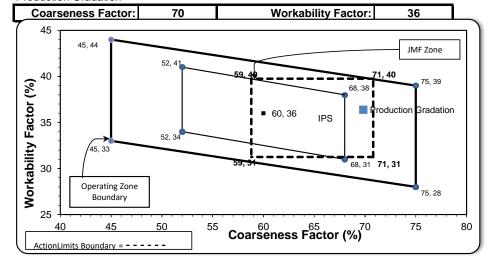
*% Retained must be at least 4% for each sieve except max.,

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.

					Tomy time mamber to 10070		
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"	42.4	100.0	100.0	79.9	20.1	20.1	
3/4"	15.3	97.9	100.0	70.0	10.0	30.0	
1/2"	5.1	76.0	100.0	61.1	8.9	38.9	
3/8"	3.8	55.4	100.0	55.6	5.5	44.4	
#4	2.6	10.9	96.5	42.9	12.7	57.1	
#8	2.3	3.3	85.4	36.4	6.5	63.6	
#16	2.2	2.5	70.8	30.2	6.2	69.8	
#30	2.1	2.3	50.6	21.9	8.3	78.1	
#50	2.0	2.2	25.2	11.5	10.4	88.5	
#100	1.8	2.1	7.6	4.2	7.3	95.8	
LBW	1.5	1.6	1.2	1.4	2.8	98.6	
roduction Grad	dation O Batch Plant Gra	dations	Supplier Gradations		Intial Production	on Sample (IP	



Coars	Coarseness Factor:		
Work	Workability Factor:		
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

Concrete Grade: P1M, 3500HP

7/3/23 Sample Date: Dates Test Represents:

Pit#

71-47

71-47

95-013

Agg. Class

CA

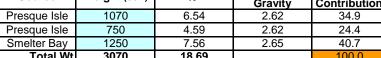
IΑ

2NS

7/4/2023	tnrougn	7/10/2023			
Source	Weight (SSD)	ft ³	Specific	%	
Source	Weight (SSD)	IL	Gravity	Contribution	
Presque Isle	1070	6.54	2.62	34.9	
Presque Isle	750	4.59	2.62	24.4	

MDOT No.:

Contractor:



SUPERIO M A T E R I A L	R

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

	Total Wt	3070	18.69		100.0	< Verify this number is 100%	
Sieve	CA	I.	A	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"	42.4	10	0.0	100.0	79.9	20.1	20.1
3/4"	15.3	97	97.9		70.0	10.0	30.0
1/2"	5.1	76	6.0	100.0	61.1	8.9	38.9
3/8"	3.8	55	5.4	100.0	55.6	5.5	44.4
#4	2.6	1().9	96.5	42.9	12.7	57.1
#8	2.3	3	.3	85.4	36.4	6.5	63.6
#16	2.2	2	2.5		30.2	6.2	69.8
#30	2.1	2.3		50.6	21.9	8.3	78.1
#50	2.0	2.2		25.2	11.5	10.4	88.5
#100	1.8	2.1		7.6	4.2	7.3	95.8
LBW	1.5	1	.6	1.2	1.4	2.8	98.6

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

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

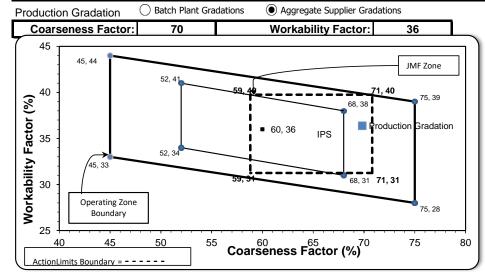
nom. max., #100 and #200 sieves.

*% 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	Coarseness Factor:		
Work	Workability Factor:		
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:

#100

7/3/23 Concrete Grade: **P1M**, **3500HP**

Dates Test Represents:		1/4/2023	through	7/10/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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

Contractor:

MDOT No.:



<---- Verify this number is 100%

ained	Cumulative % Retained	<u>Superior Materials, LLC</u> 30701 W. 10 Mile Rd.
0	0.0	Suite 500

Farmington Hills, MI 48336

ramington mills, IVII 46556

Sieve	CA	IA	2NS	% Passing	% Retained	% Retained	
2"	100.0	100.0	100.0	100.0	0.0	0.0	ı
1.5"	100.0	100.0	100.0	100.0	0.0	0.0	ĺ
1"	60.3	100.0	100.0	82.6	17.4	17.4	ı
3/4"	38.0	100.0	100.0	72.8	9.8	27.2	ĺ
1/2"	15.1	90.1	100.0	61.0	11.8	39.0	ı
3/8"	7.3	71.8	100.0	54.3	6.7	45.7	1
#4	1.7	15.0	98.7	41.4	13.0	58.6	
#8	1.2	3.5	84.1	33.5	7.9	66.5	n
#16	1.1	1.9	66.6	26.4	7.1	73.6	,
#30	1.0	1.5	47.3	18.9	7.5	81.1	n
#5 0	1.0	1 4	23.4	9.7	9.2	90.3	,

1.2

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

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

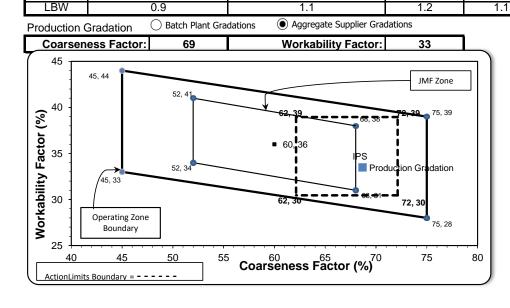
nom. max., #100 and #200 sieves.

*% 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.



Intial Production Sample (IPS)

97.0

98.9

6.7

3.0

6.3

Coars	eness Factor:	67	
Work	ability Factor:	35	
Sieve	Cumulative	%	Cumulative
	% 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

PREPARED BY: SM, LLC Technical Service

0.9

Sample Date:

7/3/23 Concrete Grade: P1M, 3500HP

Dates Test F	represents:	7/4/2023	through	7/10/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	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	63-92	Grange Hall	1200	7.26	2.65	39.1
		Total Wt	3070	18.70		100.0

Contractor:

MDOT No.:



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

	Total Wt 307		18.70	18.70		100.0 < Verify this numb	
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"	100.0	100	0.0	100.0	100.0	0.0	0.0
1"	42.4	100	0.0	100.0	79.9	20.1	20.1
3/4"	15.3	97	' .9	100.0	69.9	10.0	30.1
1/2"	5.1	76	6.0	100.0	60.7	9.3	39.3
3/8"	3.8	55	5.4	100.0	54.8	5.8	45.2
#4	2.6	10).9	97.7	41.9	12.9	58.1
#8	2.3	3.	.3	85.0	34.9	7.0	65.1
#16	2.2	2.	.5	71.7	29.4	5.4	70.6
#30	2.1	2.	.3	53.4	22.2	7.2	77.8
#50	2.0	2.	.2	23.4	10.4	11.8	89.6
#100	1.8	2.		5.3	3.2	7.2	96.8
LBW	1.5	1.	.6	2.1	1.8	1.5	98.2

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

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

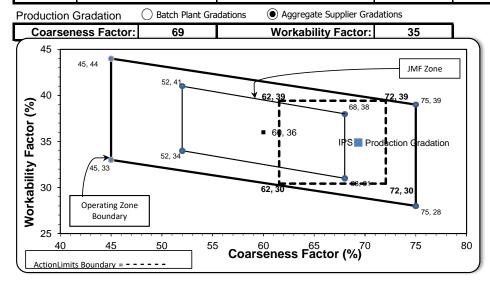
nom. max., #100 and #200 sieves.

*% 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.



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"	85.0	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

CA

1.5

Sample Date:

Sieve

#100

7/3/23 Concrete Grade: P1M, 3500HP

Dates Test F	Represents:	7/4/2023	through	7/10/2023				
Agg. Class	Pit#	Source	e Weight (SSD) ft ³		Weight (SSD) ft ³ Spe		Specific	%
Agg. Class	111.77	Source	Weight (33b)	veight (SSD)	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		

IΑ

1.9

Contractor:

MDOT No.:

Cumulative

3.3

2NS

5.6



---- Verify this number is 100%

% Retained	Cumulative % Retained	Superior Materials, LLC
0.0	0.0	Suite 500

Farmington Hills, MI 48336

				% Passing		% 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
#16	1.7	2.7	68.2	29.0	6.3	71.0
#30	1.7	2.3	51.0	21.9	7.1	78.1
#50	1.6	2.1	23.0	10.4	11.5	89.6

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

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

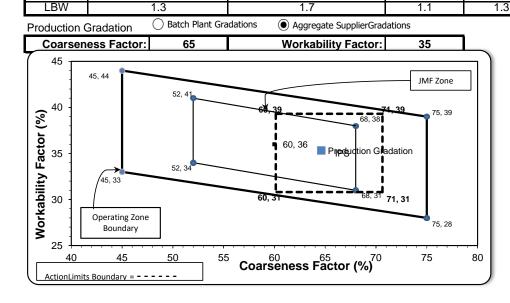
nom. max., #100 and #200 sieves.

*% 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)

96.7

98.7

7.2

Coars	eness Factor:	65	
Work	Workability Factor:		
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"	74.1	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

PREPARED BY: SM, LLC Technical Service

Sample Date:

7/3/23 Concrete Grade: P1M, 3500HP

Dates Test Represents:		7/4/2023	through	7/10/2023			
	Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
	CA	71-47	Presque Isle	1070	6.54	2.62	34.9
	IA	71-47	Presque Isle	750	4.59	2.62	24.4
	2NS	63-115	Ray Rd	1250	7.56	2.65	40.7

Contractor:

MDOT No.:



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

	Total Wt	3070	18.69		100.0	< Verify this n	umber is 100%	
Sieve	CA	IA	1	2NS	Cumulative % Passing	% Retained	Cumulative % Retained	
2"	100.0	100	.0	100.0	100.0	0.0	0.0	l
1.5"	100.0	100	.0	100.0	100.0	0.0	0.0	ı
1"	42.4	100	.0	100.0	79.9	20.1	20.1	l
3/4"	15.3	97.	9	100.0	70.0	10.0	30.0	l
1/2"	5.1	76.	.0	100.0	61.1	8.9	38.9	l
3/8"	3.8	55.	4	100.0	55.6	5.5	44.4	l
#4	2.6	10.	9	96.6	42.9	12.7	57.1	ı
#8	2.3	3.3	3	81.1	34.6	8.3	65.4	n
#16	2.2	2.	5	66.4	28.4	6.2	71.6	l
#30	2.1	2.3	3	50.4	21.8	6.6	78.2	n
#50	2.0	2.2	2	25.6	11.7	10.2	88.3	l
#100	1.8	2.	1	5.4	3.3	8.3	96.7	a
LBW	1.5	1.0	3	0.6	1.2	2.2	98.8	ı

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

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

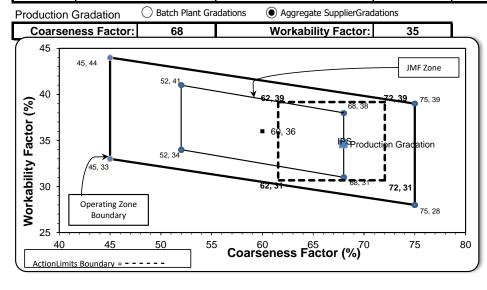
nom. max., #100 and #200 sieves.

*% 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	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"	85.0	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

PREPARED BY: SM, LLC Technical Service