Sample Date:

LBW

30

6/19/23 Concrete Grade: S2M, 3500HP

Dates Test F	Represents:	6/20/2023	through	6/26/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1575	9.63	2.62	51.6
26A	71-47	Presque Isle	250	1.53	2.62	8.2
2NS	75-051	Mid Michigan	1230	7.41	2.66	40.3
		Total Wt	3055	18.57		100.0

Contractor:

MDOT No.:



---- Verify this number is 100%

ined	Cumulative % Retained	<u>Superior Materials, LLC</u> 30701 W. 10 Mile Rd.
)	0.0	Suite 500
)	0.0	Farmington Hills, MI 48336

Cumulative 26A 6AA % Retai 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 96.2 100.0 100.0 98.0 2.0 2.0 3/4" 78.0 100.0 100.0 88.7 9.4 11.3 1/2' 37.4 96.0 100.0 67.4 21.3 32.6 3/8' 22.4 87.8 100.0 59.0 8.4 41.0 #4 4.5 22.7 97.0 43.2 15.8 56.8 #8 1.9 6.8 83.7 35.2 8.0 64.8 #16 1.6 3.7 69.4 29.1 6.2 70.9 #30 52.4 22.2 6.9 77.8 1.6 3.0 #50 1.6 2.7 24.0 10.7 11.5 89.3 #100 3.2 1.6 2.5 5.3 7.5 96.8

75, 28

75

80

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

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

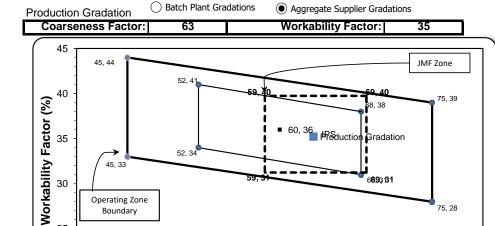
nom. max., #100 and #200 sieves.

*% 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



Coarseness Factor (%) 70

Initial 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"	100.0	0.0	0.0
3/4"	93.9	6.1	6.1
1/2"	71.4	22.5	28.6
3/8"	59.0	12.4	41.0
#4	45.1	13.9	54.9
#8	35.5	9.6	64.5
#16	28.3	7.2	71.7
#30	21.3	6.9	78.7
#50	11.0	10.3	89.0
#100	3.4	7.6	96.6
LBW	1.1	2.3	98.9

PREPARED BY: SM, LLC Technical Service

50

55

45, 33

Operating Zone

Boundary

ActionLimits Boundary = - - - - -

Sample Date:

6/19/23 Concrete Grade: **S2M**, **3500HP**

Dates Test F	represents:	0/20/2023	through	0/20/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1650	9.83	2.69	53.2
26A	58-003	Stoneco	250	1.49	2.69	8.1
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.7
		Total Wt	2100	10 50		100.0

Contractor:

MDOT No.:

<---- Verify this number is 100%

SUPERIOR MATERIALS

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

	10101111		. 5 5 . 5		Tomy and named to 10070		
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"	99.0	100.0	100.0	99.5	0.5	0.5	
3/4"	80.0	100.0	100.0	89.4	10.1	10.6	
1/2"	41.7	99.5	100.0	68.9	20.4	31.1	
3/8"	18.8	86.8	100.0	55.7	13.2	44.3	
#4	3.9	5.4	98.8	40.8	15.0	59.2	
#8	1.7	1.2	83.9	33.5	7.3	66.5	
#16	1.3	1.1	65.6	26.2	7.3	73.8	
#30	1.2	1.0	45.9	18.5	7.7	81.5	
#50	1.1	0.9	22.3	9.3	9.2	90.7	
#100	1.1	0.8	5.9	2.9	6.4	97.1	
LBW	1.0	0.6	1.3	1.1	1.9	98.9	

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

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

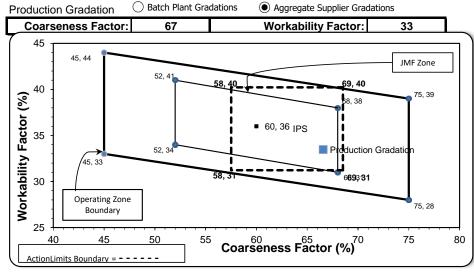
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$ 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	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"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.5	11.8	40.5
#4	43.8	15.7	56.2
#8	35.7	8.1	64.3
#16	27.0	8.7	73.0
#30	18.6	8.4	81.4
#50	6.8	11.8	93.2
#100	1.4	5.4	98.6
LBW	0.6	0.8	99.4

PREPARED BY: SM, LLC Technical Service

Sample Date:

6/19/23 Concrete Grade: S2M, 3500HP

Dates Test Represents: 6/20/2023 6/26/2023 through

Contractor:

MDOT No.:

Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1650	9.83	2.69	53.2
26A	58-003	Stoneco	250	1.49	2.69	8.1
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.7
		Total Wt	3100	18.58		100.0

SUPERIOR
MATERIALS

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

	Total Wt	3100	18.58		100.0	< Verify this n	umber is 100%
Sieve	6AA	26	SA	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"	99.0	10	0.0	100.0	99.5	0.5	0.5
3/4"	80.0	10	0.0	100.0	89.4	10.1	10.6
1/2"	41.7	99).5	100.0	68.9	20.4	31.1
3/8"	18.8	86	5.8	100.0	55.7	13.2	44.3
#4	3.9	5.	.4	98.8	40.8	15.0	59.2
#8	1.7	1.	.2	83.9	33.5	7.3	66.5
#16	1.3	1.	.1	65.6	26.2	7.3	73.8
#30	1.2	1.	.0	45.9	18.5	7.7	81.5
#50	1.1	0	9	22.3	9.3	9.2	90.7
#100	1.1	0	8	5.9	2.9	6.4	97.1
LBW	1.0	0.	.6	1.3	1.1	1.9	98.9

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

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

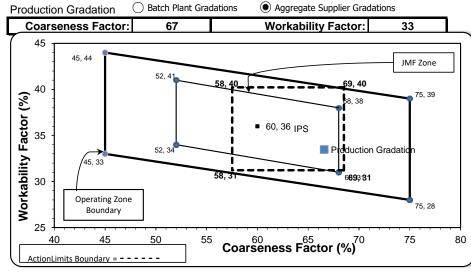
nom. max., #100 and #200 sieves.

*% 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)

Coars	eness Factor:	63	
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.5	11.8	40.5
#4	43.8	15.7	56.2
#8	35.7	8.1	64.3
#16	27.0	8.7	73.0
#30	18.6	8.4	81.4
#50	6.8	11.8	93.2
#100	1.4	5.4	98.6
LBW	0.6	0.8	99.4

Approved BY: PREPARED BY: SM, LLC Technical Service

PLANT #: Contractor: Sample Date: 6/19/23 Concrete Grade: S2M, 3500HP

Dates Test Represents: 6/20/2023 6/26/2023 through

MDOT No.:		

24100 10011	10010011101	0,-0,-0-0	un o a g	0,20,2020		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1600	9.53	2.69	51.4
26A	58-003	Stoneco	300	1.79	2.69	9.6
2NS	19-04	Schlegel	1210	7.26	2.67	38.9
		Total Wt	3110	18.58		100.0

Verify this number is 100%

Bu	<u>ilders</u>	Redi-l	<u>Mix</u>
307	701 W.	10 Mi	le Rd.
Sui	te 500		
_			

Farmington Hills, MI 48336

	i Olai Wi	3110	10.50		100.0	< verily this n	umber is 100%
Sieve	6AA	26	6A	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"	99.0	10	0.0	100.0	99.5	0.5	0.5
3/4"	80.0	10	0.0	100.0	89.7	9.8	10.3
1/2"	41.7	99	9.5	100.0	70.0	19.8	30.0
3/8"	18.8	86	5.8	100.0	57.0	13.0	43.0
#4	3.9	5	.4	99.9	41.4	15.6	58.6
#8	1.7	1.	.2	90.1	36.0	5.3	64.0
#16	1.3	1.	.1	69.4	27.8	8.3	72.2
#30	1.2	1.	.0	44.5	18.0	9.7	82.0
#50	1.1	0	.9	14.3	6.2	11.8	93.8
#100	1.1	0	.8	2.7	1.7	4.5	98.3
LBW	1.0	0.	.6	0.2	0.7	1.0	99.3

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

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

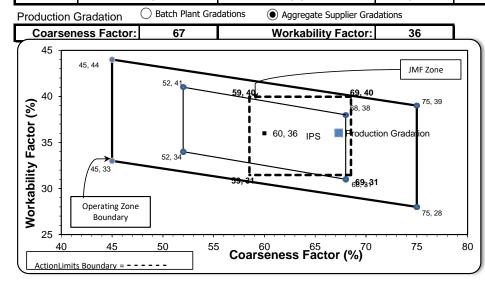
nom. max., #100 and #200 sieves.

*% 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:	64	
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.2	12.1	40.8
#4	41.5	17.7	58.5
#8	35.7	5.8	64.3
#16	27.9	7.9	72.1
#30	18.3	9.5	81.7
#50	7.3	11.0	92.7
#100	2.0	5.3	98.0
LBW	0.9	1.1	99.1

PREPARED BY: SM, LLC Technical Service

PLANT #: 12

Sample Date:

6/19/23

Concrete Grade: S2M, 3500HP

Contractor:

MDOT No.:

Dates Test F	Represents:	6/20/2023	through	6/26/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1550	9.48	2.62	50.8
26A	71-47	Presque Isle	270	1.65	2.62	8.9
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3
		Total Wt	3050	19.57		100.0

gg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1550	9.48	2.62	50.8
26A	71-47	Presque Isle	270	1.65	2.62	8.9
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3
		Total Wt	3050	18.57		100.0

SUPERIOR

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

	l otal Wt	3050	18.57		100.0	< Verify this n	umber is 100%
Sieve	6AA	26	A	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"	97.3	100	0.0	100.0	98.6	1.4	1.4
3/4"	76.4	100	0.0	100.0	88.0	10.6	12.0
1/2"	30.4	96	.5	100.0	64.3	23.7	35.7
3/8"	15.0	80	.4	100.0	55.1	9.3	44.9
#4	2.5	12	.3	96.4	41.2	13.8	58.8
#8	1.9	2.	4	80.5	33.6	7.6	66.4
#16	1.8	1.	4	65.0	27.3	6.4	72.7
#30	1.7	1.	2	48.9	20.7	6.6	79.3
#50	1.7	1.	1	25.2	11.1	9.6	88.9
#100	1.6	1.	0	4.7	2.8	8.3	97.2
LBW	1.1	0.	8	0.6	0.9	1.9	99.1
·	O				•		

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

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

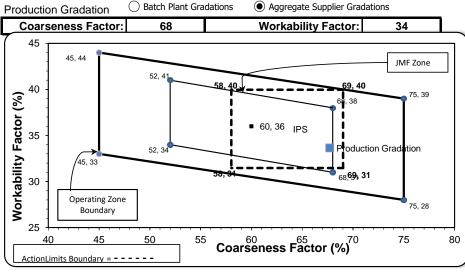
nom. max., #100 and #200 sieves.

*% 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:	64	
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	8.0
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.2	12.1	40.8
#4	41.5	17.7	58.5
#8	35.7	5.8	64.3
#16	27.9	7.9	72.1
#30	18.3	9.5	81.7
#50	7.3	11.0	92.7
#100	2.0	5.3	98.0
LBW	0.9	1.1	99.1

PREPARED BY: SM, LLC Technical Service

PLANT #: 20

6AA

100.0

100.0

99.3

83.4

44.1

26.3

5.6

3.0

2.5

2.4

2.3

2.1

Sample Date:

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

#50

#100

6/19/23 Concrete Grade: **S2M**, **3500HP**

Dates Test F	Represents:	6/20/2023	through	6/26/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1600	9.79	2.62	52.5
26A	71-47	Presque Isle	200	1.22	2.62	6.6
2NS	63-92	Grange Hall	1250	7.56	2.65	41.0
		Total Wt	3050	18.57		100.0

26A

100.0

100.0

100.0

100.0

96.8

84.1

17.4

5.2

2.6

1.9

1.6

1.5

·

MDOT No.:

8.3

20.8

10.2

16.2

7.6

6.7

8.5

12.4

6.3

1.4

Cumulative

% Passing

100.0

100.0

99.6

91.3

70.5

60.3

44.1

36.5

29.8

21.3

8.9

2.6

2NS

100.0

100.0

100.0

100.0

100.0

100.0

97.7

84.5

69.2

48.6

18.4

3.4

Contractor:

,

---- Verify this number is 100%

% Retained	Cumulative % Retained
0.0	0.0
0.0	0.0
0.4	0.4

8.7

29.5

39.7

55.9

63.5

70.2

78.7

91.1

97.4

98.8



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.,

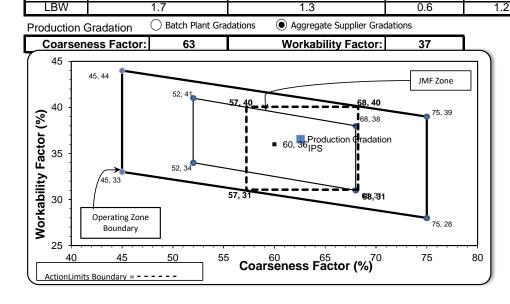
nom. max., #100 and #200 sieves.

 $^{*}\%$ 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)

Coars	eness Factor:	63	
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% 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"	93.3	6.7	6.7
1/2"	70.6	22.6	29.4
3/8"	59.6	11.0	40.4
#4	43.9	15.7	56.1
#8	35.6	8.4	64.4
#16	28.4	7.2	71.6
#30	19.4	9.0	80.6
#50	7.5	11.9	92.5
#100	0.9	6.6	99.1
LBW	0.9	0.1	99.1

PREPARED BY: SM, LLC Technical Service Approved By

Mart I. Ball

Total Wt

6AA

100.0

100.0

98.8

86.1

45.4

20.1

2.0

1.2

1.0

1.0

0.9

0.9

PLANT #: p11

Sample Date:

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

#50

#100

6/19/23 Concrete Grade: **S2M**, **3500HP**

18.57

dates Test Represents:		0/20/2023	through	0/20/2023		
∖gg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1600	9.79	2.62	52.5
26A	71-47	Presque Isle	220	1.35	2.62	7.2
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3

26A

100.0

100.0

100.0

100.0

96.5

80.4

12.3

2.4

1.4

1.2

1.1

1.0

3050

Contractor:

0.6

7.3

28.9

43.3

59.1

65.0

71.4

79.4

89.9

96.6

MDOT No.:

0.6

6.7

21.6

14.4

15.8

5.9

6.4

8.0

10.5

6.7

Cumulative

% Passing

100.0

100.0

99.4

92.7

71.1

56.7

40.9

35.0

28.6

20.6

10.1

3.4

2NS

100.0

100.0

100.0

100.0

100.0

100.0

96.6

84.8

69.4

49.5

23.7

7.0

	_
	CHIDEDIAD

<---- Verify this number is 100%

% Retained	Cumulative % Retained	<u>Superior Materials, LLC</u> 30701 W. 10 Mile Rd.		
0.0	0.0	Suite 500		
0.0	0.0	Farmington Hills, MI 48336		

Maximum % Anv two adia

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

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

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

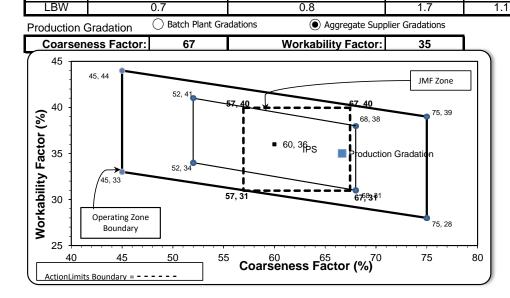
 $^{\star}\%$ Retained must be at least 4% for each sieve except max.,

MATERIALS

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:	62	
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"	100.0	0.0	0.0
3/4"	94.0	6.0	6.0
1/2"	70.2	23.7	29.8
3/8"	59.9	10.4	40.1
#4	42.7	17.2	57.3
#8	35.5	7.2	64.5
#16	28.4	7.0	71.6
#30	19.2	9.2	80.8
#50	8.9	10.3	91.1
#100	3.1	5.9	96.9
LBW	1.4	1.7	98.6

PREPARED BY: SM, LLC Technical Service

Sample Date:

6/19/23 Concrete Grade: S2M, 3500HP

Dates Test Represents:		6/20/2023	tnrougn	6/26/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1600	9.79	2.62	52.5
26A	71-47	Presque Isle	220	1.35	2.62	7.2
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3

Contractor:

MDOT No.:



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

	l otal Wt	3050	18.57		100.0	< Verify this n	umber is 100%
Sieve	6AA	26	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100	.0	100.0	100.0	0.0	0.0
1.5"	100.0	100	0.0	100.0	100.0	0.0	0.0
1"	98.8	100	.0	100.0	99.4	0.6	0.6
3/4"	86.1	100	.0	100.0	92.7	6.7	7.3
1/2"	45.4	96.	5	100.0	71.1	21.6	28.9
3/8"	20.1	80.	4	100.0	56.7	14.4	43.3
#4	2.0	12.	3	96.6	40.9	15.8	59.1
#8	1.2	2.4	4	84.8	35.0	5.9	65.0
#16	1.0	1.4	1.4		28.6	6.4	71.4
#30	1.0	1.3	2	49.5	20.6	8.0	79.4
#50	0.9	1.	1	23.7	10.1	10.5	89.9
#100	0.9	1.0)	7.0	3.4	6.7	96.6
LBW	0.7	0.8	3	1.7	1.1	2.3	98.9

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

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

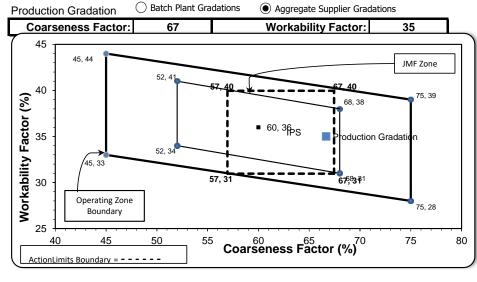
nom. max., #100 and #200 sieves.

*% 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)

Coars	eness Factor:	62	
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"	100.0	0.0	0.0
3/4"	94.0	6.0	6.0
1/2"	70.2	23.7	29.8
3/8"	59.9	10.4	40.1
#4	42.7	17.2	57.3
#8	35.5	7.2	64.5
#16	28.4	7.0	71.6
#30	19.2	9.2	80.8
#50	8.9	10.3	91.1
#100	3.1	5.9	96.9
LBW	1.4	1.7	98.6

PREPARED BY: SM, LLC Technical Service

Sample Date:

6/19/23 Concrete Grade: **S2M**, **3500HP**

ates Test Represents:		6/20/2023	tnrougn	6/26/2023			
\gg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution	
6AA	58-003	Stoneco	1650	9.83	2.69	53.2	
26A	58-003	Stoneco	250	1.49	2.69	8.1	
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.7	

Contractor:

MDOT No.:





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

Farmington Hills, MI 48336

	Total Wt	3100	18.58		100.0	< Verify this n	umber is 100%
Sieve	6AA	26A	1	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"	99.0	100.	0	100.0	99.5	0.5	0.5
3/4"	80.0	100.	0	100.0	89.4	10.1	10.6
1/2"	41.7	99.5	5	100.0	68.9	20.4	31.1
3/8"	18.8	86.8	3	100.0	55.7	13.2	44.3
#4	3.9	5.4		98.8	40.8	15.0	59.2
#8	1.7	1.2		83.9	33.5	7.3	66.5
#16	1.3	1.1		65.6	26.2	7.3	73.8
#30	1.2	1.0		45.9	18.5	7.7	81.5
#50	1.1	0.9		22.3	9.3	9.2	90.7
#100	1.1	0.8		5.9	2.9	6.4	97.1
LBW	1.0	0.6	•	1.3	1.1	1.9	98.9

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

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

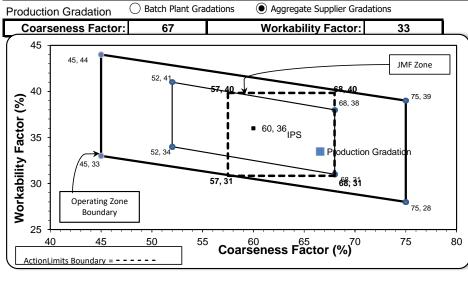
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$ 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:	63	
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"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.4	11.9	40.6
#4	43.0	16.5	57.0
#8	35.3	7.6	64.7
#16	28.2	7.1	71.8
#30	21.6	6.6	78.4
#50	9.1	12.5	90.9
#100	1.7	7.4	98.3
LBW	1.1	0.6	98.9

PREPARED BY: SM, LLC Technical Service

Concrete Grade: S2M, 3500HP

Sample Date: 6/19/23 Dates Test Represents: 6/20/2023

6/26/2023 through

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.17	2.62	49.2
26A	71-47	Presque Isle	350	2.14	2.62	11.5
2NS	63-92	Grange Hall	1200	7.26	2.65	39.3

MDOT No.:

Contractor:

,	Total Wt	3050	18.57		100.0	< Verify this n	umber is 100%
Sieve	6AA	26	6 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"	97.3	10	0.0	100.0	98.7	1.3	1.3
3/4"	76.4	10	0.0	100.0	88.4	10.3	11.6
1/2"	30.4	96	6.5	100.0	65.4	23.0	34.6
3/8"	15.0	80).4	100.0	55.9	9.4	44.1
#4	2.5	12	2.3	97.7	41.1	14.9	58.9
#8	1.9	2	.4	84.5	34.5	6.6	65.5
#16	1.8	1	.4	69.2	28.3	6.2	71.7
#30	1.7	1.2		48.6	20.1	8.2	79.9
#50	1.7	1.1		18.4	8.2	11.9	91.8
#100	1.6	1	.0	3.4	2.2	6.0	97.8
LBW	1.1	0	.8	0.6	0.9	1.4	99.1



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.,

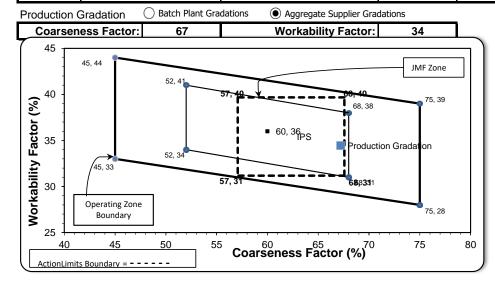
nom. max., #100 and #200 sieves.

*% 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)

Coarseness Factor:		62	
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"	99.1	0.9	0.9
3/4"	90.5	8.6	9.5
1/2"	69.8	20.7	30.2
3/8"	59.8	10.0	40.2
#4	42.2	17.6	57.8
#8	35.4	6.7	64.6
#16	28.8	6.7	71.2
#30	21.4	7.4	78.6
#50	8.8	12.6	91.2
#100	1.8	7.0	98.2
LBW	0.7	1.0	99.3

PREPARED BY: SM, LLC Technical Service

Sample Date:

Concrete Grade: S2M, 3500HP 6/19/23

Dates Test F	represents:	0/20/2023	through	0/20/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1650	9.83	2.69	53.2
26A	58-003	Stoneco	250	1.49	2.69	8.1
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.7
		Total Wt	2100	10 50		100.0

Contractor:

MDOT No.:

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

	Total Wt	3100	18.58		100.0	< Verify this n	umber is 100%
Sieve	6AA	26	iA	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"	99.0	100	0.0	100.0	99.5	0.5	0.5
3/4"	80.0	100	0.0	100.0	89.4	10.1	10.6
1/2"	41.7	99).5	100.0	68.9	20.4	31.1
3/8"	18.8	86	5.8	100.0	55.7	13.2	44.3
#4	3.9	5.	4	98.8	40.8	15.0	59.2
#8	1.7	1.	2	83.9	33.5	7.3	66.5
#16	1.3	1.	.1	65.6	26.2	7.3	73.8
#30	1.2	1.	.0	45.9	18.5	7.7	81.5
#50	1.1	0.	.9	22.3	9.3	9.2	90.7
#100	1.1	0.	8	5.9	2.9	6.4	97.1
LBW	1.0	0.	.6	1.3	1.1	1.9	98.9

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

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

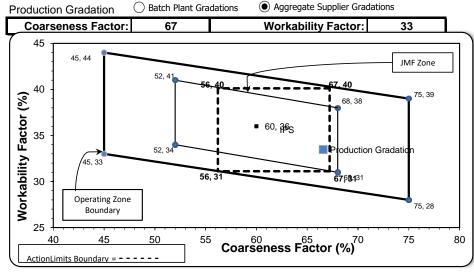
nom. max., #100 and #200 sieves.

*% 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)

Coars	eness Factor:	62	
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	0.8
3/4"	91.1	8.1	8.9
1/2"	72.0	19.1	28.0
3/8"	60.3	11.7	39.7
#4	43.4	16.9	56.6
#8	35.6	7.8	64.4
#16	28.4	7.2	71.6
#30	21.8	6.7	78.2
#50	9.1	12.6	90.9
#100	1.7	7.4	98.3
LBW	1.1	0.6	98.9

PREPARED BY: SM, LLC Technical Service

Sample Date: 6/19/23 Concrete Grade: S2M, 3500HP

Dates Test I	Represents:	6/20/2023	through	0/20/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1570	9.60	2.62	51.5
26A	71-47	Presque Isle	230	1.41	2.62	7.5
2NS	44-051	Krake Willis Rd	1250	7.56	2.65	41.0
		Total Wt	3050	18.57		100.0

Contractor:

MDOT No.:



----- Verify this number is 100%

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

Cumulative Cui 26A 6AA % Retained Sieve 2NS % Passing % F 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 96.2 100.0 100.0 98.0 2.0 2.0 3/4" 78.0 100.0 100.0 88.7 9.4 11.3 1/2' 37.4 96.0 100.0 67.5 21.2 32.5 3/8' 87.8 100.0 40.9 22.4 59.1 8.3 #4 4.5 22.7 95.7 43.2 15.9 56.8 #8 1.9 6.8 81.9 35.1 8.2 64.9 #16 1.6 3.7 66.9 28.5 6.5 71.5 #30 6.9 78.4 1.6 3.0 50.2 21.6 11.3 #50 1.6 2.7 25.0 10.4 88.7 #100 1.6 2.5 7.5 4.1 7.2 95.9 LBW 1.3 2.8

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

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

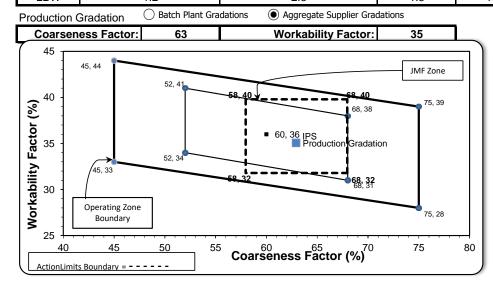
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$ 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:	63	
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% 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"	89.8	10.2	10.2
1/2"	70.7	19.1	29.3
3/8"	59.6	11.1	40.4
#4	43.2	16.4	56.8
#8	35.8	7.4	64.2
#16	29.2	6.6	70.8
#30	21.4	7.8	78.6
#50	9.8	11.6	90.2
#100	3.7	6.1	96.3
LBW	1.2	2.5	98.8

PREPARED BY: SM, LLC Technical Service

Sample Date:

6/19/23 Concrete Grade: **S2M**, **3500HP**

ates Test Represents:		6/20/2023	through	6/26/2023		
∖gg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1550	9.48	2.62	50.8
26A	71-47	Presque Isle	270	1.65	2.62	8.9
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3

Contractor:

MDOT No.:



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

	1 otal Wt 3050 18.57			100.0 < Verify this num		umber is 100%	
Sieve	6AA	26	A	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"	97.3	100	0.0	100.0	98.6	1.4	1.4
3/4"	76.4	100	0.0	100.0	88.0	10.6	12.0
1/2"	30.4	96	.5	100.0	64.3	23.7	35.7
3/8"	15.0	80	.4	100.0	55.1	9.3	44.9
#4	2.5	12	.3	96.4	41.2	13.8	58.8
#8	1.9	2.	4	80.5	33.6	7.6	66.4
#16	1.8	1.	4	65.0	27.3	6.4	72.7
#30	1.7	1.	2	48.9	20.7	6.6	79.3
#50	1.7	1.	1	25.2	11.1	9.6	88.9
#100	1.6	1.	0	4.7	2.8	8.3	97.2
LBW	1.1	0.	8	0.6	0.9	1.9	99.1

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

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

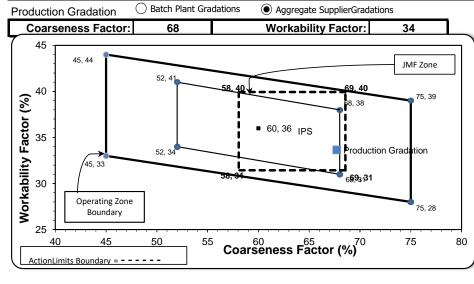
nom. max., #100 and #200 sieves.

 $^{\star}\%$ 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	eness Factor:	63	
Work	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% 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"	95.6	4.4	4.4
1/2"	73.1	22.6	26.9
3/8"	59.3	13.8	40.7
#4	42.8	16.5	57.2
#8	35.7	7.1	64.3
#16	28.9	6.8	71.1
#30	20.7	8.2	79.3
#50	9.9	10.8	90.1
#100	2.1	7.8	97.9
LBW	0.9	1.2	99.1

Approved By:

PREPARED BY: SM, LLC Technical Service