Highland

PLANT #: P-102

63-114

Sample Date: Dates

2NS

Concrete Grade: S2M, 3500HP

Dates Test Represents:		6/4/2024	through	6/10/2024		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1550	9.23	2.69	50.0
26A	58-003	Stoneco	350	2.09	2.69	11.3

Contractor:

MDOT No.:



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

2.10	00 111	ringiliaria	1200	7.20	2.00	00.1		
Total Wt		3100	18.58		100.0	< Verify this n	umber is 100%	
Sieve		6AA	26	6A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	1	100.0	10	0.0	100.0	100.0	0.0	0.0
1.5"	1	100.0	10	0.0	100.0	100.0	0.0	0.0
1"	1	100.0	10	0.0	100.0	100.0	0.0	0.0
3/4"		84.2	10	0.0	100.0	92.1	7.9	7.9
1/2"		37.8	99	9.5	100.0	68.8	23.3	31.2
3/8"		13.0	86	6.9	100.0	55.0	13.8	45.0
#4		1.4	5	.3	98.7	39.5	15.5	60.5
#8		0.9	1	.7	85.2	33.6	5.9	66.4
#16		0.8	1	.3	69.3	27.4	6.3	72.6
#30		0.8	1	.1	49.8	19.8	7.6	80.2
#50		0.7	1	.0	18.5	7.6	12.2	92.4
#100		0.7	1	.0	3.0	1.6	6.0	98.4
LBW		0.6	0	.8	0.6	0.6	1.0	99.4
•	·	_			•			

2.65

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

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

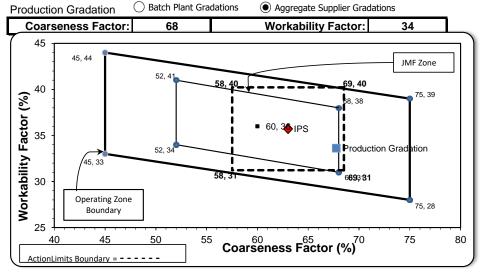
nom. max., #100 and #200 sieves.

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

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

*% Retained must be at least 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.



Intial Production Sample (IPS)

Coars	eness Factor:	63	
Work	ability Factor:	36	
Siovo	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

Total Wt

0.6

PLANT #: P-103

Sample Date:

LBW

6/3/24 Concrete Grade: **S2M**, **3500HP**

18.58

Dates Test Represents: 6/4/2024 6/10/2024 through Specific ft³ Agg. Class Pit# Source Weight (SSD) Gravity Contribution 6AA 58-003 Stoneco 1550 9.23 2.69 50.0 26A 58-003 Stoneco 350 2.09 2.69 11.3 2NS 63-114 Highland 1200 7.26 2.65 38.7

3100

Contractor:

MDOT No.:

100.0

0.6



<---- Verify this number is 100%

į	Cumulative % Retained	
	0.0	Suite 500
	0.0	Farmington Hills, MI 48336

Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	84.2	100.0	100.0	92.1	7.9	7.9
1/2"	37.8	99.5	100.0	68.8	23.3	31.2
3/8"	13.0	86.9	100.0	55.0	13.8	45.0
#4	1.4	5.3	98.7	39.5	15.5	60.5
#8	0.9	1.7	85.2	33.6	5.9	66.4
#16	0.8	1.3	69.3	27.4	6.3	72.6
#30	0.8	1.1	49.8	19.8	7.6	80.2
#50	0.7	1.0	18.5	7.6	12.2	92.4
#100	0.7	1.0	3.0	1.6	6.0	98.4

0.6

8.0

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

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

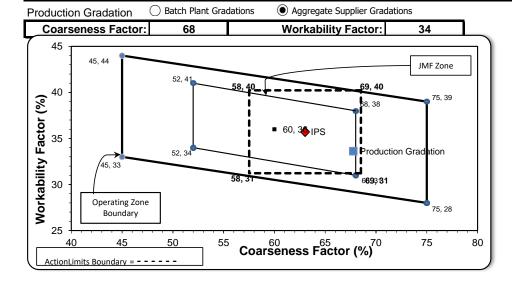
nom. max., #100 and #200 sieves.

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

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

*% Retained must be at least 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.



Intial Production Sample (IPS)

99.4

Coars	eness Factor:	63	
Work	ability Factor:	36	
Siovo	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

Approved BY:

6/3/24

6AA

100.0

100.0

98.4

87.2

52.1

31.6

4.8

2.2

2.0

1.9

1.8

1.8

PLANT #: 12

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

#50

#100

Concrete Grade: S2M, 3500HP

2NS

100.0

100.0

100.0

100.0

100.0

100.0

96.0

81.3

65.5

49.6

25.3

4.7

Cumulative

% Passing

100.0

100.0

99.1

93.0

73.5

61.8

42.7

34.4

27.7

21.2

11.3

3.0

Sample Date: **Dates Test Represents:** 6/4/2024 6/10/2024 through

	1					
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1670	10.21	2.62	54.8
26A	71-47	Presque Isle	150	0.92	2.62	4.9
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3
		Total Wt	3050	18.57		100.0

26A

100.0

100.0

100.0

100.0

95.0

84.4

26.8

8.8

4.2

3.0

2.6

2.4

Contractor:

MDOT No.:

6.1

19.5

11.7

19.1

8.2

6.7

6.5

9.9

8.3

1.8



--- Verify this number is 100%

% Retained	Cumulative % Retained
0.0	0.0
0.0	0.0
0.9	0.9

7.0

26.5

38.2

57.3

65.6

72.3

78.8

88.7

97.0

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.,

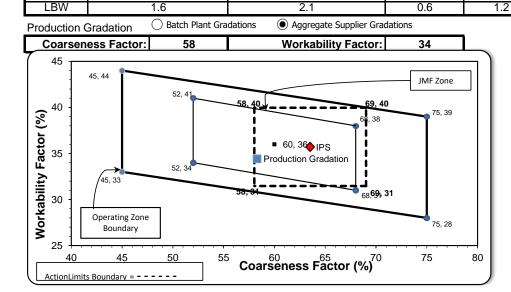
nom. max., #100 and #200 sieves.

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

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

*% Retained must be at least 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.



Intial Production Sample (IPS)

Coars	eness Factor:	64	
Work	ability Factor:	36	
Siovo	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 #: p11

Sample Date:

6/3/24 Concrete Grade: S2M, 3500HP 6/10/2024

[Dates Test F	Represents:	6/4/2024	through	6/10/2024		
1	Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
	6AA	71-47	Presque Isle	1450	8.87	2.62	47.5
Г	26A	71-47	Presque Isle	370	2.26	2.62	12.1
Г	2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3

Contractor:

MDOT No.:



<u>s</u>	uperior Materials, LLC
3	0701 W. 10 Mile Rd.
S	uite 500
F	armington Hills, MI 48336

	Total Wt	3050	18.57		100.0	< Verify 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"	96.9	10	0.0	100.0	98.5	1.5	1.5
3/4"	71.5	10	0.0	100.0	86.5	12.1	13.5
1/2"	34.5	95	5.0	100.0	68.3	18.2	31.7
3/8"	20.4	84	l.4	100.0	60.3	8.0	39.7
#4	4.6	26	6.8	95.9	44.1	16.2	55.9
#8	2.9	8	.8	84.4	36.5	7.6	63.5
#16	2.4	4	.2	69.4	29.6	6.8	70.4
#30	2.3	3	.0	49.5	21.4	8.2	78.6
#50	2.2	2	.6	22.9	10.6	10.8	89.4
#100	2.0	2	.4	6.6	3.9	6.7	96.1
LBW	1.2	2	.1	1.1	1.3	2.6	98.7

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

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

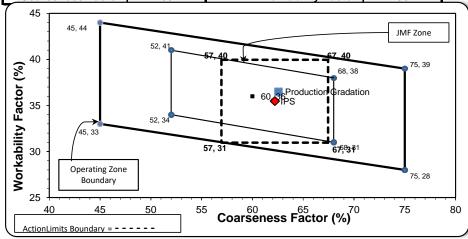
nom. max., #100 and #200 sieves.

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

nom. max., #100 and #200 sieves. *% Retained must be at least 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Batch Plant Gradations Aggregate Supplier Gradations **Production Gradation Coarseness Factor:** 63 **Workability Factor:** 36 45, 44



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 Approved By:

PLANT #: P-35

Concrete Grade: S2M, 3500HP

Sample Date: 6/3/24
Dates Test Represents: 6/4/2024

4/2024 through 6/10/2024

		_			
ΝЛ	$\cap C$	١Τ.	Nο		

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1550	9.23	2.69	50.0
26A	58-003	Stoneco	350	2.09	2.69	11.3
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.7
		Total Wt	3100	18.58		100.0

MDO 1 No.. _

Contractor:

<---- Verify this number is 100%

SUPERIO	PLS

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

	i otai wt	3100	18.58		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"	100.0	100	0.0	100.0	100.0	0.0	0.0
3/4"	84.2	100	0.0	100.0	92.1	7.9	7.9
1/2"	37.8	99	.5	100.0	68.8	23.3	31.2
3/8"	13.0	86	.9	100.0	55.0	13.8	45.0
#4	1.4	5.	3	99.0	39.6	15.4	60.4
#8	0.9	1.	7	87.0	34.3	5.3	65.7
#16	0.8	1.	3	64.4	25.5	8.8	74.5
#30	0.8	1.	1	40.8	16.3	9.2	83.7
#50	0.7	1.	0	18.3	7.5	8.8	92.5
#100	0.7	1.	0	3.6	1.9	5.7	98.1
LBW	0.6	0.	8	0.4	0.5	1.3	99.5
· ·	^	_	·	· ·	· ·	·	·

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

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

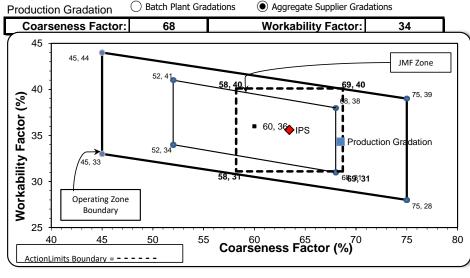
nom. max., #100 and #200 sieves.

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

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

*% Retained must be at least 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.



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"	93.1	6.9	6.9
1/2"	70.0	23.1	30.0
3/8"	59.1	10.9	40.9
#4	46.0	13.1	54.0
#8	35.6	10.4	64.4
#16	27.2	8.4	72.8
#30	19.8	7.4	80.2
#50	10.1	9.7	89.9
#100	2.5	7.6	97.5
LBW	0.9	1.6	99.1

PREPARED BY: SM, LLC Technical Service Approved By

6/3/24

PLANT #: P-38

Sample Date:

Concrete Grade: S2M, 3500HP

Contractor:

Dates Test Represents: 6/4/2024

through 6/10/2024

MDOT N

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1550	9.23	2.69	50.0
26A	58-003	Stoneco	350	2.09	2.69	11.3
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.7
		Total Wt	3100	18.58		100.0

SUPERIOR	P

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	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"	100.0	10	0.0	100.0	100.0	0.0	0.0
3/4"	84.2	10	0.0	100.0	92.1	7.9	7.9
1/2"	37.8	99).5	100.0	68.8	23.3	31.2
3/8"	13.0	86	6.9	100.0	55.0	13.8	45.0
#4	1.4	5	.3	99.0	39.6	15.4	60.4
#8	0.9	1.	.7	87.0	34.3	5.3	65.7
#16	0.8	1.	.3	64.4	25.5	8.8	74.5
#30	0.8	1.	.1	40.8	16.3	9.2	83.7
#50	0.7	1.	.0	18.3	7.5	8.8	92.5
#100	0.7	1.	.0	3.6	1.9	5.7	98.1
LBW	0.6	0.	.8	0.4	0.5	1.3	99.5

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

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

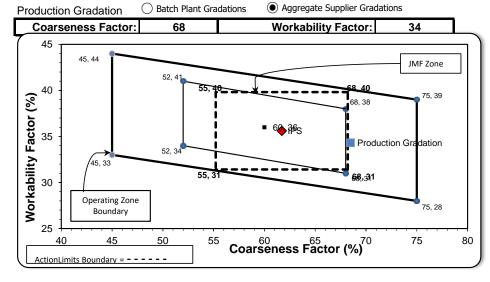
nom. max., #100 and #200 sieves.

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

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

*% Retained must be at least 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.



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 Approved By:

6/3/24

PLANT #: P-O2

Sample Date:

Concrete Grade: S2M, 3500HP

Dates Test Represents: 6/4/2024 6/10/2024 through Specific % ft³ Agg. Class Pit# Weight (SSD) Source Gravity Contribution 6AA 71-47 Presque Isle 1670 10.21 2.62 54.8 26A 71-47 Presque Isle 150 0.92 2.62 4.9 2NS 63-115 Ray Rd 1230 7.44 2.65 40.3

MDOT No.:

Contractor:



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	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"	98.4	10	0.0	100.0	99.1	0.9	0.9
3/4"	87.2	10	0.0	100.0	93.0	6.1	7.0
1/2"	52.1	95	5.0	100.0	73.5	19.5	26.5
3/8"	31.6	84	1.4	100.0	61.8	11.7	38.2
#4	4.8	26	6.8	96.0	42.7	19.1	57.3
#8	2.2	8	.8	81.3	34.4	8.2	65.6
#16	2.0	4	.2	65.5	27.7	6.7	72.3
#30	1.9	3	.0	49.6	21.2	6.5	78.8
#50	1.8	2	.6	25.3	11.3	9.9	88.7
#100	1.8	2	.4	4.7	3.0	8.3	97.0
LBW	1.6	2	.1	0.6	1.2	1.8	98.8

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

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

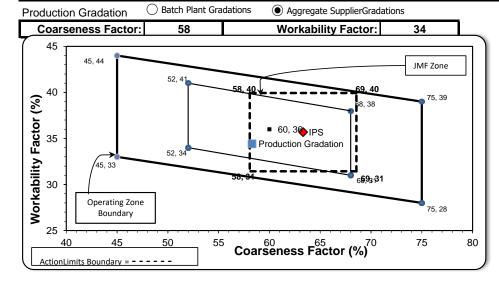
nom. max., #100 and #200 sieves.

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

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

*% Retained must be at least 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.



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	

PREPARED BY: SM, LLC Technical Service Approved By: