Sample Date:

5/20/24 Concrete Grade: P1M, 3500HP

Dates Test Represents:		5/21/2024	tnrougn	5/27/2024		
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

Contractor:

MDOT No.:



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

	Total Wt	3070	18.67		100.0	< Verify this number 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"	97.3	100	0.0	100.0	99.1	0.9	0.9
1"	37.0	100	0.0	100.0	78.0	21.0	22.0
3/4"	22.1	99	.0	100.0	72.6	5.5	27.4
1/2"	8.4	78	.2	100.0	62.4	10.2	37.6
3/8"	4.5	50	.1	100.0	53.7	8.7	46.3
#4	2.5	7.	4	96.4	40.5	13.2	59.5
#8	2.0	2.	4	81.4	33.1	7.3	66.9 r
#16	1.8	1.	7	66.9	27.2	5.9	72.8
#30	1.8	1.	6	52.7	21.6	5.6	78.4 r
#50	1.7	1.	5	28.2	12.0	9.6	88.0
#100	1.6	1.	5	8.3	4.2	7.8	95.8 a
LBW	1.3	1.	3	1.2	1.3	2.9	98.7

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

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

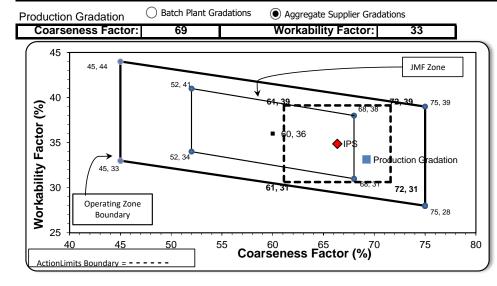
nom. max., #100 and #200 sieves.

*% 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.



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"	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

CA

100.0

100.0

67.7

35.6

Sample Date:

Sieve

2"

1.5"

3/4"

5/20/24 Concrete Grade: **P1M**, **3500HP**

Dates Test F	Represents:	5/21/2024	tnrougn	5/27/2024		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1470	8.76	2.69	47.1
IA	58-003	Stoneco	450	2.68	2.69	14.4
2NS	63-114	Highland	1200	7.26	2.65	38.5
		Total Wt	3120	18.70	_	100.0

IΑ

100.0

100.0

100.0

100.0

Contractor:

Cumulative

% Retained

0.0

0.0

15.2

30.3

39.3

44.9

58.2

65.8

72.8

80.3

92.4

98.4

99.3

MDOT No.:

% Retained

0.0

0.0

15.2

15.1

9.0

5.6

13.4

7.6

7.0

7.5

12.1

6.0

0.9

Cumulative

% Passing

100.0

100.0

84.8

69.7

2NS

100.0

100.0

100.0

100.0



----- Verify this number is 100%

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.,

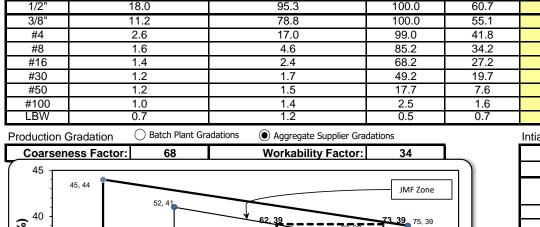
nom. max., #100 and #200 sieves.

 $^{\star}\%$ 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.



Coarseness Fac	rseness Factor: 68 Workability Factor: 34			
45				
45, 44	52, 41	62.39	JMF Zone 73. 39 75, 39	
Morkability Factor (%) 35 45, 33 Operating Bound	52, 34	■ 60,36	n Gradation	
	·	62, 31	73, 3	
25 + 40 45 ActionLimits Boundary		Coarseness Factor (%) ⁷⁰	75 80	

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

Sample Date:

5/20/24 Concrete Grade: P1M, 3500HP

Dates Test I	Represents:	5/21/2024	tnrougn	5/27/2024		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1470	8.76	2.69	47.1
IA	58-003	Stoneco	450	2.68	2.69	14.4
2NS	63-114	Highland	1200	7.26	2.65	38.5
		Total Wt	3120	18.70		100.0

Contractor:

MDOT No.:

SUPERIOR MATERIALS
Superior Materials, LLC
30701 W 10 Mile Rd

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

Total Wt		3120	18.70		100.0	< Verify this n	umber is 100%
Sieve	CA	I.	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"	67.7	10	100.0		84.8	15.2	15.2
3/4"	35.6	10	0.0	100.0	69.7	15.1	30.3
1/2"	18.0	95	5.3	100.0	60.7	9.0	39.3
3/8"	11.2	78	3.8	100.0	55.1	5.6	44.9
#4	2.6	17	' .0	99.0	41.8	13.4	58.2
#8	1.6	4.	.6	85.2	34.2	7.6	65.8 r
#16	1.4	2	.4	68.2	27.2	7.0	72.8
#30	1.2	1.	.7	49.2	19.7	7.5	80.3 r
#50	1.2	1.	.5	17.7	7.6	12.1	92.4
#100	1.0	1.	.4	2.5	1.6	6.0	98.4 a
LBW	0.7	1.	.2	0.5	0.7	0.9	99.3

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

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

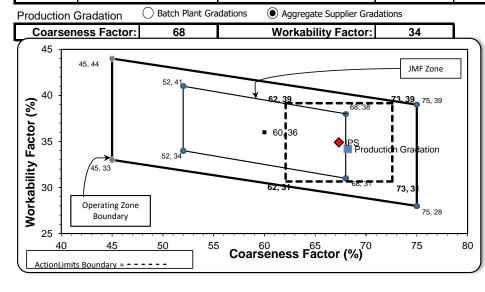
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$ 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	0.8	98.6

PLANT #: 12

Sample Date:

5/20/24

Contractor:

Concrete Grade: P1M, 3500HP

Dates Test F	Represents:	5/21/2024	through	5/27/2024		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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	63-115	Ray Rd	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

MDOT No.:

---- Verify this number is 100%

SUPERIOR MATERIALS	

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.

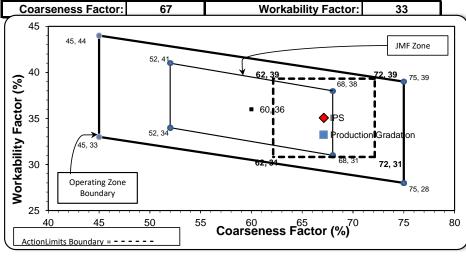
*% Retained must be at least 4% for each sieve except max.,

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.

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	97.3	100.0	100.0	99.1	0.9	0.9
1"	37.0	100.0	100.0	80.1	19.1	19.9
3/4"	22.1	99.0	100.0	75.1	5.0	24.9
1/2"	8.4	78.2	100.0	64.7	10.4	35.3
3/8"	4.5	50.1	100.0	55.2	9.5	44.8
#4	2.5	7.4	96.0	40.5	14.7	59.5
#8	2.0	2.4	81.6	33.2	7.3	66.8
#16	1.8	1.7	66.2	26.9	6.3	73.1
#30	1.8	1.6	50.6	20.8	6.1	79.2
#50	1.7	1.5	25.7	11.0	9.8	89.0
#100	1.6	1.5	4.6	2.7	8.3	97.3
LBW	1.3	1.3	0.5	1.0	1.8	99.0
Production (Production Gradation					on 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"	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:

5/20/24 Concrete Grade: **P1M**, **3500HP**

ates Test Represents:		5/21/2024	through	5/27/2024		
gg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	920	5.63	2.62	30.0
IA	71-47	Presque Isle	950	5.81	2.62	30.9
2NS	63-92	Grange Hall	1200	7.26	2.65	39.1

Contractor:

MDOT No.:

Cumulative % Retained	JUDELIUL IVIALELIAIS. LLC
0.0	Suite 500
0.8	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	10	0.0	100.0	100.0	0.0	0.0
1.5"	97.4	10	0.0	100.0	99.2	0.8	0.8
1"	35.7	100.0		100.0	80.7	18.5	19.3
3/4"	10.2	99.2		100.0	72.8	7.9	27.2
1/2"	2.7	77	' .9	100.0	64.0	8.8	36.0
3/8"	2.4	55	5.9	100.0	57.1	6.9	42.9
#4	2.3	14	l.7	98.0	43.5	13.6	56.5
#8	2.3	5	.9	82.4	34.7	8.8	65.3
#16	2.2	4.	.1	67.1	28.2	6.6	71.8
#30	2.1	3	.5	49.9	21.2	6.9	78.8
#50	2.0	3	.3	22.3	10.3	10.9	89.7
#100	1.8	3	.0	4.2	3.1	7.2	96.9
LBW	1.5	2	.5	0.6	1.5	1.7	98.5

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

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

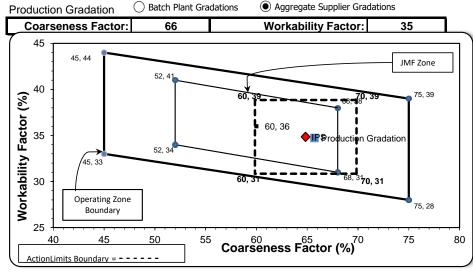
nom. max., #100 and #200 sieves.

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

PREPARED BY: SM, LLC Technical Service

Sample Date:

#100

1.6

5/20/24 Concrete Grade: P1M, 3500HP 5/27/2024

Dates Test F	Represents:	5/21/2024	through	5/27/2024		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	900	5.50	2.62	29.3
IA	71-47	Presque Isle	970	5.93	2.62	31.6
2NS	95-013	Smelter Bay	1200	7.26	2.65	39.1
		Total Wt	3070	18.70		100.0

Contractor:

MDOT No.:



---- Verify this number is 100%

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

Cumulative CA IΑ % Retaine Sieve 2NS % Passing 2" 100.0 100.0 100.0 100.0 0.0 1.5" 97.3 100.0 100.0 99.2 0.8 0.8 37.0 100.0 100.0 81.5 17.7 18.5 3/4" 22.1 99.0 100.0 76.8 4.7 23.2 1/2' 8.4 78.2 100.0 66.3 10.6 33.7 3/8' 4.5 50.1 100.0 10.0 43.8 56.2 #4 2.5 7.4 96.3 40.7 15.5 59.3 #8 2.0 2.4 85.0 34.6 6.1 65.4 #16 1.8 1.7 70.4 28.6 6.0 71.4 #30 50.5 20.8 79.2 1.8 1.6 7.8 #50 1.7 1.5 23.6 10.2 10.6 89.8

6.9

3.6

1.5

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

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

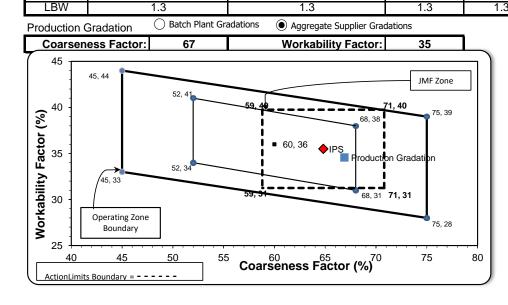
nom. max., #100 and #200 sieves.

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

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

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

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



Intial Production Sample (IPS)

96.4

6.6

2.3

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:

#100

5/20/24 Concrete Grade: P1M, 3500HP 5/27/2024

Dates Test F	Represents:	5/21/2024	through	5/27/2024		
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stoneco	1470	8.76	2.69	47.1
IA	58-003	Stoneco	450	2.68	2.69	14.4
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	
0	0.0	Suite 500
0	0.0	Farmington Hills, MI 48336

Cumulative CA IΑ % Reta 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 67.7 100.0 100.0 84.8 15.2 15.2 3/4" 35.6 100.0 100.0 69.7 15.1 30.3 1/2' 18.0 95.3 100.0 60.7 9.0 39.3 3/8' 78.8 100.0 44.9 11.2 55.1 5.6 #4 2.6 17.0 99.3 41.9 13.2 58.1 #8 1.6 4.6 87.4 35.0 6.8 65.0 #16 1.4 2.4 64.3 25.7 9.3 74.3 #30 38.7 10.0 84.3 1.2 1.7 15.7 #50 1.2 1.5 14.5 6.4 9.3 93.6

2.5

1.6

1.4

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

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

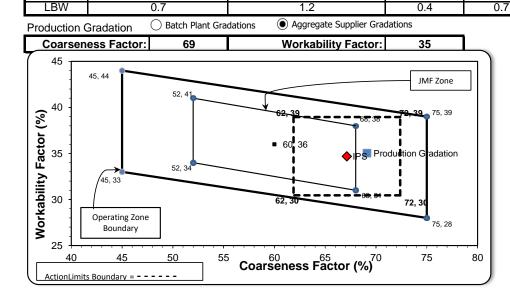
nom. max., #100 and #200 sieves.

*% 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)

98.4

99.3

4.7

1.0

Coars	Coarseness Factor:		
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

PREPARED BY: SM, LLC Technical Service

1.0

5/20/24

PLANT #: P-36

Sample Date:

Concrete Grade: P1M, 3500HP

Dates Lest F	Represents:	5/21/2024	through	5/27/2024		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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	30.1

.....

MDOT No.:

Contractor:



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	L	4	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	10	0.0	100.0	100.0	0.0	0.0
1.5"	97.3	10	0.0	100.0	99.1	0.9	0.9
1"	37.0	10	0.0	100.0	80.1	19.1	19.9
3/4"	22.1	99	0.0	100.0	75.1	5.0	24.9
1/2"	8.4	78	3.2	100.0	64.7	10.4	35.3
3/8"	4.5	50).1	100.0	55.2	9.5	44.8
#4	2.5	7	.4	98.0	41.3	13.9	58.7
#8	2.0	2	.4	82.4	33.5	7.7	66.5
#16	1.8	1	.7	67.1	27.3	6.2	72.7
#30	1.8	1	.6	49.9	20.5	6.8	79.5
#50	1.7	1	.5	22.3	9.7	10.8	90.3
#100	1.6	1	.5	4.2	2.6	7.1	97.4
LBW	1.3	1	.3	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.,

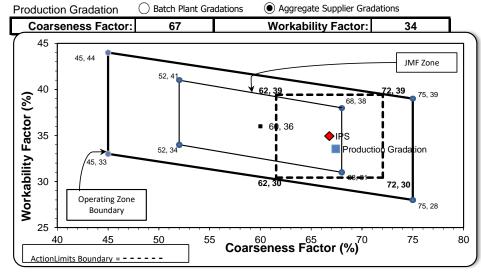
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$ 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	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"	85.0	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:

5/20/24 Concrete Grade: P1M, 3500HP

Dates Test Represents: 5/21/2024 5/27/2024 through Specific ft³ Agg. Class Pit# Source Weight (SSD) Gravity Contribution CA 71-47 Presque Isle 900 5.50 2.62 29.3 IΑ 71-47 Presque Isle 920 5.63 2.62 30.0 2NS 44-051 Krake Willis Rd 1250 7.56 2.65 40.7

MDOT No.:

Contractor:

tive	Superior Materials, LLC
ned	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	1/	4	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100	0.0	100.0	100.0	0.0	0.0
1.5"	97.3	100	0.0	100.0	99.2	0.8	0.8
1"	37.0	100	0.0	100.0	81.5	17.7	18.5
3/4"	22.1	99	.0	100.0	76.9	4.7	23.1
1/2"	8.4	78	.2	100.0	66.6	10.2	33.4
3/8"	4.5	50	.1	100.0	57.0	9.6	43.0
#4	2.5	7.	4	99.2	43.3	13.7	56.7
#8	2.0	2.	4	84.4	35.7	7.7	64.3
#16	1.8	1.	7	68.9	29.1	6.6	70.9
#30	1.8	1.	6	50.4	21.5	7.6	78.5
#50	1.7	1.	5	21.8	9.8	11.7	90.2
#100	1.6	1.	5	5.2	3.0	6.8	97.0
LBW	1.3	1.	3	0.8	1.1	1.9	98.9

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

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

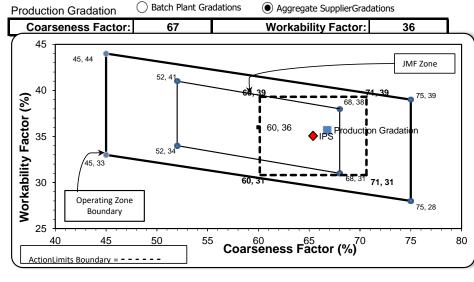
nom. max., #100 and #200 sieves.

*% 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:	65	
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"	74.1	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:

LBW

5/20/24 Concrete Grade: P1M, 3500HP 5/27/2024

Dates Test Represents:		5/21/2024	through	5/27/2024		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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	63-115	Ray Rd	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

Contractor:

MDOT No.:



---- Verify this number is 100%

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

Cumulative CA IΑ % Retai Sieve 2NS % Passing 2" 100.0 100.0 100.0 100.0 0.0 1.5" 97.3 100.0 100.0 99.1 0.9 37.0 100.0 100.0 80.1 19.1 19.9 3/4" 22.1 99.0 100.0 75.1 5.0 24.9 1/2' 8.4 78.2 100.0 64.7 10.4 35.3 3/8' 4.5 50.1 100.0 9.5 44.8 55.2 #4 2.5 7.4 96.0 40.5 14.7 59.5 #8 2.0 2.4 81.6 33.2 7.3 66.8 #16 1.8 1.7 66.2 26.9 6.3 73.1 #30 50.6 20.8 6.1 79.2 1.8 1.6 #50 1.7 1.5 25.7 11.0 9.8 89.0 #100 2.7 1.6 1.5 4.6 8.3 97.3

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

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

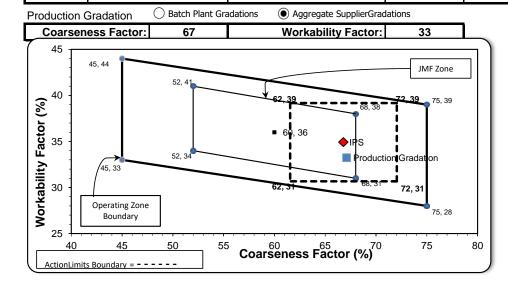
nom. max., #100 and #200 sieves.

*% 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)

99.0

1.8

1.0

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"	85.0	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