Sample Date:

Concrete Grade: P1M, 3500HP 5/13/24

Dates Test F	Represents:	5/14/2024	through	5/20/2024		
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

Contractor:

MDOT No.:



⁄e	Superior Materials, LLC
d	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.,

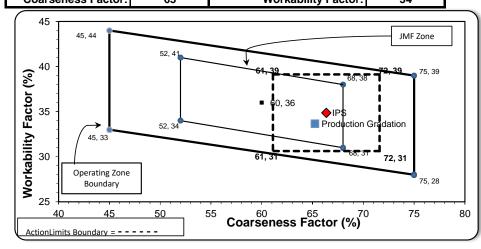
nom. max., #100 and #200 sieves.

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

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

	Total Wt	3070	18.67		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"	94.0	10	0.0	100.0	97.9	2.1	2.1
1"	34.6	10	0.0	100.0	77.2	20.7	22.8
3/4"	8.8	98	3.5	100.0	67.8	9.4	32.2
1/2"	3.2	83	3.2	100.0	61.9	5.9	38.1
3/8"	3.0	63	3.7	100.0	56.7	5.2	43.3
#4	2.5	17	' .3	95.9	42.9	13.9	57.1
#8	2.4	4.	.5	81.0	33.7	9.2	66.3
#16	2.4	2	.7	66.5	27.5	6.1	72.5
#30	2.3	2	.3	51.6	21.6	6.0	78.4
#50	2.2	2.1		27.8	12.2	9.4	87.8
#100	2.0	1.9		7.5	4.1	8.1	95.9
LBW	1.6	1.	.7	1.1	1.4	2.7	98.6

Aggregate Supplier Gradations **Production Gradation** Coarseness Factor: Workability Factor: 34



Initial Production Sample (IPS)

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

PREPARED BY: SM, LLC Technical Service

Sample Date:

5/13/24 Concrete Grade: P1M, 3500HP

Dates Test F	Represents:	5/14/2024	through	5/20/2024		
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
		Tatal MA	2420	40.70		400.0

Contractor:

MDOT No.:

•	SUPERIO
	Superior Materials
	30701 W. 10 Mile Rd

s, LLC 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.,

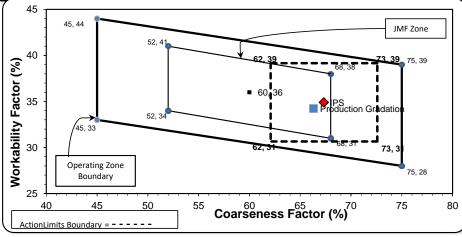
nom. max., #100 and #200 sieves.

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

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

	Total Wt	Nt 3120 18.70			100.0	< Verify this number is 100%		
Sieve	CA	1/	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"	65.8	100	0.0	100.0	83.9	16.1	16.1	
3/4"	39.8	100	0.0	100.0	71.6	12.3	28.4	
1/2"	19.9	96	.4	100.0	61.7	9.9	38.3	
3/8"	12.8	82	.5	100.0	56.4	5.4	43.6	
#4	3.1	17	.0	98.8	41.9	14.5	58.1	
#8	2.2	4.	8	84.5	34.2	7.7	65.8	
#16	1.8	2.	6	67.6	27.2	7.0	72.8	
#30	1.6	1.	9	50.5	20.5	6.8	79.5	
#50	1.6	1.	6	21.0	9.1	11.4	90.9	
#100	1.5	1.	5	2.1	1.7	7.3	98.3	
LBW	1.3	1.	2	0.3	0.9	0.8	99.1	
Production Gra	adation O Batch Plant Gra	dations	regate Supplier Gra	dations		Intial Production	on Sample (IPS	

Coarseness Factor: 66 Workability Factor: 34



Intial Production Sample (IPS)

Coars	seness Factor:	67	
Wor	kability 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

Sample Date:

Concrete Grade: P1M, 3500HP 5/13/24 5/14/2024 5/20/2024

Dales Test I	represents.	3/14/2024	unougn	3/20/2024		
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, 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	L	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"	65.8	10	0.0	100.0	83.9	16.1	16.1
3/4"	39.8	10	0.0	100.0	71.6	12.3	28.4
1/2"	19.9	96	5.4	100.0	61.7	9.9	38.3
3/8"	12.8	82	2.5	100.0	56.4	5.4	43.6
#4	3.1	17	'.O	98.8	41.9	14.5	58.1
#8	2.2	4	.8	84.5	34.2	7.7	65.8
#16	1.8	2	.6	67.6	27.2	7.0	72.8
#30	1.6	1	9	50.5	20.5	6.8	79.5
#50	1.6	1	.6	21.0	9.1	11.4	90.9
#100	1.5	1	.5	2.1	1.7	7.3	98.3
LBW	1.3	1	.2	0.3	0.9	0.8	99.1

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

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

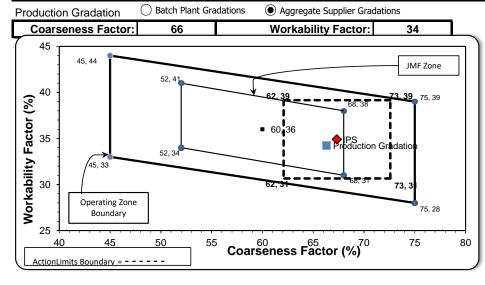
nom. max., #100 and #200 sieves.

*% 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

Sample Date:

5/13/24

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

Dates Test F	Represents:	5/14/2024	through	5/20/2024		
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.:

Contractor:

- Verify this number is 100%

SUPERIOR MATERIALS

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

	Total Wi	3070 10.70		100.0	C Verily tills II	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"	92.8	100.0	100.0	97.7	2.3	2.3
1"	36.5	100.0	100.0	79.9	17.8	20.1
3/4"	21.0	98.8	100.0	74.7	5.2	25.3
1/2"	6.5	74.8	100.0	63.1	11.6	36.9
3/8"	3.0	47.3	100.0	53.9	9.2	46.1
#4	2.0	7.3	95.8	40.2	13.7	59.8
#8	1.9	2.6	81.4	33.2	7.0	66.8
#16	1.8	2.1	65.9	26.9	6.2	73.1
#30	1.7	2.0	50.0	20.7	6.3	79.3
#50	1.7	1.9	25.2	10.9	9.7	89.1
#100	1.6	1.8	4.4	2.8	8.2	97.2
LBW	1.3	1.6	0.5	1.1	1.7	98.9

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

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

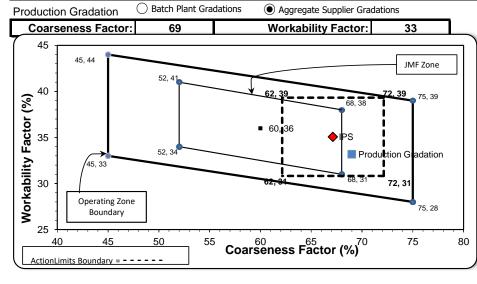
nom. max., #100 and #200 sieves.

*% 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	
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"	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:

5/13/24

Contractor:

MDOT No.:

Dates Test Represents: 5/14/2024 5/20/2024 through ft³ Agg. Class Pit# Source Weight (SSD) CA 71-47 Presque Isle 920 5.63 IΑ 71-47 Presque Isle 950 5.81 2NS 63-92 Grange Hall 1200 7.26 3070 **Total Wt** 18.70

Specific	%	
Gravity	Contribution	
2.62	30.0	
2.62	30.9	
2.65	39.1	

Concrete Grade: P1M, 3500HP

<---- Verify this number is 100%

	4				
S	U	P	E F	OF.	3

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"	97.7	100.0	100.0	99.3	0.7	0.7
1"	39.2	100.0	100.0	81.8	17.5	18.2
3/4"	11.4	97.4	100.0	72.6	9.1	27.4
1/2"	3.4	71.4	100.0	62.2	10.4	37.8
3/8"	2.7	47.2	100.0	54.5	7.7	45.5
#4	2.4	10.0	98.0	42.1	12.4	57.9
#8	2.4	4.4	82.9	34.5	7.6	65.5
#16	2.4	3.4	67.4	28.1	6.4	71.9
#30	2.3	3.1	49.7	21.1	7.0	78.9
#50	2.2	2.9	22.8	10.5	10.6	89.5
#100	2.0	2.6	4.1	3.0	7.5	97.0
I RW	1 /	2.2	0.6	1 2	17	08.7

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

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

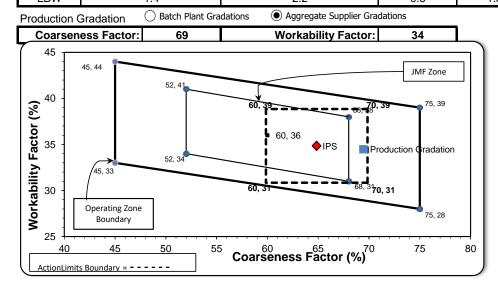
nom. max., #100 and #200 sieves.

*% 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)

Coarseness Factor:		65	
Workability 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

PLANT #: P11

Sample Date:

5/13/24 Concrete Grade: **P1M**, **3500HP**

Dates Test F	Represents:	5/14/2024	tnrougn	5/20/2024		
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%

ined	Cumulative % Retained	<u>Superior Materials, LLC</u> 30701 W. 10 Mile Rd.
)	0.0	Suite 500
	2.1	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"	92.8	100.0	100.0	97.9	2.1	2.1
1"	36.5	100.0	100.0	81.4	16.5	18.6
3/4"	21.0	98.8	100.0	76.5	4.9	23.5
1/2"	6.5	74.8	100.0	64.6	11.8	35.4
3/8"	3.0	47.3	100.0	54.9	9.7	45.1
#4	2.0	7.3	96.4	40.6	14.3	59.4
#8	1.9	2.6	85.7	34.9	5.7	65.1
#16	1.8	2.1	70.9	28.9	6.0	71.1
#30	1.7	2.0	50.8	21.0	7.9	79.0
#50	1.7	1.9	24.1	10.5	10.5	89.5
#100	1.6	1.8	7.3	3.9	6.6	96.1
LBW	1.3	1.6	1.4	1.4	2.5	98.6

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

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

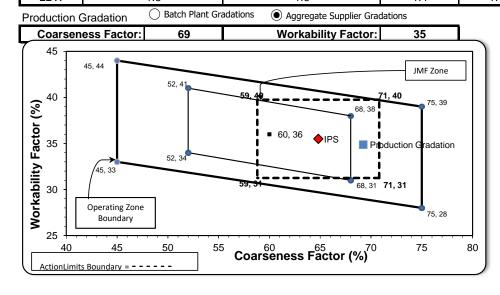
nom. max., #100 and #200 sieves.

 $^{\star}\%$ 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:	65	
Workability Factor:		36	
Sieve	Cumulative	%	Cumulative
	% 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

CA

100.0

100.0

65.8

39.8

19.9

12.8

3.1

2.2

1.8

1.6

1.6

Sample Date:

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

#50

5/13/24 Concrete Grade: **P1M**, **3500HP**

Dates Test Represents:		5/14/2024	through	5/20/2024		
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

IΑ

100.0

100.0

100.0

100.0

96.4

82.5

17.0

4.8

2.6

1.9

1.6

MDOT No.:

Cumulative

% Retained

0.0

0.0

16.1

28.4

38.3

43.6

57.9

64.7

73.1

82.4

93.0

98.0

99.0

<---- Verify this number is 100%

Contractor:

% Retained

0.0

0.0

16.1

12.3

9.9

5.4

14.3

6.8

8.4

9.3

10.6

5.1

0.9

Cumulative

% Passing

100.0

100.0

83.9

71.6

61.7

56.4

42.1

35.3

26.9

17.6

7.0

2NS

100.0

100.0

100.0

100.0

100.0

100.0

99.2

87.3

66.7

43.1

15.7

SUPE	RIOR	

<u>Superior Materials, LLC</u> 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.,

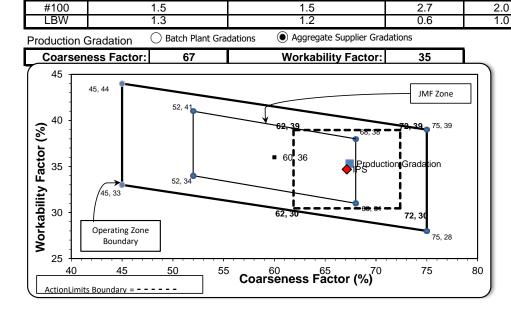
nom. max., #100 and #200 sieves.

*% 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	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"	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

Total Wt

5/13/24

PLANT #: P-36

Sample Date:

Concrete Grade: P1M, 3500HP

Contractor:

100.0

Dates Test Represents:		5/14/2024	through	5/20/2024		
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	39.1

3070

MDOT No.:

<---- Verify this number is 100%

SUPE	RIOF	

Superior Materials, LLC 36

30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 4833

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained	
2"	100.0	100.0	100.0	100.0	0.0	0.0	ĺ
1.5"	92.8	100.0	100.0	97.7	2.3	2.3	ı
1"	36.5	100.0	100.0	79.9	17.8	20.1	ı
3/4"	21.0	98.8	100.0	74.7	5.2	25.3	ı
1/2"	6.5	74.8	100.0	63.1	11.6	36.9	ı
3/8"	3.0	47.3	100.0	53.9	9.2	46.1	ı
#4	2.0	7.3	98.0	41.1	12.8	58.9	ı
#8	1.9	2.6	82.9	33.8	7.3	66.2	n
#16	1.8	2.1	67.4	27.5	6.2	72.5	ı
#30	1.7	2.0	49.7	20.6	7.0	79.4	n
#50	1.7	1.9	22.8	10.0	10.5	90.0	ĺ
#100	1.6	1.8	4.1	2.6	7.4	97.4	а

18.70

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

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

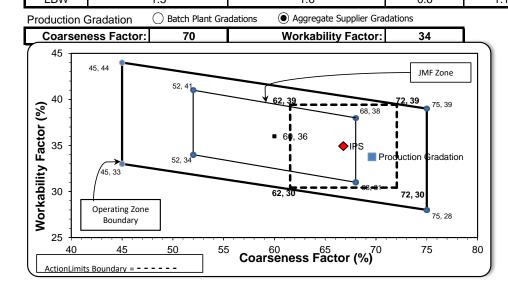
nom. max., #100 and #200 sieves.

*% 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 5/13/24

Dates Test Represents:		5/14/2024	through	5/20/2024			
	Agg. Class	Pit#	Source	Weight (SSD)	ft ³	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
	2NS	44-051	Krake Willis Rd	1250	7.56	2.65	40.7
				00=0	40.00		1000

MDOT No.:

Contractor:

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

	Total Wt	3070	18.69		100.0	< Verify this n	umber is 100%
Sieve	CA	1,4	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100	0.0	100.0	100.0	0.0	0.0
1.5"	94.0	100	0.0	100.0	98.0	2.0	2.0
1"	34.6	100	0.0	100.0	78.3	19.7	21.7
3/4"	8.8	98	.5	100.0	69.3	9.0	30.7
1/2"	3.2	83	.2	100.0	63.5	5.8	36.5
3/8"	3.0	63	.7	100.0	58.3	5.1	41.7
#4	2.5	17	.3	99.6	45.9	12.4	54.1
#8	2.4	4.	5	85.0	36.6	9.3	63.4
#16	2.4	2.	7	68.0	29.2	7.4	70.8
#30	2.3	2.	3	49.0	21.3	7.9	78.7
#50	2.2	2.	1	20.0	9.4	11.9	90.6
#100	2.0	1.	9	4.1	2.8	6.6	97.2
LBW	1.6	1.	7	0.4	1.1	1.7	98.9

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

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

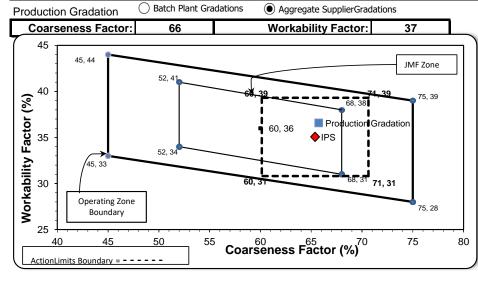
nom. max., #100 and #200 sieves.

*% 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:		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

Approved By: PREPARED BY: SM, LLC Technical Service

Sample Date:

Concrete Grade: P1M, 3500HP 5/13/24

Dates Test F	Represents:	5/14/2024	through	5/20/2024		
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

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	IA		2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100	.0	100.0	100.0	0.0	0.0
1.5"	92.8	100	.0	100.0	97.7	2.3	2.3
1"	36.5	100	.0	100.0	79.9	17.8	20.1
3/4"	21.0	98.	8	100.0	74.7	5.2	25.3
1/2"	6.5	74.	8	100.0	63.1	11.6	36.9
3/8"	3.0	47.	3	100.0	53.9	9.2	46.1
#4	2.0	7.3	3	95.8	40.2	13.7	59.8
#8	1.9	2.6	6	81.4	33.2	7.0	66.8
#16	1.8	2.1		65.9	26.9	6.2	73.1
#30	1.7	2.0)	50.0	20.7	6.3	79.3
#50	1.7	1.9	9	25.2	10.9	9.7	89.1
#100	1.6	1.8	3	4.4	2.8	8.2	97.2
LBW	1.3	1.6	6	0.5	1.1	1.7	98.9

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

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

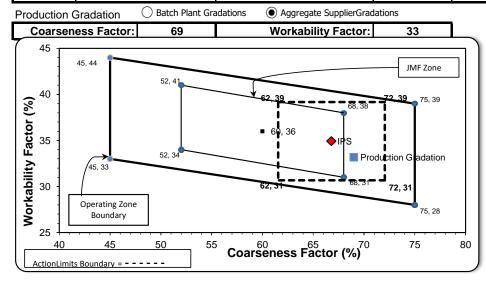
nom. max., #100 and #200 sieves.

*% 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:	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