Sample Date:

10/17/22 Concrete Grade: S2M, 3500HP

Jales Test F	Represents:	10/10/2022	through	10/24/2022		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1570	9.60	2.62	51.4
26A	71-47	Presque Isle	255	1.56	2.62	8.3
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%

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

	i Otai Wt	3033	10.37		100.0	< venly this n	umber is 100%	
Sieve	6AA	26A		2NS	Cumulative % Passing	% Retained	Cumulative % 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	ı
1"	98.5	100.0		100.0	99.2	0.8	0.8	ı
3/4"	81.6	100.0	)	100.0	90.5	8.7	9.5	ı
1/2"	40.2	93.5		100.0	68.7	21.8	31.3	ı
3/8"	21.4	76.8		100.0	57.7	11.1	42.3	ľ
#4	2.9	20.3		99.0	43.0	14.6	57.0	ŀ
#8	1.7	7.5		85.9	36.1	7.0	63.9	n
#16	1.5	4.3		71.3	29.8	6.2	70.2	ľ
#30	1.5	3.3		53.6	22.6	7.2	77.4	n
#50	1.4	3.0		22.6	10.1	12.6	89.9	ŀ
#100	1.4	2.8		4.4	2.7	7.3	97.3	а
LBW	1.2	2.4		0.7	1.1	1.6	98.9	l

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

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

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

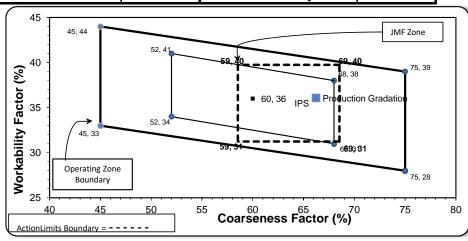
\*% Retained must be at least 4% for each sieve except max.,

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.

 Batch Plant Gradations Aggregate Supplier Gradations **Production Gradation** Coarseness Factor: Workability Factor: 66 36 45



Initial Production Sample (IPS)

Coarseness Factor:		64	
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"	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

Sample Date:

10/17/22 Concrete Grade: S2M, 3500HP

Dates Test F	Represents:	10/18/2022	through	10/24/2022		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	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

Contractor:

MDOT No.:



---- Verify this number is 100%

ined	Cumulative % Retained	Superior Materials, LLC
	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.,

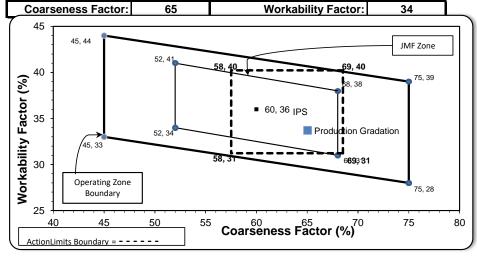
nom. max., #100 and #200 sieves.

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

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

	Total Wt	10tai vvt 3100 10.30		100.0	Verify this number is 100 %	
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulativ % Retaine
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"	78.5	100.0	100.0	88.6	10.9	11.4
1/2"	43.8	99.0	100.0	70.0	18.6	30.0
3/8"	22.8	74.8	100.0	56.9	13.1	43.1
#4	3.7	14.7	98.3	41.2	15.7	58.8
#8	1.7	4.9	83.7	33.7	7.5	66.3
#16	1.2	2.2	66.4	26.5	7.2	73.5
#30	1.0	1.8	46.4	18.6	7.9	81.4
#50	1.0	1.6	21.6	9.0	9.6	91.0
#100	0.9	1.5	6.4	3.1	5.9	96.9
LBW	0.9	1.4	1.7	1.3	1.8	98.8

Production Gradation



Intial Production Sample (IPS)

Coarseness Factor:		63	
Workability 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

PREPARED BY: SM, LLC Technical Service

Sample Date:

Dates Test Represents:

10/17/22 Concrete Grade: S2M, 3500HP

10/18/2022 10/24/2022 through

Contractor:

MDOT No.:

Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	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

--- Verify this number is 100%

SUPERIO	PR

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

	rotar vvt	0100 10.00	7100		Verify trills fluiriber is 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"	78.5	100.0	100.0	88.6	10.9	11.4	
1/2"	43.8	99.0	100.0	70.0	18.6	30.0	
3/8"	22.8	74.8	100.0	56.9	13.1	43.1	
#4	3.7	14.7	98.3	41.2	15.7	58.8	
#8	1.7	4.9	83.7	33.7	7.5	66.3	
#16	1.2	2.2	66.4	26.5	7.2	73.5	
#30	1.0	1.8	46.4	18.6	7.9	81.4	
#50	1.0	1.6	21.6	9.0	9.6	91.0	
#100	0.9	1.5	6.4	3.1	5.9	96.9	
LBW	0.9	1.4	1.7	1.3	1.8	98.8	

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

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

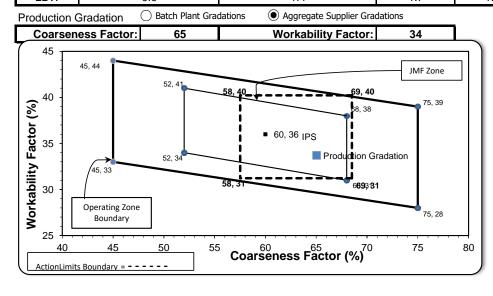
nom. max., #100 and #200 sieves.

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

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

\*% Retained must be at least 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

PREPARED BY: SM, LLC Technical Service

P-14 PLANT #:

Sample Date:

10/17/22 Concrete Grade: S2M, 3500HP

Dates Test Represents:  Agg. Class Pit #		10/18/2022	through	10/24/2022			
		Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
	6AA	58-003	Stoneco	1620	9.65	2.69	52.1
	26A	58-003	Stoneco	280	1.67	2.69	9.0
	2NS	19-55	Schlegel	1210	7.26	2.67	38.9

Contractor:

MDOT No.:



ninad	Cumulative	
ained	% Retained	

30701 W. 10 Mile Rd. Suite 500

**Builders Redi-Mix** 

Farmington Hills, MI 48336

	i otai vvt	3110 18	5.38	100.0	< Verify this n	umber is 100%
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"	78.5	100.0	100.0	88.8	10.7	11.2
1/2"	43.8	99.0	100.0	70.6	18.2	29.4
3/8"	22.8	74.8	100.0	57.5	13.1	42.5
#4	3.7	14.7	99.9	42.1	15.4	57.9
#8	1.7	4.9	89.6	36.2	5.9	63.8
#16	1.2	2.2	69.1	27.7	8.5	72.3
#30	1.0	1.8	43.9	17.8	9.9	82.2
#50	1.0	1.6	15.0	6.5	11.3	93.5
#100	0.9	1.5	3.2	1.8	4.7	98.2
LBW	0.9	1.4	0.5	0.8	1.1	99.2

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

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

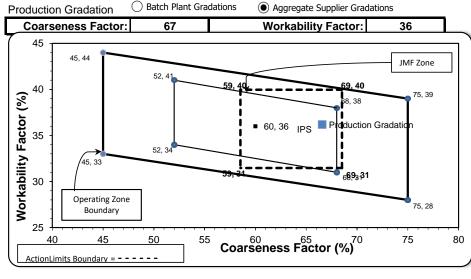
nom. max., #100 and #200 sieves.

\*% 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	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 #:

6AA

100.0

100.0

98.3

82.1

38.4

20.6

3.5

2.2

1.9

1.9

1.8

1.7

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

#50

#100

10/17/22 Concrete Grade: S2M, 3500HP Sample Date:

21.3

11.0

4.0

2NS

100.0

100.0

100.0

100.0

100.0

100.0

95.6

83.5

68.6

50.0

24.7

7.4

Dates Test Represents:		10/18/2022	through	10/24/2022		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1620	9.91	2.62	53.1
26A	71-47	Presque Isle	200	1.22	2.62	6.6
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
Total Wt			3050	18.57		100.0

26A

100.0

100.0

100.0

100.0

99.4

88.4

22.6

5.3

2.4

1.9

1.7

1.6

MDOT No.:

Contractor:

--- Verify this number is 100%

SUP	<b>ER</b>	IOR ALS

**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	
100.0	0.0	0.0	
99.1	0.9	0.9	
90.5	8.6	9.5	
67.2	23.3	32.8	
57.1	10.2	42.9	*M
41.9	15.2	58.1	*A
35.2	6.7	64.8	nom
28.8	6.4	71.2	*%

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

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

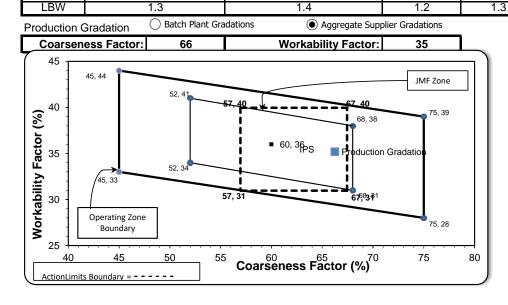
m. max., #100 and #200 sieves.

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

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)

7.5

10.3

7.0

2.7

78.7

89.0

96.0

98.7

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

Sample Date:

Concrete Grade: S2M, 3500HP 10/17/22

Dates Test Represents:		10/18/2022	through	10/24/2022			
	Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
	6AA	71-47	Presque Isle	1620	9.91	2.62	53.1
	26A	71-47	Presque Isle	200	1.22	2.62	6.6
	01.10	0= 040		4000	- 44	0.05	40.0

Contractor:

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1620	9.91	2.62	53.1
26A	71-47	Presque Isle	200	1.22	2.62	6.6
2NS	95-013	Smelter Bay	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

	i otai 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"	98.3	100	0.0	100.0	99.1	0.9	0.9
3/4"	82.1	100	0.0	100.0	90.5	8.6	9.5
1/2"	38.4	99	.4	100.0	67.2	23.3	32.8
3/8"	20.6	88	.4	100.0	57.1	10.2	42.9
#4	3.5	22	6	95.6	41.9	15.2	58.1
#8	2.2	5.	3	83.5	35.2	6.7	64.8
#16	1.9	2.	4	68.6	28.8	6.4	71.2
#30	1.9	1.	9	50.0	21.3	7.5	78.7
#50	1.8	1.	7	24.7	11.0	10.3	89.0
#100	1.7	1.	6	7.4	4.0	7.0	96.0
LBW	1.3	1.	4	1.2	1.3	2.7	98.7

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

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

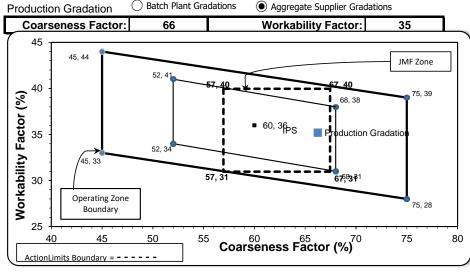
nom. max., #100 and #200 sieves.

\*% 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.



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"	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

10/17/22

PLANT #: P-35

Sample Date:

Concrete Grade: S2M, 3500HP

Contractor:

Jates Test F	Represents:	10/18/2022	through	10/24/2022		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	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

MDOT No.:

this number is 100%

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	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"	78.5	100.0	100.0	88.6	10.9	11.4
1/2"	43.8	99.0	100.0	70.0	18.6	30.0
3/8"	22.8	74.8	100.0	56.9	13.1	43.1
#4	3.7	14.7	98.3	41.2	15.7	58.8
#8	1.7	4.9	83.7	33.7	7.5	66.3
#16	1.2	2.2	66.4	26.5	7.2	73.5
#30	1.0	1.8	46.4	18.6	7.9	81.4
#50	1.0	1.6	21.6	9.0	9.6	91.0
#100	0.9	1.5	6.4	3.1	5.9	96.9
LBW	0.9	1.4	1.7	1.3	1.8	98.8

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

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

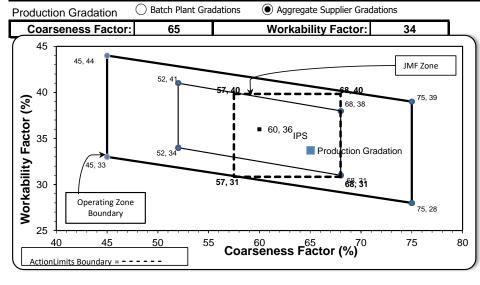
nom. max., #100 and #200 sieves.

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

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

\*% Retained must be at least 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"	59.4	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

Sample Date:

Concrete Grade: S2M, 3500HP

Dates Test F	Represents:	10/18/2022	through	10/24/2022		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1550	9.48	2.62	50.8
26A	71-47	Presque Isle	300	1.83	2.62	9.8

Contractor:

MDOT No.:

Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1550	9.48	2.62	50.8
26A	71-47	Presque Isle	300	1.83	2.62	9.8
2NS	63-92	Grange Hall	1200	7.26	2.65	39.3
		Total Wt	3050	18.57		100.0

---- Verify this number is 100%

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

			. 0.0.		. 0 0.0	Tomy uno number to 1	
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"	97.0	10	0.0	100.0	98.5	1.5	1.5
3/4"	81.3	10	0.0	100.0	90.5	8.0	9.5
1/2"	37.2	99	).4	100.0	68.0	22.5	32.0
3/8"	17.2	88	3.4	100.0	56.8	11.2	43.2
#4	3.3	22	2.6	97.5	42.3	14.5	57.7
#8	1.7	5	.3	83.7	34.3	7.9	65.7
#16	1.5	2	.4	69.0	28.1	6.2	71.9
#30	1.4	1.	.9	49.1	20.2	7.9	79.8
#50	1.4	1.	.7	20.0	8.7	11.5	91.3
#100	1.3	1.	.6	3.6	2.2	6.5	97.8

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

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

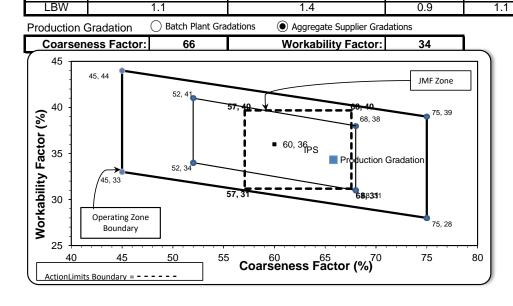
nom. max., #100 and #200 sieves.

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

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

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

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



Intial Production Sample (IPS)

98.9

Coarseness Factor:		62	
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"	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

Sample Date:

Concrete Grade: S2M, 3500HP 10/17/22

Jates Test F	Represents:	10/18/2022	tnrougn	10/24/2022		
Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	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	44-051	Krake Willis Rd	1250	7.56	2.65	41.0

Contractor:

MDOT No.:



% Retained 30	Retained	Cumulative % Retained	ı Sı
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uperior Materials, LLC 30701 W. 10 Mile Rd. Suite 500 Farmington Hills, MI 48336

Cumulative		
% Passing	% Retained	Cumulative % Retained
100.0	0.0	0.0
100.0	0.0	0.0
99.2	0.8	0.8
90.3	8.9	9.7
68.2	22.1	31.8
57.2	11.0	42.8
42.1	15.1	57.9
33.0	9.1	67.0
26.4	6.6	73.6
20.3	6.1	79.7
11.5	8.8	88.5
4.2	7.3	95.8
1.2	3.0	98.8
	100.0 99.2 90.3 68.2 57.2 42.1 33.0 26.4 20.3 11.5 4.2	% Passing       100.0     0.0       100.0     0.0       99.2     0.8       90.3     8.9       68.2     22.1       57.2     11.0       42.1     15.1       33.0     9.1       26.4     6.6       20.3     6.1       11.5     8.8       4.2     7.3

\*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.

F	Production Gradation	O Batch Plant Gradations	<ul><li>Aggregate Supplier Gradati</li></ul>	ions	
Г	Coarseness Factor:	64	Workability Factor:	33	
7	45, 44	52, 41	<b>S8</b> 40	JMF Zone	

	<sup>45</sup> [	45, 44 JMF Zone	
(%).	40 -	52, 41 58, 40 68, 38	
ity Factor (%)	35 - 1	■ 60, 36 IPS  52, 34  ■ Production Gradation	
Workability	30 -	Operating Zone Boundary 75, 28	
	25 <del> </del> 40	0 45 50 55 60 65 70 75 80 imits Boundary =	

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"	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

Sample Date:

Concrete Grade: S2M, 3500HP

Dates Test F	Represents:	10/18/2022	through	10/24/2022		
Agg. Class	Pit#	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1620	9.91	2.62	53.1
26A	71-47	Presque Isle	200	1.22	2.62	6.6

Contractor:

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1620	9.91	2.62	53.1
26A	71-47	Presque Isle	200	1.22	2.62	6.6
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3
		Total Wt	3050	18.57		100.0

SUPERIOR MATERIALS
Superior Materials, LLC

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

	i otai vyt	3030 18.37		100.0	< Verify this n	umber is 100%
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"	97.0	100.0	100.0	98.4	1.6	1.6
3/4"	81.3	100.0	100.0	90.1	8.3	9.9
1/2"	37.2	99.4	100.0	66.6	23.5	33.4
3/8"	17.2	88.4	100.0	55.3	11.3	44.7
#4	3.3	22.6	96.7	42.2	13.0	57.8
#8	1.7	5.3	78.0	32.7	9.5	67.3
#16	1.5	2.4	60.8	25.5	7.2	74.5
#30	1.4	1.9	46.3	19.5	5.9	80.5
#50	1.4	1.7	26.3	11.5	8.1	88.5
#100	1.3	1.6	6.2	3.3	8.2	96.7
LBW	1.1	1.4	0.7	1.0	2.3	99.0

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

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

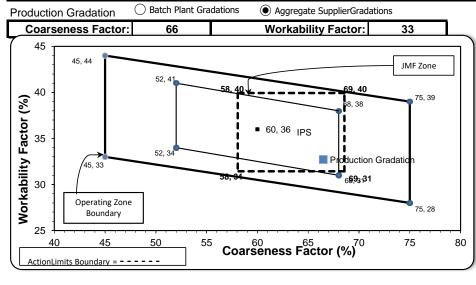
nom. max., #100 and #200 sieves.

\*% 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"	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