Total Wt

PLANT #: P-102

8/5/24 Concrete Grade: S2M, 3500HP Sample Date:

8/6/2024 **Dates Test Represents:** 8/12/2024 through Specific % Agg. Class Pit# Weight (SSD) ft³ Source Gravity Contribution 6AA 58-003 1500 8.94 2.69 48.4 Stoneco 26A 58-003 Stoneco 400 2.38 2.69 12.9 2NS 63-114 Highland 1200 7.26 2.65 38.7 3100 18.58

MDOT No.:

Contractor:

<---- Verify this number is 100%

	rotal III	0100		100.0	voiny this namber is 10076		
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"	99.3	100.0	100.0	99.7	0.3	0.3	
3/4"	76.6	100.0	100.0	88.7	11.0	11.3	
1/2"	38.1	99.4	100.0	70.0	18.7	30.0	
3/8"	13.3	83.0	100.0	55.9	14.1	44.1	
#4	3.0	7.8	99.0	40.8	15.1	59.2	
#8	2.2	1.8	84.4	34.0	6.8	66.0	
#16	1.4	1.2	66.2	26.5	7.5	73.5	
#30	1.3	0.9	46.8	18.9	7.6	81.1	
#50	1.2	0.8	18.9	8.0	10.9	92.0	
#100	1.2	0.8	3.9	2.2	5.8	97.8	
LBW	1.4	0.4	0.4	0.9	1.3	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.

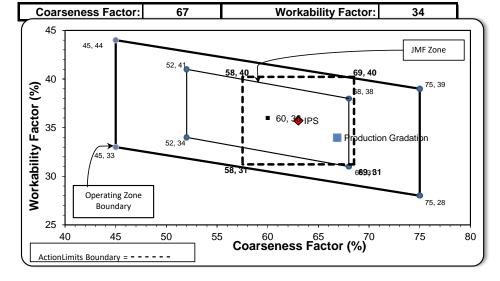
*% Retained must be at least 4% for each sieve except max.,

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

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

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

O Batch Plant Gradations Aggregate Supplier Gradations **Production Gradation**



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	8.0
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

PLANT #: P-103

Sample Date:

Concrete Grade: S2M, 3500HP 8/5/24

18.58

Dates Test F	Represents:	8/6/2024	through	8/12/2024		
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1500	8.94	2.69	48.4
26A	58-003	Stoneco	400	2.38	2.69	12.9
2NS	63-114	Highland	1200	7.26	2.65	38.7

3100

Contractor:

MDOT No.:



----- Verify this number is 100%

0/ Datained	Cumulative	
% Retained	% Retained	

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

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"	99.3	100.0	100.0	99.7	0.3	0.3
3/4"	76.6	100.0	100.0	88.7	11.0	11.3
1/2"	38.1	99.4	100.0	70.0	18.7	30.0
3/8"	13.3	83.0	100.0	55.9	14.1	44.1
#4	3.0	7.8	99.0	40.8	15.1	59.2
#8	2.2	1.8	84.4	34.0	6.8	66.0 n
#16	1.4	1.2	66.2	26.5	7.5	73.5
#30	1.3	0.9	46.8	18.9	7.6	81.1 n
#50	1.2	0.8	18.9	8.0	10.9	92.0
#100	1.2	0.8	3.9	2.2	5.8	97.8 a
LBW	1.4	0.4	0.4	0.9	1.3	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.

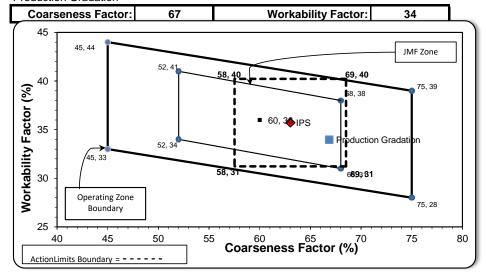
*% Retained must be at least 4% for each sieve except max.,

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

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

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

O Batch Plant Gradations Aggregate Supplier Gradations **Production Gradation**



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	8.0
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

PLANT #:

Sample Date:

8/5/24

Concrete Grade: S2M, 3500HP

Dates Test Represents:		8/6/2024	through	8/12/2024			
	Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
	6AA	71-47	Presque Isle	1520	9.30	2.62	49.8
	26A	71-47	Presque Isle	300	1.83	2.62	9.8
	2NS	63-115	Ray Rd	1230	7.44	2.65	40.3
			Total Wt	3050	18.57		100.0

Contractor:

MDOT No.:

SUPERIOR MATERIALS	

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

	i Otai Wt	TOTAL WIL 3030		10.37		< verily this number is 100%		
Sieve 6AA		26A		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"	97.6	10	0.0	100.0	98.8	1.2	1.2	
3/4"	77.2	10	0.0	100.0	88.6	10.2	11.4	
1/2"	37.6	95	5.6	100.0	68.5	20.2	31.5	
3/8"	19.6	85	5.2	100.0	58.5	10.0	41.5	
#4	3.0	18	3.0	97.6	42.6	15.9	57.4	
#8	2.0	3	.9	79.1	33.3	9.3	66.7	
#16	1.6	2	.0	62.4	26.2	7.1	73.8	
#30	1.5	1.	.7	46.4	19.6	6.5	80.4	
#50	1.4	1.	.6	25.5	11.1	8.5	88.9	
#100	1.4	1.	.5	7.1	3.7	7.4	96.3	
LBW	1.0	1.	.3	1.0	1.0	2.7	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.

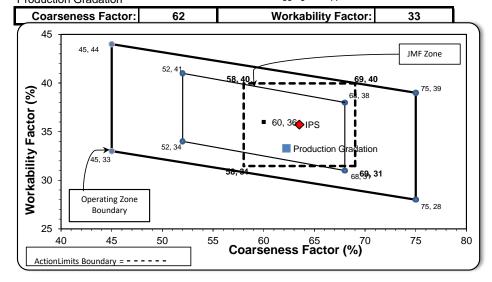
*% Retained must be at least 4% for each sieve except max.,

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

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

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

 Aggregate Supplier Gradations O Batch Plant Gradations **Production Gradation**



Intial Production Sample (IPS)

Coars	eness Factor:	64	
Work	ability Factor:	36	
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	8.0	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 #: p11

Sample Date:

LBW

8/5/24 Concrete Grade: S2M, 3500HP 0/40/2024

Dates Test Represents:		0/0/2024	through	8/12/2024		
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

Contractor:

MDOT No.:

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	18.57		100.0

---- Verify this number

per is 100%	SUP
umulative	Superior
6 Retained	30701 W.
2.2	Suite 500

C Cumulative 6AA 26A 2NS % Retained Sieve % % Passing 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" 97.6 100.0 100.0 98.8 1.2 1.2 3/4" 77.2 100.0 100.0 88.4 10.4 11.6 1/2" 37.6 95.6 100.0 67.9 20.5 32.1 3/8' 19.6 85.2 100.0 57.8 10.1 42.2 #4 3.0 18.0 97.6 42.5 15.4 57.5 #8 2.0 3.9 79.1 33.3 9.2 66.7 #16 2.0 62.4 26.2 7.1 73.8 1.6 #30 1.5 1.7 46.4 19.6 6.5 80.4 #50 1.4 1.6 25.5 11.1 8.5 88.9 3.7 #100 1.4 1.5 7.1 7.4 96.3

1.0

1.0

1.3

*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.,

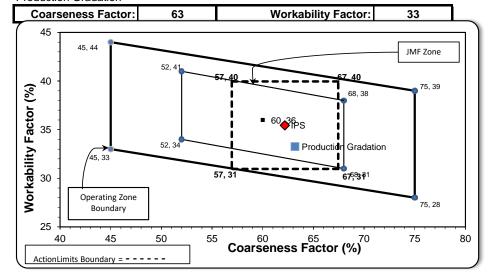
nom. max., #100 and #200 sieves.

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

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

O Batch Plant Gradations Aggregate Supplier Gradations **Production Gradation**

1.0



Intial Production Sample (IPS)

99.0

2.7

Coars	eness 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"	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	8.08
#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

PLANT #: P-35

Sample Date:

#100

LBW

8/5/24 Concrete Grade: S2M, 3500HP 0/40/2024

Dates Test Represents.		0/0/2024	unougn	0/12/2024		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1500	8.94	2.69	48.4
26A	58-003	Stoneco	400	2.38	2.69	12.9
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%

6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained	l
0.001	100.0	100.0	100.0	0.0	0.0	i

4.1

0.6

2.3

1.0

6 Sieve 10 1.5" 100.0 100.0 100.0 100.0 0.0 0.0 1" 99.3 100.0 100.0 99.7 0.3 0.3 3/4" 76.6 100.0 100.0 88.7 11.0 11.3 1/2" 38.1 99.4 100.0 70.0 18.7 30.0 3/8' 13.3 83.0 100.0 55.9 14.1 44.1 #4 3.0 7.8 98.4 40.5 15.3 59.5 #8 2.2 1.8 87.1 35.0 5.5 65.0 #16 1.2 67.6 27.0 8.0 73.0 1.4 #30 1.3 0.9 46.6 18.8 8.2 81.2 #50 1.2 0.8 21.6 9.0 9.7 91.0

0.8

0.4

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.

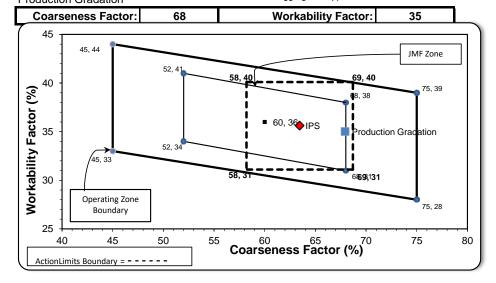
*% Retained must be at least 4% for the 3/4" sieve when

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

O Batch Plant Gradations Aggregate Supplier Gradations **Production Gradation**

1.2

1.4



Intial Production Sample (IPS)

97.7

99.0

6.8

Coars	eness Factor:	63	
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"	93.1	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

8/5/24

PLANT #: P-38

Sample Date:

Concrete Grade: S2M, 3500HP

Contractor:

8/6/2024 Dates Test Represents:

8/12/2024 through

	_	_	_			
M	П	\cap	т	NI	\sim	٠
IVI	ᅟ	v		IN	u.	

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1500	8.94	2.69	48.4
26A	58-003	Stoneco	400	2.38	2.69	12.9
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.7

ned	Cumulative % Retained	Superior Materials, LLC 30701 W. 10 Mile Rd.
	0.0	Suite 500
	0.0	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"	99.3	100.0	100.0	99.7	0.3	0.3
3/4"	76.6	100.0	100.0	88.7	11.0	11.3
1/2"	38.1	99.4	100.0	70.0	18.7	30.0
3/8"	13.3	83.0	100.0	55.9	14.1	44.1
#4	3.0	7.8	98.4	40.5	15.3	59.5
#8	2.2	1.8	87.1	35.0	5.5	65.0 ı
#16	1.4	1.2	67.6	27.0	8.0	73.0
#30	1.3	0.9	46.6	18.8	8.2	81.2
#50	1.2	0.8	21.6	9.0	9.7	91.0
#100	1.2	0.8	4.1	2.3	6.8	97.7
LBW	1.4	0.4	0.6	1.0	1.3	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 4% for the 3/4" sieve when

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

O Batch Plant Gradations Aggregate Supplier Gradations **Production Gradation**

Intial Production Sample (IPS)

Co	arseness Factor:	68	Workability Factor: 35
4	5		
)r (%)	0 -	52, 41 55, 4	JMF Zone 68, 38 75, 39
Workability Factor (%)	5 - 45, 33	52, 34 55, 3 ²	Production Gradation
	Operating Zone Boundary		75, 28
_	40 45	50 55	60 65 70 75 80 Coarseness Factor (%)

Coarseness 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	8.0
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

Total Wt

PLANT #: **P-02**

Sample Date:

LBW

8/5/24 Concrete Grade: S2M, 3500HP

Dates Test F	Represents:	8/6/2024	through	8/12/2024		
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1520	9.30	2.62	49.8
26A	71-47	Presque Isle	300	1.83	2.62	9.8
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3

3050

Contractor:

MDOT No.:



--- Verify this number is 100%

% Retained	Cumulative % Retained
0.0	0.0
0.0	0.0
1.2	1.2

99.0

Superior Materials, LLC 30701 W. 10 Mile Rd.

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	ĺ
1.5"	100.0	100.0	100.0	100.0	0.0	0.0	ı
1"	97.6	100.0	100.0	98.8	1.2	1.2	ı
3/4"	77.2	100.0	100.0	88.6	10.2	11.4	ı
1/2"	37.6	95.6	100.0	68.5	20.2	31.5	ı
3/8"	19.6	85.2	100.0	58.5	10.0	41.5	,
#4	3.0	18.0	97.6	42.6	15.9	57.4	,
#8	2.0	3.9	79.1	33.3	9.3	66.7	no
#16	1.6	2.0	62.4	26.2	7.1	73.8	,
#30	1.5	1.7	46.4	19.6	6.5	80.4	no
#50	1.4	1.6	25.5	11.1	8.5	88.9	,
#100	1.4	1.5	7.1	3.7	7.4	96.3	а

1.0

1.3

18.57

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

Suite 500

*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.,

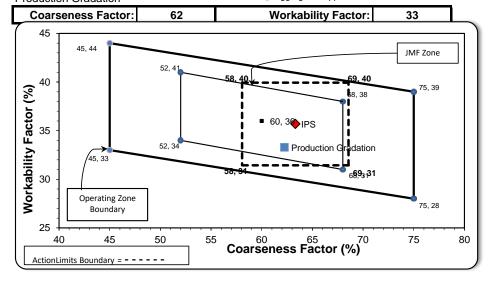
nom. max., #100 and #200 sieves.

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

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

O Batch Plant Gradations Aggregate SupplierGradations **Production Gradation**

1.0



Intial Production Sample (IPS)

Coars	eness Factor:	63	
Work	ability Factor:	36	
Sieve	Cumulative % Passing	% Retained	Cumulative % 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