Sample Date:

8/7/23 Concrete Grade: **S2M**, **3500HP**

Dates Test F	Represents:	8/8/2023	tnrougn	8/14/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1625	9.94	2.62	53.2
26A	71-47	Presque Isle	200	1.22	2.62	6.5
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%

ve	Superior iviaterials, LLC
ed	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

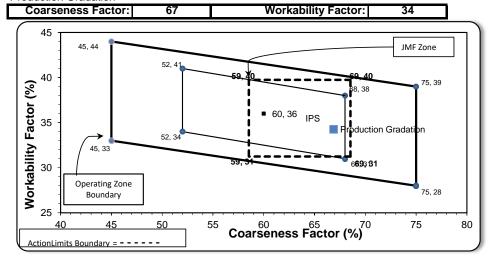
a 1.5" max. size (nom. Max. 1.0") aggregate is used.

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"	97.8	100.0	100.0	98.8	1.2	1.2
3/4"	79.7	100.0	100.0	89.2	9.6	10.8
1/2"	35.3	96.6	100.0	65.4	23.8	34.6
3/8"	18.8	88.3	100.0	56.0	9.3	44.0
#4	2.8	24.2	96.9	42.1	14.0	57.9
#8	1.6	4.9	82.2	34.3	7.8	65.7
#16	1.4	2.1	67.9	28.2	6.0	71.8
#30	1.4	1.6	52.0	21.8	6.4	78.2
#50	1.3	1.5	23.8	10.4	11.4	89.6
#100	1.3	1.4	6.3	3.3	7.1	96.7
LBW	1.0	1.3	0.9	1.0	2.3	99.0

Production Gradation

O Batch Plant Gradations

Aggregate Supplier Gradations



Initial Production Sample (IPS)

Coar	seness Factor:	64	
Worl	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"	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

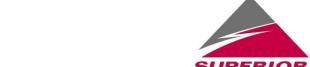
Sample Date:

8/7/23 Concrete Grade: S2M, 3500HP

Dates Test F	represents:	0/0/2023	through	8/14/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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

Contractor:

MDOT No.:



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	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"	77.0	100	0.0	100.0	87.8	12.2	12.2
1/2"	38.0	99	.7	100.0	67.0	20.8	33.0
3/8"	20.2	89	.5	100.0	56.7	10.3	43.3
#4	4.8	12	.0	98.1	41.5	15.2	58.5
#8	2.6	3.	7	83.1	33.9	7.6	66.2
#16	1.7	2.	9	65.9	26.6	7.2	73.4
#30	1.6	2.	6	46.9	19.2	7.4	80.8
#50	1.4	2.	4	22.7	9.7	9.5	90.3
#100	1.4	2.	4	5.9	3.2	6.5	96.8
LBW	1.4	2.	2	0.7	1.2	2.0	98.8

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

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

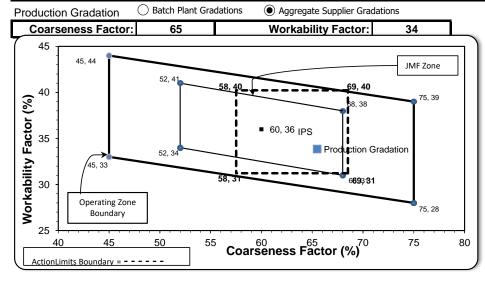
nom. max., #100 and #200 sieves.

*% 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"	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

Sample Date:

8/7/23 Concrete Grade: **S2M**, **3500HP**

Dates Test Represents:		8/8/2023	through	8/14/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	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

Contractor:

MDOT No.:

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	SA.	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"	77.0	10	0.0	100.0	87.8	12.2	12.2
1/2"	38.0	99).7	100.0	67.0	20.8	33.0
3/8"	20.2	89).5	100.0	56.7	10.3	43.3
#4	4.8	12	2.0	98.1	41.5	15.2	58.5
#8	2.6	3	.7	83.1	33.9	7.6	66.2
#16	1.7	2	.9	65.9	26.6	7.2	73.4
#30	1.6	2	.6	46.9	19.2	7.4	80.8
#50	1.4	2	.4	22.7	9.7	9.5	90.3
#100	1.4	2	.4	5.9	3.2	6.5	96.8
LBW	1.4	2.	.2	0.7	1.2	2.0	98.8

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

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

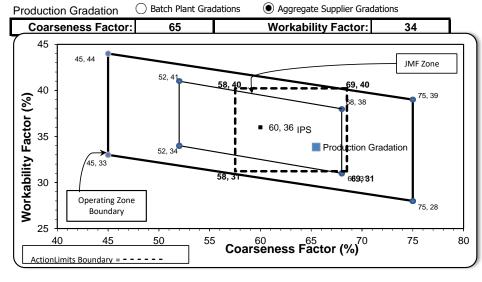
nom. max., #100 and #200 sieves.

*% 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"	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

PLANT #: Contractor: 8/7/23 Concrete Grade: S2M, 3500HP Sample Date:

Dates Test F	Represents:	8/8/2023	through	8/14/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1630	9.71	2.69	52.4
26A	58-003	Stoneco	270	1.61	2.69	8.7
2NS	19-04	Schlegel	1210	7.26	2.67	38.9
		Total Wt	3110	18.58		100.0

MDOT No.:

---- Verify this number is 100%

Builders'
REDI-MIX
Finish First With Builders

Builders Redi-Mix

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"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	77.0	100.0	100.0	87.9	12.1	12.1
1/2"	38.0	99.7	100.0	67.5	20.5	32.5
3/8"	20.2	89.5	100.0	57.3	10.2	42.7
#4	4.8	12.0	99.9	42.4	14.8	57.6
#8	2.6	3.7	90.1	36.7	5.7	63.3
#16	1.7	2.9	69.4	28.1	8.6	71.9
#30	1.6	2.6	44.5	18.4	9.8	81.6
#50	1.4	2.4	14.3	6.5	11.9	93.5
#100	1.4	2.4	2.7	2.0	4.5	98.0
LBW	1.4	2.2	0.2	1.0	1.0	99.0

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

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

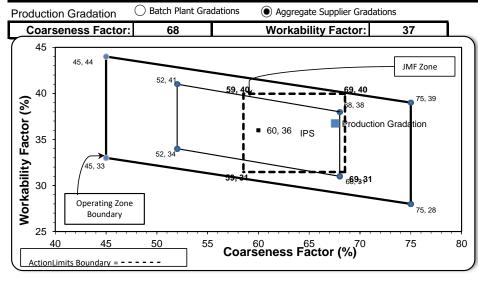
nom. max., #100 and #200 sieves.

*% 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.



Intial Production Sample (IPS)

Coars	Coarseness Factor:		
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

PLANT #: 12

Sample Date:

8/7/23

Contractor:

MDOT No.:

Dates Test Represents: 8/8/2023 8/14/2023 through Specific % ft³ Agg. Class Pit# Source Weight (SSD) 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

Concrete Grade: S2M, 3500HP

<---- Verify this number is 100%

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"	97.2	100.0	100.0	98.5	1.5	1.5
3/4"	80.3	100.0	100.0	89.5	9.0	10.5
1/2"	35.1	92.2	100.0	65.0	24.5	35.0
3/8"	19.3	79.0	100.0	55.8	9.3	44.2
#4	3.6	11.6	96.0	41.4	14.4	58.6
#8	2.8	2.6	80.8	34.2	7.1	65.8
#16	2.4	1.3	65.5	27.8	6.5	72.2
#30	2.1	1.0	49.2	21.0	6.8	79.0
#50	1.8	0.9	24.6	10.9	10.1	89.1
#100	1.6	0.9	5.0	2.9	8.0	97.1
LBW	1.3	0.7	1.0	1.1	1.8	98.9

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

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

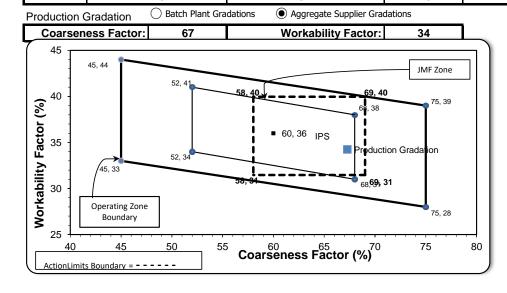
nom. max., #100 and #200 sieves.

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

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

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

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



Intial Production Sample (IPS)

Coars	Coarseness Factor:		
Work	Workability Factor:		
Siovo	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"	59.2	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 #: 20

Sample Date:

8/7/23 Concrete Grade: S2M, 3500HP 8/14/2023

Dates Test F	Represents:	8/8/2023	through	8/14/2023		
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	250	1.53	2.62	8.2
2NS	63-92	Grange Hall	1250	7.56	2.65	41.0
		Total Wt	3050	18.57		100.0

MDOT No.:

---- Verify this number is 100%

Contractor:

SUPERIO	PR

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"	95.5	100.0	100.0	97.7	2.3	2.3
3/4"	81.8	100.0	100.0	90.8	7.0	9.2
1/2"	45.3	96.8	100.0	71.9	18.8	28.1
3/8"	27.2	84.7	100.0	61.7	10.2	38.3
#4	6.5	18.4	97.4	44.7	17.0	55.3
#8	3.1	5.0	83.8	36.3	8.4	63.7
#16	2.4	2.5	70.2	30.2	6.1	69.8
#30	2.2	2.0	51.6	22.4	7.8	77.6
#50	2.1	1.8	21.3	9.9	12.5	90.1
#100	2.0	1.7	3.3	2.5	7.4	97.5
LBW	1.6	1.5	1.0	1.3	1.2	98.7

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

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

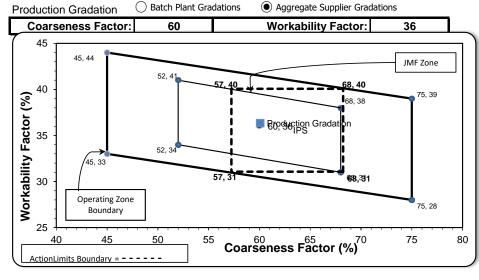
nom. max., #100 and #200 sieves.

*% 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.



Intial Production Sample (IPS)

Coars	Coarseness Factor:		
Work	Workability Factor:		
Sieve	Siovo 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"	93.3	6.7	6.7
1/2"	70.6	22.6	29.4
3/8"	59.6	11.0	40.4
#4	43.9	15.7	56.1
#8	35.6	8.4	64.4
#16	28.4	7.2	71.6
#30	19.4	9.0	80.6
#50	7.5	11.9	92.5
#100	0.9	6.6	99.1
LBW	0.9	0.1	99.1

PLANT #: p11

Sample Date:

8/7/23 Concrete Grade: S2M, 3500HP

Dates Test F	Panracante:	8/8/2023	through	8/14/2023		
Dales Test I	чергезепіз.	0/0/2023	tillough	0/14/2023		
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	95-013	Smelter Bay	1230	7.44	2.65	40.3

Contractor:

MDOT No.:



Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington 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"	96.4	10	0.0	100.0	98.2	1.8	1.8
3/4"	75.9	10	100.0		88.0	10.2	12.0
1/2"	33.8	92	2.2	100.0	66.2	21.7	33.8
3/8"	17.5	79	79.0		56.8	9.4	43.2
#4	3.0	11	1.6	97.0	41.8	15.1	58.2
#8	1.4	2	.6	86.1	35.7	6.1	64.3
#16	1.2	1	.3	71.4	29.5	6.2	70.5
#30	1.1	1	1.0		21.3	8.2	78.7
#50	1.0	0.9		23.9	10.2	11.1	89.8
#100	1.0	0.9		6.8	3.3	6.9	96.7
LBW	0.7	0	.7	1.0	0.8	2.5	99.2

75, 28

80

75

*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 **Production Gradation Coarseness Factor:** 67 **Workability Factor:** 36 JMF Zone 75. 39 Workability Factor (%) ■ 60, 36_{PS} Production Gradation 52, 34

Coarseness Factor (%) 70

Batch Plant Gradations

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

50

Operating Zone

Boundary

45

ActionLimits Boundary = - - - - -

Total Wt

PLANT #: P-32

Sample Date:

8/7/23 Concrete Grade: S2M, 3500HP

Dates Test Represents:		0/0/2023	through	8/14/2023		
Agg. Class	Class Pit # Source Weight (SSD) ft ³		Specific	%		
Ayy. Class	FIL#	Source	weight (SSD)	π	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	95-013	Smelter Bay	1230	7 44	2.65	<i>4</i> 0 3

Contractor:

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.

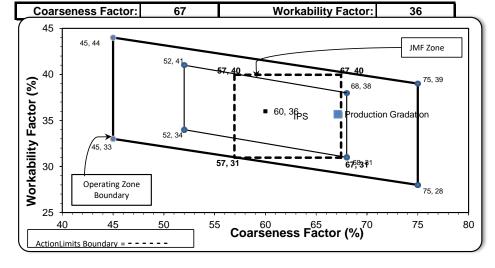
*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.

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

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

						Tomy uno mambor to 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"	96.4	100	.0	100.0	98.2	1.8	1.8	
3/4"	75.9	100	.0	100.0	88.0	10.2	12.0	
1/2"	33.8	92.	2	100.0	66.2	21.7	33.8	
3/8"	17.5	79.	0	100.0	56.8	9.4	43.2	
#4	3.0	11.	6	97.0	41.8	15.1	58.2	
#8	1.4	2.6	6	86.1	35.7	6.1	64.3	
#16	1.2	1.3	3	71.4	29.5	6.2	70.5	
#30	1.1	1.0)	51.2	21.3	8.2	78.7	
#50	1.0	0.0)	23.9	10.2	11.1	89.8	
#100	1.0	0.9)	6.8	3.3	6.9	96.7	
LBW	0.7	0.7	7	1.0	0.8	2.5	99.2	
Production Grad	dation Batch Plant Grad	dations () Aggre	egate Supplier Gradations		-	Intial Production	on Sample (IPS	

Production Gradation



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

Sample Date:

8/7/23 Concrete Grade: **S2M**, **3500HP**

Dates Test Represents:		8/8/2023	tnrougn	8/14/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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

Contractor:

MDOT No.:



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"	77.0	10	100.0		87.8	12.2	12.2
1/2"	38.0	99).7	100.0	67.0	20.8	33.0
3/8"	20.2	89	9.5	100.0	56.7	10.3	43.3
#4	4.8	12	2.0	98.1	41.5	15.2	58.5
#8	2.6	3	.7	83.1	33.9	7.6	66.2
#16	1.7	2	2.9		26.6	7.2	73.4
#30	1.6	2	2.6		19.2	7.4	80.8
#50	1.4	2.4		22.7	9.7	9.5	90.3
#100	1.4	2.4		5.9	3.2	6.5	96.8
LBW	1.4	2	.2	0.7	1.2	2.0	98.8

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

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

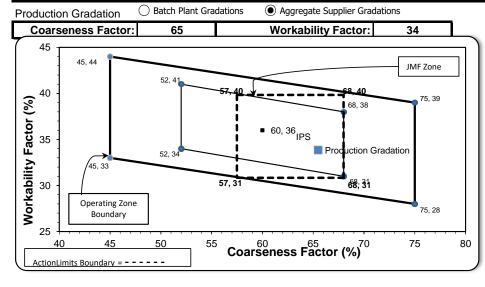
nom. max., #100 and #200 sieves.

*% 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:	35	
Sieve	Cumulative	%	Cumulative
Sieve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	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:

8/7/23 Concrete Grade: S2M, 3500HP

Dates Test F	Represents:	8/8/2023	through	8/14/2023		
Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1600	9.79	2.62	52.5
26A	71-47	Presque Isle	250	1.53	2.62	8.2
2NS	63-92	Grange Hall	1200	7.26	2.65	39.3
		T-4-1 \A/4	2050	40 E7		400.0

MDOT No.:

Contractor:

---- Verify this number is 100%

	THE SOCIETY OF THE ADDRESS OF THE PARTY STATE OF TH
ve ed	Superior Materials, LLC
	30701 W. 10 Mile Rd.
	Suite 500
	Farmington Hills, MI 48336

Total Wt 3050 18.57 Cumulative Cumulati 6AA 26A % Retained Sieve 2NS % Passing % 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 97.2 100.0 100.0 98.5 1.5 1.5 3/4" 80.3 100.0 100.0 89.7 8.9 10.3 1/2' 35.1 92.2 100.0 65.3 24.4 34.7 3/8' 79.0 100.0 44.1 19.3 55.9 9.4 #4 3.6 11.6 97.4 41.2 14.8 58.8 #8 2.8 2.6 83.8 34.7 6.5 65.3 #16 2.4 1.3 70.2 29.0 5.7 71.0 #30 2.1 21.5 78.5 1.0 51.6 7.5 #50 1.8 0.9 21.3 9.4 12.1 90.6 #100 2.2 1.6 0.9 3.3 7.2 97.8 LBW

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

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

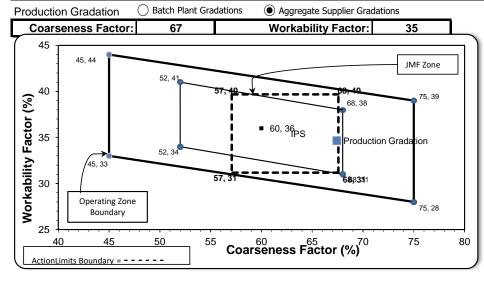
nom. max., #100 and #200 sieves.

*% 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	Coarseness Factor:		
Work	Workability Factor:		
Siovo	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

Total Wt

6AA

100.0

100.0 100.0

77.0

38.0

20.2

4.8

2.6

1.7

1.6

1.4

1.4

PLANT #: P-38

Sample Date:

Sieve

2"

1.5"

3/4"

1/2'

3/8'

#4

#8

#16

#30

#50

#100

LBW

8/7/23 Concrete Grade: S2M, 3500HP

18.58

Dates Test F	represents:	0/0/2023	through	8/14/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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

26A

2.4

2.4

3100

Contractor:

MDOT No.:



<---- Verify this number is 100%

etained	Cumulative % Retained	Juperior Materials, LLC
0.0	0.0	Suite 500

Cumulative % Passing	% Retained	Cumulative % Retained	
100.0	0.0	0.0	
100.0	0.0	0.0	
100.0	0.0	0.0	
87.8	12.2	12.2	
67.0	20.8	33.0	
56.7	10.3	43.3	*Max

Farmington Hills, MI 48336

	0.0	0.0	100.0	100.0	100.0
	0.0	0.0	100.0	100.0	100.0
	0.0	0.0	100.0	100.0	100.0
	12.2	12.2	87.8	100.0	100.0
	33.0	20.8	67.0	100.0	99.7
*Ma	43.3	10.3	56.7	100.0	89.5
*Ar	58.5	15.2	41.5	98.1	12.0
nom	66.2	7.6	33.9	83.1	3.7
*%	73.4	7.2	26.6	65.9	2.9
nom	80.8	7.4	19.2	46.9	2.6

9.7

3.2

100.0

2NS

22.7

5.9

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

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

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

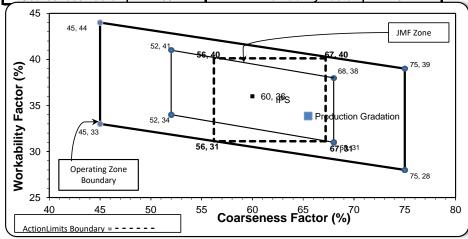
% Retained must be at least 4% for each sieve except max.,

m. 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.

Production Gradation	O Batch Plant Gradations		Aggregate Supplier Grad	ations
Coarseness Factor	: 65		Workability Factor:	34
45				
45, 44				JMF Zone



Intial Production Sample (IPS)

90.3

96.8

98.8

9.5

6.5

2.0

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	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

Sample Date:

8/7/23 Concrete Grade: S2M, 3500HP

Dates Test F	Represents:	8/8/2023	through	8/14/2023		
Agg. Class	· ·	Source	Weight (SSD)	ft ³	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.:



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

	l otal Wt	3050	18.57		100.0	< Verify this n	umber is 100%
Sieve	6AA	26	i 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"	97.8	100	0.0	100.0	98.8	1.2	1.2
3/4"	79.7	100	0.0	100.0	89.4	9.5	10.6
1/2"	35.3	96	5.6	100.0	65.8	23.5	34.2
3/8"	18.8	88	3.3	100.0	56.6	9.2	43.4
#4	2.8	24	.2	97.7	43.1	13.5	56.9
#8	1.6	4.	9	83.2	35.3	7.8	64.7
#16	1.4	2.	.1	67.2	28.4	6.8	71.6
#30	1.4	1.	.6	49.3	21.0	7.4	79.0
#50	1.3	1.	.5	22.5	10.0	11.0	90.0
#100	1.3	1.	4	6.3	3.4	6.6	96.6
LBW	1.0	1.	.3	1.3	1.1	2.2	98.9

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

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

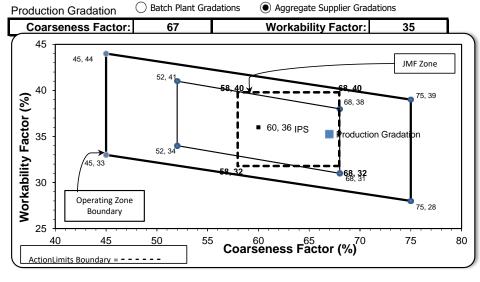
nom. max., #100 and #200 sieves.

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

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

*% Retained must be at least 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	
Workability Factor:		36	
Siovo	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

Approved By: PREPARED BY: SM, LLC Technical Service

Sample Date:

8/7/23 Concrete Grade: S2M, 3500HP

Dates Test F	Represents:	8/8/2023	through	8/14/2023		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	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

Contractor:

MDOT No.:



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	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"	97.2	10	0.0	100.0	98.5	1.5	1.5
3/4"	80.3	10	0.0	100.0	89.5	9.0	10.5
1/2"	35.1	92	2.2	100.0	65.0	24.5	35.0
3/8"	19.3	79	9.0	100.0	55.8	9.3	44.2
#4	3.6	11	.6	96.0	41.4	14.4	58.6
#8	2.8	2	.6	80.8	34.2	7.1	65.8
#16	2.4	1	.3	65.5	27.8	6.5	72.2
#30	2.1	1	.0	49.2	21.0	6.8	79.0
#50	1.8	0	.9	24.6	10.9	10.1	89.1
#100	1.6	0	.9	5.0	2.9	8.0	97.1
LBW	1.3	0	.7	1.0	1.1	1.8	98.9

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

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

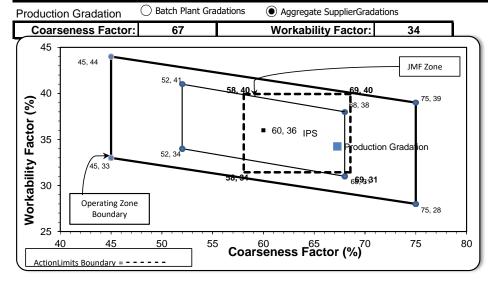
nom. max., #100 and #200 sieves.

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

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

*% Retained must be at least 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	
	% 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