Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-101 Contractor:

Sample Date: 8/2/21 Concrete Grade: DM

Dates Test Represents: 8/3/2021 through 8/9/2021

				0,0,00		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1560	9.54	2.62	53.6
26A	71-47	Presque Isle	200	1.22	2.62	6.9
2NS	75-051	Mid-Michigan	1150	6.93	2.66	39.5

MDOT No.:

Coarseness Factor:

<---- Verify this number is 100%

SUPERIOR	

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

*Maximum	%	Retained	must	he	above	the 3/8	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	2910	17.69		100.0	< Verify this n	umber is 100%	
Sieve	6AA	26/	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained	
2"	100.0	100.	.0	100.0	100.0	0.0	0.0	1
1.5"	100.0	100	.0	100.0	100.0	0.0	0.0	
1"	98.2	100	.0	100.0	99.0	1.0	1.0	1
3/4"	87.2	100	.0	100.0	93.1	5.9	6.9	1
1/2"	49.0	97.	7	100.0	72.5	20.6	27.5	1
3/8"	28.2	89.	4	100.0	60.8	11.7	39.2	
#4	3.9	23.	4	99.2	42.9	17.9	57.1	
#8	1.3	4.4		83.0	33.8	9.1	66.2	n
#16	1.2	2.2		67.7	27.5	6.3	72.5	
#30	1.2	1.9)	52.1	21.4	6.2	78.6	n
#50	1.1	1.8	3	26.8	11.3	10.1	88.7	
#100	1.1	1.7	•	6.1	3.1	8.2	96.9	а
LBW	1.0	1.5		0.7	0.9	2.2	99.1	1
Production Grad	dation O Batch Plant Gradat	ions 💿 Aggre	egate Supplier Gra	adations	Adjusted WF	Initial Producti	on Sample (IF	-S)

Coarseness Factor:	59	Workability Factor:	34	36.3
45 45, 44 45, 44 45, 33 Operating Zone Boundary	52, 41	57, 39 68, 38 68, 38 Freedy elicin Gradation 67, 31 67, 31	75, 28	
40 45 ActionLimits Boundary =	50 5	Coarseness Factor (%)	75	80

Work	ability Factor:	35	
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"	95.0	5.0	5.0
1/2"	70.5	24.5	29.5
3/8"	60.0	10.5	40.0
#4	44.4	15.6	55.6
#8	35.5	9.0	64.5
#16	28.5	7.0	71.5
#30	21.5	7.0	78.5
#50	10.2	11.3	89.8
#100	3.1	7.1	96.9
LBW	1.3	1.8	98.7

Approved By

Production Gradation

Sample Date: 8/2/21 DM Concrete Grade: Dates Test Represents: 8/3/2021 8/9/2021 through

Contractor:	

MDOT No.:

Adjusted WF Intial Production Sample (IPS)

Coarseness Factor:

36.3

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1500	8.94	2.69	50.8
26A	58-003	Stoneco	305	1.82	2.69	10.3
2NS	63-114	Highland	1150	6.95	2.65	38.9
		Total Wt	2955	17.71		100.0

Source	Weight (SSD)	ft³	Gravity	Contribution
Stoneco	1500	8.94	2.69	50.8
Stoneco	305	1.82	2.69	10.3
Highland	1150	6.95	2.65	38.9
Total Wt	2955	17.71		100.0

S	L	JF	7	E R	7	10	0	R

Superior Materials, LLC

30701 W. 10 Mile Rd. Suite 500

Farmington Hills, MI 48336

	i otai Wt	2955	17./1		100.0	< Verify this n	umber is 100%	
Sieve	6AA	26	SA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained	
2"	100.0	100	0.0	100.0	100.0	0.0	0.0	ı
1.5"	100.0	100	0.0	100.0	100.0	0.0	0.0	ı
1"	100.0	100	0.0	100.0	100.0	0.0	0.0	ĺ
3/4"	77.5	100	0.0	100.0	88.6	11.4	11.4	ı
1/2"	39.3	99	0.6	100.0	69.1	19.4	30.9	l
3/8"	17.7	85	5.5	100.0	56.7	12.4	43.3	ı
#4	3.3	13	3.8	99.0	41.6	15.1	58.4	ı
#8	2.2	2.	.1	83.4	33.8	7.8	66.2	n
#16	0.7	1.	.1	64.5	25.6	8.2	74.4	ı
#30	0.6	0.	.9	46.0	18.3	7.3	81.7	n
#50	0.5	0.	.8	22.9	9.2	9.1	90.8	ı
#100	0.5	0.	.7	5.4	2.4	6.8	97.6	а
I RW	0.6	0	5	0.8	0.7	1.8	99.3	1

Aggregate Supplier Gradations

*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.

Coarseness Factor:	65	Workability Factor:	34	
45 45, 44 45, 44 45, 33 Operating Zone Boundary	52, 34	68, 38 60,139 Firoduction G	75, 39 radation 75, 28	
25 40 45 ActionLimits Boundary =	50 55	Coarseness Factor (%)	75	80

Batch Plant Gradations

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"	99.3	0.7	0.7
3/4"	89.2	10.1	10.8
1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
#4	44.4	16.3	55.6
#8	35.9	8.5	64.1
#16	27.3	8.6	72.7
#30	19.1	8.2	80.9
#50	7.4	11.7	92.6
#100	1.9	5.6	98.1
LBW	0.7	1.2	99.3

61

Sample Date:

Production Gradation

8/2/21 DM Concrete Grade: 8/3/2021 8/9/2021 through

Contractor:

MDOT No.:

Adjusted WF Intial Production Sample (IPS)

Coarseness Factor:

35.8

Dates Test F	Dates Test Represents:		through	8/9/2021		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1705	10.43	2.62	58.7
26A	71-47	Presque Isle	100	0.61	2.62	3.4
2NS	63-92	Grange Hall	1100	6.65	2.65	37.9
		Total Wt	2905	17.69		100.0

---- Verify this number is 100%

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

						. ,	
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"	98.5	100	0.0	100.0	99.1	0.9	0.9
3/4"	84.9	100	0.0	100.0	91.1	8.0	8.9
1/2"	45.6	97	7.8	100.0	68.0	23.1	32.0
3/8"	25.9	90	.8	100.0	56.2	11.8	43.8
#4	4.1	27	.4	98.2	40.5	15.7	59.5
#8	1.7	7.	0	84.8	33.3	7.2	66.7
#16	1.5	3.	0	69.2	27.2	6.2	72.8
#30	1.4	2.	2	49.1	19.5	7.7	80.5
#50	1.3	2.	0	21.0	8.8	10.7	91.2
#100	1.2	1.		3.1	1.9	6.8	98.1
LBW	1.1	1.	6	0.3	0.8	1.1	99.2

Aggregate Supplier Gradations

*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.

Coars	seness Factor:	66	Workability Factor:	33	
Workability Factor (%)	45, 44 45, 33 Operating Zone Boundary	52, 41	57, 40 68, 40 68, 38 ■ Production G	JMF Zone 75, 39 radation 75, 28	
25 -4		50 5	5 Coarseness Factor (%)	75	80

Batch Plant Gradations

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"	89.2	10.8	10.8
1/2"	68.4	20.8	31.6
3/8"	59.9	8.6	40.1
#4	43.0	16.9	57.0
#8	35.9	7.1	64.1
#16	29.0	6.8	71.0
#30	21.3	7.7	78.7
#50	9.9	11.4	90.1
#100	2.4	7.5	97.6
LBW	1.2	1.2	98.8

Aggregate Optimization Chart

8/2/21

8/3/2021

PLANT #: P-32

Sample Date:

Dates Test Represents:

DM Concrete Grade:

Contractor:

MDOT No.:

Coarseness Factor:

Agg. Class	Pit#	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1550	9.48	2.62	53.4
26A	71-47	Presque Isle	205	1.25	2.62	7.1
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
		Total Wt	2905	17.69		100.0

through

IVI	A	"	E	r	"	A	_	3
Su	per	io	r N	/lat	:e	rial	s,	<u>LLC</u>
30	701	W	. 1	0 N	1il	e R	d.	
Sui	te 5	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.

62

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

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

	Total Wt	2905 17.69		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"	94.0	100.0	100.0	96.8	3.2	3.2
3/4"	83.6	100.0	100.0	91.2	5.5	8.8
1/2"	49.0	97.7	100.0	72.6	18.6	27.4
3/8"	28.1	87.1	100.0	60.7	11.9	39.3
#4	5.0	26.4	96.6	42.8	18.0	57.2
#8	2.5	7.7	84.5	35.3	7.4	64.7
#16	2.1	4.0	70.2	29.2	6.1	70.8
#30	2.0	3.2	49.7	21.0	8.2	79.0
#50	1.9	2.8	23.0	10.3	10.7	89.7
#100	1.8	2.5	6.6	3.7	6.6	96.3
LBW	1.3	1.9	0.8	1.1	2.6	98.9

8/9/2021

Coarseness Factor: 61 **Workability Factor:** 35 37.8 45 JMF Zone 45, 44 75, 39 Workability Factor (%) Production Grapation ■ 60,3MBS 45, 33 Operating Zone Boundary 75, 28 25 Coarseness Factor (%) 70 75 80

Workability 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"	95.0	5.0	5.0
1/2"	72.3	22.8	27.7
3/8"	60.4	11.8	39.6
#4	42.6	17.8	57.4
#8	36.0	6.6	64.0
#16	29.5	6.5	70.5
#30	20.3	9.2	79.7
#50	9.5	10.8	90.5
#100	3.4	6.1	96.6
LBW	1.3	2.1	98.7

PREPARED BY: SM, LLC Technical Service

ActionLimits Boundary = - - - -

Sample Date: 8/2/21 DM Concrete Grade: Dates Test Represents: 8/3/2021 8/9/2021 through

Contractor:

35.7

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1505	8.97	2.69	50.9
26A	58-003	Stoneco	350	2.09	2.69	11.8
2NS	81-093	Burmeister	1100	6.65	2.65	37.2
		Total Wt	2955	17.70		100.0

MDOT No.:

--- Verify this number is 100%

Coarseness Factor:

SUPERIOR MATERIALS

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

		2000			· • • • • • • • • • • • • • • • • • • •	
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"	77.5	100.0	100.0	88.5	11.5	11.5
1/2"	39.3	99.6	100.0	69.0	19.5	31.0
3/8"	17.7	85.5	100.0	56.4	12.7	43.6
#4	3.3	13.8	98.8	40.1	16.3	59.9
#8	2.2	2.1	85.5	33.2	6.9	66.8 r
#16	0.7	1.1	69.6	26.4	6.8	73.6
#30	0.6	0.9	50.1	19.1	7.3	80.9 r
#50	0.5	0.8	18.1	7.1	12.0	92.9
#100	0.5	0.7	3.2	1.5	5.6	98.5
LBW	0.6	0.5	0.7	0.6	0.9	99.4
Production Gradation		dations Aggregate Supplier Gra	dations	Adjusted WF	Intial Production	on Sample (IPS)

*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.

Coarseness Factor:	65	Workability Factor:	33	
45 45, 44 45, 44 45, 33 Operating Zone Boundary	52, 41 56 52, 34 56	68, 38 ■ Production Grad	75, 39 ation 75, 28	
40 45 ActionLimits Boundary =	50 5	Coarseness Factor (%)	75	80

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"	99.3	0.7	0.7
3/4"	89.1	10.2	10.9
1/2"	70.5	18.6	29.5
3/8"	60.5	10.0	39.5
#4	44.1	16.4	55.9
#8	35.6	8.5	64.4
#16	27.7	7.9	72.3
#30	20.6	7.1	79.4
#50	8.7	11.8	91.3
#100	1.6	7.1	98.4
LBW	1.1	0.6	98.9

Sample Date:

8/2/21 DM Concrete Grade: 8/9/2021

MDOT	No	

Contractor:

Dates Test F	Represents:	8/3/2021	through	8/9/2021		
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1605	9.82	2.62	55.2
26A	71-47	Presque Isle	200	1.22	2.62	6.9
2NS	63-92	Grange Hall	1100	6.65	2.65	37.9
		Total Wt	2005	17 60		100.0

SUPER	IOR

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.,

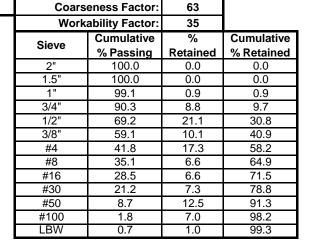
nom. max., #100 and #200 sieves.

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

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

Total Wt		2905	17.69		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"	96.1	100	0.0	100.0	97.8	2.2	2.2
3/4"	78.9	100	0.0	100.0	88.3	9.5	11.7
1/2"	42.8	97	7.7	100.0	68.2	20.1	31.8
3/8"	23.8	87	7.1	100.0	57.0	11.2	43.0
#4	3.7	26	.4	98.2	41.0	16.0	59.0
#8	1.9	7.	7	84.8	33.7	7.4	66.3
#16	1.7	4.	0	69.2	27.4	6.3	72.6
#30	1.6	3.	2	49.1	19.7	7.7	80.3
#50	1.5	2.8		21.0	9.0	10.7	91.0
#100	1.4	2.5		3.1	2.1	6.9	97.9
LBW	1.0	1.	9	0.3	0.8	1.3	99.2
Production Gradation							

Production Gradation	Batch Plant Gradation	ons Aggregate Supplier Grad	ations	Adjusted \
Coarseness Factor:	65	Workability Factor:	34	36.2
45 45, 44	52, 41	39 60,59	JMF Zone	



Workability Factor (% ■ 60, 36 Production Gradation IPS 52, 34 Operating Zone Boundary 25 Coarseness Factor (%) 70 45 50 55 75 80 ActionLimits Boundary = - - - - -

PREPARED BY: SM, LLC Technical Service Approved By:

PLANT #: P-39 Contractor:

Sample Date: 8/2/21 DM Concrete Grade: **Dates Test Represents:** 8/3/2021 8/9/2021 through

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1605	9.82	2.62	55.2
26A	71-47	Presque Isle	200	1.22	2.62	6.9
2NS	44-051	Krake Willis Rd	1100	6.65	2.65	37.9
Total Wt			2905	17.69		100.0

MDOT No.:

Coarseness Factor:

SUPERIO MATERIAL	Rs

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

		Farm

63

*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		2905	17.69		100.0	< Verify this n	umber 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"	98.2	10	0.0	100.0	99.0	1.0	1.0
3/4"	87.2	10	0.0	100.0	92.9	6.1	7.1
1/2"	49.0	97.7		100.0	71.7	21.3	28.3
3/8"	28.2	89).4	100.0	59.6	12.1	40.4
#4	3.9	23	3.4	97.6	40.7	18.9	59.3
#8	1.3	4	.4	81.9	32.0	8.7	68.0
#16	1.2	2	.2	67.1	26.2	5.8	73.8
#30	1.2	1.9		51.3	20.2	6.0	79.8
#50	1.1	1.8		27.0	11.0	9.3	89.0
#100	1.1	1.7		8.8	4.1	6.9	95.9
LBW	1.0	1	.5	1.2	1.1	2.9	98.9
	O B + 1 B + 6 - 1			1			·

75, 28

80

75

Aggregate Supplier Gradations Batch Plant Gradations **Production Gradation** Adjusted WF Intial Production Sample (IPS) **Coarseness Factor:** 59 **Workability Factor:** 32 34.5 45 JMF Zone 45, 44 52, 41 Workability Factor (%) ■ 60, 36 IPS Production Gradatio

Coarseness Factor (%)⁷⁰

Workability 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"	89.7	10.3	10.3
1/2"	70.3	19.4	29.7
3/8"	59.1	11.2	40.9
#4	42.8	16.3	57.2
#8	35.5	7.3	64.5
#16	29.0	6.5	71.0
#30	21.2	7.7	78.8
#50	9.8	11.5	90.2
#100	3.7	6.1	96.3
LBW	1.2	2.5	98.8

PREPARED BY: SM, LLC Technical Service

Operating Zone Boundary

45

ActionLimits Boundary = - - -

25

52, 34

50

55

Approved By:

PLANT #: P-02 Contractor:

Sample Date: 8/2/21 DM Concrete Grade: Dates Test Represents: 8/3/2021 8/9/2021 through

MDOT No.:

Adjusted WF Intial Production Sample (IPS)

Coarseness Factor:

34.8

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1605	9.82	2.62	55.2
26A	71-47	Presque Isle	200	1.22	2.62	6.9
2NS	63-115	Ray Rd	1100	6.65	2.65	37.9
		Total Wt	2905	17.69		100.0



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

	i otai wt	2905	17.69		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"	96.1	10	0.0	100.0	97.8	2.2	2.2
3/4"	78.9	10	0.0	100.0	88.3	9.5	11.7
1/2"	42.8	97	7.7	100.0	68.2	20.1	31.8
3/8"	23.8	87	7.1	100.0	57.0	11.2	43.0
#4	3.7	26	6.4	96.5	40.4	16.6	59.6
#8	1.9	7.	.7	81.1	32.3	8.1	67.7
#16	1.7	4.	.0	66.6	26.4	5.9	73.6
#30	1.6	3	.2	51.1	20.5	6.0	79.5
#50	1.5	2.	.8	27.4	11.4	9.1	88.6
#100	1.4	2	.5	6.1	3.3	8.1	96.7
LBW	1.0	1.	.9	0.8	1.0	2.3	99.0

Aggregate SupplierGradations

*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.

63

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

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

Coarseness Factor:	63	Workability Factor:	32	
45 45, 44 45, 44 45, 33 Operating Zone Boundary	52, 41	58, 39 68, 39 68, 38 68, 38 68, 38 68, 38 68, 38	75, 39	
Boundary 25 40 45 ActionLimits Boundary =	50 55	Coarseness Factor (%)	75, 28 75	80

Batch Plant Gradations

Production Gradation

Workability Factor:		35	
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"	95.1	4.9	4.9
1/2"	74.6	20.5	25.4
3/8"	59.3	15.3	40.7
#4	42.1	17.2	57.9
#8	35.1	7.1	64.9
#16	29.2	5.9	70.8
#30	21.9	7.3	78.1
#50	9.6	12.4	90.4
#100	2.4	7.2	97.6
LBW	0.9	1.5	99.1