

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-2**

Sample Date: 9/16/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 9/17/2026 through 9/23/2026

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1570	9.79	2.57	52.9
26A	71-47	Presque Isle	200	1.25	2.57	6.7
2NS	63-115	Ray Rd	1200	7.20	2.67	40.4
Total Wt			2970	18.24		100.0

<----- Verify this number 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"	97.4	100.0	100.0	98.6	1.4	1.4
3/4"	86.1	100.0	100.0	92.7	6.0	7.3
1/2"	45.3	98.5	100.0	71.0	21.7	29.0
3/8"	19.6	83.6	100.0	56.4	14.6	43.6
#4	2.3	22.4	95.4	41.3	15.1	58.7
#8	1.7	7.4	79.1	33.4	7.9	66.6
#16	1.4	3.6	64.8	27.2	6.2	72.8
#30	1.3	2.9	50.3	21.2	6.0	78.8
#50	1.2	2.6	28.8	12.4	8.8	87.6
#100	1.2	2.5	7.3	3.8	8.7	96.2
LBW	1.0	2.2	0.7	1.0	2.8	99.0



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

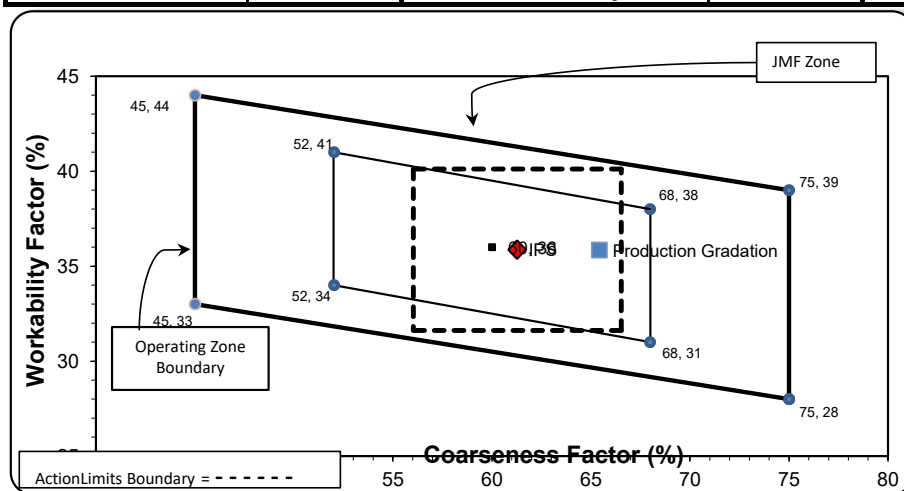
a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	65	Workability Factor:	33	35.9
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Coarseness Factor:		61	
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"	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



PREPARED BY:
SM, LLC Technical Service

Approved By:
Nancy Donahue

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-2**

Sample Date: 9/16/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 9/17/2026 through 9/23/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1500	9.35	2.57	52.3
26A	71-47	Presque Isle	220	1.37	2.57	7.7
2NS	63-115	Ray Rd	1150	6.90	2.67	40.1
Total Wt			2870	17.63		100.0

<----- Verify this number 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"	97.4	100.0	100.0	98.6	1.4	1.4
3/4"	86.1	100.0	100.0	92.7	5.9	7.3
1/2"	45.3	98.5	100.0	71.3	21.4	28.7
3/8"	19.6	83.6	100.0	56.7	14.6	43.3
#4	2.3	22.4	95.4	41.1	15.6	58.9
#8	1.7	7.4	79.1	33.2	8.0	66.8
#16	1.4	3.6	64.8	27.0	6.2	73.0
#30	1.3	2.9	50.3	21.1	5.9	78.9
#50	1.2	2.6	28.8	12.4	8.7	87.6
#100	1.2	2.5	7.3	3.7	8.6	96.3
LBW	1.0	2.2	0.7	1.0	2.8	99.0



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*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.

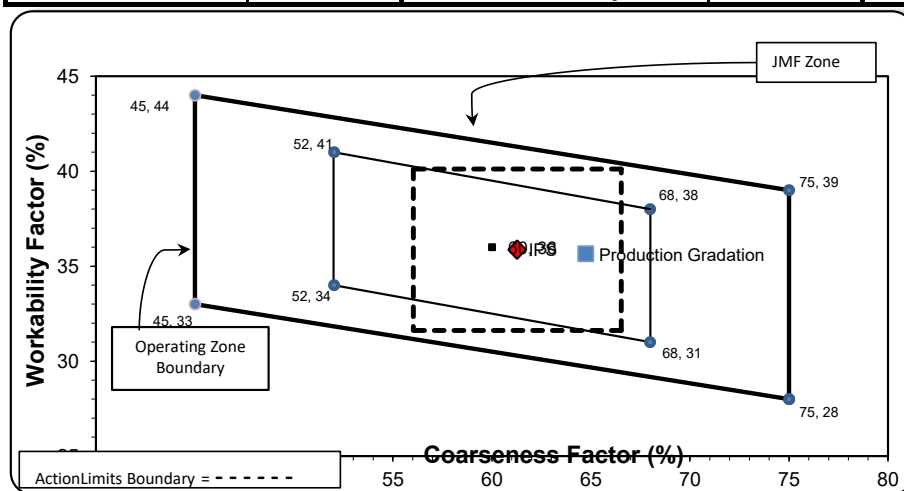
Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	65	Workability Factor:	33	35.7
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Coarseness Factor:	61
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Workability Factor:	36
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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

PREPARED BY:
SM, LLC Technical Service

Approved By:
Nancy Donahue

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Sample Date: 9/16/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 9/17/2026 through 9/23/2026

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1590	9.47	2.69	51.8
1A	58-003	StoneCo	300	1.79	2.69	9.8
2NS	63-114	Highland	1180	7.11	2.66	38.4
Total Wt			3070	18.37		100.0

<----- Verify this number is 100%



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Sieve	6AA	1A	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"	99.9	100.0	100.0	99.9	0.1	0.1
3/4"	82.9	100.0	100.0	91.1	8.8	8.9
1/2"	45.5	88.8	100.0	70.7	20.5	29.3
3/8"	28.8	73.2	100.0	60.5	10.2	39.5
#4	6.0	21.1	98.4	43.0	17.5	57.0
#8	2.7	4.4	83.6	34.0	9.0	66.0
#16	1.4	2.9	66.1	26.4	7.5	73.6
#30	1.2	2.5	47.1	19.0	7.4	81.0
#50	1.0	2.2	22.4	9.3	9.6	90.7
#100	1.0	2.1	5.5	2.8	6.5	97.2
LBW	0.9	2.0	0.9	1.0	1.8	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.

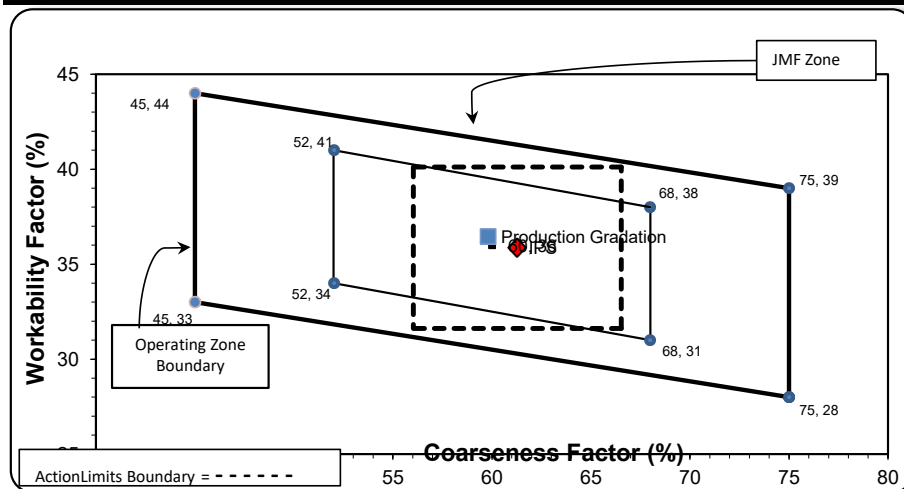
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	60	Workability Factor:	34	36.5
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Coarseness Factor:	61
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Workability Factor:	36
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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

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Approved By:
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Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Sample Date: 9/16/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 9/17/2026 through 9/23/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1500	8.94	2.69	51.0
1A	58-003	StoneCo	320	1.91	2.69	10.9
2NS	63-114	Highland	1120	6.75	2.66	38.1
Total Wt			2940	17.59		100.0

<----- Verify this number is 100%



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Sieve	6AA	1A	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"	99.9	100.0	100.0	99.9	0.1	0.1
3/4"	82.9	100.0	100.0	91.3	8.7	8.7
1/2"	45.5	88.8	100.0	71.0	20.3	29.0
3/8"	28.8	73.2	100.0	60.8	10.2	39.2
#4	6.0	21.1	98.4	42.8	17.9	57.2
#8	2.7	4.4	83.6	33.7	9.1	66.3
#16	1.4	2.9	66.1	26.2	7.5	73.8
#30	1.2	2.5	47.1	18.8	7.4	81.2
#50	1.0	2.2	22.4	9.3	9.5	90.7
#100	1.0	2.1	5.5	2.8	6.4	97.2
LBW	0.9	2.0	0.9	1.0	1.8	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.

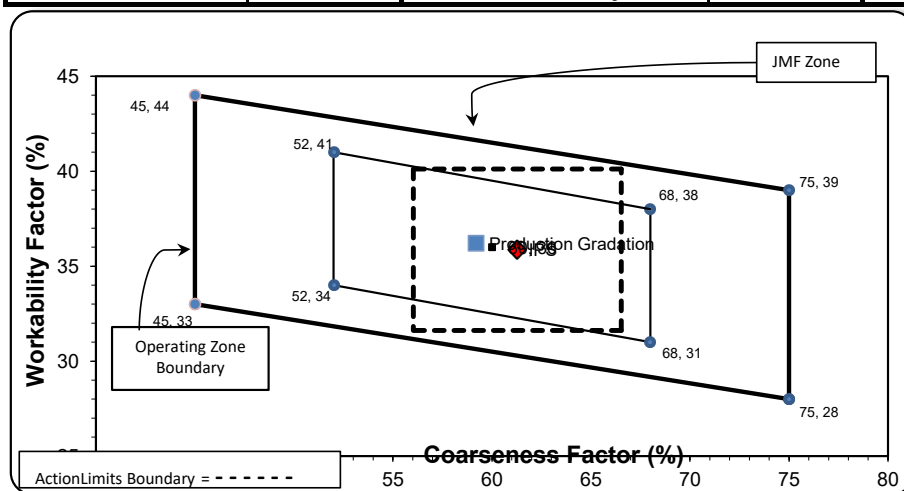
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	59	Workability Factor:	34	36.2
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Coarseness Factor:	61
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Workability Factor:	36
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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

PREPARED BY:
SM, LLC Technical Service

Approved By:
Nancy Donahue

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Sample Date: 9/16/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 9/17/2026 through 9/23/2026

1" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1590	9.47	2.69	51.8
1A	58-003	StoneCo	300	1.79	2.69	9.8
2NS	63-114	Highland	1180	7.11	2.66	38.4
Total Wt			3070	18.37		100.0

<----- Verify this number is 100%



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Suite 500

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Sieve	6AA	1A	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"	99.9	100.0	100.0	99.9	0.1	0.1
3/4"	82.9	100.0	100.0	91.1	8.8	8.9
1/2"	45.5	88.8	100.0	70.7	20.5	29.3
3/8"	28.8	73.2	100.0	60.5	10.2	39.5
#4	6.0	21.1	98.4	43.0	17.5	57.0
#8	2.7	4.4	83.6	34.0	9.0	66.0
#16	1.4	2.9	66.1	26.4	7.5	73.6
#30	1.2	2.5	47.1	19.0	7.4	81.0
#50	1.0	2.2	22.4	9.3	9.6	90.7
#100	1.0	2.1	5.5	2.8	6.5	97.2
LBW	0.9	2.0	0.9	1.0	1.8	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.

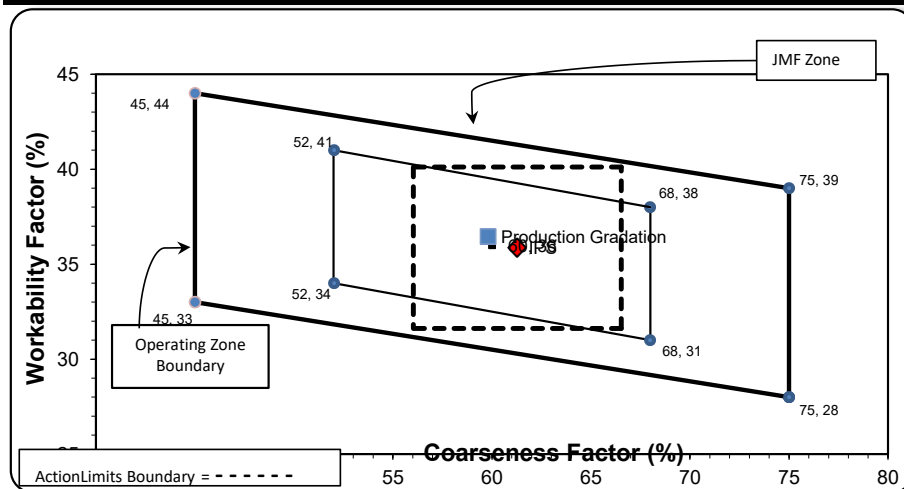
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	60	Workability Factor:	34	36.5
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Coarseness Factor:	61
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Workability Factor:	36
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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

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Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Sample Date: 9/16/26

Concrete Grade: **DM-4500HP**

Contractor: _____

Dates Test Represents: 9/17/2026 through 9/23/2026

5" Slump

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	StoneCo	1500	8.94	2.69	51.0
1A	58-003	StoneCo	320	1.91	2.69	10.9
2NS	63-114	Highland	1120	6.75	2.66	38.1
Total Wt			2940	17.59		100.0

<----- Verify this number is 100%



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Sieve	6AA	1A	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"	99.9	100.0	100.0	99.9	0.1	0.1
3/4"	82.9	100.0	100.0	91.3	8.7	8.7
1/2"	45.5	88.8	100.0	71.0	20.3	29.0
3/8"	28.8	73.2	100.0	60.8	10.2	39.2
#4	6.0	21.1	98.4	42.8	17.9	57.2
#8	2.7	4.4	83.6	33.7	9.1	66.3
#16	1.4	2.9	66.1	26.2	7.5	73.8
#30	1.2	2.5	47.1	18.8	7.4	81.2
#50	1.0	2.2	22.4	9.3	9.5	90.7
#100	1.0	2.1	5.5	2.8	6.4	97.2
LBW	0.9	2.0	0.9	1.0	1.8	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.

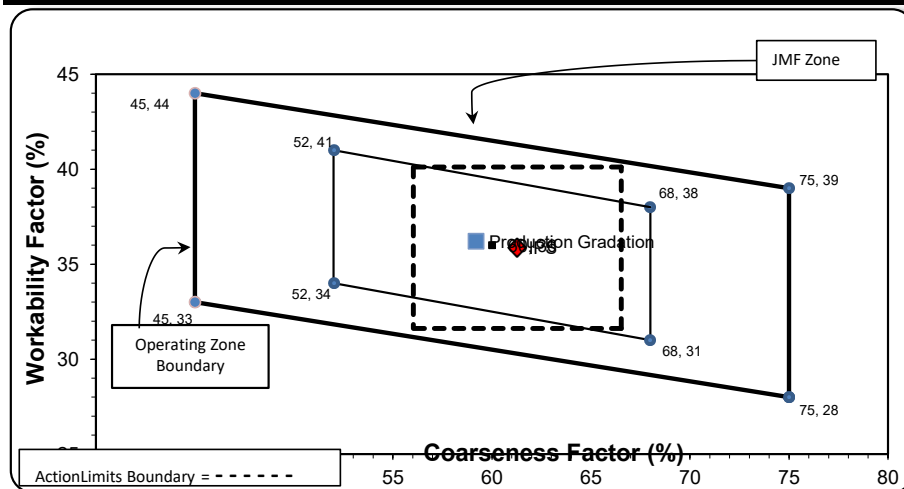
Production Gradation ☐ Batch Plant Gradations ☒ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	59	Workability Factor:	34	36.2
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Coarseness Factor:	61
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Workability Factor:	36
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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

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Nancy Donahue