

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-101**

Sample Date: 11/20/23

Concrete Grade: **DM, 4500HP**

Dates Test Represents: 11/21/2023 through 11/27/2023

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1450	8.87	2.62	50.0
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	75-051	Mid Michigan	1150	6.93	2.66	39.7
Total Wt			2900	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"	96.6	100.0	100.0	98.3	1.7	1.7
3/4"	81.0	100.0	100.0	90.5	7.8	9.5
1/2"	39.6	94.8	100.0	69.3	21.2	30.7
3/8"	22.8	83.9	100.0	59.7	9.5	40.3
#4	3.6	20.4	96.3	42.1	17.6	57.9
#8	1.8	5.8	82.4	34.2	7.9	65.8
#16	1.6	3.2	67.4	27.9	6.3	72.1
#30	1.6	2.4	50.4	21.0	6.8	79.0
#50	1.5	2.0	25.9	11.2	9.8	88.8
#100	1.4	1.8	6.6	3.5	7.7	96.5
LBW	1.2	1.6	0.8	1.1	2.4	98.9



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 Suite 500
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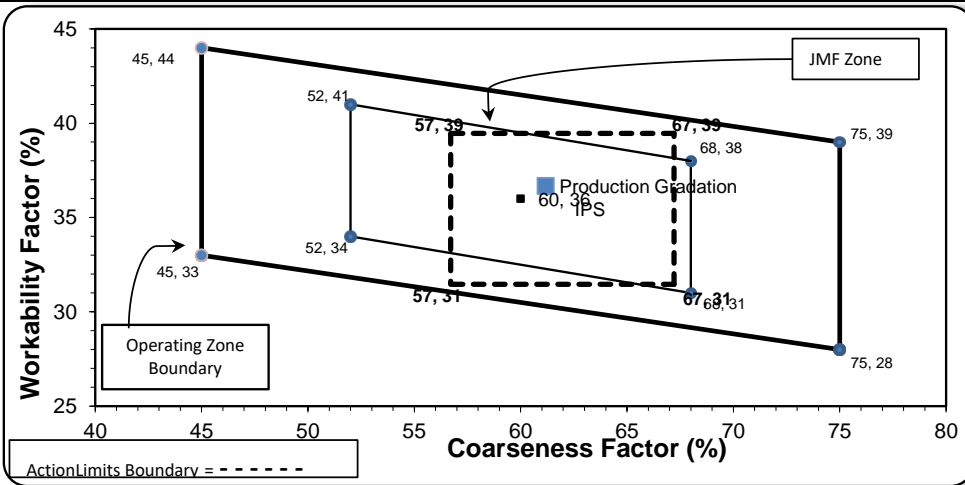
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	61	Workability Factor:	34	Adjusted WF	36.7	Coarseness Factor:	62
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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"	95.0	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

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Sample Date: 11/20/23

Concrete Grade: DM, 4500HP

Contractor: _____

Dates Test Represents: 11/21/2023 through 11/27/2023

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1375	8.19	2.69	46.6
26A	58-003	Stoneco	425	2.53	2.69	14.4
2NS	81-019	Pleasant Lake	1150	6.95	2.65	39.0
Total Wt			2950	17.68		100.0

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



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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"	85.4	100.0	100.0	93.2	6.8	6.8
1/2"	44.2	99.4	100.0	73.9	19.3	26.1
3/8"	18.5	86.6	100.0	60.1	13.8	39.9
#4	3.6	19.1	98.4	42.8	17.3	57.2
#8	1.7	6.2	84.6	34.7	8.1	65.3
#16	1.2	3.5	66.9	27.1	7.5	72.9
#30	1.2	2.8	44.8	18.4	8.7	81.6
#50	1.2	2.4	16.7	7.4	11.0	92.6
#100	1.2	2.2	2.7	1.9	5.5	98.1
LBW	0.9	2.0	0.5	0.9	1.0	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

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

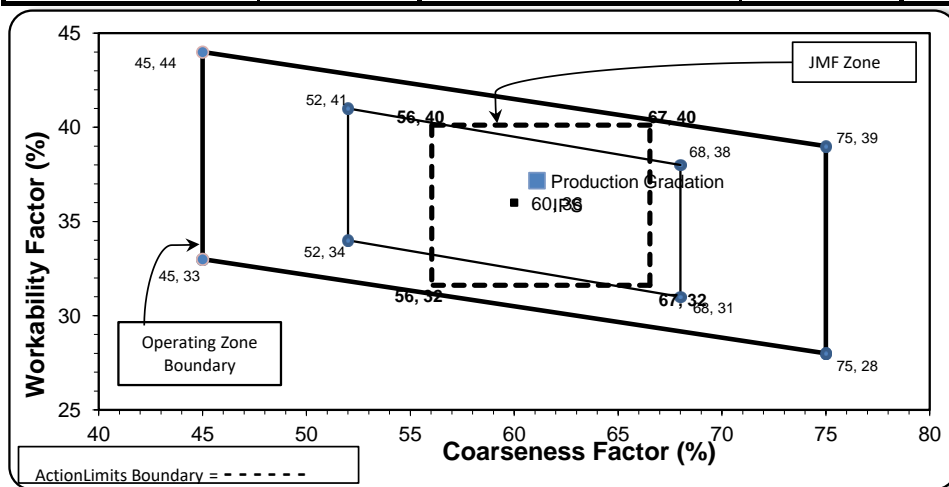
Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	61	Workability Factor:	35	37.2
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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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Aggregate Optimization Chart

PLANT #: 12

Contractor: _____

Sample Date: 11/20/23

Concrete Grade: DM, 4500HP

Dates Test Represents: 11/21/2023 through 11/27/2023

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1450	8.87	2.62	49.9
26A	71-47	Presque Isle	305	1.87	2.62	10.5
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
Total Wt			2905	17.69		100.0

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



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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"	97.6	100.0	100.0	98.8	1.2	1.2
3/4"	77.0	100.0	100.0	88.5	10.3	11.5
1/2"	34.4	93.9	100.0	66.6	21.9	33.4
3/8"	18.6	82.4	100.0	57.5	9.1	42.5
#4	3.5	17.7	96.7	41.9	15.6	58.1
#8	1.9	3.5	81.6	33.6	8.3	66.4
#16	1.7	1.8	65.7	27.0	6.6	73.0
#30	1.6	1.4	49.8	20.7	6.4	79.3
#50	1.6	1.4	25.6	11.1	9.6	88.9
#100	1.4	1.2	5.4	3.0	8.1	97.0
LBW	1.2	1.1	0.6	1.0	2.0	99.0

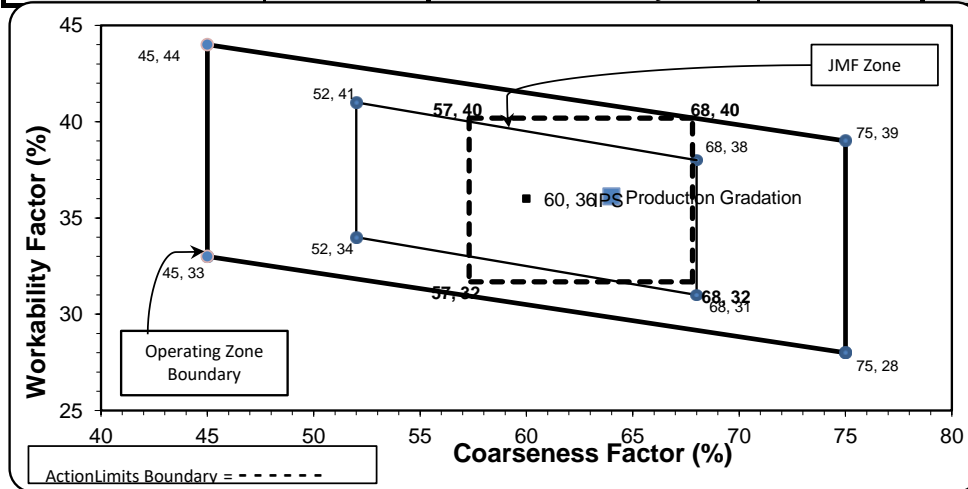
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	64	Workability Factor:	34	Adjusted WF	36.1	Coarseness Factor:	63
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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"	89.0	10.3	11.0
1/2"	70.3	18.7	29.7
3/8"	59.9	10.4	40.1
#4	41.9	18.0	58.1
#8	35.9	6.0	64.1
#16	27.8	8.2	72.2
#30	18.9	8.8	81.1
#50	6.3	12.6	93.7
#100	1.7	4.6	98.3
LBW	1.0	0.7	99.0

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Aggregate Optimization Chart

PLANT #: p11

Contractor: _____

Sample Date: 11/20/23

Concrete Grade: DM, 4500HP

Dates Test Represents: 11/21/2023 through 11/27/2023

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1455	8.90	2.62	50.1
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
Total Wt			2905	17.69		100.0

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



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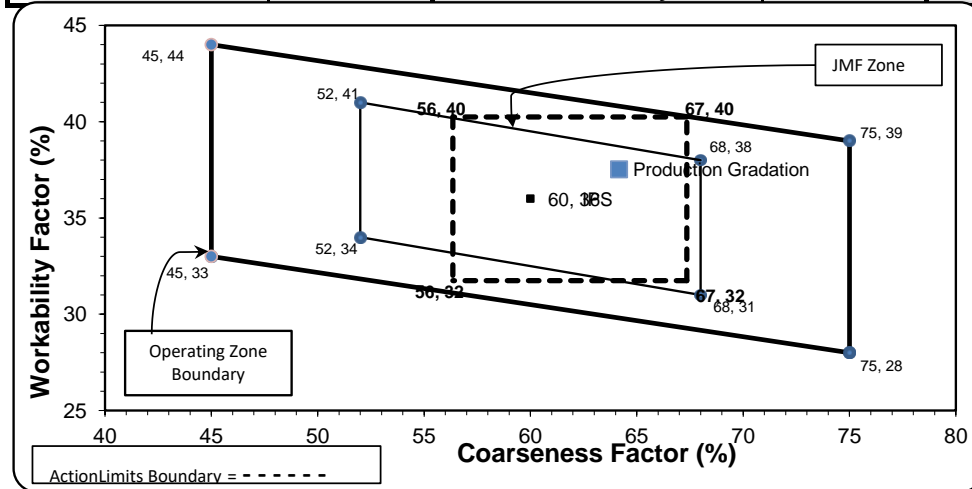
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	96.5	100.0	100.0	98.2	1.8	1.8
3/4"	78.8	100.0	100.0	89.4	8.9	10.6
1/2"	33.1	93.9	100.0	65.9	23.5	34.1
3/8"	20.4	82.4	100.0	58.3	7.5	41.7
#4	4.4	17.7	95.7	41.9	16.4	58.1
#8	2.9	3.5	83.9	35.0	6.9	65.0
#16	2.6	1.8	68.9	28.8	6.3	71.2
#30	2.5	1.4	49.5	21.0	7.8	79.0
#50	2.4	1.4	24.0	10.8	10.1	89.2
#100	2.3	1.2	7.3	4.2	6.7	95.8
LBW	1.8	1.1	1.9	1.8	2.4	98.2

*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 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:	64	Workability Factor:	35	Adjusted WF	37.5	Coarseness Factor:	62
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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"	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

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Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Sample Date: 11/20/23

Concrete Grade: DM, 4500HP

Contractor: _____

Dates Test Represents: 11/21/2023 through 11/27/2023

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1455	8.90	2.62	50.1
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
Total Wt			2905	17.69		100.0

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



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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"	96.5	100.0	100.0	98.2	1.8	1.8
3/4"	78.8	100.0	100.0	89.4	8.9	10.6
1/2"	33.1	93.9	100.0	65.9	23.5	34.1
3/8"	20.4	82.4	100.0	58.3	7.5	41.7
#4	4.4	17.7	95.7	41.9	16.4	58.1
#8	2.9	3.5	83.9	35.0	6.9	65.0
#16	2.6	1.8	68.9	28.8	6.3	71.2
#30	2.5	1.4	49.5	21.0	7.8	79.0
#50	2.4	1.4	24.0	10.8	10.1	89.2
#100	2.3	1.2	7.3	4.2	6.7	95.8
LBW	1.8	1.1	1.9	1.8	2.4	98.2

*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 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

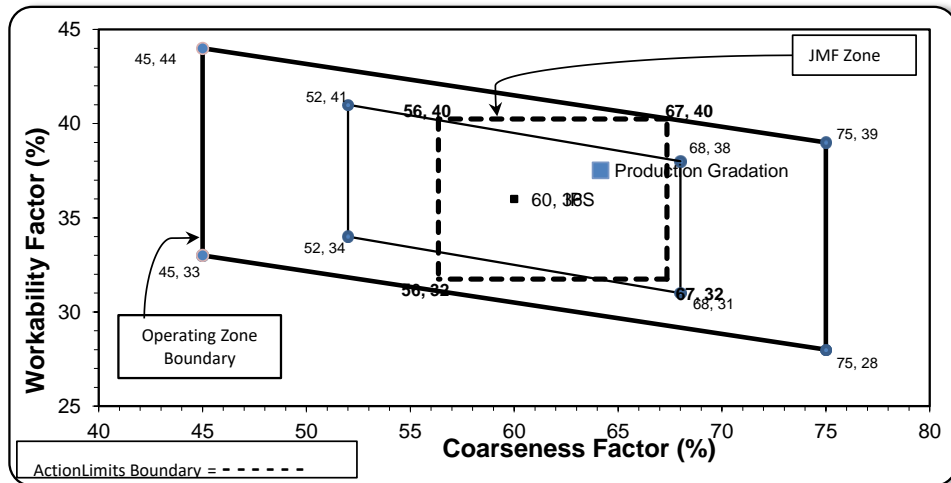
Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	64	Workability Factor:	35	37.5
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Coarseness Factor:	62
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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"	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:
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Approved By:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-35**

Sample Date: 11/20/23

Concrete Grade: DM, 4500HP

Contractor: _____

Dates Test Represents: 11/21/2023 through 11/27/2023

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1375	8.19	2.69	46.6
26A	58-003	Stoneco	425	2.53	2.69	14.4
2NS	81-019	Pleasant Lake	1150	6.95	2.65	39.0
Total Wt			2950	17.68		100.0

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



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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"	85.4	100.0	100.0	93.2	6.8	6.8
1/2"	44.2	99.4	100.0	73.9	19.3	26.1
3/8"	18.5	86.6	100.0	60.1	13.8	39.9
#4	3.6	19.1	98.4	42.8	17.3	57.2
#8	1.7	6.2	84.6	34.7	8.1	65.3
#16	1.2	3.5	66.9	27.1	7.5	72.9
#30	1.2	2.8	44.8	18.4	8.7	81.6
#50	1.2	2.4	16.7	7.4	11.0	92.6
#100	1.2	2.2	2.7	1.9	5.5	98.1
LBW	0.9	2.0	0.5	0.9	1.0	99.1

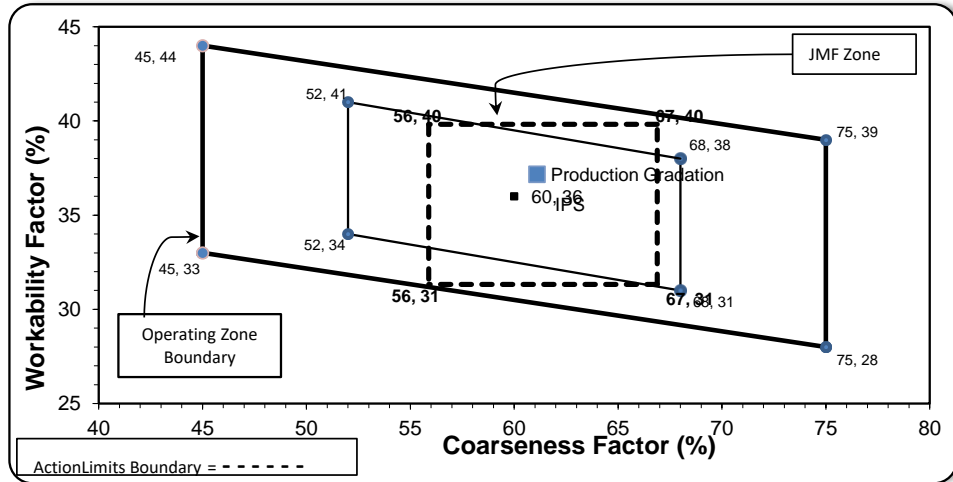
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	61	Workability Factor:	35	Adjusted WF	37.2
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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"	89.1	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



PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-36**

Sample Date: 11/20/23

Concrete Grade: DM, 4500HP

Contractor: _____

Dates Test Represents: 11/21/2023 through 11/27/2023

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1450	8.87	2.62	49.9
26A	71-47	Presque Isle	305	1.87	2.62	10.5
2NS	63-92	Grange Hall	1150	6.95	2.65	39.6
Total Wt			2905	17.69		100.0

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



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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"	97.6	100.0	100.0	98.8	1.2	1.2
3/4"	77.0	100.0	100.0	88.5	10.3	11.5
1/2"	34.4	93.9	100.0	66.6	21.9	33.4
3/8"	18.6	82.4	100.0	57.5	9.1	42.5
#4	3.5	17.7	97.3	42.1	15.4	57.9
#8	1.9	3.5	82.8	34.1	8.0	65.9
#16	1.7	1.8	67.4	27.7	6.4	72.3
#30	1.6	1.4	49.2	20.4	7.3	79.6
#50	1.6	1.4	20.9	9.2	11.2	90.8
#100	1.4	1.2	2.8	1.9	7.3	98.1
LBW	1.2	1.1	0.4	0.9	1.1	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 a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

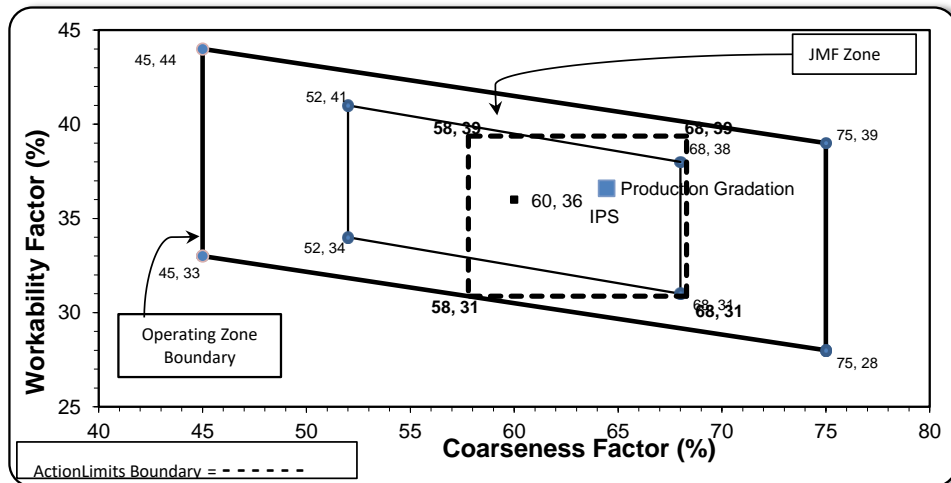
Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	64	Workability Factor:	34	36.6
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Coarseness Factor:	63
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Workability Factor:	35
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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"	99.1	0.9	0.9
3/4"	90.3	8.8	9.7
1/2"	69.2	21.1	30.8
3/8"	59.1	10.1	40.9
#4	41.8	17.3	58.2
#8	35.1	6.6	64.9
#16	28.5	6.6	71.5
#30	21.2	7.3	78.8
#50	8.7	12.5	91.3
#100	1.8	7.0	98.2
LBW	0.7	1.0	99.3



PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-39**

Sample Date: 11/20/23

Concrete Grade: DM, 4500HP

Contractor: _____

Dates Test Represents: 11/21/2023 through 11/27/2023

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1505	9.21	2.62	51.8
26A	71-47	Presque Isle	300	1.83	2.62	10.3
2NS	44-051	Krake Willis Rd	1100	6.65	2.65	37.9
Total Wt			2905	17.69		100.0

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



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 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"	96.6	100.0	100.0	98.2	1.8	1.8
3/4"	81.0	100.0	100.0	90.2	8.1	9.8
1/2"	39.6	94.8	100.0	68.2	22.0	31.8
3/8"	22.8	83.9	100.0	58.3	9.8	41.7
#4	3.6	20.4	98.8	41.4	17.0	58.6
#8	1.8	5.8	84.6	33.6	7.8	66.4
#16	1.6	3.2	67.0	26.5	7.0	73.5
#30	1.6	2.4	48.4	19.4	7.1	80.6
#50	1.5	2.0	21.6	9.2	10.2	90.8
#100	1.4	1.8	5.2	2.9	6.3	97.1
LBW	1.2	1.6	1.0	1.2	1.7	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.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

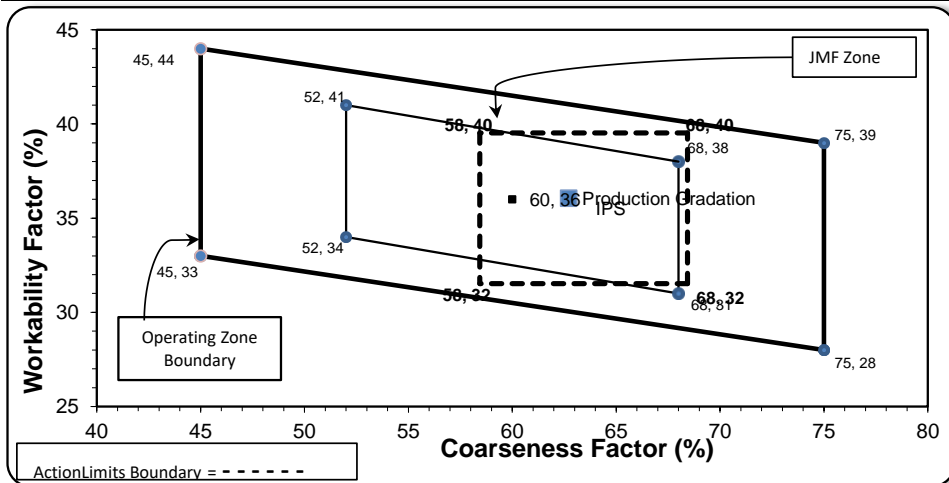
Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	63	Workability Factor:	34	36.1
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Coarseness Factor:	63
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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"	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

Approved By:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-02**

Sample Date: 11/20/23

Concrete Grade: DM, 4500HP

Contractor: _____

Dates Test Represents: 11/21/2023 through 11/27/2023

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1450	8.87	2.62	49.9
26A	71-47	Presque Isle	305	1.87	2.62	10.5
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
Total Wt			2905	17.69		100.0

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



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 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"	97.6	100.0	100.0	98.8	1.2	1.2
3/4"	77.0	100.0	100.0	88.5	10.3	11.5
1/2"	34.4	93.9	100.0	66.6	21.9	33.4
3/8"	18.6	82.4	100.0	57.5	9.1	42.5
#4	3.5	17.7	96.7	41.9	15.6	58.1
#8	1.9	3.5	81.6	33.6	8.3	66.4
#16	1.7	1.8	65.7	27.0	6.6	73.0
#30	1.6	1.4	49.8	20.7	6.4	79.3
#50	1.6	1.4	25.6	11.1	9.6	88.9
#100	1.4	1.2	5.4	3.0	8.1	97.0
LBW	1.2	1.1	0.6	1.0	2.0	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.

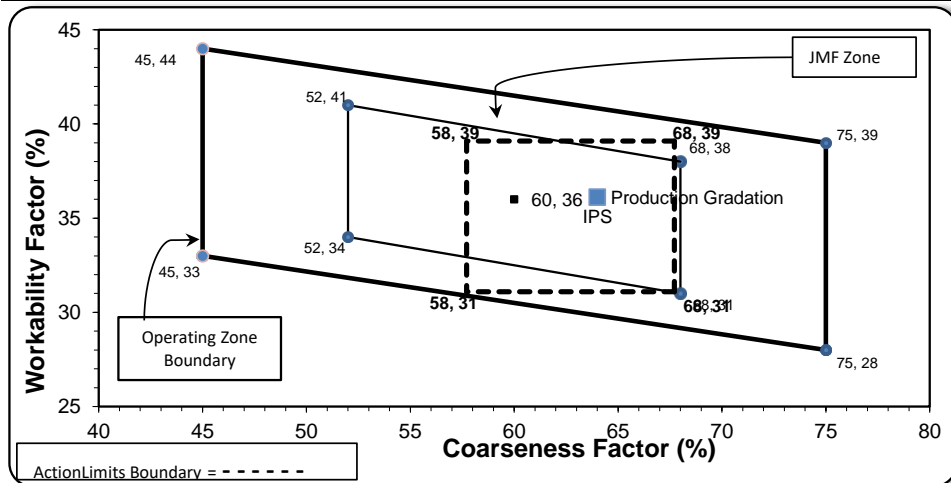
Production Gradation Batch Plant Gradations Aggregate Supplier Gradations Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	64	Workability Factor:	34	36.1
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Coarseness Factor:	63
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Workability Factor:	35
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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"	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



PREPARED BY:
 SM, LLC Technical Service

Approved By: