PLANT #: P-101

Sample Date:

#100

LBW

6/26/23 Concrete Grade: **P1M**, **3500HP**

| Dates Test H | ates Test Represents: | | tnrougn | 7/3/2023 | | |
|--------------|-----------------------|--------------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit # | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
| CA | 71-47 | Presque Isle | 1070 | 6.54 | 2.62 | 34.9 |
| IA | 71-47 | Presque Isle | 800 | 4.89 | 2.62 | 26.1 |
| 2NS | 75-051 | Mid Michigan | 1200 | 7.23 | 2.66 | 39.1 |
| | | Total Wt | 3070 | 18.67 | | 100.0 |

Contractor:

MDOT No.:



---- Verify this number is 100%

| ulative tained | Superior iviaterials, LLC |
|-------------------|---------------------------|
| 0.0 | Suite 500 |

Farmington Hills, MI 48336

| Sieve | CA | IA | 2NS | % Passing | % Retained | % Retained | |
|-------|-------|-------|-------|-----------|------------|------------|----|
| 2" | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | |
| 1.5" | 94.3 | 100.0 | 100.0 | 98.0 | 2.0 | 2.0 | 1 |
| 1" | 39.3 | 100.0 | 100.0 | 78.8 | 19.2 | 21.2 | 1 |
| 3/4" | 8.8 | 98.5 | 100.0 | 67.8 | 11.0 | 32.2 | ı |
| 1/2" | 3.3 | 83.2 | 100.0 | 61.9 | 5.9 | 38.1 | 1 |
| 3/8" | 2.5 | 63.7 | 100.0 | 56.6 | 5.4 | 43.4 | ١, |
| #4 | 2.1 | 17.3 | 96.5 | 43.0 | 13.6 | 57.0 | ١, |
| #8 | 2.0 | 4.5 | 81.8 | 33.8 | 9.1 | 66.2 | no |
| #16 | 1.9 | 2.7 | 67.1 | 27.6 | 6.2 | 72.4 | ١, |
| #30 | 1.9 | 2.3 | 51.6 | 21.4 | 6.2 | 78.6 | no |
| #50 | 1.8 | 2.1 | 27.7 | 12.0 | 9.4 | 88.0 | ١, |

7.5

4.0

1.3

1.9

1.7

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

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

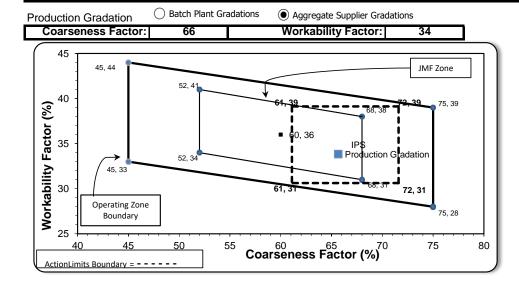
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$ 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.



Initial Production Sample (IPS)

96.0

98.7

8.0

2.7

| Coars | eness Factor: | 66 | |
|-------|-----------------|----------|------------|
| Work | ability Factor: | 35 | |
| Sieve | Cumulative | % | Cumulative |
| Sieve | % Passing | Retained | % Retained |
| 2" | 100.0 | 0.0 | 0.0 |
| 1.5" | 99.6 | 0.4 | 0.4 |
| 1" | 84.3 | 15.3 | 15.7 |
| 3/4" | 74.8 | 9.6 | 25.2 |
| 1/2" | 64.3 | 10.4 | 35.7 |
| 3/8" | 56.8 | 7.5 | 43.2 |
| #4 | 43.0 | 13.8 | 57.0 |
| #8 | 34.9 | 8.1 | 65.1 |
| #16 | 26.4 | 8.5 | 73.6 |
| #30 | 19.9 | 6.5 | 80.1 |
| #50 | 10.4 | 9.5 | 89.6 |
| #100 | 3.4 | 7.0 | 96.6 |
| LBW | 1.2 | 2.2 | 98.8 |

PREPARED BY: SM, LLC Technical Service

1.7

PLANT #: P-102

Sample Date:

6/26/23 Concrete Grade: P1M, 3500HP

| Dates Test I | Represents: | 6/27/2023 | tnrougn | 7/3/2023 | | |
|--------------|-------------|---------------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit# | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
| CA | 58-003 | Stoneco | 1370 | 8.16 | 2.69 | 43.9 |
| IA | 58-003 | Stoneco | 550 | 3.28 | 2.69 | 17.6 |
| 2NS | 81-019 | Pleasant Lake | 1200 | 7.26 | 2.65 | 38.5 |
| | | Total Wt | 3120 | 18.70 | | 100.0 |

Contractor:

MDOT No.:

---- Verify this number is 100%

| d | Cumulative % Retained | |
|---|--------------------------|----------------------------|
| | 0.0 | Suite 500 |
| | 0.0 | Farmington Hills, MI 48336 |

18.70 Cumulative CA IΑ % Retained Sieve 2NS % Passing 2" 100.0 100.0 100.0 100.0 0.0 1.5" 100.0 100.0 100.0 100.0 0.0 0.0 64.2 100.0 100.0 84.3 15.7 15.7 3/4" 40.0 100.0 100.0 73.7 10.6 26.3 1/2' 16.1 91.2 100.0 61.6 12.0 38.4 3/8' 70.8 100.0 54.3 7.6 7.3 45.7 #4 2.6 16.4 98.5 41.9 12.4 58.1 #8 1.3 5.6 83.8 33.8 8.1 66.2 #16 1.0 3.2 66.2 26.5 7.3 73.5 #30 1.0 2.3 46.5 18.7 7.7 81.3 #50 1.0 2.1 22.7 9.5 9.2 90.5 #100 0.9 2.0 6.0 3.1 6.5 96.9 LBW 1.0 2.0

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

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

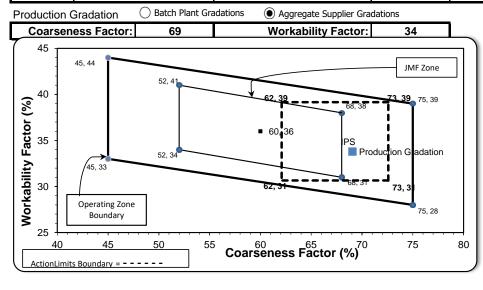
nom. max., #100 and #200 sieves.

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

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

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

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



Intial Production Sample (IPS)

| Coars | eness Factor: | 67 | |
|-------|-----------------|----------|------------|
| 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" | 85.5 | 14.5 | 14.5 |
| 3/4" | 73.4 | 12.1 | 26.6 |
| 1/2" | 61.0 | 12.4 | 39.0 |
| 3/8" | 56.2 | 4.8 | 43.8 |
| #4 | 43.1 | 13.1 | 56.9 |
| #8 | 34.9 | 8.2 | 65.1 |
| #16 | 29.4 | 5.5 | 70.6 |
| #30 | 21.6 | 7.8 | 78.4 |
| #50 | 8.1 | 13.4 | 91.9 |
| #100 | 2.2 | 5.9 | 97.8 |
| LBW | 1.4 | 0.8 | 98.6 |

PREPARED BY: SM, LLC Technical Service

PLANT #: P-103

Sample Date:

6/26/23 Concrete Grade: **P1M**, **3500HP**

| Dates Test F | ates rest Represents: 6/2 | | through | 1/3/2023 | | |
|--------------|---------------------------|---------------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit # | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
| CA | 58-003 | Stoneco | 1370 | 8.16 | 2.69 | 43.9 |
| IA | 58-003 | Stoneco | 550 | 3.28 | 2.69 | 17.6 |
| 2NS | 81-019 | Pleasant Lake | 1200 | 7.26 | 2.65 | 38.5 |

Contractor:

MDOT No.:



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

| | Total Wt | 3120 | 18.70 | | 100.0 | < Verify this n | umber is 100% |
|-------|----------|------|-------|-------|-------------------------|-----------------|--------------------------|
| Sieve | CA | L | 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" | 64.2 | 10 | 0.0 | 100.0 | 84.3 | 15.7 | 15.7 |
| 3/4" | 40.0 | 10 | 0.0 | 100.0 | 73.7 | 10.6 | 26.3 |
| 1/2" | 16.1 | 91 | 1.2 | 100.0 | 61.6 | 12.0 | 38.4 |
| 3/8" | 7.6 | 70 |).8 | 100.0 | 54.3 | 7.3 | 45.7 |
| #4 | 2.6 | 16 | 6.4 | 98.5 | 41.9 | 12.4 | 58.1 |
| #8 | 1.3 | 5 | .6 | 83.8 | 33.8 | 8.1 | 66.2 |
| #16 | 1.0 | 3 | .2 | 66.2 | 26.5 | 7.3 | 73.5 |
| #30 | 1.0 | 2 | .3 | 46.5 | 18.7 | 7.7 | 81.3 |
| #50 | 1.0 | 2 | .1 | 22.7 | 9.5 | 9.2 | 90.5 |
| #100 | 0.9 | 2 | .0 | 6.0 | 3.1 | 6.5 | 96.9 |
| LBW | 0.8 | 1 | .7 | 1.0 | 1.0 | 2.0 | 99.0 |

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

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

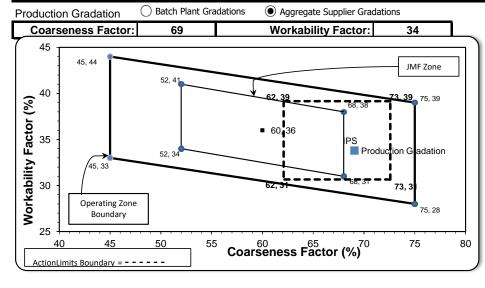
nom. max., #100 and #200 sieves.

 $^{\star}\%$ 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.



Intial Production Sample (IPS)

| Coars | eness Factor: | 67 | |
|-------|-----------------|----------|------------|
| 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" | 85.5 | 14.5 | 14.5 |
| 3/4" | 73.4 | 12.1 | 26.6 |
| 1/2" | 61.0 | 12.4 | 39.0 |
| 3/8" | 56.2 | 4.8 | 43.8 |
| #4 | 43.1 | 13.1 | 56.9 |
| #8 | 34.9 | 8.2 | 65.1 |
| #16 | 29.4 | 5.5 | 70.6 |
| #30 | 21.6 | 7.8 | 78.4 |
| #50 | 8.1 | 13.4 | 91.9 |
| #100 | 2.2 | 5.9 | 97.8 |
| LBW | 1.4 | 0.8 | 98.6 |

PREPARED BY: SM, LLC Technical Service Approved BY:

North Ball

PLANT #: Contractor: Concrete Grade: P1M, 3500HP 6/26/23 Sample Date:

| Dates Test F | Represents: | 6/27/2023 | through | 7/3/2023 | | |
|--------------|-------------|-----------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit# | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
| CA | 58-003 | Stoneco | 1370 | 8.16 | 2.69 | 43.9 |
| IA | 58-003 | Stoneco | 550 | 3.28 | 2.69 | 17.6 |
| SIAC | 10-04 | Schlogol | 1200 | 7.20 | 2.67 | 29.5 |

MDOT No.:

<---- Verify this number is 100%

| Builders' |
|-----------------------------|
| Finish First With Builders* |

Builders Redi-Mix

30701 W. 10 Mile Rd. Suite 500

Farmington Hills, MI 48336

| | Total Wt | 3120 | 18.64 | | 100.0 | < Verify this n | umber is 100% |
|-------|----------|------|-------|-------|-------------------------|-----------------|--------------------------|
| Sieve | CA | L | 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" | 64.2 | 10 | 0.0 | 100.0 | 84.3 | 15.7 | 15.7 |
| 3/4" | 40.0 | 10 | 0.0 | 100.0 | 73.7 | 10.6 | 26.3 |
| 1/2" | 16.1 | 91 | 1.2 | 100.0 | 61.6 | 12.0 | 38.4 |
| 3/8" | 7.6 | 70 | 0.8 | 100.0 | 54.3 | 7.3 | 45.7 |
| #4 | 2.6 | 16 | 6.4 | 99.9 | 42.5 | 11.8 | 57.5 |
| #8 | 1.3 | 5 | .6 | 90.1 | 36.2 | 6.2 | 63.8 |
| #16 | 1.0 | 3 | .2 | 69.4 | 27.7 | 8.5 | 72.3 |
| #30 | 1.0 | 2 | .3 | 44.5 | 18.0 | 9.7 | 82.0 |
| #50 | 1.0 | 2 | .1 | 14.3 | 6.3 | 11.7 | 93.7 |
| #100 | 0.9 | 2 | .0 | 2.7 | 1.8 | 4.5 | 98.2 |
| LBW | 0.8 | 1 | .7 | 0.2 | 0.7 | 1.1 | 99.3 |

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

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

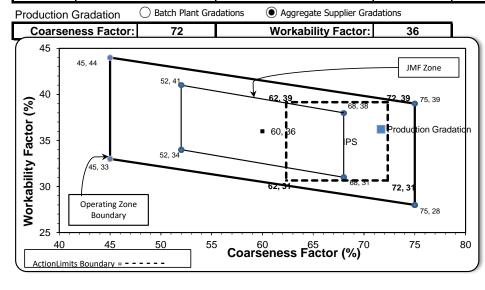
nom. max., #100 and #200 sieves.

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

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

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

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



Intial Production Sample (IPS)

| Coars | Coarseness Factor: | | |
|---------------------|--------------------|----------|------------|
| 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" | 85.5 | 14.5 | 14.5 |
| 3/4" | 73.4 | 12.1 | 26.6 |
| 1/2" | 61.0 | 12.4 | 39.0 |
| 3/8" | 56.2 | 4.8 | 43.8 |
| #4 | 43.1 | 13.1 | 56.9 |
| #8 | 34.9 | 8.2 | 65.1 |
| #16 | 29.4 | 5.5 | 70.6 |
| #30 | 21.6 | 7.8 | 78.4 |
| #50 | 8.1 | 13.4 | 91.9 |
| #100 | 2.2 | 5.9 | 97.8 |
| LBW | 1.4 | 0.8 | 98.6 |

PREPARED BY: SM, LLC Technical Service

PLANT #: 12

Sample Date:

6/26/23

Concrete Grade: P1M, 3500HP

Contractor: MDOT No.:

| Dates Test Represents: | | 6/27/2023 | through | 7/3/2023 | | |
|------------------------|--------|--------------|---------------|-----------------|----------|--------------|
| Agg. Class | Pit# | Source | Weight (SSD) | ft ³ | Specific | % |
| riggi Giaco | | 000.00 | rroight (002) | | Gravity | Contribution |
| CA | 71-47 | Presque Isle | 1070 | 6.54 | 2.62 | 34.9 |
| IA | 71-47 | Presque Isle | 750 | 4.59 | 2.62 | 24.4 |
| 2NS | 63-115 | Ray Rd | 1250 | 7.56 | 2.65 | 40.7 |
| | | Total W/ | 2070 | 10.60 | | 100.0 |

Superior Materials, LLC

30701 W. 10 Mile Rd.

Suite 500

Farmington Hills, MI 48336

| • | Total Wt | 3070 | 18.69 | | 100.0 | < Verify this n | umber is 100% |
|-------|----------|------|-------|-------|-------------------------|-----------------|--------------------------|
| Sieve | CA | L | A | 2NS | Cumulative % Passing | % Retained | Cumulative % Retained |
| 2" | 100.0 | 10 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| 1.5" | 97.2 | 10 | 0.0 | 100.0 | 99.0 | 1.0 | 1.0 |
| 1" | 39.5 | 10 | 0.0 | 100.0 | 78.9 | 20.1 | 21.1 |
| 3/4" | 14.1 | 98 | 3.7 | 100.0 | 69.7 | 9.2 | 30.3 |
| 1/2" | 4.0 | 78 | 3.5 | 100.0 | 61.3 | 8.5 | 38.7 |
| 3/8" | 3.0 | 57 | 7.6 | 100.0 | 55.8 | 5.5 | 44.2 |
| #4 | 2.4 | 12 | 2.9 | 96.5 | 43.3 | 12.6 | 56.7 |
| #8 | 2.2 | 4 | .0 | 80.4 | 34.5 | 8.8 | 65.5 |
| #16 | 2.1 | 2 | .8 | 65.1 | 27.9 | 6.6 | 72.1 |
| #30 | 2.0 | 2 | .6 | 49.5 | 21.5 | 6.4 | 78.5 |
| #50 | 2.0 | 2 | .5 | 25.6 | 11.7 | 9.8 | 88.3 |
| #100 | 1.9 | 2 | .3 | 4.8 | 3.2 | 8.6 | 96.8 |
| LBW | 1.4 | 2 | .0 | 0.7 | 1.3 | 1.9 | 98.7 |

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

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

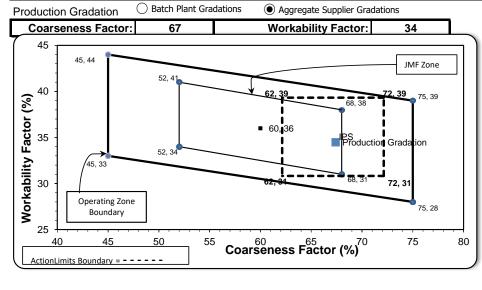
nom. max., #100 and #200 sieves.

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

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

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

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



Intial Production Sample (IPS)

| Coarseness Factor: | | 67 | |
|---------------------|------------|----------|------------|
| Workability Factor: | | 35 | |
| Sieve | Cumulative | % | Cumulative |
| Sieve | % Passing | Retained | % Retained |
| 2" | 100.0 | 0.0 | 0.0 |
| 1.5" | 99.6 | 0.4 | 0.4 |
| 1" | 83.9 | 15.7 | 16.1 |
| 3/4" | 74.0 | 9.8 | 26.0 |
| 1/2" | 63.7 | 10.3 | 36.3 |
| 3/8" | 56.4 | 7.3 | 43.6 |
| #4 | 43.0 | 13.4 | 57.0 |
| #8 | 35.1 | 7.9 | 64.9 |
| #16 | 29.0 | 6.1 | 71.0 |
| #30 | 20.9 | 8.0 | 79.1 |
| #50 | 8.1 | 12.8 | 91.9 |
| #100 | 1.6 | 6.5 | 98.4 |
| LBW | 0.9 | 0.8 | 99.1 |

PREPARED BY: SM, LLC Technical Service

PLANT #: 20

Pit#

71-47

71-47

63-92

Sample Date:

Agg. Class

CA

IΑ

2NS

Dates Test Represents:

6/26/23 6/27/2023

Source

Presque Isle

Presque Isle

Grange Hall

Contractor:

Concrete Grade: P1M, 3500HP

7/3/2023 through Specific % ft³ Weight (SSD) Gravity Contribution 970 5.93 2.62 31.6 900 5.50 2.62 29.3 1200 2.65 39.1

MDOT No.:

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

| | l otal Wt | 3070 18.70 | | 100.0 | < Verify this n | umber is 100% |
|-------|-----------|------------|-------|-------------------------|-----------------|--------------------------|
| Sieve | CA | IA | 2NS | Cumulative % Passing | % Retained | Cumulative % Retained |
| 2" | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| 1.5" | 96.9 | 100.0 | 100.0 | 99.0 | 1.0 | 1.0 |
| 1" | 37.6 | 100.0 | 100.0 | 80.3 | 18.7 | 19.7 |
| 3/4" | 11.1 | 98.8 | 100.0 | 71.6 | 8.7 | 28.4 |
| 1/2" | 3.9 | 76.7 | 100.0 | 62.8 | 8.8 | 37.2 |
| 3/8" | 2.9 | 54.4 | 100.0 | 56.0 | 6.9 | 44.0 |
| #4 | 2.1 | 13.4 | 97.2 | 42.6 | 13.4 | 57.4 |
| #8 | 1.9 | 4.8 | 84.6 | 35.1 | 7.5 | 64.9 r |
| #16 | 1.9 | 3.1 | 71.0 | 29.3 | 5.8 | 70.7 |
| #30 | 1.8 | 2.7 | 52.0 | 21.7 | 7.6 | 78.3 r |
| #50 | 1.7 | 2.5 | 19.8 | 9.0 | 12.7 | 91.0 |
| #100 | 1.7 | 2.4 | 3.5 | 2.6 | 6.4 | 97.4 |
| LBW | 1.3 | 2.0 | 0.6 | 1.2 | 1.4 | 98.8 |

7.26

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

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

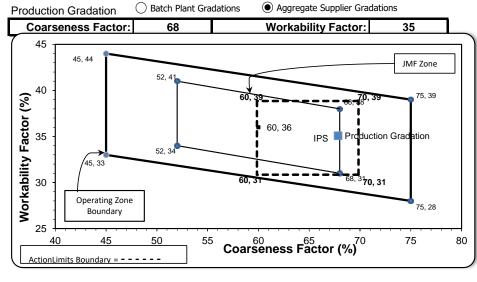
nom. max., #100 and #200 sieves.

*% 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.



Intial Production Sample (IPS)

| Coarseness Factor: | | 65 | |
|---------------------|------------|----------|------------|
| Workability Factor: | | 35 | |
| Siovo | Cumulative | % | Cumulative |
| Sieve | % Passing | Retained | % Retained |
| 2" | 100.0 | 0.0 | 0.0 |
| 1.5" | 99.1 | 0.9 | 0.9 |
| 1" | 80.8 | 18.2 | 19.2 |
| 3/4" | 71.3 | 9.6 | 28.7 |
| 1/2" | 64.0 | 7.3 | 36.0 |
| 3/8" | 57.7 | 6.2 | 42.3 |
| #4 | 42.8 | 15.0 | 57.2 |
| #8 | 34.8 | 7.9 | 65.2 |
| #16 | 28.4 | 6.4 | 71.6 |
| #30 | 20.2 | 8.2 | 79.8 |
| #50 | 7.6 | 12.6 | 92.4 |
| #100 | 1.6 | 6.0 | 98.4 |
| LBW | 1.0 | 0.6 | 99.0 |

PREPARED BY: SM, LLC Technical Service

Total Wt

1.9

PLANT #: P11

Sample Date:

#100

LBW

6/26/23 Concrete Grade: P1M, 3500HP

18.69

| Dates Test F | Represents: | 6/27/2023 | through | 7/3/2023 | | |
|--------------|-------------|--------------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit # | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
| CA | 71-47 | Presque Isle | 1070 | 6.54 | 2.62 | 34.9 |
| IA | 71-47 | Presque Isle | 750 | 4.59 | 2.62 | 24.4 |
| 2NS | 95-013 | Smelter Bay | 1250 | 7.56 | 2.65 | 40.7 |

3070

Contractor:

MDOT No.:

100.0

4.3

---- Verify this number is 100%

| SUPERIOR MATERIALS |
|-----------------------|
| |

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

| Sieve | CA | IA | 2NS | Cumulative % Passing | % Retained | Cumulative % Retained |
|-------------|-------|-------|-------|----------------------|------------|--------------------------|
| 2" | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| 1.5" | 97.2 | 100.0 | 100.0 | 99.0 | 1.0 | 1.0 |
| 1" | 39.5 | 100.0 | 100.0 | 78.9 | 20.1 | 21.1 |
| 3/4" | 14.1 | 98.7 | 100.0 | 69.7 | 9.2 | 30.3 |
| 1/2" | 4.0 | 78.5 | 100.0 | 61.3 | 8.5 | 38.7 |
| 3/8" | 3.0 | 57.6 | 100.0 | 55.8 | 5.5 | 44.2 |
| #4 | 2.4 | 12.9 | 96.4 | 43.2 | 12.6 | 56.8 |
| #8 | 2.2 | 4.0 | 85.6 | 36.6 | 6.6 | 63.4 |
| #16 | 2.1 | 2.8 | 71.2 | 30.4 | 6.2 | 69.6 |
| #30 | 2.0 | 2.6 | 51.0 | 22.1 | 8.3 | 77.9 |
| #5 0 | 2.0 | 2.5 | 25.4 | 11.6 | 10.4 | 88 4 |

2.3

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

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

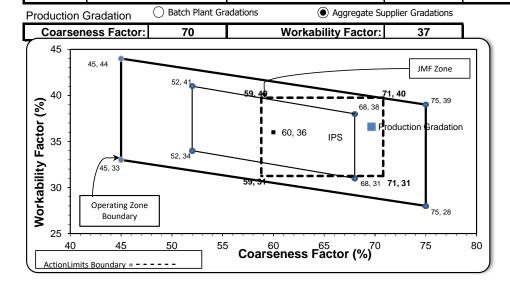
nom. max., #100 and #200 sieves.

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

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

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

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



Intial Production Sample (IPS)

95.7

98.5

7.3

| Coars | Coarseness Factor: | | |
|---------------------|--------------------|----------|------------|
| Workability Factor: | | 36 | |
| Sieve | Cumulative | % | Cumulative |
| Sieve | % Passing | Retained | % Retained |
| 2" | 100.0 | 0.0 | 0.0 |
| 1.5" | 99.0 | 0.6 | 0.6 |
| 1" | 84.0 | 15.3 | 16.0 |
| 3/4" | 73.5 | 10.5 | 26.5 |
| 1/2" | 65.2 | 8.2 | 34.8 |
| 3/8" | 58.2 | 7.1 | 41.8 |
| #4 | 44.1 | 14.1 | 55.9 |
| #8 | 35.5 | 8.6 | 64.5 |
| #16 | 29.1 | 6.4 | 70.9 |
| #30 | 21.9 | 7.3 | 78.1 |
| #50 | 9.6 | 12.2 | 90.4 |
| #100 | 2.6 | 7.1 | 97.4 |
| LBW | 1.0 | 1.6 | 99.0 |

PREPARED BY: SM, LLC Technical Service

7.6

6/26/23

PLANT #: P-32

Sample Date:

Dates Test Represents:

Concrete Grade: P1M, 3500HP

75, 28

80

75

Contractor:

6/27/2023 7/3/2023 through

| Agg. Class | Pit# | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
|------------|--------|--------------|--------------|-----------------|---------------------|-------------------|
| CA | 71-47 | Presque Isle | 1070 | 6.54 | 2.62 | 34.9 |
| IA | 71-47 | Presque Isle | 750 | 4.59 | 2.62 | 24.4 |
| 2NS | 95-013 | Smelter Bay | 1250 | 7.56 | 2.65 | 40.7 |
| | | Total Wt | 3070 | 18.69 | | 100.0 |

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

| | i otai wt | 3070 18.69 | | 100.0 | < Verify this n | umber is 100% |
|-------|-----------|------------|-------|----------------------|-----------------|--------------------------|
| Sieve | CA | IA | 2NS | Cumulative % Passing | % Retained | Cumulative % Retained |
| 2" | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| 1.5" | 97.2 | 100.0 | 100.0 | 99.0 | 1.0 | 1.0 |
| 1" | 39.5 | 100.0 | 100.0 | 78.9 | 20.1 | 21.1 |
| 3/4" | 14.1 | 98.7 | 100.0 | 69.7 | 9.2 | 30.3 |
| 1/2" | 4.0 | 78.5 | 100.0 | 61.3 | 8.5 | 38.7 |
| 3/8" | 3.0 | 57.6 | 100.0 | 55.8 | 5.5 | 44.2 |
| #4 | 2.4 | 12.9 | 96.4 | 43.2 | 12.6 | 56.8 |
| #8 | 2.2 | 4.0 | 85.6 | 36.6 | 6.6 | 63.4 |
| #16 | 2.1 | 2.8 | 71.2 | 30.4 | 6.2 | 69.6 |
| #30 | 2.0 | 2.6 | 51.0 | 22.1 | 8.3 | 77.9 |
| #50 | 2.0 | 2.5 | 25.4 | 11.6 | 10.4 | 88.4 |
| #100 | 1.9 | 2.3 | 7.6 | 4.3 | 7.3 | 95.7 |
| LBW | 1.4 | 2.0 | 1.4 | 1.5 | 2.8 | 98.5 |
| | | | | | | |

*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.

 Batch Plant Gradations Aggregate Supplier Gradations **Production Gradation Coarseness Factor:** 70 **Workability Factor:** 37 45, 44 JMF Zone Workability Factor (%) Production Gradation **6**0, 36

Coarseness Factor (%) 70

Intial Production Sample (IPS)

| Coars | eness Factor: | 65 | |
|-------|-----------------|----------|------------|
| Work | ability Factor: | 36 | |
| Sieve | Cumulative | % | Cumulative |
| Sieve | % Passing | Retained | % Retained |
| 2" | 100.0 | 0.0 | 0.0 |
| 1.5" | 99.0 | 0.6 | 0.6 |
| 1" | 84.0 | 15.3 | 16.0 |
| 3/4" | 73.5 | 10.5 | 26.5 |
| 1/2" | 65.2 | 8.2 | 34.8 |
| 3/8" | 58.2 | 7.1 | 41.8 |
| #4 | 44.1 | 14.1 | 55.9 |
| #8 | 35.5 | 8.6 | 64.5 |
| #16 | 29.1 | 6.4 | 70.9 |
| #30 | 21.9 | 7.3 | 78.1 |
| #50 | 9.6 | 12.2 | 90.4 |
| #100 | 2.6 | 7.1 | 97.4 |
| LBW | 1.0 | 1.6 | 99.0 |

PREPARED BY: SM, LLC Technical Service

Operating Zone

Boundary

45

ActionLimits Boundary = - - - - -

52, 34

50

PLANT #: P-35

Sample Date:

6/26/23 Concrete Grade: P1M, 3500HP 7/3/2023

| Dates Test Represents: | | 6/27/2023 | through | 7/3/2023 | | |
|------------------------|--------|---------------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit # | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
| CA | 58-003 | Stoneco | 1370 | 8.16 | 2.69 | 43.9 |
| IA | 58-003 | Stoneco | 550 | 3.28 | 2.69 | 17.6 |
| 2NS | 81-019 | Pleasant Lake | 1200 | 7.26 | 2.65 | 38.5 |
| | | Total Wt | 3120 | 18.70 | | 100.0 |

MDOT No.:

Contractor:



---- Verify this number is 100%

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

| Sieve | CA | IA | 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" | 64.2 | 100.0 | 100.0 | 84.3 | 15.7 | 15.7 |
| 3/4" | 40.0 | 100.0 | 100.0 | 73.7 | 10.6 | 26.3 |
| 1/2" | 16.1 | 91.2 | 100.0 | 61.6 | 12.0 | 38.4 |
| 3/8" | 7.6 | 70.8 | 100.0 | 54.3 | 7.3 | 45.7 |
| #4 | 2.6 | 16.4 | 98.5 | 41.9 | 12.4 | 58.1 |
| #8 | 1.3 | 5.6 | 83.8 | 33.8 | 8.1 | 66.2 |
| #16 | 1.0 | 3.2 | 66.2 | 26.5 | 7.3 | 73.5 |
| #30 | 1.0 | 2.3 | 46.5 | 18.7 | 7.7 | 81.3 |
| #50 | 1.0 | 2.1 | 22.7 | 9.5 | 9.2 | 90.5 |
| #100 | 0.9 | 2.0 | 6.0 | 3.1 | 6.5 | 96.9 |
| LBW | 0.8 | 1.7 | 1.0 | 1.0 | 2.0 | 99.0 |

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

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

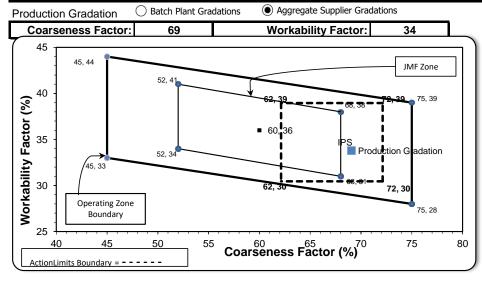
nom. max., #100 and #200 sieves.

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

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

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

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



Intial Production Sample (IPS)

| Coars | eness Factor: | 67 | |
|-------|---------------------|----------|------------|
| 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" | 86.9 | 13.1 | 13.1 |
| 3/4" | 76.1 | 10.8 | 23.9 |
| 1/2" | 63.7 | 12.4 | 36.3 |
| 3/8" | 56.2 | 7.5 | 43.8 |
| #4 | 43.2 | 13.0 | 56.8 |
| #8 | 34.7 | 8.5 | 65.3 |
| #16 | 27.5 | 7.2 | 72.5 |
| #30 | 20.6 | 7.0 | 79.4 |
| #50 | 9.0 | 11.6 | 91.0 |
| #100 | 2.1 | 6.9 | 97.9 |
| LBW | 1.0 | 1.1 | 99.0 |

Approved By: PREPARED BY: SM, LLC Technical Service

PLANT #: P-36

Sample Date:

6/26/23 Concrete Grade: **P1M**, **3500HP**

| Dates Test Represents: | | 0/21/2023 | through | 1/3/2023 | | |
|------------------------|-------|--------------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit# | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
| CA | 71-47 | Presque Isle | 1070 | 6.54 | 2.62 | 34.9 |
| IA | 71-47 | Presque Isle | 800 | 4.89 | 2.62 | 26.1 |
| 2NS | 63-92 | Grange Hall | 1200 | 7.26 | 2.65 | 39.1 |
| | | | | | | |

Contractor:

MDOT No.:



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

| | Total Wt | 3070 | 18.70 | | 100.0 | < Verify this n | umber is 100% |
|-------|----------|------|-------|-------|-------------------------|-----------------|--------------------------|
| Sieve | CA | 1/ | A. | 2NS | Cumulative % Passing | % Retained | Cumulative % Retained |
| 2" | 100.0 | 100 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| 1.5" | 97.2 | 100 | 0.0 | 100.0 | 99.0 | 1.0 | 1.0 |
| 1" | 39.5 | 100 | 0.0 | 100.0 | 78.9 | 20.1 | 21.1 |
| 3/4" | 14.1 | 98.7 | | 100.0 | 69.7 | 9.2 | 30.3 |
| 1/2" | 4.0 | 78.5 | | 100.0 | 60.9 | 8.8 | 39.1 |
| 3/8" | 3.0 | 57.6 | | 100.0 | 55.1 | 5.8 | 44.9 |
| #4 | 2.4 | 12.9 | | 97.2 | 42.2 | 13.0 | 57.8 |
| #8 | 2.2 | 4.0 | | 84.6 | 34.9 | 7.3 | 65.1 |
| #16 | 2.1 | 2. | 8 | 71.0 | 29.2 | 5.7 | 70.8 |
| #30 | 2.0 | 2.6 | | 52.0 | 21.7 | 7.5 | 78.3 |
| #50 | 2.0 | 2.5 | | 19.8 | 9.1 | 12.6 | 90.9 |
| #100 | 1.9 | 2.3 | | 3.5 | 2.6 | 6.5 | 97.4 |
| LBW | 1.4 | 2. | 0 | 0.6 | 1.2 | 1.4 | 98.8 |

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

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

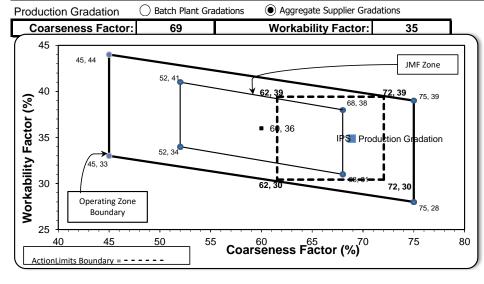
nom. max., #100 and #200 sieves.

 $\ensuremath{^{*}\%}$ 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.



Intial Production Sample (IPS)

| Coarseness Factor: | | 67 | |
|---------------------|------------|----------|------------|
| 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" | 85.0 | 15.0 | 15.0 |
| 3/4" | 72.1 | 12.9 | 27.9 |
| 1/2" | 64.5 | 7.6 | 35.5 |
| 3/8" | 56.5 | 8.0 | 43.5 |
| #4 | 42.7 | 13.8 | 57.3 |
| #8 | 34.9 | 7.8 | 65.1 |
| #16 | 29.0 | 5.9 | 71.0 |
| #30 | 21.0 | 8.0 | 79.0 |
| #50 | 8.2 | 12.8 | 91.8 |
| #100 | 1.6 | 6.5 | 98.4 |
| LBW | 0.7 | 0.9 | 99.3 |

PREPARED BY: SM, LLC Technical Service

6/26/23

PLANT #: P-39

Sample Date:

Concrete Grade: P1M, 3500HP

6/27/2023 7/3/2023 through

| Dates Test F | Represents: | 6/27/2023 | through | 7/3/2023 | | |
|--------------|-------------|-----------------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit# | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
| CA | 71-47 | Presque Isle | 1020 | 6.24 | 2.62 | 33.2 |
| IA | 71-47 | Presque Isle | 800 | 4.89 | 2.62 | 26.1 |
| 2NS | 44-051 | Krake Willis Rd | 1250 | 7.56 | 2.65 | 40.7 |
| | | Total Wt | 3070 | 18.69 | | 100.0 |

Contractor:

MDOT No.:



---- Verify this number is 100%

| ined | Cumulative % Retained | <u>Superior Materials, LLC</u> 30701 W. 10 Mile Rd. |
|------|-----------------------|--|
| | 0.0 | Suite 500 |
| | 1.9 | Farmington Hills, MI 48336 |

Cumulative CA IΑ % Retai 2NS Sieve % Passing 2" 100.0 100.0 100.0 100.0 0.0 1.5" 94.3 100.0 100.0 98.1 1.9 1.9 20.2 39.3 100.0 100.0 79.8 18.3 3/4" 8.8 98.5 100.0 69.3 10.5 30.7 1/2' 3.3 83.2 100.0 63.5 5.8 36.5 3/8' 2.5 63.7 100.0 58.1 41.9 5.3 #4 2.1 17.3 95.8 44.2 13.9 55.8 #8 2.0 4.5 82.0 35.2 9.0 64.8 #16 1.9 2.7 67.7 28.9 6.3 71.1 #30 50.6 21.8 78.2 1.9 2.3 7.1 #50 1.8 2.1 22.8 10.4 11.4 89.6 #100 1.7 1.9 5.4 3.3 7.2 96.7

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

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

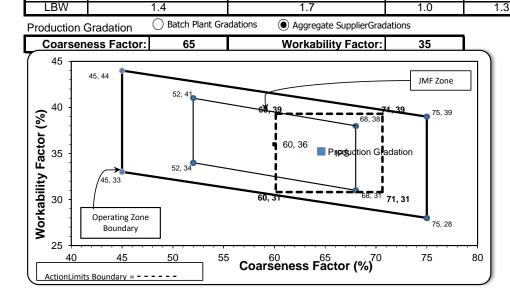
nom. max., #100 and #200 sieves.

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

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

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

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



Intial Production Sample (IPS)

| Coarseness Factor: | | 65 | |
|---------------------|------------|----------|------------|
| Workability Factor: | | 35 | |
| Sieve | Cumulative | % | Cumulative |
| Sieve | % Passing | Retained | % Retained |
| 2" | 100.0 | 0.0 | 0.0 |
| 1.5" | 99.6 | 0.4 | 0.4 |
| 1" | 83.9 | 15.7 | 16.1 |
| 3/4" | 74.1 | 9.8 | 25.9 |
| 1/2" | 64.3 | 9.7 | 35.7 |
| 3/8" | 57.5 | 6.8 | 42.5 |
| #4 | 44.5 | 13.1 | 55.5 |
| #8 | 35.1 | 9.4 | 64.9 |
| #16 | 27.9 | 7.2 | 72.1 |
| #30 | 21.7 | 6.2 | 78.3 |
| #50 | 12.6 | 9.1 | 87.4 |
| #100 | 3.5 | 9.1 | 96.5 |
| LBW | 1.2 | 2.4 | 98.8 |

PREPARED BY: SM, LLC Technical Service

Total W/s

PLANT #: P-02

Sample Date:

6/26/23 Concrete Grade: P1M, 3500HP

| Dates Test F | Represents: | 6/27/2023 | through | 7/3/2023 | | |
|--------------|-------------|--------------|--------------|-----------------|---------------------|-------------------|
| Agg. Class | Pit # | Source | Weight (SSD) | ft ³ | Specific Gravity | % Contribution |
| CA | 71-47 | Presque Isle | 1070 | 6.54 | 2.62 | 34.9 |
| IA | 71-47 | Presque Isle | 750 | 4.59 | 2.62 | 24.4 |
| 2NS | 63-115 | Ray Rd | 1250 | 7.56 | 2.65 | 40.7 |

Contractor:

MDOT No.:



| etained | Cumulative % Retained | <u>Superior Materials, LLC</u> 30701 W. 10 Mile Rd. |
|---------|--------------------------|--|
|---------|--------------------------|--|

Suite 500

Farmington Hills, MI 48336

| | i otai wt | 3070 | 18.69 | | 100.0 | < Verify this n | umber is 100% |
|-------|-----------|------|-------|-------|----------------------|-----------------|--------------------------|
| Sieve | CA | IA | 1 | 2NS | Cumulative % Passing | % Retained | Cumulative % Retained |
| 2" | 100.0 | 100 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| 1.5" | 97.2 | 100 | 0.0 | 100.0 | 99.0 | 1.0 | 1.0 |
| 1" | 39.5 | 100 | 0.0 | 100.0 | 78.9 | 20.1 | 21.1 |
| 3/4" | 14.1 | 98 | .7 | 100.0 | 69.7 | 9.2 | 30.3 |
| 1/2" | 4.0 | 78 | .5 | 100.0 | 61.3 | 8.5 | 38.7 |
| 3/8" | 3.0 | 57 | .6 | 100.0 | 55.8 | 5.5 | 44.2 |
| #4 | 2.4 | 12 | .9 | 96.5 | 43.3 | 12.6 | 56.7 |
| #8 | 2.2 | 4. | 0 | 80.4 | 34.5 | 8.8 | 65.5 r |
| #16 | 2.1 | 2. | 8 | 65.1 | 27.9 | 6.6 | 72.1 |
| #30 | 2.0 | 2. | 6 | 49.5 | 21.5 | 6.4 | 78.5 |
| #50 | 2.0 | 2. | 5 | 25.6 | 11.7 | 9.8 | 88.3 |
| #100 | 1.9 | 2. | 3 | 4.8 | 3.2 | 8.6 | 96.8 |
| LBW | 1.4 | 2. | 0 | 0.7 | 1.3 | 1.9 | 98.7 |

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

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

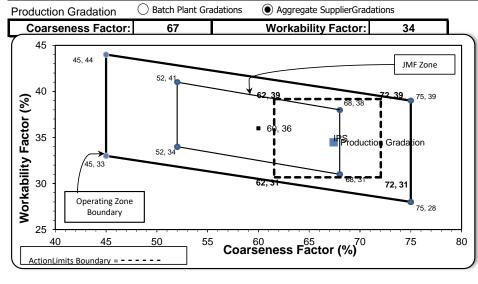
nom. max., #100 and #200 sieves.

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

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

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

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



Intial Production Sample (IPS)

| Coarseness Factor: | | 67 | |
|---------------------|------------|----------|------------|
| 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" | 85.0 | 15.0 | 15.0 |
| 3/4" | 72.3 | 12.7 | 27.7 |
| 1/2" | 64.5 | 7.8 | 35.5 |
| 3/8" | 56.5 | 8.0 | 43.5 |
| #4 | 42.7 | 13.8 | 57.3 |
| #8 | 34.9 | 7.8 | 65.1 |
| #16 | 29.0 | 5.9 | 71.0 |
| #30 | 21.0 | 8.0 | 79.0 |
| #50 | 8.2 | 12.8 | 91.8 |
| #100 | 1.6 | 6.5 | 98.4 |
| LBW | 0.7 | 0.9 | 99.3 |

PREPARED BY: SM, LLC Technical Service