

# Aggregate Optimization Chart

## Production Gradation Report

**PLANT #:** **P-02**

Sample Date: 2/3/25

Concrete Grade: **DM, 4500HP**

Contractor: \_\_\_\_\_

Dates Test Represents: 2/4/2025 through 2/10/2025

MDOT No.: \_\_\_\_\_

| Agg. Class      | Pit #  | Source       | Weight (SSD) | ft <sup>3</sup> | 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           |
| <b>Total Wt</b> |        |              | <b>2905</b>  | <b>17.69</b>    |                  | <b>100.0</b>   |

<----- 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"    | 99.3  | 100.0 | 100.0 | 99.7                 | 0.3        | 0.3                   |
| 3/4"  | 80.4  | 100.0 | 100.0 | 90.2                 | 9.4        | 9.8                   |
| 1/2"  | 43.8  | 96.1  | 100.0 | 71.5                 | 18.7       | 28.5                  |
| 3/8"  | 29.5  | 83.5  | 100.0 | 63.1                 | 8.5        | 36.9                  |
| #4    | 5.8   | 19.9  | 96.5  | 43.2                 | 19.9       | 56.8                  |
| #8    | 2.9   | 6.2   | 78.8  | 33.3                 | 9.9        | 66.7                  |
| #16   | 2.4   | 3.6   | 62.8  | 26.4                 | 6.9        | 73.6                  |
| #30   | 2.3   | 3.0   | 47.4  | 20.2                 | 6.2        | 79.8                  |
| #50   | 2.2   | 2.7   | 24.5  | 11.1                 | 9.1        | 88.9                  |
| #100  | 2.1   | 2.5   | 5.3   | 3.4                  | 7.7        | 96.6                  |
| LBW   | 1.8   | 2.2   | 1.1   | 1.6                  | 1.8        | 98.4                  |

\*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.



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

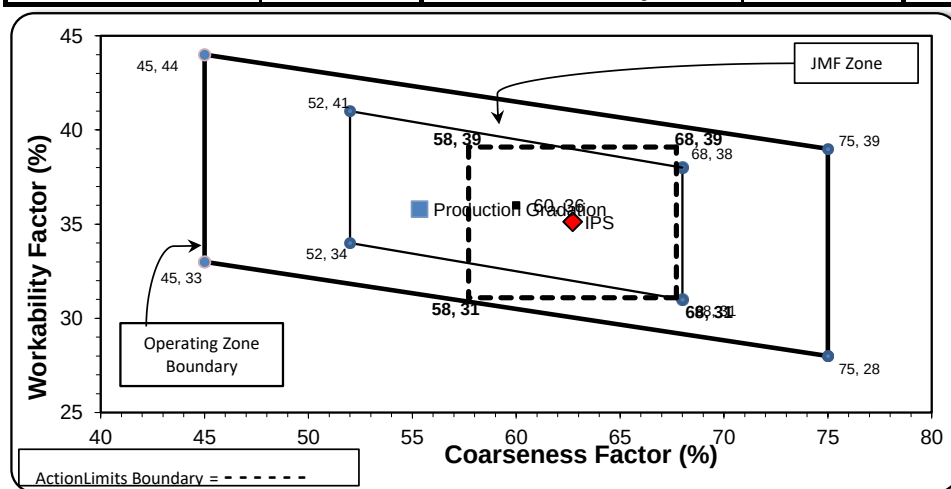
Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

|                           |           |                            |           |             |
|---------------------------|-----------|----------------------------|-----------|-------------|
| <b>Coarseness Factor:</b> | <b>55</b> | <b>Workability Factor:</b> | <b>33</b> | <b>35.8</b> |
|---------------------------|-----------|----------------------------|-----------|-------------|

|                           |           |
|---------------------------|-----------|
| <b>Coarseness Factor:</b> | <b>63</b> |
|---------------------------|-----------|

|                            |           |
|----------------------------|-----------|
| <b>Workability Factor:</b> | <b>35</b> |
|----------------------------|-----------|



| 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:

*[Signature]*



## Daily Summary Report

Date Wednesday, February 5, 2025

|                       |                |                |                    |
|-----------------------|----------------|----------------|--------------------|
| Sample Id             | - 674979459    | -1989629918    | -224823355         |
| Plant                 | Hoover         | Hoover         | Hoover             |
| Product               | 1022<br>2NS GR | 1051<br>6AA LS | 1067<br>26A Mod LS |
| Specification         | 2NS GR Spec    | 6AA LS         | 26A Mod LS Spec    |
| Sample Type           | QA             | QA             | QA                 |
| Time                  | 12:00          | 12:00          | 12:00              |
| 2" (50mm)             |                | 100.0          | 100.0              |
| 1 1/2" (37.5mm)       |                | 100.0          | 100.0              |
| 1" (25mm)             |                | 99.3           | 100.0              |
| 3/4" (19mm)           |                | 80.4           | 100.0              |
| 1/2" (12.5mm)         |                | 43.8           | 96.1               |
| 3/8" (9.5mm)          | 100.0          | 29.5           | 83.5               |
| #4 (4.75mm)           | 96.5           | 5.8            | 19.9               |
| #8 (2.36mm)           | 78.8           | 2.9            | 6.2                |
| #16 (1.18mm)          | 62.8           | 2.4            | 3.6                |
| #30 (.6mm)            | 47.4           | 2.3            | 3.0                |
| #50 (.3mm)            | 24.5           | 2.2            | 2.7                |
| #100 (.15mm)          | 5.3            | 2.1            | 2.5                |
| #200 (75µm)           | 1.1            | 1.94           | 2.3                |
| Pan                   | 0.0            | 0.00           | 0.0                |
| FM                    | 2.85           |                |                    |
| Wash Loss (#200/75um) | 1.1            | 1.8            | 2.2                |
| Total Moisture        | 3.00           | 2.72           | 3.87               |