

Aggregate Optimization Chart

Production Gradation Report

PLANT #: p11

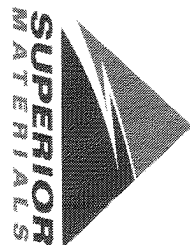
Sample Date: 11/11/24

Dates Test Represents: 1/11/2024 through 1/11/2024

Concrete Grade: DM, 4500HP

Contractor: _____

MDOT No.: _____



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

| Agg. Class | Pit # | Source | Weight (ssd) | ft ³ | Specific Gravity | Contribution % |
|------------|--------|--------------|--------------|-----------------|------------------|----------------|
| GAA | 71-47 | Presque Isle | 1755 | 10.73 | 2.62 | 60.4 |
| 26A | 71-47 | Presque Isle | 0 | 0.00 | 2.62 | 0.0 |
| 2NS | 63-115 | Ray Rd | 1150 | 6.95 | 2.65 | 39.6 |
| Total Wt | | | 2905 | 17.69 | | 100.0 |

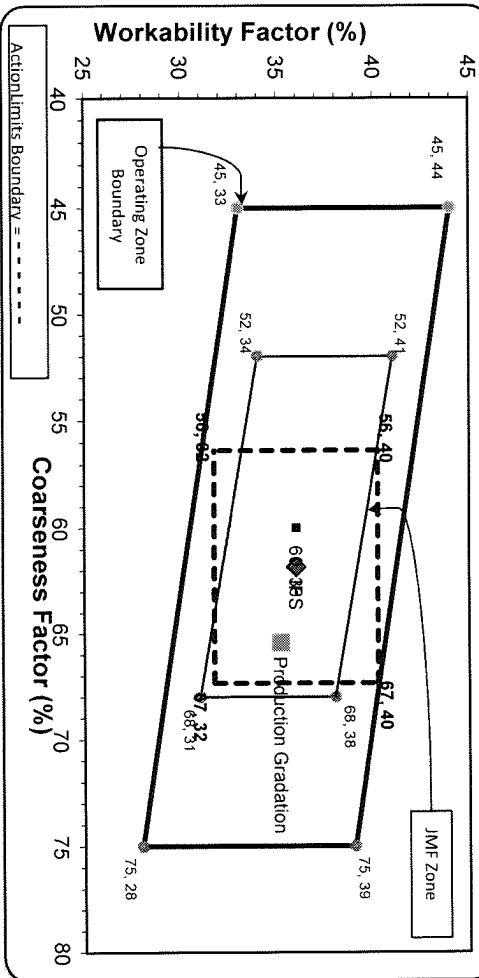
| Sieve | 6AA | 26A | 2NS | Cumulative % Passing | % Retained | Cumulative % Retained |
|-------|-------|-------|-------|----------------------|------------|-----------------------|
| 2" | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| 1.5" | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 |
| 1" | 97.2 | 100.0 | 100.0 | 98.3 | 1.7 | 1.7 |
| 3/4" | 85.1 | 100.0 | 100.0 | 91.0 | 7.3 | 9.0 |
| 1/2" | 47.8 | 96.3 | 100.0 | 68.5 | 22.5 | 31.5 |
| 3/8" | 27.1 | 82.9 | 100.0 | 56.0 | 12.5 | 44.0 |
| #4 | 4.6 | 19.6 | 95.3 | 40.5 | 15.5 | 59.5 |
| #8 | 2.4 | 7.8 | 78.9 | 32.7 | 7.8 | 67.3 |
| #16 | 2.3 | 4.8 | 64.1 | 26.8 | 5.9 | 73.2 |
| #30 | 2.2 | 4.4 | 49.2 | 20.8 | 6.0 | 79.2 |
| #50 | 2.1 | 4.0 | 25.4 | 11.3 | 9.5 | 88.7 |
| #100 | 2.0 | 3.4 | 6.5 | 3.8 | 7.5 | 96.2 |
| LBW | 1.7 | 2.7 | 0.9 | 1.4 | 2.4 | 98.6 |

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor: **65** Workability Factor: **33** Adjusted WF: **35.2**

Coarseness Factor: **62** Workability Factor: **36**

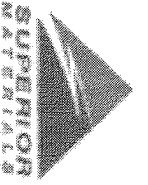


| Sieve | Cumulative % Passing | % Retained | Cumulative % Retained |
|-------|----------------------|------------|-----------------------|
| 2" | 100.0 | 0.0 | 0.0 |
| 1.5" | 100.0 | 0.0 | 0.0 |
| 1" | 100.0 | 0.0 | 0.0 |
| 3/4" | 95.0 | 5.0 | 5.0 |
| 1/2" | 72.3 | 22.8 | 27.7 |
| 3/8" | 60.4 | 11.8 | 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 |

*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.

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



Daily Summary Report

Date Tuesday, November 12, 2024

| | | | |
|------------------|-----------------------|-----------------------|-----------------------|
| Sample Id | -1989616024 | -674910400 | -674906140 |
| Plant | S102 Superior Novi | S102 Superior Novi | S102 Superior Novi |
| Product | 1051 6AA LS | 1067 26A Mod LS | 1022 2NS GR |

| Specification | 6AA LS | 26A Mod LS Spec | 2NS GR Spec |
|-----------------------|--------|-----------------|-------------|
| Sample Type | QA | QA | QA |
| Time | 10:42 | 10:43 | 10:44 |
| 2" (50mm) | 100.0 | 100.0 | 100.0 |
| 1 1/2" (37.5mm) | 100.0 | 100.0 | 99.3 |
| 1" (25mm) | 99.2 | 100.0 | 84.7 |
| 3/4" (19mm) | 86.5 | 100.0 | 68.4 |
| 1/2" (12.5mm) | 44.8 | 99.8 | 49.6 |
| 3/8" (9.5mm) | 22.9 | 88.8 | 24.1 |
| #4 (4.75mm) | 2.7 | 7.8 | 5.3 |
| #8 (2.36mm) | 2.7 | 2.7 | 1.2 |
| #16 (1.18mm) | 0.9 | 2.0 | 0.0 |
| #30 (.6mm) | 0.8 | 1.8 | 2.69 |
| #50 (.3mm) | 0.8 | 1.7 | 0.8 |
| #100 (.15mm) | 0.8 | 1.6 | |
| #200 (.075mm) | 0.74 | 1.6 | |
| Pan | 0.00 | 0.0 | |
| FM | | | |
| Wash Loss (#200/75um) | 0.7 | 1.5 | 0.8 |
| Total Moisture | 3.09 | 4.33 | 4.24 |