

# Aggregate Optimization Chart

**PLANT #:** p11

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

Sample Date: 6/17/24

Concrete Grade: DM, 4500HP

Dates Test Represents: 6/20/2024 through 6/24/2024

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

| Agg. Class      | Pit #  | Source       | Weight (SSD) | ft <sup>3</sup> | Specific Gravity | % Contribution |
|-----------------|--------|--------------|--------------|-----------------|------------------|----------------|
| 6AA             | 71-47  | Presque Isle | 1405         | 8.59            | 2.62             | 48.4           |
| 26A             | 71-47  | Presque Isle | 350          | 2.14            | 2.62             | 12.0           |
| 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%



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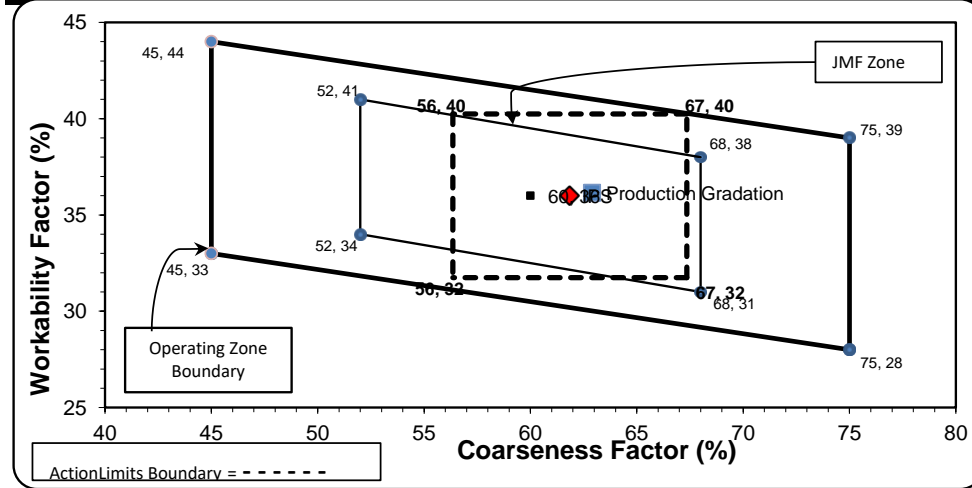
| Sieve | 6AA   | 26A   | 2NS   | Cumulative % Passing | % Retained | Cumulative % Retained |
|-------|-------|-------|-------|----------------------|------------|-----------------------|
| 2"    | 100.0 | 100.0 | 100.0 | 100.0                | 0.0        | 0.0                   |
| 1.5"  | 100.0 | 100.0 | 100.0 | 100.0                | 0.0        | 0.0                   |
| 1"    | 96.2  | 100.0 | 100.0 | 98.2                 | 1.8        | 1.8                   |
| 3/4"  | 72.4  | 100.0 | 100.0 | 86.7                 | 11.5       | 13.3                  |
| 1/2"  | 33.4  | 93.5  | 100.0 | 67.0                 | 19.6       | 33.0                  |
| 3/8"  | 18.3  | 81.6  | 100.0 | 58.3                 | 8.7        | 41.7                  |
| #4    | 4.2   | 16.6  | 95.6  | 41.9                 | 16.4       | 58.1                  |
| #8    | 3.3   | 4.2   | 79.7  | 33.7                 | 8.2        | 66.3                  |
| #16   | 2.6   | 2.4   | 64.1  | 26.9                 | 6.7        | 73.1                  |
| #30   | 2.3   | 2.0   | 48.6  | 20.6                 | 6.3        | 79.4                  |
| #50   | 2.0   | 1.8   | 25.8  | 11.4                 | 9.2        | 88.6                  |
| #100  | 1.8   | 1.7   | 6.1   | 3.5                  | 7.9        | 96.5                  |
| LBW   | 1.4   | 1.4   | 1.0   | 1.2                  | 2.2        | 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)

|                           |           |                            |           |                    |             |                           |           |
|---------------------------|-----------|----------------------------|-----------|--------------------|-------------|---------------------------|-----------|
| <b>Coarseness Factor:</b> | <b>63</b> | <b>Workability Factor:</b> | <b>34</b> | <b>Adjusted WF</b> | <b>36.2</b> | <b>Coarseness Factor:</b> | <b>62</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"  | 95.0                 | 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:  
 SM, LLC Technical Service

Approved By: