## HMA Asphalt Content, Gradation & Marshall Volumetrics Test Report (T 329, T 164, T 30, T 166, T 209, T 245)

| | | |
|---|---|---|
| Date/Time: | Lab/Location: | |
| Weather: | Date Rec'd #: | Random Sample: Yes No |
| Project: | Lab Login #: | Lot #: |
| Contract #: | Material ID: | Sublot #: |
| Contractor: | Material #: | Sample Location: |
| Pay Item #: | Sample #: | Station: |
| Source: | Sample Type: QC A-V IA DR Other | Offset: |
| Plant Type: | Sampled By/Cert. #: | |

| Moisture Content (T 329) | | Asphalt Content of HMA by Extraction Method (T 164) | | | |
|---|---|---|---|---|---|
| Sample Wet Mass (A): | | Initial Sample Mass ($W_1$i): | | Extracted Agg.+ Pan ($W_3$p): | |
| Sample Dry Mass (B): | | Corrected Sample Mass ($W_1$): | | Pan Tare Mass (P): | |
| Water Mass (C): (A - B) | | ($W_1$i / (1+(.01*M))) | | Extracted Agg. ($W_3$ ): ($W_3$p-P): | |
| **% Moisture (M):** | | Initial Filter Mass (Fi): | | Total Agg. Mass: ($W_3$ + $W_4$) | |
| (100*((A-B)/B)) | | Final Filter Mass (Ff): | | PG Binder Mass (Wpg): | |
| *Note:* | | Fines on Filter ($W_4$f): (Ff - Fi) | | ($W_1$ - ($W_3$ + $W_4$)) | |
| *Total Ash Correction from Form T111* | | Ash Correction ($W_4$a): | | **%PG Binder (Pb):** | |
| **HMA Temperature** | | Mineral Matter Mass ($W_4$): | | ((Wpg/$W_1$)*100) | |
| Sample Temp, ºC: | | ($W_4$f + $W_4$a) | | PG Binder JMF: | |

### Mechanical Analysis of Extracted Aggregate (T 30)

| Sieve, in. (mm) | Mass Retained | Percent Retained | **Percent Passing** | Job Mix Formula | + / - Tolerance | Variance |
|---|---|---|---|---|---|---|
| 1 1/2 (37.5) | | | | | | |
| 1 (25) | | | | | | |
| 3/4 (19) | | | | | | |
| 1/2 (12.5) | | | | | | |
| 3/8 (9.5) | | | | | | |
| #4 (4.75) | | | | | | |
| #8 (2.36) | | | | | | |
| #16 (1.18) | | | | | | |
| #30 (600 µm) | | | | | | |
| #50 (300 µm) | | | | | | |
| #100 (150 µm) | | | | | | |
| #200 (75 µm) | | | | | | |
| PAN | | | | | | |
| TOTAL: | | | | | | |

### Bulk Specific Gravity of Compacted HMA (T 166)

| Specimen # | Mass in Air | Mass in $H_2O$ | SSD Mass | Volume | $G_{mb}$ |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

### Maximum Specific Gravity of HMA (T 209)

| Specimen # | (A) | Bowl Method: Pyc on weigh below | Bowl Method: Pyc and Sample on Weigh Below | Flask Method: (D) | Flask Method: (E) | $G_{mm}$ | Unit Weight | A = Sample<br>D = Pycn. + H2O<br>E = Pycn. + H2O + A |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | Average: | | | |

| Specimen # | Volumetric Analysis: $G_{sb}$ | % Air Voids | VMA | VFA | HMA Marshall Stability and Flow (T 245): Dial Reading | Corr. Factor | Stability | Corr. Stability | Flow |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | Average: | | | | | | Average: | | |

Comments:

| | |
|---|---|
| Tested by: | Reviewed by: |
| Certification #: | Certification #: |
| Date: | Date: |

Test Results Within Engineering Limits: YES ☐ NO ☐