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## AGGREGATE SUBMITTAL

## **C-33 Report of Physical Properties**

GRP Material Description: Washed, Standard 3/8" x #16

Report Date: July 17, 2023

GRP Material Code: CHIP

Reviewed by: Dan McDaniel

Source Location/Code: Point of the Mountain / 525

Report No. 525CHIP00323

ANALYSIS AASHTO T27 % Passing

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0.8

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Spec.

| TEST RESULTS           |                     |   |        |             | SIEVE ANAL                            |  |
|------------------------|---------------------|---|--------|-------------|---------------------------------------|--|
| Standard               | PHYS                | ICAL PROPERTIES                                       | Result | Test Source | ASTM C136 AA                          |  |
| ASTM C 29              | Unit                | Unit Weight, lbs./cu.ft. =                            | 97     |             | Sieve Size                            |  |
| AASHTO T19             | Weight              | Voids, % =  | 39     |             | 450 mm (18")                          |  |
|                        |                     | ☐ Jigged Loos √ Rodded                                |        |             | 375 mm (15")                          |  |
| ASTM D1557             | Modified            | Max. density, lbs./cu.ft. =                           |        |             | 300 mm (12")                          |  |
| AASHTO T180            | Proctor             | Optimum Moisture, % =                                 |        |             | 250 mm (10")                          |  |
| ASTM D698              | Standard            | Max. density, lbs./cu.ft. =                           |        |             | 225 mm (9")                           |  |
| AASHTO T99             | Proctor             | Optimum Moisture, % =                                 |        |             | 200 mm (8")                           |  |
| ASTM D4318             | Liquid Limit        | Liquid Limit=   | 0      |             | 150 mm (6")                           |  |
| AASHTO T89/90          | Plastic Limit       | Plastic Limit=  | 0      |             | 125 mm (5")                           |  |
|                        | Plasticity Index    | Plasticity Index=                                     | NP     |             | 100 mm (4")                           |  |
| ASTM C131              | L.A.                | Small Coarse Loss, % =                                | 23     |             | 75.0 mm (3")                          |  |
| AASHTO T96             | Abrasion            | Grading/Revolutions, =                                | 500    |             | 63.0 mm (2-1/2")                      |  |
| ASTM C535              | L.A.                | Large Coarse Loss, % =                                |        |             | 50.0 mm (2")                          |  |
|                        | Abrasion            | Grading/Revolutions, =                                |        |             | 37.5 mm (1-1/2")                      |  |
|                        | Fine                | Bulk Specific Gravity (dry) =                         |        |             | 25.0 mm (1")                          |  |
| ASTM C 128             | Specific            | Bulk Specific Gravity, SSD =                          |        |             | 19.0 mm (3/4")                        |  |
| AASHTO T84             | Gravity &           | Apparent Specific Gravity =                           |        |             | 12.5 mm (1/2")                        |  |
|                        | Absorption          | Absorption, % =                                       |        |             | 9.5 mm (3/8")                         |  |
|                        | Coarse              | Bulk Specific Gravity (dry) =                         | 2.526  |             | 6.3 mm (1/4")                         |  |
| ASTM C 127             | Specific            | Bulk Specific Gravity, SSD =                          | 2.563  |             | 4.75 mm (No.4)                        |  |
| AASHTO T85             | Gravity &           | Apparent Specific Gravity =                           |        |             | 2.36 mm (No.8)                        |  |
|                        | Absorption          | Absorption, % =                                       | 1.4    |             | 2.00 mm (No.10)                       |  |
| ASTM D2419             | Sand                | Sand Equivalent, % =                                  |        |             | 1.18 mm (No.16)                       |  |
| AASHTO T176            | Equivalent          |   |        |             | 0.600 mm (No.30)                      |  |
|                        | Soundness           | Coarse Soundness Loss, % =                            |        |             | 0.425 mm (No.40)                      |  |
| ASTM C 88              | ooununess           | Sodium No. of Cycles =                                |        |             | 0.300 mm (No.50)                      |  |
| AASHTO T104            | Soundness           | Fine Soundness Loss, % =                              | 1      |             | 0.180 mm (No.80)                      |  |
|                        | ooununess           | Sodium No. of Cycles =                                | 5      |             | 0.150 mm (No.100)                     |  |
| ASTM C 1252            | Fine Aggregate      | Uncompacted Voids, % =                                |        |             | 0.075 mm (No.200)                     |  |
| AASHTO T304            | Angularity          | Method C (as received material)                       |        |             | ASTM D422                             |  |
| ASTM C40               | Organic             | Coarse Aggregate, % =                                 | 0      |             |                                       |  |
| ASTM C40<br>AASHTO T21 | Impurities          | Fine Aggregate, % =                                   |        |             | Hydrometer =<br>ASTM C566 AASHTO T255 |  |
| ASTM C142              | Clay / Friable      | Coarse Aggregate, % =                                 | 0      |             |                                       |  |
|                        | -                   |   | 0      |             | Moisture Content, % =                 |  |
| AASHTO T112            | Particles           | Fine Aggregate, % =                                   |        |             | ASTM C136 AASHTO T27                  |  |
| ASTM C123              | Lightweight         | Coarse Aggregate, % =                                 |        |             | Fineness Modulus (FM) =               |  |
| AASHTO T113            | Pieces              | Fine Aggregate, % =<br>Surcharge = 10 lbs CBR @ 0.1"= |        |             | AASHTO M145                           |  |
| ASTM D1883             | CBR                 | •   |        |             | Classification of Soils =             |  |
| AASHTO T193            |                     | Swell% = 0.0% CBR @ 0.2"=                             |        |             | ASTM D4791 Ratio =                    |  |
| ASTM D5821             | Fractured Face      | 1 or 2 Faces =  |        |             | Flat & Elongated =                    |  |
| ASTM D2487             |                     | Fractured Face, % =                                   |        |             |                                       |  |
|                        | Soil Classification | Group Symbol =  |        |             |                                       |  |
|                        |                     | Group Name =  |        |             |                                       |  |
| ASTM D2488             | Soil Description &  | Group Symbol =  |        |             |                                       |  |
|                        | Identification      | Group Name =  |        |             |                                       |  |