

Laboratory Test Report

| | | | |
|-----------------|-------------------|------------------|------------------------|
| Client: | A&K Earthmovers | Project Number.: | 1013 |
| Client Contact: | Reed Tolotti | Lab Number: | 33019 |
| Project Name: | Aggregate Quality | Material: | Type II Aggregate Base |
| Source: | Tucker Pit | Date Tested: | 11/21/2018 |
| Date Sampled: | 11/16/2018 | Date Completed: | 11/26/2018 |
| Sampled By: | G. Casey | Reviewed By: | Katie B. Weagel |

SOILS AND AGGREGATE TESTING

| Test Method | Sieve Analysis | Percent Passing | 2016 SSPWC Specification |
|----------------|------------------|-----------------|--------------------------|
| ASTM C136/C117 | 4 Inch | - | - |
| | 3 Inch | - | - |
| | 2 Inch | - | - |
| | 1 1/2 Inch | - | - |
| | 1 Inch | 100 | 100 |
| | 3/4 Inch | 98 | 90-100 |
| | 1/2 inch | 77 | - |
| | 3/8 Inch | 65 | - |
| | No. 4 | 46 | 35-65 |
| | No. 8 | 38 | - |
| | No. 10 | 36 | - |
| | No. 16 | 33 | 15-40 |
| | No. 30 | 27 | - |
| | No. 40 | 24 | - |
| | No. 50 | 20 | - |
| | No. 100 | 14 | - |
| | | No. 200 | 8.7 |
| | Fineness Modulus | | |

MATERIAL PROPERTIES

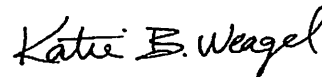
| Test & Test Method | Sample Results | 2016 SSPWC Specification |
|-------------------------------|----------------|--------------------------|
| Liquid Limit ASTM D4318 | 19 | 35 Max |
| Plasticity Index ASTM D4318 | 1 | 8 Max. |
| Los Angeles Rattler ASTM C131 | 20.8% | 45% Max. |
| Fractured Faces ASTM D5821 | 60.7% | 35% Min. |
| R-Value ASTM D2844 | 78.1 | 70 Min. |
| | | |
| | | |
| | | |
| | | |

MOISTURE DENSITY CURVE

| Test Type | Test Method | Sample Results | Specifications |
|---------------------|-------------|----------------|----------------|
| Maximum Dry Density | ASTM D1557 | 134.5 pcf | - |
| Optimum Moisture | ASTM D1557 | 8.0% | - |

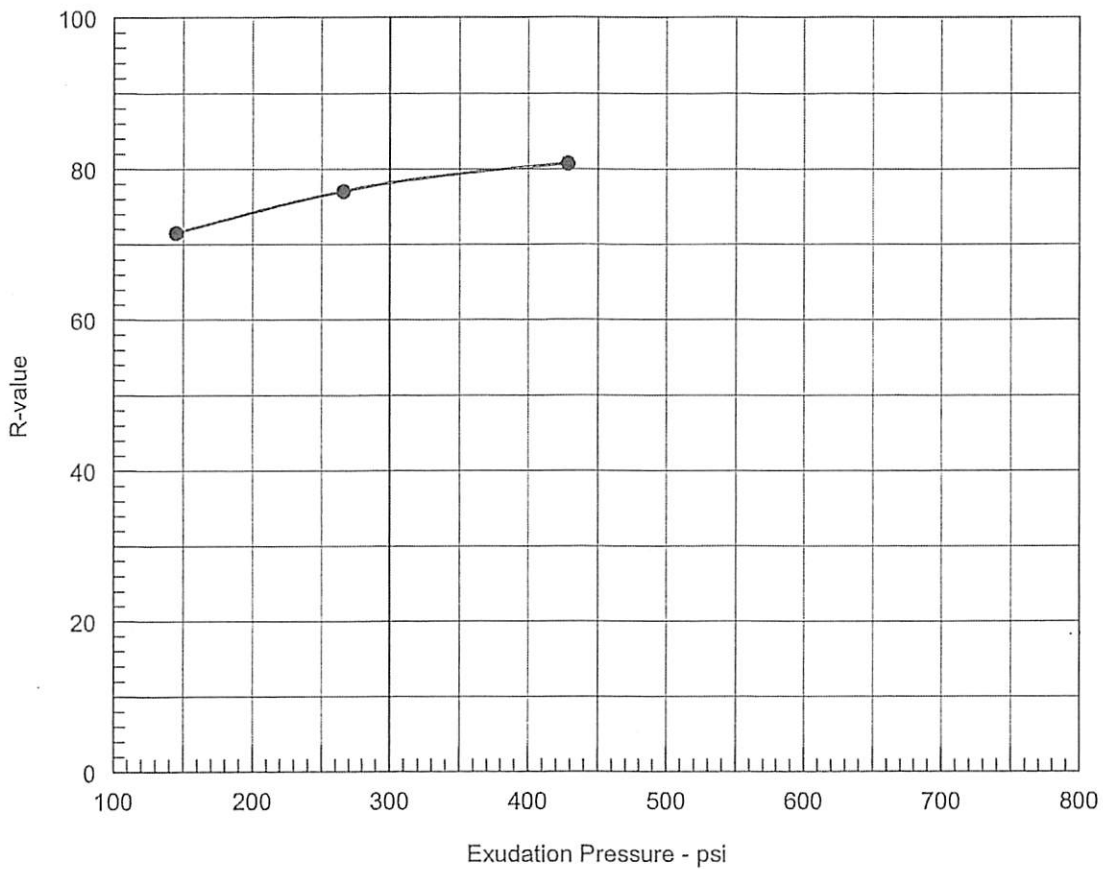
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Construction Materials Engineers, Inc.



Katie B. Weagel, PE

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - ASTM D2844

| No. | Compact. Pressure psi | Density pcf | Moist. % | Expansion Pressure psi | Horizontal Press. psi @ 160 psi | Sample Height in. | Exud. Pressure psi | R Value | R Value Corr. |
|-----|-----------------------|-------------|----------|------------------------|---------------------------------|-------------------|--------------------|---------|---------------|
| 1 | 350 | 133.8 | 10.7 | 0.00 | 20 | 2.40 | 266 | 78.5 | 77.0 |
| 2 | 350 | 135.8 | 8.5 | 0.00 | 18 | 2.45 | 428 | 80.7 | 80.7 |
| 3 | 350 | 134.2 | 9.1 | 0.00 | 25 | 2.45 | 145 | 71.5 | 71.5 |


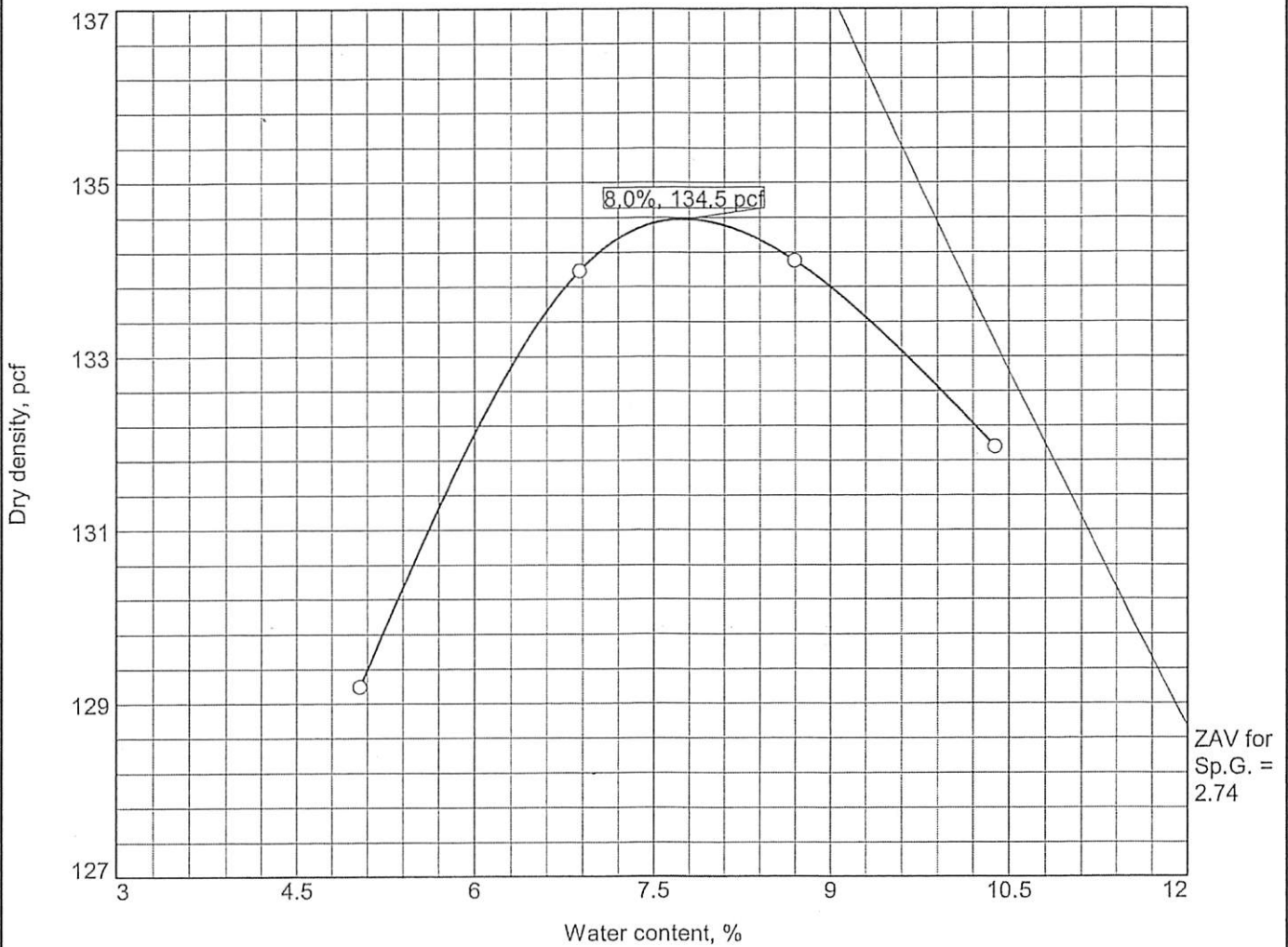
| Test Results | Material Description |
|--|--|
| R-value at 300 psi exudation pressure = 78.1 | TYPE 2 AGG. BASE |
| Project No.: 1013 Project: TUCKER PIT Location: STOCKPILE-TUCKER PIT Sample Number: 33019 Date: 11/26/2018 | Tested by: G. MORALES Checked by: A. SALAZAR Remarks: RECEIVED 11/16/2018 |
|  | |

Figure 33019

MOISTURE DENSITY CURVE



Test specification: ASTM D 1557-12 Method C Modified

| Elev/ Depth | Classification | | Nat. Moist. | Sp.G. | LL | PI | % > 3/4 in. | % < No.200 |
|----------------|----------------|--------|----------------|-------|----|----|----------------|---------------|
| | USCS | AASHTO | | | | | | |
| | | | | | | | 2.7 | |

| TEST RESULTS | MATERIAL DESCRIPTION |
|---|----------------------|
| Maximum dry density = 134.5 pcf Optimum moisture = 8.0 % | TYPE 2 AGG. BASE |

| | |
|--|---------------------------------|
| Project No. 1013 Client: A&K EARTHMOVERS Project: TUCKER PIT Date: 11/20/ Location: STOCKPILE-TUCKER PIT Sample Number: 33019 | Remarks: RECEIVED 11/16/2018 |
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Figure

Tested By: T. OWENS Checked By: A. SALAZAR