



**Cole Garner Geotechnical**  
 1070 West 124th Ave  
 Suite 300  
 Westminster, CO 80234  
 Phone: 303.996.2999

# Soil Nuclear Gauge

**Report Date:** 9/17/2019  
**Test Method:** ASTM D 6938

**Client:**  
 KB Home Colorado Inc.  
 7807 East Peakview Avenue, Suite 300  
 Centennial, CO 80111

**Project:**  
 19.23.042  
 Trails at Crowfoot  
 Crowfoot Valley Road and Bayou Gulch Road  
 Parker, CO

## Test Results

| Test # | Retest Of | Test Date | Proctor ID | Method | Soil Classification | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in) | Percent Compaction | Min Comp. (%) | Remark |
|--------|-----------|-----------|------------|--------|---------------------|----------------------|---------------------------|-----------------------|----------------------------|------------------|--------------------|---------------|--------|
| 373    |           | 9/16/19   | 5121       | A      | A-6                 | 13.2                 | 115.8                     | 15.2                  | 109.6                      | 8                | 95                 | 95            | DP/MP  |
| 374    |           | 9/16/19   | 4532       | A      | A-7                 | 17.3                 | 107.0                     | 18.6                  | 105.4                      | 8                | 99                 | 95            | DP/MP  |
| 375    |           | 9/16/19   | 5121       | A      | A-6                 | 13.2                 | 115.8                     | 15.1                  | 114.7                      | 8                | 99                 | 95            | DP/MP  |
| 376    |           | 9/16/19   | 4532       | A      | A-7                 | 17.3                 | 107.0                     | 18.7                  | 104.7                      | 8                | 98                 | 95            | DP/MP  |
| 377    |           | 9/16/19   | 5121       | A      | A-6                 | 13.2                 | 115.8                     | 15.2                  | 110.0                      | 8                | 95                 | 95            | DP/MP  |
| 378    |           | 9/16/19   | 5121       | A      | A-6                 | 13.2                 | 115.8                     | 14.2                  | 113.7                      | 8                | 98                 | 95            | DP/MP  |
| 379    |           | 9/16/19   | 5121       | A      | A-6                 | 13.2                 | 115.8                     | 15.0                  | 111.1                      | 8                | 96                 | 95            | DP/MP  |
| 380    |           | 9/16/19   | 5121       | A      | A-6                 | 13.2                 | 115.8                     | 14.2                  | 111.1                      | 8                | 96                 | 95            | DP/MP  |

## Test Information

| Test # | Test Location   | Elevation | Reference    | Gauge Make / Model / SN / Calibrated | Field Technician |
|--------|---|-----------|--------------|--------------------------------------|------------------|
| 373    | Utility Backfill: Sanitary Sewer: MH-22 to MH-31 Mock Orange Ave Staions: 11+00 to 10+10.<br>Test: Mock Orange Ave Staions: 10+40 | -6.0      | Down from FG | Troxler / 3440 / 63528 / 2/1/2019    | Rob Lopez        |
| 374    | Utility Backfill: Sanitary Sewer: MH-22 to MH-31 Mock Orange Ave Staions: 11+00 to 10+10.<br>Test: Mock Orange Ave Staions: 10+42 | -4.0      | Down from FG | Troxler / 3440 / 63528 / 2/1/2019    | Rob Lopez        |
| 375    | Utility Backfill: Sanitary Sewer: MH-22 to MH-31 Mock Orange Ave Staions: 11+00 to 10+10.<br>Test: Mock Orange Ave Staions: 10+42 | -2.0      | Down from FG | Troxler / 3440 / 63528 / 2/1/2019    | Rob Lopez        |
| 376    | Utility Backfill: Sanitary Sewer: MH-22 to MH-31 Mock Orange Ave Staions: 11+00 to 10+10.<br>Test: Mock Orange Ave Staions: 10+50 | -0.5      | Down from FG | Troxler / 3440 / 63528 / 2/1/2019    | Rob Lopez        |
| 377    | Utility Backfill: Sanitary Sewer: Service to Block 2 Lot 2 South of MH-22 Mock Orange Station: 11+00                              | -7.0      | Down from FG | Troxler / 3440 / 63528 / 2/1/2019    | Rob Lopez        |
| 378    | Utility Backfill: Sanitary Sewer: Service to Block 2 Lot 2 South of MH-22 Mock Orange Station: 11+00                              | -5.0      | Down from FG | Troxler / 3440 / 63528 / 2/1/2019    | Rob Lopez        |
| 379    | Utility Backfill: Sanitary Sewer: Service to Block 2 Lot 2 South of MH-22 Mock Orange Station: 11+00                              | -3.0      | Down from FG | Troxler / 3440 / 63528 / 2/1/2019    | Rob Lopez        |
| 380    | Utility Backfill: Sanitary Sewer: Service to Block 2 Lot 2 South of MH-22 Mock Orange Station: 11+00                              | -1.0      | Down from FG | Troxler / 3440 / 63528 / 2/1/2019    | Rob Lopez        |

| Remarks                             | Comments   |
|-------------------------------------|--|
| DP/MP: Density Pass / Moisture Pass | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |



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| Test Results                        |   |           |            |        |                     |  |                           |                       |   |                  |                    |                  |        |
|-------------------------------------|---|-----------|------------|--------|---------------------|--|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of   | Test Date | Proctor ID | Method | Soil Classification | Optimum Moisture (%)   | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 381                                 |   | 9/16/19   | 5121       | A      | A-6                 | 13.2   | 115.8                     | 15.1                  | 112.3                                   | 8                | 97                 | 95               | DP/MP  |
| 382                                 |   | 9/16/19   | 5121       | A      | A-6                 | 13.2   | 115.8                     | 14.4                  | 109.9                                   | 8                | 95                 | 95               | DP/MP  |
| 383                                 |   | 9/16/19   | 5121       | A      | A-6                 | 13.2   | 115.8                     | 14.3                  | 111.0                                   | 8                | 96                 | 95               | DP/MP  |
| 384                                 |   | 9/16/19   | 5121       | A      | A-6                 | 13.2   | 115.8                     | 15.2                  | 113.7                                   | 8                | 98                 | 95               | DP/MP  |
| Test Information                    |   |           |            |        |                     |  |                           |                       |   |                  |                    |                  |        |
| Test #                              | Test Location   |           |            |        |                     |  | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 381                                 | Utility Backfill: Sanitary Sewer: Service to Block 1 Lot 25 West of MH-24 |           |            |        |                     |  | -7.0                      | Down from FG          | Troxler / 3440 / 63528 / 2/1/2019       |                  |                    | Rob Lopez        |        |
| 382                                 | Utility Backfill: Sanitary Sewer: Service to Block 1 Lot 25 West of MH-24 |           |            |        |                     |  | -5.0                      | Down from FG          | Troxler / 3440 / 63528 / 2/1/2019       |                  |                    | Rob Lopez        |        |
| 383                                 | Utility Backfill: Sanitary Sewer: Service to Block 1 Lot 25 West of MH-24 |           |            |        |                     |  | -3.0                      | Down from FG          | Troxler / 3440 / 63528 / 2/1/2019       |                  |                    | Rob Lopez        |        |
| 384                                 | Utility Backfill: Sanitary Sewer: Service to Block 1 Lot 25 West of MH-24 |           |            |        |                     |  | -1.0                      | Down from FG          | Troxler / 3440 / 63528 / 2/1/2019       |                  |                    | Rob Lopez        |        |
| Remarks                             |   |           |            |        |                     | Comments   |                           |                       |   |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |   |           |            |        |                     | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                           |                       |   |                  |                    |                  |        |