

**AMENDMENT NO. 1 TO PROFESSIONAL SERVICES CONTRACT  
(CONTRACT NO. 0517-1240-UES)**

The City of Daytona Beach, a Florida municipal corporation (the "City") and Universal Engineering Sciences, Inc., ("Consultant"), hereby agree to amend the above-referenced Contract, effective on the date last signed below.

WITNESSETH:

WHEREAS, the City Commission approved the above-referenced Contract, with Universal Engineering Sciences, Inc., by Resolution 17-256; and

WHEREAS, certain additional amendments are required to update the Contract.

NOW, THEREFORE, the City and Consultant agree to amend the Contract as follows, based on the mutual valuable consideration contained herein.

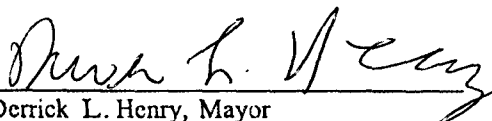
1. Exhibit B to the Contract is replaced with Exhibit B-1. All references in the Contract to "Exhibit B" will hereafter be deemed to refer to the revised Exhibit B-1.

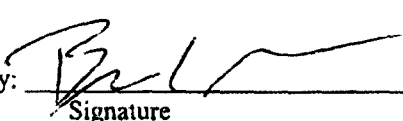
All other provisions of the Contract remain in full force and effect.

IN WITNESS WHEREOF, the CITY and CONSULTANT have set their hands and seals, effective on the date that the last party has signed below.

THE CITY

CONSULTANT

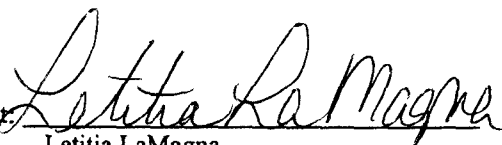
By:   
Derrick L. Henry, Mayor

By:   
Signature

Name Typed: Brian C. Pohl, P.E.

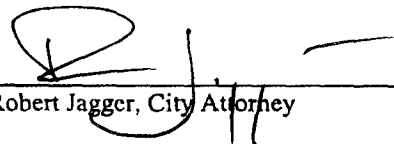
Title: Branch Manager

Date: March 2, 2018

Attest:   
Letitia LaMagna

Date: 4-4-18

Approved as to legal form

By:   
Robert Jagger, City Attorney

## EXHIBIT B-1

### CITY OF DAYTONA BEACH

CONTRACT FOR PROFESSIONAL SERVICES – CONTINUING GEOTECHNICAL  
AND ENVIRONMENTAL ENGINEERING SERVICES  
CODB CONTRACT 0517-1240

#### 2017 UNIVERSAL ENGINEERING SCIENCES RATE SCHEDULE

##### I. PROFESSIONAL AND TECHNICAL SERVICES

###### A. PROFESSIONAL SERVICES

1. Principal	\$ 60.10/hr*
2. Senior Project Manager	\$ 24.04/hr*
3. Senior Project Engineer/Scientist	\$ 24.50/hr*
4. Project Engineer/Scientist	\$ 23.77/hr*
5. Assistant Project Engineer/Scientist	\$ 23.04/hr*
6. Soil Scientist	\$ 22.60/hr*
7. Senior Engineer Technician	\$ 20.84/hr*
8. Engineering Technician	\$ 15.40/hr*
9. Threshold Inspection	\$ 22.90/hr*

###### B. WORD PROCESSING AND DRAFTING SERVICES

1. CADD Graphics	\$ 22.00/hr*
2. Word Processing Services	\$ 14.25/hr*

\*Actual Cost with an upset limit fee. These rates will be multiplied by 3.0000

##### II. GEOTECHNICAL AND HYDROGEOLOGICAL SERVICES

###### A. FIELD INVESTIGATION

1. Preliminary Site Reconnaissance and Utility Location/Coordination	\$ 48.00/hr
2. Premium drilling rates for work performed prior to 6:00 a.m., after 7:00 p.m., weekends, holidays, hours in excess of 40 hours/week or when specialized barge or bombardier equipment is used	\$ Standard Rates x 1.5 (barge rates quoted per project)

3. Subsurface Soil Investigation

a. Mobilization of truck mounted equipment (truck)	\$ 300 each (truck)
i. Mobilization for All-Terrain Vehicle (ATV)	\$ 350 each (ATV)
b. Mileage for support vehicle	\$ None
c. Standby Time - for circumstances beyond control of drilling crew	\$ 80.00/hr
d. Soil Borings	
i. Shallow Manual or Power Auger Borings	\$ 9.00/foot
ii. Standard Penetration Test Borings in Soil:	
0- 50' Depths	\$ 10.00/foot
50-100' Depths	\$ 11.00/foot
100-150' Depths	\$ 13.50/foot
150-200' Depths	\$ 17.50/foot
200-250' Depths	\$ 19.50/foot
iii. Seal Bore Holes with Cement/Bentonite	
0- 50' Depths	\$ 3.50/foot
50-100' Depths	\$ 4.00/foot
100-150' Depths	\$ 4.50/foot
150-200' Depths	\$ 5.00/foot
200-250' Depths	\$ 5.50/foot
iv. Install Casing:	
0- 50' Depths	\$ 5.00/foot
50-100' Depths	\$ 6.00/foot
100-150' Depths	\$ 7.00/foot
150-200' Depths	\$ 8.00/foot
200-250' Depths	\$ 10.00/foot
e. Cone Penetrometer/Sounding	
0-100' Depths	\$ 8.50/foot
100-200' Depths	\$ 11.50/foot
f. Dilatometer Testing	\$ 23.00/foot*
* Includes technician time	

g. Grouted Piezometers (2" Diameter)	
0- 25' Depths	\$ 25.00/foot
25- 50' Depths	\$ 25.00/foot
50- 75' Depths	\$ 25.00/foot
75-100' Depths	\$ 30.00/foot
h. Clear/Develop Wells for Sampling	\$ 80.00/hr
i. Push Wells (1" Diameter)	
0-50' Depths	\$ 19.00/foot
j. Sampling of Wells/Deliver to Water Quality Laboratory	\$ 50.00/hr
k. Muck survey or (2 man party)	\$ 80.00/hr
Wash borings (3 man party)	\$ 90.00/hr
l. Extra Split Spoon Samples	\$ 20.00 each
m. Undistributed (Shelby) Samples	
0- 50' Depths	\$100.00 each
50-100' Depths	\$125.00 each
n. Collection of Shallow Depth Vertical Permeability Samples	\$ 75.00 each
o. Percolation Tests	\$150.00 each
p. Field Bore Hole Permeability	
0-50' Depths	\$175.00 each
q. Piezometer Permeability*	
*(Does not include piezometer installation)	
0-25' Depths	\$125.00 each
25-50' Depths	\$125.00 each
r. Concentric Ring Infiltrometer tests	\$350.00 each
s. Rotary Wash Borings in Rock with Penetration @ 10' intervals:	
0-50' Depths	\$ 10.50/foot
50-100' Depths	\$ 12.50/foot
100-150' Depths	\$ 15.50/foot
150-200' Depths	\$ 20.50/foot
200-250' Depths	\$ 25.50/foot

t. Rock Corings: NX Size	
0-50' Depths	\$ 20.50/foot
50-100' Depths	\$ 22.50/foot
100-150' Depths	\$ 24.50/foot
150-200' Depths	\$ 28.50/foot
200-250' Depths	\$ 30.50/foot
u. California Bearing Ratio	\$200.00 each
v. California Bearing Design	\$400.00 each
w. Field Density Tests (Min 3 per trip)	\$ 19.00 each
x. Limerock Bearing Ratio (1 point LBR)	\$150.00 each
y. Limerock Bearing Ratio (5 point LBR)	\$250.00 each
aa. Limerock Bearing Ratio Design	\$500.00 each
bb. Florida Bearing Value (F.B.V.)	\$45.00 each
cc. Florida Bearing Value Determination of Blend Proportions (5 points)	\$100.00 each
dd. Grain Size Percent Passing No. 200 Sieve	\$25.00 each
ee. Moisture-Density Determination (Standard or Modified Proctor)	\$65.00 each
ff. Well Development	\$80.00/hour
gg. Permanent Monitoring Wells (2" diameter with manhole cover or above grade protector)	\$34.00/foot

**B. LABORATORY SOIL INVESTIGATION**

**1. Identification and Classification**

a. Natural Moisture Content ASTM D-2216	\$15.00 each
b. Unit weight and moisture content from (Undisturbed Sample)	\$ 25.00 each
c. Liquid and Plastic Limit ASTM D-4318	\$ 80.00 each

d. Specific Gravity, ASTM D-854	\$ 35.00 each
e. Grain Size Determinations	
i. Full Grain size (8 sieve sizes)	\$ 60.00 each
ii. Wash through #200 or #270	\$ 25.00 each
iii. Hydrometer analysis ASTM D-422	\$ 70.00 each
f. Organic Content by Dry Weight ASTM D-2974	\$ 30.00 each
g. Soil Resistivity	
Laboratory	\$ 40.00 each
Field Survey	\$ 60.00/hr
h. Soil Corrosivity (pH, sulfate, chloride, resistivity)	\$165.00 each
i. Soil pH	\$ 20.00 each
2. Consolidation	
a. Consolidation test of undisturbed sample, including loading to overburden pressure, unloading and loading	\$350.00 each
3. Shear Strength	
a. Unconfined compression test on Shelby Tube Sample	\$100.00 each
b. Direct Shear Test	\$150.00 each
c. Triaxial Compression Test	
CD/Point	\$300.00 each
UU/Point	\$200.00 each
4. Laboratory Permeability (Collection of soil sample not included)	
On Undisturbed Shelby Tube (sand)	\$100.00 each
In Triaxial Machine (natural clay)	\$150.00 each
In Triaxial Machine (landfill liner)	\$150.00 each
Remolding of Samples	\$ 50.00 each
5. Compaction & Stabilization	
a. Laboratory Limerock Bearing Ratio (LBR) or California Bearing Ration (CBR) including Modified Proctor Test (5 point)	\$200.00 each

C. SOIL COMPACTION AND STABILITY

- |   |               |
|---|---------------|
| 1. Standard or Modified Proctor Maximum Density Test<br>in accordance with applicable ASTM Standards  | \$ 75.00 each |
| 2. In-Place Density Tests (compaction test) in accordance<br>with Applicable ASTM Standards for calibrated drive sleeve,<br>Sand cone or nuclear methods (Minimum 3 per trip) | \$ 19.00 each |
| 3. Sub-base Soil Stability Test in accordance with the<br>Florida Bearing Value (FBBV) method of test   | \$ 35.00 each |
| 4. Limerock Bearing Ratio test in accordance with FDOT<br>Procedures including Modified Proctor Test (5 pt)   | \$250.00 each |

D. CONCRETE TESTS

- |  |                         |
|--|-------------------------|
| 1. Sampling fresh concrete at job site, performing slump test,<br>molding 6" x 12" concrete cylinders, returning to project site<br>to pick up test cylinders, curing, testing and reporting compressive<br>strength test results, all in accordance with applicable ASTM Standards. |                         |
| Set of 3, 4, or 5 Cylinders  | \$ 75.00/set            |
| 2. Additional Cylinders  | \$ 10.00 each           |
| 3. Air content pressure method (ASTM-C-231)  | \$ 10.00 each           |
| 4. Extra Slump Tests   | \$ 10.00 each           |
| 5. Concrete technician, stand-by-time  | \$ 35.00/hr             |
| 6. Evaluation of In-Place Hardened Concrete  |                         |
| a. Obtaining and Testing Hardened Concrete Cores   |                         |
| i. Set-up charge   | \$100.00 each           |
| ii. Compressive Strength<br>Testing (ASTM C-42)  | \$ 20.00 each           |
| iii. Length Evaluation (ASTM C-174)  | \$ 10.00 each           |
| b. Windsor Probe Testing   |                         |
| i. Set-up Charge   | \$100.00 each           |
| ii. In-place Testing   | \$150.00/location       |
| c. Swiss Hammer  | \$ 45.00/hr (\$200 min) |

7. Concrete Material Testing for Design Purposes or Verification Testing

a. Sieve Analysis, dry, ASTM C-136 including finer than #200 Sieve, ASTM C-177	\$30.00 each
b. Specific Gravity, ASTM C-127 or C-128	
Coarse	\$ 25.00 each
Fine	\$ 25.00 each
c. Absorption, ASTM C-127 or C-128	
Coarse	\$ 25.00 each
Fine	\$ 25.00 each
d. Unit Weight, ASTM C-29	\$ 25.00 each
e. Organic Impurities (Colorimetric ASTM C-40)	\$ 30.00 each
f. Effects of Organic Impurities ASTM C-87	\$ 40.00 each
g. Clay lumps in aggregates AASHTO T-112	\$ 25.00 each
h. Soft particles, ASTM C-142	\$ 30.00 each
i. Friable particles, ASTM C-142	\$ 30.00 each
j. Abrasion Los Angeles, ASTM C-131 Preparation of sample, if uncrushed	\$175.00 each

8. Mix Design or Verifications

a. Initial mix, including test of fine sand and coarse aggregate and 9 confirmatory cylinders, per mix	\$600.00 each
b. Additional mixes, same aggregate, 6 confirmatory cylinders per mix	\$350.00 each
c. Flexible strength, 6 test beams including test of aggregate, per mix	\$600.00 each
d. Additional mixes, 6 test beams, same aggregate per mix	\$350.00 each
e. Lightweight aggregate mixes	\$600.00 each
f. Mix reviews and calculations	\$ 65.00/mix



9. Concrete Masonry Units	
a. Compressive Strength, ASTM C-140	\$ 30.00 each
b. Absorption and moisture content, ASTM C-150	\$ 25.00 each
c. Linear drying, shrinkage, ASTM C-341	\$350.00/set of 3
10. Clay Brick (ASTM C-67) Clay Tile (ASTM C-1120)	
a. Compressive strength, 5 specimens	\$125.00/set
b. Flexible strength, 5 specimens	\$125.00/set
c. Absorption, 24 hour specimen, 5 specimens, 5 hour boiling, 5 specimens each	\$100.00/set
11. Testing and Evaluation of Lightweight Insulating Concrete	
a. Obtaining and testing samples of lightweight insulating concrete during construction (ASTM C-495)	\$ 60.00/set (field)
i. Set of 5 compressive strength and dry unit weight cylinders	\$ 50.00/set (lab)
ii. Wet unit weight tests of plastic insulating concrete	\$ 15.00/test
E. ASPHALT MIXTURES	
1. Bitumen Extractions	\$ 75.00 each
2. Graduations of Extracted Aggregates	\$ 75.00 each
3. Marshall Stability (includes density, flow and stability of 3 specimens)	\$ 90.00 each
4. Field density and thickness determination (\$200.00 minimum per trip)	\$ 20.00 each
5. Mix designs	
a. Hubbard Field Stability Design Method, absorption, specific gravity and gradation of the various aggregates; theoretical blending of aggregates to meet gradation requirements of project specifications; molding, curing and testing of 3 specimens each at 5 liquid asphalt contents for air voids, Unit Weight and Hubbard Field Stability; and preparation of Engineering Report	\$500.00 each

- b. Marshall Stability Design Method, includes absorption specific gravity and gradation of the various aggregates; to meet gradation requirements of project specifications; molding, curing, and testing of 2 specimens each at 4 liquid asphalt contents for Unit Weight, % Air Voids, % Voids in Mineral Aggregate (V.M.A.), Marshall Stability and Flow; and Preparation of Engineering Report. \$600.00 each
- c. Marshall Stability (F.A.A. requirements) \$700.00 each

F. STRUCTURAL STEEL INSPECTION AND TESTING

- 1. Magnetic particle, dye penetrant and radiographic examination of weldments \$ 55.00/hr
- 2. Inspection and thickness checks of fire proofing material applied to structural steel \$ 55.00/hr
- 3. Engineering observation of reinforcing steel to verify that the size, number, spacing, securement, grade and placement of reinforcing steel \$ 55.00/hr
- 4. Engineering observations during construction required to determine the suitability of erection and securement of the steel framing system and tensions (torque) of high strength bolted connections within the structural framing system. \$ 55.00/hr
- 5. Observation of placement and securement of post-tension tendons and/or tensioning operations including measurements of elongations and monitoring jacking force for each tendon \$ 45.00/hr

G. SOIL-CEMENT DESIGN AND CONSTRUCTION MONITORING

- 1. Laboratory determination of optimum cement content to cement content to produce a structurally sound soil-cement base for road construction including grain size determination, liquid and plastic limits. Standard Proctor Test (AASHTO T-134) and preparing, curing and testing 2 specimens each at 3 varying cement contents, in accordance with a Modified version of P.C.A.'s "Short Cut Procedures for Sandy Soils." \$ 45.00/hr
- 2. Construction monitoring including resident inspection during application and processing of soil-cement \$ 40.00/hr

H. INSPECTION AND ANALYSIS OF BUILT-UP ROOFING

- |   |             |
|---|-------------|
| 1. Monitoring of built-up roofing operations including types of materials, bitumen temperature at application, moisture conditions, rain precautions and general compliance with project specifications | \$ 45.00/hr |
| 2. Analysis of new built-up roofing components (ASTM D-3617)  | \$ 45.00/hr |
| 3. Analysis of existing built-up roofing components (ASTM D-2829)   | \$ 45.00/hr |

I. SPECIAL TESTING SERVICES

- |  |   |
|--|---|
| 1. Vibration monitoring                                  | \$ 55.00/hr (plus \$250.00 equipment charge per trip) |
| 2. Floor slab flatness profiling                         | \$ 55.00/hr (plus \$250.00 equipment charge per trip) |
| 3. Ultrasonic testing of concrete                        | \$ 55.00/hr (plus \$100.00 equipment charge per trip) |
| 4. R-meter for location of reinforcing steel in concrete | \$ 55.00/hr (plus \$100.00 equipment charge per trip) |

J. PHASE I ENVIRONMENTAL SITE ASSESSMENTS

- |                   |                      |
|-------------------|----------------------|
| 1. 0 to 20 Acres  | \$2,000.00           |
| 2. 21 to 40 Acres | \$2,400.00           |
| 3. 41 to 60 Acres | \$2,600.00           |
| 4. 61 to 80 Acres | \$2,800.00           |
| 5. over 80 Acres  | \$quoted per project |

K. PORTABLE DRILLING

- |  |               |
|--|---------------|
| 1. Portable drilling equipment Mobilization/Demobilization | \$350.00 each |
| 2. Portable drilling (2 Man Crew)                          | \$130.00/hr   |