AMENDMENT TO AGREEMENT For PROFESSIONAL ENGINEERING SERVICES Between THE CITY OF COLUMBIA, MISSOURI And OWN, INC.

THIS AMENDMENT TO AGREEMENT (hereinafter "Amendment") by and between the City of Columbia, Missouri (hereinafter "City"), and **Own, Inc.** (formerly Anderson Engineering, Inc.) (hereinafter "Engineer"), is entered into on the date of the last signatory noted below (the "Effective Date"). City and Engineer are each individually referred to herein as a "Party" and collectively as the "Parties".

WHEREAS, on November 22, 2022, City and Engineer entered into an Agreement for Professional Engineering Services (hereinafter "Agreement") for signed and sealed plans for an arch culvert with associated structural and roadway design underneath Crestridge Drive;

WHEREAS, City has need for additional services to be performed by Engineer including revision of the design and permitting as set forth in Engineer's Supplemental Agreement #1 attached hereto as Exhibit D and within the Amended Scope of Services Crestridge Culvert Replacement dated April 2, 2025 attached hereto as Exhibit E (together hereinafter "Amended Scope of Work"); and

WHEREAS, City and Engineer desire to amend the Agreement's Scope of Work to include the additional work needed by City and to amend the Agreement's cost not to exceed accordingly.

AMENDMENTS

NOW, THEREFORE, in consideration of the mutual covenants set out herein the Parties agree to amend the Agreement as follows:

- 1. Within paragraph 2.1.1 of the Agreement, "as set forth in Exhibit A 'Scope of Basic Services,' dated **October 13, 2022**" is amended to insert immediately thereafter "and as set forth in Engineer's Supplemental Agreement #1 attached hereto as Exhibit D and within the Amended Scope of Services Crestridge Culvert Replacement dated April 2, 2025 attached hereto as Exhibit E (together hereinafter "Amended Scope of Work")".
- 2. Within paragraph 5.3 of the Agreement, "270 calendar days from the issuance of the Notice to Proceed" is removed and replaced with "270 calendar days from the Effective Date of the Amendment".
- 3. Within paragraph 6.1.1.6, "shall not exceed \$123,500" is removed and replaced with "shall not exceed \$163,770".

4. Paragraph 7.18 is removed and replaced with:

7.18 Agreement Documents

This Agreement includes the following exhibits, which are incorporated herein by reference:

| <u>Exhibit</u> | <u>Description</u> |
|----------------|---|
| A | Scope of Work |
| В | Hourly Fee Schedule |
| С | Work Authorization Affidavit |
| D | Engineer's Supplemental Agreement #1 |
| Е | Amended Scope of Services Crestridge |
| | Culvert Replacement dated April 2, 2025 |

In the event of a conflict between the terms and conditions of this Agreement, as amended, and any exhibit hereto, the terms contained in this Agreement, as amended, shall prevail and the terms contained in any exhibit shall subsequently prevail in the following order of preference: Exhibit E, D, A, B, C.

- 5. Within paragraph 7.19, "This Agreement" is removed and replaced with "This Agreement, as amended".
- 6. The terms and conditions of the Agreement are modified as specifically set forth herein. All other terms of the Agreement shall remain unchanged and in full force and effect.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the Parties hereto have executed this Amendment by their duly authorized representatives as of the date of the last signatory to this Amendment.

| | CITY | OF COLUMBIA, MISSOURI |
|-----------------------------------|----------|---|
| | Ву: | De'Carlon Seewood, City Manager |
| | Date: | |
| ATTESTED BY: | | |
| Sheela Amin, City Clerk | | |
| APPROVED AS TO FORM: | | |
| Nancy Thompson, City Counselor/ek | | |
| which it is charged, A | ccount N | expenditure is within the purpose of the appropriation to 55816688 604990 SS151 , and that there is an credit of such appropriation sufficient to pay therefor. Matthew Lue, Director of Finance |
| | Ву: | s: Scott Edgar, PE, CFM Senior Project Manager |
| | Date: | 05/06/2025 |
| ATTEST: By: Hanna Samuelson | _ | |
| Name: Hanna Samuelson | | |

Attachment A.

Scope of Services

Crestridge Culvert Replacement

October 13, 2022

The proposed project will replace the existing concrete masonry unit culvert that carries an un-named tributary of County House Branch under Crestridge Drive with a larger, open-bottom, arch type culvert that accommodates the 10-year flood without overflowing the east stream bank. The design will include grading and/or other features to achieve this goal while ensuring overflows in larger storms are managed so that they do not damage the properties to the east of the channel. The design will also include incorporating measures such as Newbury Weir-type channel drops to reduce the effective slope of the channel through the culvert, which may also include some design to lower a sanitary sewer which crosses the channel.

To be provided by the City:

- A Project Manager to act on the City's behalf with respect to the project. The City's Project
 Manager will render decisions in a timely manner pertaining to documents submitted by the
 consultant to avoid unreasonable delay in the orderly and sequential progress of the
 Consultant's services.
- Prompt written notice to the Consultant if the City becomes aware of any fault or defect in the Project, including any errors, omissions or inconsistencies in the Consultant's instruments of service.
- The application and processing for any necessary permits and environmental, historic and cultural clearances.
- Processing of pay applications, change orders and any payroll or labor wage rate certifications necessary for the project.
- A review of the findings of investigations and engineering reporting submittals to provide comments and determine if there will be any major changes in the scope as a result.
- A review of preliminary design submittals to provide comments and determine if the Consultant
 has approval to proceed forward in each stage of the design.
- Most recent aerial topographic data to cover the extent of the hydrologic model
- Existing Hydrologic and Hydraulic Models
- All public input processes
- R/W Acquisition except development of drawings and descriptions of R/W and easements.
- A conceptual drawing that outlines features, configurations and suggested parameters on which
 the consultant should base the design. Any major deviation from the conceptual design requires
 discussion with the City's Project Manager.
- Examples of plans with typical pay items.

To be provided by *Engineer*:

Deliverables Summary:

- Hydrologic model and report
- Hydraulic model and report
- o Boundary survey, topographic survey and design in Autocad format
- Signed and sealed easement descriptions and display drawings
- Signed and Sealed Plans with project-specific specifications to be on the plans
- Floodplain and Army Corps of Engineer permit applications complete and ready to be signed by City
- Utility coordination in the design process.
- Topographic and Boundary survey, in state plane coordinates, necessary to complete the project including property information necessary for describing easements and enough topography from Stadium to Ridgemont and to the east right-of-way of College Park to estimate flood elevations from the 100-year flood.
- A geotech report characterizing conditions for design and construction of the culverts based on at least two borings to extend 10' below the channel bed. The report will include coring of competent rock that is found within 10' of the channel bed as part of the investigation.
- Any traffic control (per MUTCD) necessary for site investigations.
- A hydrologic and hydraulic analysis report with sub-catchments broken out based on models provided by the City and including results from a suite of storms; 1yr, 2yr, 10yr, 100yr and 500yr. Results to include tractive force and velocities for at least 2 cross sections in the channel between Crestridge and Ridgemont, not including the normal culvert cross sections. Report will summarize inputs to the models as well as results. A peer review, by a subconsultant (EFK Moen), of the 2D hydraulic modeling will be included prior to submission of the signed and sealed report.
- A Conceptual Design report, describing the proposed project and including/addressing the following:
 - Estimated depth of water in Crestridge resulting from a 100-year flood if the concept is implemented.
 - Designer's preference of arch culvert under Crestridge. Arched structure must allow rock riprap channel to be placed through the barrel of the structure during construction.
 - 5 foot wide sidewalk at back of curb on south side of Crestridge
 - Estimated cost of the project including major elements including sewer relocation, pavement removal and replacement, inlets and pipe, rock riprap, arched conveyance structure, headwalls and parapet walls.
 - Channel drop(s) similar to Newbury Weirs to reduce channel slope from 25 feet upstream of culvert through the culvert to 0.4-0.7 percent.
 - Structural design, and plans will not be started until the conceptual phase has verified that a
 prefabricated arch culvert will work and the City notifies the Engineer to proceed. The
 structural work includes design of the footings and headwalls for a pre-fab open bottom

arch structure, but not the design of the structure itself. It is assumed that the manufacturer will provide the design of the culvert structure.

- Signed and sealed plans for a culvert and residential street, 24 feet back of curb to back of curb, minimum, with a 5-foot sidewalk at the back of curb on the south side of the street, a short wall at the back of walk, and a smooth transition from the boulevard on the west side of the culvert to the 24-foot section based on the attached conceptual plan. The design must work within City Standard Specifications. Project specific specifications must be included in the signed and sealed project drawings.
- Prepare Endangered Species report to accompany the 404 Permit submission.
- A Floodplain Development Permit application ready for the City to sign and submit. This scope does not include any FEMA map or floodway revisions should either become necessary.
- Prepare a 'No-Rise Certificate' if required, for submission to the Army Corps of Engineers.
- An Army Corps of Engineers 404/401 Permit application ready for the City to sign and submit.
- Digital copies of the survey/cad files in Autocad format will be provided to the City.
- An Engineer's Estimate to be broken down per City Standard Specifications and usual City bidding process.
- Design project administration and attendance at as many as five design meetings with the City and other stakeholders.
- No construction administration or bidding support is included in this scope of services.



FEE SCHEDULE

THIS SCHEDULE IS PREPARED AS A METHOD OF CHARGING FOR SERVICES ON A UNIT AND HOURLY BASIS. THE RATES ARE BASED UPON THE SKILL AND KNOWLEDGE OF OUR PERSONNEL. INVOICES WILL BE SUBMITTED MONTHLY AND/OR UPON COMPLETION OF SERVICES. PAYMENT IS DUE ON RECEIPT OF THE INVOICE. ACCOUNTS OVER FORTY FIVE DAYS ARE SUBJECT TO A 1 1/2% MONTHLY SERVICE CHARGE. SERVICES WILL BE PERFORMED IN ACCORDANCE WITH ACCEPTED STANDARD METHODS UTILIZING PROPERLY TRAINED, REGISTERED, LICENSED, OR CERTIFIED PERSONNEL AS REQUIRED. HOWEVER, WE CANNOT ASSUME RESPONSIBILITY FOR CONSTRUCTION METHODS, MATERIALS, PROCEDURES, PRODUCTS, OR ACTIONS OF OTHERS.

ANDERSON ENGINEERING, INC., BY

EFFECTIVE: 01/01/2022 THRU 12/31/2022

Jerrod Hogan, PLS, C.E.O.

BASIC CHARGES

| PERSONNEL (HOURLY RATES): | | | | | | |
|--|----------------|-------|-----------------------------------|--------------|-------------|----------|
| PRINCIPAL | \$ 280.00 | | ENVIRONMENTAL SPECIALIST II | | \$ | 138.00 |
| PRINCIPAL ENGINEER | \$ 230.00 | | ENVIRONMENTAL SPECIALIST I | | \$ | 110.00 |
| ENGINEERING MANAGER | \$ 207.00 | | ONE MAN SURVEY CREW | | \$ | 131.00 |
| PROJECT MANAGER | \$ 187.00 | | TWO MAN SURVEY CREW | | \$ | 166.00 |
| PROJECT ENGINEER | \$ 165.00 | | THREE MAN SURVEY CREW | | \$ | 221.00 |
| ASSOCIATE ENGINEER | \$ 140.00 | | FOUR MAN SURVEY CREW | | \$ | 275.00 |
| DESIGN ENGINEER | \$ 112.00 | | GIS DIRECTOR | | \$ | 172.00 |
| PROJECT DESIGNER | \$ 147.00 | | GIS MANAGER | | \$ | 144.00 |
| SENIOR DESIGNER | \$ 132.00 | | GIS ANALYST | | \$ | 133.00 |
| DESIGNER III | \$ 119.00 | | GIS SPECIALIST | | \$ | 111.00 |
| DESIGNER II | \$ 107.00 | | GIS TECHNICIAN | | \$ | 94.00 |
| DESIGNER | \$ 96.00 | | IBC FIRESTOP INSPECTOR | | \$ | 111.00 |
| PROJECT COORDINATOR | \$ 106.00 | | DRILLING COORDINATOR | | \$ | 147.00 |
| PRINCIPAL SURVEYOR | \$ 207.00 | | PROJECT REPRESENTATIVE III | | \$ | 111.00 |
| SURVEY MANAGER | \$ 177.00 | | PROJECT REPRESENTATIVE II | | \$ | 94.00 |
| PROJECT SURVEYOR | \$ 138.00 | | PROJECT REPRESENTATIVE I | | \$ | 80.00 |
| ASSOCIATE SURVEYOR | \$ 116.00 | | STRUCTURAL STEEL INSPECTOR | | \$ | 111.00 |
| LAB MANAGER | \$ 149.00 | | AWS CERTIFIED WELD INSPECTOR | | \$ | 111.00 |
| TECHNICIAN IV - SURVEY/LAB SPECIAL | \$ 111.00 | | ASNT TC-1A ULTRASONIC, MAG | | \$ | 111.00 |
| TECHNICIAN III - SURVEY/SENIOR LAB | \$ 91.00 | | PARTICLE & DYE TESTING - LEVEL II | | \$ | 105.00 |
| TECHNICIAN IIs - SURVEY | \$ 76.00 | | ADMINISTRATIVE ASSISTANT | | \$ | 55.00 |
| TECHNICIAN II - LAB | \$ 65.00 | | PROJECT COORDINATOR ASST | | \$ | 68.00 |
| TECHNICIAN I - SURVEY/LAB AIDE | \$ 54.00 | | | | | |
| EXPENSES & EQUIPMENT CHARGES: | | | | | | |
| VEHICLE (3/4 TON OR LESS) | \$ 0.74 | /MILE | GPS | \$ 319.00 | /DAY | |
| VEHICLE (SUBURBAN & 1 TON) | \$ 0.84 | /MILE | ROBOTIC TOTAL STATION | \$ 295.00 | /DAY | |
| WATER TRUCK PER DAY + | \$ 85.00 | /DAY | DRONE | \$ 470.00 | /DAY | |
| WATER TRUCK PER MILE | \$ 0.81 | /MILE | COPIES | \$ 0.17 | EACH | |
| LASER SCANNING | \$ 469.00 | /DAY | PRINTING PLANS | \$ 0.59 | /SF + TE | ECH TIME |
| MOBILE LIDAR \$5,000 MINIMUM | \$ 1,000.00 | /DAY | | | | |

REIMBURSABLES

COST PLUS 15% - TRAVEL EXPENSES (INCLUDING MEAL & LODGING), OUTSIDE PRINTING, CONSUMABLE MATERIALS AND SUBCONTRACTOR EXPENSES.

OVERTIME (OVER 8 HOURS PER DAY OR SATURDAY, SUNDAY, AND HOLIDAY WORK)

1.5 TIMES THE HOURLY RATE.

HOURLY RATES:

APPLY TO MEETINGS AND TRAVEL TIME

DEPOSITION OR COURT TESTIMONY:

1.5 TIMES THE HOURLY RATE

MININUM CHARGE:

2 HOURS OF TECHNICIAN TIME PER JOB SITE VISIT, EXCEPT FOR CYLINDER AND SAMPLE PICK UP.

FEE SCHEDULE JANUARY 1, 2022 THRU DECEMBER 31, 2022 PAGE 2 OF 3

HAZARDOUS OPERATION CHARGE:

FOR LEVEL C: 1.5 TIMES THE BASIC CHARGE; FOR LEVEL A & B: 2 TIMES THE BASIC CHARGES

| TOTALE VEE O. 1.5 TIMES THE BROTS OF WINGE, | ONLL | VLL / (O D. Z | TIMES THE BASIS STATISES | | |
|---|----------------|----------------|-------------------------------------|---------|-------------------|
| FIELD TESTING AND INSPECTION CHARGES: | | | | | |
| | | | BASIC CHARGES + \$ 15.00 | /EAC | CH |
| | | | BASIC CHARGES + \$ 19.00 | | |
| | | | BASIC CHARGES + \$ 312.00 | | |
| | | | BASIC CHARGES + \$ 31.00 | | |
| | | | BASIC CHARGES + \$ 124.50 | | |
| | | | BASIC CHARGES + \$ 55.00 | | |
| | | | | | |
| ROLLING STRAIGHT EDGE | | | BASIC CHARGES + \$ 248.50 | /DA | r |
| LABORATORY TEST CHARGES: | | | | | |
| AGGREGATES (ASTM) | LIMIT | CHARGE | SOIL TESTS (ASTM) | INIT (| CHARGE |
| L.A. ABRASION, SMALL AGG. (C131) | \$ | 158.50 | ATTERBERG LIMITS (D4318) | \$ | 72.00 |
| L.A. ABRASION, LARGE AGG. (C535) | \$ | 193.00 | ATTERBERG LIMITS (D4318) | \$ | 104.50 |
| [1981] [19. [20] [20] [20] [20] [20] [20] [20] [20] | | | | 92 | |
| SULFATE SOUNDNESS TEST (C88): 5-CYCLE | \$ | 266.50 | SWELL TEST, 1/16 TSF (D4546) | \$ | 193.00 |
| SULFATE SOUNDNESS TEST (C88): 10-CYCLE | \$ | 371.50 | SWELL PRESSURE (D4546) | \$ | 365.00 |
| SULFATE SOUNDNESS TEST (C88): 20-CYCLE | \$ | 525.00 | SHRINKAGE LIMIT (D4643) | \$ | 72.00 |
| SIEVE ANALYSIS, DRY AGG. (C136) | \$ \$ \$ | 65.00 | MOISTURE CONTENT (2216) | \$ | 8.00 |
| SIEVE ANALYSIS (C117) | \$ | 79.50 | SIEVE + HYDROMETER | \$ | 178.50 |
| SIEVE ANALYSIS (C117, C136) | \$ | 98.00 | HYDROMETER ONLY (D422) | \$ | 98.00 |
| SPECIFIC GRAVITY, FINE AGG. (C128) | | 72.00 | USCS CLASSIFICATION | \$ | 33.00 |
| SPECIFIC GRAVITY, COARSE AGG. (C127) | \$ \$ | 72.00 | PERCENT PASSING #200 | \$ | 53.00 |
| LIGHTWEIGHT PIECES IN AGG. (C123) | | 111.50 | SPECIFIC GRAVITY (D845) | \$ | 91.50 |
| ORGANIC IMPURITIES (C40) | \$ \$ | 65.00 | UNCONFINED COMPRESSION | \$ | 63.00 |
| FLAT & ELONGATED PIECES (D4791) | \$ | 98.00 | UNCONFINED/TRIAXIAL, REMOLDED | \$ | 98.00 |
| DELETERIOUS MATLS (MODOT TM71) | \$ | 86.00 | TRIAXIAL TEST, PP, CU w/PP /POINT | \$ | 500.00 |
| CLAY LUMPS & FRIABLE PARTICLES (C142) | \$ | 106.00 | ORGANIC MATTER (D2974-C) | \$ | 65.00 |
| DRY RODDED UNIT WEIGHT (C29) | \$ | 46.00 | PENETROMETER | \$ | 6.00 |
| 2111 (102222 2111 1120111 (023) | <i>া</i> ক | | SAMPLE PREP, PER HOUR | \$ | 63.00 |
| MASONRY TESTS (ASTM) | | | SHELBY TUBE DENSITY | \$ | 40.00 |
| COMPRESSIVE STRENGTH 4" BLOCK | \$ | 32.00 | RESISTIVITY, 1 POINT | \$ | 77.00 |
| COMPRESSIVE STRENGTH 6" BLOCK | \$ | 40.00 | RESISTIVITY, MINIMUM | \$ | 88.00 |
| COMPRESSIVE STRENGTH 8" BLOCK | \$ | 55.00 | Ph | \$ | 65.00 |
| | \$ | 91.50 | Parket. | э \$ | |
| COMPRESSIVE STRENGTH CMU | ą e | | CONSOLIDATION TEST, TO 8 TSF | 63.00 | 504.00 |
| COMPRESSIVE STRENGTH MORT/GR CUBE | \$ | 15.00 | CONSOLIDATION TEST, >8 TSF | \$ | 65.00 |
| GROUT PRISM | \$ \$ | 15.00 | CALIFORNIA BEARING RATIO, LAB, /PNT | \$ | 150.00 |
| MORTAR CYLINDER (2" X 4") | | 15.00 | PERMEABILITY, FALLING HEAD 4" MOLD | \$ | 476.00 |
| ABSORPTION, MASONRY BLOCK | \$ | 53.00 | PERMEABILITY, FLEXIBLE WALL | \$ | 550.00 |
| LINEAR SHRINKAGE (SET OF 3) | \$ | 398.00 | PERMEABILITY CONSTANT HEAD | \$ | 476.00 |
| | | | PERMEABILITY, FALLING | \$ | 575.00 |
| | | | HEAD UNDISTURBED | Ψ | 373.00 |
| DITUMINOUS TESTING | | | LABORATORY COMPACTION TECTS | | |
| BITUMINOUS TESTING | | 440.00 | LABORATORY COMPACTION TESTS | | |
| ASPHALT CONTENT | \$ | 119.00 | MOISTURE DENSITY RELATIONSHIP | 100 | la Warram nethori |
| ASPHALT CONTENT & AGG. GRADATION | \$ | 198.50 | STD. PROCTOR (D698), MTH. A & B | \$ | 190.50 |
| SIEVE ANALYSIS EXTRACTION | \$ | 98.00 | STD. PROCTOR (D698), MTH. C | \$ | 224.50 |
| MARSHALL TEST, FIELD - 3 PUCKS | \$ | 98.00 | STD. PROCTOR (D698), 1 POINT | \$ | 67.00 |
| MARSHALL TEST, LAB - 3 PUCKS | \$ | 145.50 | MOD. PROCTOR (D1557), MTH. A & B | \$ | 232.50 |
| RETAINED STABILITY | \$ | 224.50 | MOD. PROCTOR (D1557), MTH. C | \$ | 314.50 |
| ASPHALT CORE DENSITY, EACH | \$ | 32.00 | MOD. PROCTOR (D1557), 1 POINT | \$ | 74.00 |
| THEORETICAL MAX. DENSITY | \$ | 158.50 | RELATIVE DENSITY | \$ | 477.00 |
| | | | | | |
| CONCRETE/ROCK CORE | | | CONCRETE TESTING | | |
| CORE TRIM & TEST | \$ | 52.75 | 4" X 8" OR 6" X 12" TEST MOLD | \$ | 2.25 |
| THICKNESS (AASHTO T148/ASTM C174) | \$ | 30.00 | 6" X 12" CYLINDER, TESTED AND MOLD | \$ | 18.00 |
| | | | 4" X 8" CYLINDER, TESTED AND MOLD | \$ | 12.75 |
| | | | SAW CONCRETE CYLINDER | \$ | 31.25 |
| | | | BEAM FLEXURAL STRENGTH | \$ | 44.00 |
| | | | CONCRETE BEAM, NOT TESTED | \$ | 25.00 |
| | | | OAMBLE BBED OUTLIER MADE (F OVE O) | ~ | 00.00 |

SAMPLE PREP, CLIENT MADE (5 CYLS.)

FEE SCHEDULE JANUARY 1, 2022 THRU DECEMBER 31, 2022 PAGE 3 OF 3

DRILLING SERVICES CHARGES:

| ENGINEER, STANDBY TIME, STAKEOUT CREW & OFFICE PERSONNEL | | BASIC CHARGES |
|--|-------------|---------------|
| MILEAGE - CME 75 RIGS (\$100 MINIMUM) | \$ 3.50 | /MILE |
| MILEAGE - CME 550 RIGS (\$150 MINIMUM) | \$ 4.00 | /MILE |
| CME 55 DRILL RIG AND TWO MAN CREW | \$ 221.50 | /HOUR |
| CME 75 DRILL RIG AND TWO MAN CREW | \$ 258.00 | /HOUR |
| CME 550 DRILL RIG AND TWO MAN CREW | \$ 258.00 | /HOUR |
| CORE BIT CHARGE | \$ 7.27 | /FOOT |
| ROCK CORE SET UP | \$ 90.35 | /BORING |
| DECONTAMINATION EQUIPMENT | \$ 175.50 | /DAY |
| GROUT MACHINE | \$ 292.50 | /DAY |
| PLUG & BACKFILL BORINGS (UP TO 20 FT. DEPTH) | \$ 13.50 | /EACH |
| ALL-TERRAIN DRILL RIG RENTAL SURCHARGE | \$ 375.00 | /DAY |
| CME 75 EQUIPMENT RENTAL SURCHARGE | \$ 250.00 | /DAY |
| WATER TRUCK TANK & EQUIPMENT SURCHARGE | \$ 94.00 | /DAY |
| RESISTIVITY, FIELD TESTING, EQUIPMENT | \$ 303.50 | /DAY |
| MINIMUM DRILLING CHARGE | \$ 1,375.00 | /DAY |

| DRILLING ITEM: | | DEPTH: | | | | | | | |
|----------------------------------|----|---------|-----|------------|------------------------|-----|---------|-----|---------|
| | 0' | 'TO 20' | _ 2 | 20' TO 40' | 0' TO 60' | 60' | TO 100' | 100 | TO 150' |
| SOIL OVERBURDEN, 4 IN. AUGER | \$ | 9.65 | \$ | 10.75 | \$ 11.90 | \$ | 13.35 | \$ | |
| SOIL OVERBURDEN, 6 IN. HS AUGER | \$ | 11.65 | \$ | 13.35 | \$ 14.45 | \$ | 16.15 | \$ | |
| SOIL OVERBURDEN, 8 IN. HS AUGER | \$ | 11.65 | \$ | 14.45 | \$ 17.60 | \$ | 20.50 | \$ | Œ |
| SOIL OVERBURDEN, 10 IN. HS AUGER | \$ | 13.35 | \$ | 20.50 | \$ - | \$ | - | \$ | 84 |
| SOIL OVERBURDEN, 12 IN. HS AUGER | \$ | 16.15 | \$ | 20.50 | \$, - , | \$ | (=) | \$ | - |
| ROCK PENETRATION | \$ | 36.05 | \$ | 40.30 | \$ 42.90 | \$ | 49.95 | \$ | 73.60 |
| NQ CORING | \$ | 46.90 | \$ | 49.95 | \$ 56.25 | \$ | 64.75 | \$ | 12 |
| STANDARD PENETRATION TEST | \$ | 26.65 | \$ | 33.20 | \$ 40.65 | \$ | 46.90 | \$ | 28 |
| 3IN. SHELBY TUBES | \$ | 33.20 | \$ | 40.65 | \$ 46.90 | \$ | 53.95 | \$ | 15 |

NOTE: A HIGHER PRICE WILL APPLY WHEN THERE IS AN INCREASED RISK OF LOSING AUGERS OR BREAKING CORE BARRELS.



CITY OF COLUMBIA, MISSOURI WORK AUTHORIZATION AFFIDAVIT PURSUANT TO 285.530 RSMo (FOR ALL CONTRACTS IN EXCESS OF \$5,000.00)

| County of <u>Cass</u>) |
|--|
| State ofMissouri) ss. |
| My name is Gary Strack I am an authorized agent of Anderson |
| Engagenna / C (Bidder). This business is enrolled and participates in a federal |
| work authorization program for all employees working in connection with services |
| provided to the City of Columbia. This business does not knowingly employ any person |
| who is an unauthorized alien in connection with the services being provided. |
| Documentation of participation in a federal work authorization program is |
| attached to this affidavit. |
| Furthermore, all subcontractors working on this contract shall affirmatively state |
| in writing in their contracts that they are not in violation of Section 285.530.1 RSMo and |
| shall not thereafter be in violation. Alternatively, a subcontractor may submit a sworn |
| affidavit under penalty of perjury that all employees are lawfully present in the United |
| States. Affiant Tary D Strack Printed Name |
| Subscribed and sworn to before me this <u>20</u> day of <u>0 ctober</u> , 20 <u>2</u> 2 |
| Hanna SM Sanu Boes Notary Public |
| |

HANNA LM SAMUELSON Notary Public, Notary Seal State of Missouri Cass County Commission # 14608033 My Commission Expires 04-22-2026

SUPPLEMENTAL AGREEMENT TO AGREEMENT FOR PROFESSIONAL SERVICES



April 1, 2024

City of Columbia Tom Wellman 701 East Broadway PO Box 6015 Columbia, MO 65205

Re: OWN Supplemental Agreement #1 to Letter of Agreement for Professional Services dated 11/22/2022, Crestridge Drive Culvert Replacement over un-named tributary of Country House Branch.

Dear Mr. Wellman,

This Supplemental Agreement #1 is hereby attached to and made part of the Letter Agreement for Professional Services dated 11/22/2022 between the City of Columbia ("Client") and OWN, Inc. ("OWN"). All Terms and Conditions remain the same unless specifically modified herein. OWN's additional scope of services for this Supplemental Agreement #1 are provided below. OWN would like to request consideration for the effort required concerning Scope revisions due to avoiding the United States Army Corps of Engineers (USACE) Individual 404 permit requirements.

ADDITIONAL SCOPE OF SERVICES

The effort required to revise the design is as follows:

| • | 404 Individual Permit assistance / negotiations | \$11,270 |
|---|--|----------|
| | Provided design revision exhibits as requested for multiple review cycles during the USACI 404 Individual permit review. This included multiple sanitary sewer layouts and designs, relocation of weirs and channel grading revisions. | E |
| • | Eliminate sanitary sewer design / rework sheet order | \$2,500 |
| | Revise design package to comply with USACE Nationwide Permit, (NWP) elimination of sanitary sewer (SS) improvements. | of |
| • | Revise temporary and permanent easements | \$5,000 |
| | o Elimination of SS improvements and revise easement areas for most affected properties. | |
| • | Regrade channel & cut profiles | \$7,500 |
| | Minimize channel impacts to comply with NWP limits & regrade per revised headwalls. | |
| • | Revise FEMA CLOMR application per proposed revisions | \$2,000 |
| | Verify that channel revisions have no adverse impacts to roadway and/or structure flooding | ıg. |
| • | Revise permit packages: MDNR401 / USACE 404 & FP development Permit | \$4,500 |
| | Rework and re-submit permit application packages for consistency with revised design. | |
| • | Revise Headwalls | \$5,500 |
| | Redesign headwalls to parallel roadway, evaluate various structural types. | |
| • | Check potential utility impacts | \$2,000 |
| | Minimize utility impacts & plan for relocations as necessary. | |

TOTAL AMENDMENT FEE \$40,270

TOTAL REVISED CONTRACT FEE including SUPPLEMENTAL AGREEMENT 1 plus reimbursables.

| Original Contract | \$123,500 |
|----------------------------|-----------|
| Supplemental Agreement #1 | \$40,270 |
| TOTAL REVISED CONTRACT FEE | \$163,770 |

VERSON PROJECT # 22KC40033 SA #1 PAGE 1

SUPPLEMENTAL AGREEMENT TO AGREEMENT FOR PROFESSIONAL SERVICES



Compensation

These Amended services will add Forty Thousand Two Hundred Seventy Dollars and Zero Cents, (\$40,270), to our original Agreement plus additional reimbursable expenses. Additional services will be invoiced in accordance with the terms of the original Agreement unless otherwise stated herein.

This Supplemental Agreement, to the original Agreement, represents the entire understanding between Client and OWN with respect to the Project and may only be modified in writing signed by both parties.

If this Supplemental Agreement satisfactorily sets forth your understanding of our agreement, please sign in the space provided below. Retain a copy for your files and return an executed original to OWN. This proposal will be open for acceptance for a period of thirty (30) days from the date set forth above, unless changed by OWN in writing. Client warrants that it is either the legal owner of the property to be improved by this project or that Client is acting as the duly authorized agent of the legal owner.

Sincerely,

OWN, Inc.

Jay Green, P.E., PLS

KC office leader

Scott Edgar, P.E., C.F.M.

Senior Project Manager

By signing below, you acknowledge that you have full authority to bind Client to this Supplemental Agreement. Your Signature indicates authorization to proceed and that you have reviewed and accepted this Supplemental Agreement.

City of Columbia

OWN Project #22KC40033

Signature: _____

Title:

Date: _____

Client Representative (if different from above): ______

Amended Scope of Services

Crestridge Culvert Replacement

April 2, 2025

The proposed project will replace the existing concrete masonry unit culvert that carries an un-named tributary of County House Branch under Crestridge Drive with a larger, open-bottom, arch type culvert that accommodates the ten-year flood without overflowing the east stream bank and limits the 100-year overflow such that the resultant water depth in College Park Drive is less than seven inches. The design will include grading and/or other features to achieve this goal while ensuring overflows in larger storms are managed so that they do not damage the properties to the east of the channel. The design will also include incorporating measures such as Newbury Weir-type channel drops to reduce the effective slope of the channel through the culvert, which may also include some design to lower a sanitary sewer which crosses the channel.

To be provided by the *City*:

- A Project Manager to act on the City's behalf with respect to the project. The City's Project
 Manager will render decisions in a timely manner pertaining to documents submitted by the
 consultant to avoid unreasonable delay in the orderly and sequential progress of the
 Consultant's services.
- Prompt written notice to the Consultant if the City becomes aware of any fault or defect in the Project, including any errors, omissions or inconsistencies in the Consultant's instruments of service.
- The application and processing for any necessary permits and environmental, historic and cultural clearances.
- Processing of pay applications, change orders and any payroll or labor wage rate certifications necessary for the project.
- A review of the findings of investigations and engineering reporting submittals to provide comments and determine if there will be any major changes in the scope as a result.
- A review of preliminary design submittals to provide comments and determine if the Consultant has approval to proceed forward in each stage of the design.
- Most recent aerial topographic data to cover the extent of the hydrologic model
- Existing Hydrologic and Hydraulic Models
- All public input processes
- R/W Acquisition except development of drawings and descriptions of R/W and easements.
- A conceptual drawing that outlines features, configurations and suggested parameters on which the consultant should base the design. Any major deviation from the conceptual design requires discussion with the City's Project Manager.
- Examples of plans with typical pay items.

To be provided by *Engineer*:

- Utility coordination in the design process
- Topographic and Boundary survey, in state plane coordinates, necessary to complete the project including property information necessary for describing easements and enough topography from Stadium to Ridgemont and to the east right-of-way of College Park to estimate flood elevations from the 100-year flood.
- A geotech report characterizing conditions for design and construction of the culverts based on at least two borings. The report does not need to include coring of competent rock that is found within the investigation zone.
- Any traffic control (per MUTCD) necessary for site investigations.
- A hydrologic and hydraulic analysis report with sub-catchments broken out based on models
 provided by the City and including results from a suite of storms; 1yr, 2yr, 10yr, 100yr and 500yr.
 Results to include tractive force and velocities for at least 2 cross sections in the channel
 between Crestridge and Ridgemont, not including the normal culvert cross sections. Report will
 summarize inputs to the models as well as results.
- A Conceptual Design report, describing the proposed project and including/addressing the following:
 - Estimated depth of water in Crestridge resulting from a 100-year flood if the concept is implemented.
 - Designer's preference of arch culvert under Crestridge. Arched structure must allow rock riprap channel to be placed through the barrel of the structure during construction.
 - 5 foot wide sidewalk at back of curb on south side of Crestridge
 - Estimated cost of the project including major elements such as sewer relocation, pavement removal and replacement, inlets and pipe, rock riprap, arched conveyance structure, headwalls and retaining walls with costs broken out per normal City design standards.
 - Channel drop(s) similar to Newbury Weirs to reduce channel slope from 25 feet upstream of culvert through the culvert to 0.4-0.7 percent.
 - Final plans will not be started until the conceptual phase has verified that a prefabricated arch culvert will work and the City notifies the Engineer to proceed. Final design includes design of the footings and headwalls for a pre-fab open bottom arch structure, but not the design of the structure itself. It is assumed that the manufacturer will provide the design of the culvert structure.
- Signed and sealed plans for a culvert and residential street, 24 feet back of curb to back of curb, minimum, with a 5-foot sidewalk at the back of curb on the south side of the street, a short wall at the back of walk, and a smooth transition from the boulevard on the west side of the culvert to the 24-foot section based on the attached conceptual plan. The design must work within City Standard Specifications. Project specific specifications must be included in the signed and sealed project drawings.

- A Floodplain Development Permit application ready for the City to sign and submit. This scope does not include any FEMA map or floodway revisions should either become necessary.
- An Army Corps of Engineers Permit application ready for the City to sign and submit.
- Digital copies of the survey/cad files in Autocad format
- An Engineer's Estimate for the final design to be broken down per City Standard Specifications and usual City bidding process.
- Design project administration and attendance at as many as five design meetings with the City and other stakeholders.
- No construction administration or support is included in this scope of services.
- Additional Assistance with USACE (Army Corps of Engineers) 404 Permit
 - Provided design revision exhibits as requested for multiple review cycles during the USACE 404 permit review. This included multiple sanitary sewer layouts and designs, relocation of channel grading revisions.
- Eliminate sanitary sewer design and reconfigure plan set.
- Regrade channel and provide revised profiles/sections.
- Revise Headwalls.
 - o Redesign headwalls to parallel roadway for better maintenance access.
- Revise temporary and permanent easements based on redesign.
- Estimate effect of revisions on roadway and property flooding.
- Revise permit packages for MDNR (Missouri Department of Natural Resources) 401 and USACE
 404 permits
 - o Revise and resubmit permit application packages based on revised design.
- Check potential utility impacts resulting from redesign.

Deliverables Summary:

- Hydrologic model and report
- Hydraulic model and report
- o Boundary survey, topographic survey and design in Autocad format
- Signed and sealed easement descriptions and display drawings
- Signed and Sealed Plans with project-specific specifications to be on the plans
- Floodplain and Army Corps of Engineer permit applications complete and ready to be signed by City