

**(TO) TASK ORDER AMENDMENT TO CSC AGREEMENT
(PROFESSIONAL CCNA SERVICES)**

THIS TASK ORDER AMENDMENT (the "Amendment") to the (CSC) Continuing Services Contract for Professional CCNA Services is made and entered into effective the 11th **day of March 2016**, by and between the **CITY OF NAPLES**, a Florida Municipal Corporation (the "City"), and **TETRA TECH, INCORPORATED**, a Delaware Corporation (the Consultant").

WHEREAS, the City and the Consultant entered into that certain Agreement to furnish CCNA Services, on **May 19, 2015** (the "Original Agreement") (Reference Original **RFQ 14-054** and Original **Clerk Tracking No.15-00090**. This Task Order Amendment is associated with the **(WWTP) Waste Water Treatment Plant PLC-5 Replacement Design: Task Order No. 16-02-30-40-531010**; the ('Project'); and

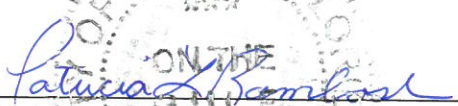
WHEREAS, the parties desire to amend the Original Agreement by this Task Order Amendment so that the Consultant will provide said services pursuant to the terms and conditions contained in the Original Agreement and Amendment herein.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, and in consideration of the mutual covenants, promises and conditions herein set forth, it is hereby acknowledged and agreed as follows:

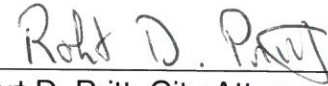
1. The above recitals are true and correct and are incorporated herein by this Reference.
2. "Article Three, Time" is amended to state that this Project Task Order Amendment will be performed and completed by **September 30, 2016** with a 60-day Project close-out time frame. Project: (WWTP) Waste Water Treatment Plant As-Need Services:
3. "Article Four, Compensation" is amended to reflect an increase to the Consultant for this Task Order Amendment in the amount of **\$29,610.00** for the Project as indicated in **Attachment A-1 Scope of Services and Basis of Compensation**, attached and made a part of this Amendment.
4. All other terms, provisions and conditions of the Original Agreement, except as expressly amended and modified by this Amendment, shall remain in full force and effect.
5. This Amendment may be executed in any number of counterparts, each of which shall be deemed to be an original as against any part whose signature appears thereon and all of which shall together constitute one and the same instrument.

IN WITNESS WHEREOF, the City and the Consultant have caused this Task Order Amendment to be duly executed by their duly authorized officers, all as of the day and year first above written.

ATTEST:

By: 
Patricia L. Rambosk, City Clerk

Approved as to form and legal sufficiency:

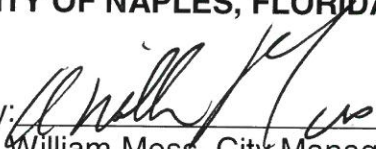
By: 
Robert D. Pritt, City Attorney


Witness (Signature)

Printed
Name: DAVID BUGOCI

CITY:

CITY OF NAPLES, FLORIDA

By: 
A. William Moss, City Manager

CONSULTANT:

Tetra Tech, Incorporated
10600 Chevrolet Way, Suite 300
Estero, Florida 33928
Att: **Daniel M. Nelson**, Vice President

By: 
(Signature)

Printed
Name: DANIEL M NELSON

Title: VICE PRESIDENT

FEI/EIN Number: On File
A Delaware Corporation (DE)



March 2, 2016

Transmitted Electronically

Mr. Barry Stein, Wastewater Plant Supervisor
City of Naples
380 Riverside Circle
Naples, FL 34102

**Re: Naples WWTP PLC-5 Replacement Design
Proposal for Professional Services**

Dear Mr. Stein:

Thank you for the opportunity to submit our professional services proposal to assist the City of Naples with upgrading the Wastewater Treatment Plant (WWTP) programmable logic controllers (PLCs).

Based on our discussions it our understanding that you would like to upgrade the WWTP PLC's. It is our understanding that you prefer to replace the current PLC-5 processors and related input/output (I/O) cards with Allen-Bradley ControlLogix L7x series processors and I/O for the following control panels:

- RDP Panel (Single I/O Rack)
 - Approximately 9 I/O Cards
- Old Generator Panel (Two I/O Racks)
 - Approximately 20 I/O Cards
- New Generator Panel (Five I/O Racks)
 - Approximately 50 I/O Cards

The end-goal is to achieve replacement of the ageing PLC-5 type processors and related I/O for the entire WWTP.

Tetra Tech proposes an approach that essentially places the new ControlLogix equipment in parallel with the existing PLC5 equipment then existing wiring will be migrated on a rack-by-rack basis. This will minimize operational disruptions.

Recommendations

The three main PLC's and related input/output (I/O) rack components should be considered for replacement due to their age.

In addition it should be known that Allen-Bradley has decided to fully retire the PLC-5 line of programmable logic equipment including all PLC's, I/O cards and related equipment in the next



couple of years. Currently Allen-Bradley has announced what's called a silver series designation for PLC-5 type components. The silver series designation is a final production end-date for specific PLC-5 equipment types. It's expected that Allen-Bradley will entirely phase out the PLC-5 type equipment within the next 3 years.

A migration project will require programming modification of the existing PLC-5 PLC programs to the newer ControlLogix style programs as well as revise the existing Trihedral HMI software input/output (I/O) drivers & tag-name database to achieve communications to the new logic controllers and associated hardware. This proposal is for design only, software services and onsite system commissioning services (startup) from Tetra Tech will be under separate proposal.

To minimize impact to the daily operations of the treatment plant Tetra Tech recommends the use of the Allen-Bradley PLC-5 wiring migration solution which utilizes a PLC-5 backplane replacement plate and pre-wired ControlLogix connection wiring. This is the most cost effective and least disruptive method to migrate to the new PLC platform based on our experience with these types of projects. This will substantially reduce the labor that would normally be required by an electrician.

The migration kits would allow plant staff to fully implement the installation of components if so desired or a contractor could be obtained to perform the installation. Tetra Tech would provide required programming, on/off site technical assistance, and onsite system commissioning services during the project.

Tetra Tech proposes a two-step project consisting of a design step followed by a second step consisting of hardware procurement, programming and onsite startup. It's expected that some new networking equipment will be needed to support the ControlLogix Ethernet I/O which will replace the current Remote I/O method of communication between PLC and remote rack I/O.

Tetra Tech recommends that the three main PLC's be replaced during three separate phases starting with the RDP PLC, then the Old Generator PLC then the New Generator PLC. This will allow the project to fit within your multi fiscal year budget and also allow any system bugs to be corrected before moving on to the next phase.

SCOPE OF WORK

RDP Panel

- Conduct a conference call meeting to discuss the proposed design.
- Prepare a system one-line utilizing Ethernet as the remote I/O network. This will include design for the Old Generator and New Generator PLC networks.
- Prepare a complete equipment bill-of-material to be submitted to the City of Naples.
 - Bill of material to include all system upgrade hardware components.
- Provide revised (mark-up of existing) control panel drawings showing new ControlLogix PLC and I/O equipment and network revisions. Note: Drawings will be revised with hardcopy, electronic AutoCAD and PDF files delivered to the City.



TETRA TECH

- Ethernet network will be upgraded to be compatible with the existing network and allow Ethernet input/output (I/O) traffic. Existing fiber optics will be utilized where possible.
- Tetra Tech will produce updated control panel drawings for each control panel and a complete bill-of-material.

Old Generator Panel

- Prepare a complete equipment bill-of-material to be submitted to the City of Naples.
 - Bill of material to include all system upgrade hardware components.
- Provide revised (mark-up of existing) control panel drawings showing new ControlLogix PLC and I/O equipment and network revisions. Note: Drawings will be revised with hardcopy, electronic AutoCAD and PDF files delivered to the City.
- Tetra Tech will produce updated control panel drawings for each control panel and a complete bill-of-material.

New Generator Panel

- Prepare a complete equipment bill-of-material to be submitted to the City of Naples.
 - Bill of material to include all system upgrade hardware components.
- Provide revised (mark-up of existing) control panel drawings showing new ControlLogix PLC and I/O equipment and network revisions. Note: Drawings will be revised with hardcopy, electronic AutoCAD and PDF files delivered to the City.
- Tetra Tech will produce updated control panel drawings for each control panel and a complete bill-of-material.

ASSUMPTIONS

Tetra Tech assumes the following:

- All control panel drawings are documented and available in electronic form or in good enough shape to electronically scan.
- Hardware procurement, programming and installation of equipment will occur during phase 2 of the project and is not included in this proposal.
- The City would install all equipment or procure a contractor to install all equipment.

SCHEDULE

We are prepared to begin work on or about Monday March 14, 2016 and estimate project completion on or before Friday July 15 2016.

COMPENSATION

Compensation for the professional services for this project will be based on time and materials at a not to exceed fee of:

**TETRA TECH**

RDP Panel Design	\$11,522
Old Generator Panel Design	\$7,913
New Generator Panel Design	\$10,176
<u>TOTAL (design phase)</u>	<u>\$29,610.00</u>

The City will be invoiced monthly based on services performed. With this compensation method you pay only for the hours actually used. The proposed budget is for programming, startup and owner training engineering & programming services.

Services will be provided using the terms & conditions of the FY- 2015 City of Naples Continuing Services Agreement contract 15-00090 signed May 19, 2015.

We appreciate this opportunity to be of service to the City of Naples and look forward to working with you on this important project.

Sincerely,

Mick S. Jones, P.E.
Senior Project Manager

Encl.: Standard Terms and Conditions

Copy: Accounting (w/encl.)

PROPOSAL ACCEPTED BY _____

TITLE _____ **DATE** _____

Naples WWTP PLC-5 Replacement Design

