

April 15th, 2024



PO Box 2275
Estacada, OR 97023
(503) 807-2085

Darren Eki
Wastewater Operations Supervisor
City of Camas, Washington
1129 SE Polk St
Camas, WA 98607

via email: deki@cityofcamas.us

Subject: Proposal for City of Camas Wastewater Treatment Plant PLC-C Replacement

OCD Automation Inc. (OCD Automation) is pleased to provide this proposal to the City of Camas for professional services, automation hardware components, and commissioning services to support the automation hardware upgrade of the Solids Building Programmable Logic Controller (PLC) at the City of Camas Wastewater Treatment Plant.

The Solids Building Modicon Quantum PLC hardware has been discontinued and product support will soon be ending. Based on recent Solids Plant failures and system outages of PLC system (PLC-C), it appears that the hardware is nearing the end of life, and its replacement is necessary to mitigate additional unexpected outages. Additionally, PLC-C is at capacity for program logic and is constraining both maintenance tasks and capital projects (VFD Replacements and Blower Upgrades) that interface with PLC-C. Replacing this obsolete hardware and improving the control system architecture of PLC-C is critical to eliminating outages, enabling overdue replacement of VFDs, and allowing future process improvements. In addition to the PLC upgrade, two additional improvements are required as part of this project, listed below:

1. Update the 120VAC and 24VDC Uninterruptable Power Systems (UPS) that power Input/Output signals and the PLC hardware in Solids Building Motor Control Centers 1 and 2. (MCC-C1/C1A/C2/C2A).
 - a. Currently, not all the PLC-C hardware is UPS powered!
2. Retain an interface to the legacy serial communications (ModbusPLUS) to integrate 20+ obsolete VFDs.
3. Deploy a robust ethernet PLC Remote I/O and device network which removes barriers to upgrades of the 20+ obsolete VFDs constrained by the ModbusPLUS network.

OCD Automation is well positioned to support Camas effectively with our deep understanding of System Control and Data Acquisition (SCADA) systems, our depth of highly skilled technical staff near the wastewater treatment plant, and our familiarity and tribal knowledge of the plant itself. OCD Automation's employee Jake Ositis will be supporting this project primarily and Jake brings years of earned experience from his support of multiple municipalities and water providers throughout the Pacific Northwest. Furthermore, OCD Automation has been actively supporting the Camas Wastewater Treatment plant for over a decade and is familiar with the people, protocols, and expectations of the City of Camas for the successful execution of this work. Jake will be supported by a talented team as all OCD Automation employees are effective at programming the PLCs and Human-Machine-Interface software (HMI) utilized at the Camas Wastewater Treatment plant. Additionally, all OCD Automation staff can directly execute troubleshooting of controls system signals, networks, instrumentation, automation components as issues arise.

Scope and Work and Deliverables Provided by OCD Automation:

- Execution of detailed plan and design to be followed by the City's electrical contractor to upgrade of the four PLC groups that comprise the Solids Building Modicon Quantum PLC system (PLC-C). Design deliverables will include the following:
 - The selection and provision of new Modicon PLC hardware detailed on attachment-1 and summarized below is based on our knowledge of the Modicon platform.
 - Modicon M580 Processor using the Modicon X80 series PLC hardware platform.
 - Modicon Managed Ethernet Network hardware.
 - 120VAC UPS power in MCC-C1 and C2 to power existing hardware and discrete I/O signals (MCC-C1A and C2A will be powered from this unit as well).
 - 24VDC UPS power each PLC panel for new PLC/Network hardware and analog I/O signals.
 - Industrial ethernet patch panel for interconnections between the four PLC control sections of MCC-C.
 - Upgrade design will be conveyed as PDF redlines drafted upon PDF scans of the existing plant PLC network block diagram, the MCC-C panel drawings, and each panel's respective control loop drawings where applicable. Up to 40 total drawing sheets are assumed to be redlined broken down below.
 - 1 Demolition drawing per PLC cabinet identifying hardware and circuits to be removed.
 - 1 MCC-C PLC and device Network Block Diagram identifying network components, and cabling to be installed between them.
 - PLC cabinet layout drawing redlines of each of the control cabinets in the MCC identifying new hardware to be installed.
 - PLC cabinet power schematics of each of the control cabinets in the MCC identifying modified and new circuits.
 - 26 loop drawing updates reflecting new PLC hardware for the 13 digital I/O cards.
 - 10 loop drawing updates reflecting new PLC hardware for the 10 analog I/O cards.
 - Refinement of PDF redlines based on final implementation, startup, and commissioning efforts of the PLC panel upgrades.
- Configuration and Programming of OCD Automation Provided Hardware:
 - Migration of current Modicon Quantum PLC-C code into the Modicon M580 plc platform. The PLC programming will replicate the existing programming with the following features requested:
 - Review, adjustments, and cleanup of function blocks and datatypes based on usage to eliminate unused logic and variables.
 - Update of motor and motorized valve function blocks and datatypes to make HMI manual operation, speed control available to the operators from the HMI.
 - Development of an analog transmitter function block and datatype to allow transmitter scaling, diagnostics, and alarm setpoints to be available to the operators from the HMI.
- OCD Automation will provide two weeks of onsite startup support at the Camas Wastewater Treatment Plant during PLC panel upgrade during implementation phase to support the City of Camas and their installing electrician.
- OCD Automation employees Jake Ositis (E5) and Rylli Whitney (E1) are expected to be the primary staff members working on project tasks, assisted as necessary by others.

Materials:

- See Attachment 1, itemized hardware list.

Info Needs:

- Existing Network Block Diagrams, MCC-C Panel Drawings, and MCC-C I/O Loop Drawings in PDF or native CAD format.

Assumptions/Exclusions:

- No trade craft labor is included or electrical materials other than identified in Attachment-1 will be provided. Spare parts not included.
- It is assumed that any onsite electrical demolition or installation work and any materials not identified in Attachment-1 will be provided by the City's installing electrician. OCD Automation will be onsite during the implementation phase of the project to directly support the City's electrical contractor.
- PDF Redlines or modification of existing CAD drawings is assumed. Development of new CAD drawings is not anticipated or included.
- Services will be executed under the terms and conditions of our Agreement for Professional Services agreement dated April 15th, 2024, to be signed by the City of Camas prior to the start of work.

Schedule

OCD Automation can be ready to start the design, procurement, and programming efforts upon receipt of purchase order referencing this proposal letter.

Invoicing

The anticipated hardware costs will be invoiced at project onset, with subsequent invoices based on project progress submitted monthly.

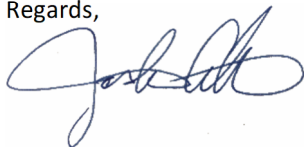
Cost of Services

The services to execute this work will be performed on a time and materials basis to a target budget of **\$179,969** broken down as follows:

- Hardware, Components, and Expenses: **\$75,774**
- Project Labor: **\$104,195**

We appreciate the opportunity to provide these services and your consideration of our project proposal for this work. This proposal is valid for 30 days. If there are any questions, please don't hesitate to contact Jake Ositis at (503) 910-5364 or jake.ositis@odcautomation.com.

Regards,



Justin D. Colton
President, OCD Automation Inc.

Attachments:

- 1) PLC Hardware and Components List
- 2) Agreement for Professional Services



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ATTACHMENT-1 PLC Hardware and Components List

| Description | Manufacturer | Part Number | Quantity | Notes |
|--|-----------------|----------------|----------|---|
| QUINT4-PS/1AC/24DC/20 - Power supply unit | Phoenix Contact | 2904602 | 4.00 | One in each cabinet, 4 total |
| QUINT4-UPS/24DC/24DC/20 - Uninterruptible power supply | Phoenix Contact | 2907071 | 4.00 | One in each cabinet, 4 total |
| UPS-BAT/PB/24DC/12AH - Battery module | Phoenix Contact | 1274119 | 4.00 | One in each cabinet, 4 total |
| APC Smart-UPS120VAC Rack/Tower | APC | SMX2200RMLV2U | 2.00 | One in MCC-C1 feeds C1A, One in MCC-C2 feeds C2A |
| Modicon Extended Managed Switch, 8 ports for copper | Schneider | MCSESM083F23F1 | 6.00 | Remote I/O Ring Network + VFD/Device Connectivity |
| Proxy module, Modicon X80, Modbus Plus | Schneider | TCSEGDB23F24FA | 1.00 | Legacy ModbusPLUS Gateway |
| VIP-2/SC/D15SUB/F - Interface module | Phoenix Contact | 2315175 | 2.00 | Wiring Interface for AB Valves and ModbusPLUS. |
| 3 meters RS 485 corset (RJ45, SUB-D 15) | Schneider | VW3A8306 | 2.00 | Cable Adapter for AB Valves and ModbusPlus |
| Industrial Patch Panel, 600V, 8-Port | Panduit | CDPP8RG-S | 6.00 | 8-Port Patch Box for Ethernet, 1ea in MCC1/2, 2ea in MCC1A/1B |
| Patch Panel Mini-Com Module, CAT-6, Shielded | Panduit | CJS688TGGRY | 48.00 | RJ45 Keystones for patch panel cable terminations |
| 8-Slot Ethernet Backplane | Schneider | BMEXBP0800 | 6.00 | |
| High Power 24-48VDC Power Supply | Schneider | BMXCPS3020 | 6.00 | |
| X-Bus Backplane Extender Kit (2 Modules, Cable, and Terminators) | Schneider | BMXXBE2005 | 1.00 | |
| X-Bus Backplane Module | Schneider | BMXXBE1000 | 1.00 | |
| X-Bus Backplane Cable w/ Angled Connector | Schneider | BMXXBC008K | 1.00 | |
| M580 CPU Level 40 - DIO and RIO | Schneider | BMEP584040 | 1.00 | |
| M580 Ethernet IP, 3-Port | Schneider | BMENOC0301 | 1.00 | |
| BUS MODULE, 2 RS485/232 Ports | Schneider | BMXNOM0200 | 1.00 | |
| Ethernet Remote I/O drop adapter | Schneider | BMECRA31210 | 3.00 | |
| Protective Covers | Schneider | BMXXEM010 | 19.00 | |
| Digital Input, 16 Channel, 120VAC, Sinking | Schneider | BMXDAl1604 | 9.00 | |
| Digital Input, 16 Channel, 24VDC, Sinking | Schneider | BMXDDI1602 | 1.00 | |
| Digital Output, 8 Channel, Form-C Relay | Schneider | BMXDRC0805 | 4.00 | |
| Analog Input, 8 Channel, Current/Voltage | Schneider | BMXAMI0810 | 9.00 | |
| Analog Output, 4 Channel, Current/Voltage | Schneider | BMXAMO0410 | 1.00 | |

OCD AUTOMATION'S ADDRESS: PO Box 2275
 Estacada, Oregon 97023

PROJECT NAME: Automation Design and Systems Integration Support

CLIENT: City of Camas, WA

CLIENT'S ADDRESS:

CLIENT requests and authorizes OCD AUTOMATION INC. (hereinafter "OCD AUTOMATION") to perform the following Services:

Scope of Services

See Proposal for City of Camas Wastewater Treatment Plant PLC-C Replacement, dated April 15, 2024.

Compensation

See ATTACHMENT-1, billing rates.

Other Terms

Services covered by this AGREEMENT will be performed in accordance with the Provisions and any attachments or schedules. This AGREEMENT supersedes all prior agreements and understandings and may only be changed by written amendment executed by both parties.

CITY OF CAMAS, WASHINGTON


Signature _____

Name (printed) _____

Title _____

Date _____

OCD AUTOMATION INC.

Signature  _____

Name (printed) Justin D. Colton _____

Title President _____

Date April 15th, 2024 _____

OCD AUTOMATION STANDARD AGREEMENT FOR PROFESSIONAL SERVICES PROVISIONS

1. Authorization to Proceed

Execution of this AGREEMENT by CLIENT will be authorization for OCD AUTOMATION to proceed with the Services, unless otherwise provided for in this AGREEMENT.

2. Salary Costs

OCD AUTOMATION's and its affiliated companies' Salary Costs, when the basis of compensation, are the amount of wages or salaries paid OCD AUTOMATION employees for work directly performed on the Project plus a percentage applied to all such wages or salaries to cover all payroll-related taxes, payments, premiums, and benefits.

3. Per Diem Rates

OCD AUTOMATION's and its affiliated companies' Per Diem Rates, when the basis of compensation, are those hourly or daily rates charged for work performed on the Project by OCD AUTOMATION employees. These rates are contained in the COMPENSATION section on Page 1 and are subject to a 4% annual calendar year escalation/adjustment.

4. Subcontracts and Direct Expenses

When Services are performed on a cost reimbursement basis, a markup of 15 percent will be applied to subcontracts and outside services and a markup of 15 percent will be applied to Direct Expenses. For purposes of this AGREEMENT, Direct Expenses are defined to include those necessary costs and charges incurred for the Project including, but not limited to: (1) the direct costs of transportation, meals, lodging, shipping, equipment and supplies; (2) OCD AUTOMATION's current standard rate charges for direct use of OCD AUTOMATION's vehicles, laboratory test and analysis, and certain field equipment; and (3) OCD AUTOMATION's standard project charges for computing systems, and health and safety requirements of OSHA.

All sales, use, value added, business transfer, gross receipts, or other similar taxes will be added to OCD AUTOMATION's compensation when invoicing CLIENT.

5. Cost Opinions

Any cost opinions or Project economic evaluations provided by OCD AUTOMATION will be on a basis of experience and judgment, but, since OCD AUTOMATION has no control over market conditions or bidding procedures, OCD AUTOMATION cannot warrant that bids, ultimate construction cost, or Project economics will not vary from these opinions.

6. Standard of Care

The standard of care applicable to OCD AUTOMATION's services will be the degree of skill and diligence normally employed by professional engineers or consultants performing the same or similar services at the time OCD AUTOMATION's services are performed. OCD AUTOMATION will re-perform any services not meeting this standard without additional compensation.

7. Termination

This AGREEMENT may be terminated for convenience on 30 days written notice or if either party fails substantially to perform through no fault of the other and does not commence correction of such nonperformance within 5 days of written notice and diligently complete the correction thereafter. On termination, OCD AUTOMATION will be paid for all authorized work performed up to the termination date plus termination expenses, such as, but not limited to, reassignment of personnel, subcontract termination costs, and related closeout costs.

8. Payment to OCD AUTOMATION

Monthly invoices will be issued by OCD AUTOMATION for all Services performed under this AGREEMENT. CLIENT shall pay each invoice within 15 days. Interest at a rate of 1-1/2 percent per month will be charged on all past-due amounts.

In the event of a disputed billing, only that disputed portion will be withheld from payment, and the undisputed portion will be paid. CLIENT will exercise reasonableness in disputing any bill or portion thereof. No interest will accrue on any disputed portion of the billing until mutually resolved.

9. Limitation of Liability

OCD AUTOMATION's liability for CLIENT's damages will, in the aggregate, not exceed contract value less the sales cost of delivered project materials. This Provision takes precedence over any conflicting Provision of this AGREEMENT or any document incorporated into it or referenced by it.

In no event shall OCD AUTOMATION, its affiliated corporations, officers, employees, or any of its subcontractors be liable for any incidental, indirect, special, punitive, economic or consequential damages, including but not limited to loss of revenue or profits, suffered or incurred by CLIENT or any of its agents, including other contractors engaged at the project site, as a result of this Agreement or OCD AUTOMATION's performance or non-performance of services pursuant to this Agreement.

Limitations of liability provided herein will apply whether OCD AUTOMATION's liability arises under breach of contract or warranty; tort, including negligence; strict liability; statutory liability; or any other cause of action, and shall include OCD AUTOMATION's officers, affiliated corporations, employees, and subcontractors.

10. Severability and Survival

If any of the provisions contained in this AGREEMENT are held illegal, invalid or unenforceable, the other provisions shall remain in full effect. Limitations of liability shall survive termination of this AGREEMENT for any cause.

11. No Third Party Beneficiaries

This AGREEMENT gives no rights or benefits to anyone other than CLIENT and OCD AUTOMATION and has no third party beneficiaries except as provided in Provision 9.

12. Materials and Samples

Any items, substances, materials, or samples removed from the Project site for testing, analysis, or other evaluation will be returned to the Project site unless agreed to otherwise. CLIENT recognizes and agrees that OCD AUTOMATION is acting as a bailee and at no time assumes title to said items, substances, materials, or samples. CLIENT recognizes that OCD AUTOMATION assumes no risk and/or liability for a waste or hazardous waste site originated by other than OCD AUTOMATION.

13. Assignments

Neither party shall have the power to or will assign any of the duties or rights or any claim arising out of or related to this AGREEMENT, whether arising in tort, contract or otherwise, without the written consent of the other party. Any unauthorized assignment is void and unenforceable.

14. Integration

This AGREEMENT incorporates all previous communications and negotiations and constitutes the entire agreement of the parties. If CLIENT issues a Purchase Order in conjunction with performance of the Services, general or standard terms and conditions on the Purchase Order do not apply to this AGREEMENT.

15. Force Majeure

If performance of the Services is affected by causes beyond OCD AUTOMATION's reasonable control, project schedule and compensation shall be equitably adjusted.

16. Dispute Resolution

The parties will use their best efforts to resolve amicably any dispute. If the parties are unable to resolve their dispute, then the matter shall be subject exclusively to arbitration.

17. Changes

CLIENT may make or approve changes within the general Scope of Services in this AGREEMENT. If such changes affect OCD AUTOMATION's cost of or time required for performance of the services, an equitable adjustment will be made through an amendment to this AGREEMENT.



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2024 Rates (USD)

| | | |
|-------------------------|---|---|
| Normal Rate: | E6: \$200 per hour E5: \$175 per hour E4: \$150 per hour E3: \$125 per hour E2: \$100 per hour E1: \$85 per hour | |
| Overtime Rate: | 1.5 x normal rate | Once over a continuous 8 hours at the Normal Rate, or outside of Monday through Friday. |
| Call out Rate: | 1.5 x normal rate | |
| Holiday Rate: | 2.0 x normal rate | 8 hours minimum |
| Mileage Rate: | IRS Rate (Currently \$0.67 per mile*) | If more than 25 miles from Portland International Airport |
| Per Diem (Meals) | IRS Rate for location | Minimum \$50 per day |
| Travel Expenses | Cost | Including but not limited to hotel, car rental, airfare, parking. If over 7 days, laundry services. |
| Materials: | 15% markup | Hardware or Software |
| Sub-Contractors | 15% markup | |

Rates are subject to annual escalation after December 31st, 2024.

Normal Business Hours: 7:00am to 5:00pm, with flexibility.

1. The following will require a 4-hour minimum charge:
 - a. Callout outside of normal business hours.
2. The following will require an 8-hour minimum charge:
 - a. Support further than 100 miles from Estacada, OR.
 - b. Callout on a weekend day (Saturday or Sunday).
 - c. Callout on the following holidays:
 - i. New Year’s Eve
 - ii. New Year’s Day
 - iii. Memorial Day
 - iv. July 4th
 - v. Labor Day
 - vi. Thanksgiving Day and the day after
 - vii. Christmas Eve
 - viii. Christmas Day