

RESOLUTION NO. R22-36

A RESOLUTION AUTHORIZING THE MAYOR TO EXECUTE ALL CONTRACT AND RELATED DOCUMENTS WITH IN CONTROL, INC. FOR THE CITY OF LAUREL WATER TREATMENT PLANT IMPROVEMENTS.

WHEREAS, the City of Laurel needs to conduct Water Treatment Plant improvements, known as the City of Laurel Water Treatment Plan Improvement Project (hereinafter “the Project”);

WHEREAS, In Control, Inc. has provided a proposal for materials and services related to the Project;

WHEREAS, the proposal from In Control, Inc. is based upon its knowledge and experience from years of service at the City of Laurel Water Treatment Plant, as well as the Water Treatment Plant Pre-Engineering Survey performed by In Control, Inc. in 2021 and 2022;

WHEREAS, the proposal from In Control, Inc. for the Project is in the amount of Three Hundred Fifty Seven Thousand Twenty Five Dollars (\$357,025.00); and

WHEREAS, the City of Laurel currently possesses adequate funds to complete the project and it is in the City of Laurel’s best interests to proceed with the project.

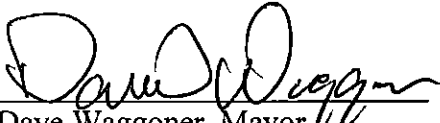
NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Laurel, Montana, that the City Council accepts the proposal with In Control, Inc. and the Mayor is authorized to execute all contract and related documents with In Control, Inc. for the project known as the City of Laurel Water Treatment Plant Improvements, pursuant to the terms and conditions contained in the attached Proposal for the total cost of Three Hundred Fifty Seven Thousand Twenty Five Dollars (\$357,025.00).

Introduced at a regular meeting of the City Council on the 12th day of July, 2022, by Council Member Eaton.

PASSED and APPROVED by the City Council of the City of Laurel the 12th day of July, 2022.

APPROVED by the Mayor the 12th day of July, 2022.

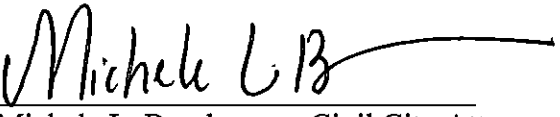
CITY OF LAUREL


Dave Waggoner, Mayor

ATTEST:


Kelly Strecker, Clerk-Treasurer

APPROVED AS TO FORM:


Michele L. Braukmann, Civil City Attorney



In Control, Inc.
10350 Jamestown St. NE
Blaine, MN 55449

PROPOSAL# QP22062101-04

To: City of Laurel

Date: June 22, 2022

From: Cade Beeton

Valid: 45 days

Page: 1 of 12

Attn: Mr. Nathan Herman - Utility Plants Superintendent

Re: City of Laurel Water Treatment Plant Improvements

In Control, Inc. is pleased to provide our proposal for materials and services as part of the project referenced above. This proposal is based upon our knowledge and experience from years of service at the Laurel Water Treatment Plant as well as the WTP Pre-Engineering Survey performed by In Control in 2021 and 2022. It is the intent of In Control to incorporate our proven standards and programming as much as possible on an upgraded control system to provide effective and efficient operation of the City of Laurel WTP for decades to come.

This proposal includes replacing the back panels and obsolete GE Fanuc 90-30 PLC's and the other obsolete equipment in the existing control panels listed below. The existing control panel enclosures will be reused. All new hardware and components including new programmable logic controllers (PLC's), operator interface terminals (OIT's), power supplies, ethernet switches, fiber optic media converters, surge protectors, circuit breakers, isolators, relays, Uninterruptible Power Supplies (UPS's), terminal strips, etc. will be provided. This proposal also includes a new Networking Panel as a Master Radio/Data Concentrator for the existing and future remote sites.

The Variable Frequency Drives (VFD's) for the three Refinery Pumps (RP's) and two Treatment Plant Pumps (TPP's) located in the Motor Control Center (MCC) in the Intake Building are due for replacement. This proposal includes new VFD's with Ethernet IP communication capabilities. In order to provide standalone control for the VFD's in the Intake Building, the existing control panel will be modified to include a dedicated PLC and OIT. This PLC will include programming that will allow the TPP pumps to be used to pump water to the refinery as a backup mode of operation.

The motor starters and VFD's located in MCCA are currently controlled and monitored via Modbus TCP communications using a third-party protocol convertor. This proposal includes changing the Modbus TCP communications to Ethernet IP. The replacement of the Allen Bradley MicroLogix 1400 at the Sedimentation Basin to an Allen Bradley CompactLogix will facilitate Ethernet IP communications directly.

This proposal excludes any radios, radio equipment and any of the remote site panels that tie back to the WTP and communicate via radio. Most of these remote site panels have obsolete equipment including the Allen Bradley MicroLogix 1100 and Teledesign radios and it is recommended that they be upgraded in the near future. This proposal also excludes the panels associated with the Flocculator, Sludge Collector, and Sludge Scraper controls as they are relatively new and can be interfaced into all the proposed controls.

Cybersecurity threats have increased in the last 5 years. Hackers have become more sophisticated and are constantly finding ways to compromise systems using techniques such as Phishing, Ransomware, and Credential Theft. In addition, at this moment there is credible intelligence Russia is preparing malicious cyber-attacks against our critical infrastructure as a response to United States' economic sanctions.

One of the most important security measures that should be implemented for any system that allows remote access via the internet is Multi-Factor Authentication (MFA). An example of MFA is using a password together with a code sent to your smartphone to authenticate yourself. Any computer system that has access to the internet can become vulnerable to cyber-attack, but experts agree that implementing a hardware firewall coupled with MFA, firmware updates, and ongoing maintenance support will reduce cyber threats.

In Control has developed an **Automation & Cybersecurity Service Plan** collaborating with WatchGuard, a leader in network security. This Service Plan provides regular inspection, testing, and maintenance of your control system and its cybersecurity defenses.

Implementing the hardware and support features contained in this proposal along with following internal best practices will provide a strong defense to cybersecurity threats.

Relevant Cybersecurity Information Links:

- [WaterISAC - \(https://www.waterisac.org/about-us\)](https://www.waterisac.org/about-us)
 - [15 Cybersecurity Fundamentals for Water and Wastewater Utilities](#)
- [Cybersecurity & Infrastructure Security Agency – Shields Up](#)
- [Compromise of U.S. Water Treatment Facility](#) published by the FBI, CISA, EPA, and MSISAC

Proposed Materials and Services

Item 1 - Professional Engineering Services

- A. One project manager will be assigned as a primary point of contact through project completion
- B. A project team consisting of up to (3) engineers will be assigned to the project
- C. Engineering review meetings will be conducted on a timely basis as required
- D. Industry best practices, proven control approaches and standardized objects will be implemented in the design, configuration, and development of the entire system
- E. PLC, OIT, and SCADA programming is included and will be tested prior to start up
- F. The entire design including control panel schematics and control panel manufacturing will be completed internally with functional testing prior to start up
- G. Control panel installation drawings will be provided to the city and city's electrical contractor. Final drawings and O&M documents will be provided electronically after substantial completion.

Item 2 - Laurel 1 (High/Low Service Pump PLC) Control Panel

In Control shall furnish the following items with coordination and installation assistance by city's electrical contractor:

- A. Replacement Hoffman back panel and Hol-Sealers for abandoned operators in panel door
- B. Allen Bradley CompactLogix PLC CPU and I/O Modules
- C. 24v DC Power Supply
- D. Fiber Optic Managed Ethernet Switch, Fiber patch cable, ethernet patch cable
- E. Eaton 700VA Online UPS
- F. Relays, terminal blocks, circuit breakers, surge protector, fuse blocks, fuses, UL label, etc.

Item 3 - Laurel 1 Extension (High Service Pump I/O) Control Panel

In Control shall furnish the following items with coordination and installation assistance by city's electrical contractor:

- A. Replacement Hoffman back panel
- B. Allen Bradley CompactLogix I/O Modules (Remote I/O from Laurel 1 control panel PLC)
- C. 24v DC Power Supply
- D. Unmanaged Ethernet Switch, Ethernet patch cable
- E. Eaton 700VA Online UPS
- F. Signal Isolators
- G. Relays, terminal blocks, circuit breakers, surge protector, fuse blocks, fuses, UL label, etc.

Item 4 - Laurel 1 Garage Extension (Low Service Pump I/O) Control Panel

In Control shall furnish the following items with coordination and installation assistance by city's electrical contractor: (Electrical contractor to furnish and install fiber optic cable from water treatment plant Laurel 1 PLC control panel to Laurel 1 Garage Extension control panel)

- A. Replacement Hoffman back panel
- B. Allen Bradley CompactLogix PLC CPU and I/O Modules
- C. Allen Bradley Operator Interface Terminal
- D. 24v DC Power Supply
- E. Fiber Optic Managed Ethernet Switch, Fiber patch cable, ethernet patch cable
- F. Eaton 700VA Online UPS
- G. Relays, terminal blocks, circuit breakers, surge protector, fuse blocks, fuses, UL label, etc.

Item 5 - Laurel 2 (Filter) Control Panel

In Control shall furnish the following items with coordination and installation assistance by city's electrical contractor:

- A. Replacement Hoffman back panel
- B. Replacement Hoffman panel door with operators and displays
- C. Allen Bradley CompactLogix PLC CPU and I/O Modules
- D. 24v DC Power Supply
- E. Unmanaged Ethernet Switch, Ethernet patch cable
- F. Eaton 700VA Online UPS
- G. Relays, terminal blocks, circuit breakers, surge protector, fuse blocks, fuses, UL label, etc.

Item 6 - Laurel 3 (Clearwell/Chemical) Control Panel

In Control shall furnish the following items with coordination and installation assistance by city's electrical contractor:

- A. Replacement Hoffman back panel and Hol-Sealers for abandoned operators in panel door
- B. Allen Bradley CompactLogix PLC CPU and I/O Modules
- C. 24v DC Power Supply
- D. Fiber Optic Managed Ethernet Switch, Fiber patch cable, ethernet patch cable
- E. Eaton 700VA Online UPS
- F. Signal Isolators
- G. Relays, terminal blocks, circuit breakers, surge protector, fuse blocks, fuses, UL label, etc.

Item 7 - SCP A (Sedimentation Basin) Control Panel

The existing SCPA (Sedimentation Basin) Control Panel is currently utilizing an Allen Bradley MicroLogix 1400 PLC which is operating to the maximum specifications of its inputs, outputs and CPU processing and memory capabilities. It is recommended that it be replaced with an Allen Bradley CompactLogix PLC which has higher specifications in I/O and CPU processing/memory capabilities. The existing Maple Systems OIT will also be replaced with an Allen Bradley PanelView OIT. In Control shall furnish the following items with coordination and installation assistance by city's electrical contractor:

- A. Allen Bradley CompactLogix PLC CPU and I/O Modules
- B. Allen Bradley Operator Interface Terminal

Item 8 - Radio Communications and Networking Panel

In Control shall furnish the following items with coordination and installation assistance by city's electrical contractor:

- A. New Hoffman enclosure
- B. Allen Bradley CompactLogix PLC CPU and I/O Modules
- C. Allen Bradley CompactLogix Serial Communications Module
- D. 24v DC Power Supply
- E. Managed Ethernet Switch, ethernet patch cable
- F. Eaton 700VA Online UPS
- G. Relays, terminal blocks, circuit breakers, surge protector, fuse blocks, fuses, UL label, etc.
- H. Existing radio will be re-installed in new panel
- I. Replacement radio antenna cable (75 feet with connectors)

Item 9 - RP and TPP VFD Replacements in the Low Service Building.

In Control shall furnish the following items with coordination and installation assistance by city's electrical contractor:

- A. Refinery Pump VFD's with Ethernet IP communications (QTY: 3)
- B. Treatment Plant Pump VFD's with Ethernet IP communications (QTY: 2)

Item 10 - SCADA System Hardware

Computer system hosting the SCADA software is furnished complete with accessory devices as identified. Delivery, installation and configuration by In Control.

- A. Dell Precision desktop workstation (QTY: 2)
- B. Dell wired keyboard and laser scroll mouse (QTY: 2)
- C. Microsoft Office Professional (QTY: 2)
- D. Dell 24" Ultrasharp Monitor (QTY: 4)
- E. Dell USB Stereo Soundbar (QTY: 2)
- F. 12 outlet, 10' cord surge suppression power strip (QTY: 2)
- G. Eaton 700VA Online UPS (QTY: 2)
- H. 8 port desktop Ethernet switch (QTY: 2)
- I. 4TB, 2 USB external HDD (QTY: 2)
- J. Hardware Firewall (internet access by City)
 - 1. Internet Service Provider Configuration

- K. Cybersecurity Defense (1 year subscription included)
 - 1. Total Security Suite Configuration
 - 2. AuthPoint Multi-Factor Authentication Configuration (Up to 10 users)
- L. Cybersecurity Defense – Ongoing services (1 year included)
 - 1. URL filtering, Intrusion Prevention System (IPS), and Gateway Antivirus (GAV)
 - 2. APT Blocker – Defends against ransomware, zero-day threats, advanced malware
 - 3. DNS Filtering – Detects and blocks dangerous connections via a cloud-based service using DNS-level (Domain Name System) filtering
 - 4. Threat Detection & Response – Identifies and isolates infected computers on the network
 - 5. Cloud Data Retention – Real-time monitoring and thirty-day retention of traffic logs of all activity on the network

Item 11 - SCADA System Software

Software applications for SCADA, Alarming and Historical Data are furnished with the system hardware as a complete solution. Configuration, delivery, and installation by In Control.

- A. FT View SE Station Unlimited Display, Perpetual License (QTY: 2)
- B. VNC CONNECT - Enterprise, 1 computer via direct/cloud - 1 YEAR (QTY: 2)

Item 12 - Spare Parts

In Control will furnish the following spare parts:

- A. Allen Bradley CompactLogix PLC CPU
- B. Allen Bradley CompactLogix Removable Terminal Block
- C. Allen Bradley AENTR Ethernet IP I/O Module
- D. Allen Bradley 8 Channel Analog Output Module
- E. Allen Bradley 16 Channel Digital Output, Relay
- F. Allen Bradley 5V 4A Power Supply
- G. Allen Bradley 8 Channel Analog Input Module
- H. Allen Bradley 16 Channel Digital Input Module, 120V
- I. Allen Bradley 16 Channel Digital Input Module, 24vDC
- J. Fuses and Lamps (QTY: 6 each)
- K. 24v DC Power Supply

Proposal Summary

The price for all items above is \$357,025.00 USD net total excluding sales and use taxes. Freight is included, FOB shipping point. Submittal and Equipment delivery dates will be scheduled to meet project substantial completion date or project milestones when stated.

TERMS: 30% upon order, 30% upon control panel drawing approval, 30% upon equipment delivery and 10% upon substantial completion.

EXCLUSIONS:

Our proposal does not include the following:

- o Bonding, Permits, Licenses, or Fees of any kind
- o Removal, demolition, or disposal of existing equipment
- o Field installation of equipment, enclosures, instrumentation, or other products furnished
- o Fasteners or mounts, wire, raceway, or fittings required for field installed products
- o Termination of any field wiring such as line power, control signals, instrumentation, etc.
- o Normal and customary items furnished or provided by a general or electrical contractor
- o Any equipment or services that are not defined in the scope of work detailed in this proposal
- o Shipping costs to locations other than the primary project site

Thank you in advance for the consideration of our offer and for the opportunity to work together. Should you have any questions regarding this proposal, please contact me directly at your convenience. I look forward to hearing from you soon to secure and coordinate this project.

Best Regards,

Cade Beeton
 Technical Sales Engineer
 Mobile: 406.661.4795
 Office: 763.783.9500 x2002
 E-Mail: cade.beeton@incontrol.net

Bob Dietrich
 Estimator
 Mobile: 612.799.9017
 Office: 763.783.9500 x2004
 E-Mail: bob.dietrich@incontrol.net

ACCEPTANCE: To accept this proposal please return a signed copy with purchase order. Thank you!

Signature: David Waggoner
 Print Name: DAVID WAGGONER
 Title: MAYOR

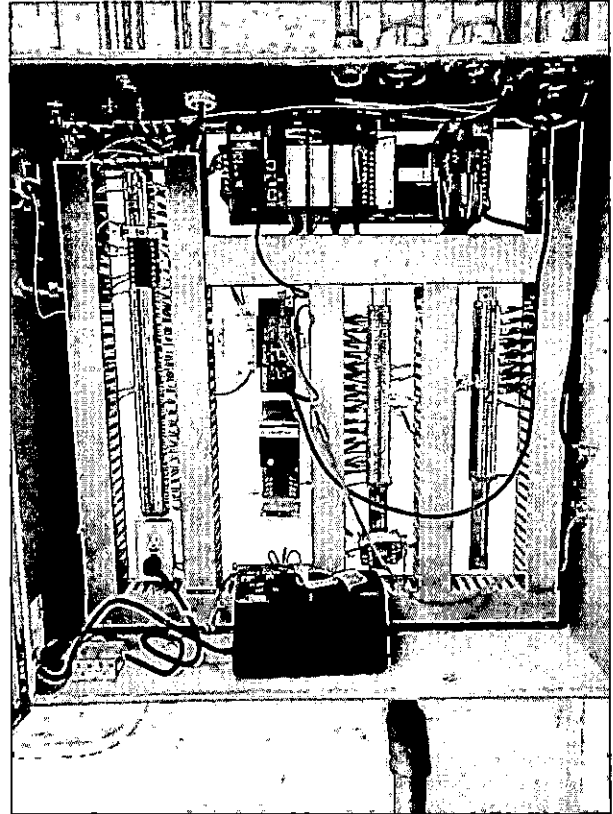
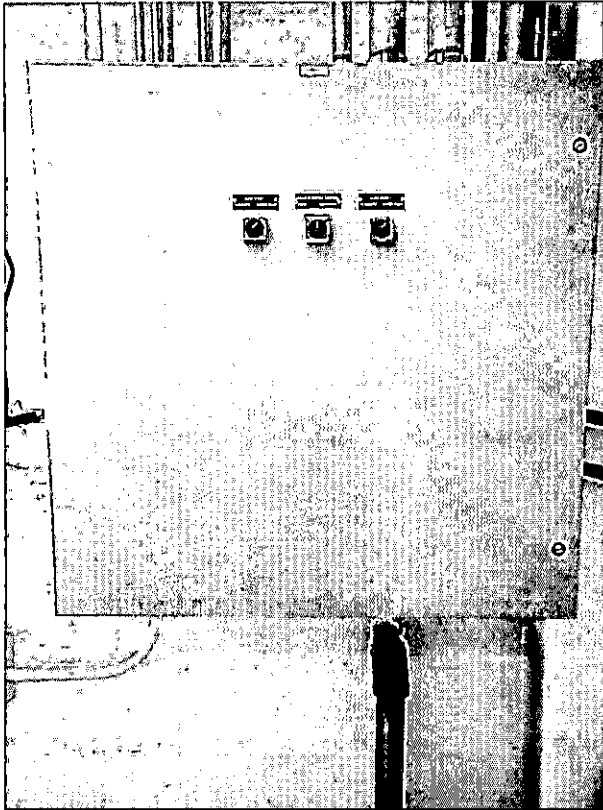
Purchase Order: _____
 Date: _____
 Proposal Number: QP22062101-04

Standard Terms and Conditions of Sale

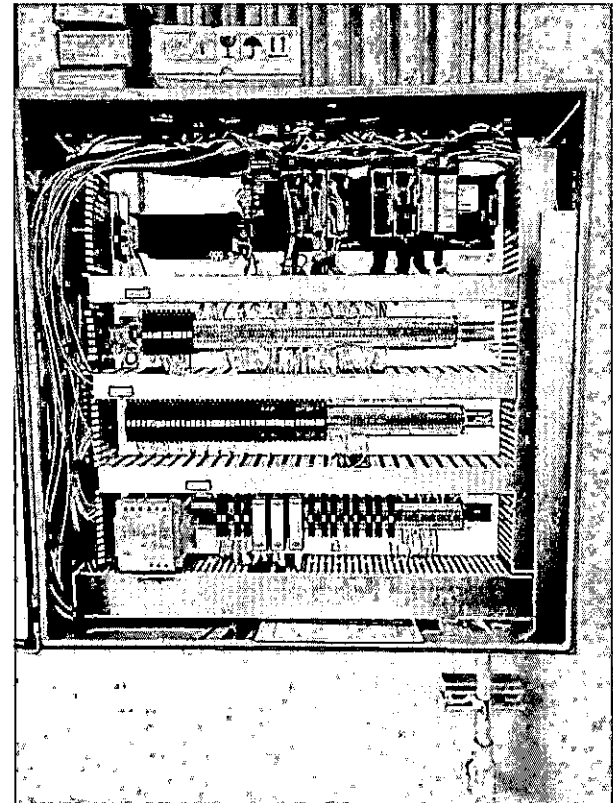
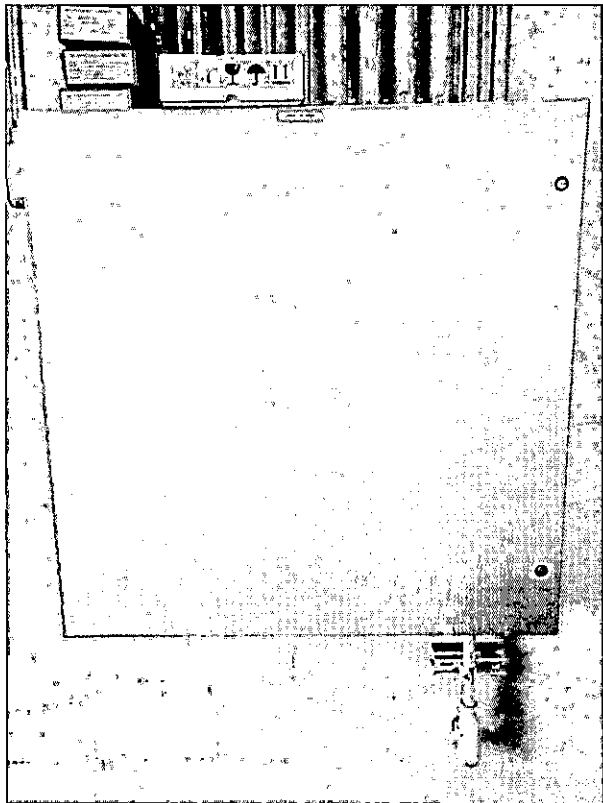
These terms and conditions are in effect between the party ("Purchaser") issuing the purchase order ("Order") and In Control, Inc. ("In Control").

1. **ACCEPTANCE** – Acceptance of this Order will be in writing within 30 days of Order receipt, subject to approval of the Purchaser's credit by In Control and compliance with the acceptance criteria set forth herein. Upon acceptance, this Order will constitute the entire agreement between In Control and Purchaser, supersede all prior negotiations and discussions, and may not be modified or terminated except in writing signed by both Purchaser and In Control.
2. **TERMINATION** – Notification of termination of this Order shall be made in writing with 14 days notice. If Purchaser terminates this Order at no fault of In Control, Purchaser shall pay for services rendered at In Control's published rates, reimbursable expenses, and equipment ordered through the date of termination. This payment will also include a fee of 10% of the Order value to cover the expense of terminating the contract.
3. **ATTORNEY FEES** - If either party commences or is made a party to an action or proceeding to enforce or interpret this Order, the prevailing party in such action or proceeding will be entitled to recover from the other party all reasonable attorneys' fees, costs and expenses incurred in connection with such action or proceeding or any appeal or enforcement of any judgment.
4. **INDEMNIFICATION** - Purchaser will indemnify and hold harmless In Control from and against any and all claims, actions, proceedings, costs, expenses, losses and liability, including all reasonable attorneys' fees, costs and expenses, arising out of or in connection with or relating to any goods or services not furnished by In Control pursuant to this Order, including without limitation all product liability claims and any claims involving personal injury, death or property damage. The obligations set forth in this Section will survive the termination or fulfillment of this Order.
5. **LIMITATIONS OF LIABILITY** - In no event will In Control be liable in contract, tort, strict liability, warranty or otherwise, for any special, incidental or consequential damages, such as delay, disruption, loss of product, loss of anticipated profits or revenue, loss of use of the equipment or system, non-operation or increased expense of operation of other equipment or systems, cost of capital, or cost of purchase or replacement equipment systems or power. In particular, unless otherwise agreed to in writing between the Purchaser and In Control, In Control will not accept liquidated damages.
6. **FORCE MAJEURE** – In no event shall In Control be responsible or liable for any failure or delay in the performance of its obligations hereunder arising out of or caused by, directly or indirectly, forces beyond its control, including, without limitation, strikes, work stoppages, supply chain disruptions, accidents, acts of war or terrorism, civil or military disturbances, health crises, nuclear or natural catastrophes or acts of God, and interruptions of utilities, communications or computer services. It being understood that In Control shall use all commercially reasonable efforts to resume performance as soon as practicable under the circumstances.
7. **WARRANTY** - In Control warrants that the goods and services furnished will be of good quality, free from defects in material, design and workmanship will conform to the specifications and drawings and be suitable for their intended purpose. This warranty will be in force for eighteen (18) months after shipment or twelve (12) months from startup, whichever is shorter. Any remaining allotments for Purchaser or end owner/engineer-initiated changes and call-back expire with the warranty period and are not refundable. In Control reserves the right to terminate warranty should the Purchaser's account be in arrears.
8. **TRANSPORTATION** - Unless otherwise specified, all deliveries from In Control will be F.O.B. factory, freight prepaid.
9. **ESCALATION** – This Order is conditioned upon the ability of In Control to complete the work at present prices for material and at the existing scale of wages for labor. If In Control is, at any time during the term of the Order, unable to complete the work at the present prices and wages, then the Order sum shall be equitably adjusted by change order to compensate In Control for significant price increases, where a significant price increase is defined as a change of 10% or more between the date of quote and the date of applicable work.
10. **PAYMENT TERMS** - The payment terms are due upon invoice receipt. Any balance remaining over 31 days beyond the invoice date will be subject to a 2.0% monthly service fee until paid. Debit or credit card payment is accepted and subject to a 3.0% surcharge of the payment amount. Should a payment default occur In Control reserves the right to stop all work, including but not limited to startup of equipment. All reasonable attempts will be made between both parties to resolve the disputed portions of any invoice within the payment terms.
Order value will be invoiced in full upon shipment unless specific terms are described in the proposal. No retainage is allowed.
11. **NONWAIVER** - The failure by In Control to enforce at any time, or for any period of time, any of the provisions hereof will not be a waiver of such provisions nor the right of In Control thereafter to enforce each and every such provision.
12. **REMEDIES** - Remedies herein reserved to In Control will be cumulative and in addition to any other or further remedies provided in law or equity.

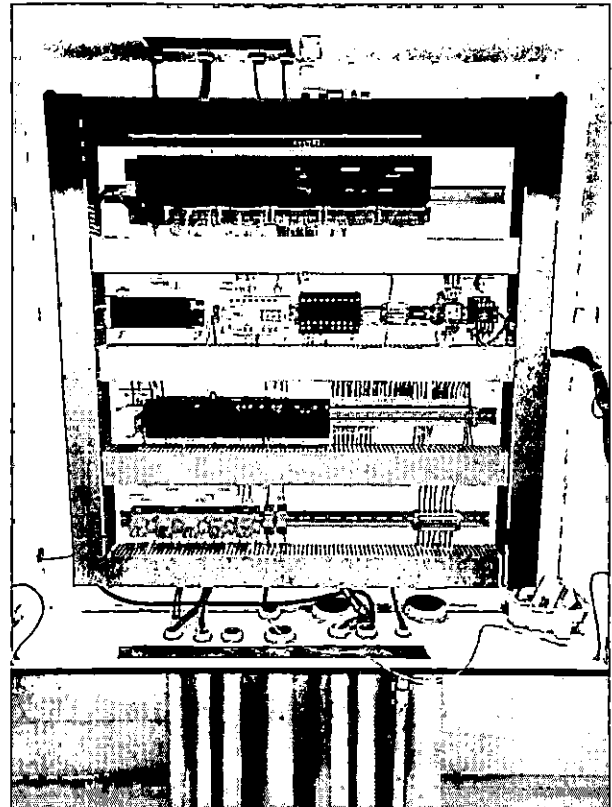
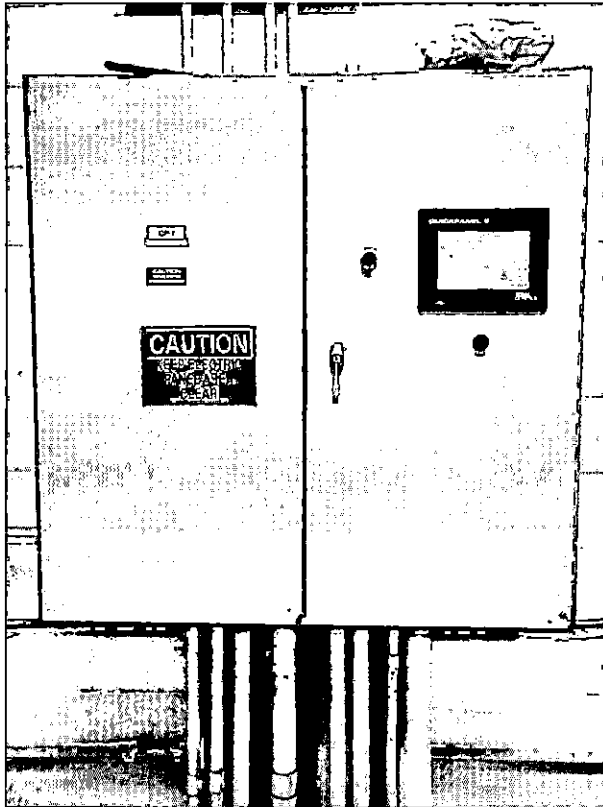
Laurel 1 (High/Low Service Pump PLC) Control Panel



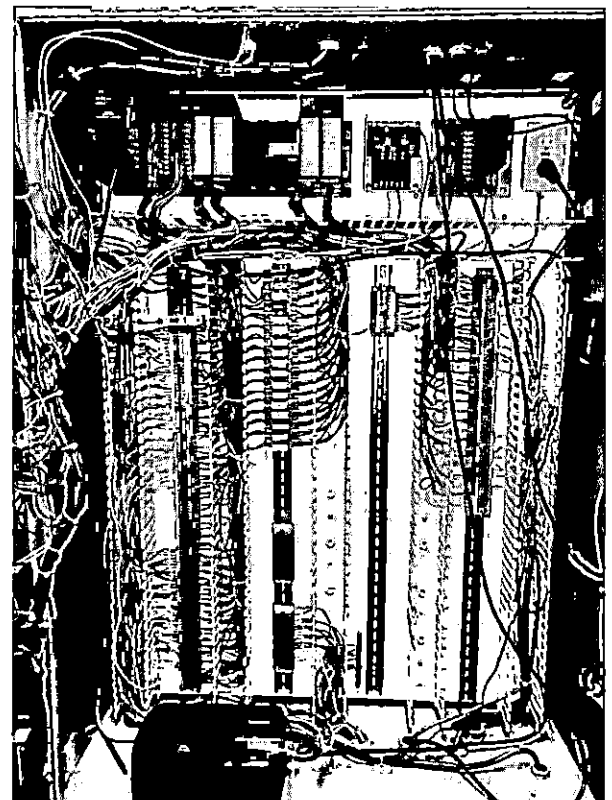
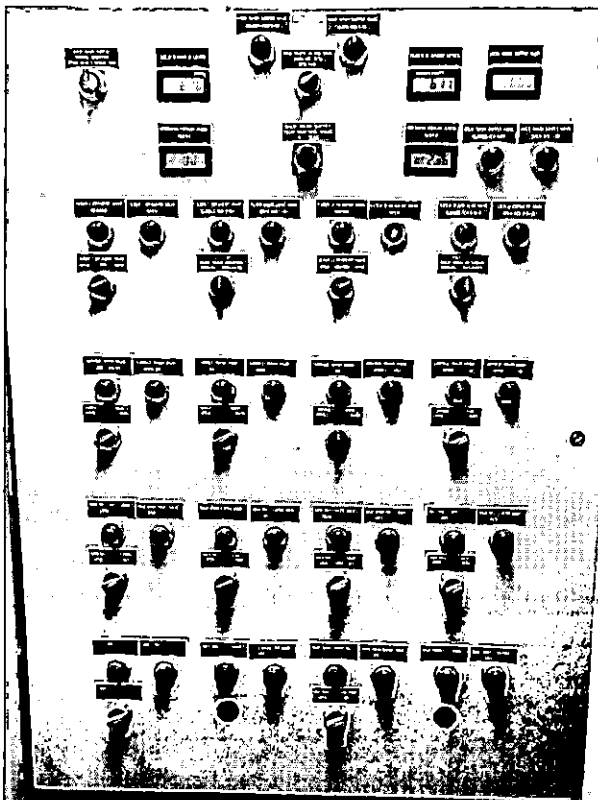
Laurel 1 Extension (High Service Pump I/O) Control Panel



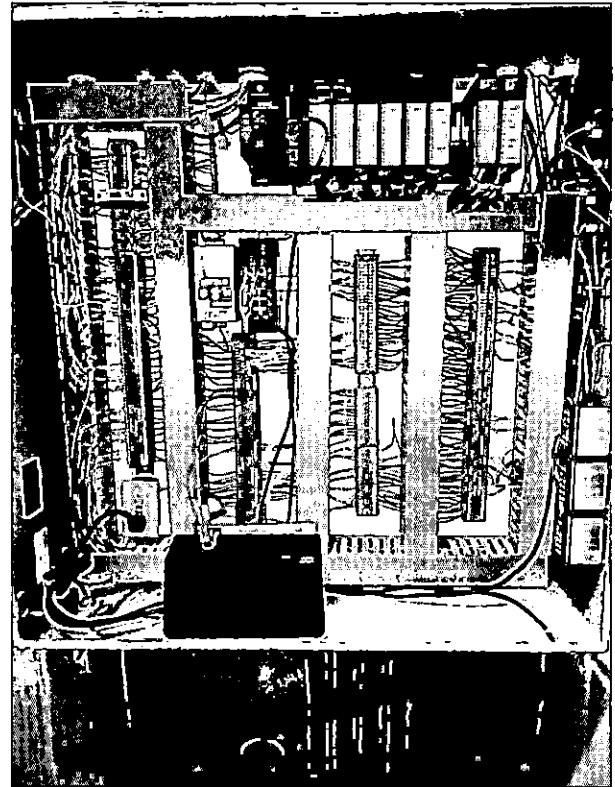
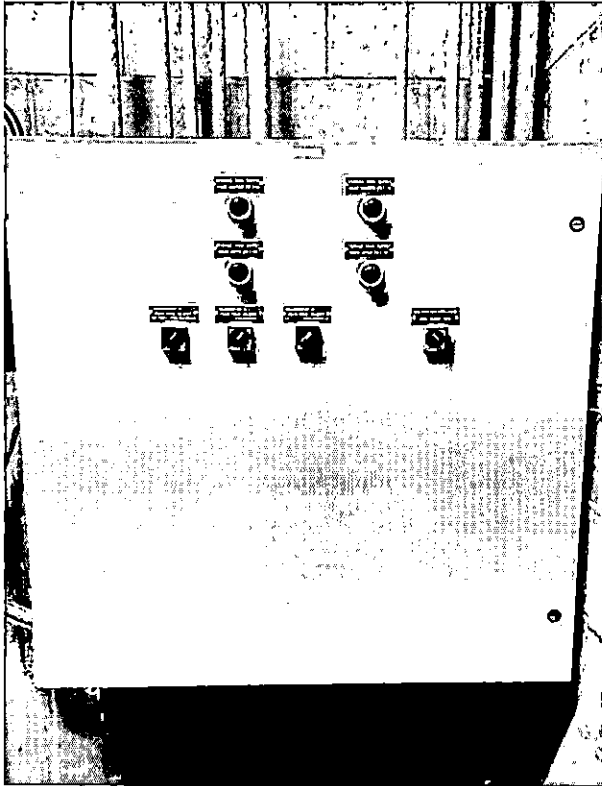
Laurel 1 Garage Extension (Low Service Pump I/O) Control Panel



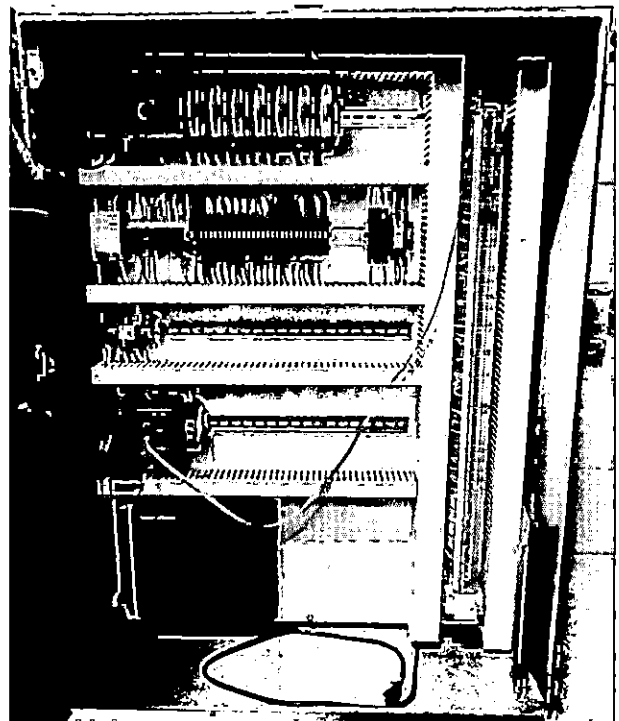
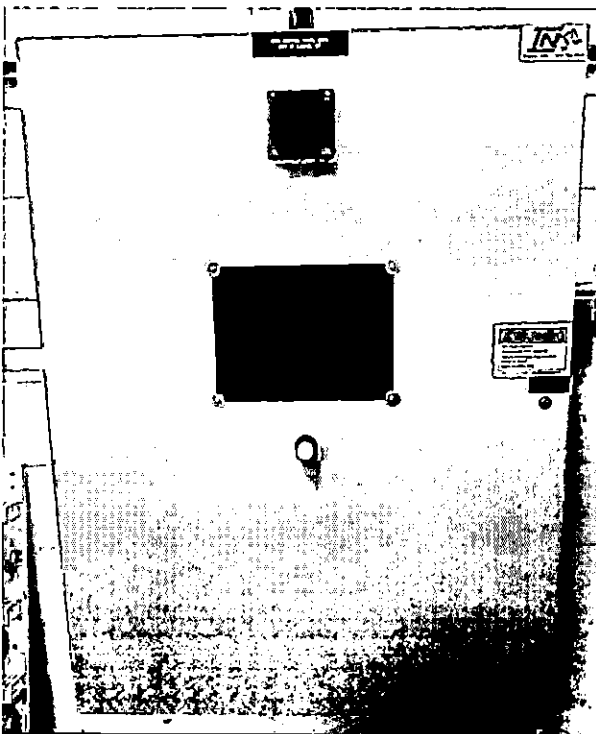
Laurel 2 (Filter) Control Panel



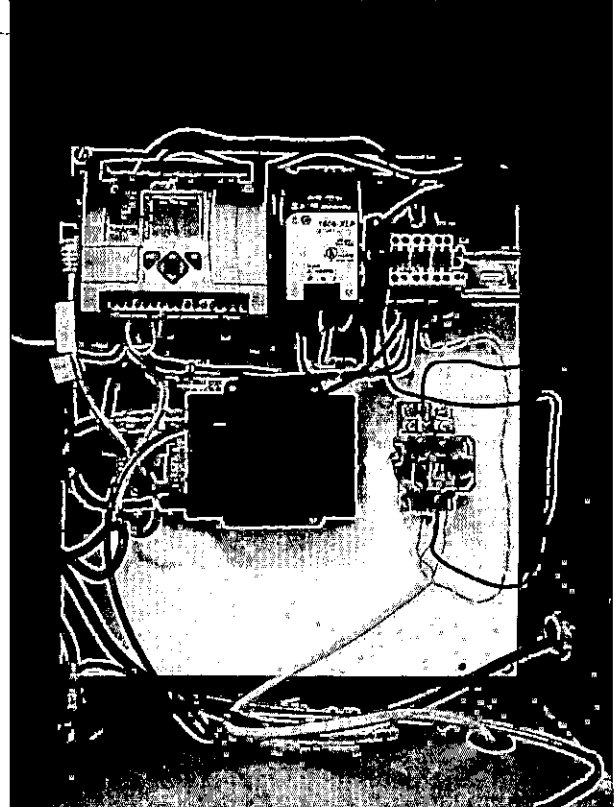
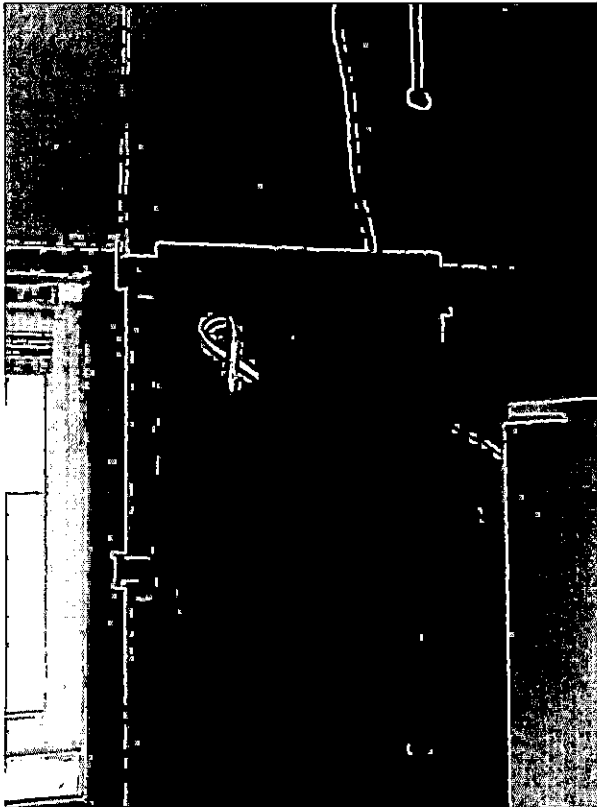
Laurel 3 (Clearwell/Chemical) Control Panel



SCP A (Sedimentation Basin) Control Panel



Radio Communications and Networking Panel



RP and TPP VFD Replacements in the Low Service Building.

