PUBLIC SERVICE BOARD MEETING
AGENDA ITEM
REGULAR MEETING

Wednesday, June 12, 2019

SUBJECT

SCADA system upgrade for the Robertson Umbenhauer Water Treatment Plant

BACKGROUND

The Robertson Umbenhauer Water Treatment Plant, Supervisory Control and Data Acquisition (SCADA) system requires upgrades. The scope of the project will be to replace and upgrade existing Programmable Logic Controllers (PLC) and controlled via the Factory Talk software that will be implemented. The following processes will be upgraded and/or automated as part of the project: High Lift Stations 1 through 3, Plant 1 and 2 Filter Control Room, Plant 1 Filters 1-6, Intake Grit Collectors, Plant 2 Ferrous Chloride Pumps/Mixer, Plant 2 Pipe Gallery, and Intake Low Lifts.

STRATEGIC OBJECTIVES SUPPORTED

Improve Use of Technology

EVALUATION PROCESS

The SCADA system upgrade is available through GSA buy board Contract Number GS-35F-0455W via Prime Controls, LP (Prime). Staff solicited and evaluated a quote from Prime and determined that it met all the requirements for this procurement. Staff recommends approval of the SCADA system upgrades contract to Prime in the amount of $2,800,000.

FINANCIAL IMPLICATIONS

Sufficient funds are available in Account Number 2256, and the funding sources are the Improvement Fund in the amount of $1,300,000 and the Commercial Paper Fund in the amount of $1,500,000.

PROPOSED ACTION REQUESTED

Approve a contract for SCADA system upgrade at the Robertson Umbenhauer Water Treatment Plant to Prime Controls, LP., through GSA buy board Contract Number GS-35F-0455W in the amount of $2,800,000 and authorize the use of commercial paper.

SUPPORTING DOCUMENTATION PROVIDED

- Prime Controls, LP quote
- GSA contract number GS-35F-0455W

AUTHORIZED
INFORMATION TECHNOLOGY SCHEDULE PRICELIST
GENERAL PURPOSE COMMERCIAL INFORMATION TECHNOLOGY
EQUIPMENT, SOFTWARE AND SERVICES

Special Item No. 132-51 Information Technology Professional Services

FPDS Code D307	Automated Information Systems Design and Integration Services
FPDS Code D308	Programming Services
FPDS Code D399	Other Information Technology Services, Not Elsewhere Classified

Note 1: All non-professional labor categories must be incidental to and used solely to support hardware, software and/or professional services, and cannot be purchased separately.

Note 2: Offerors and Agencies are advised that the Group 70 — Information Technology Schedule is not to be used as a means to procure services which properly fall under the Brooks Act. These services include, but are not limited to, architectural, engineering, mapping, cartographic production, remote sensing, geographic information systems, and related services. FAR 36.6 distinguishes between mapping services of an A/E nature and mapping services which are not connected nor incidental to the traditionally accepted A/E Services.

Note 3: This solicitation is not intended to solicit for the reselling of IT Professional Services, except for the provision of implementation, maintenance, integration, or training services in direct support of a product. Under such circumstances the services must be performance by the publisher or manufacturer or one of their authorized agents.

Prime Controls, LP
1725 Lakepointe Drive
Lewisville, TX 75057
(281)979-1815
www.prime-controls.com

Contract Number: GS-35F-0455W
Period Covered by Contract: May 26, 2010 through May 25, 2020
General Services Administration

Federal Acquisition Service

Pricelist current through Modification #2_ , dated. April 28, 2015

Products and ordering information in this Authorized FSS Information Technology Schedule Pricelist are also available on the GSA Advantage! System. Agencies can browse GSA Advantage! by accessing the Federal Acquisition Service's Home Page via the Internet at http://www.fss.gsa.gov/

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SECTION 1. INFORMATION FOR ORDERING ACTIVITIES

SPECIAL NOTICE TO AGENCIES: Small Business Participation
SBA strongly supports the participation of small business concerns in the Federal Acquisition Service. To enhance Small Business Participation SBA policy allows agencies to include in their procurement base and goals, the dollar value of orders expected to be placed against the Federal Supply Schedules, and to report accomplishments against these goals.

For orders exceeding the micropurchase threshold, FAR 8.404 requires agencies to consider the catalogs/pricelists of at least three schedule contractors or consider reasonably available information by using the GSA Advantage!TM on-line shopping service (www.fss.gsa.gov). The catalogs/pricelists, GSA Advantage!TM and the Federal Acquisition Service Home Page (www.fss.gsa.gov) contain information on a broad array of products and services offered by small business concerns.

This information should be used as a tool to assist ordering activities in meeting or exceeding established small business goals. It should also be used as a tool to assist in including small, small disadvantaged, and women-owned small businesses among those considered when selecting pricelists for a best value determination.

For orders exceeding the micropurchase threshold, customers are to give preference to small business concerns when two or more items at the same delivered price will satisfy their requirement.

1. GEOGRAPHIC SCOPE OF CONTRACT

Domestic delivery is delivery within the 48 contiguous states, Alaska, Hawaii, Puerto Rico, Washington, DC, and U.S. Territories. Domestic delivery also includes a port or consolidation point, within the aforementioned areas, for orders received from overseas activities.

Overseas delivery is delivery to points outside of the 48 contiguous states, Washington, DC, Alaska, Hawaii, Puerto Rico, and U.S. Territories.

Offerors are requested to check one of the following boxes:

[ ] The Geographic Scope of Contract will be domestic and overseas delivery.
[ ] The Geographic Scope of Contract will be overseas delivery only.
[X] The Geographic Scope of Contract will be domestic delivery only.

2. CONTRACTOR'S ORDERING ADDRESS AND PAYMENT INFORMATION:

Ordering Address:

Prime Controls, LP
1725 Lakepointe Drive
Lewisville, TX 75057

Contractors are required to accept credit cards for payments equal to or less than the micro-purchase threshold for oral or written delivery orders. Credit cards will not be acceptable for payment above the micro-purchase threshold. In addition, bank account information for wire transfer payments will be shown on the invoice.

The following telephone number(s) can be used by ordering activities to obtain technical and/or ordering assistance:

(281)-979-1815

3. LIABILITY FOR INJURY OR DAMAGE

The Contractor shall not be liable for any injury to ordering activity personnel or damage to ordering activity property arising from the use of equipment maintained by the Contractor, unless such injury or damage is due to the fault or negligence of the Contractor.

4. STATICAL DATA FOR GOVERNMENT ORDERING OFFICE COMPLETION OF STANDARD FORM 279:

Block 9: G. Order/Modification Under Federal Schedule
Block 16: Data Universal Numbering System (DUNS) Number: 046552316

Block 30: Type of Contractor —C. Large Business

Block 31: Woman-Owned Small Business — No

Block 37: Contractor's Taxpayer Identification Number (TIN): 75-2394015.

a. CAGE Code: 3Y051
b. Contractor has registered with the System for Award Management.

5. FOB DESTINATION

6. DELIVERY SCHEDULE

a. TIME OF DELIVERY: The Contractor shall deliver to destination within the number of calendar days after receipt of order (ARO), as set forth below:

SPECIAL ITEM NUMBER	DELIVERY TIME (Days ARO)
132-51	To Be Negotiated between the ordering Agency and the contactor

b. URGENT REQUIREMENTS: When the Federal Supply Schedule contract delivery period does not meet the bona fide urgent delivery requirements of an ordering activity, ordering activities are encouraged, if time permits, to contact the Contractor for the purpose of obtaining accelerated delivery. The Contractor shall reply to the inquiry within 3 workdays after receipt. (Telephonic replies shall be confirmed by the Contractor in writing.) If the Contractor offers an accelerated delivery time acceptable to the ordering activity, any order(s) placed pursuant to the agreed upon accelerated delivery time frame shall be delivered within this shorter delivery time and in accordance with all other terms and conditions of the contract.

7. DISCOUNTS:

Prices shown are NET Prices; Basic Discounts have been deducted.

a. Prompt Payment: 0 % - 30 days from receipt of invoice or date of acceptance, whichever is later.
b. Quantity: None
c. Dollar Volume: None
d. Government Educational Institutions are offered the same discounts as all other Government customers.

8. TRADE AGREEMENTS ACT OF 1979, as amended:

All items are U.S. made end products, designated country end products, Caribbean Basin country end products, Canadian end products, or Mexican end products as defined in the Trade Agreements Act of 1979, as amended.STATEMENT CONCERNING AVAILABILITY OF EXPORT PACKING:

9. SMALL REQUIREMENTS

The minimum dollar value of orders to be issued is $100.00.

10. MAXIMUM ORDER

(All dollar amounts are exclusive of any discount for prompt payment.)

The Maximum Order value for the following Special Item Numbers (SINs) is $500,000:

Special Item Number 132-51 - Information Technology (IT) Professional Services

11. ORDERING PROCEEDURES FOR FEDERAL SUPPLY SCHEDULE CONTRACTS

Ordering activities shall use the ordering procedures of Federal Acquisition Regulation (FAR) 8.405 when placing an order or establishing a BPA for supplies or services. These procedures apply to all schedules.

a. FAR 8.405-1 Ordering procedures for supplies, and services not requiring a statement of work.

b. FAR 8.405-2 Ordering procedures for services requiring a statement of work.

12. FEDERAL INFORMATION TECHNOLOGY/TELECOMMUNICATION STANDARDS REQUIREMENTS:

Ordering activities acquiring products from this Schedule must comply with the provisions of the Federal Standards Program, as appropriate (reference: NIST Federal Standards Index). Inquiries to determine whether or not specific products listed herein comply with Federal Information Processing Standards (FIPS) or Federal Telecommunication Standards (FED-STDS), which are cited by ordering activities, shall be responded to promptly by the Contractor.

a. FEDERAL INFORMATION PROCESSING STANDARDS PUBLICATIONS (FIPS PUBS):

Information Technology products under this Schedule that do not conform to Federal Information Processing Standards (FIPS) should not be acquired unless a waiver has been granted in accordance with the applicable "FIPS Publication." Federal Information Processing Standards Publications (FIPS PUBS) are issued by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST), pursuant to National Security Act. Information concerning their availability and applicability should be obtained from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161. FIPS PUBS include voluntary standards when these are adopted for Federal use. Individual orders for FIPS PUBS should be referred to the NTIS Sales Office, and orders for subscription service should be referred to the NTIS Subscription Officer, both at the above address, or telephone number (703) 487-4650.

b. FEDERAL TELECOMMUNICATION STANDARDS (FED-STDS):

Telecommunication products under this Schedule that do not conform to Federal Telecommunication Standards (FED-STDS) should not be acquired unless a waiver has been granted in accordance with the applicable "FED-STD." Federal Telecommunication Standards are issued by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST), pursuant to National Security Act. Ordering information and information concerning the availability of FED-STDS should be obtained from the GSA, Federal Acquisition Service, Specification Section, 470 East L'Enfant Plaza, Suite 8100, SW, Washington, DC 20407, telephone number (202)619-8925. Please include a self-addressed mailing label when requesting information by mail. Information concerning their applicability can be obtained by writing or calling the U.S. Department of Commerce, National Institute of Standards and Technology, Gaithersburg, MD 20899, telephone number (301)975-2833.

13. CONTRACTOR TASKS / SPECIAL REQUIREMENTS (C-FSS-370) (NOV 2003)

(a) Security Clearances: The Contractor may be required to obtain/possess varying levels of security clearances in the performance of orders issued under this contract. All costs associated with obtaining/possessing such security clearances should be factored into the price offered under the Multiple Award Schedule.

(b) Travel: The Contractor may be required to travel in performance of orders issued under this contract. Allowable travel and per diem charges are governed by Pub .L. 99-234 and FAR Part 31, and are reimbursable by the ordering agency or can be priced as a fixed price item on orders placed under the Multiple Award Schedule. Travel in performance of a task order will only be reimbursable to the extent authorized by the ordering agency. The Industrial Funding Fee does NOT apply to travel and per diem charges.

(c) Certifications, Licenses and Accreditations: As a commercial practice, the Contractor may be required to obtain/possess any variety of certifications, licenses and accreditations for specific FSC/service code classifications offered. All costs associated with obtaining/ possessing such certifications, licenses and accreditations should be factored into the price offered under the Multiple Award Schedule program.

(d) Insurance: As a commercial practice, the Contractor may be required to obtain/possess insurance coverage for specific FSC/service code classifications offered. All costs associated with obtaining/possessing such insurance should be factored into the price offered under the Multiple Award Schedule program.

(e) Personnel: The Contractor may be required to provide key personnel, resumes or skill category descriptions in the performance of orders issued under this contract. Ordering activities may require agency approval of additions or replacements to key personnel.

(f) Organizational Conflicts of Interest: Where there may be an organizational conflict of interest as determined by the ordering agency, the Contractor's participation in such order may be restricted in accordance with FAR Part 9.5.

(g) Documentation/Standards: The Contractor may be requested to provide products or services in accordance with rules, regulations, OMB orders, standards and documentation as specified by the agency's order.

(h) Data/Deliverable Requirements: Any required data/deliverables at the ordering level will be as specified or negotiated in the agency's order.

(i) Government-Furnished Property: As specified by the agency's order, the Government may provide property, equipment, materials or resources as necessary.

(j) Availability of Funds: Many Government agencies' operating funds are appropriated for a specific fiscal year. Funds may not be presently available for any orders placed under the contract or any option year. The

Government's obligation on orders placed under this contract is contingent upon the availability of appropriated funds from which payment for ordering purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are available to the ordering Contracting Officer.

(k) Overtime: For professional services, the labor rates in the Schedule should not vary by virtue of the Contractor having worked overtime. For services applicable to the Service Contract Act (as identified in the Schedule), the labor rates in the Schedule will vary as governed by labor laws (usually assessed a time and a half of the labor rate).

14. CONTRACT ADMINISTRATION FOR ORDERING ACTIVITIES:

Any ordering activity, with respect to any one or more delivery orders placed by it under this contract, may exercise the same rights of termination as might the GSA Contracting Officer under provisions of FAR 52.212-4, paragraphs (1) Termination for the ordering activity's convenience, and (m) Termination for Cause (See 52.212-4)

15. GSA ADVANTAGE!

GSA Advantage! is an on-line, interactive electronic information and ordering system that provides on-line access to vendors' schedule prices with ordering information. GSA Advantage! will allow the user to perform various searches across all contracts including, but not limited to:

(1) Manufacturer;
(2) Manufacturer's Part Number; and
(3) Product categories.

Agencies can browse GSA Advantage! by accessing the Internet World Wide Web utilizing a browser (ex.: Internet Explorer). The Internet address is http://www.fss.gsa.gov/.

16. PURCHASE OF OPEN MARKET ITEMS

NOTE: Open Market Items are also known as incidental items, noncontract items, non-Schedule items, and items not on a Federal Supply Schedule contract. ODCs (Other Direct Costs) are not part of this contract and should be treated as open market purchases. Ordering Activities procuring open market items must follow FAR 8.402(f).

For administrative convenience, an ordering activity contracting officer may add items not on the Federal Supply Multiple Award Schedule (MAS) -- referred to as open market items -- to a Federal Supply Schedule blanket purchase agreement (BPA) or an individual task or delivery order, **only if-**

(1) All applicable acquisition regulations pertaining to the purchase of the items not on the Federal Supply Schedule have been followed (e.g., publicizing (Part 5), competition requirements (Part 6), acquisition of commercial items (Part 12), contracting methods (Parts 13, 14, and 15), and small business programs (Part 19));

(2) The ordering activity contracting officer has determined the price for the items not on the Federal Supply Schedule is fair and reasonable;

(3) The items are clearly labeled on the order as items not on the Federal Supply Schedule; and

(4) All clauses applicable to items not on the Federal Supply Schedule are included in the order.

17. CONTRACTOR COMMITMENTS, WARRANTIES AND REPRESENTATIONS

a. For the purpose of this contract, commitments, warranties and representations include, in addition to those agreed to for the entire schedule contract:

(1) Time of delivery/installation quotations for individual orders;

(2) Technical representations and/or warranties of products concerning performance, total system performance and/or configuration, physical, design and/or functional characteristics and capabilities of a product/equipment/ service/software package submitted in response to requirements which result in orders under this schedule contract.

(3) Any representations and/or warranties concerning the products made in any literature, description, drawings and/or specifications furnished by the Contractor.

b. The above is not intended to encompass items not currently covered by the GSA Schedule contract.

18. OVERSEAS ACTIVITIES

The terms and conditions of this contract shall apply to all orders for installation, maintenance and repair of equipment in areas listed in the pricelist outside the 48 contiguous states and the District of Columbia, except as indicated below:

Not Applicable

Upon request of the Contractor, the ordering activity may provide the Contractor with logistics support, as available, in accordance with all applicable ordering activity regulations. Such ordering activity support will be provided on a reimbursable basis, and will only be provided to the Contractor's technical personnel whose services are exclusively required for the fulfillment of the terms and conditions of this contract.

19. BLANKET PURCHASE AGREEMENTS (BPAs)

The use of BPAs under any schedule contract to fill repetitive needs for supplies or services is allowable. BPAs may be established with one or more schedule contractors. The number of BPAs to be established is within the discretion of the ordering activity establishing the BPA and should be based on a strategy that is expected to maximize the effectiveness of the BPA(s). Ordering activities shall follow FAR 8.405-3 when creating and implementing BPA(s).

20. CONTRACTOR TEAM ARRANGEMENTS

Contractors participating in contractor team arrangements must abide by all terms and conditions of their respective contracts. This includes compliance with Clauses 552.238-74, Industrial Funding Fee and Sales Reporting, i.e., each contractor (team member) must report sales and remit the IFF for all products and services provided under its individual contract.

21. INSTALLATION, DEINSTALLATION, REINSTALLATION

The Davis-Bacon Act (40 U.S.C. 276a-276a-7) provides that contracts in excess of $2,000 to which the United States or the District of Columbia is a party for construction, alteration, or repair (including painting and decorating) of public buildings or public works with the United States, shall contain a clause that no laborer or mechanic employed directly upon the site of the work shall received less than the prevailing wage rates as determined by the Secretary of Labor. The requirements of the Davis-Bacon Act do not apply if the construction work is incidental to the furnishing of supplies, equipment, or services. For example, the requirements do not apply to simple installation or alteration of a public building or public work that is incidental to furnishing supplies or equipment under a supply contract. However, if the construction, alteration or repair is segregable and exceeds $2,000, then the requirements of the Davis-Bacon Act applies.

The ordering activity issuing the task order against this contract will be responsible for proper administration and enforcement of the Federal labor standards covered by the Davis-Bacon Act. The proper Davis-Bacon wage

determination will be issued by the ordering activity at the time a request for quotations is made for applicable construction classified installation, deinstallation, and reinstallation services under SIN 132-8.

22. SECTION 508 COMPLIANCE.

If applicable, Section 508 compliance information on the supplies and services in this contract are available in Electronic and Information Technology (EIT) at the following:

www.prime-controls.com

The EIT standard can be found at: www.Section508.gov/.

23. PRIME CONTRACTOR ORDERING FROM FEDERAL SUPPLY SCHEDULES.

Prime Contractors (on cost reimbursement contracts) placing orders under Federal Supply Schedules, on behalf of an ordering activity, shall follow the terms of the applicable schedule and authorization and include with each order

(a) A copy of the authorization from the ordering activity with whom the contractor has the prime contract (unless a copy was previously furnished to the Federal Supply Schedule contractor); and

(b) The following statement:

This order is placed under written authorization from _____ dated _____. In the event of any inconsistency between the terms and conditions of this order and those of your Federal Supply Schedule contract, the latter will govern.

24. INSURANCE—WORK ON A GOVERNMENT INSTALLATION (JAN 1997)(FAR 52.228-5)

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.
(b) Before commencing work under this contract, the Contractor shall notify the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective—
(1) For such period as the laws of the State in which this contract is to be performed prescribe; or
(2) Until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.
(c) The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

25. SOFTWARE INTEROPERABILITY.

Offerors are encouraged to identify within their software items any component interfaces that support open standard interoperability. An item's interface may be identified as interoperable on the basis of participation in a Government agency-sponsored program or in an independent organization program. Interfaces may be identified by reference to an interface registered in the component registry located at http://www.core.2ov.

26. ADVANCE PAYMENTS

A payment under this contract to provide a service or deliver an article for the United States Government may not be more than the value of the service already provided or the article already delivered. Advance or pre-payment is not authorized or allowed under this contract. (31 U.S.0

SECTION 2. TERMS AND CONDITIONS APPLICABLE TO INFORMATION TECHNOLOGY (IT) PROFESSIONAL SERVICES SIN 132-51

1. SCOPE

a. The prices, terms and conditions stated under Special Item Number 132-51 Information Technology Professional Services apply exclusively to IT Services within the scope of this Information Technology Schedule.
b. The Contractor shall provide services at the Contractor's facility and/or at the ordering activity location, as agreed to by the Contractor and the ordering activity.

2. PERFORMANCE INCENTIVES

a. Performance incentives may be agreed upon between the Contractor and the ordering activity on individual fixed price orders or Blanket Purchase Agreements under this contract in accordance with this clause.
b. The ordering activity must establish a maximum performance incentive price for these services and/or total solutions on individual orders or Blanket Purchase Agreements.
c. Incentives should be designed to relate results achieved by the contractor to specified targets. To the maximum extent practicable, ordering activities shall consider establishing incentives where performance is critical to the ordering activity's mission and incentives are likely to motivate the contractor. Incentives shall be based on objectively measurable tasks.

3. ORDER

a. Agencies may use written orders, EDI orders, blanket purchase agreements, individual purchase orders, or task orders for ordering services under this contract. Blanket Purchase Agreements shall not extend beyond the end of the contract period; all services and delivery shall be made and the contract terms and conditions shall continue in effect until the completion of the order. Orders for tasks which extend beyond the fiscal year for which funds are available shall include FAR 52.232-19 (Deviation —May 2003) Availability of Funds for the Next Fiscal Year. The purchase order shall specify the availability of funds and the period for which funds are available.
b. All task orders are subject to the terms and conditions of the contract. In the event of conflict between a task order and the contract, the contract will take precedence.

4. PERFORMANCE OF SERVICES

a. The Contractor shall commence performance of services on the date agreed to by the Contractor and the ordering activity.
b. The Contractor agrees to render services only during normal working hours, unless otherwise agreed to by the Contractor and the ordering activity.
c. The ordering activity should include the criteria for satisfactory completion for each task in the Statement of Work or Delivery Order. Services shall be completed in a good and workmanlike manner.

d. Any Contractor travel required in the performance of IT Services must comply with the Federal Travel Regulation or Joint Travel Regulations, as applicable, in effect on the date(s) the travel is performed. Established Federal Government per diem rates will apply to all Contractor travel. Contractors cannot use GSA city pair contracts.

5. STOP-WORK ORDER (FAR 52.242-15) (AUG 1989)

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either-

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if-

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

6. INSPECTION OF SERVICES

The Inspection of Services—Fixed Price (AUG 1996) (Deviation — May 2003) clause at FAR 52.246-4 applies to firm-fixed price orders placed under this contract. The Inspection—Time-and-Materials and Labor-Hour (JAN 1986) (Deviation — May 2003) clause at FAR 52.246-6 applies to time-and-materials and labor-hour orders placed under this contract.

7. RESPONSIBILITIES OF THE CONTRACTOR

The Contractor shall comply with all laws, ordinances, and regulations (Federal, State, City, or otherwise) covering work of this character. If the end product of a task order is software, then FAR 52.227-14 (Deviation — May 2003) Rights in Data — General, may apply.

8. RESPONSIBILITIES OF THE ORDERING ACTIVITY

Subject to security regulations, the ordering activity shall permit Contractor access to all facilities necessary to perform the requisite IT Services.

9. INDEPENDENT CONTRACTOR

All IT Services performed by the Contractor under the terms of this contract shall be as an independent Contractor, and not as an agent or employee of the ordering activity.

10. ORGANIZATIONAL CONFLICTS OF INTEREST

a. Definitions.
"Contractor" means the person, firm, unincorporated association, joint venture, partnership, or corporation that is a party to this contract. "Contractor and its affiliates" and "Contractor or its affiliates" refers to the Contractor, its chief executives, directors, officers, subsidiaries, affiliates, subcontractors at any tier, and consultants and any joint venture involving the Contractor, any entity into or with which the Contractor subsequently merges or affiliates, or any other successor or assignee of the Contractor.
An "Organizational conflict of interest" exists when the nature of the work to be performed under a proposed ordering activity contract, without some restriction on ordering activities by the Contractor and its affiliates, may either (i) result in an unfair competitive advantage to the Contractor or its affiliates or (ii) impair the Contractor's or its affiliates' objectivity in performing contract work.

b. To avoid an organizational or financial conflict of interest and to avoid prejudicing the best interests of the ordering activity, ordering activities may place restrictions on the Contractors, its affiliates, chief executives, directors, subsidiaries and subcontractors at any tier when placing orders against schedule contracts. Such restrictions shall be consistent with FAR 9.505 and shall be designed to avoid, neutralize, or mitigate organizational conflicts of interest that might otherwise exist in situations related to individual orders placed against the schedule contract. Examples of situations, which may require restrictions, are provided at FAR 9.508.

11. INVOICES

The Contractor, upon completion of the work ordered, shall submit invoices for IT services. Progress payments may be authorized by the ordering activity on individual orders if appropriate. Progress payments shall be based upon completion of defined milestones or interim products. Invoices shall be submitted monthly for recurring services performed during the preceding month.

12. PAYMENTS

For firm-fixed price orders the ordering activity shall pay the Contractor, upon submission of proper invoices or vouchers, the prices stipulated in this contract for service rendered and accepted. Progress payments shall be made only when authorized by the order. For time-and-materials orders, the Payments under Time-and-Materials and Labor-Hour Contracts at FAR 52.232-7 (DEC 2002), (Alternate II — Feb 2002) (Deviation — May 2003) applies to time-and-materials orders placed under this contract. For labor-hour orders, the Payment under Time-and-Materials and Labor-Hour Contracts at FAR 52.232-7 (DEC 2002), (Alternate II — Feb 2002) (Deviation — May 2003)) applies to labor-hour orders placed under this contract. 52.216-31(Feb 2007) Time-and-Materials/Labor-Hour Proposal Requirements—Commercial Item Acquisition As prescribed in 16.601(e)(3), insert the following provision:

a. The Government contemplates award of a Time-and-Materials or Labor-Hour type of contract resulting from this solicitation.
b. The offeror must specify fixed hourly rates in its offer that include wages, overhead, general and administrative expenses, and profit. The offeror must specify whether the fixed hourly rate for each labor category applies to labor performed by—

(1) The offeror;
(2) Subcontractors; and/or
(3) Divisions, subsidiaries, or affiliates of the offeror under a common control.

13. RESUMES

Resumes shall be provided to the GSA Contracting Officer or the user ordering activity upon request.

14. INCIDENTAL SUPPORT COSTS

Incidental support costs are available outside the scope of this contract. The costs will be negotiated separately with the ordering activity in accordance with the guidelines set forth in the FAR.

15. APPROVAL OF SUBCONTRACTS

The ordering activity may require that the Contractor receive, from the ordering activity's Contracting Officer, written consent before placing any subcontract for furnishing any of the work called for in a task order.

16. DESCRIPTION OF IT SERVICES AND PRICING

Prime Controls offers the following services on this GSA Schedule:

Industrial Process Control System Design

Prime Controls engineers design automated control systems based on Programmable Logic Controllers (PLCs) for a wide variety of applications including water distribution systems, wastewater treatment systems, water control structures such as locks and dams, material handling equipment and manufacturing equipment. System design includes software development and a complete drawing package.

SCADA System Installation

Prime Controls engineers and technicians install, commission, and test Supervisory Control and Data Acquisition (SCADA) systems based on PLCs using personal computer workstations for Human Machine Interaction (HMI). Systems include those that communicate via copper wire, fiber optic networks, industrial ethernet, data radios, and satellite ground stations.

Control System Troubleshooting

Prime Controls engineers and technicians evaluate existing control systems, develop corrective action plans, and implement those plans to correct control system problems. Services include hardware and software troubleshooting. Recommendations for replacement hardware are made along with suggested sources of supply.

a. **Labor Category Descriptions**

1. Labor Category: Account Manager

Minimum/General Experience: Minimum of 10 years of experience in Instrumentation and Controls.

Functional Responsibility: Serves as primary contact for customer and directly manages a group which includes project managers, project engineers, Instrumentation and Electrical (I&E) Technicians. Job duties include customer relations, scheduling, P&L and overseeing all phases of project. Requests assets from other groups as required and manages them while assigned.

Education: BS in Engineering in a relevant field such as Electrical Engineering, Mechanical Engineering or Computer Engineering

2. Labor Category: Project Manager

Minimum/General Experience: Minimum of 7 years of experience in Instrumentation and Controls .

Functional Responsibility: Overall job responsibility for engineering, scheduling, forecasting, subcontractor coordination, manpower, and project financials including invoicing and purchasing. Also administrative duties including performance corrections and reviews, approving timesheets and expense forms for project groups.

Education: BS in Engineering in a relevant field such as Electrical Engineering, Mechanical Engineering or Computer Engineering

3. Labor Category: Project Engineer Level 2/Level **1**

Minimum/General Experience: Level 1-3 years relevant experience
Level 2-5 years relevant experience

Functional Responsibility: Initial specification review, submittal preparation and approval, complete system design, drawing approval, software implementation (PLC and HMI), and maintain project documentation. Able to examine project specifications and be the technical lead. Total engineering responsibility for project from start to finish from submittal preparation to fmal O&M. *Level 2* in addition, oversee Level 1 engineers and technician crews.

Education: BS in Engineering in a relevant field such as Electrical Engineering, Mechanical Engineering or Computer Engineering

4. Labor Category: Technicians

Minimum/General Experience: Technician-3 years relevant experience
Sr. Technician-5 years relevant experience

Functional Responsibility: Devises, selects sets up, and operates electronic instrumentation and related electromechanical devices used for operational and environmental testing of mechanical, structural, or electrical equipment. Translates test data for engineering personnel by performing the following duties: Select, install, calibrate, and check sensing, telemetering, and recording instrumentation and circuitry. Develops specifications for nonstandard devices according to engineering data, characteristics of equipment under test, and capabilities of available test equipment.

Education: High School Diploma

5. Labor Category: CAD Designer

Minimum/General Experience: 5 years relevant experience

Functional Responsibility: The CAD Designer takes the system design layout provided by the Project Engineer or Sr. Systems/Design Engineer and translates it into a standard that can be input into the Computer Aided Design program. The CAD Designer ensures that standard requirements are included in each design to facilitate efficient installation and effective change control.

Education: BS in Engineering in a relevant field such as Electrical Engineering, Mechanical Engineering or Computer Engineering

b. **Price List**

Labor Category	**GSA Rate With IFF**
Account Manager	$ 164.00
Project Manager	$ 103.77
Project Engineer Level 2	$ 100.75
Project Engineer Level 1	$ 84.63
Sr. Technician	$ 84.63
Technician	$ 64.48
CAD Designer	$ 64.48

SECTION 3. USA COMMITMENT TO PROMOTE SMALL BUSINESS PARTICIPATION PROCUREMENT PROGRAMS

PREAMBLE

Prime Controls, LP provides commercial products and services to ordering activities. We are committed to promoting participation of small, small disadvantaged and women-owned small businesses in our contracts. We pledge to provide opportunities to the small business community through reselling opportunities, mentor-protégé programs, joint ventures, teaming arrangements, and subcontracting.

COMMITMENT

To actively seek and partner with small businesses.

To identify, qualify, mentor and develop small, small disadvantaged and women-owned small businesses by purchasing from these businesses whenever practical.

To develop and promote company policy initiatives that demonstrate our support for awarding contracts and subcontracts to small business concerns.

To undertake significant efforts to determine the potential of small, small disadvantaged and women-owned small business to supply products and services to our company.

To insure procurement opportunities are designed to permit the maximum possible participation of small, small disadvantaged, and women-owned small businesses.

To attend business opportunity workshops, minority business enterprise seminars, trade fairs, procurement conferences, etc., to identify and increase small businesses with whom to partner.

To publicize in our marketing publications our interest in meeting small businesses that may be interested in subcontracting opportunities.

We signify our commitment to work in partnership with small, small disadvantaged and women-owned small businesses to promote and increase their participation in ordering activity contracts. To accelerate potential opportunities please contact:

Gary Anglin
Proposal Manager
(281)979-1815
g.anglin@prime-controls.com

SECTION 4. BEST VALUE BLANKET PURCHASE AGREEMENT

BEST VALUE
BLANKET PURCHASE AGREEMENT
FEDERAL SUPPLY SCHEDULE

(Insert Customer Name)

In the spirit of the Federal Acquisition Streamlining Act Ordering activity) and (Contractor) enter into a cooperative agreement to further reduce the administrative costs of acquiring commercial items from the General Services Administration (GSA) Federal Supply Schedule Contract(s)_____

Federal Supply Schedule contract BPAs eliminate contracting and open market costs such as: search for sources; the development of technical documents, solicitations and the evaluation of offers. Teaming Arrangements are permitted with Federal Supply Schedule Contractors in accordance with Federal Acquisition Regulation (FAR) 9.6.

This BPA will further decrease costs, reduce paperwork, and save time by eliminating the need for repetitive, individual purchases from the schedule contract. The end result is to create a purchasing mechanism for the ordering activity that works better and costs less.

Signatures

Ordering Activity	Date	Contractor	Date

BPA NUMBER

(CUSTOMER NAME)
BLANKET PURCHASE AGREEMENT

Pursuant to GSA Federal Supply Schedule Contract Number(s)_____ , Blanket Purchase Agreements, the Contractor agrees to the following terms of a Blanket Purchase Agreement (BPA) EXCLUSIVELY WITH (ordering activity):

(1) The following contract items can be ordered under this BPA. All orders placed against this BPA are subject to the terms and conditions of the contract, except as noted below:

MODEL NUMBER/PART NUMBER	*SPECIAL BPA DISCOUNT/PRICE

(2) Delivery:

DESTINATION	DELIVERY SCHEDULES / DATES

(3) The ordering activity estimates, but does not guarantee, that the volume of purchases through this agreement will be_____

(4) This BPA does not obligate any funds.

(5) This BPAexpires on_____ or at the end of the contract period, whichever is earlier.

(6) The following office(s) is hereby authorized to place orders under this BPA:

OFFICE	POINT OF CONTACT

(7) Orders will be placed against this BPA via Electronic Data Interchange (EDI), FAX, or paper.

(8) Unless otherwise agreed to, all deliveries under this BPA must be accompanied by delivery tickets or sales slips that must contain the following information as a minimum•

(a) Name of Contractor;

(b) Contract Number;

(c) BPA Number;

(d) Model Number or National Stock Number (NSN);

(e) Purchase Order Number;

(f) Date of Purchase;

(g) Quantity, Unit Price, and Extension of Each Item (unit prices and extensions need not be shown when incompatible with the use of automated systems; provided, that the invoice is itemized to show the information); and

(h) Date of Shipment.

(9) The requirements of a proper invoice are specified in the Federal Supply Schedule contract. Invoices will be submitted to the address specified within the purchase order transmission issued against this BPA.

(10) The terms and conditions included in this BPA apply to all purchases made pursuant to it. In the event of an inconsistency between the provisions of this BPA and the Contractor's invoice, the provisions of this BPA will take precedence.

****

SECTION 5. BASIC GUIDELINES FOR USING "CONTRACTOR TEAM ARRANGEMENTS"

Federal Supply Schedule Contractors may use "Contractor Team Arrangements" (see FAR 9.6) to provide solutions when responding to a ordering activity requirements.

These Team Arrangements can be included under a Blanket Purchase Agreement (BPA). BPAs are permitted under all Federal Supply Schedule contracts.

Orders under a Team Arrangement are subject to terms and conditions or the Federal Supply Schedule Contract.

Participation in a Team Arrangement is limited to Federal Supply Schedule Contractors.

Customers should refer to FAR 9.6 for specific details on Team Arrangements.

Here is a general outline on how it works:

- The customer identifies their requirements.
- Federal Supply Schedule Contractors may individually meet the customers needs, or -
- Federal Supply Schedule Contractors may individually submit a Schedules "Team Solution" to meet the customer's requirement.
- Customers make a best value selection.

144 WINDY MEADOWS ▯ SCHERTZ, TX 78154
PHONE 210-718-0040 ▯ FAX 210-319-5410

May 30, 2019

To: El Paso Water Utilities
1154 Hawkins Boulevard
El Paso, TX 79925

Ref: W. E. Robertson Water Treatment Plant Control System Upgrade
Quote No. EPWU030819

Prime Controls is pleased to offer this quote for the Control System work associated with the referenced W. E. Robertson Water Treatment Plant project.

This quote is submitted in accordance with our GSA Schedule 70 contract provisions.

We are readily available to review this proposal and trust that you shall not hesitate to call if there are any questions.

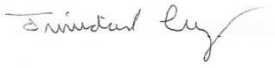
Your consideration of Prime Controls for this work is greatly appreciated.

We sincerely appreciate this opportunity and look forward to being of service for this work.

Thanks again and please feel free to call if there are any questions.

Sincerely,

Prime Controls, LP



Trinidad Cruz
Regional Account Manager
210-718-0040
t.cruz@prime-controls.com

W.E. ROBERTSON WATER TREATMENT PLANT CONTROL SYSTEM UPGRADE
El Paso Water Utilities

Headquarters

1725 Lakepointe Drive
Lewisville, TX 75057
Phone (972) 221-4849 Fax (972) 420-4842
www.prime-controls.com

Branch Offices

Prime Controls – New Orleans
110 Phlox Ave, Suite B
Metairie, LA 70001
Phone (504) 301-3631

Prime Controls –South Texas
144 Windy Meadows Drive
Schertz, TX 78154
Phone (210) 718-0040

Prime Controls – West Texas
4136 Business Park Drive
Amarillo, TX 79110
Phone (806) 553-7880

Prime Controls – East Texas
1065 N. Jackson Street
Jacksonville, TX 75776
Phone (903) 245-0969

Prime Controls – Midland
13020 Highway 191 West, Suite C
Midland, TX 79707
Phone (210) 718-0040

Prime Controls – Southeast Texas
12144 Dairy Ashford, Building 3
Sugar Land, TX 77478
Phone (713) 244-9747

Prime Controls – Oklahoma
9428 South 68th East Avenue
Tulsa, OK 74133
Phone (918) 496-2606

Prime Controls – Central Texas
16821 Joe Barbee
Pflugerville, TX 78660
Phone (512) 375-3580

Prime Controls – Southwest
1515 W. University Drive
Tempe, AZ 85281
Phone (602) 377-2844

EXECUTIVE SUMMARY

W.E. ROBERTSON WATER TREATMENT PLANT CONTROL SYSTEM UPGRADE

Prime Controls, LP of Lewisville, Texas herein presents our proposal to El Paso Water Utilities to upgrade the SCADA system at the W.E. Robertson Water Treatment Plant. This proposal is offered on a fixed-price basis under our GSA Schedule 70 contract that includes Cooperative Purchasing provisions. These provisions allow municipalities in Texas to use GSA Schedules as an alternate procurement method.

The features of our proposed design are:

- Allen-Bradley ControlLogix Programmable Logic Controllers
- Allen-Bradley FactoryTalk SCADA Software
- Plant Control Logic will be reviewed and enhancements incorporated where possible.
- Use Existing Equipment Where Possible
- Provide a Fully-Functional SCADA System using the Latest Technology
- Provide for Future Expansion

Prime Controls has established a reputation for delivering the highest quality control systems. This reputation is the direct result of our Quality Management Program. We will use this program to generate a site-specific Quality Plan which will include a Software Quality Plan.

Prime Controls has assembled a highly-experienced project team to execute this project. The team has performed recent, relevant work for such customers as El Paso Water Utilities, Las Cruces, Dallas, Houston, Sugar Land, Trinity River Authority, and North Texas Municipal Water District.

Prime Controls has the resources to staff this project to meet the schedule requirements. The company uses a matrix organization that allows us to rapidly deploy trained and qualified employees to meet schedule demands. Prime Controls is one of the largest System Integrators in the Industrial Automation sector. This size is a key factor in reducing schedule risk on the project.

Prime Controls has the financial resources to execute this project. With sales in 2018 exceeding $125,000,000, Prime Controls can incorporate this project into our backlog without impacting our financial structure.

Prime Controls is a true “System Integrator” offering complete Control System design, fabrication, installation, commissioning, and maintenance. This complete offering reduces risk to EPWU with an integrated and stream-lined project team.

Prime Controls is a Rockwell Automation Solutions Partner. This elite designation gives us enhanced support for Allen-Bradley hardware and software products.

We invite El Paso Water Utilities to thoroughly examine the information in this proposal. We believe Prime Controls is the best, lowest risk, complete solution for the W.E. Robertson Water Treatment Plant project.

Total System Responsibility

Section 1. PRIME CONTROLS OVERVIEW

A. Introduction

Prime Controls was established in 1997 to provide customers a sole source solution for Industrial Automation services and products. Experience includes Water and Wastewater, Canals, Dams, Hydroelectric Power, Oil and Gas, Critical Infrastructure, Food and Beverage, Pharmaceutical, Cosmetic, Aggregate, Building Products, Electric Utilities, and Energy Management applications. As a dedicated System Integrator and I&C Construction firm, Prime Controls is professionally staffed to supply the customer with all aspects of their Automation and Control needs. Utilizing our vast experience and relationships with multiple manufacturers, Prime Controls works closely with the Customer from project design to post project maintenance. As a certified Systems Integrator for both hardware and software product manufacturers, Prime Controls has access to all required resources including Factory support services.

As an I&C Construction Firm, Prime Controls is a licensed Instrumentation & Electrical contractor and a licensed Engineering firm. These professional service offerings, coupled with our expertise in Industrial Automation, SCADA, and Control applications, Prime Controls has earned the reputation as the premiere “true turnkey” System Integrator in the Southwest and is recognized nationally as one of the largest Systems Integrators in the United States.

The company employs 350 people full-time. The size of our company is such that we have the resources of a mid-size business coupled with the fast response of a small business. Our size and expertise has allowed us to deliver successful projects in recent years from China to New York to Hawaii.

Prime Controls performs the following tasks with our own employees:

- Control System Design
- Control System Engineering
- Software Development
- PLC, HMI, and SCADA Programming
- Control Panel Assembly
- Instrument Calibration
- Electrical Controls Installation
- Mechanical Controls Installation
- Commissioning
- Start-Up
- Testing

B. Company Revenue

Year	Revenue
2018	$130,000,000.00
2017	$95,408,492.00
2016	$82,372,000.00*
2015	$90,240,172.00
2014	$77,196,174.00

In December 2016, the magazine Control Engineering ranked Prime Controls third on their list of System Integrator Giants.

C. Company Location

Prime Controls' headquarters location is:

1725 Lakepointe Drive
Lewisville, TX 75057

Other office locations are:

Prime Controls – New Orleans
110 Phlox Ave. Suite B
Metairie, LA 70001
Phone (504) 301-3631

Prime Controls – Southeast Texas
12144 Dairy Ashford, Building 3
Sugar Land, TX 77478
Phone (713) 244-9747

Prime Controls –South Texas
144 Windy Meadows Drive
Schertz, TX 78154
Phone (210) 718-0040

Prime Controls – Oklahoma
9428 South 68th East Avenue
Tulsa, OK 74133
Phone (918) 496-2606

Prime Controls – West Texas
4136 Business Park Drive
Amarillo, TX 79110
Phone (806) 553-7880

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16821 Joe Barbee
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Phone (903) 245-0969

Prime Controls – Southwest
1515 W. University Drive
Tempe, AZ 85281
Phone (602) 377-2844

Prime Controls – Midland
13020 Highway 191 West, Suite C
Midland, TX 79707
Phone (210) 718-0040

D. Ownership

Prime Controls is a limited partnership registered in Texas. The company began operations as I&C Sales, Inc. in June 1997. The company name and business type was changed in March 2004 from I&C Sales, Inc. to Prime Controls, LP. The company has been in continuous operation under the same ownership and executive management since its founding.

E. Partnership and Teaming Experience

Prime Controls has a proven history of executing and performing work in a true partnership and teaming environment. Many of our projects are based on the design/build concept that requires all members of the team to work together in an open and honest atmosphere that allows all parties to have a successful end result. The process begins and ends with Prime Controls' willingness to accept stewardship responsibility for the performance of our scope and the ability

to contribute to the success of others. This "Win/Win" attitude requires each to not only excel in their particular discipline but also requires each party to assist other participants to be successful as well. Projects of this nature require an extra effort for the establishment and retention of trust, effective and open communications and a demonstrated willingness to do what is required to ensure success by all. Prime Controls' history of repeat business with our critical infrastructure; oil and gas; food and beverages; and municipal customers, clearly demonstrates our ability to be a key and contributing team member in many similar applications.

F. Technical Expertise

Project Management

Prime Controls maintains a staff of professional Project Managers who execute our customer's projects. Project Managers have a comprehensive package of computer-based management tools to assist with scheduling, budgeting, document control, and personnel allocation. As the key customer contact on the project, the Project Manager is given the tools and authority to ensure complete customer satisfaction. All Project Managers currently have or are in the process of obtaining their PMP certification.

Control System Engineering

Prime Controls has a large staff of engineering personnel completely dedicated to process control and industrial automation. This staff includes fourteen licensed Professional Engineers and eighty-one Automation Specialists which include degreed engineers and highly experienced technical specialists. We have staffed our Engineering Department with experienced talent from a wide range of industries. This pool of experience means there are few, if any, issues our people have not solved.

HMI/PLC/RTU Software Development and Implementation

Prime Controls employees have vast experience programming most major PLC/RTU and HMI products. Current factory certifications include Emerson DeltaV, Allen-Bradley, Modicon, Siemens, GE, and Motorola PLC/RTUs and RSView, Wonderware, iFIX, Citect, Iconics, Cimplicity and Siemens WinCC HMI products. We are recognized as the following:

- Rockwell Automation Solution Partner
- Siemens Solution Partner
- Schneider Electric Alliance Partner
- ICONICs Gold Systems Integrator
- GE Premier Solution Partner
- Wonderware Certified System Integrator Partner

All software development is supervised by our corporate engineering Manager, Tim Shepherdson, PE, who is a licensed professional control and software engineer.

UL/Custom Control Panel Design & Assembly

Prime Controls is a certified UL 508 and UL 698A panel shop; we offer both UL certified and non-rated custom panel fabrication. All panel assembly is accomplished via our in-house QA/QC documented process to ensure complete compliance with client specifications and requirements.

OEM/VAR Equipment Procurement

Prime Controls purposely does not represent any single manufacturer. This allows Prime Controls the flexibility to procure and furnish the products best suited for each application and customer preference. Prime Controls is certified by the following major hardware and software product manufacturers:

- Siemens
- Rockwell/Allen-Bradley
- Schneider/Wonderware
- GE
- Iconics
- Motorola
- Schneider/Modicon
- Belden/Hirschmann

Electrical & Mechanical Control Installation

Prime Controls maintains a staff of fully trained electrical control technicians. These highly skilled employees install, troubleshoot and commission control systems. Mechanical control installation services are performed by factory trained tubing specialists. All work is performed via our in-house QA/QC process and standards to ensure full compliance with local, state and customer requirements.

Communications/RF/Fiber Optic System Analysis, Installation and Certification

On-site communications/RF path analysis is performed utilizing state of the art equipment by factory trained professionals. Off-site analysis is also available via the use of software packages specifically developed for same. Fiber Optic installation, terminations, testing and certifications are performed by our employees that are factory trained and certified. State of the art equipment includes Corning X77 Micro Fusion Splicer and OptiVisor 400 OTDR. OTDR provides test results and trace files in electronic format.

Calibration and Start-up Services

Services are performed by degreed and factory trained technicians. Prime Controls maintains a professional growth program which encourages employees to continually enhance their technical skills via ISA certification, factory training, and continued education. All work is performed and documented via our in-house QA/QC process which incorporates industry accepted ISA standards (calibration, loop check, system commissioning, etc.). Customer specific requirements are incorporated as needed.

Operations and Maintenance Training

Services are custom tailored to meet or exceed customer expectations. Great care is taken to clearly define customer requirements and then properly prepare course agenda and content. Services are performed by Prime Controls professionals and factory personnel as needed. Services can be performed at our facility, on-site, or by video.

Customized Maintenance Services Including 24/7

Prime Controls maintains a fully staffed service department specifically structured to provide preventive and corrective maintenance services. This service includes scheduled maintenance programs as well as 24/7 emergency services. A toll free number is maintained (1-866-99SCADA) for after hours and weekend response. Maintenance and Service Agreements are customized to meet specific requirements including budgetary constraints. All work is performed by on-staff technicians and engineers.

Accountability from "Start to Finish"

Prime Controls takes complete responsibility for all provided services and products. This commitment continues beyond standard warranties and ensures long term relationships with our Customers.

TOTAL SYSTEM RESPONSIBILITY

G. Company Financials

Prime Controls has more than adequate financial resources to successfully execute and complete this project. Required resources are derived from our internal working capital and supplemented by our $3,000,000.00 line of credit. Our bonding capacity is $35,000,000.00 for an individual project and $80,000,000.00 in aggregate.

Year-end financial statements prepared by our independent accounting firm and interim statements prepared in-house are available upon request.

Section 2. EXPERIENCE AND REFERENCES

A. Project Experience

Prime Controls has extensive experience in SCADA systems for water and wastewater treatment facilities for municipalities. This experience includes system design, programming, integration, training and implementation services. Many of our municipal customers have retained our services for multiple projects spanning ten or more years. Large, recent municipal customers include:

Customer	**Project Description**
Arlington Water Utility	Water Distribution SCADA
Dallas Water Utility	Water Distribution SCADA
Guadalupe-Blanco River Authority	Hydroelectric Power SCADA
Georgetown, Texas	Water/Wastewater SCADA
Houston	Wastewater Collection/Treatment SCADA
Oklahoma City	Water Distribution SCADA
Pasadena, Texas	Water/Wastewater SCADA
Pine Bluff, Arkansas	Water Distribution SCADA
Sugar Land, Texas	Water Distribution SCADA
Trinity River Authority, Water	Water/Wastewater SCADA

In the past five years our Water and Wastewater group has completed more than $100M in Instrumentation and Controls work. Included in this total are 46 Municipal Water and Wastewater SCADA projects each valued at more than $1M and 8 that are larger than $5M. This large number of large SCADA projects is indicative of the trust our customers place in Prime Controls.

Municipal Water and Wastewater customers include:

Addison, TX	Ft. Worth, TX	North Texas Municipal Water District
Amarillo, TX	Garland, TX	Oklahoma City, OK
Aquilla Water Supply	Georgetown, TX	Oro Valley, FL
Arlington, TX	Granbury, TX	Pantego, TX
Austin, TX	Grand Prairie, TX	Park Cities, TX
Balch Springs, TX	Grapevine, TX	Pasadena, TX
Bartlesville, TX	Greenbelt Water Authority	Pearland, TX
Baton Rouge, LA	Guadalupe-Blanco River	Plaquemines Parish, LA
Beaumont, TX	Gulf Coast Water Authority	Richardson, TX
Belton, TX	Highland Village, TX	Richmond, TX
Blanchard, LA	Houston, TX	Roanoke, TX
Boerne, TX	Hurst, TX	Round Rock, TX
Brazos River Authority	Jefferson Parish, LA	San Angelo, TX

Burleson, TX	Killeen, TX	San Antonio River Authority
Canadian River Authority	Kyle, TX	San Antonio Water System
Carrollton, TX	Lake Cities, TX	Schertz, TX
Cedar Park, TX	Lancaster, TX	Sewerage & Water Board of NOLA
Clear Lake, TX	Laredo, TX	Shavano Park, TX
Cleburne, TX	Las Cruces, NM	Shreveport, LA
Clute, TX	League City, TX	Southlake, TX
Conroe, TX	Lewisville, TX	St. Bernard Parish, LA
Coppell, TX	Little Elm, TX	St. Charles Parish, LA
Corinth, TX	Lorena, TX	Sugar Land, TX
Dallas County, TX	Lower Colorado River Authority	Sweetwater, TX
Decatur, TX	Lucas, TX	Taylor, TX
Deer Park, TX	Lutcher, LA	Temple, TX
Del Rio, TX	Marana, AZ	Terrell, TX
Denton, TX	McKinney, TX	Texas City, TX
Denton, TX	Mesquite, TX	The Colony, TX
El Paso, TX	Midland, TX	Travis County, TX
Euless, TX	Midlothian, TX	Trinity River Authority
Farmers Branch, TX	Mineral Wells, TX	Tulsa, OK
Flower Mound, TX	Missouri City, TX	United States Army Corps of Engineers
Frisco, TX	Natchez, MS	Uvalde, TX
		Waco, TX

B. Project References

The following project references are representative of the projects we have performed for the listed municipal customers. These projects include all of the services required by the Scope of Work.

Project:	**Haskell R. Street Wastewater Treatment Plant SCADA**
Owner:	City of El Paso
Owner's Representative:	Severo Borrego, Instrumentation & Control Manager 4801 Fred Wilson El Paso, TX 79906
Phone Number:	915-258-9512
Email:	sborrego@epwu.org
Project Manager:	Scott Carter/Trinidad Cruz
Start:	May 2014
Completion:	October 2014
Contract Amount:	$1,776,000 No Change Orders
Project Description:	Prime Controls designed, installed, and commissioned a Rockwell Automation (Allen-Bradley) PlantPAx industrial control system for a 27.7 MGD wastewater treatment plant. This upgrade to the existing system used the same control logic, but upgraded the hardware, software, and communications. I/O Points: 1500
Major Equipment:	• Control Panels • Allen-Bradley ControlLogix PLCs • FactoryTalk Historian • Workstations • Radio Communications
System Includes:	• Headworks • Digesters • Grit Removal • Belt Press • Mixed Sludge • Blowers • Chemical Feed
Services Provided:	Prime Controls provided a turn-key Control system. Specific services included: • Prime and Subcontractor Responsibility • Electrical Subcontractor Supervision, Coordination, Accountability • Conceptual and Detailed Design for Complete Project Application Engineering • PLC/HMI Software Development and Implementation • Custom Trend Development and Implementation • Custom Panel Fabrication & Assembly • Hardware Procurement • Instrumentation Installation and Calibration • Computer Network Installation • Factory and On-Site System Testing • Startup and System Commissioning • WiFi Radio Installation • Project Documentation • Operator and Engineer Hardware and Software Training • Warranty and On-Going Support Services

Project:	**EPWU Bustamante WWTP PHASE I & II SCADA**
Owner:	City of El Paso
Owner's Representative:	Severo Borrego, Instrumentation & Control Manager 4801 Fred Wilson El Paso, TX 79906
Phone Number:	915-258-9512
Email:	sborrego@epwu.org
Project Manager:	Scott Carter/Trinidad Cruz
Start:	October 2015
Completion:	December 2016
Contract Amount:	$2,665,000 No Change Orders – Phase I and Phase II

Project Description: Prime Controls designed, installed, and commissioned a Rockwell Automation (Allen-Bradley) PlantPAx industrial control system for a 39 MGD wastewater treatment plant. This upgrade to the existing system used the same control logic, but upgraded the hardware, software, and communications. I/O Points: 1950

Major Equipment:

- Control Panels
- Allen-Bradley ControlLogix PLCs
- FactoryTalk Historian
- Workstations/Servers
- Asset Centre with Disaster Recovery
- Wastewater Simulator for Operations/Maintenance Training

System Includes:

- Headworks
- Digesters
- Grit Removal
- Aeration
- Mixed Sludge
- Blowers
- Chemical Feed
- Sand Filters

Services Provided: Prime Controls provided a turn-key Control system. Specific services included:

- Conceptual and Detailed Design for Complete Project Application Engineering
- PLC/HMI Software Development and Implementation
- Custom Trend Development and Implementation
- Custom Panel Fabrication & Assembly
- Simulation Development for Operations/Maintenance Training
- Hardware/Instrumentation Product Procurement
- Computer Network Installation
- Factory and On-Site System Testing
- Startup and System Commissioning
- Project Documentation
- Operator and Engineer Hardware and Software Training
- Warranty and On-Going Support Services

Project:	**Twin Oaks Brackish Groundwater Desalination**
Owner:	San Antonio Water System
Owner's Representative:	Ron Lee, Project Manager (Alterman Electric)
Phone Number:	210-912-6713
Email:	rlee@goalterman.com
Completion:	September 2016
Project Manager:	Trinidad Cruz
Contract Amount:	Initial: $4,893,726.00 Final: $5,121,652.30
Project Description:	Prime Controls designed, installed, programmed and commissioned a Rockwell Automation (Allen-Bradley) PlantPAx industrial control system for a 12 MGD Desalination Plant. This included procurement, calibration and installation of instrumentation.

Major Equipment:

- Control Panels
- Allen-Bradley ControlLogix PLCs
- FactoryTalk Historian
- Instrumentation
- Servers/Workstations
- Radio Communications
- Asset Centre for Audit Trail/ Disaster Recovery

System Includes:

- Production Wells
- Injection Wells
- Reverse Osmosis
- Pretreatment
- Post Treatment
- Concentrator
- Chemical Feed

Services Provided: Prime Controls provided a turn-key Control system. Specific services included:

- Prime and Subcontractor Responsibility
- Electrical Subcontractor Supervision, Coordination, Accountability
- Conceptual and Detailed Design for Complete Project Application Engineering
- PLC/HMI Software Development and Implementation
- Custom Trend Development and Implementation
- Custom Panel Fabrication & Assembly
- Hardware / Instrumentation Product Procurement
- Instrumentation Installation and Calibration
- Computer Network Installation
- Factory and On-Site System Testing
- Startup and System Commissioning
- Project Documentation
- Operator and Engineer Hardware and Software Training
- Warranty and On-Going Support Services

Project:	**Regional Water System Water Treatment Plants I, II, III, & IV Ozonation Project No. 153**
Owner:	North Texas Municipal Water District
Owner's Representative:	Steve Long, Project Manager
Phone Number:	972-442-5405
Email:	slong@ntmwd.com
Project Manager:	Lain Cloy
Start:	January 2011
Completion:	October 2014
Contract Amount:	$3,667,712.59
Project Description:	Complete SCADA system for a large water treatment plant. The system includes Ozonation, Water Cooled Chillers, Ozone Generation, and Service Water. Prime Controls supplied Rockwell Automation PLCs and SCADA software. The SCADA system included a data historian. The SCADA computer network required 16 network switches and included a domain server, historian server, operator workstations, and notebook computers. This project required extensive use of VMWare software in order to maximize the effectiveness of the SCADA computer network. Prime Controls developed and executed a virtualization plan.

Major Equipment:

8 PLC Control Panels
40 Other Control Panels
SCADA Network
HMI Computer System
Instruments for measuring flow, temperature, pressure, and chemical concentration

I/O Points:
DI-992
DO-275
AI-172
AO-94
Total-1533

System Includes:

- 4 Treatment Plant Sites
- 2 Ozone Facilities

Services Provided: Prime Controls provided a turn-key Control system. Specific services included:

- Prime and Subcontractor Responsibility
- Electrical Subcontractor Supervision, Coordination, Accountability
- Conceptual and Detailed Design for Complete Project Application Engineering
- PLC/HMI Software Development and Implementation
- Custom Trend Development and Implementation
- Custom Panel Fabrication & Assembly
- Hardware/Instrumentation Product Procurement
- Instrumentation Installation and Calibration
- Computer Network Installation
- Factory and On-Site System Testing
- Startup and System Commissioning
- Project Documentation
- Operator and Engineer Hardware and Software Training
- Warranty and On-Going Support Services

Project:	**SCADA System Upgrades and Operations**
Owner:	North Texas Municipal Water District
Owner's Representative:	David Scott 501 E. Brown St. Wylie, TX 75098
Phone Number:	972-442-5405
Email:	dscott@ntmwd.com
Project Manager:	Lain Cloy
Start:	January 2013
Completion:	December 2014
Contract Amount:	$2,830,320.37
Project Description:	Furnish and install an upgraded SCADA system for the 4 water plants at the Wylie Campus. The new SCADA System consists of new SCADA and Historian Servers and Operator Workstations, new HMI software, new/upgraded PLCs and a fiber-optic SCADA network. The system has provisions for future expansion. The SCADA software is Rockwell Automation FactoryTalk. The PLCs are Rockwell Automation. The SCADA System also communicates to existing Schneider Electric Modicon PLCs.
Major Equipment:	• 12 ControlLogix PLCs • 6 CompactLogix PLCs • 8 Ethernet Switches • RSLogix 5000 PLC Software • 2 SCADA Servers • 2 Historian Servers • 1 Domain Controller • 6 Operator Workstations
System Includes:	• 4 Water Plants

Services Provided: Prime Controls provided a turn-key Control system. Specific services included:

- Prime and Subcontractor Responsibility
- Electrical Subcontractor Supervision, Coordination, Accountability
- Conceptual and Detailed Design for Complete Project Application Engineering
- PLC/HMI Software Development and Implementation
- Custom Trend Development and Implementation
- Custom Panel Fabrication & Assembly
- Hardware / Instrumentation Product Procurement
- Instrumentation Installation and Calibration
- Computer Network Installation
- Factory and On-Site System Testing
- Startup and System Commissioning
- Project Documentation
- Operator and Engineer Hardware and Software Training
- Warranty and On-Going Support Services

Project:	**City of Sugar Land Groundwater Plant Upgrades**
Owner:	City of Sugar Land
Owner's Representative:	Brian Butscher, PE
Phone Number:	281-275-2456
Email:	bbutscher@sugarlandtx.gov
Project Manager:	Michael Nivong
Start:	January 12, 2012
Completion:	November 18, 2013
Contract Amount:	$1,251,248.80
Project Description:	Complete control system for a Groundwater System. The system serves the City of Sugar Land by controlling a group of water wells, tanks, and treatment plants. The various sites are networked via data radios. Prime Controls provided Design, Programming, Control Panel Manufacturing, System Installation, Instrument Procurement and Installation, Testing, and Commissioning.

Major Equipment:

Rockwell Automation (Allen-Bradley) PLCs
GE iFIX SCADA Software
Freewave HT Plus Radios
Allen-Bradley PanelView OITs
Dell SCADA Workstations

I/O Points

- DI-656
- DO-272
- AI-184
- AO-88
- Total-1200

System Includes:

7 Groundwater Plants
4 Elevated Storage Tanks
8 Remote Water Wells

Services Provided:

Prime Controls provided a turn-key Control system. Specific services included:
Prime and Subcontractor Responsibility
Electrical Subcontractor Supervision, Coordination, Accountability
Conceptual and Detailed Design for Complete Project Application Engineering
PLC/HMI Software Development and Implementation
Custom Trend Development and Implementation
Custom Panel Fabrication and Assembly
Hardware/Instrumentation Product Procurement
Instrumentation, Installation and Calibration
Computer Network Installation
Factory and On-Site System Testing
Startup and System Commissioning
Project Documentation
Operator and Engineer Hardware and Software Training
Warranty and On-Going Support Services

Project:	**City of Sugar Land Surface Water Plant Upgrades**
Owner:	City of Sugar Land
Owner's Representative:	Brian Butscher, PE
Phone Number:	281-275-2456
Email:	bbutscher@sugarlandtx.gov
Contracted to:	CH2M HILL / WBG
Contact:	Michael Fox, Phone Number: (281) 565-9294
Start:	November 28, 2011
Completion:	June 30, 2013
Contract Amount:	$389,098.43
Project Description:	Control System for a large Water Treatment Plant

Major Equipment:

- Allen-Bradley ControlLogix PLCs
- GE iFIX HMI
- Iconics Hyperhistorian
- 850 I/O Points

Services Provided: Prime Controls provided a turn-key Control system. Specific services included:

- Subcontractor Responsibility
- Conceptual and Detailed Design for Complete Project Application Engineering
- PLC/HMI Software Development and Implementation
- Custom Trend Development and Implementation
- Custom Panel Fabrication & Assembly
- Hardware / Instrumentation Product Procurement
- Instrumentation Installation and Calibration
- Computer Network Installation
- Factory and On-Site System Testing
- Startup and System Commissioning
- Project Documentation
- Operator and Engineer Hardware and Software Training
- Warranty and On-Going Support Services

Project:	**Hickory Groundwater Treatment Facility**
Owner:	City of San Angelo
Owner's Representative:	Kevin Krueger, City of San Angelo
Phone Number:	325-657-4260
Account Manager:	Chanc Cobb
Start:	September 2013
Completion:	December 2014
Contract Amount:	$783,994.00
Project Description:	Prime Controls provided a complete PLC based control system for a new Groundwater Treatment Plant in Tom Green County, TX. The PLC system uses Modicon PLCs with Unity Pro PLC software. The SCADA software is GE iFIX. HMI software is Vijeo Citect.

Major Equipment:

- Magnetic Flow Meter
- Flow Switch/Level Switch
- Pressure Transmitter/Pressure Switch
- Pressure Gauges
- Ultrasonic Level Transmitter
- Rotameters
- Dissolved Oxygen Analyzer
- Network Equipment (Switches, Media Converters, etc.)
- Computer Products (WS-2, WS-3, WS-50, Printer, UPSs, etc.)
- Software Products (iFIX, Unity, Vijeo, MS.)
- Fully Assembled and Tested PLC Panel (PCM-50)
- Fully Assembled and Tested PLC Panel (PCM-60)

Services Provided: Prime Controls provided a turn-key Control system. Specific services included:

Prime and Subcontractor Responsibility
Electrical Subcontractor Supervision, Coordination, Accountability
Conceptual and Detailed Design for Complete Project Application Engineering
PLC/HMI Software Development and Implementation
Custom Trend Development and Implementation
Custom Panel Fabrication & Assembly
Hardware/Instrumentation Product Procurement
Instrumentation Installation and Calibration
Computer Network Installation
Factory and On-Site System Testing
Startup and System Commissioning
Project Documentation
Operator and Engineer Hardware and Software Training
Warranty and On-Going Support Services

Project:	**Hickory Water Supply Project Booster Pump and Well Field**
Owner:	City of San Angelo
Owner's Representative:	Kevin Krueger
Phone Number:	325-657-4260
Email:	kevin.krueger@sanangelotexas.us
Account Manager:	Chanc Cobb
Start:	April 2012
Completion:	December 2013
Contract Amount:	$2,032,076.19
Project Description:	The scope of this project was a new SCADA system for a booster pump station and associated well field. The system was integrated into an existing SCADA system at the water treatment plant. The system uses RTUs at the remote sites communicating via data radio. The system allows complete control from both the Booster Pump Station and the Water Treatment Plant.

Major Equipment:

- 10 PLC Panels (Modicon PLCs)
- 4 Local Control Panels
- 12 Radio Towers
- iFIX HMI Software
- Unity Pro PLC Software
- Instrumentation (flow, pressure, level)
- 2 Repeater Panels
- 2 SCADA Servers
- Historian Server
- Domain Controller
- 2 Operator Workstations
- Engineering Workstation
- Laptop Computer

System Includes:

- Booster Pump Stations
- Well Field
- Transmission Main and Water Treatment Plant

Services Provided: Prime Controls provided a turn-key Control system. Specific services included:

- Prime and Subcontractor Responsibility
- Electrical Subcontractor Supervision, Coordination, Accountability
- Conceptual and Detailed Design for Complete Project Application Engineering
- PLC/HMI Software Development and Implementation
- Custom Trend Development and Implementation
- Custom Panel Fabrication & Assembly
- Hardware/Instrumentation Product Procurement
- Instrumentation Installation and Calibration
- Computer Network Installation
- Factory and On-Site System Testing
- Startup and System Commissioning
- Project Documentation
- Operator and Engineer Hardware and Software Training
- Warranty and On-Going Support Services

Project:	**Permanent Canal Closures and Pumps** **USACE Contract W912P8-12-C-0049**
Owner:	US Army Corps of Engineers—New Orleans District
Owner's Representative:	Kirby Stumpf, PCCP Constructors, Inc.
Phone Number:	504-733-3040
Email:	Kirby@mrpittman.com
Project Manager:	Lain Cloy
Completion:	Start: September 2013, Completion: November 2017
Contract Amount:	$8,846,685.00
Project Description:	Design-Build contract to construct 3 canal closure structures to replace the Interim Closure Structures completed after Hurricane Katrina. Prime Controls is providing the Control System that monitors and controls the three pumping stations and includes pumps, generators, fuel farms, communications, and instrumentation. The 3 structures communicate with each other, the Jefferson Parish emergency center, and the USACE Emergency Operations Center.
System Includes:	• Rockwell Automation ControlLogix PLCs • Operator Workstations and Historian Servers • Fiber Optic and Radio Communications • Main and Local Control Panels • 5000 hard I/O Points • 6000 soft I/O Points
Services Provided:	Prime Controls is providing a turnkey Control system. Specific services include: • Subcontractor Responsibility • Electrical Subcontractor Supervision, Coordination, Accountability • Conceptual and Detailed Design for Complete Project Application Engineering • PLC/HMI/SCADA Software Development and Implementation • Custom Trend Development and Implementation • Custom Panel Fabrication and Assembly • Hardware/Instrumentation Product Procurement • Instrumentation Installation and Calibration • Computer Network Installation • Factory and On-Site System Testing • Startup and System Commissioning • Project Documentation • Operator and Engineer Hardware and Software Training • Warranty and On-Going Support Services

Section 3. PROJECT TEAM

A. Organizational Chart

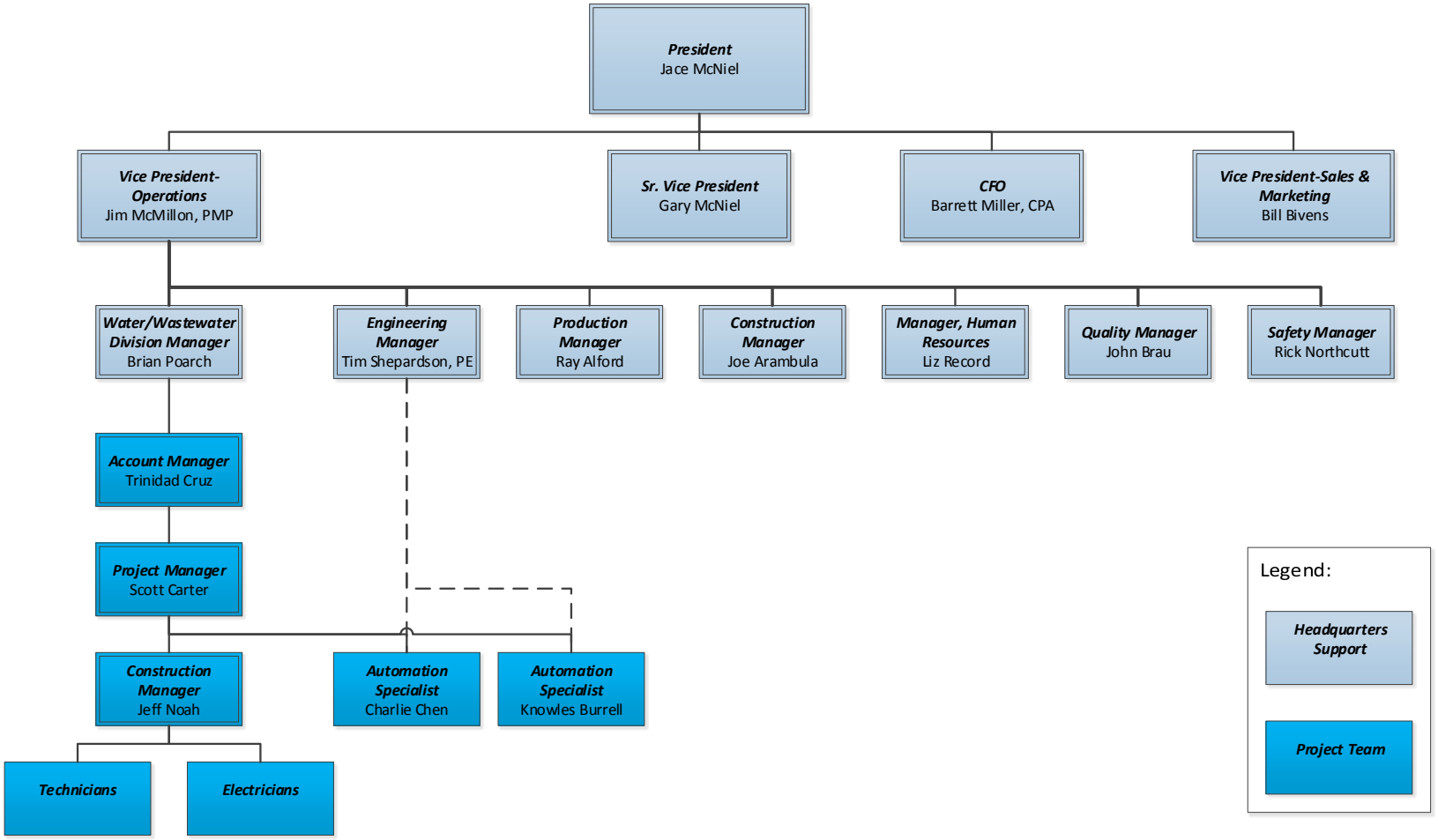
Prime Controls has assigned an experienced, highly capable project team to this effort. The Account Manager is Trinidad Cruz. As the manager of the Prime Controls offices in San Antonio and Amarillo, Trinidad has at his disposal a highly-skilled workforce that he will allocate as required. In addition to the local assets, Trinidad will draw on a pool of Professional Engineers and Automation Specialists from our Lewisville, Texas headquarters, as well as more localized Prime Controls resources in the Midland – Odessa area. Trinidad obtains resources from Lewisville through Brian Poarch, Water/Wastewater Division Manager. Brian will be personally involved with the oversight of this project bringing executive level attention to this critical effort.

Scott Carter will be the Project Manager. Scott has managed several of our projects for El Paso Water. This experience serves to reduce the risk to the project because of his familiarity with the unique requirements of El Paso Water.

The Automation Specialists are Knowles Burrell and Marco Arellano. Their responsibilities include design, programming, oversight of the installation process, and documentation. They are assisted in the design and programming tasks by personnel in the Lewisville, and San Antonio locations. Overseeing the design and programming will be Tim Shepherdson, P.E. Tim is the Engineering Manager for Prime Controls. It is his responsibility to ensure the design meets customer, industry, and Prime Controls standards. Tim's staff includes Professional Engineers licensed in Texas who will assist in the design.

The following Project Organizational Chart illustrates this matrix approach.

PROJECT ORGANIZATIONAL CHART



B. Resumes

Brian Poarch

Water/Wastewater Division Manager

Senior Executive responsible for all Water and Wastewater projects at Prime Controls. Through teams of Project Managers, oversees dozens of projects per year that combine to produce approximately $25M in yearly revenue for the company.

Total Years of Experience
20

Years of Experience with Firm
16

Expertise
Project Management

Education
North Lake Community College – Electrical Technology

Industries

- Semiconductor Manufacturing
- Water/Wastewater
- Power Plants
- Government
- Power Plants
- Pharmaceutical

Relevant Skills

- Project Management
- Safety Supervision
- Construction Management
- Instrumentation/Valve Specification/Implementation
- Civil Construction
- Startup Supervision/Implementation

Previous Employers

- Team Controls
- GE Automation Services

Project Experience

- Hundreds of Municipal Multiple Water/Wastewater Projects
- Semiconductor Fabs
- Pharmaceutical – Mary Kay, Alcon, Abbott Labs
- Food & Beverage – Frito-Lay, Pace Foods, Miller Brewing

Training

- Various PLC Manufacturer Training Programs - Modicon, Siemens, Allen-Bradley, Motorola, etc.
- Various HMI Manufacturer Training Programs - Wonderware, Intellution, Lookout, etc.
- Various Instrument Training Manufacturer Programs

Trinidad Cruz, PMP

South Texas Branch Manager

Total Years of Experience
36

Years of Experience with Firm
8

Expertise
- Central Utility Plants
- Semiconductor Fabs
- Fire and Gas Safety Systems

Education
Electrical Engineering Technology – Albuquerque Tech

Senior-level Business Unit Manager and project management professional with more than 35 years of experience exceeding client expectations through Instrumentation and Control systems design and build of onshore control room and offshore platform auxiliary systems. Design, construct, and deliver major projects, building client trust and developing new revenue streams. Specialized training program development and delivery for engineering and technical oil and gas industry professionals. Successfully managing multiple, large-scale projects and budgets.

Industries

- Semiconductor HVAC and Ultra-Pure Water
- Anhydrous Ammonia
- Carbon Black
- Chemical

Relevant Skills

- Programming various PLCs and HMIs
- Life Cycle Engineering Project Execution
- Design Control System
- Startup and Maintenance Support

Previous Employers

- Tegron Latin America
- Saudi Aramco
- Advanced System Integration
- Terra International
- J.M. Huber Corporation

Industry Experience

- Automation Off-Shore Platforms
- Fire and Gas Safety System
- Emergency Shutdown System
- Semiconductor - Ultra-Pure water
- Semiconductor HVAC
- Saudi Aramco Sr. Instructor
- Water/Wastewater Treatment

Training

- Siemens S7-300 Programming
- Fisher Provox Maintenance and Certification
- VMS Administration Digital Corporation

Scott Carter

Project Manager

Project Manager with over 10 years of Experience in Municipal Water and Wastewater Treatment Infrastructure Projects

Industries

- Water/Wastewater

Relevant Skills

- Product Team Leadership
- Developing Good Working Relationships with Owners, Engineers, and Contractors to Ensure Quality Driven Projects
- Value Engineering

Total Years of Experience
11

Years of Experience with Firm
3

Expertise

Project Management

Education

Universal Technical Institute, Houston, TX – HVAC/R

Previous Employers

- Purcell Contracting, Ltd.
- Abilene Electrical Contractors
- General Engineering
- Trac-N-Trol
- Weldon Contractors

Project Experience

- Bluebonnet Water Supply Corporation – RDA Water Treatment Plant Improvements Temple, TX
- Water Treatment Plant Improvements – City of Winters, TX
- Bell County WCI&D No. 1 – Water Treatment Plant Expansion
- Texas Department of Transportation Waco, TX – I-35 Lift Station Project
- City of Waco, TX – Riverside Water Treatment Plant Rehab
- White River Municipal Water District, Spur, TX – Water Treatment Plant Modifications
- Aquilla Water Supply District, Hillsboro, TX – Water Treatment Plant Expansion
- City of Killeen, TX – Lift Station No. 2 Project
- Millerview-Doole Water Supply Corporation – Raw Water Intake Structure Project
- City of Brady, TX – Water Treatment Plant Project
- City of Hamlin, TX – Pump Station Project
- City of Abilene, TX – Buck Creek Grit Removal System
- City of Waco, TX – TSTC Ground Storage Tank, Pump Station and Chemical Building Project
- Possum Kingdom Water Supply Corporation, Graford, TX – Water Treatment Plant Phase II and III Pump Stations

Jeff Noah

Master Electrician/Installer

Electrical construction and managing with more than 27 years of experience in commercial and industrial projects.

Industries

Semiconductor Manufacturing
Government
Power Distribution
General Industry

Relevant Skills

Electrical Installation
Field Supervision
Control Panel Installation
Electrical System Testing

Total Years of Experience
27

Years of Experience with Firm
2

Expertise
Master Electrician

Previous Employers

- Long Electric
- Francis Electric

Industry Experience

Multiple Water/Wastewater, Oil and Gas, Project Support TX, LA

Training

- Basic Plus: CPR, AED and First Aid for Adults
- OSHA 10
- Aerial Work Platform
- MSHA
- PEC Safety Cardholder (2014)

Charlie Chen

Senior Automation Specialist

Total Years of Experience
9

Years of Experience with Firm
5

Expertise
Automation

Education
BS, Electrical Engineering – University of Texas at Austin

MBA – Texas State University at San Marcos

Over 9 years of Application, Software Development and System Commissioning Experience in the following Industries:

Industries

- Data Centers
- Water/Wastewater
- Oil and Gas
- Food and Beverage
- OEM
- Power Plants

Relevant Skills

- Project Team Leadership
- Programming PLC, HMI, SCADA, and Reporting
- System Design / Panel Layout
- Instrumentation / Commissioning
- Technical Supervision
- Startup Supervision / Implementation
- Project Documentation

Previous Employers

- Control Panels USA
- U.S. Air Force Research Laboratory
- Central Texas Water Maintenance

Industry Experience

- Multiple Water/Wastewater – City of Georgetown, City of Round Rock, City of Austin, etc.
- Multiple Oil and Gas – PVR Midstream, Eagle Rock Energy, etc.
- Food and Beverage – Coca-Cola
- Data Centers – Data Foundry
- OEM – Houston Service Industries

Training

- Various PLC Manufacturer Training Programs – Allen-Bradley and GE Proficy Process Systems
- Various HMI Manufacturer Training – Wonderware, RSView, FactoryTalk View Studio, iFIX, etc.
- Various Manufacturer Instrumentation Training Programs – Endress+Hauser, Foxboro, Hach, Rotork, etc.
- OSHA 10 Hr. Certification

Knowles Burrell

Sr. Automation Specialist

Total Years of Experience
7

Years of Experience with Firm
5

Expertise
Programming and Start-Up of Industrial Control Systems

Efficiency-driven worker with over 6 years of experience in a fast-paced industrial environment dealing with operations, software development and system commissioning.

Industries

- Utilities

Relevant Skills

- Project Team Leadership
- Startup Supervision / Implementation
- Software Design / Development / Implementation
- Technical Supervision

Previous Employers

- Texas Tech University
- WebMD Practice Services
- Print2Web
- Software Spectrum

Industry Experience

- PLC-5 to ControlLogix Upgrade
- Cooling Tower Acid System Retrofit
- Project Lead on Retrofit of Chiller
- Cooling Tower VFD Redesign (Fan and Pump)

Training

- Allen-Bradley Rockwell ControlLogix
- Micromod MLMod30
- GE Fanuc iFIX
- Air-Conditioning & Refrigeration Universal Certification

Section 4. PROJECT PLAN

A. Project Management

1. General

This project will be managed and executed from our office in Schertz, Texas with support from personnel in Lewisville and Midland-Odessa.

Our Project Management approach is based on continuous communication with the Owner. We will deliver a complete project that conforms to all requirements. Further, we commit to providing a solution that delivers functionality in the method that most closely matches the operational realities of the Owner's mission. To accomplish these objectives, we will seek Owner input on each aspect of the design.

A solid project management philosophy is key to a successful implementation of any project. Prime Controls has established a project management philosophy, called the Project Life Cycle that is central to every project effort undertaken. This methodology includes a set of common tools and techniques that have proven to be vital in the execution of a successful project. By implementing a standardized approach to project execution, consistent communication and more satisfying deliverables can be more routinely delivered to the client.

Prime Controls has a number of tools used in managing a project. Some of these include:

Microsoft Office

Microsoft Project

Timberline Integrated Project Management and Job Cost Accounting System

The use of these tools gives a standard approach to project management and helps ensure schedule adherence, cost tracking, and ultimately Customer satisfaction. Microsoft Office Tools and Timberline are used to track project communications (transmittals, submittals, RFIs, meeting minutes action lists, etc.) as well as the project change log (both those approved as well as those not yet approved). Microsoft Project will be the tool used to track the project schedule and to keep the Customer apprised of changes to the schedule. Timberline is utilized to provide detail Job Cost accounting and related project reports.

2. Project Control

Project Digitization--Prime Controls conducts much of its business across the Internet. This will include the posting of files for submittals and documentation on to the Internet for remote access. Our communication network and our file sharing site are continuously monitored and updated by our IT department in order to maintain the strictest security.

Remote Meetings--Prime Controls will conduct some design review meetings regularly across the Internet. This technology allows the Customer and Prime Controls to share PC-based applications at the same time without having to transfer large files or load expensive software licenses on various machines.

B. Construction Safety Program

Prime Controls is committed to construction safety. Within his overall responsibility for safety, Scott Carter, Project Manager, is specifically responsible for Health and Safety Leadership and Accountability. The Project Manager will ensure participation by all team members. The Project Manager will incorporate the EPWU Safety Program requirements into a project specific Health and Safety Plan.

The Project Manager will inform other contractors of our Health and Safety requirements and will be responsible to ensure any violations are immediately reported.

Prime Controls has a formal safety manual, entitled Environmental, Safety, and Health (ES&H) Policy. This manual contains all the detailed procedures and processes by which Prime Controls conducts our safety program. The manual consists of more than 500 pages and is too large to include in this proposal. It is available upon request.

Prime Controls has addressed the following Key Issues:

- On-Site Safety Supervisor—This role will be filled by the Prime Controls Project Superintendent
- Trained Employees—Prime Controls maintains an extensive training program both in OSHA training and job functional training.
- Materials—Material Safety Data Sheets will be on-site for all material.
- Signage—Prime Controls employees are instructed to strictly follow on-site signage.
- Lockout/Tagout—Prime Controls employees are thoroughly instructed in lockout/tagout procedures and have extensive experience performing work in accordance with those procedures.
- Confined Spaces—Prime Controls employees are trained to recognize Confined Spaces. We do not expect to perform confined space work on this project.
- Hot Work Permits—Prime Controls employees are trained to obtain Hot Work Permits as required.
- Accident/Near Miss Reporting—The On-Site Safety Supervisor has the specific duty to conform to these requirements.
- Excavation Permit—Prime Controls employees are trained to recognize when excavation permits are required. We do not expect to perform excavation work, nor any work inside an excavation, on this project.
- Job Hazard Analysis—Prime Controls employees are trained to perform Job Hazard Analysis for each portion of their work. Job Hazard Analysis forms are maintained on-site and will be provided as required.
- PPE—Prime Controls employees are trained in the use of PPE. All PPE is provided by Prime Controls for our employees and must meet applicable standards.
- New Employee Orientation—Prime Controls has an extensive New Employee Orientation as described in our EH&S Policy.
- Regular Safety Meetings/Training—Prime Controls participates in OSHA 10 and OSHA 30 as described in our EH&S Policy.

- Tracking—Prime Controls EH&S Manager maintains records of Safety Meetings and Training. These records may be submitted as required.
- Emergency Plan—These plans are a part of the site-specific Safety Plan.
- Emergency Medical Services—Prime Controls employees are trained to contact emergency medical services in accordance with on-site procedures.
- Accident Investigation—Prime Controls has an extensive, thorough accident investigation procedure contained in our EH&S Policy.
- Chemical Hazards—In addition to the MSDS provisions above, Prime Controls will remove all designated materials at the conclusion of work.
- Fall Protection—Prime Controls employees are trained in fall protection procedures and equipment. The company provides fall protection PPE as required.
- Respiratory Protection—Prime Controls recognizes that respiratory protection PPE requires special training and record keeping and is covered in our EH&S Policy. Prime Controls does not expect to require its employees to need respiratory protection PPE on this project.
- Grounding—Prime Controls employees are trained in the proper use of GFCIS.
- Mobile Equipment/Crane Operator—Should this equipment be required, Prime Controls will supply licensed and trained operators. We do not expect to need this equipment for this project.
- Toolbox Meetings—Prime Controls conducts Toolbox Meetings to review timely safety information pertaining to a particular job.

Specific responsibilities of the On-Site Safety Supervisor include, but are not limited to:

- Daily Work Site Inspections
- Documented Safety Inspections
- Documented Safety Orientation
- Accident/Injury/Near Miss Investigations
- Safety Records
- Enforcement

C. Quality Assurance Process

Prime Controls operates in four distinct areas when executing a project: Design, Manufacturing; Programming; and Installation. Each of these areas requires a different approach to quality control.

3. Design

The Design group, reporting to the Engineering Manager, uses standards developed by Prime Controls to engineer control panels and control systems. These standards are modified as required to conform to specific customer requirements. The standards are communicated to the project teams via twice-yearly Engineering Roundtable meetings. At these meetings, all of the Automation Specialists and Project Engineers gather to discuss developments in control system design and how those developments fit into our standards. The standards have evolved and will continue to do so as new technologies and best practices are introduced. The panel design standards developed by Prime Controls have been adopted by several of our customers.

The use of design standards reduces design errors. Once drawings are produced, they are checked by other designers and then reviewed by the Project Engineer and Project Manager. These quality checks ensure the drawings are conveying the correct information.

4. Manufacturing

The Production Department receives panel design documentation from the project team and then assembles the panels. Each Production Associate is responsible for checking their assembly work. Once the panels are complete, they are moved to the Quality Assurance section of the Panel Shop where they are checked against the drawings by Quality Technicians. Any discrepancies are noted and returned to be corrected. Corrective actions are developed by the project's Automation Specialists and Project Engineers and reviewed by the Production Manager. The Quality Department tracks whether each panel passes or fails the check. These logs are reviewed with the Production Associates as an aid to reducing assembly errors.

Within our 20,000 square foot manufacturing facility, Prime Controls has a 4,000 square foot, environmentally controlled Factory Acceptance Test (FAT) facility. Once the panels have passed the QA checks, they are moved to the FAT room for testing. On most projects, the FAT is witnessed by the Customer. Prime Controls performs preliminary testing on the panels to ensure a successful FAT.

5. Programming

Prime Controls provides programming for PLCs, HMIs, and SCADA. Programming tasks range from very simple to extremely complex. Within our staff of more than 100 programmers, we have a knowledge base encompassing almost any control scenario. This experience has been documented by programming standards that are similar to our design standards. We have also developed libraries of code for many of the industry standard software packages. These libraries give the programmers a verified basis to start customizing for a specific application. Produced code is reviewed by other programmers as a preliminary check. The final version is then reviewed by the Engineering Manager or another senior engineer. The final check of the program code is the FAT. Prime Controls makes extensive use of simulation software to verify the code functions as intended. One powerful feature of the simulation software is the ability to conduct the software FAT independently of the hardware FAT. The software can be tested almost anywhere, including at a customer facility. This approach not only ensures the quality of the software; it significantly reduces the amount of time required to deliver the control system components.

6. Installation

Control System installation is performed by licensed Electricians and automation Technicians. The lead installers are selected from the most experienced field personnel at Prime Controls. One or more Automation Specialists will be assigned to oversee the installation to be certain the customers' requirements are being met. These Automation Specialists will have been involved in the Design and Programming phases of the project so they have a clear understanding of all of the project requirements.

Subcontractors are chosen based on their past performance with Prime Controls or on their reputation for quality execution among contractors who work with Prime Controls. While cost

control is a vital part of any project, we usually pick our subcontractors based on qualifications rather than price. We have found that qualified subcontractors reduce cost. The Project Manager negotiates the subcontract and handles contractual and engineering communications. The Construction Manager oversees the daily activities performed by the subcontractor on-site.

Quality Assurance checks are performed by the Construction Manager who is responsible to the Project Engineer for the quality of the installation. The Construction Manager has examined the design documentation and understands the expectations for quality. The Construction Manager has the authority to authorize corrective action as required while working with the Automation Specialist to satisfy unique customer requirements.

7. Internal Process to Identify Problems

The Prime Controls Quality Assurance Manual specifies the process by which we deliver control systems that meet or exceed customer requirements. The quality process starts with the recognition that every employee of Prime Controls is responsible for Quality. The Quality Department, headed by the Quality Manager, is charged with documenting procedures to enhance quality, maintain records of non-conformance, and disseminate knowledge of corrective/preventative action.

For software, the programming is subject to review by senior engineering personnel and the Engineering Manager. Over the years, Prime Controls has developed templates and guides for the various PLC, HMI, and DSC software that minimize development time and programming errors. Software is thoroughly tested via simulation and finally subjected to a rigorous test as part of the Factory Acceptance Test.

Purchased hardware is inspected upon receipt and tested before delivery. During installation, the commissioning process includes calibration and testing of the equipment before the Site Acceptance Test. Control panel hardware and equipment such as PLCs, HMI, power supplies, etc. is assembled into enclosures. This manufacturing process conducted by trained Production Associates who have procedures to follow to minimize errors. Quality Technicians check each panel against the construction drawings to verify the assembly is correct. The Factory Acceptance Test is designed to simulate the actual operational environment. This test ensures the system performs as designed and is ready for delivery. Once installed, numerous loop checks, continuity checks, and performance checks are performed to be certain the system is ready for the Site Acceptance Test. This test ensures the system is ready for service and meets all design requirements.

The Project Engineer is responsible for designing and writing test plans for both Factory and Site testing. These plans are subject to Customer and Owner approval. Any discrepancies found in any of these processes are brought to the attention of the Project Engineer. The Project Engineer formulates corrective action and determines the proper approach to implement the corrections. Corrective actions are documented and filed by the Quality Manager.

Our matrix organization aids in the dissemination of best practices. Project Managers, Project Engineers, Automation Specialists, and Production Associates work on many different projects in many different industries. This practice quickly builds on lessons learned and reduces the risk of repetitive errors.

8. Internal Systems to Identify Performance Gaps

Control system design depends upon the process to be controlled. The critical document that describes the process is the Control Narrative. Prime Controls will generate a Control Narrative in a collaborative fashion with the engineers, Owner, and other stakeholders. It is important to include operations personnel in this collaboration so that the control system functions according to their expectations. Once the Control Narrative is completed and accepted, the design of the rest of the system may proceed. Prime Controls follows this procedure on every large project.

When the control cabinets are completed, the programs for the PLCs and HMIs will have been developed. At this point, the Control Narrative, as represented by the programming, is the "planned performance." "What actually happens" is how the system controls the process. In order to make certain these two things match, Prime Controls makes extensive use of simulation software.

Simulation software will be configured with the ranges of inputs expected from the instruments and the outputs required to operate the equipment. This software is loaded on a special, stand-alone computer that is then connected to the actual PLCs and other control hardware to be delivered. The system is then thoroughly tested to ensure the PLCs are responding with the proper output according to the expected input. The system emulates I/O, instrumentation, process equipment, and the actual process. All of the alarms, graphics, sequences, interlocks, failovers, and anomalies can be tested. The simulation system can even test historian and trending requirements. Once the simulation is complete, the simulation system is available to assist in operator training.

This simulation is used in the Unwitnessed Factory Test to make certain the system is programmed and is performing in accordance with the specifications. This internal process immediately identifies performance gaps and enables corrective action without impacting the schedule.

D. Project Manager

Our project management team structure places Prime Controls, LP in a unique position to execute projects with the Customer's best interest in mind. We offer the benefits of medium size company resources with the small company capabilities, flexibility, and effectiveness. Utilizing a classical organization matrix, department managers make project assignments from a pool of highly qualified technical resources, which results in a project team of dedicated personnel with the required skills, experience, and dedication. A highly skilled Project Manager who has experience in managing complex control system projects for industrial projects leads the team. This management structure ensures competence and ability to respond to our Customer's needs.

The Project Manager has the overall responsibility for the execution of a project from its inception through the system acceptance by the Customer. The Project Manager is the Customer's primary point of contact and provides total project visibility throughout the execution phase. The Project Manager participates in the sales and proposal activities related to a project during the proposal phase. The Project Manager develops the Project Schedule, and submits to the Customer for review and approval. The Project Manager attends all project meetings

specified by the Customer and arranges special meetings as required to resolve specific issues. The Project Manager oversees the timely execution of all engineering activities concerning the project, including design and drafting, submittals, factory acceptance test, installation of equipment, final acceptance test, and final documentation. The Project Manager communicates any special quality control requirements specified for the project to the QA Manager. The Project Manager participates in the system tests performed prior to Customer witness tests and arranges and conducts the factory field acceptance tests with the Customer. Throughout the execution of the project, the Project Manager defines tasks and objectives to members of the Project Team, and monitors the progress of all tasks. The Project Manager prepares monthly status, billings, and cost project reports. The Project Manager also oversees the establishment and maintenance of a project's technical files.

E. Project Superintendent

Project specific responsibilities include:

- Ensures that technical activities within and between the disciplines are coordinated and all appropriate documentation is included in the project file
- Plans and formulates installation program and organizes project staff according to project requirements
- Establishes, with Project Manager, project schedule and manpower requirements
- Assigns discipline personnel to specific phases or aspect of projects such as technical studies, preparation of specifications, preparation of technical plans, and product testing
- Interfaces with customer and subcontractors on technical issues
- Coordinates activities concerned with technical developments, scheduling, and resolving problems.

F. Scope of Work

Prime Controls will design, procure, install, and commission the following control panels:

Item #	Enclosure Description
1	**Plant 1 PLC #1 Networked to RIO Panels:**
a.	PLC 1 & 21
b.	PLC 9 & 10
c.	PLC 13 & 20
d.	PLC 14
e.	PLC 11 & 12
2	**Plant 1 PLC #2 Networked to RIO Panels: :**
a.	PLC 5 & 22 & 23 #1
b.	PLC 5 & 22 & 23 #2
c.	PLC 2
d.	PLC 3
3	**Plant 2 PLC #3 Networked to RIO Panels: :**
a.	PLC 32
b.	PLC 4

Item #	Enclosure Description
c.	PLC 17
d.	PLC 23
e.	PLC RM 6 & 15
4	**Plant 2 PLC #4 Networked to RIO Panels::**
a.	PLC 16
b.	PLC 18
c.	PLC 7 & 8 #2

This effort will not change any of the control methodologies currently in use. It will allow for future expansion should the capacity of the plant need to be increased. New equipment will include the latest Rockwell Automation (Allen-Bradley) ControlLogix and CompactLogix PLCs. The system will include control, alarming, data analysis, reporting, and historical recordkeeping. At the end of the project, Prime Controls will deliver to the El Paso Water Utilities a complete design documentation package describing in detail every feature of the SCADA system.

Prime Controls will design the system, provide PLC and SCADA programming, procure the materials and equipment, fabricate control panels, perform factory and site testing, install the equipment, and commission the system. Prime Controls will also provide warranty services for a period of one year after acceptance by EPWU.

The project will require extensive reporting and submittals. Prime Controls will work with the Owner to tailor the list of reports and submittals. Prime Controls will provide progress reports at least monthly with weekly progress reports during the Integration phase.

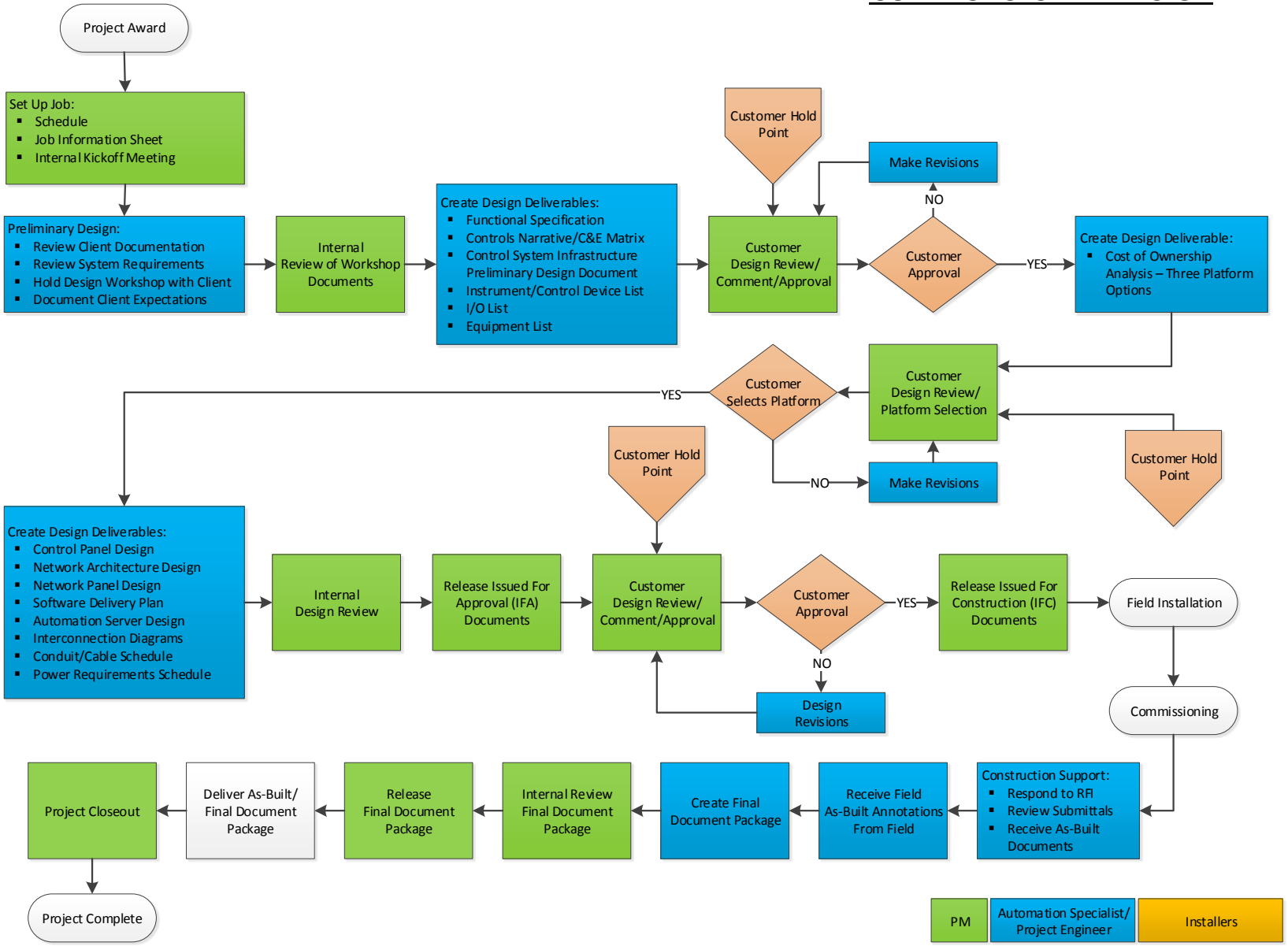
Progress Meetings are planned throughout the duration of the effort to keep the Owner informed as to the status of the various tasks. In addition to items on the meeting agenda, Prime Controls will be responsible for minutes, progress reports, and schedules. Prime Controls will submit to the Owner monthly invoices covering the activity described by each progress report.

Our understanding of the Scope of Work is based upon our visits to the plant and discussions with EPWU personnel. A summary of the work by PLC and/or location is shown in Appendix A.

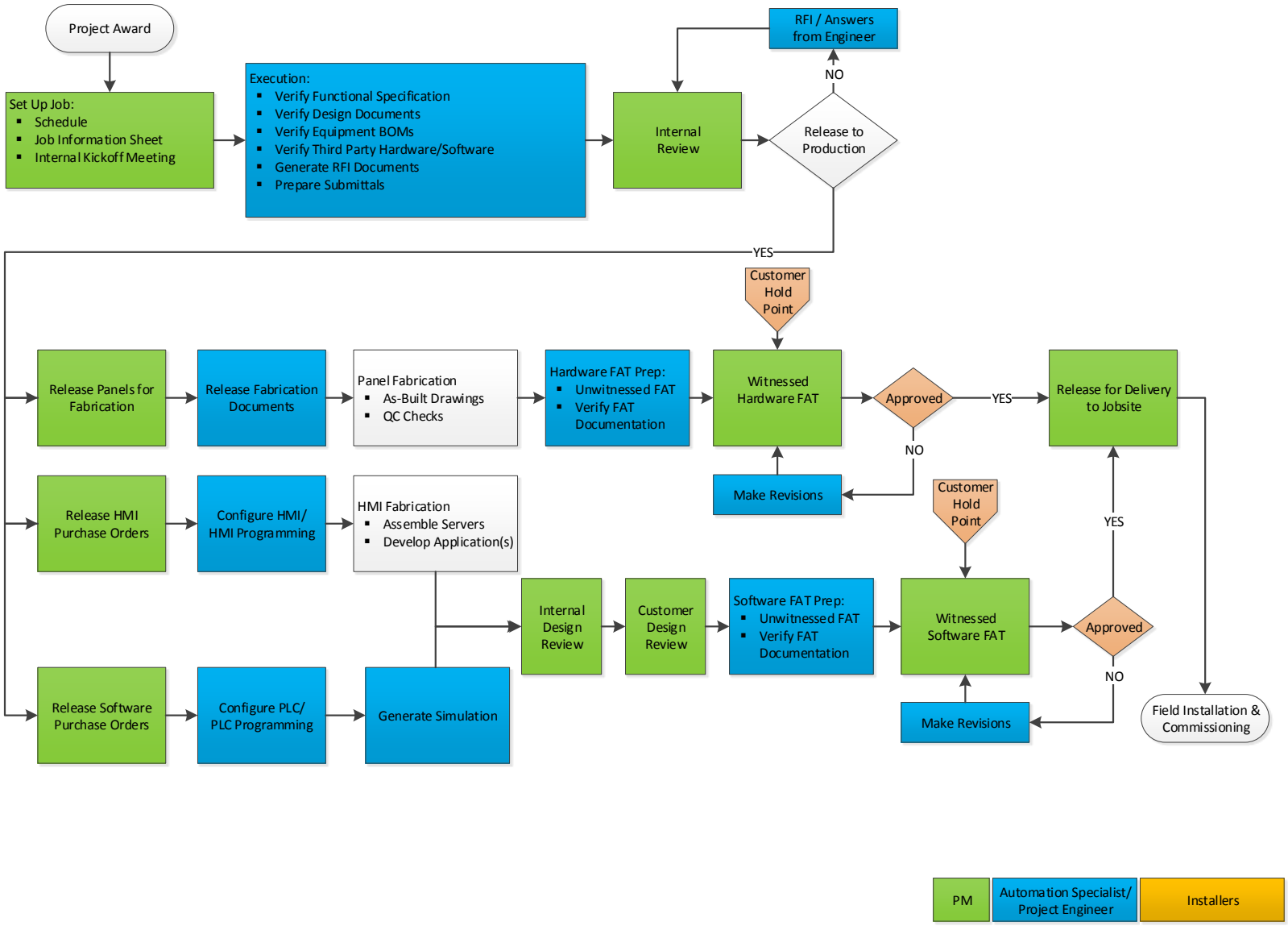
G. Project Execution Process

The following three charts illustrate our Project Execution Process. This process is divided in three phases. The first phase is control system design. The second phase is hardware and software configuration which includes procurement, programming, factory testing, and the other steps necessary to prepare the system for delivery to the job site. The third phase is commissioning which includes all work required to install the system.

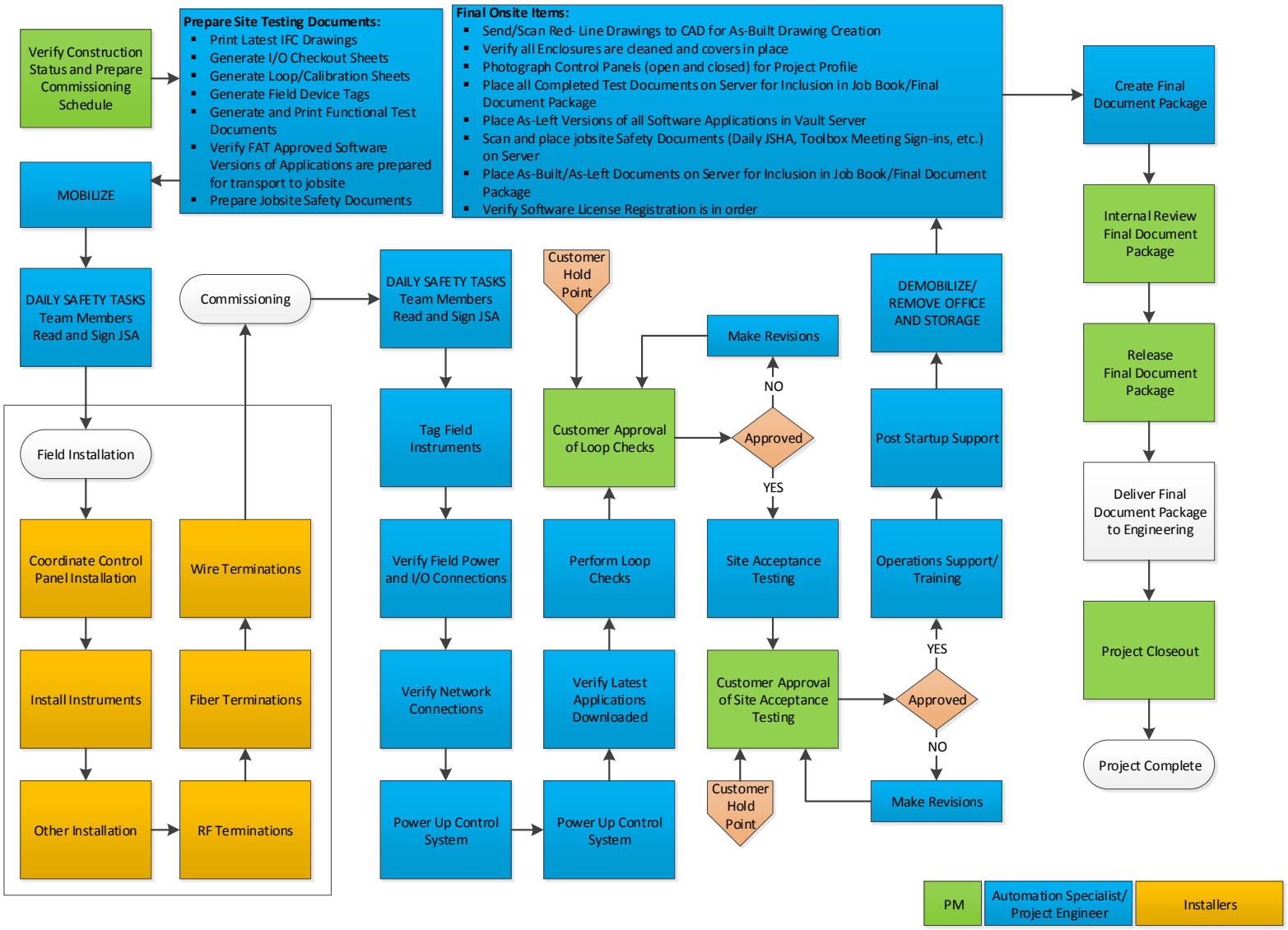
CONTROL SYSTEM DESIGN



HARDWARE AND SOFTWARE CONFIGURATION



INSTALLATION - COMMISSIONING



H. Schedule

The schedule will be finalized and submitted immediately after the Pre-Construction Meeting. The Project Manager will maintain this schedule and provide timely updates to EPWU.

I. Follow-on Support

Prime Controls will work with the Customer prior to completion of the project to finalize the details of the sustaining portion of the contract. These include but are not limited to:

- Establishment of communications processes
- Authority levels to initiate actions
- Response times
- Documentation requirements
- Spares and storage thereof
- Corrective action plans

A formal document detailing each of the above and other requirements will be delivered to ensure proper service response.

Prime Controls has an office in Midland, Texas. The office address is:

13020 Highway 191 West
Suite C
Midland, TX 79707

From this office, Prime Controls will provide six hour response time for emergencies. During the performance of the project, EPWU will be provided with contact numbers for key people who are familiar with the project and available to respond in case of an outage. In addition, as discussed above, Prime Controls maintains a toll free number staffed 24/7 for emergency contacts. This number is 1-866-99SCADA (1-866-997-2232).

Section 5. CONTROL SYSTEM COMPONENTS BILL OF MATERIAL

	Redundant Chassis Modules PLANT #1 PLC #1
1756-A4	ABPC 1756-A4 4 SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-L75	A-B 1756-L75 LOGIX5575
1756-EN2T	A-B 1756EN2T
1756-RM2	A-B 1756-RM2 CLX
	2 of each in this section
	Redundant Chassis Modules PLANT #1 PLC #2
1756-A4	ABPC 1756-A4 4 SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-L75	A-B 1756-L75 LOGIX5575
1756-EN2T	A-B 1756EN2T
1756-RM2	A-B 1756-RM2 CLX
	2 of each in this section
	Redundant Chassis Modules PLANT #2 PLC #3
1756-A4	ABPC 1756-A4 4 SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-L75	A-B 1756-L75 LOGIX5575
1756-EN2T	A-B 1756EN2T
1756-RM2	A-B 1756-RM2 CLX
	2 of each in this section
	Redundant Chassis Modules PLANT #2 PLC #4
1756-A4	ABPC 1756-A4 4 SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-L75	A-B 1756-L75 LOGIX5575
1756-EN2T	A-B 1756EN2T
1756-RM2	A-B 1756-RM2 CLX
	2 of each in this section
	Plant 1 PLC#1 -1&21
1756-A10	A-B 1756A10 10SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M

1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(30) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (OnMach003)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(2) of OnMach003)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
	Plant 1 PLC#1 - 9 &10 #1
1756-A17	ABPC 1756-A17 17 SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(2) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(3) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(4) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M

1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(48) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(49) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(71) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(72) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(39) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(40) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(2) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(32) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(1) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(31) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
	Plant 1 PLC #1 - 13 & 20

1756-A10	A-B 1756A10 10SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(8) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(50) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(6) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(33) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(2) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
	Plant 1 PLC#1 - #14
1756-A7	A-B 1756A7 7SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(9) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2

1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(7) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(1) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(3) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
	Plant 1 PLC #2 -5&22&23 #1
1756-A10	A-B 1756A10 10SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(20) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(18) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(4) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(7) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(22) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(23) of OnMach004)

1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(24) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(25) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
	Plant 1 PLC #2 - 2
1756-A10	A-B 1756A10 10SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(20) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(21) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(22) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(13) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(7) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(11) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
	Plant 1 PLC #2 - 3

1756-A10	A-B 1756A10 10SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(23) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(24) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(14) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(8) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(12) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
	Plant 2 PLC #3 - 32
1756-A10	A-B 1756A10 10SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(25) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(26) of OnMach001)

1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(15) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(9) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-N2	A-B 1756N2 EMPTY SLOT
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(13) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
	Plant 2 PLC #3 - 4
1756-A13	A-B 1756A13 13SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(28) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(29) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(30) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(70) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(17) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF

1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(18) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(10) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-N2	A-B 1756N2 EMPTY SLOT
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(15) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
	Plant 2 PLC #4 - 16
1756-A10	A-B 1756A10 10SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(31) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(32) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(33) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(19) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(11) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM

1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(16) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
	Plant 2 PLC #4 - 18
1756-A10	A-B 1756A10 10SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(34) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(20) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(12) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(13) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-N2	A-B 1756N2 EMPTY SLOT
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(17) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
	Plant 2 PLC #3 - 17
1756-A10	A-B 1756A10 10SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.

	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(38) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(24) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(15) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-N2	A-B 1756N2 EMPTY SLOT
1756-N2	A-B 1756N2 EMPTY SLOT
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(19) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
	Plant 2 PLC #3 - 23
1756-A7	A-B 1756A7 7SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(39) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(40) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(41) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(42) of OnMach001)

1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(25) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
	PLC #3 RM 6 &15
1756-A17	ABPC 1756-A17 17 SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(43) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(44) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(45) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(46) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(26) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(27) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(28) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-N2	A-B 1756N2 EMPTY SLOT

1756-N2	A-B 1756N2 EMPTY SLOT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(16) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(17) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(20) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(21) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
	Plant 1 PLC #2 -5&22&23 #2
1756-A13	A-B 1756A13 13SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(64) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(65) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(66) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(67) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(68) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M

1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(69) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(43) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(44) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(45) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-N2	A-B 1756N2 EMPTY SLOT
	Plant 1 PLC#1 - 9 &10 #2
1756-A7	A-B 1756A7 7SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(2) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(3) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(8) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
1756-N2	A-B 1756N2 EMPTY SLOT
1756-N2	A-B 1756N2 EMPTY SLOT
	Plant 1 PLC#1 - 11 &12 #1
1756-A17	ABPC 1756-A17 17 SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.

	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(5) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(6) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(7) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(10) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(11) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(12) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(13) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(46) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(47) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(48) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M

1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(49) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(50) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(51) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(52) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
	Plant 1 PLC#1 - 11 &12 #2
1756-A7	A-B 1756A7 7SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(5) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(6) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(9) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
1756-N2	A-B 1756N2 EMPTY SLOT
1756-N2	A-B 1756N2 EMPTY SLOT
	Plant 2 PLC#4 - 7 &8 #1
1756-A17	ABPC 1756-A17 17 SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply

	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(14) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(15) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(16) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(17) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(18) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(19) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-IB16	ABPC1756-IB16 VDC INPT
	On-Machine BOM (Copy(27) of OnMach001)
1492-IFM20F-F24A-2	A-B 1492IFM20FF24A2
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-N2	A-B 1756N2 EMPTY SLOT
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(53) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(54) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(55) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(56) of OnMach002)

1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(57) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(58) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
1756-OB16E	A-B 1756OB16E 10-30 VDC
	On-Machine BOM (Copy(59) of OnMach002)
1492-XIM2024-16RF	A-B 1492-XIM2024-16RF
1492-CABLE025X	AB 1492-CABLE025X 2.5 M
	Plant 2 PLC#4 - 7 &8 #2
1756-A7	A-B 1756A7 7SLOT
1756-PAR2	ALBR 1756PAR2 REDUND.
	Includes (2) 1756-PA75R: 85-265V AC Redundant Power Supply
	Includes (1) 1756-PSCA2: Redundant power supply chassis adapter module.
	Includes (2) 1756-CPR2: Redundant power supply cables (Length = 0.91m [3ft]).
1756-EN2TR	A-B 1756-EN2TR 2-PORT
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(14) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-IF16	A-B 1756IF16 36PIN 16PT
	On-Machine BOM (Copy(19) of OnMach005)
1492-AIFM16-F-5	AB 1492-AIFM16-F-5 IFM
1492-ACABLE025UB	AB 1492-ACABLE025UB 2.5
1756-N2	A-B 1756N2 EMPTY SLOT
1756-OF8	A-B 1756OF8 20PIN 8PT
	On-Machine BOM (Copy(10) of OnMach004)
1492-AIFM8-3	A-B 1492-AIFM8-3 MODULE
1492-ACABLE025WB	A-B 1492-ACABLE025WB
1756-N2	A-B 1756N2 EMPTY SLOT
1756-N2	A-B 1756N2 EMPTY SLOT
	ETAP1f
	ETHERNET Switches and STP

Section 6. PROPOSAL PRICING

A. Pricing Clarifications

This proposal is offered as a fixed-price quote under our GSA Schedule which is a Schedule 70 contract and includes Cooperative Purchasing. Our GSA Contract Number is GS-35F-0455W. In accordance with GSA's Cooperative Purchasing requirements, this contract number must be contained in the purchase order for this procurement.

GSA requires material or equipment to be purchased from GSA Schedule holders if possible. For municipalities in Texas, this means that the supplier must hold a Schedule 70 contract that includes the Cooperative Purchasing provisions. Prime Controls was prepared to assist EPWU with purchasing the Rockwell Automation from their GSA Schedule. However, Rockwell Automation no longer participates in the GSA Schedule program. Therefore, the Rockwell Automation equipment will be purchased under open market rules.

These rules also apply to the other material. We have not found the anticipated equipment on the GSA Schedules. However, should material or equipment that is listed on a GSA Schedule be required for this project, Prime Controls will assist EPWU in purchasing said material directly from the GSA Schedule holder and provide an equitable adjustment in our price. This provision only applies if the material or equipment is available on a Schedule 70 contract that includes Cooperative Purchasing.

B. Terms and Conditions

The terms and conditions proposed for this project are found in Prime Controls' Authorized Information Technology Schedule Pricelist General Purpose Commercial Information Technology Equipment, Software and Services which is GSA Schedule Contract Number GS-35F-0455W and is attached.

These terms and conditions are typical for a federal government acquisition. EPWU may negotiate or require any other terms which do not violate our GSA contract. Following is a summary of the Terms and Conditions:

1. Scope—Information Technology Professional Services
2. Performance Incentives—Not Applicable
3. Order—The form of the order can be contract, purchase order, or task order.
4. Performance of Services—
5. Start on the Start Date
6. Work during normal hours unless otherwise agreed
7. Services completed in a good and workmanlike manner
8. Comply with Federal Travel Regulation (not applicable to fixed price)
9. Stop Work Order—EPWU may cancel the order upon written notice.
10. Inspection of Services—EPWU may inspect our work.
11. Responsibilities of the Contractor—Prime Controls must follow applicable laws and regulations.

12. Responsibilities of the Ordering Activity—EPWU will allow Prime Controls access to all facilities necessary to perform the work.
13. Independent Contractor—Prime Controls is not an agent or employee of EPWU.
14. Organizational Conflicts of Interest—Prime Controls agrees to be bound by restrictions that avoid conflicts of interest.
15. Invoices—Progress payments are allowed.
16. Payments—EPWU will pay upon submission of proper invoices subject to agreed terms.
17. Resumes—Prime Controls will furnish resumes upon request (included in proposal).
18. Incidental Support Costs—Not applicable, fixed price quote.
19. Approval of Subcontractors—EPWU has the right to approve subcontractors.
20. Description of IT Services and Pricing
21. Industrial Process Control System Design
22. SCADA System Installation
23. Control System Troubleshooting
24. This quote is fixed price. Work outside the scope of this quote may be procured using the following hourly rates:

Labor Category	GSA Rate
Account Manager	$ 164.00
Project Manager	$ 103.77
Project Engineer Level 2	$ 100.75
Project Engineer Level 1	$ 84.63
Sr. Technician	$ 84.63
Technician	$ 64.48
CAD Designer	$ 64.48

For comparison purposes, the following table shows Prime Controls' standard rates:

Labor Category	Standard Rate
Account Manager	$ 180.00
Project Manager	$ 145.00
Project Engineer Level 2	$ 200.00
Project Engineer Level 1	$ 130.00
Sr. Technician	$ 100.00
Technician	$ 90.00
CAD Designer	$ 97.00

C. Scope of Work

The offering is complete with the exception of those items specifically excluded within the "Exclusions" section of this proposal.

1. Services Scope of Work

- **Design services**
  - All design drawings will be generated in AutoCAD Electrical
  - All AutoCAD DWG and PDF as-built drawings will be provided
- **Programming and Testing Services**
  - Utilize Rockwell PlantPAx objects to standardize logic and graphics programming
  - Hardware Factory Acceptance Testing with Customer approved documentation.
  - Software Factory Acceptance Testing with Customer approved documentation.
  - Onsite Loop Checks and Commissioning with Customer approved documentation
  - Training on FactoryTalk Studio and RSLOGIX 5000
- **Technician Services**
  - Control System Installation
  - Tag all I/O field wiring
  - Hardware Cutover Support from ABB to AB ControlLogix
  - Test all spare Fiber Optic Cables with OTDR and provide reports
- **Panel Build and QA/QC services**
  - Panel hardware will be installed by qualified personnel in certified UL-508 panel shop.
  - All installation verified and tested by QA/QC personnel

The detailed scope of work for each plant system is described in Appendix A.

Additional Services to be provided by Prime Controls include the following major items:

ITEM	SERVICES
1.	System Responsibility
2.	Submittals

3.	Operations and Maintenance Documentation
4.	Warranty -One Year Warranty on Parts and Services

D. Proposal Exclusions

The following items are not included in our pricing and shall be the responsibility of others:

ITEM	EXCLUSIONS
1.	Furnishing and installation of all electrical power and specialty panels/products including switchgear, MCCs, distribution panels, AFDs/VFDs, disconnects, heat tracing, power monitor devices, etc.
2.	All "Civil" work including building and vessel modifications, asphalt demolition/patching, concrete foundations/piers, etc.

E. Proposal Pricing

Bid Item	Base Bid	Pricing
1	GSA Labor, per GSA Schedule Contract GS-35F-0455W	$718,574.53
2	Open Market Material	$1,285,932.26
3	Open Market Labor	$365,557.42
4	Other Direct Costs	$429,935.80
	TOTAL BASE BID AMOUNT	$2,800,000.00

Signed,

Trinidad Cruz
Regional Account Manager

APPENDIX A-SCOPE PRESENTATION

The Canal Street Water Treatment Plant will be upgraded from existing PLC Direct commercial grade PLC's to Allen-Bradley .

The latest and most advanced Rockwell Automation Control System hardware and software will be implemented.

The existing network infrastructure is CAT 5 which will be replaced with multimode Fiber Optics and CAT 6 where required.

The Scope of Work for each area will be discussed in this presentation.

CANAL STREET IO COUNT	
Analog Inputs	375
Analog Outputs	160
Discrete Inputs	965
Discrete Outputs	650
Total IO	**2150**

The current plant houses 25 PLC Direct Processors that execute the logic for the specific process area. It is a cumbersome task to maintain all these programs and will be reduced to four major logic programs.

Plant 1 and Plant 2 will be implemented with four redundant ControlLogix PLC's housing Ethernet IO Communications via Device Level Ring. This architecture is robust and eliminates single points of failure of processors and IO communications.

The existing PLC's will be converted to 17 Allen-Bradley Remote IO Racks with robust Device Level Ring Communications.

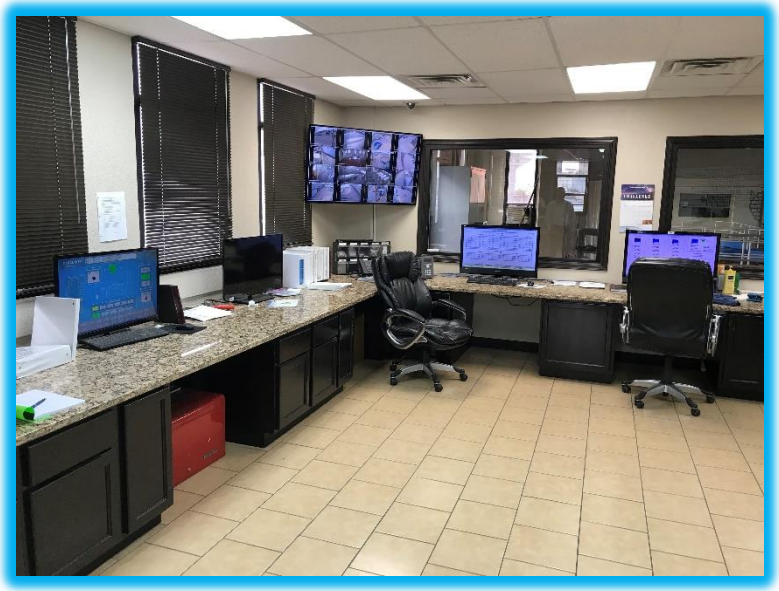
ADDITIONAL AUTOMATION OF PROCESS AREAS AND EQUIPMENT

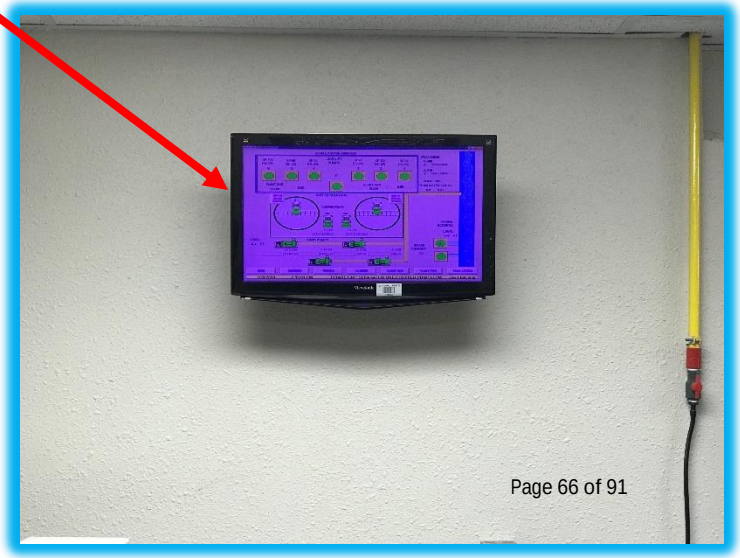
Various Process Area equipment is currently operated in manual mode. This project will provide automation for the equipment below. This will allow operations to monitor and control via the FactoryTalk SE Client Workstations to be installed at the water treatment plant.
The list of equipment is:

1. **High Lift Station #1 -** 4 Valves on High Lift Station Pump Discharge
2. **High Lift Station #2 -** 3 Effluent Valves for High Lift pumps 5-7
3. **High Lift Station #3 -** 3 Effluent Valves for High Lift pumps 8-10
4. **Intake Grit Collectors -** 2 Chopper and Low Lift #7 Pump
5. **Plant 2 Ferrous Chloride Pumps/Mixer –** 3 VFD's to Control Flocculators, 4 Rapid Mixer Starters, 1 Polymer Pump for Flash Mixer.
6. **Plant 1 Filter Control Room –** Final Filter Sequence Automation
7. **Plant 2 Filter Control Room –** Final Filter Sequence Automation
8. **Plant 1 Filter 1, 3 & 5 -** 6 Polymer Pumps and 1 Mixer.
9. **Plant 1 Filter 2, 4 & 6 -** 6 Phosphate Pumps
10. **Plant 2 Pipe Gallery -** 3 Polymer and 3 Phosphate Pumps
11. **Intakes Low Lifts -** 2 Polymer Pumps, 4 Sand Pumps.

CANAL STREET CONTROL ROOM

1. **Replace Two FactoryTalk Workstations with Dell Computers and latest FactoryTalk SE Software.**
2. **Install a network Allen-Bradley Stratix Switch with Multimode Fiber Optics.**
3. **Replace existing Monitor with Dell 34” Monitor**
4. **A FactoryTalk SE Client Workstation will also be installed at the Superintendent’s office.**





LUNCH ROOM OPERATOR WORKSTATION

1. **Install a FactoryTalk SE Client Workstation for Operations to monitor/control plant during meetings. This will be a new Dell PC with FactoryTalk SE client license.**

2. **Provide a Workstation Enclosure with Lock for installation of the FactoryTalk SE Client.**

3. **Install Conduit and CAT 6 cable to Control Room Network switch.**

FactoryTalk SE SERVERS

1. **The existing FactoryTalk SE Servers will be replaced with new Dell Servers.**
    a. **Redundant FactoryTalk SE Dell Servers**
    b. **One Dell Server for Asset Center with disaster recovery and Vantage Point**
    c. **One 5000 Point Historian Dell Server**
    d. **One Engineering Workstation Toughbook Laptop with docking station and dual monitors.**
    e. **Network Rack to host servers and switches**
    f. **Redundant Plant network 2960 Cisco Switches**
    g. **Cisco 2921 VPN Router for VPN Connections with Verizon Cradle Point for Remote Support.**
    h. **Dell RD1000 Backup Storage Removable Disk Cartridge.**
    i. **UPS with Transfer Switch to provide power for servers.**

Note: EL Paso Water to upgrade existing Air Conditioning Units to provide sufficient cooling for server room.

CANAL TREATMENT REDUNDANT PROCESSORS

Due to the size of Inputs/Outputs, Four Redundant Primary Allen-Bradley PLC's are required to allow future expansion of the Water Treatment Plant.

Each plant will require two Redundant L75 Processors to control the respective process areas.

PLANT 1 PLC #1

PLANT 1 PLC #2

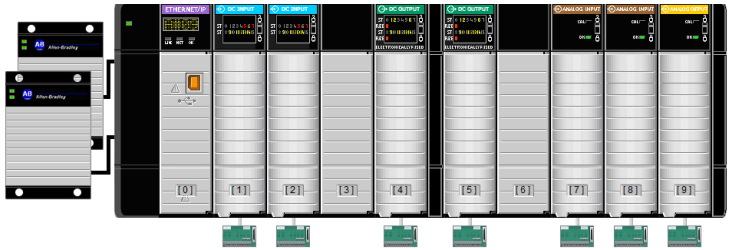
PLANT 2 PLC #3

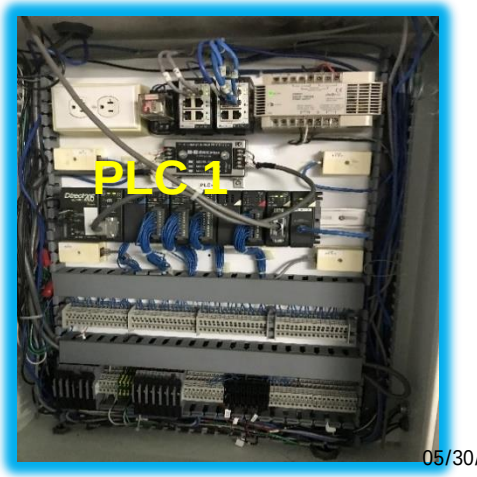
PLANT 2 PLC #4

PLC 1 and 21 – High Lift Station #1

1. PLC 1 and PLC 21 Inputs/Outputs will be combined into existing PLC 21.
2. Convert PLC 1 into Junction Box by removing existing hardware and installing back plate with terminal blocks.
3. Install Conduit and Cables from PLC 1 to PLC 21.
4. Install Conduit and Cable from PLC 21 to 5 existing instruments.
5. Replace existing PLC 21 with enclosure to house all Allen-Bradley Remote Input/Output hardware. All IO will be fused plus Redundant IO Power Supplies will be provided.
6. Install Allen-Bradley Stratix switch for communications between FactoryTalk SE server and Superintendent FactoryTalk SE Client via Multimode Fiber Optic.
7. Install Conduit and CAT 6 Cable from PLC 21 to Superintendent office
8. A UPS will be installed to provide power to PLC.
9. Automate 4 Valves on High Lift Station Pump Discharge.
10. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.

PROPOSED ALLEN-BRADLEY IO HARDWARE

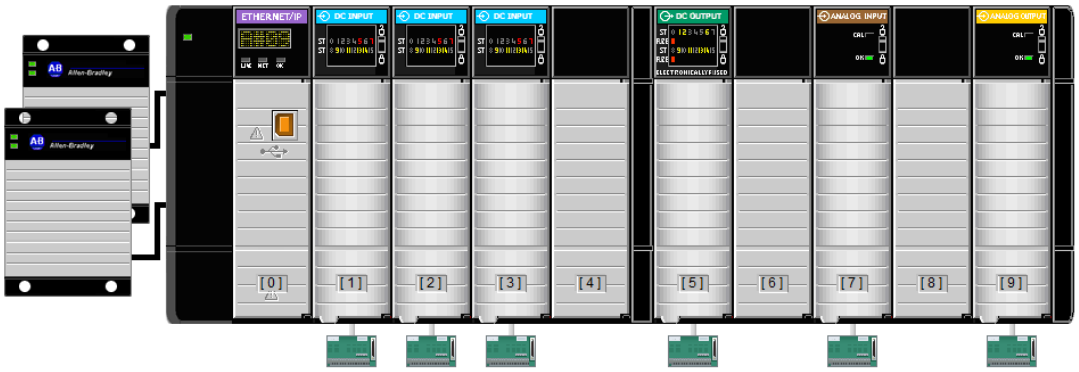




PLC 2 – High Lift Station #2

1. Replace existing enclosure to house Allen-Bradley Remote Input/Output hardware for PLC 2
2. Redundant IO and Field Power Supplies will be provided
3. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
4. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.
5. A UPS will be installed to provide power to PLC.
6. Additional Automation to control 3 Effluent Valves for High Lift pumps 5-7. Install Conduit and Wire, 30Ft.

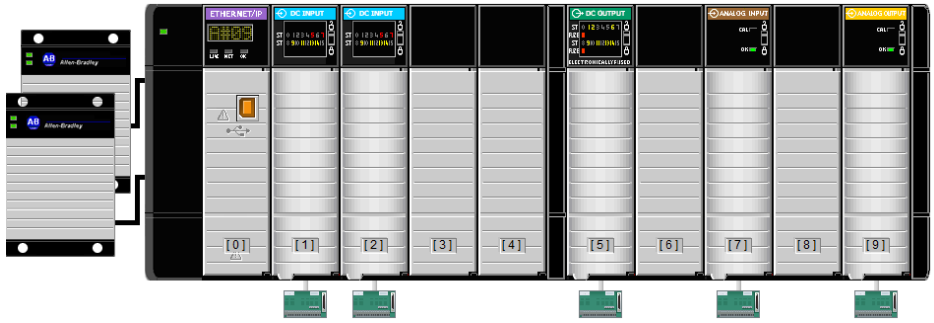
PROPOSED ALLEN-BRADLEY IO HARDWARE



PLC 3 – High Lift Station #3

1. Replace existing enclosure to house Allen-Bradley Remote Input/Output hardware for PLC 3
2. Redundant IO and Field Power Supplies will be provided
3. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
4. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.
5. Install Fiber Optics for Plant Network FactoryTalk SE Server and FactoryTalk SE Clients with Stratix Switch.
6. An Advantech Industrial PC will be installed on the enclosure for Operations Supervisory control.
7. A UPS will be installed to provide power to PLC.
8. Additional Automation to control 3 Effluent Valves for High Lift pumps 8-10. Install Conduit and Wire 30Ft.

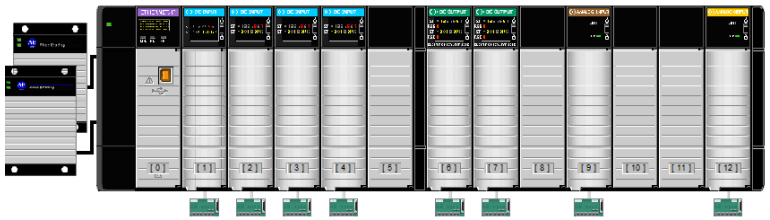
PROPOSED ALLEN-BRADLEY IO HARDWARE



PLC 4 – Intake Grit Collectors

1. Replace existing enclosure to house Allen-Bradley Remote Input/Output hardware for PLC 4
2. Redundant IO and Field Power Supplies will be provided
3. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
4. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.
5. Install an Allen-Bradley Stratix switch for Ethernet communications between PLC4 and PLC 30. New CAT6 cable to be installed in existing conduit.
6. A UPS will be installed to provide power to PLC.
7. Additional Automation of 2 Chopper and Low Lift #7 Pump.
8. Install Conduit and Wire.

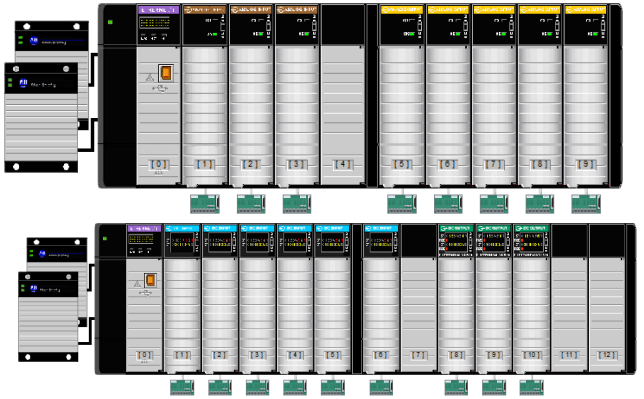
PROPOSED ALLEN-BRADLEY IO HARDWARE



PLC 5, 22, 33 – Ferrous Chloride Pumps – Plant 1

1. PLC 5, 22 and 33 Inputs and Outputs will be combined into one Remote Enclosure located at existing PLC 5 Locations.
2. Convert PLC 22 and 33 into Junction boxes by removing existing hardware and installing back plate with terminal blocks.
3. Install Conduit and Cables from PLC 22 to PLC 5 plus PLC 33 to PLC 5.
4. Replace existing PLC 5 with enclosure to house all Allen-Bradley Remote Input/Output hardware.
5. A UPS will be installed to provide power to PLC.
6. Redundant IO and Field Power Supplies will be provided
7. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
8. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.

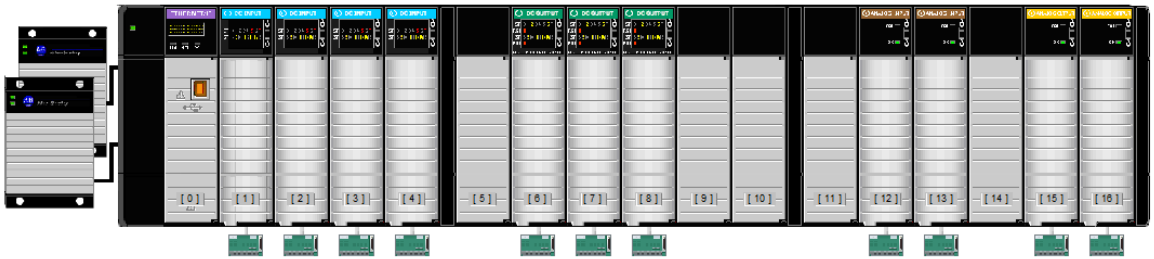
PROPOSED ALLEN-BRADLEY IO HARDWARE



PLC 6 and 15 - Ferrous Chloride Pumps/Mixer – Plant 2

1. Replace existing enclosure to house Allen-Bradley Remote Input/Output hardware for PLC 6 & 15.
2. Redundant IO and Field Power Supplies will be provided
3. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
4. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.
5. A UPS will be installed to provide power to PLC.
6. Automation of 3 VFD's to Control Flocculators.
7. Automation of 4 Rapid Mixers Starters.
8. Automation of 1 Polymer Pump for Flash Mixer.

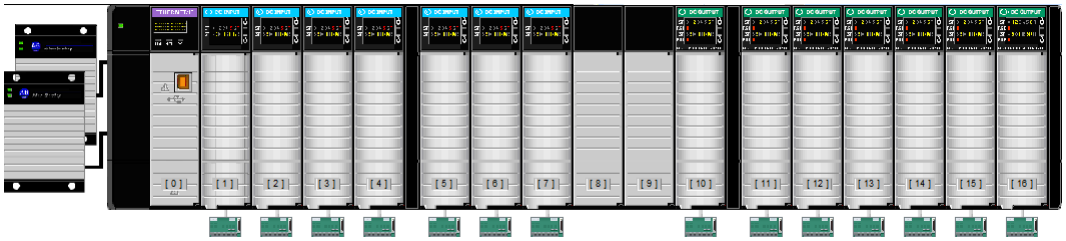
PROPOSED ALLEN-BRADLEY IO HARDWARE

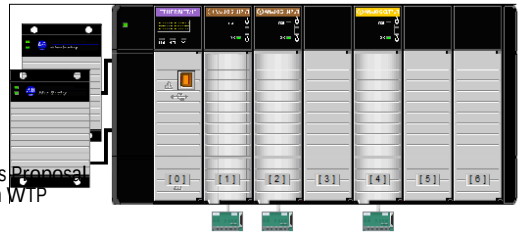


PLC 7 & 8 – Filter Control Room Plant 2

1. Replace existing enclosure to house Allen-Bradley Remote Input/Output hardware for PLC 7 an 8
2. Redundant IO and Field Power Supplies will be provided
3. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
4. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.
5. Install Fiber Optics for Plant Network FactoryTalk SE Server and FactoryTalk SE Clients and Stratix Switch..
6. An Advantech Industrial PC will be installed on the enclosure for Operations Supervisory control.
7. A UPS will be installed to provide power to PLC.

PROPOSED ALLEN-BRADLEY IO HARDWARE





PLC 7 and 8 – Plant 2 Final Filter Automation

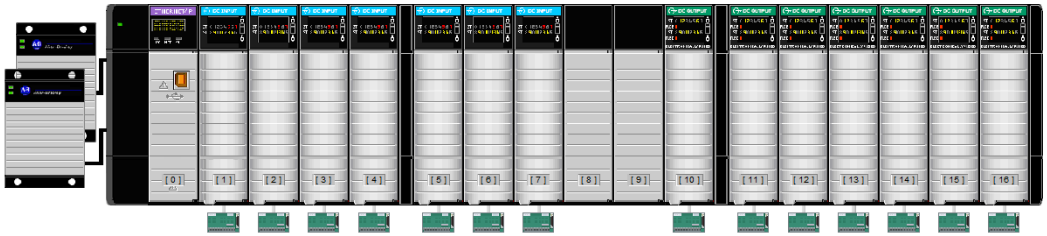
Currently the Final Filters backwash sequence is conducted by Operations via manual intervention.
Prime Controls will automate the Three Basins controlled by PLC 7 and 8 with a backwash sequence as stated below.

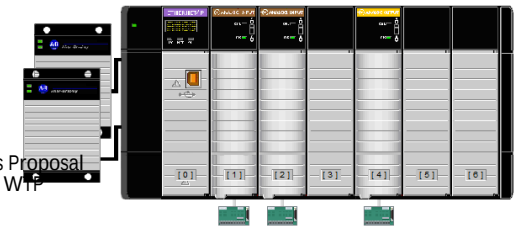
1. **Install conduit and wire for a new Vega Level Transmitter at each basin for monitor and control.**
2. **Conduit and wire will be installed at each basin valve to PLC for Monitor and Control.**
3. **Prime Controls and EL Paso Water will develop a controls sequence for the Final Filter Backwash .**
4. **A program will be written in the PLC for automatic control of the Backwash**
5. **The existing enclosure will be left in place as requested by EL Paso Water Operations for manual intervention.**
6. **The existing Valve Position Indicator will be changed and upgraded to interface to PLC.**

PLC 9 and 10 – Plant 1 Filter 1, 3 & 5

1. Replace existing enclosure to house Allen-Bradley Remote Input/Output hardware for PLC 9 and 10.
2. Redundant IO and Field Power Supplies will be provided
3. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
4. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.
5. Install Fiber Optics for Plant Network FactoryTalk SE Server and FactoryTalk SE Clients.
6. An Advantech Industrial PC will be installed on the enclosure for Operations Supervisory control.
7. A UPS will be installed to provide power to PLC.
8. Automation of 6 Polymer Pumps and 1 Mixer.

PROPOSED ALLEN-BRADLEY IO HARDWARE

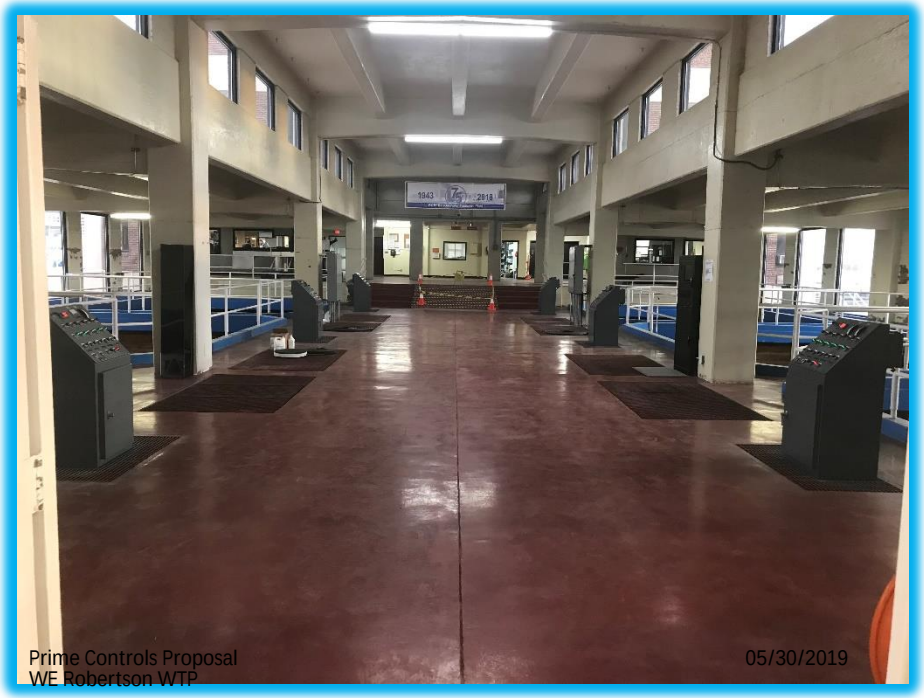




PLC 9 and 10 – Plant 1 Final Filter Automation

Currently the Final Filters backwash sequence is conducted by Operations via manual intervention.
Prime Controls will automate the Three Basins controlled by PLC 9 and 10 with a backwash sequence as stated below.

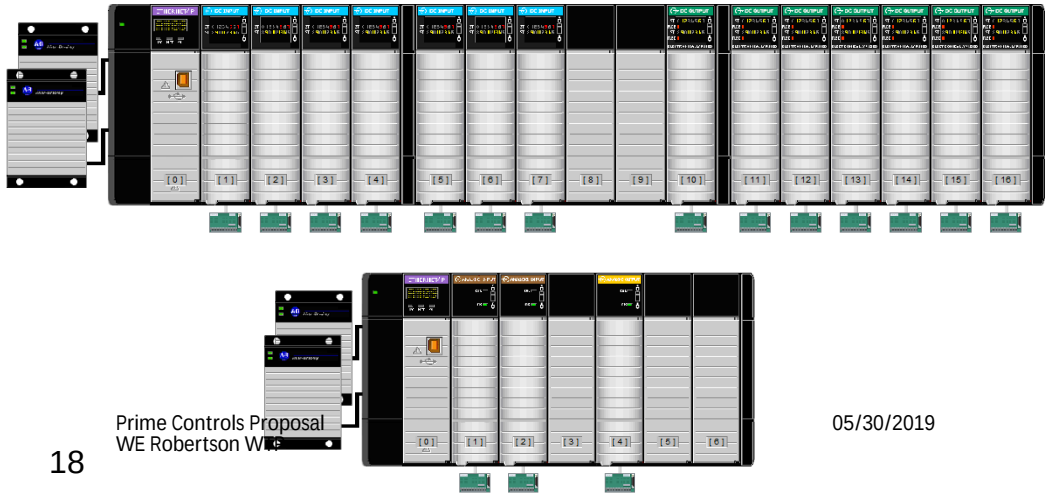
1. **Install conduit and wire for a new Vega Level Transmitter at each basin for monitor and control.**
2. **Conduit and wire will be installed at each basin valve to PLC for Monitor and Control.**
3. **Prime Controls and EL Paso Water will develop a controls sequence for the Final Filter Backwash .**
4. **A program will be written in the PLC for automatic control of the Backwash**
5. **The existing enclosure will be left in place as requested by EL Paso Water Operations for manual intervention.**
6. **The existing Valve Position Indicator will be changed and upgraded plus interface to the PLC.**



PLC 11 and 12 – Plant 1 Filter 2, 4 & 6

1. Replace existing enclosure to house Allen-Bradley Remote Input/Output hardware for PLC 11 and 12.
2. Redundant IO and Field Power Supplies will be provided
3. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
4. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.
5. A UPS will be installed to provide power to PLC.
6. Automate 6 Phosphate Pumps.

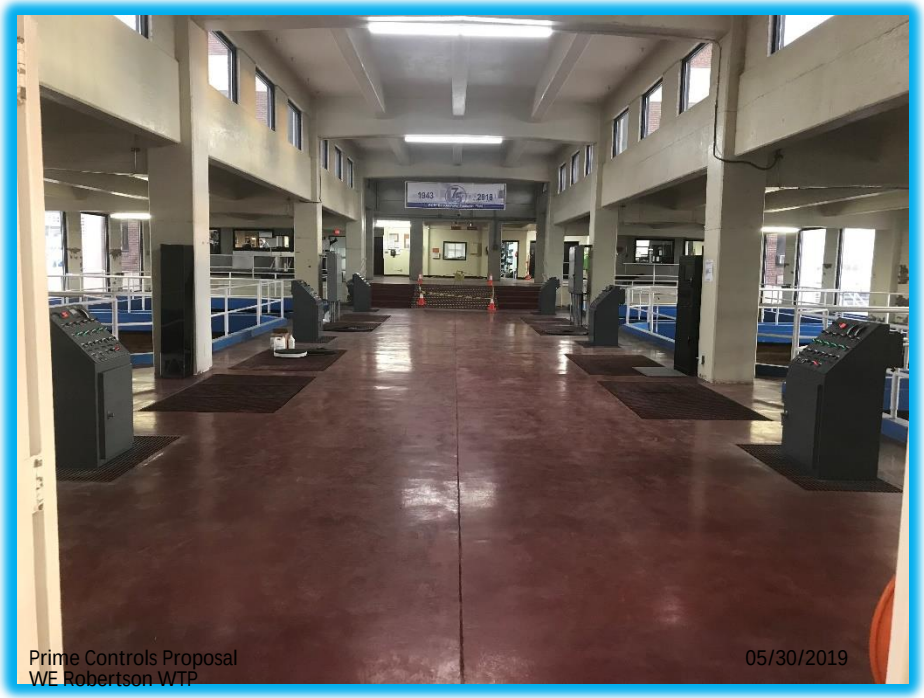
PROPOSED ALLEN-BRADLEY IO HARDWARE



PLC 11 and 12 – Plant 1 Final Filter Automation

Currently the Final Filters backwash sequence is conducted by Operations via manual intervention.
Prime Controls will automate the Three Basins controlled by PLC 11 and 12 with a backwash sequence as stated below.

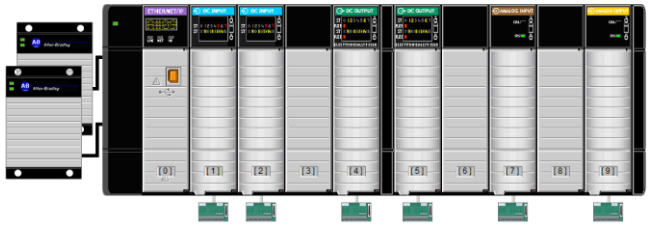
1. **Install conduit and wire for a new Vega Level Transmitter at each basin which will be utilized for monitor and control.**
2. **Conduit and wire will be installed at each basin valve to PLC for Monitor and Control.**
3. **Prime Controls and EL Paso Water will develop a controls sequence for the Final Filter Backwash .**
4. **A program will be written in the PLC for automatic control of the Backwash**
5. **The existing enclosure will be left in place as requested by EL Paso Water Operations for manual intervention.**
6. **The existing Valve Position Indicator will be changed, upgraded, and interfaced to the PLC.**



PLC 13 and 20 – Plant 1 Pipe Gallery- Scrubber

1. PLC 13 and PLC 20 Inputs/Outputs will be combined into existing PLC 13.
2. Convert PLC 20 into Junction Box by removing existing hardware and installing back plate with terminal blocks.
3. Install Conduit and Cables from PLC 13 to PLC 20
4. Replace existing PLC 13 with enclosure to house all Allen-Bradley Remote Input/Output hardware.
5. A UPS will be installed to provide power to PLC.
6. Redundant IO and Field Power Supplies will be provided
7. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
8. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.

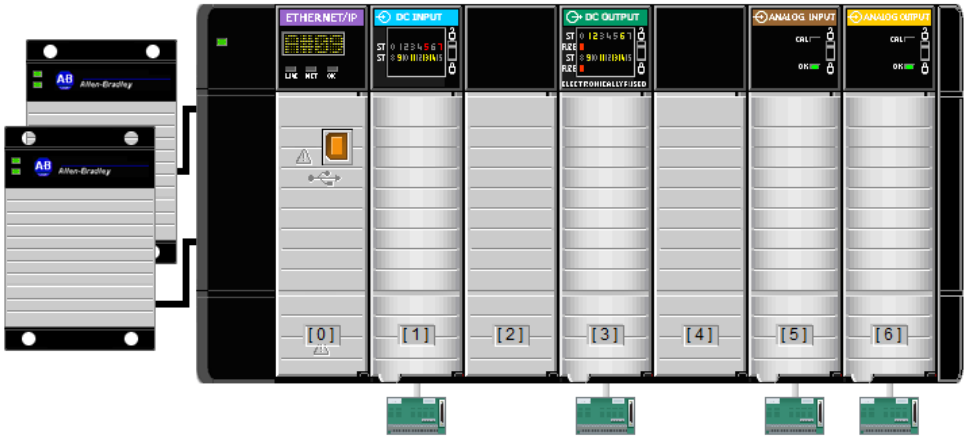
PROPOSED ALLEN-BRADLEY IO HARDWARE



PLC 14 – Plant 1 Sludge Pumps

1. Replace existing enclosure to house Allen-Bradley Remote Input/Output hardware for PLC 14
2. Redundant IO and Field Power Supplies will be provided
3. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
4. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.
5. Install a Stratix switch for communications to FactoryTalk SE server.
6. A UPS will be installed to provide power to PLC.

PROPOSED ALLEN-BRADLEY IO HARDWARE



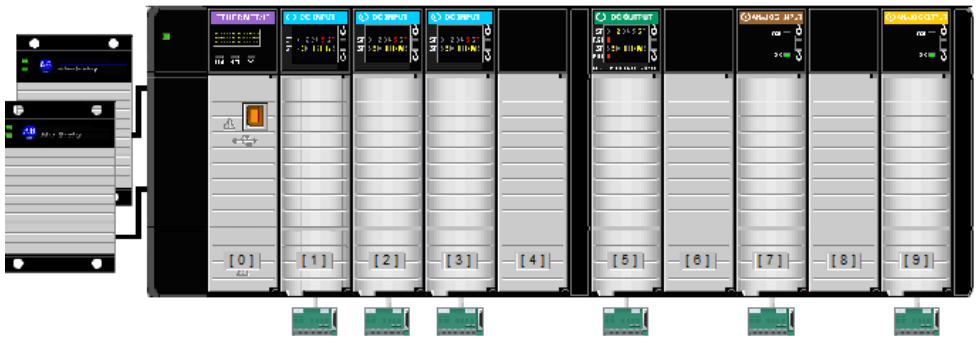
PLC 14 – Plant 1 Sludge Pumps

1. PLC 14 will be utilized as a Junction Box.
2. Terminal blocks will be installed on a new back plate
3. Conduits will be installed from existing PLC Enclosure to new location.
3. The new enclosure will be installed in this new location

PLC 16 - Blowers

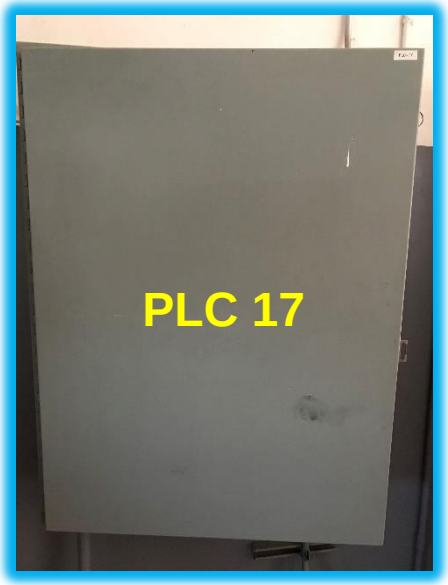
1. Replace existing enclosure to house Allen-Bradley Remote Input/Output hardware for PLC 16.
2. Redundant IO and Field Power Supplies will be provided
3. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
4. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.
5. A UPS will be installed to provide power to PLC.

PROPOSED ALLEN-BRADLEY IO HARDWARE

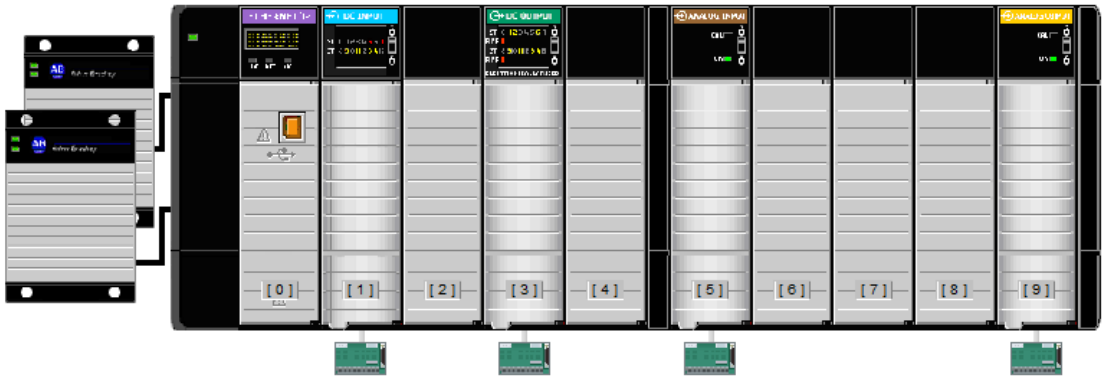


PLC 17 – Plant 2 Chemical Building

1. Replace existing enclosure to house Allen-Bradley Remote Input/Output hardware for PLC 17
2. Redundant IO and Field Power Supplies will be provided
3. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
4. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.
5. Install a Stratix switch for communications
6. A UPS will be installed to provide power to PLC.
7. Install conduit and CAT 6 Cable with a Grace port to Chlorine Dioxide Generators.



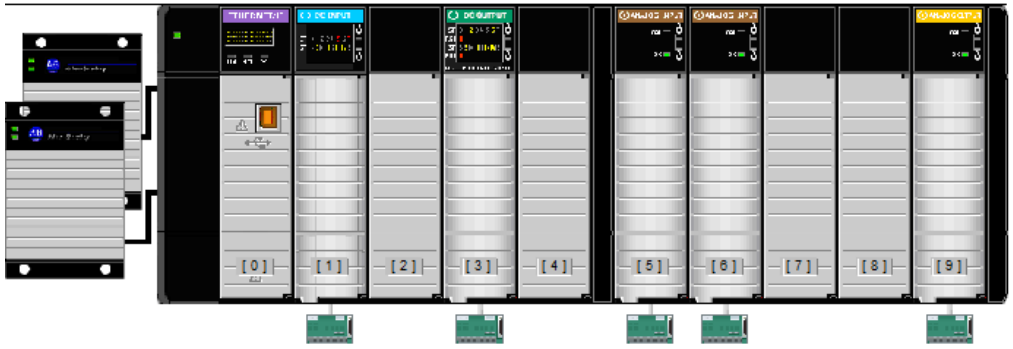
PROPOSED ALLEN-BRADLEY IO HARDWARE



PLC 18 – Plant 2 Pipe Gallery

1. Replace existing enclosure to house Allen-Bradley Remote Input/Output hardware for PLC 18.
2. Redundant IO and Field Power Supplies will be provided
3. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
4. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.
5. A UPS will be installed to provide power to PLC.
6. Automate 3 Polymer and 3 Phosphate Pumps.

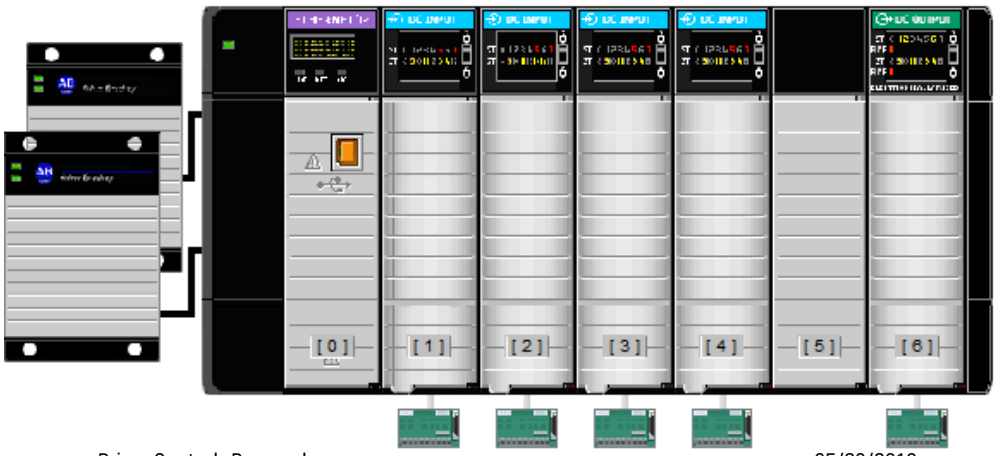
PROPOSED ALLEN-BRADLEY IO HARDWARE



PLC 23 – Plant 2 Flocculator

1. Replace existing enclosure to house Allen-Bradley Remote Input/Output hardware for PLC 23
2. Redundant IO and Field Power Supplies will be provided
3. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
4. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.
5. A UPS will be installed to provide power to PLC.

PROPOSED ALLEN-BRADLEY IO HARDWARE



PLC 24 – Central Communications

1. This PLC and Radio transfer Data from Canal Street Water Treatment Plant to Lee Central.

2. The PLC will be replaced with a Red Lion Data Station Plus Gateway with Modbus communication.

PLC 25 – Chlorine Room

1. Rockwell hardware and enclosure upgrades will be provided by others.

2. Prime Controls will interface to existing PLC via Modbus Communications or Allen Bradley Ethernet IP.

3. Prime Controls will generate graphics for Chlorine System if PLC 25 is not upgraded during the duration of this project by others.

PLC 32 – Intakes Low Lifts

1. Replace existing enclosure to house Allen-Bradley Remote Input/Output hardware for PLC 32
2. Redundant IO and Field Power Supplies will be provided
3. All IO will be provided with fuse protection allowing technicians to remove power before replacing a field device.
4. Install Fiber Optics on Device Level Ring from Redundant Controller IO network.
5. A UPS will be installed to provide power to PLC.
6. Additional Automation of 2 Polymer Pumps.
7. Additional Automation of 4 Sand Pumps.

PROPOSED ALLEN-BRADLEY IO HARDWARE