

Broadband Access Points and Programmable Logic Controllers Replacement – Phase 3

Non-Mandatory WebEx Pre-Bid Meeting

Thursday, February 25, 2021

Adam Eddy, P.E.

Project Engineer, Plants & Major Projects

Janie M. Powell

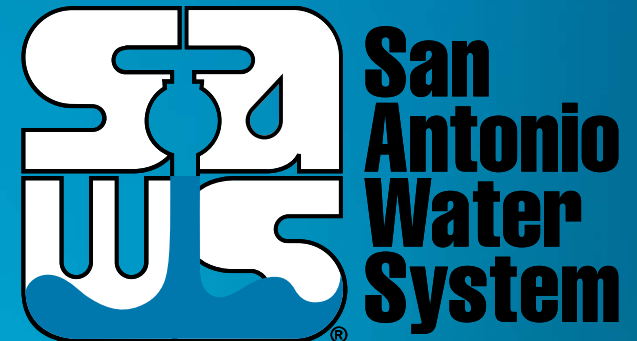
Contract Administrator

Marisol V. Robles

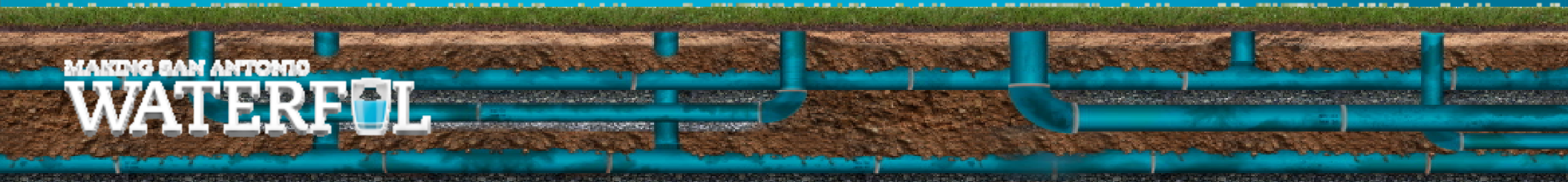
SMWVB Program Manager

Andrew Paulson, P.E.

Design Engineer, Signature Automation



MAKING SAN ANTONIO
WATERFUL



Oral Statements

Oral statements or discussion during the pre-bid meeting today will not be binding, nor will it change or affect the terms or conditions within the Plans and Specifications of this Project. Changes, if any, will be addressed in writing only via an Addendum.

Agenda

- General Information
- Small, Minority, Women and Veteran-Owned Business (SMWVVB Requirements)
- IFB Schedule
- Contract Solicitation Website
- Vendor Registration & Notification (VRN)
- Contract Requirements
- Bid Packet Preparation
- Key Reminders
- Temporary Bid Opening Instructions
- Contact Information
- Technical Information

General Information

- Non-Mandatory Pre-Bid meeting
- Presentation has been posted on SAWWS website
- Construction services being procured through IFB
- Construction Estimate: \$4,155,472.00
- Calendar Days: 477 days
- Geotechnical Report available on the SAWWS website with signing of disclaimer form

Aspirational SMWB Goal

| Industry | Aspirational SMWB Goal |
|--------------|------------------------|
| Construction | 20% |

The aspirational SMWB goal is 20% of your total bid price.

Accepted SMWVB Certification Agency

- **South Central Texas Regional Certification Agency**
 - MBE, WBE, SBE (Includes “HUB” Program)

Minimum Qualifications for SMWVB recognition:

- **SBE-Certified** (even MBEs and WBEs)
- **Local office or local equipment yard**

Good Faith Effort Plan (GFEP) FAQs

- **Q: Is the 20% SMWB goal mandatory?**
A: No, but we ask prime contractors to do their best with good faith outreach efforts. If the goal is not met, proof of outreach efforts is required with the submittal.
- **Q: What if I am having trouble finding SMWB subcontractors?**
A: Please email the SMWVB Program Manager with the scopes of work you are seeking. You will receive lists of local SMWVB-certified firms to contact.
- **Q: What if my business is SMWB-certified? Do I need to find SMWB subs?**
A: If your firm is SMWVB-certified, you will most likely meet the goal. However, the GFEP is a required document, and a good faith outreach effort is still necessary.
- **Q: Do I need to include all my subcontractors in the GFEP or just those that qualify towards the SMWB goal?**
A: All subcontractors need to be included in the GFEP, even those that may not count towards the SMWB goal.
- **Q: What if I have questions about the GFEP?**
A: Please contact the SMWVB Program Manager at 210-233-3420, or at Marisol.Robles@saws.org. GFEP questions can be asked at any time before the submittal is due.

Post Award: Subcontractor Payment & Utilization Reporting (S.P.U.R.) System

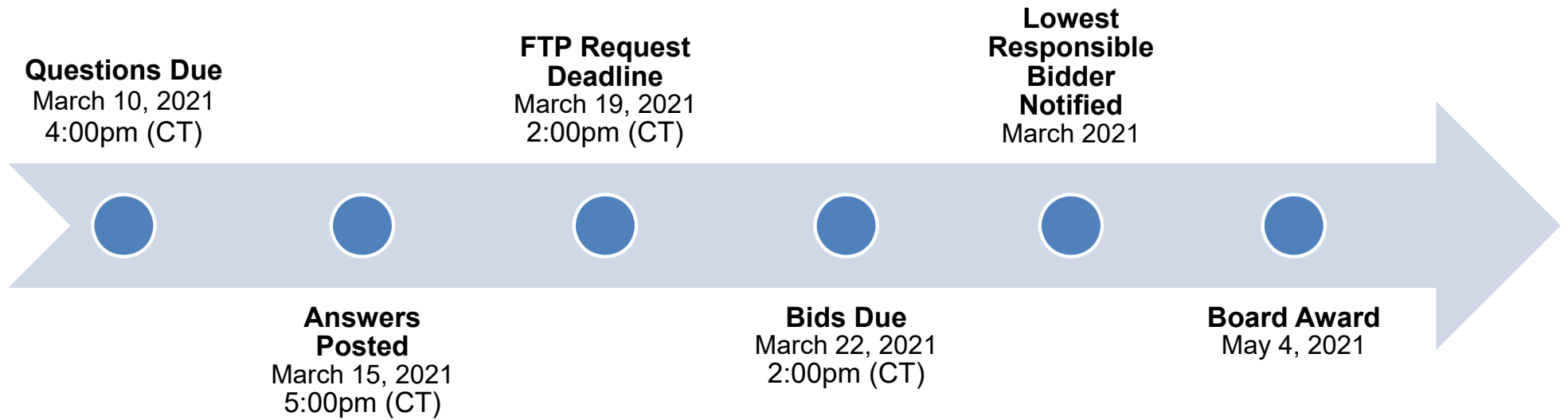
1. Subcontractor & Supplier Payment Tracking
2. Subcontractor and Supplier Additions or Substitutions
3. LCP Tracker
4. Must be Current and Accurate before Retainage is released

<https://saws.smwbe.com>



Broadband Access Points and Programmable Logic Controls Replacement – Phase 3

IFB Schedule



Contract Solicitations Website

- To locate the Contract Solicitations website choose Resources

The screenshot shows the San Antonio Water System website. The top navigation bar includes links for 'Pay Bill', 'Start-Stop Service', 'Report Water Waste', and 'Español'. A search bar is present with the text 'What can we help you find?'. Below the navigation bar, there are links for 'About SAWS', 'Resources' (circled in red), and 'Work With Us'. A blue button labeled 'Sign In / My Account' is also visible. Below the navigation bar, there is a section for 'Business Center' with a sub-header 'Find information on bid and contract opportunities for vendors; design tools and construction specs for developers; and'. A red arrow points to the 'Contract Solicitations' option in the Business Center dropdown menu.

- At the drop down menu choose Contract Solicitations.

Vendor Registration & Notification (VRN)

Reasons to Register in the VRN

- Receive bid notices directly in your email “Inbox”.
- Download bid documents.
- Subscribe to specific bids.
- Receive addendum notifications.



Notify Me

Receive updates sent straight to your inbox.

Subscribe

https://apps.saws.org/Business_Center/Contractsol/

Contract Requirements

Prevailing Wage Rate and Labor Standards – Section 2.10 of the General Conditions

- Payroll records are subject to review
- Contractors to utilize LCP Tracker
- Certified payroll to be submitted on weekly basis
- Contractors are responsible for sub-contractor payroll
- Late payrolls delay contractor payments from SAWS
- Wage decisions are included within the specifications
- Site visits are random and unannounced
- Interviews will be conducted and will be private & confidential
- All apprenticeship programs will need to be approved by Department of Labor prior to starting

Contract Requirements

Supplemental Conditions

- Insurance requirements are found in Section 5.7 of the GCs
 - Installation Floater in lieu of Builder's Risk
 - Including Riggers Liability Insurance
 - Maintain insurance coverage during the construction of this Project
- Will ask for insurance prior to Board award to expedite execution of the contract
- Compliant prior to executing the contract

Contract Requirements

Supplemental Conditions (Continued)

Apparent Low Bidder

- Notified within 24 hours of Bid Opening
- Statement for completing project
- W-9
- Proof of Insurability
- Schedule of Manufacturers and Suppliers
- Detailed baseline schedule with NTP of May 15, 2021
- Resumes
- Thoroughly completed Statement of Bidder's Experience form
 - Projects should meet requirements identified in the solicitation
 - References
 - Contact information must be verified prior to submitting

Contract Requirements

Supplemental Conditions (Continued)

- Contractor shall perform the work with its own organization on at least 40% of the total original contract price, which should be indicated on the Good Faith Effort Plan

Type/s of Certification: SBE: _____ MBE: _____ VBE: _____ WBE: _____

Prime Contractor's Percentage of Participation: (Ex: 100% is the total value of the contract.) _____ %

Describe your firm's participation to be performed on this Project: _____

- Liquidated damages will be assessed at \$932.00 per day

Bid Packet Preparation

- Utilize the Bid Packet Checklist within the specifications
- Double check all mathematical calculations and verify all extensions
- Ensure Mobilization and Demobilization items do not exceed percentages allowed
- Addendums are acknowledged on the Bid Proposals
 - Check our website regularly for addendum postings
 - It is possible to have multiple addendums during the time frame in addition to the scheduled final addendum

Key Reminders

- All questions should be sent in writing to the corresponding Contract Administrator by email or fax
- Please identify the project by its associated solicitation number (CO-00352)

Temporary Bid Opening Procedures

- Bids will be submitted using SAWS' temporary bid opening procedures
- SAWS encourages and prefers the submission of electronic bids using its secure FTP site
 - Bidders should submit a request via email to obtain access to the site no later than 24 hours before the bid opening
- Or, Bidders may drop off bid; but only the required items
 - Drop box is located at 2800 US Hwy 281 N, Customer Service Tower
 - Enter the first set of glass double doors
 - Insert into the black drop box on the wall on the left hand side
- Late bids will not be accepted and will be returned unopened
- Bid Opening will be handled via WebEx only; link found in IFB

Contact Information

| Contact Name | Title | Telephone Number | Email address |
|----------------|------------------------|------------------|--|
| Janie Powell | Contract Administrator | 210-233-2443 | Janie.Powell@saws.org |
| Marisol Robles | SMWVB Program Manager | 210-233-3420 | Marisol.Robles@saws.org |

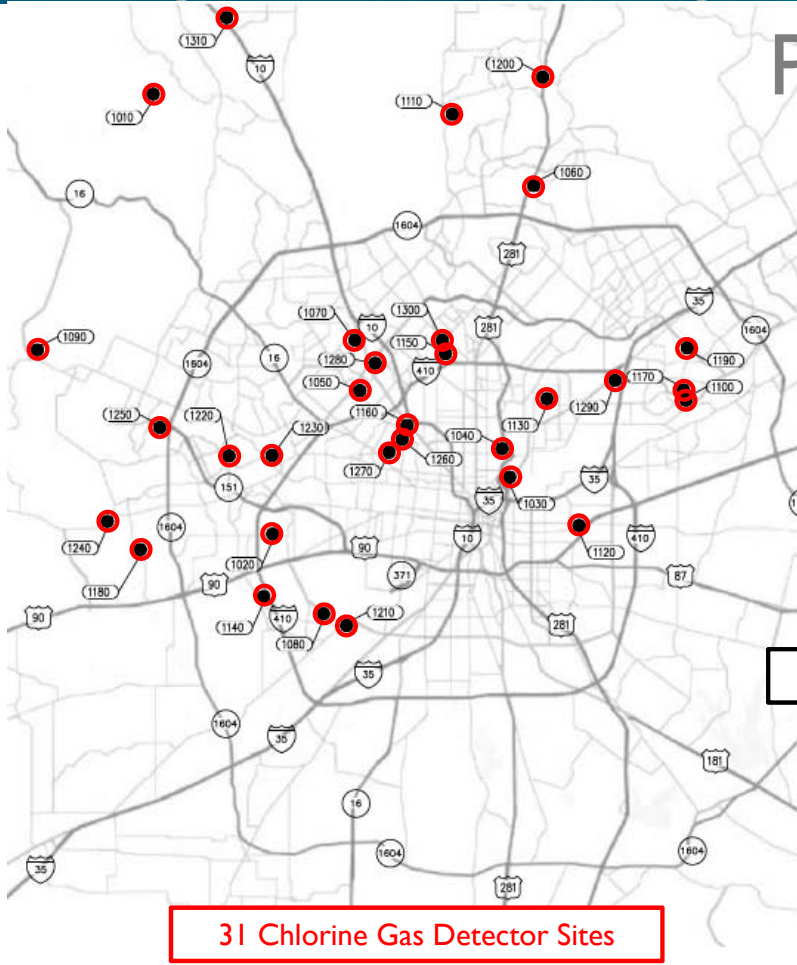
REMINDER

Please be advised that Bidders are prohibited from communicating with any other SAWS staff, the Consultant or City of San Antonio officials regarding this IFB up until the contract is awarded as outlined in the Instructions to Bidders

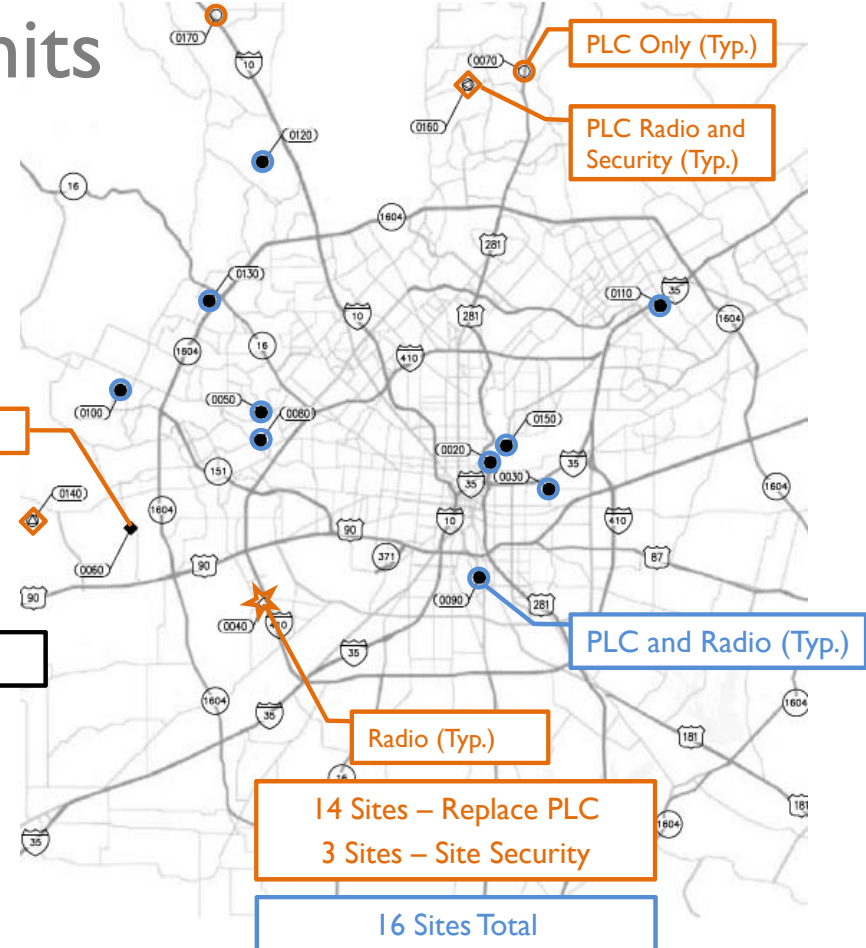
Project Overview

- The project includes the continued build-out and interface of a Broadband radio system with the SAWS communications network to provide secure and reliable communications and allow for the continued monitoring and controlling of equipment at various SAWS facilities, as outlined by the 2012 SCADA master plan
- It also includes the replacement of programmable logic controllers (PLCs), Narrowband radio access points, site security systems, replacement of chlorine gas detectors, and radio tower grounding improvements at various production facilities

Project Limits

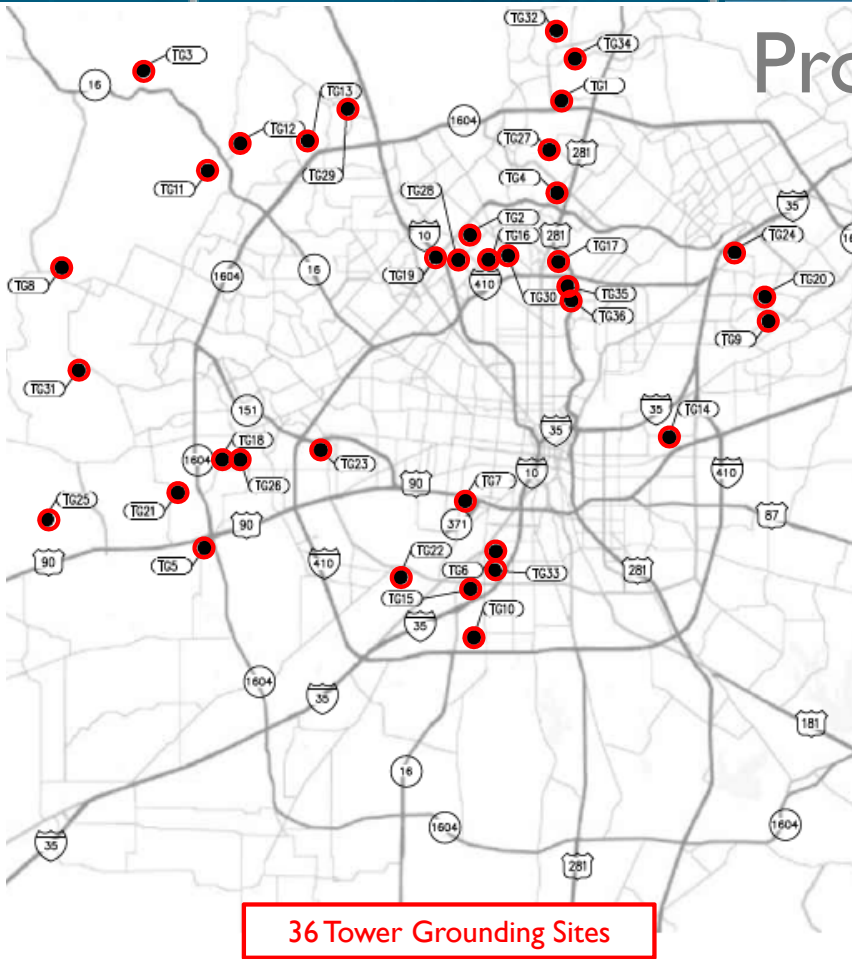


CHLORINE GAS DETECTOR SITE MAP



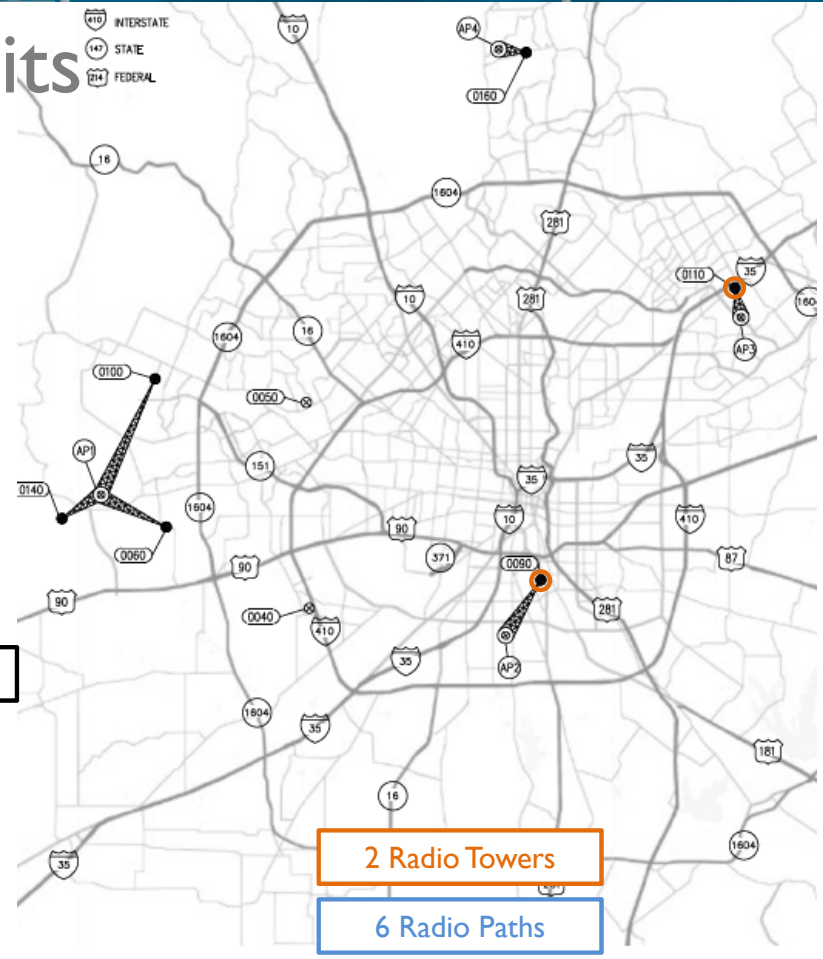
PLC, RADIO, AND SECURITY SITE MAP

Project Limits



36 Tower Grounding Sites

66 Total Sites



2 Radio Towers

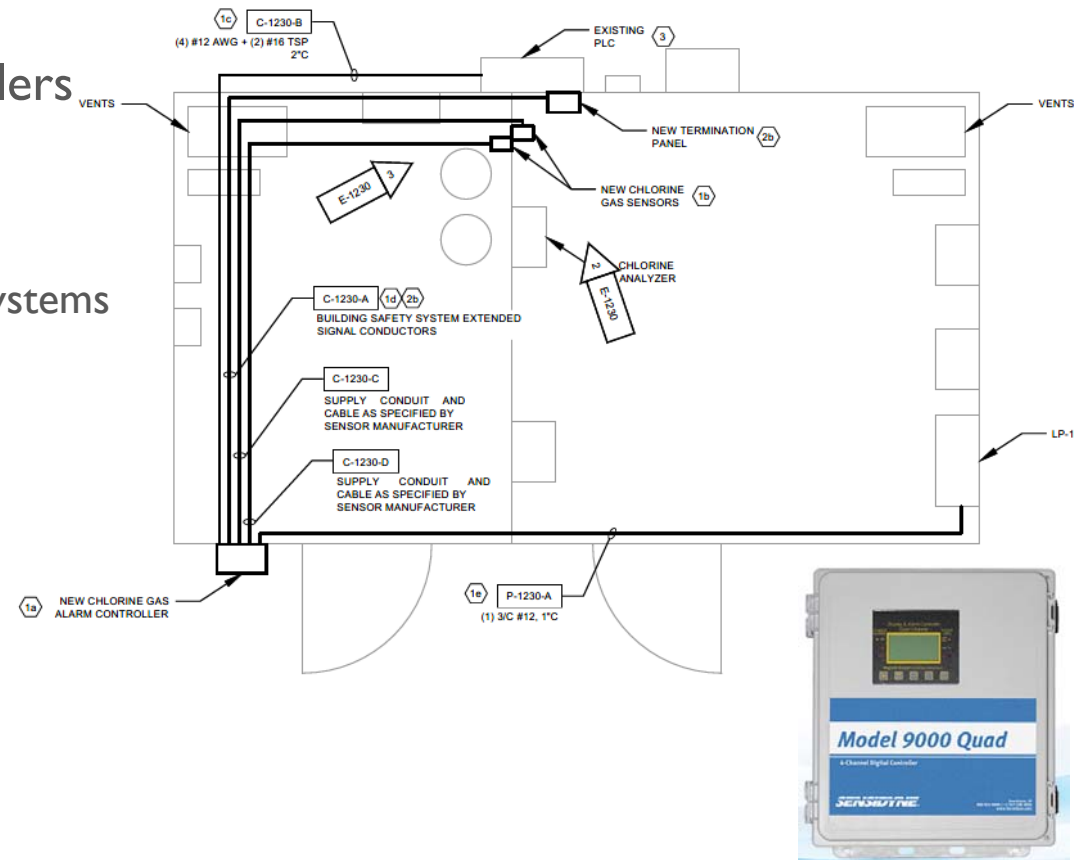
6 Radio Paths

EXISTING LATTICE TOWER GROUNDING SITE MAP

RADIO PATH MAP

Project Overview – Chlorine Detector Sites

- All 31 sites - New sensors and controllers
 - Parallel operation with existing to reduce downtime
 - Personal gas protection and PPE required
 - Tie-into existing alarm and annunciation systems
 - Analog for each sensor to PLC/HMI
- Controller and PLC configuration
- PLC/HMI programming



Project Overview – Radio Sites

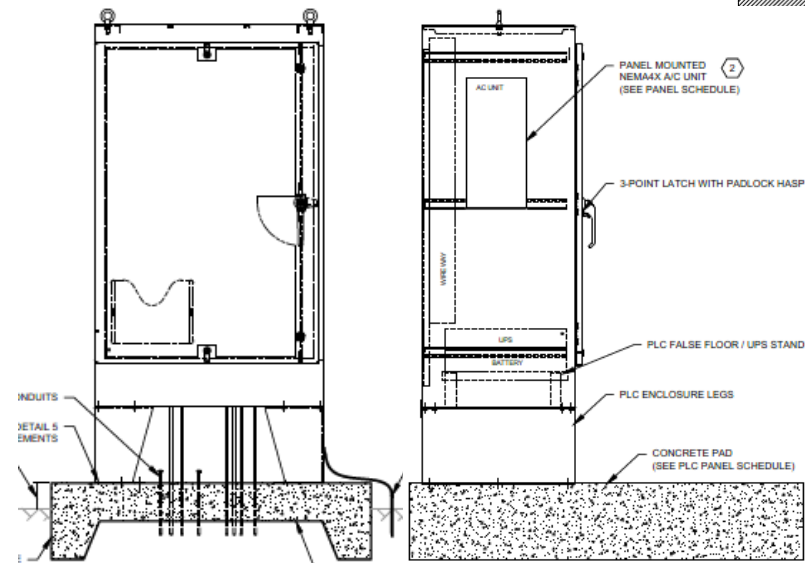
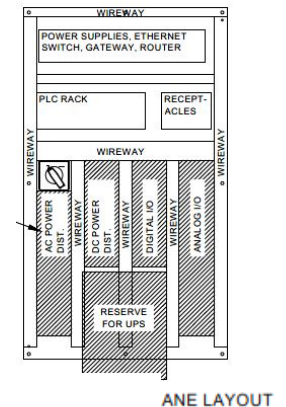
- Radio work at 8 sites
 - 6 sites – Broadband radio (Cambium PMP 450i)
 - 2 sites – Narrowband access point radio (Schneider Trio J900)
 - 2 sites – New 55 foot lattice tower



- Tower bases to be designed by Contractor (Texas PE)
- Contractor to finalize FAA coordination and pay permitting fees

Project Overview – PLC Replacement Sites

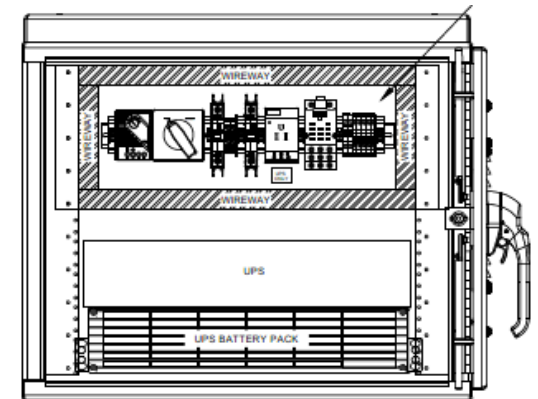
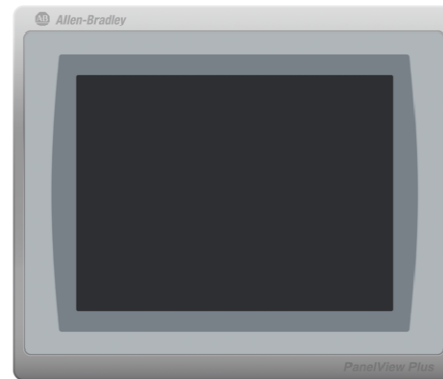
- PLC Replacement at 14 sites
 - 4 sites – Primary Pump Station
 - 5 sites – Booster Pump Station
 - 1 site – Storage Tank
 - 4 sites – Reuse Pump Station
- Allen Bradley CompactLogix PLC
- PlantPAx programming standards
- PLC, OIT, and HMI Programming



TYPICAL PLC ENCLOSURE LAYOUT

Project Overview – PLC Replacement Sites

- OIT replacements
- Serial gateways
- UPS units
 - 2 hour runtime requirement
 - 48VDC Battery Backup Systems
 - UPS enclosures at some sites

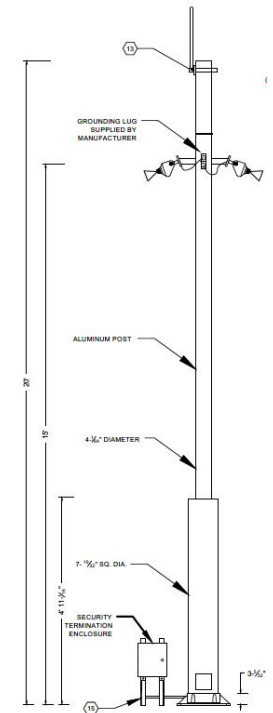
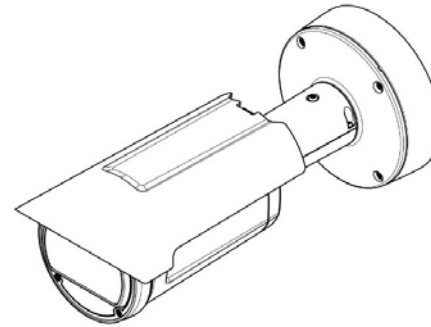


UPS PANEL LAYOUT



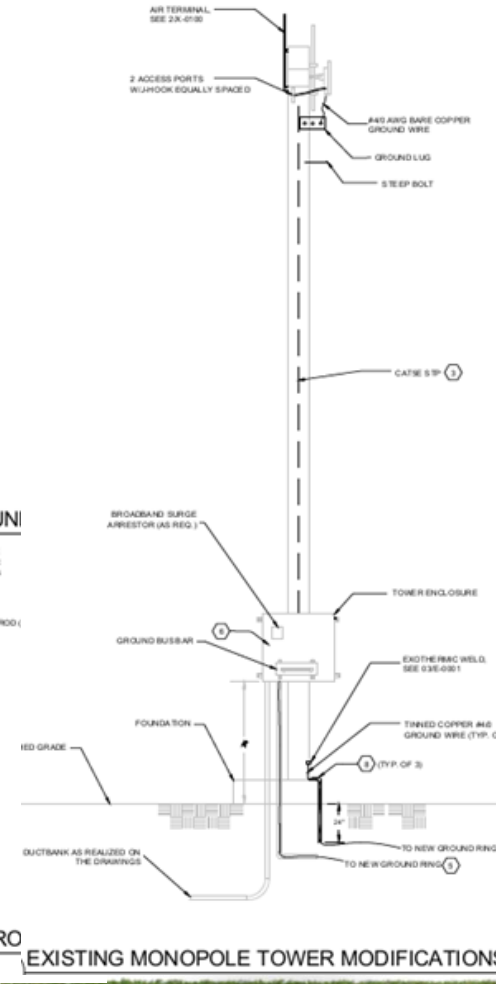
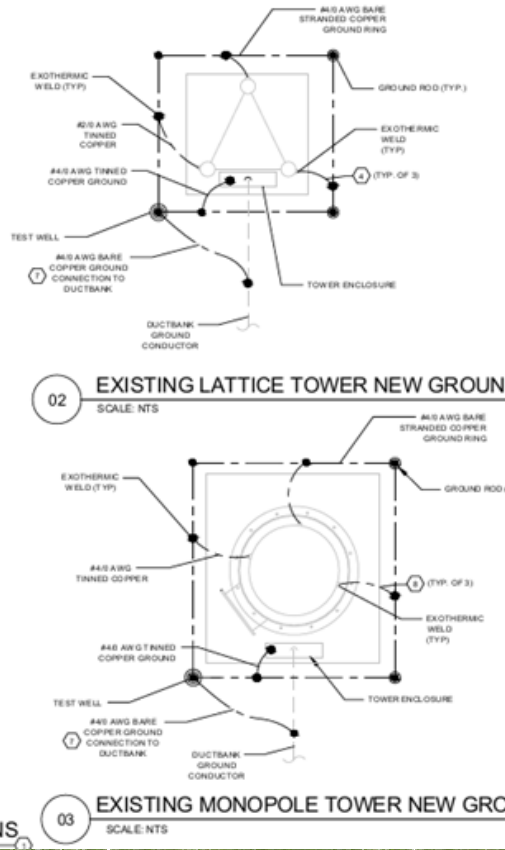
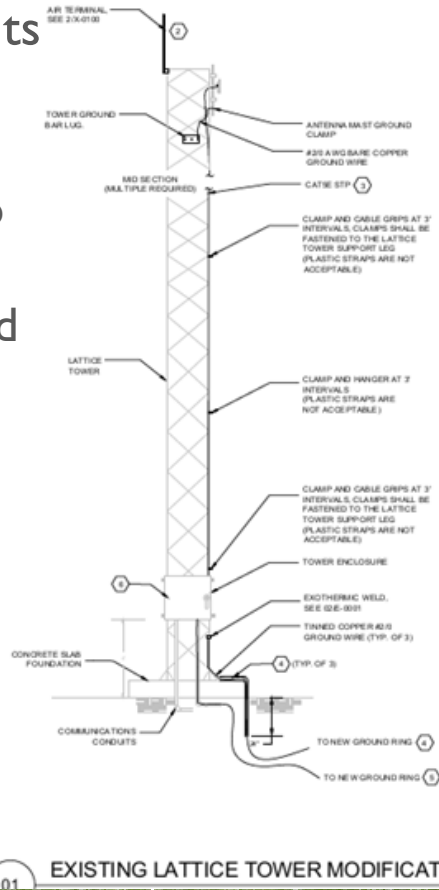
Project Overview – Security Sites

- Security work at 3 sites
 - IP cameras
 - Camera poles
 - Network video recorders
- Security System Integrator Qualifications
 - 5-years verifiable security system experience
 - Three (3) similar projects within the last 5 years
 - Service facility within 200 miles of project sites



Project Overview – Tower Grounding

- Grounding improvements at 36 existing towers
 - Rework grounding systems to bring up to standard
 - Ground tower legs and ensure grounding ring
 - Connect ductbank grounding conductors
 - Replace STP Ethernet cabling
 - Lightning protection



Project Overview – Testing

- **Factory Testing**
 - Witnessed Factory Test – all PLCs **one session** (Submit PLC/HMI programs at least one week prior)
- **Pre-Functional Testing**
 - Prior to installation of the process control system components at each PLC replacement site and prior to startup, the system shall be tested (inspect and document terminations, calibrations, loop functionality, field equipment functionality, and controls functionality) by the PCSI/ASP as installed to document conditions prior to construction activities
- **Field Testing**
 - Communications Testing – each site tested with SAWS IS or I&C group prior to startup
 - Operational Readiness Test (ORT) – each site fully tested prior to Owner review
 - Performance Acceptance [Functional] Test (PAT) – each site with Owner at Startup
 - Final Completion Walkthroughs – each site, grouped within three (3) one-week sessions
 - 30-day Site Acceptance Test (SAT) – each site

Construction Sequencing – Chlorine Gas Detectors

- Start with chlorine gas detector sites
 - Prioritize all chlorine gas detector related submittals and submit as soon as possible
 - Complete chlorine gas detector construction, startup and testing first
 - Chlorine gas detector sites shall have no limitation as to the quantity of sites under construction at any given time
 - Performance Acceptance Testing and Substantial Completion Walkthrough inspections of chlorine gas detector sites shall be conducted at one time after all chlorine gas detector are started up and tested. Partial inspections and performance testing of individual sites will not be acceptable

Construction Sequencing – Chlorine Gas Detectors

- Workers at any chlorine detector site shall be equipped with proper Personal Protective Equipment (PPE) including personal gas monitors during any time the existing chlorine gas detector system is out-of-service or disconnected from the local safety systems
- Notify SAWS security for any sites that will have their chlorine gas detector systems offline for longer than a normal working day
- Chlorine gas detector systems shall remain online to the furthest extent possible. CONTRACTOR to provide backup monitoring systems or operate the existing and new detector systems in parallel to minimize downtime. Disconnection of the chlorine gas detection system requires shutdown of the facility's production system and needs to be coordinated and notified as an outage request
- New chlorine gas detection systems shall be completely and successfully tested with Owner for operation of local safety systems and remote SCADA connection functionality prior to allowing the new system as the primary safety system, and demolition of the existing gas detection systems
- Provision of temporary power, cabling, or gas monitoring systems shall be the responsibility of the CONTRACTOR

Construction Sequencing – PLC Radio Security

- Radio, PLC Replacement, and Security Installation Sites
 - Begin construction following completion of chlorine gas detector sites
 - Adhere to construction constraints from Section 01 35 00
 - Not more than one station per pressure zone shall be allowed to be under construction at any given time
 - Not more than eight sites shall be allowed to be under construction at any given time.
 - Commissioning shall be limited to no more than two sites at the same time and shall be grouped by pressure zone where possible
 - Follow testing and walkthrough grouping and requirements
 - Factory Testing
 - Pre-Functional Testing
 - Field Testing

Construction Sequencing

- PLC and Radio Replacement Sites

| PLC AND RADIO REPLACEMENT SITES | |
|--|------------------|
| PRESSURE ZONE | QTY SITES |
| 890 | 3 |
| 930 | 1 |
| 994 | 2 |
| 1520 | 1 |
| 1610 | 2 |
| 1060/1125 | 1 |
| 1170/1111 | 1 |
| 1170S | 1 |
| 1170W,1258W | 1 |
| 1400E | 1 |
| Undetermined | 2 |

* Work at Riverside Reuse must reach substantial completion before PLC replacement work may begin at Brackenridge Reuse or Roft Road

Construction Sequencing – Tower Grounding

- Tower grounding improvements sites shall have no limitation as to the quantity of sites under construction at any given time

Milestones

| Task/Activity | Calendar Days from NTP |
|--|------------------------|
| Completion of Complete Shop Drawings/Submittals | 140 |
| Completion of Chlorine Gas Detector Sites | 310 |
| Completion of PLC/Radio Replacement Sites (First 5) | 340 |
| Completion of PLC/Radio Replacement Sites (Next 4) | 390 |
| Completion of PLC/Radio Replacement Sites (Next 4) | 420 |
| Completion of PLC/Radio Replacement Sites (Last 4) and Tower Grounding Improvements | 450 |
| Completion of Record Drawings | 470 |

QUESTIONS



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