

SECTION 27 3000 - PHONE SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Phone handsets
- B. These specifications contain the functional and operational requirements for the new Voice system.
- C. This phone system shall be sole sourced in products and installation contractor:

CCi Voice
70 Stony Hill Rd
Bethel, CT 06801
+1 203-938-8400

Contact: Cooper LeBlanc

1.2 INTENT

- A. This phone system and all handsets shall be procured, configured, and installed as stated within this specification.
- B. Integration of this new Phone system shall include integrating with the PA systems and shall allow every handset to utilize the PA system. Each handset shall be configured to utilize the PA system per the Owners' direction.
- C. General: Provide and install a complete phone system with all specified devices, installation, associated supporting devices, configuration of system, and testing in accordance with this section to provide a complete and functional system.
- D. It is the intent of these specifications to procure a fully acceptable, effective and reliable phone system. These specifications recognize the importance of a complete system operation and are not limited to specifying of equipment only. The following are also required from the contractor awarded this section:
 - 1. Prompt delivery and professional installation including service of equipment as specified.
 - 2. Contractor awarded this section must provide, for objective evaluation, references, which clearly state and show the effectiveness of proposed equipment and services.
 - 3. Used products will not be acceptable. The manufacturer must satisfactorily demonstrate that he has supplied and will continue to supply products to avoid the obsolescence of equipment installed in the building.

4. All equipment shall be fully guaranteed for twelve (12) months of the Owner's acceptance of substantial completion. This guarantee shall become effective from the day of installation completion. When in normal operation, if the equipment is found to be below the manufacturer's specification, repair and replacement of equipment shall be provided. Repairs shall be started within twenty-four (24) hours and completed without delay. The installation contractor shall either stock spares or be capable of obtaining all required replacement parts within twenty-four (24) hours.

1.3 APPLICABLE STANDARDS

- A. All of the work within the scope of this bid shall be performed in accordance with the applicable state, county and city laws and ordinances. The contractor awarded this section shall be able to obtain all permits and licenses as required in addition to being a licensed contractor. All materials, supplies and equipment being furnished shall be installed in accordance with the latest version of the applicable standards of:
 1. OSHA
 2. Uniform Building Code
 3. Americans with Disabilities Act (ADA)
 4. Components of the system shall be of the type approved by Safety and Regulatory Agencies including:
 - a. Underwriters' Laboratories (UL), Inc.
 - b. Federal Communications Commission (FCC).
 - c. Agency approvals and UL Listing declare the system's design, components, and installation shall meet the highest standards.
 - d. System installation shall comply with UL 681 and UL 611.
 5. The equipment shall comply with Part 68 of the FCC Telephone Requirements Rules.
 6. All circuits and equipment shall be installed and protected according to the National Electric Code and any applicable local requirements.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data, product specifications, installation instructions, and other pertinent information as applicable for each product or material specified.
- B. Operating and Maintenance instructions for each product.
- C. Samples of manufacturer's standard and extended warranties.
- D. Equipment List: Include every piece of equipment by model number, manufacturer, serial number, and date of original installation.

1.5 QUALITY ASSURANCE

- A. Single Source Responsibility: Obtain all materials from one (1) source from a single approved manufacturer for each different product required.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Take care in handling products in accordance with manufacturer's instructions.
- B. Store indoors in original undamaged packaging, in a well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity. Store products upright in secure, protected area. Verify with the manufacturer that site conditions are acceptable before receiving material.

1.7 WARRANTY

- A. Standard Manufacturer's Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of any device and equipment related to operation, and equipment that fail in materials or workmanship within specified warranty period.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. The selected manufacturer shall be Sangoma.
- B. All necessary equipment, cabling, and configurations required for a complete system to accommodate all the phones and users in this town/district is required as part of this section.
- C. **All patch cords required to connect each new IP phone to the existing Ethernet, 8P8C jack shall be furnished with each new phone as part of this section.**

2.2 BILL OF MATERIAL

- A. The following bill of material is a guideline for what is minimally required. The voice integrator shall furnish, install, and configure devices required for a fully functional system.
- B. The following devices are offered as REFERENCE only. Actual quantities of all devices MUST be verified with the IT drawings.

#	MFG	PART NO.	PRODUCT DESCRIPTION	QTY
1	Handsets			
2	Sangoma	P325	6 LCD LCD labeled buttons, HD Voice, Gigabit computer pass-through, 1 x USB port, 4.3" (diagonal), 480x272 pixel Color Display, IPS - Wall Phone - PHW	13

3	Sangoma	P3xx	Wall Mount Kit	13
4	Sangoma	P330	12 LCD labeled buttons, HD Voice, Gigabit computer pass-through, 2 x USB, WiFi capable, 4.3" Color Display - Administration Desk Phone 7821 - PHA	18
5	Sangoma	P325	6 LCD LCD labeled buttons, HD Voice, Gigabit computer pass-through, 1 x USB port, 4.3" (diagonal), 480x272 pixel Color Display, IPS - Desk Phone - PHB	30
6	Yealink	CP965	5 " Color Screen Display, 20' Range, Full-duplex speakerphone, 10/100 pass-through - Conference Room Phone - PHC	2
7			Installation	1

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Any area that may incur damage of any devices specified within this section must be brought to the attention of the technology consultant.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. The installation contractor awarded this section shall be responsible for replacing all damaged and/or faulty equipment specified within this section up until the Owner's acceptance of substantial completion.

3.2 SYSTEM INSTALLATION

- A. The contractor awarded this section is responsible for the Warranty and Support on all phone devices is required.
- B. Comply with all manufacturers' recommendations and best practices.
- C. The contractor awarded this section shall deliver and unpack all devices specified within this document and dispose of all trash.
- D. All device locations must be coordinated and verified by the owner prior to actual installation.
- E. All devices within this specification must be installed per the manufacturer's recommended insulation specifications.
- F. All cabling shall be properly dressed in a neat fashion that is acceptable to the owner. This shall include Velcro & nylon ty-wraps secured to the furniture so that all cables are properly supported, protected from damage in an aesthetically pleasing fashion.

- G. All configuration(s) required to obtain a fully functional system shall be included within this portion of work.
- H. The contractor awarded this section shall be responsible for the following:
 - 1. The phone system shall remain fully functional during the entire installation. Any outages shall be coordinated with the town IT department 14 days prior to any outage or cutovers.
 - 2. Installation of licenses required.
 - 3. Testing and verification of phone system.

3.3 SYSTEM STARTUP

- 1. System and components have been installed and inspected in accordance with the manufacturer's installation instructions.
 - 2. A visual inspection of the system components has been conducted to ensure that defective equipment items have not been installed and that there are no loose connections.
 - 3. All system grounding and transient protection systems have been verified as properly installed and connected, as indicated.
- B. Satisfaction of the above requirements shall not relieve the contractor of responsibility for incorrect installations, defective equipment items, or collateral damage as a result of Contractor work/equipment.

3.4 FIELD QUALITY CONTROL

- A. Verify that all accessories required for a complete and functional phone system have been properly installed.
- B. Verify each phone handset installed has dial-tone and can attain connectivity to the Public address system.
- C. Manufacturer's Perform tests and inspections: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including:
 - 1. All Connections
 - 2. Operational Tests: Perform operational system tests to verify that system complies with Specifications. Include all modes of system operation.

3.5 CLEANING

- A. Remove rubbish, debris, and waste materials and deposit in dumpster provided on site.

- B. Clean installed items using methods and materials recommended in writing by manufacturer.

END OF SECTION 27 3000