

SECTION 28XXX - MASS NOTIFICATION

PART 1 - GENERAL

1.0 SECTION INCLUDES

- A. Mass Notification System: Performance based specification and components required for networked based MNS including but not limited to the following:
 - 1. Control Unit.
 - 2. Paging/Audio interfaces.
 - 3. Amplifiers.
 - 4. Pre-recorded announcements Modules.
 - 5. Text to speech modules.
 - 6. Telephone/SIP inputs.
 - 7. SIP Page Stacking.
 - 8. One Touch Conference Bridge.
 - 9. Desktop notification.
 - 10. Social media (Twitter).
 - 11. Microsoft Teams Integration and Control.
 - 12. Email Integration.
 - 13. SMS Integration.
 - 14. Voice Call Integration.
 - 15. Email Ingestion.
 - 16. Multiple Control Unit Integration.
 - 17. Local or Campus Wide Integration.
 - 18. Digital signage Integration.
 - 19. Desktop Notification Integration.
 - 20. Strobes and other visual light bars Integration.
 - 21. Two Way Talk Back Communication Unit Integration.
 - 22. Distributed Audio Integration.
 - 23. Integration with FACU/Fire Alarm System for Audio or Notification.

1.01 SUMMARY

- a. This section specifies the requirements for the design, installation, and integration of a Mass Notification System (MNS).
- b. The MNS shall provide emergency notification capabilities for broadcasting information and alerts to building occupants.
- c. Compliance with applicable codes, regulations, and standards is required.

1.02 RELATED DOCUMENTS

- a. Drawings and general provisions of the contract, including general conditions and Division 01, apply to this section.
- b. Applicable codes and standards:
 - a. National Fire Protection Association (NFPA):
 - a. NFPA 72 - National Fire Alarm and Signaling Code.
 - b. NFPA 72E - Standard on Fire Department Communications Systems.
 - b. International Building Code (IBC).
 - c. Americans with Disabilities Act (ADA).
 - i. Local, state, and federal regulations.
 - ii. Product Data:
 - 1. Manufacturer's data sheets on each product to be used.
 - a. Submit in PDF format.
 - b. Equipment data sheets will be identified with device IDs that reference drawings and equipment used.
 - 2. Preparation instructions and recommendations.
 - 3. Storage and handling requirements and recommendations.
 - 4. Typical installation methods.

1.03 SYSTEM DESCRIPTION

- a. The MNS system must provide the following:
 - a. Ability to Integrate to any third party distributed audio system with line level input availability.
 - b. Command Center:
 - i. Integrated interactive Global, Regional Local Map.
 - 1. Allow for ingestion of Microsoft Active Directory.
 - a. Allow for the creation of Notification groups.
 - b. Allow for SMS Text via local or global groups.
 - i. Allows for Text back from individuals.
 - c. Allow for Email via local or global groups.
 - d. Allow for outbound prerecorded voice telephone calls to local or global groups.
 - e. Allow for Desktop notification.
 - f. One Touch conference.
 - ii. One touch or Automated Pre-Recorded Messaging.
 - iii. One touch Two Way Talk Back.
 - iv. One touch or Automated Zone Communication.
 - v. Text to Speech ability.
 - vi. One touch or Automated digital sign egress communication.
 - vii. Scheduled tones or announcement capability.

- viii. Ability to track impact noise or occupancy.
 - ix. Controls for volume and EQ for audio sources.
 - x. Controls via Cell Phone without the need to download a separate app.
 - xi. Email Ingestion ability to allow for triggering of audio or notification.
 - 1. Ability to Unify multiple FACU or Audio Systems for messaging and notification.
- b. The MNS shall include the following components:
- a. Head-End Appliance (MNUC).
 - b. Audio Interface (PI).
 - c. Networked Audio Amplifier (MOP).
 - d. Network infrastructure for integration.
 - e. Power supply and backup.
 - f. Integration with other building systems as required.

1.04 SUBMITTALS

- a. Product data: Submit manufacturer's product literature and technical data sheets for each MNS component.
- b. System design: Provide a comprehensive system design including system architecture, device placement, wiring diagrams, and network integration details.
- c. Certifications: Submit documentation indicating the MNS components comply with relevant codes and standards.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- a. The MNS components shall be provided by manufacturers with a minimum of three years of experience in manufacturing mass notification systems.
- b. Acceptable manufacturers: [Mercury Notifications LLC].
 - i. Product: MerCure MNUC, PI, and MOP.
 - 1. MNUC – (Mercury Next Unit of Communication) – Headend
 - a. Specify Quantity (1 Per Building or System)
 - 2. PI (Platform Interface) – Audio Bridge
 - a. Specify Quantity (1 Per MNUC)
 - 3. MOP (Micro Operating Platform) – Networked Amplifier
 - a. Specify Quantity (Minimum 1 per MerCure System or Existing Distributed Amplifier/Zone)

2.02 EMERGENCY NOTIFICATION SPEAKERS by others

- a. Speakers shall be high-efficiency, intelligible, and designed for emergency notification purposes.
- b. Speakers shall be distributed throughout the building to provide uniform coverage.
- c. Speaker enclosures shall be weather-resistant for outdoor installations.
- d. Speakers shall comply with NFPA 72 requirements for audibility and intelligibility.

2.03 VISUAL NOTIFICATION DEVICES by others

- a. Visual notification devices shall be provided in areas where audible notification alone may not be effective, such as noisy environments or areas with hearing-impaired occupants.
- b. Visual notification devices shall comply with ADA requirements and be designed to attract attention effectively.

2.04 CENTRAL CONTROL PANEL

- a. The MNS shall include a central control panel for system management.
- b. The control panel shall support integration with other building systems, such as fire alarm systems, BMS and security systems.
- c. The control panel shall provide a user-friendly interface for system configuration, event programming, and monitoring.

2.05 NETWORK INFRASTRUCTURE

- a. The MNS shall utilize a robust network infrastructure to support system communications and integration.
- b. Network components shall comply with industry standards for data transmission and security.
- c. Backup power supplies shall be provided to ensure system reliability.

2.06 POWER SUPPLY AND BACKUP

- a. The MNS shall be powered by a reliable and dedicated power supply.
- b. The power supply shall be capable of supporting all MNS components under normal operating conditions.
- c. A backup power supply, such as an uninterruptible power supply (UPS) or emergency generator, shall be provided to ensure continued operation during power outages.
- d. The backup power supply shall have sufficient capacity to support the MNS for a minimum of 4 hours without interruption.

2.07 SYSTEM MONITORING AND TESTING

- a. Regular testing and maintenance of the MNS shall be performed as per manufacturer's recommendations and applicable codes.

PART 3 - EXECUTION

3.01 INSTALLATION

- a. Installation of the MNS shall be performed by qualified personnel experienced in the installation of mass notification systems.

- b. All components shall be installed in accordance with the manufacturer's instructions and applicable codes and standards.
- c. Wiring and cabling shall be properly routed, protected, and labeled for easy identification and future maintenance.

3.02 INTEGRATION

- a. The MNS shall be integrated with other building systems as specified and approved by the project's design team.
- b. Integration may include, but is not limited to, fire alarm systems, security systems, access control systems, and building management systems.
- c. The integration shall allow for seamless communication and coordination between the MNS and other systems during emergencies.

3.03 TRAINING

- a. The MNS supplier shall provide comprehensive training to the building owner's personnel responsible for the operation and maintenance of the system.
- b. Training shall cover system operation, emergency procedures, troubleshooting, and routine maintenance tasks.
- c. Training sessions shall be conducted both on-site and remotely, as required by the project.

3.04 WARRANTIES

- a. The MNS supplier shall provide warranties for all MNS components and equipment in accordance with industry standards.
- b. Warranties shall cover defects in materials, workmanship, and performance for a minimum period of 1 year from the date of substantial completion.
