

ADDENDUM NO. 3

TO: PLANS AND SPECIFICATIONS FOR STATE OF MISSOURI

**Re-Bid Install Fire Alarm System
Northwest Missouri Psychiatric Rehabilitation Center
St. Joseph, Missouri
PROJECT NO.: M2001-01**

Bid Opening Date: 1:30 PM, November 22, 2022 (UNCHANGED)

Bidders are hereby informed that the construction Plans and/or Specifications are modified as follows:

SPECIFICATION CHANGES:

1. Section 284621.11 – Addressable Fire Alarm Systems

a. ADD Paragraph 2.12 as follows:

2.12 NETWORK COMMUNICATION CENTER (NCC)

A. Performance Criteria:

1. Regulatory Requirements:

a. NFPA 72 or UL as applicable.

2. General Characteristics:

a. The management station software shall be UL 864 and UL 2572 Listed to run on non-UL864 and UL 2572 Listed server hardware to monitor and control the complete system as designed in accordance with the Building System Information Unit (BSIU) requirements in NFPA72.

b. The management station software shall be supervised with remote listed fire detection and notification systems.

c. All fire panels connected to the management station shall be supervised and result in a notification at the user interface on the server and, if configured, at the user interface of each additional client workstation.

d. The system shall not be limited to only proprietary protocols, but shall also be able to integrate to third-party fire panels via drivers and gateways.

e. The system software shall be capable of running on Windows Professional and Enterprise (64 bit), Windows Server 2016, and Windows Server 2019.

f. The software shall support full High Definition (HD) graphics at 1920x1080 resolution.

g. The software shall support a minimum of four (4) monitors for displaying the event list, graphics, and system browser on separate monitors.

h. Interface Description:

1) Operator interface software shall minimize operator training through the use of user-friendly and interactive graphical applications.

- 2) Users must be able to build multiple, separate, personalized hierarchical “tree” views that represent the workstation, fire systems, geographical facility layouts, and equipment relationships.
- 3) 256-character custom object identification (names) must be supported to provide clearly descriptive identification.
- 4) The user interface shall display relevant information for a selection in multiple panes of a single window without the need for opening multiple overlapping windows on the desktop.
- 5) Provide a graphical user interface that shall minimize the use of keyboard through the use of a mouse or similar pointing device, with a “point and click” approach to menu selection and a “drag and drop” approach to inter-application navigation.
- 6) Software navigation shall be user friendly by utilizing “forward & back” capability between screens and embedded links to graphics, documents, drawings, trends, schedules, as well as external documents (.doc, .pdf, .xls, etc.) or web addresses that are related to any selected object.
- 7) Primary selection of objects in the operator interface software shall be available from user defined hierarchical Views, from graphics, or from events in an Event List.
- 8) Secondary selection of objects in the operator interface software shall be available from links to any objects or external documents related to the primary selection.
- 9) Links to information related to any selected objects shall be displayed in a consistent manner and automatically defined based on where an object is used in the system.
- 10) The operator workstation shall be capable of displaying web pages and common document formats (.doc, .xls, .pdf) within the operator workstation application.
- 11) The software shall provide a multi-tasking type environment that allows the user to run several applications simultaneously.
- 12) System database parameters shall be stored within an object-oriented database.
- 13) Standard Windows applications shall be capable of running simultaneously with the management station software unless running in Closed Mode.
- 14) The operator shall be able to work in Microsoft Word, Excel, and other Windows based software packages, while concurrently annunciating alarms and monitoring information.
- 15) Management station configuration, editing, and graphics generation shall be performed on-line from the operator workstation software.
- 16) The management station software shall have the ability to simultaneously display graphics, list of system event, and device information and commands.

- 17) The software shall provide online, context-sensitive help, including an index, glossary of terms, and the capability to search help via keyword or phrase.
- 18) The management station software shall provide a status Summary Bar window with the following capabilities:
 - a. The management station user interface shall display event lamps indicating at a minimum the following events:
 - 1) Life Safety Alarms
 - 2) Alarms
 - 3) Supervisory
 - 4) Trouble
 - b. When a new event is received, the event lamp of the corresponding event shall flash and/or change color along with an audible tone.
 - 1) The event audible tone shall be silenced once all the new events have been acknowledged.
 - c. The summary bar shall indicate the total number of events in each corresponding category.
 - d. The summary bar shall always be visible and the topmost window preventing other windows from obstructing the summary bar.
 - e. There shall be an indicator of the integrity of the system's network connection.
- 19) The management station software shall provide a status node map window with the following capabilities:
 - a. The node map shall always be visible and the topmost window preventing other windows from obstructing the node map.
 - b. The node map shall automatically display a graphical symbol to represent all FACP's connected to the management station software.
 - c. The software shall provide the capability to define the location and size of the node map displayed on the monitor.
 - d. For each FACP represented in the node map, the software shall provide the capability to:
 - 1) Request control of the fire panel
 - 2) Optionally, disconnect and connect the management station from the FACP
 - 3) Group multiple FACP's into a summary node
 - 4) Display the state of each FACP and provide a summary of the number of events active on each FACP.
- 20) The management station software shall provide a macro viewer window with the following capabilities:
 - a. The macro viewer window shall be accessible with one UI click.
 - b. The macros displayed in the macro viewer are user-definable.
 - c. Macros are displayed as they are grouped with in the software.
 - d. The status of each macro is displayed in the macro viewer.
- 21) The operator shall be able to individual control FACP devices control (activate/deactivate and energize/de-energize) from the user interface from either the graphics or selection in the system browser.
- 22) The system shall be able to display specific addressable points, both status, and alarm condition by address, location, or specific description.

- 23) The system shall be able to specifically and individually control addressable points, zones of notification, and be able to adjust detector sensitivity.
 - 24) The system shall provide the operator with both global and local commands for connected FACPs.
- i. Event Management:
- 1) Event Notification shall be presented to each workstation in a tabular format application, and shall include at a minimum the following information for each event: event type displayed by color and icon, event category, event cause, event source object, event state, event time and date, suggested action, event commands, and detailed event text.
 - 2) Only events for which the logged-on user has privileges to view shall be displayed on each workstation.
 - 3) The software shall provide the ability to users to limit the list of events displayed at each workstation (e.g., only show fire alarms at this workstation, no matter who is logged on)
 - 4) Each event shall have the ability to sound an audible notification based on the category of the event.
 - 5) The Event List shall have the ability to list and sort the events based on event type, event status, point name, ascending or descending activation time.
 - 6) Directly from the Event List, the user shall have the ability to acknowledge, silence/unsilence, and reset the fire panel.
 - 7) The user shall have the ability to navigate to all information related to a selected point in order to command, launch an associated graphic, view related items, or run a report on a selected point directly from the Event List.
 - 8) Each event shall have a direct link from the Event List to further user-defined point informational data.
 - 9) The user shall have the ability to also associate real-time electronic annotations or notes to each event.
 - 10) The software shall provide the option to configure detailed operating procedures that guide a user through predetermined standard operating procedures for handling critical events. Users shall be able to log completion of each operating step as it is performed.
- j. Subsystem Connectivity:
- 1) The management station software must be capable of connecting simultaneously to multiple fire systems and data sources.
 - 2) The system shall have the ability for multiple command centers with full control of the fire system.
 - 3) The system shall support both networked and/or standalone FACPs.
 - 4) The system shall be capable to connect to a minimum of 128 stand-alone FACPs with point-to-point connections where the distance between the FACP and the management station can be up to 10 miles apart.

- 5) The system shall be able to monitor and control a minimum of 66,000 addressable fire points.
 - 6) The management station software must support the following standard protocols:
 - a. BACnet Life Safety objects
 - b. BACnet IP (standard Revision 1.13)
 - c. OPC (OLE for Process Control) OPC DA 2.05, 3.0
 - d. Modbus TCP
 - e. SNMP (Agent V1 and V2)
 - 7) The system shall be capable of supporting both standard and vendor specific protocols to integrate a wide variety of third-party devices and legacy systems.
 - 8) The management station software shall be capable of integrating with building automation systems.
 - 9) The management station software shall be capable of integrating with access control systems, video management systems, and mass notification systems
- k. Certifications and Approvals:
- 1) The management station software shall have been tested against the following norms and standards:
 - a. UL-listed to UL864 10th edition Standard for Control Units and Accessories.
 - b. BACnet Revision 1.13, certified by BACnet Testing Laboratory as BACnet Advanced Workstation Software (BTL B-AWS).
 - c. IT security compliant with the ISA-99/IEC 62443 Security Level: SL1.
 - d. OPC DA V2.05a and V3.0 Server, certified by the OPC Foundation certification program.
- l. Client-Server Connectivity.
- 1) Client sessions must be allowed to run on the server and on other devices connected to the server via Intranet, Extranet, or, where permitted, Internet connections.
 - 2) Internet connections, ISP services, VPN services, as well as necessary firewalls or proxy servers shall be provided by the owner as required to support remote access features.
 - 3) The following client options must be supported:
 - a. Installed Client:
 - 1) Software application installed from installation media on to the client machine.
 - 2) Installed client software must be configurable to allow it to run in a Closed Mode such that the software can lock down the client machine and prevent users without permission from minimizing the application or running other Windows applications that might cover the management station software user interface.
 - 3) Communication between the server and Installed Clients must be monitored so that any break in communication between the

server and an installed client results in notification at the Server and Installed Client machine.

4) Installed client machines communicate directly with the management station server.

b. Web Client:

1) Software that runs in a browser on the client machine as a Full Trust client application.

2) Connected to the management station software server via Microsoft IIS Server.

c. Windows App:

1) Software application downloaded from the management station server to run on the client machine like an installed application

2) Application must be automatically updated whenever new apps are available at the management station server.

3) Connected to the management station software server via Microsoft IIS Server.

4) Each of the client options shall provide the same functionalities including operation and configuration capabilities.

m. Access Rights and User Privileges:

1) Access to any client user session must be password protected.

2) Users shall be able to create local user accounts specific to the application software.

3) Users shall be able to link application user accounts to Active Directory user accounts for consistent management with domain user accounts.

4) Operator-specific password access protection shall be provided to allow the administrator/manager to limit users' workstation control, display and data base manipulation capabilities as deemed appropriate for each user, based upon an assigned username and password.

5) Operator privileges shall follow the operator to any workstation logged onto.

6) The administrator or manager shall be able to further limit operator privileges based on which operator workstation an operator is logged on to.

7) The administrator or manager shall be able to grant discrete levels of access and privileges, per user, for each point, graphic, report, schedule, and operator workstation application.

n. Activity Logging:

1) The management station software shall maintain a log of the actions of each individual operator.

2) The software shall provide an application that allows querying based on object name, operator, action, or time range.

3) The software shall provide the ability to generate reports showing operator activity based on object name, operator, action, or time range.

o. Reports:

1) The software shall provide the capability to generate reports on-demand.

- 2) The software shall provide the capability to generate reports pre-defined schedule.
 - 3) The reports shall be able to be viewed on the screen, sent to e-mail recipients, sent to a local file system folder, or sent to a printer.
 - 4) The reports shall be able to be exported in Portable Document Format (PDF) and Microsoft Excel file formats.
 - 5) The software shall provide the capability to customize existing reports and create new reports with graphical report builder.
 - 6) The software shall provide multiple filters for concise history report generation
 - 7) As a minimum, the system shall allow the user to easily obtain the following types of reports:
 - a. A general listing of all or selected points in the system
 - b. List of all points with active alarm, supervisory, trouble, or status
 - c. Sensitivity report for all detectors connected to a fire alarm panel that is capable of sending sensitivity information to the management station
 - d. List of all disabled points
 - e. User activity report
 - f. Event history reports
- p. Graphics Application:
- 1) All graphics shall be available with the same look and functionality whether they are displayed at an installed client, web client, or windows app client workstation.
 - 2) User shall be able to add/delete/modify system graphics for floor plan displays and system schematics from a standard user interface without the need of any external or specialized tools.
 - 3) The software shall include all necessary tools and procedures for the user to create their own graphics.
 - 4) The software shall provide the ability to add custom graphic objects to graphic pages.
 - 5) The software must include a library of standard graphical objects for visualizing compatible fire panels and connected input and output device, non-compatible fire panels and connected input and output devices.
 - 6) The Graphics application shall be capable of automatically assigning the appropriate symbol for an object (point) selected to be displayed on the graphic based on what the object represents (fire panel, detector, I/O module, etc.) when the object is placed on a graphic.
 - 7) The Graphics application shall allow a user to manually override the automatically assigned symbol for an object when a different symbol is desired.
 - 8) The user shall have the ability to add custom symbols to the symbol library.
 - 9) The software shall permit the importing of AutoCAD or scanned pictures for use in graphics.

- 10) The software shall be capable of automatically placing detectors, pull stations, and I/O modules on graphical floor plans according to the locations indicated in the AutoCAD files.
 - 11) Graphics must be automatically associated to any points or system objects that are rendered on the graphic, so that selection of a system object will allow a user to simply navigate to any associated graphic, without the need for manual association.
 - 12) The software must allow users to command points directly off graphics application.
 - 13) Navigation through various graphic screens shall be optionally achieved through a hierarchical "tree" structure
 - 14) Graphics viewing shall include dynamic pan zoom capabilities.
 - 15) Graphics viewing shall include the ability to switch between multiple layers with different information on each layer.
 - 16) Graphics shall include a decluttering capability that allows layers to be programmatically hidden and displayed based on zoom level.
- q. Macros, Reaction Processor, and Scripts:
- 1) The software shall provide user-definable macro commands that enable an operator to command one or more devices with a single action.
 - 2) The software shall provide macros that can be either started manually on-demand and scheduled to execute a user defined time.
 - 3) The number of user-defined macros that can be created shall only be limited the available system resources.
 - 4) The software shall provide a reaction processor that can automatically execute specified actions when a set of conditions are verified.
 - 5) The reaction processor shall provide at a minimum the following conditions:
 - a. Time
 - b. Event
 - c. Change of value
 - d. a combination of some or all of Time, Event, and Change of Value
 - 6) The software shall provide a Script Editor to create sophisticated and powerful script programs based on the Javascript language where scripts can be executed on demand or automatically by the system based on trigger conditions.
- r. Remote Notification (RENO):
- 1) Workstations shall be configured to send out messages to numeric pagers, alphanumeric pagers, SMS (Simple Messaging Service, text messaging) Devices, and email accounts based on a point's alarm condition.
 - 2) Email notification must support POP3, IMAP, and SMTP with SSL/TSL
 - 3) Communication with external software must be encrypted.
 - 4) There shall be no limit to the number of points that can be configured for remote notification of alarm conditions and no limit on the number of remote devices which can receive messages from the system.

- 5) On a per point basis, system shall be configurable to send messages to an individual or group and shall be configurable to send different messages to different remote devices based on alarm message priority level.
 - 6) System must be configurable to send messages to an escalation list so that if the first device does not respond, the message is sent on to the next device after a configurable time has elapsed.
 - 7) Workstation shall have the ability to send manual messages allowing an operator to type in a message to be sent immediately.
 - 8) Workstation shall have a feature to send a heartbeat message to periodically notify users that they have communication with the system.
- s. External Data Access:
- 1) The software shall provide the ability to expose configuration properties and real-time values through CSV files, OPC DA, OPC UA, or REST-based Web Services.
 - 2) The software shall provide the ability for external applications to change configuration and real-time values through OPC DA, OPC UA, or REST-based Web Services.
 - 3) External data access must be secured using the level of permissions configured for users and operator workstations.
 - 4) Web service interfaces must allow for exchanging data (object's values and events) between workstation and external applications such as facility management systems, enterprise applications, mobile applications or other value-added services.
 - 5) Documentation describing web services interfaces must be included to allow external developers to write applications that leverage the data exchange.
- t. Licensing:
- 1) Software licensing must be allowed to be bound to a hardware-based dongle or to physical computer hardware.
 - 2) User licenses from all client types shall be from a common pool of client licenses. Licenses for installed and browser-based clients shall not be in separate pools.
- u. Data Security:
- 1) The management station software must allow that all communication paths between clients and the server are encrypted and authenticated.
 - 2) Any runtime data transfer between the system server and Web Server (IIS) must be allowed to be encrypted by the management station software.
 - 3) Communication between any Web Server (IIS) and the Web Clients must be allowed to be encrypted.
 - 4) Passwords must be handled with encrypted storage and transmission
 - 5) The software must support the use of public domain algorithms for cryptographic functions, including AES, DiffieHellmann, RSA, and SHA-2. No self-coded algorithms shall be allowed.

- 6) All symmetrical encryption must use 256 bit AES or stronger.
- 7) All asymmetrical encryption must use 2048 bit or stronger.
- 8) The software must support the use of commercial certificates for securing client-server communications.
- 9) The software must support the use of self-signed certificates to allow local deployments without the overhead of obtaining commercial certificates.
- 10) When using self-signed certificates, the owner of the management station system is responsible for maintaining their validity status, and for manually adding them to and removing them from the list of trusted certificates.
- 11) The management station software shall be compatible with the following Virus Scanners:
 - a. Kaspersky
 - b. Avira
 - c. McAfee
 - d. Bitdefender
 - e. TrendMicro Office Scan

v. Database Backup and Restore:

- 1) The system shall be capable of backing-up the database at the operator interface:
 - a. A copy of the database shall be created and stored in a Backup folder on the hard drive.
 - b. The copy of the database shall be able to be copied to an external media.
 - c. The database backup shall be able to be scheduled and be done while the system is still running.
- 2) The system shall be capable of restoring the database via a copy of the backup file.

B. Management Station Server Hardware:

1. The management station server application shall be installed on a UL864 listed server hardware when control of compatible fire panels is required.
2. The server hardware shall include a mouse, keyboard and 42in flat screen monitor.
3. The flat screen monitor and server hardware shall, at a minimum, support a screen resolution of 1920x1080.
4. The server hardware shall meet the minimum hardware specification as required by the management station server software based on the number of connected addressable fire points.

C. Management Station Client Workstation Hardware:

1. The management station client application shall be installed on UL864 listed workstation hardware when control of compatible fire panels is required.
2. The workstation hardware shall include a mouse, keyboard and 42in flat screen monitor.
3. The flat screen monitor and workstation hardware shall, at a minimum, support a screen resolution of 1920x1080.

4. The workstation hardware shall meet the minimum hardware specification as required by the management station client software.
- D. Network Printers:
1. The management station printer shall be operated from the printer port and shall be UL 864 listed for operation with the system. The parallel printer shall be supervised for: On/Offline, out of paper, paper jam, power off, and connection the system.
 2. The printer shall be a high speed, 24 dot matrix, wide carriage, and capable of using tractor or friction fed paper.
 3. Supervised network connection shall be either Style 4 or 7 as required by local requirements. The printer shall contain diagnostic LED's for ease in maintenance.

GENERAL COMMENTS:

1. Bidders desiring to perform a site inspection should contact Michael Fisher or Timmy Collins at (573) 644-4041 or (816) 387-2271, Michael.Fisher2@oa.mo.gov or Timmy.Collins@oa.mo.gov to schedule a time to enter the facility.
2. Please contact Mandy Roberson, Contract Specialist, at (573) 522-0074, Mandy.Roberson@oa.mo.gov for questions about bidding procedures, MBE\WBE\SDVE Goals, and other submittal requirements.
3. The deadline for technical questions was November 14, 2022 at noon (12:00 PM).
4. Changes to, or clarification of, the bid documents are only made as issued in the addenda.
5. All correspondence with respect to this project must include the State of Missouri project number as indicated above.
6. Current Planholders list is available online at: [RE-BID M2001-01 Install Fire Alarm System- Northwest Missouri Psychiatric Rehabilitation Center :: Plan Holders :: State of Missouri Office of Administration \(oafmdcplanroom.com\)](https://oafmdcplanroom.com)
7. Prospective Bidders contact American Document Solutions, 1400 Forum Blvd Suite 7A, Columbia MO 65203, (573) 446-7768 to get plans and specifications.
8. **All bids shall be submitted on the bid form without additional terms and conditions, modifications, or stipulations. Each space on the bid form shall be properly filled. Failure to do so will result in rejection of the bid.**
9. **MBE/WBE/SDVE participation requirements can be found in DIVISION 00. The MBE/WBE/SDVE participation goals are 10%/10%/3%, respectively. Only certified firms as of the bid opening date can be used to satisfy the MBE/WBE/SDVE participation goals for this project. If a bidder is unable to meet a participation goal, a Good Faith Effort Determination Form must be completed. Failure to complete this process will result in rejection of the bid.**

November 15, 2022

END ADDENDUM NO. 3