Building Automation Systems (BAS) Critical Alarm Standards

NOTICE: This standard operating procedure is available to view digitally on the Facilities Management ARCHIBUS website: http://facilities.uncc.edu/information-systems/archibus/archibus

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Pages 5, Draft # 3

I.   PURPOSE. This standard operating procedure (SOP) is a user reference for the UNC Charlotte Facilities Management Division personnel. The purpose of this SOP is to establish a reference and a standard system guideline for Building Automation Systems in relation to the operation, security, monitoring, and system data update and maintenance of Building Automation alarms console and alarms contact information for UNC Charlotte Campus buildings. This SOP also establishes policy and procedure on how Facilities Management personnel, Police and Public Safety and assigned responsible personnel manage Building Automation alarm console data updates for system notifications within ARCHIBUS Web Central.

II.   SCOPE. Develop and implement standard operating procedures for Building Automation Systems access, alarms monitoring and maintenance for UNC Charlotte facilities. Provide processes and procedures for alarms set up, monitoring, access control and security for Building Automation Systems databases and management. Provide consolidated information and clarify processes and terminology on responsibilities and Building Automation Systems established standards. This SOP applies to all Building Automation System (BAS) personnel, Police and Public Safety, Building Alarms Contact System Administrative and UNC Charlotte Facilities Management personnel.

Role Name	Responsibilities
PPS	Monitors and Responds to alarm notifications via alarm console during designated hours by contacting call tree individuals; documents contacted individual
Building Alarms Contact Administrators	Update call tree contact data and provides threshold set points for building alarms notifications. Insures updated information for police monitoring and notifications
Facilities Operations Supervisor and Manager	Reviews, manages and responds to alarms within their assigned Zone during normal operating hours.
Facilities Operations Controls Personnel	Manage updates to system controls hardware
FIS Personnel/System Admin	Completes alarm configurations as established, provide system updates for software, database and application; sets up hardware initially, limits and maintains security access controls and provides technical and customer support as needed; Enforces security and manages who accesses BAS database; responsible for controlling access and tracking all BAS assets.

BAS: Roles, Responsibilities and Descriptions

III. RESPONSIBILITIES. The UNC Charlotte Facilities Management Building Automation Analyst is responsible for maintaining database security and access to JACE infrastructure, maintaining inventory of BAS assets, and tracking and documenting changes to infrastructure. Facilities Management Zone Supervisors or assigned department personnel are primarily responsible for maintaining the alarm notifications information, processes, and ensuring alarm responses are handled efficiently and that any system problems are reported as needed. Police and Public Safety operators are responsible for notifications of alarms utilizing the contacts call tree provided during established monitoring timeframes (afterhours, weekends and holidays). UNC Charlotte Facilities Management Facilities Information Systems personnel in coordination with the various UNC Charlotte departments and in accordance with *UNC Charlotte Policy Statement 102: Data and Information Access and Security* are responsible for safeguarding and maintaining all data within the BAS system.

IV. ALARMS CONSOLE PROCEDURES:
1. **Call Tree Notifications:** A primary and secondary contact will be established for each building.
    1.1. The Call tree will list operational information on who will be contacted. Three contacts will be provided for Facilities Management personnel and three for the department associated to the specific alarm.
    1.2. The call tree for each alarm will indicate contact name and phone numbers.
    1.3. Each alarm will indicate responsibility parties to be contacted: department, Facilities Management or Both.
    1.4. An email notification will be sent to all contacts when the alarm is generated.
2. **Adding and Updating Contacts to BAS Alarms Contact Module:** Assigned personnel will access to update their building alarms contacts information to insure that accurate information is maintained for alarm contacts and responses.
    2.1. When individuals are added automatic to an alarm call tree, they will be sent an email notification.
    2.2. A link to the general basic instructions concerning alarms and responsibilities will be provided.
    2.3. All Facilities Management personnel contact information is defaulted in the system for alarms requiring response.

V. ALARMS MONITORING RESPONSIBILITIES
1. **Normal Operating Hours:** During Normal Operating Hours the Zone personnel will monitor alarms.
    1.1. **ZONE personnel:** During normal operational hours, the Zone Manager and Shop Supervisor, as back up, along with the Director of Facilities Operations will be the main point of contact for outages and to communicate to others when problems affect buildings.
    1.2. FIS and the Controls Shop will manage alarm systems interface, databases and notifications related to alarms.
    1.3. Facilities Management Maintenance and Operations' Supervisor or Administrative Assistant will notify all campus building liaisons of all scheduled or unexpected outages.

2. **After Hours Notifications Procedures:** Police will monitor the Alarm Console outside of normal operations hours.

    2.1. Afterhours, Monday through Friday, from 4:30 PM each evening to 7:00 AM in the morning, and during weekends, and holidays, etc.

    2.2. A 30-minute leeway will occur for alarm monitoring. A sound file will inform at the beginning of the monitoring timeframe and at the end of the monitoring period.

    2.3. Notifications will occur/display on the alarm console screen; however, the alarms will only be audible during the monitoring timeframe.

    2.4. When an alarm is generated, the PPS operator will indicate calls made for the alarm utilizing the call tree information provided for that alarm. The PPS operator may add comments and indicate any additional information as needed for the alarm.

    2.5. An Alarm Watch with a date and time schedule will be established for holidays and weekend monitoring

    2.6. The schedule will indicate responsibilities for each role.

3. **Alarm Notification Protocol:**

    3.1. If no response to the alarms within specified period (determined by alarm thresholds), the Facilities Operations Director, Area Manager, the Supervisor/on-call person will be notified.

    3.2. Alarms that are indicated as department responsibility will indicate department contacts for police contacts; however, FM will be in a standby mode but the department will be responsible for any needed contacts/response

    3.3. Alarm notification contact audits will occur periodically to insure that all call tree data is accurate.

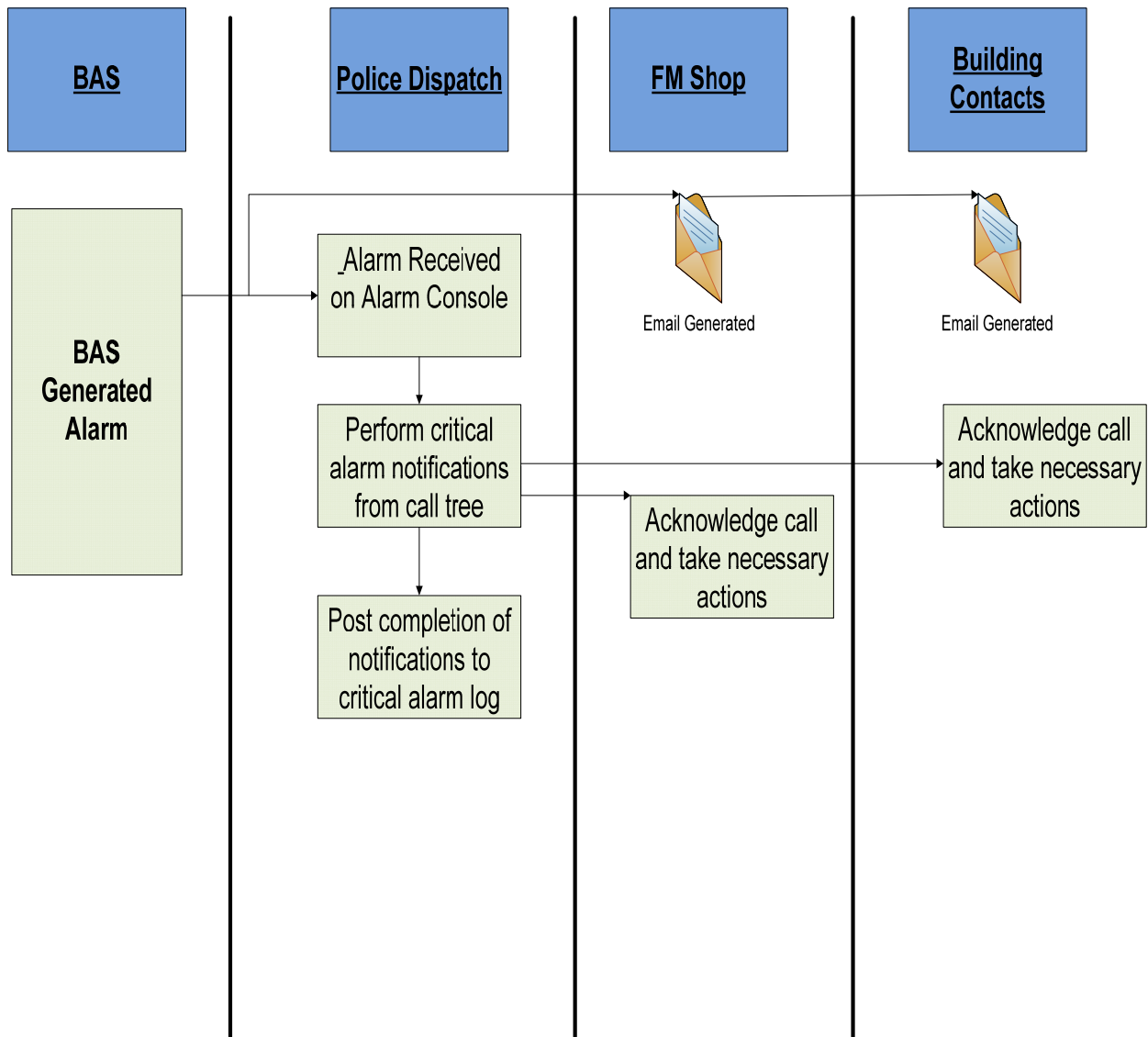4. **Alarm Notification Reports:**

    4.1. Reports will allow police and public safety to review all alarms acknowledged.

    4.2. A log file will document notes and responses.

    4.3. Alarm Contacts report provides building contact information and alarms data to be available as needed.

Appendix A: After Hours (Nights, Weekends, Holidays) Alarm Notifications Work Flow

DRAFT -- BAS Critical Alarms
After Hours, Weekends, and Holidays

BAS	Police Dispatch	FM Shop	Building Contacts

BAS Generated Alarm

Alarm Received on Alarm Console

Email Generated

Email Generated

Perform critical alarm notifications from call tree

Acknowledge call and take necessary actions

Acknowledge call and take necessary actions

Post completion of notifications to critical alarm log

Appendix B: Work Hours Alarm Workflow

DRAFT -- BAS Critical Alarms
Working Hours

BAS

FM Shop

Building Contacts

BAS Generated Alarm

Email Generated

Email Generated

Alarm Received on Alarm Console

Acknowledge call and take necessary actions

Perform critical alarm notifications from call tree

Post completion of notifications to critical alarm log