

Duval County Public Schools
Security System Retrofit
January 23, 2003

GENERAL SPECIFICATIONS

I. Wire and Cable

1. The contractor will pull a 22 gauge, 12-conductor wire for future use by the DCPS Police Department (annunciation) in addition to a 16 gauge, 4-conductor wire from the office touchpad location from each control panel.
2. The contractor will install all wire, conduit, and equipment in accordance with current NEC Electrical Code and specifically article 110 section 12 will be interpreted and enforced by the DCPS Code Enforcement and DCPS Police Departments serving as authorities having jurisdiction (AHJ).
3. The contractor will install a 4 conductor fire wire in conduit from the new security panel to the existing fire alarm control panel. School fire panel technicians are to be contacted to make the fire panel connection. The contractor will install a telephone line in conduit from the control panel to the site d-marc location.
4. All wire used for the new system installation will be Belden wire. Solid cable is to be used only for the fire panel connection wire and the telephone connection wire.
5. No existing wiring is to be used. No joints or splices are allowed. All wiring shall be home run to the perspective termination point.
6. No more than 3 wires 18 gauge/4 wires 22 gauge or larger may be inserted under a terminal strip, and no more than 3 wires 18 gauge may be inserted under a terminal screw on the Vista Control Panel or Vista Peripheral Devices.
7. Door contacts shall be wired with 22 gauge 4 conductor Belden cable.
8. All wiring terminal strip connectors shall be Newark part # 31f2436, and #31f2440 or equivalent. Expander cabinets shall be Mier products part number "BW-101".
9. All terminated wiring must be installed in a neat and professional manner utilizing wire management procedures. Cable wiring in cabinets shall be routed in such a manner to allow for future rewiring or relocation of modules in the cabinet.
10. All wiring shall be installed in conduit and minimum ¾" pvc conduit for any buried cabling.

II. Equipment, Devices and Modules

1. The installed devices will be normally closed (N/C) devices; any normally open (N/O) devices will be replaced with normally closed (N/C) devices.
2. The security system data point devices (Ademco part #4190SN, and 4208SN modules) are to be labeled, installed in groups, and housed in cabinets to be accessible for servicing. The Modules are to be installed on wooden backboards inside the cabinets.

The 4208SN (8 point modules) shall be used as the primary devices. Resistors shall be terminated on the modules with unused zones terminated with resistors. Recommended location is indicated on map, other locations may be considered for acceptance.

3. The contractor will provide security device locator maps and "as-built" diagrams on a 3.5 floppy computer disk in a compatible graphic file format and in printed form. Copies of updated maps must be located on-site and in the DCPS Police Office's Central Station before monitoring of new equipment can proceed.
4. All devices, both new and existing, will independently report signals to the DCPS Central Station receiver.
5. Ademco part number 4297 polling loop extenders are to be used for each data loop feed, supplied power from the Altronix power supply unit, and installed at the Vista control panel location.
6. All 4190SN, 4208SN modules, power supplies, terminal strips, etc. are to be installed with hardware fasteners. Double-sided tape used to secure these devices will not be acceptable.
7. All devices being utilized by the new security system will be identified on each individual device. Old device numbers are to be removed at time of re-identification (i.e. Door Contacts, Motion Detectors, and Polling Devices).
8. The DCPS Police Department will be notified of any existing devices, which are found to be inoperative at which time the DCPS Police Department will provide an equal device for its replacement but said device should be installed by the contractor at no charge.
9. All devices, panels, modules, or any equipment related to the old security system shall be removed and returned to the DCPS Security Department warehouse location at 129 King Street. Wiring known to be part of the replaced system shall be removed from the site.
10. All motion detectors must be completely sealed against outside contaminants (bugs) using Clear RTV[®] Silicone. (Specifically Wire Entry Area) Classroom and office motion detectors shall have the microwave sensitivity set to half range.
11. All motion detectors shall measure voltages at no less than + 2vdc above the minimum manufacturer specified operation voltage.
12. The DCPS District shall provide a dedicated voice grade telephone line for the system onsite. The contractor shall make connection to this circuit, install a standard RJ-31x jack next to the Vista control panel, and identify the telephone circuit on the jack.
13. It is the contractor's responsibility to patch walls where any equipment is removed. DCPS will be responsible for painting after the patchwork is complete.

III. Power and Surge Protection

1. Power supplies (Altronix SMP5PM-CTX) are to be supervised for both A/C loss and battery trouble. The power supplies shall be wired directly into a 120vac circuit. DCPS Electricians shall perform this procedure after a written request defining specific locations for said connections is submitted to the DCPS Central Station.

2. Surge protection for A/C (Edco FAS-120AC), telephone line (Edco PC2-TEL), system touchpads (Edco PHC-015), and data buss wiring (Edco PTC-642) is to be installed. "Ditek" equivalents for above specified suppressors will be accepted.
3. The contractor may not power the expansion modules from the Vista keypad buss. The Altronix auxiliary Power Supply must power the expansion modules.
4. Power supply current draw measurements shall be taken, dated, and labeled on the inside of the power supply cabinet.

IV. Training

1. The contractor will provide training for system arming/disarming to all on-site users and will provide DCPS Police Department with a document indicating user signature acknowledging system training.

V. Monitoring

1. The contractor will submit device descriptions and zone location information to the DCPS Central Station for approval prior to monitoring of equipment.
2. Upon completion of the security system the contractor will test all devices to signal alarm conditions to the DCPS alarm monitoring facility. Thereafter, an appointment will be scheduled with the DCPS police staff to perform a walk through test and inspection with both parties present.