New Mexico Public School Facilities Authority
1312 Basehart Rd. SE, Suite 200
Albuquerque, NM 87106-4368

Construction Checklist

BUILDING AUTOMATION SYSTEM

PROJECT: *(Enter School Name)*

PROJECT NUMBER: *(Enter Project Reference Number)*

REPORT ID: *Enter Report Unique ID Number)*

EQUIPMENT DESCRIPTION: Building Automation System

AREA SERVED: *(Entire Building)*

This Pre-Functional Checklist is used during the Performance Assurance Process to insure the correct equipment is delivered and installed in preparation for Functional Testing of related building systems. This checklist does not take the place of the Manufacturer's recommended checkout.

This Checklist is divided into 2 Sections and is to be completed by the Contractor in 2 separate steps. When completing each Section, be sure to check and initial EACH line item as being completed. Each Section's items must ALL be checked complete and initialed before the form is submitted to the PAC. Any item which does not apply can be marked as "N/A" in the initial section. If this form is not used for documenting, one of similar rigor shall be used.

This filled-out checklist has been reviewed with the exceptions noted below.

COMMENTS:

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SECTION 1 – EQUIPMENT DELIVERY:

The Contractor shall complete Section 1 of this form when the equipment is delivered to the site. The purpose is to record the checklist items as indicated.

CHECKLIST ITEMS:

Initial	Complete	Description
_____	Yes / No	All related submittals approved by A/E
_____	Yes / No	O&M data provided to PAC agent
_____	Yes / No	Equipment and materials thoroughly inspected for physical damage
_____	Yes / No	Electrical Verified: Source Panel, Panel Location, Circuit (List in Comments below)

COMMENTS:

The checklist items of SECTION 1 are all successfully completed……___YES ___NO

SECTION 2 – EQUIPMENT INSTALLATION:

The Contractor shall complete Section 2 of this form when the installation of the equipment is being performed. The purpose of this Section is to insure the equipment is installed to the Project Design and the Manufacturer's recommendations. Immediately notify the PAC and RFM should any item be checked incomplete.

CHECKLIST ITEMS:

Initial	Complete	Description
		General Installation Check
_____	Yes / No	General appearance good, no apparent damage
_____	Yes / No	Equipment labels affixed
_____	Yes / No	Control panels accessible and properly labeled
_____	Yes / No	Layout and location of control panels matches drawings
_____	Yes / No	Areas or equipment panels serve clear in control drawings
_____	Yes / No	Wiring labeled inside panels (to controlled components)
_____	Yes / No	Controlled components labeled/tagged
_____	Yes / No	All field sensors installed, secure, and calibrated
_____	Yes / No	BAS connection made to labeled terminal(s) as shown on drawings
_____	Yes / No	Shielded wiring used on electronic sensors
_____	Yes / No	110 volt AC power available to panel
_____	Yes / No	UPS or battery backup in place and operable
_____	Yes / No	Panels properly grounded
_____	Yes / No	Environmental conditions according to manufacturer's requirements
_____	Yes / No	Date and time correct
_____	Yes / No	Lighting control panels reside on BAS communication network
_____	Yes / No	All control devices and wiring complete
_____	Yes / No	Graphical interface developed and installed per specifications
_____	Yes / No	System architecture per drawings and specifications
_____	Yes / No	Sequence of operation per drawings and specifications

Device and Point Verification

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The following procedures are required to be performed and documented for each and every point in the control system. The following procedures are minimum requirements. These procedures are not a substitute for the manufacturer's recommended start-up and checkout procedures, but are to be combined with them, as applicable. The documentation may be provided on the vendor's stock form, as long as all the information in the table below can be clearly documented on the form.

Procedures

1. *Wire*: Verify that the wiring is correct to each point.
2. *Actu*: If the device is or has an actuator, verify full free movement through its full range.
3. Addr: Verify that the software address is correct.
4. *Load*: For devices with a controller, verify that current software program with proper setpoints has been downloaded.
5. *DevCal*: Device stroke/range calibration. This applies to all controlled valves, dampers, fans, pumps, actuators, etc. Simulate maximum and minimum transmitter signal values and verify minimum and maximum controller output values and positively verify each and every control device minimum and maximum stroke and capacity range.
6. *SensLoc*: Verify that all sensor locations are appropriate and away from causes of erratic operation.
7. *SensCal*: Sensor calibration. Calibrate or verify calibration of all sensors and thermostats, including temperature, pressure, flow, current, kW, rpm, Hertz, etc. Verify that the sensor readings in the control system are within the sensor accuracies included in the specifications, using hand-held or other external measuring instruments.
    a. *BAS*: Building automation system or gage-read value.
    b. *Instru*: Instrument (calibrated) read value.
    c. *Offset*: Offset programmed into the point to correct the calibration.

Point ID	Object	Hardware Checks			*Load*	*Dev Cal*	*Sens Loc*	*SensCal*		
		Wire	*Actu*	*Addr*				*BAS*	*Instru*	*Offset*
		1	2	3	4	5	6	7	7	7
Example 1	**ZN-T (zone T)**	√	**N/A**	√	**N/A**	**N/A**	√	**70.2F**	**71.4F**	**+1.2F**
Example 2	**RA-DPR (damper)**	√	√	√	**N/A**	√	**N/A**	**N/A**	**N/A**	**N/A**

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Point ID	**Object**	**Hardware Checks**			***Load***	***Dev Cal***	***Sens Loc***	***SensCal***		
		Wire	***Actu***	***Addr***				***BAS***	***Instru***	***Offset***
		1	**2**	**3**	**4**	**5**	**6**	**7**	**7**	**7**

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Point ID	Object	Hardware Checks			Load	Dev Cal	Sens Loc	SensCal		
		Wire	*Actu*	*Addr*				*BAS*	*Instru*	*Offset*
		1	2	3	4	5	6	7	7	7

COMMENTS:

The checklist items of SECTION 2 are all successfully completed……..___YES ___NO

ALL FIELDS MUST BE ENTERED. NO BLANKS. IF NOT INVOLVED, N/A.

RESPONSIBLE PARTY	VERIFIED BY (Name)	COMPANY	DATE

Mechanical Contractor			
Plumbing Contractor			
General Contractor			
Controls Contractor			
Electrical Contractor			
PAC Consultant			
NMPSFA RFM			
Manufacturer Rep.			