MIDDLESEX COUNTY COLLEGE
Edison, New Jersey 08818-3050

March 22, 2017

All Bidders

ADDENDUM NUMBER 2 BID # 17-33- Digital Media Presentation System

Please note the bid opening date has been changed to April 6, 2017 at 2:30 p.m.

REVISIONS

1. The bid opening date has been changed to April 6, 2017.
2. Room CC 174 has been included on the price sheet, please see attached revised price sheet.
3. There has been a different Elmo Document camera added, please see sections 1.1.2J and 1.8.1.
4. The completion date has been changed to July 30, 2017, please see section 4.0.

THIS PAGE MUST BE REFERENCED IN YOUR BID RESPONSE.

David Fricke, RPPO, C.P.M.
Director of Purchasing and Inventory

END OF ADDENDUM No. 2

MIDDLESEX COUNTY COLLEGE
Bid # 17-33
FORM OF PROPOSAL
REVISED

LOCATIONS: BH201, CB119, CB121, CB122, CB123, CB 124, CB200, CB203, CB204, CB212, CB214, CB216, CB217, CB218, CB219, CB220, CB221, CB222, CC171, CC174 CC319, JLC 131A, JLC221, JLC222, MH117, MH 135, PA212, PA215, PA216, PA217, PA219, PA223, PA 226, RH001, RH004, RH209, RH215, SH101, SH103, SH105, SH131, SH135, SH137, SH139, SH201, SH203, SH205, SH212, SH231, SH235, SH237 SH239

COST PER ROOM

BH 201 $_____

CB 119 $_____

CB 121 $_____

CB 122 $_____

CB 123 $_____

CB 124 $_____

CB 200 $_____

CB 203 $_____

CB204 $_____

CB 212 $_____

CB 214 $_____

CB 216 $_____

CB 217 $_____

CB 218 $_____

CB 219 $_____

CB 220 $_____

CB 221 $_____

Vendor Initials_____

CB 222	$_____
CC 171	$_____
CC 174	$_____
CC 319	$_____
JLC 131A	$_____
JLC 221	$_____
JLC 222	$_____
MH 117	$_____
MH 135	$_____
PA212	$_____
PA 215	$_____
PA 216	$_____
PA 217	$_____
PA 219	$_____
PA 223	$_____
PA226	$_____
RH 001	$_____
RH 004	$_____
RH 209	$_____
RH 215	$_____
SH 101	$_____
SH 103	$_____
SH 105	$_____

SH 131 $_____

SH 135 $_____

SH 137 $_____

SH 139 $_____

SH 201 $_____

SH 203 $_____

SH 205 $_____

SH 212 $_____

SH 231 $_____

SH 235 $_____

SH 237 $_____

SH 239 $_____

TOTAL BASE BID: $_____

In Words:_____

Signature: _____Date: _____

Name (print): _____

Title: _____

Firm Name: _____

Address: _____

Telephone: _____ Fax Number: _____

MIDDLESEX COUNTY COLLEGE
DIGITAL MEDIA PRESENTATION SYSTEM and PROJECTOR
SPECIFICATIONS

1.0.0 GENERAL

The purpose of this specification is to replace the existing Extron Plenum Vault System with a new Crestron DM 3.0 system comprising of a DMPS3-4K-100-C (totaling 4 HDMI inputs). The purpose is also to reconfigure existing classroom with Crestron DM 3.0 system and install new projectors. The system includes scaling switch, HDMI transmitter plates, projector, speakers, amplifier, button plate, screen and cabling. The Contractor will remove all the Extron equipment in South Hall and return the equipment to Crestron.

The projector shall be ceiling mounted and fully operational. The Contractor must provide plenum rated cabling run in the ceiling/floor/walls between the wall plate and the Crestron RMC receiver box located in the ceiling next to the projector. The college will provide a 120v AC receptacle located within the ceiling and in the faculty workstation.

The Contractor shall be responsible for locating, mounting, focusing, and setting up the projector in a manner that will fill the screens without any KEYSTONE EFFECT.

The Contractor shall securely mount the projector, using the manufacturer's recommended mounting brackets and extension tubes as needed. The extension tubes and mounting brackets must be secured to the roof deck or ceiling structure not attached or suspended from the drop ceiling. Connect all cables, and test the screen image. The manufacturer's security plate and lock are to be provided and installed.

In the LH Building, surface mounted wire mold must be used to cable the Faculty workstation. No holes can be drilled into these walls. Any other rooms with block walls are to use wire mold. Wire mold shall match the wall color as close as possible. Any other building with stud walls shall have the cable run inside the wall cavity.

The Contractor must be Crestron certified partner. The Contractor must program and label the Crestron MP-B10 button panel. The Contractor also must supply and connect all cables and equipment to the Crestron Digital Media Presentation System. The system equipment must be tested and fully functional.

The Contractor will supply Crestron Certified HDMI Interface cable or equivalent, for all four HDMI inputs to connect the Crestron DMPS3-4K-100-C to each source.

In rooms where an audio amplifier and speakers are needed, the contractor will connect the Crestron MP-AMP30 & Crestron FSDI8 speakers.

The Contractor shall be responsible that ensuring all connections, video, audio and HDMI pass the appropriate signals successfully.

1.1.0 SYSTEM OPERATION

1.1.1 LAB INSTALLATIONS (South Hall)

a) Remove all existing Extron equipment from the teacher's workstation & ceiling. Contractor must return this equipment to Crestron.

b) There is one Cat 6 cable existing inside of the faculty workstation cabinet that runs to the projector.

c) Install one Crestron Cresnet cable from DMPS3-4K-100-C to the Crestron MP-B10 button panel

d) Install the Crestron DMPS3-4K-100-C that will provide four HDMI inputs inside of faculty workstation cabinet. The Contractor will supply Crestron Certified HDMI Interface Cable, for all four HDMI inputs to connect the Crestron DMPS3-4K-100C to each source.

e) Connect the Crestron DMPS3-4K-100-C to the Creston DM-RMC-4K-100-C-1G over Cat 6.

f) Connect the Creston DM-RMC-4K-100-C-1G to input 1 of the EPSON Powerlite 955WH projector with an HDMI cable.

g) Connect the Middlesex County College (MCC) supplied computer to input 4 of the DMPS3-4K-100-C. Connect the HDMI output of the DMPS3-4K-100-C to the computer display.

h) Connect the MCC supplied Blu-ray player to input 1 of the Crestron DMPS3-4K-100-C. Also Connect IR Sensor from Crestron DMPS3-4K-100-C to Blu-ray player.

i) Connect the MCC supplied document camera to input 2 of the Crestron DMPS3-4K-100-C. Note the Elmo MO -1 document camera has a micro HDMI output and requires a micro HDMI to HDMI cable.

j) Connect the HDMI cable for external device to input 3 of the Crestron DMPS3-4K-100-C.

k) Install, program and label the Crestron MP-B10 button panel to select each of the four HDMI inputs above, to interact with the DMPS3-4K-100-C, EPSON Powerlite 955WH projector, network and the Sony BDP-S6700 Blu–ray player. Also Program buttons 5 thru 8 to control the 4 VGA inputs.

LOCATIONS: SH 101, SH 103, SH 105, SH 131, SH 135, SH 137, SH 139, SH 201, SH 203, SH 205, SH 212, SH 231, SH 235, SH 237, SH 239

1.1.2 CLASSROOM/LAB INSTALLATIONS

a) Install one Crestron DM-CBL-ULTRA-P shielded twisted pair plenum cable from the ceiling location of the Crestron DM-RMC-4K-100-C-1G above projector to the DMPS3-4K-100-C under mounted to the teacher's workstation.

b) Install one Crestron Cresnet cable from DMPS3-4K-100-C to the Crestron MP-B10 button panel.

c) Connect Crestron DMPS3-4K-100-C to new network connection. Note the network connection will be supplied by the college's IT department.

d) Install new EPSON Powerlite 955WH projector. Remove existing projector and return to Middlesex County College.

e) Install the Crestron DMPS3-4K-100-C that will provide four HDMI inputs to the faculty workstation under mounted to desk. The Contractor will supply Crestron Certified HDMI Interface Cable, for all four HDMI inputs to connect the Crestron DMPS3-4K-100C to each source.

f) Connect the Crestron DMPS3-4K-100-C to the Creston DM-RMC-4K-100-C-1G over Crestron DM-CBL-ULTRA-P cable.

g) Connect the Creston DM-RMC-4K-100-C-1G to input 1 of the EPSON Powerlite 955WH projector with an HDMI cable.

h) Connect the MCC supplied computer to input 4 of the DMPS3-4K-100-C. Connect the HDMI output of the DMPS3-4K-100-C to the computer display.

i) Connect the Blu-ray player supplied by contractor to input 1 of the Crestron DMPS3-4K-100-C and undermount to desk with the Crestron DMPS3-4K-100-C. Also connect IR Sensor from Crestron DMPS3-4K-100-C to Blu-ray player.

j) Connect the document camera supplied by contractor to input 2 of the Crestron DMPS3-4K-100-C. Note the Elmo MX-1 Visual Presenter with connect box bundle MFR # 1358. Contractor must provide extension cable and HDMI cable to complete connection.

k) Connect the HDMI cable for external device to input 3 of the Crestron DMPS3-4K-100-C.

l) Install, program and label the Crestron MP-B10 button panel to select each of the four HDMI inputs above, to interact with the DMPS3-4K-100-C, EPSON Powerlite 955WH projector, network and the Sony BDP-S6700 Blu-ray player. Also Program buttons 5 thru 8 to control the 4 VGA inputs.

LOCATIONS: CB 119, CB 121, CB 122, CB 123, CB 124, CB 200, CB 203, CB 204, CB 212, CB 214, CB 216, CB 217, CB 218, CB 219, CB 220, CB 221, CB 222, BH 201, CC

171, CC 174, JLC 221, JLC 222, MH 117, MH 135, PA 212, PA 215, PA 216, PA 217, PA 219, PA 223, PA 226, RH 001, RH 004, RH 209, RH 215

1.1.3 CLASSROOM/LAB AUDIO INSTALLATIONS

a) Install and connect Crestron MP-AMP30 Media Presentation Audio Amplifier and Creston FSDI8 Drop-in Ceiling Speaker.
b) Connect the Crestron MP-AMP30 to the Crestron DMPS3-4K-100-C.

It is the contactor responsibility to make sure the Audio system is connected and fully intergraded with the Creston Digital Media Presentation System.

LOCATIONS: RH 215, SH 101, SH 103, SH 105, SH 131, SH 135, SH 137, SH 139, SH 201, SH 203, SH 205, SH 212, SH 231, SH 235, SH 237, SH 239

EQUIPMENT REQUIREMENTS

1.2.0 DIGITAL MEDIA CONTROL

1.2.1 CRESTRON DMPS3-4K-100-C or EQUIVALENT

Operating System	
Crestron® 3-Series®; real-time, preemptive, multi-threaded/multitasking kernel; Transaction-Safe Extended FAT file system; supports up to 10 simultaneously running programs; preloaded DMPS3 .AV Framework™ Base Program; out-of-the-box "Crestron Connect It™" functionality	
Control System Memory	
SDRAM	1 GB
Flash	4 GB
Communications	
Ethernet	10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, industry-standard TCP/IP stack, UDP/IP, CIP, DHCP, SSL, TLS, SSH, SFTP (SSH File Transfer Protocol), FIPS 140-2 compliant encryption, IEEE 802.1X, SNMP, BACnet™/IP [10], IPv4 or IPv6, Active Directory authentication, IIS v.6.0 web server, SMTP e-mail client, RSTP, Private Network Mode
Cresnet®	Cresnet master mode
USB	USB host ports for Crestron Connect It devices and firmware update via USB flash drive; USB device port for computer console (setup)
RS-232	2-way device control and monitoring up to 115.2k baud with hardware and software handshaking
IR/Serial	1-way device control via infrared up to 1.2 MHz or serial TTL/RS-232 (0-5 Volts) up to 115.2k baud; built-in RC-5 compatible IR receiver
DigitalMedia™	DM 8G+®, HDCP, EDID, CEC, PoDM, Ethernet
HDBaseT®	HDCP, EDID, CEC, RS-232, PoH, Ethernet

HDMI®	HDCP, EDID, CEC

NOTE: Supports management of HDCP and EDID; supports management of CEC between the connected HDMI and HDBaseT devices and the control system

Video	
Switcher	8x1 (organized as multi-format 4x1), auto-switching, auto-detecting multi-format digital/analog source inputs, QuickSwitch HD™ technology
Scaler	4K video scaler, motion-adaptive deinterlacer, intelligent frame rate conversion, Deep Color support, 3D to 2D conversion [7], content-adaptive noise reduction, widescreen format selection (zoom, stretch, maintain aspect-ratio, or 1:1)
Input Signal Types	HDMI w/Deep Color, 3D, & 4K (DVI & Dual-Mode DisplayPort compatible [4]); RGB/VGA (RGBHV, RGBS, RGsB); component (YPbPr); S-Video (Y/C); composite (NTSC, PAL) [5]
Output Signal Types	HDMI w/Deep Color, 3D, & 4K (DVI compatible [4]); DM 8G+ & HDBaseT w/Deep Color, 3D, & 4K
Analog-To-Digital Conversion	10-bit 165 MHz per each of 3 channels

Maximum Pass-Through Resolutions

Input Type	Scan Type	Resolution	Frame Rate	Color Sampling	Color Depth
HDMI	Progressive	4096x2160 4K DCI or 3840x2160 Ultra HD	24 Hz	4:4:4	30 bit
			30 Hz	4:4:4	24 bit
			30 Hz	4:2:2	36 bit
			60 Hz	4:2:0	24 bit
		2560x1600 WQXGA	60 Hz	4:4:4	36 bit
		1920x1080 HD 1080p	60 Hz	4:4:4	36 bit
	Interlaced	1920x1080 HD 1080i	30 Hz	4:4:4	36 bit
RGB/VGA	Progressive	1600x1200 UXGA	60 Hz	n/a	
		1920x1200 WUXGA	60 Hz	n/a	
Component [5]	Progressive	1920x1080 HD 1080p	60 Hz	n/a	
	Interlaced	1920x1080 HD 1080i	30 Hz	n/a	
Composite or S-Video [5]	Interlaced	480i NTSC or 576i PAL	60 Hz	n/a	

Maximum Scaler Input Resolutions

Input Type	Scan Type	Resolution	Frame Rate	Color Sampling	Color Depth
HDMI	Progressive	4096x2160 4K DCI or 3840x2160 Ultra HD	24 Hz	4:4:4	30 bit
			30 Hz	4:4:4	24 bit
			30 Hz	4:2:2	36 bit
		2560x1600 WQXGA	60 Hz	4:4:4	36 bit

		1920x1080 HD 1080p	60 Hz	4:4:4	36 bit
	Interlaced	1920x1080 HD 1080i	30 Hz	4:4:4	36 bit
RGB/VGA	Progressive	1600x1200 UXGA	60 Hz	n/a	
		1920x1200 WUXGA	60 Hz	n/a	
Component [5]	Progressive	1920x1080 HD 1080p	60 Hz	n/a	
	Interlaced	1920x1080 HD 1080i	30 Hz	n/a	
Composite or S-Video [5]	Interlaced	480i NTSC or 576i PAL	60 Hz	n/a	

Maximum Scaler Output Resolutions

Input Type	Scan Type	Resolution	Frame Rate	Color Sampling	Color Depth
HDMI, DM, or HDBaseT	Progressive	4096x2160 4K DCI or 3840x2160 Ultra HD	24 Hz	4:4:4	30 bit
			30 Hz	4:4:4	24 bit
			30 Hz	4:2:2	36 bit
		2560x1600 WQXGA	60 Hz	4:4:4	36 bit
		1920x1080 HD 1080p	60 Hz	4:4:4	36 bit

NOTE: Common resolutions are shown; other custom resolutions are supported at pixel clock rates up to 300 MHz for digital inputs and outputs, or 165 MHz for analog inputs

Audio – General

Switcher/Mixer

8x1 (organized as multi-format 4x1) stereo source switcher, auto-detecting digital/analog source inputs, single-channel gated mic preamp w/DSP, two independent mic/source mixers (one for analog output, one for digital outputs), stereo DSP for analog output, 4x1 multichannel source switcher, digital audio mixer bypass mode for multichannel pass-through to digital outputs

Analog-To-Digital Conversion	24-bit 48 kHz
Digital-To-Analog Conversion	24-bit 48 kHz
Frequency Response	20 Hz to 20 kHz ±0.5 dB (digital source); 20 Hz to 20 kHz ±0.5 dB (analog line source); 20 Hz to 20 kHz ±0.7 dB (microphone source)
S/N Ratio	>108 dB, 1 kHz, A-weighted (digital source); >103 dB, 1 kHz, A-weighted (analog line source)
THD+N	<0.002%, 20 Hz to 20 kHz (digital source); <0.005%, 20 Hz to 20 kHz (analog line source); <0.05%, 20 Hz to 20 kHz (microphone source)
Stereo Separation	>108 dB (digital source); >103 dB (analog source)

Audio – Microphone Input

Input Signal Type	Mono analog mic level
Phantom Power	Enable/Disable

Gain	0 to +60 dB Gain adjustment, plus Mute
EQ Center Frequencies	50 to 200 Hz (Band 1); 200 to 800 Hz (Band 2); 800 to 3.2k Hz (Band 3); 3.2k to 12.8k Hz (Band 4)
EQ Gain	±12.0 dB per band
Gating Threshold	-80 to 0 dB
Gating Depth (Attenuation)	-80 to 0 dB
Gating Attack	1 to 250 ms
Gating Release	1 to 1000 ms
Gating Hold	1 to 200 ms
Compression Threshold	-80 to 0 dB
Compression Ratio	1:1 to 10:1
Compression Attack	1 to 250 ms
Compression Release	1 to 1000 ms
Compression Hold	1 to 200 ms
Compression Curve	Hard or soft knee
Audio – Source Inputs	
Typical of 8 source input channels (Audio Inputs 1 – 4, HDMI Inputs 1 – 4)	
Input Signal Types	Analog 2-channel [6], HDMI (Dual-Mode DisplayPort compatible [4])
Analog Formats	Stereo 2-channel
Digital Formats	Dolby Digital®, Dolby Digital EX, Dolby Digital Plus, Dolby® TrueHD, Dolby Atmos®, DTS®, DTS-ES, DTS 96/24, DTS-HD High Res, DTS-HD Master Audio™, LPCM up to 8 channels [8]
Input Compensation	±10.0 dB [8]
Audio – Analog Line Output	
Output Signal Type/Format	Stereo 2-channel
Mic	-80 to +10 dB Level adjustment range, plus Mute and Pan
Source	-80 to +10 dB Level adjustment range, plus Mute and Balance
Master Volume	-80 to +10 dB Level adjustment range, plus Mute and Mono
Bass	±12.0 dB
Treble	±12.0 dB
Equalization	10-band graphic
GEQ Center Frequencies	31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz
GEQ Gain	±12.0 dB per band

Delay	0.0 to 80.0 ms
Limiter Threshold	-80 to 0 dBz
Limiter Ratio	1:1 to 10:1
Limiter Attack	1 to 250 ms
Limiter Release	1 to 1000 ms
Limiter Curve	Hard or soft knee
Audio – Digital Output	
Output Signal Types	HDMI, DM 8G+ & HDBaseT
Formats	Dolby Digital, Dolby Digital EX, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos, DTS, DTS-ES, DTS 96/24, DTS-HD High Res, DTS-HD Master Audio, LPCM up to 8 channels [8]
Mic	-80 to +10 dB Level adjustment range, plus Mute and Pan [8]
Source	-80 to +10 dB Level adjustment range, plus Mute and Balance [8]
Master Volume	-80 to +10 dB Level adjustment range, plus Mute [8]
Connectors – Audio/Video Inputs	
VGA IN 1 – 4	(4) HD15 female; Analog VGA/RGB/video inputs; Signal Types: VGA, RGB, component, S-Video, or composite [5]; Formats: RGBHV, RGBS, RGsB, YPbPr, Y/C, NTSC or PAL; Input Level: 0.5 to 1.5 Vp-p with built-in DC restoration; Input Impedance: 75 Ohms nominal; Sync Detection: RGBHV, RGBS, RGsB, YPbPr; Sync Input Level: 3 to 5 Vp-p; Sync Input Impedance: 2.2k Ohms
AUDIO IN 1 – 4	(4) 3.5 mm TRS mini phone jacks; Unbalanced stereo line-level analog audio inputs; Input Impedance: 32k Ohms unbalanced; Maximum Input Level: 2.8 Vrms unbalanced; *Note: If an HDMI input is selected but no digital audio signal is detected, the corresponding analog audio input is activated (AUDIO 1 for HDMI 1, etc.). Please note, the analog audio inputs do not pass audio if the HDMI video input resolution is higher than 1920x1200.*
HDMI IN 1 – 4	(4) 19-pin Type A HDMI female; Digital video/audio inputs; Signal Types: HDMI, DVI, or Dual-Mode DisplayPort [4]
MIC IN	(1) 3-pin 3.5 mm detachable terminal block; Balanced microphone audio input; Input Level: -60 to 0 dBV, 1 Vrms maximum; Input Impedance: 6.5k Ohms balanced; Phantom Power: 48 Volts DC, software enabled/disabled

Connectors – Audio/Video Outputs	
HDMI OUT	(1) 19-pin Type A HDMI female; Digital video/audio output; Signal Types: HDMI, DVI [4]
DM OUT	(1) 8-pin RJ45 female, shielded; DM 8G+ output, HDBaseT compliant; PoDM and PoH PSE (Power Sourcing Equipment) port; Connects to the DM 8G+ input of a DM receiver or other DM device, or to an HDBaseT device, via CAT5e, Crestron DM-CBL-8G, or Crestron DM-CBL-ULTRA cable [9]
AUDIO OUT	(1) 5-pin 3.5 mm detachable terminal block; Balanced/unbalanced stereo line-level audio output; Output Impedance: 200 Ohms balanced, 100 Ohms unbalanced; Maximum Output Level: 4 Vrms balanced, 2 Vrms unbalanced
Connectors - Control & Power	
IR OUT	(1) 3.5 mm mini-phone jack; IR/Serial output port; IR output up to 1.2 MHz; 1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud
COM	(1) 5-pin 3.5 mm detachable terminal block; Bidirectional RS-232 port; Up to 115.2k baud, hardware and software handshaking support
LAN	(1) 8-pin RJ45 female; 10Base-T/100Base-TX Ethernet port
USB 1 – 4	(4) USB Type A female; USB 2.0 host ports for TT-100 series Crestron Connect It Cable Caddies[1]; Also enables firmware update via USB flash drive
G	(1) 6-32 screw, chassis ground lug
NET	(1) 4-pin 3.5 mm detachable terminal block; Cresnet Master port; Available Cresnet Power: 24 Watts
100-240V~1.4A 50/60Hz	(1) IEC 60320 C14 main power inlet; Mates with removable power cord, included
COMPUTER (front)	(1) USB Type B female; USB computer console port; For setup only
IR IN (front)	(1) Infrared sensor; IR Frequency: 36 to 38 kHz; IR Formats: Crestron format, RC5; Allows control from IR wireless remotes using the Crestron or RC-5 command sets

Controls & Indicators	
PWR	(1) Bi-color green/amber LED, indicates operating power supplied from AC line power, turns amber while booting and green when operating
NET	(1) Yellow LED, indicates Cresnet bus activity
MSG	(1) Red LED, indicates internal control system has generated an error message
HW-R	(1) Recessed pushbutton for hardware reset, reboots the control system
SW-R	(1) Recessed pushbutton for software reset, restarts the software program
AUTO INPUT SELECT	(1) Pushbutton and bicolor green/amber LED, selects auto-switching mode
VGA INPUT SELECT 1 – 4	(4) Pushbuttons for manual input selection, and (4) bicolor green/amber LEDs to indicate the current active input and signal presence at each corresponding VGA input
HDMI INPUT SELECT 1 – 4	(4) Pushbuttons for manual input selection, and (4) bicolor green/amber LEDs to indicate the current active input and signal presence at each corresponding HDMI input
VOLUME	(1) Continuous turn rotary encoder, adjusts the analog audio output volume
DM OUT (rear)	(2) LEDs, green LED indicates DM link status, amber LED indicates video and HDCP signal presence, for the DM output
LAN (rear)	(2) LEDs, bi-color LED (left) indicates Ethernet speed and activity, green LED (right) indicates Ethernet link status
Power Requirements	
Main Power	1.4 Amps @ 100-240 Volts AC, 50/60 Hz
Power Consumption	36 Watts typical, 26 Watts idle
Available Cresnet Power	24 Watts
Power over DM (PoDM)	PoDM PSE (Power Sourcing Equipment), DM OUT port supplies up to 15.4W (Class 0-3) to one PoDM PD (Powered Device)
Power over HDBaseT (PoH)	PoH PSE (Power Sourcing Equipment), DM OUT port supplies up to 15.4W (Class 0-3) to one PoH PD (Powered Device)
Environmental	
Temperature	41° to 104° F (5° to 40° C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	122 BTU/hr typical, 89 BTU/hr idle
Enclosure	
Chassis	Metal, black finish, fan-cooled, vented sides
Front Panel	Metal, black finish with polycarbonate label overlay

Mounting	Freestanding, 1 RU 19-inch rackmount, or under-table mount (adhesive feet, rack ears, and under-table mounting brackets included)
Dimensions	
Height	1.74 in (45 mm) without feet
Width	17.28 in (439 mm); 18.94 in (482 mm) with rack ears
Depth	10.47 in (266 mm)
Weight	
6.4 lb (2.9 kg)	

DM 8G+ & HDBaseT Maximum Cable Lengths

	Cable Type		
Resolution	DM-CBL-ULTRA DigitalMedia™ Ultra Cable	DM-CBL-8G DigitalMedia 8G™ Cable	CAT5e (or better) UTP or STP [9]
1080p60 Full HD 1920x1200 WUXGA 1600x1200 UXGA 2048x1080 2K DCI	330 ft (100 m) [ALL RESOLUTIONS]	330 ft (100 m) [2K RESOLUTIONS]	330 ft (100 m) [2K RESOLUTIONS]
2560x1440 WQHD 2560x1600 WQXGA 3840x2160 Ultra HD 4096x2160 4K DCI		230 ft (70 m) [4K RESOLUTIONS]	165 ft (50 m) [4K RESOLUTIONS]

LOCATIONS: CB 119, CB 121, CB 122, CB 123, CB 124, CB 200, CB 203, CB 204, CB 212, CB 214, CB 216, CB 217, CB 218, CB 219, CB 220, CB 221, CB 222, BH 201, CC 171, CC 174, JLC 221, JLC 222, MH 117, MH 135, PA 212, PA 215, PA 216, PA 217, PA 219, PA 223, PA 226, RH 001, RH 004, RH 209, RH 215, SH 101, SH 103, SH 105, SH 131, SH 135, SH 137, SH 139, SH 201, SH 203, SH 205, SH 212, SH 231, SH 235, SH 237, SH 239

1.2.2 CRESTRON DM-RMC-4K-100-C-1G or EQUIVALENT

Maximum Cable Lengths

	Cable Type		
Resolution	DM-CBL-ULTRA	DM-CBL-8G DigitalMedia 8G™ Cable	CAT5e (or better) UTP or STP [9]

	DigitalMedia™ Ultra Cable		
1080p60 Full HD 1920x1200 WUXGA 1600x1200 UXGA 2048x1080 2K DCI		330 ft (100 m) [2K RESOLUTIONS]	330 ft (100 m) [2K RESOLUTIONS]
2560x1440 WQHD 2560x1600 WQXGA	330 ft (100 m) [ALL RESOLUTIONS]		
3840x2160 Ultra HD 4096x2160 4K DCI		230 ft (70 m) [4K RESOLUTIONS]	165 ft (50 m) [4K RESOLUTIONS]

Video

Input Signal Types	DM 8G+® & HDBaseT® w/Deep Color, 3D, & 4K
Output Signal Types	HDMI® w/Deep Color, 3D, & 4K (DVI compatible [4])

Maximum Resolutions

Scan Type	Resolution	Frame Rate	Color Sampling	Color Depth
Progressive	4096x2160 4K DCI & 3840x2160 Ultra HD	24 Hz	4:4:4	30 bit
		30 Hz	4:4:4	24 bit
		30 Hz	4:2:2	36 bit
		60 Hz	4:2:0	24 bit
	2560x1600 WQXGA	60 Hz	4:4:4	36 bit
	1920x1080 HD 1080p	60 Hz	4:4:4	36 bit
Interlaced	1920x1080 HD 1080i	30 Hz	4:4:4	36 bit

NOTE: Common resolutions are shown; other custom resolutions are supported at pixel clock rates up to 300 MHz

Audio

Input Signal Types	DM 8G+, HDBaseT
Output Signal Type	HDMI
Formats	Dolby Digital®, Dolby Digital EX, Dolby Digital Plus, Dolby® TrueHD, DTS®, DTS-ES, DTS 96/24, DTS-HD High Res, DTS-HD Master Audio™, LPCM up to 8 channels

Communications

RS-232	2-way device control and monitoring up to 115.2k baud with software handshaking [1]
IR/Serial	1-way device control via infrared up to 1.1 MHz or serial TTL/RS-232 (0-5 Volts) up to 19.2k baud [1]
DigitalMedia	DM 8G+, HDCP 2.2, EDID, CEC [6], PoDM
HDBaseT	HDCP 2.2, EDID, CEC [6], PoH
HDMI	HDCP 2.2, EDID, CEC [6]

Connectors – Front	
HDMI OUT	(1) 19-pin Type A HDMI female; HDMI digital video/audio output (DVI compatible [4])
IR OUT	(1) 2-pin 3.5 mm detachable terminal block, IR/Serial port [1]; IR output up to 1.1 MHz; 1-way serial TTL/RS-232 (0-5 Volts) up to 19200 baud
COM	(1) 3-pin 3.5 mm detachable terminal block, bidirectional RS-232 port [1]; Up to 115.2k baud, software handshaking support
Connectors – Rear	
G	(1) 6-32 screw, chassis ground lug
DM IN	(1) 8-pin RJ45 female, shielded; DM 8G+ input, HDBaseT compliant; PoDM and PoH PD (Powered Device) port [5]; Connects to the DM 8G+ output of a DM switcher, transmitter, or other DM device, or to an HDBaseT device, via CAT5e, Crestron DM-CBL-8G, or Crestron DM-CBL-ULTRA cable [2]
24VDC 0.75A	(1) 2-pin 3.5 mm detachable terminal block; 24 Volt DC power input; PW-2407WUL power pack included
Indicators	
PWR	(1) Green LED, indicates operating power supplied via PoDM, PoH, or local power pack
VIDEO	(1) Green LED, indicates video signal presence at the HDMI output
DM IN (rear)	(2) LEDs, green LED indicates DM link status, amber LED indicates video and HDCP signal presence
Power Requirements	
Power Pack	0.75 Amps @ 24 Volts DC; 100-240 Volts AC, 50/60 Hz power pack, model PW-2407WUL included
Power over DM (PoDM)	PoDM PD (Powered Device), capable of being powered by a PoDM PSE (Power Sourcing Equipment), conforms to IEEE 802.3at Type 1 Class 3 (12.95 W) [7]
Power over HDBaseT (PoH)	PoH PD (Powered Device), capable of being powered by a PoH PSE (Power Sourcing Equipment), conforms to IEEE 802.3at Type 1 Class 3 (12.95 W) [7]
Power Consumption	5.8 Watts typical; 2.5 Watts idle
Environmental	
Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	19.8 BTU/hr
Enclosure	

Construction	Metal, black finish with white or black polycarbonate label overlay
Flush Wall Mount	1-gang mountable in an extra-deep electrical box (3-1/2 inch deep minimum), requires a decorator style faceplate (not included)
Surface Mount	Surface mount bracket included
Rack Mount	Attachable to a single 19-inch EIA rack rail
Dimensions	
Height	4.12 in (105 mm)
Width	1.72 in (44 mm)
Depth	2.35 in (60 mm)
Weight	
6.3 oz (179 g)	

LOCATIONS: CB 119, CB 121, CB 122, CB 123, CB 124, CB 200, CB 203, CB 204, CB 212, CB 214, CB 216, CB 217, CB 218, CB 219, CB 220, CB 221, CB 222, BH 201, CC 171, CC 174, JLC 221, JLC 222, MH 117, MH 135, PA 212, PA 215, PA 216, PA 217, PA 219, PA 223, PA 226, RH 001, RH 004, RH 209, RH 215, SH 101, SH 103, SH 105, SH 131, SH 135, SH 137, SH 139, SH 201, SH 203, SH 205, SH 212, SH 231, SH 235, SH 237, SH 239

1.3.0 CEILING MOUNTED SPEAKERS with AMP

1.3.1 CRESTRON MP-AMP30 or EQUIVALENT

Audio	
Input Volume Range	-55dB to +20dB
Loudness	Active at volume settings below center detent
Bass Gain Range	±15dB @ 100Hz
Treble Gain Range	±15dB @ 10kHz
Frequency Response	20Hz to 20kHz ±0.5dB
S/N Ratio	75dB 20Hz to 20kHz A-weighted
THD+N	0.7% 20Hz to 20kHz
Output Power	15 Watts per channel at 8 or 4 Ohms
Amplifier Protection	Electronic short-circuit and overload protection
Connectors – Top Panel	

AUDIO OUT 8Ω	(2) 2-pin 3.5mm detachable terminal blocks; Left & right channel speaker-level audio outputs; Wire Size: Connector accepts 16 AWG maximum; Output Power: 15 Watts per channel at 8 or 4 Ohms
Connectors – Bottom Panel	
AUDIO IN	(2) RCA female, unbalanced stereo line-level audio input; Maximum Input Level: 2 Vrms; Input Impedance: 18k Ohms; 3 ft (0.9 m) stereo RCA-RCA cable included
PWR 24VDC 2.0A	(1) 2.1 x 5.5 mm DC power connector; 24 Volt DC power input; (power pack included)
Controls & Indicators	
BASS	Rotary low frequency boost/cut adjustment, flat at center detent
TREBLE	Rotary high frequency boost/cut adjustment, flat at center detent
VOL	Rotary input level adjustment
ST, MO	Mode selection jumpers, select stereo or mono-summed operation
Power	(1) green LED, indicates operating power supplied from external power pack
Power Requirements	
Power Pack	2.0 Amps @ 24 Volts DC; 100-240 Volts AC, 50/60 Hz power pack included
Environmental	
Temperature	41° to 104°F (5° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	21 BTU/Hr
Enclosure	
Chassis	Aluminum w/polycarbonate label overlay and (4) integral mounting flanges, meets the requirements of UL 2043 for installation in an environmental air-handling (plenum) space[1]
Mounting	Freestanding or surface mount
Dimensions	
Height	5.85 in (149 mm)
Width	3.91 in (100 mm)
Depth	1.43 in (37 mm)
Weight	
11.8 oz (335 g)	

LOCATIONS: RH 215, SH 101, SH 103, SH 105, SH 131, SH 135, SH 137, SH 139, SH 201, SH 203, SH 205, SH 212, SH 231, SH 235, SH 237, SH 239

1.3.2 CRESTRON FSDI8 or EQUIVALENT

Features & Performance	
Driver	8 inch (203 mm) full-range w/secondary high-frequency cone
Impedance	8 Ohms nominal
Frequency Response	85 Hz to 18 kHz
Sensitivity	94 db SPL minimum @ 1W/1m
Dispersion	100° @ 2kHz (-6dB)
Power Handling	15 Watts maximum
Recommended Amplifier Power	5 to 30 Watts
Connections	
Input	2 conductor red/black flying leads w/wire nuts behind cover; Wire entry via conduit knockout or notch
Environmental	
Temperature	41° to 104°F (5° to 40°C)
Humidity	10% to 90% RH (non-condensing)
For indoor use only	
Enclosure	
Enclosure	Fully-enclosed, industrial grade steel, plenum-rated (complies with Requirements of Standard UL-2043)
Grille	Finely-perforated metal, textured white finish
Mounting	Designed for 2x2 or 2x4 ft suspended ceiling grid, includes four seismic attachment points and support rail crossbar for 2x4 applications
Dimensions	
Height	5.00 in (127 mm)
Width	23.82 in (605 mm)
Depth	23.82 in (605 mm)
Weight	
12.0 lb (5.5 kg)	

LOCATIONS: RH 215, SH 101, SH 103, SH 105, SH 131, SH 135, SH 137, SH 139, SH 201, SH 203, SH 205, SH 212, SH 231, SH 235, SH 237, SH 239

1.4.0 HIGH RESOLUTION PROJECTOR

1.4.1 SPECIFICATIONS: EPSON Powerlite 955WH– or EQUIVALENT

Display Resolution (Native):	WXGA (1280 x 800) Native Resolution up through UXGA (1600 x 1200)
Devise Type:	Epson 3 LCD 3 chip optical engine. Driving Method Epson Poly-silicon TFT Active Matrix
Brightness:	3000 ANSI lumens (ISO 21118 Standard)
Aspect Ratio:	Native 16:10
Contrast Ratio:	10000:1
Data Compatibility:	PC, Mac®
Video Compatibility:	NTSC / NTSC4.43 / PAL /M-PAL / N -PAL/ PAL60/ SECAM
DTV / HDTV:	Compatibility including 480i, 480p, 576i, 576p, 720p, 1080i, 1080p
H & V Frequency:	fH 15-110 kHz / fV 45-85 Hz / 12-170 MHz
Lens Type:	Manual Optical Zoom: 1.0-1.6x Manual Focus F Number: 1:51-1.99
Throw Ratio:	1.38 - 2.24:1
Projection Distance:	29” – 280”
Wireless Remote Control:	Video, power, aspect, volume, freeze, menu, mouse functions
Built-in Audio System:	16 W monaural
Lamp Module:	V13H010L78
Estimated Lamp Life:	5,000 hours (standard mode); 6,000 hours (eco)
Fan Noise (standard/eco):	37dB/29dB
Power Source:	100V – 240V AC
Power Consumption:	299 W
Safety Approval:	UL, FCC Class A
Operating:	41ºF - 95º (+5ºC to 35ºC)

Inputs / Outputs:	2 – Computer/Component video: D-sub 15 pin; 1 – S-video: Mini DIN ; 1 - Composite video: RCA (Yellow) 1 – Audio in RCA (L and R) 2 – Mini stereo 2– HDMI 2 – USB 1 – RJ-45 1 – Serial: RS-232c;
LAN Connectivity:	RJ-45x1 Wireless Lan Port 802.11 b/g/n **Optional module to be added at a later date**
Weight / Dimensions (w x h x d):	6.4 lbs. 11.6 x 3.5 x 10.7 (W x H x D)
Warranty:	3 years parts/labor including 3 years of 24-hour turnaround Express Repair. 90-day lamp warranty.
Included Accessories:	Wireless remote control; two AA batteries; 6' AC power cord; 10' RGB signal cable; attached lens cap; integrated air filter; projector operation manual; RS-232C control adaptor; storage bag

In locations that there is an existing projector and mount, these items are to be removed and returned to the College. Please remount existing speaker amplifier and insure they are properly connected to ceiling speakers and fully functional.

LOCATIONS: CB 119, CB 121, CB 122, CB 123, CB 124, CB 200, CB 203, CB 204, CB 212, CB 214, CB 216, CB 217, CB 218, CB 219, CB 220, CB 221, CB 222, BH 201, CC 171, CC 174, CC 319, JLC 131A, JLC 221, JLC 222, MH 117, MH 135, PA 215, PA 216, PA 217, PA 219, PA 223, RH 001, RH 004, RH 209, RH 215

1.5.0 PROJECTOR & DESK MOUNTS

1.5.1 Chief RPAA1 Projector Security Mount or EQUIVALENT
Chief CMA—110 Mounting flange, vendor to supply appropriate unistrut, threaded rod, beam clamps & pipe to complete installation. Security mount shall be as close as possible to the drop ceiling.

LOCATIONS: RH 215

1.5.2 Cruxial URACK-4 Under Table Rack Mount or EQUIVALENT.

Mount rack under faculty workstation and secure the CRESTRON DMPS3-4K-100-C to the bottom space of the rack and place the Blu-ray player above.

LOCATIONS: CB 119, CB 121, CB 122, CB 123, CB 124, CB 200, CB 203, CB 204, CB 212, CB 214, CB 216, CB 217, CB 218, CB 219, CB 220, CB 221, CB 222, BH 201, CC 171, CC 174, JLC 221, JLC 222, MH 117, MH 135, PA 212, PA 215, PA 216, PA 217, PA 219, PA 223, PA 226, RH 001, RH 004, RH 209, RH 215

1.6.0 SCREEN

1.6.1 SPECIFICATIONS:

WALL MOUNTED

Da-Lite, Spring Roller-Type Screen, Model B, #40197 or Da-Lite Model B #40208 Manual Projection Screen or EQUIVALENT

- Projection screen 7' x 7'
- Painted white 22-gauge octagonal steel case with flat back design with baked enamel finish and fitted with end caps concealing rollers ends with integral bearing surface
- Matte White surface with masking borders standard on flame retardant and mildew resistant seamless fabric.
- Provide manufacturers wall mounting brackets as required.

- Where there is an existing screen that is to be replaced, the existing screen shall be returned to the College.

LOCATIONS: RH 215

1.6.2 CEILING MOUNTED

Da-Lite Automatic Electric Projection Screen, Model # 40801L or EQUIVALENT

- 8' (H) x 8'(W), electrically operated 120 volt (60 Hz) 2.0 amp
- Motor mounted inside the roller with a patented noise silencer to be three wire quick reversal type
- Built in low voltage control
- Screen fabric is flame retardant and mildew resistant fiberglass, Matte White seamless
- Bottom of fabric is formed into a pocket holding a 3/8" diameter metal rod
- Case is white, 21-gauge steel
- Three position low voltage control switch with cover plate, wiring to screen
- Ceiling Trim Kit.

LOCATION: N/A

1.7.0 CABLE

All cables utilized on this project shall comply with NEC article 800 for use on voice/data systems. These cables shall be UL listed for these applications. All cable runs shall comply with the layouts indicated in the building and site drawings unless otherwise agreed upon by the College Project Manager. The cable shall be equal to Belden Media Twist.

- Solid, annealed bare 23 AWG copper conductors.
- Pairs shall be bonded together in data communications cable.
- Conductor insulation color-coded to telephone industry standards.
- Insulated conductors shall be bonded into pairs and pairs shall be twisted with varying lay lengths to minimize crosstalk.
- Cable shall support digital and analog, voice, data, and video.
- Cable shall also support 10, 100, 1000 Mbps Ethernet and HDMI Video.

1.7.1 CRESTRON DM-CBL-ULTRA-P or EQUIVALENT

1.7.2 SPECIFICATIONS:
The vendor shall provide, install, and test, at each workstation designated in the drawings, cables complying with the following specifications for the worst pair.

Construction	
S/FTP with four individually shielded twisted pairs, overall shield, and overall jacket	
Electrical & Performance	
Mutual Capacitance	≤5.6 nF / 100 m @ 1 kHz
Velocity of Propagation	74% nominal
Delay Skew	≤25 ns / 100 m
Conductor DC Resistance	≤95 Ohms / km @ 20°C
Conductor DC Resistance Unbalance	≤2% @ 20°C
Pair to Ground Capacitance Unbalance	≤1600 pF / km
Characteristic Impedance	100 Ohms nominal
(4) Shielded Twisted Pairs	
Colors	Blue/white, orange/white, green/white, brown/white
Conductors	22 AWG solid bare copper
Insulation	Foam FEP
Outer Diameter (per conductor)	0.056 inch (1.41 mm) nominal
Shield (per pair)	AL foil

Overall Shield	
Shield	Tinned copper braid (>50% coverage)
Outer Jacket	
Color	Blue
Material	Low Smoke PVC
Thickness	0.018 inch (0.45 mm)
Outer Diameter	0.304 inch (7.7 mm) nominal
Minimum Recommended Bend Radius	2.44 inches (62 mm)
Maximum Recommended Pull Tension	25 lbf (111 N)
Environmental	
Operating Temperature	-4° to 140°F (-20° to 60°C)
Weight	
Bulk Cable Weight	41.67 lb / 1000 ft (62 kg / km)
Compliance	
Type CMP, NEC Article 800, UL Subject 444, cUL, IEC 61156-5, ISO/IEC 11801, Category 7a	

LOCATIONS: CB 119, CB 121, CB 122, CB 123, CB 124, CB 200, CB 203, CB 204, CB 212, CB 214, CB 216, CB 217, CB 218, CB 219, CB 220, CB 221, CB 222, BH 201, CC 171, CC 174, JLC 221, JLC 222, MH 117, MH 135, PA 212, PA 215, PA 216, PA 217, PA 219, PA 223, PA 226, RH 001, RH 004, RH 207, RH 215

1.8.0 ADDTIONAL EQUIPMENT

1.8.1 ELMO MX-1 Visual Presenter with connect box bundle MFR # 1358. Contractor must provide extension cable and HMDI cable to complete the connection

1.8.2 SPECIFICATIONS:

Power Source
DC5V

Power Consumption
3.2W

Outside Dimensions
W 73.2mm x D 294.3mm x H 298mm (when setup) W 73.2mm x D 244mm x H18mm (when folded)

Weight
Approx. 1.04lbs. (main body only)

External Control Terminal
USB 3.0 type microB x 1

Lens
F=2.0

Frame Rate
60fps (in high frame rate mode at 1080p)

Focus
Auto (one push)
Imaging Area
14.72in x 11.06in (Height: 11.26in) 4:3

Effective Pixels
H: 4160, V: 3120

Brightness
Auto (Set value 0 - 12_)

Image Rotation
0° / 180° (camera mode)

Zoom
Possible

Video Still
Possible

Focus
Auto/Manual

Scene Mode
Normal/Document

Illumination
White LED

MX-1 Document Camera Expansion Module

Outputs
HDMI & RGB Outputs to MX-1 Camera

Flicker Correction
Switchable 50/ 60 Hz

Includes Cables,

Power Consumption
110V & 120V AC Adapters

LOCATIONS: CB 119, CB 121, CB 122, CB 123, CB 124, CB 200, CB 203, CB 204, CB 212, CB 214, CB 216, CB 217, CB 218, CB 219, CB 220, CB 221, CB 222, BH 201, CC 171, CC 174, JLC 221, JLC 222, MH 117, MH 135, PA 212, PA 215, PA 216, PA 217, PA 219, PA 223, PA 226, RH 001, RH 004, RH 209, RH 215

1.9.0 VIDEO PLAYERS
1.9.1 Sony BDP-S6700 Blu-rayPlayer or or EQUIVALENT (Supplied By Contactor)

1.9.2 SPECIFICATIONS:

Video	
System	NTSC
Region	Blu-ray: A DVD: 1
HD Upconversion	Yes, 720p, 1080i, 1080p, 4K
Audio	
Dolby Digital/DTS Compatibility	DTS, DTS-HD Master Audio, Dolby Digital, Dolby TrueHD
Built-in Decoder	Yes
LPCM	Yes
A/V Playback Formats	
Video	BD-R, BD-RE, DVD+R, DVD+R DL, DVD+RW, DVD-R, DVD-R DL, DVD-RW, DVD-Video, VCD
Audio	CD, CD-R, CD-RW
Pictures	CD-R CD-RW DVD+R DVD+R DL DVD+RW DVD-R DVD-R DL DVD-RW
File Formats Supported	3G2, 3GP, 3GPP, 3GPP2, AAC, AC3, ASF, AVCHD, AVI, FLA, FLAC, FLV, GIF, JPEG, LPCM, M2TS, M4A, MKA, MOV, MP3, MPEG-1 PS,MPEG1, MPEG2, MPEG2 PS, MPG, MTS, PNG, VC-1, WAV, WMA, WMA9, XVID
Convenience	
Slow Motion Playback	Yes
Frame-by-Frame Playback	Yes

Network & Internet Multimedia	
Network Access	Yes, Built-in Wi-Fi
BD-Live	Yes
Bonus View	Yes
Support for Streaming Services	Yes
Mobile Device Control	Yes
DLNA Home Network Sharing	Yes
Input/Output Connectors	
Digital	1x HDMI Output 1x USB Input 1x Digital Coaxial Audio Output 1x Ethernet Input
General	
Remote	Yes
Power Requirements	120 VAC, 60 Hz
Power Consumption	Operational: 12.0 W Standby: 0.3 W
Dimensions (WxHxD)	10.1 x 1.6 x 7.6" / 25.7 x 4.0 x 19.4 cm
Weight	1.98 lb / .90 kg
Packaging Info	
Package Weight	3.05 lb
Box Dimensions (LxWxH)	11.4 x 10.7 x 2.7"

LOCATIONS: CB 119, CB 121, CB 122, CB 123, CB 124, CB 200, CB 203, CB 204, CB 212, CB 214, CB 216, CB 217, CB 218, CB 219, CB 220, CB 221, CB 222, BH 201, CC 171, CC 174, JLC 221, JLC 222, MH 117, MH 135, PA 212, PA 215, PA 216, PA 217, PA 219, PA 223, PA 226, RH 001, RH 004, RH 209, RH 215

2.0.0 ACCEPTANCE AND WARRANTY

2.1.0 WARRANTY

The Contractor shall provide a no-exception on-site parts and labor warranty for a period of three years from the date of acceptance except as noted in 2.1.1. The Contractor shall provide, in a three-ring binder, close out documentation, instruction manuals, software drivers, and warranty certificates.

2.1.1 CRESTRON A+ PARTNER 5 YEAR EXTENDED WARRANTY & ADVANCED REPLACEMENT or EQUIVALENT

MCC is a Crestron A+ Partner (Partner Number 1017919). As a Crestron A+ partner, MCC is entitled to all Crestron products maintaining a 5 year warranty as per the Crestron Five Year Extended Limited Warranty.
http://www.crestron.com/downloads/pdf/sales_terms_and_conditions_of_sale/extended_five_year_warranty_govt_enterprise_aplus.pdf

All Crestron 3-series DMPS products are entitled to the Crestron DMPS 3-series Extended 5 Year Limited Warranty and Advanced Replacement for A+ partners.
http://www.crestron.com/downloads/pdf/sales_terms_and_conditions_of_sale/dmps3_extended_support/dmps3_extended_support.pdf

All warranty repairs for Crestron products are eligible for direct RMA to MCC as per the Crestron Five Year Extended Limited Warranty.

MCC is entitled to Crestron direct technical support for system design and specification, and during and after installation.

MCC is entitled to use Crestron's training and showroom facilities and use Crestron Rewards points to pay for training.

2.2.0 ACCEPTANCE

The Contractor shall test all projectors prior to notifying the College for acceptance testing. The Engineer and College Representatives will witness tests. Tests shall include, but not be limited to, the following through all connections:

Size
Color Range
Keystone
Computer Interface
Focus Range
Video Performance

After the testing, a training session shall be conducted to train personnel in use of equipment and user maintenance requirements.

3.0 CONTRACTOR QUALIFICATIONS:

The Contractor shall be an authorized dealer of the product bid upon.

4.0 INSTALLATION:

Any drilling, hammering or process generating any disruption shall be completed between May 9, and May 15, 2017 or Saturdays and Sundays or between 10:00 PM and 7:00 AM Monday through Friday when to building is not occupied. Coordinate installation schedule with the Media Department. Work hours in this section take precedent over, and will

supersede any conflicting reference to hours elsewhere in these plans and specifications. Project shall be completed no later than July 30, 2017.

4.1 COMPLIANCE

The Contractor shall comply with all of the College's safety and work rules when performing work at the college. It is expected that all contractor employees will conduct themselves in a professional manner.

The buildings will be occupied during this project, classes may be in session. The contractor shall not interrupt or disturb any operations of this building during the completion of this project. Any work performed that the College deems could be loud or disruptive in nature must be done when the building is not occupied.

4.2. SITE CLEANUP

The work area shall be cleaned on a daily basis. Any items remaining shall be secured and surrounded with safety tape and/or barriers. Any damage caused by the contractor shall be repaired at no cost to the college.

The contractor is to remove all trash, excavated materials, and other waste off site and disposed of it in accordance with current regulations.

5.0 ATTACHMENTS:

Room Plans
Creston Equipment Drawings

6.0 SCOPE OF WORK:

College to furnish electrical receptacles as noted on the floor plans. New network connections (Cat 6) to be supplied by the College. College to furnish computer. The College will supply the Blu-ray player and Elmo document camera for South Hall only.