VIDEO

WIRELESS KEYBOARD & MOUSE
OFE
USB OUT — USB — USB-001 — USB IN — USBA — USB CAT OUT — RJ45 — SCAT-301 — FRONT DISPLAY 7 (TV7) TO RACK (ER1)
NOTE: Mount Behind Display Front Display

USB CAT5-TX
LIBERTY
DIGI-USB2-4P
USB IN — USBA — USB CAT OUT — RJ45

USB CAT5-RX
LIBERTY
INCLUDED W/TX
CAT IN — RJ45 — USB OUT — USB — USB-101 — RACK

DEDICATED PC
OFE
--
USB IN — USBA — HDMI OUT — HDMI — HDMI-101 — RACK
USB IN — USBA — USB-201 — RACK
LAN — RJ45 — CAT-801 — RACK
NOTE: From OFE Network

DIGITAL VIDEO MATRIX
CRESTRON
DM-MD32X32-RPS
INPUT 1 HDMI — HDMI — INPUT CARD CRESTRON DMC-4K-HD — OUTPUT CARD CRESTRON DMC-4K-CO-HD — OUTPUT 1 DM — RJ45
OUTPUT 2 DM — RJ45
INPUT 2 DM — RJ45 — INPUT CARD CRESTRON DMC-4K-C — OUTPUT CARD CRESTRON DMC-4K-CO-HD
OUTPUT 3 DM — RJ45
OUTPUT 4 DM — RJ45
INPUT 3 SDI — SDI — INPUT CARD CRESTRON DMC-SDI — OUTPUT CARD CRESTRON DMC-4K-CO-HD
OUTPUT 5 DM — RJ45
INPUT 4 SDI — SDI — INPUT CARD CRESTRON DMC-SDI
OUTPUT 6 DM — RJ45
INPUT 5 SDI — SDI — INPUT CARD CRESTRON DMC-SDI — OUTPUT CARD CRESTRON DMC-4K-CO-HD
OUTPUT 7 DM — RJ45
OUTPUT 8 DM — RJ45
INPUT 6 SDI — SDI — INPUT CARD CRESTRON DMC-SDI — OUTPUT CARD CRESTRON DMC-4K-HDO
OUTPUT 9 HDMI — HDMI — HDMI-209 — RACK
INPUT 7 SDI — SDI — INPUT CARD CRESTRON DMC-SDI
OUTPUT 10 HDMI — HDMI — HDMI-210 — RACK
OUTPUT CARD CRESTRON DMC-4K-HDO
OUTPUT 11 HDMI — HDMI — HDMI-DVI-211 — RACK
INPUT 8 SDI — SDI — INPUT CARD CRESTRON DMC-SDI
OUTPUT 12 HDMI — HDMI — HDMI-DVI-212 — RACK
OUTPUT CARD CRESTRON DMC-4K-HDO
OUTPUT 13 HDMI — HDMI — HDMI-DVI-213 — RACK
INPUT 9 SDI — SDI — INPUT CARD CRESTRON DMC-SDI
OUTPUT 14 HDMI — HDMI — HDMI-DVI-214 — RACK
OUTPUT CARD CRESTRON DMC-4K-HDO
OUTPUT 15 HDMI — HDMI — HDMI-DVI-215 — RACK
INPUT 10 HDMI — HDMI — INPUT CARD CRESTRON DMC-4K-HD
OUTPUT 16 HDMI — HDMI — HDMI-DVI-216 — RACK
OUTPUT CARD CRESTRON DMC-4K-HDO
OUTPUT 17 HDMI — HDMI — HDMI-DVI-217 — RACK
OUTPUT 18 HDMI — HDMI
OUTPUT 19 HDMI — HDMI
OUTPUT CARD CRESTRON DMC-4K-HDO
OUTPUT 20 HDMI — HDMI
LAN — RJ45 — CAT-702 — RACK — NOTE: From Crestron Switch

USB BRIDGE
VADDIO
AV BRIDGE
HDMI IN — HDMI — USB OUT — USB

ENCODER 1
REACH
REX ENC1200S
DVI IN — DVI — LAN — RJ45 — CAT-803 — RACK — NOTE: To OFE Network

ENCODER 2
REACH
REX ENC1200S
DVI IN — DVI — LAN — RJ45 — CAT-804 — RACK — NOTE: To OFE Network

ENCODER 3
REACH
REX ENC1200S
DVI IN — DVI — LAN — RJ45 — CAT-805 — RACK — NOTE: To OFE Network

ENCODER 4
REACH
REX ENC1200S
DVI IN — DVI — LAN — RJ45 — CAT-806 — RACK — NOTE: To OFE Network

ENCODER 5
REACH
REX ENC1200S
DVI IN — DVI — LAN — RJ45 — CAT-807 — RACK — NOTE: To OFE Network

ENCODER 6
REACH
REX ENC1200S
DVI IN — DVI — LAN — RJ45 — CAT-808 — RACK — NOTE: To OFE Network

ENCODER 7
REACH
REX ENC1200S
DVI IN — DVI — LAN — RJ45 — CAT-809 — RACK — NOTE: To OFE Network

ENCODER 8
REACH
REX ENC1200S
DVI IN — DVI — LAN — RJ45 — CAT-810 — RACK — NOTE: To OFE Network

MULTIVIEWER
RGB SPECTRUM
QUADVIEW UHD
INPUT 1 HDMI — HDMI — HDMI-218 — RACK
MULTIVIEW OUTPUT — HDMI — HDMI-110 — RACK
INPUT 2 HDMI — HDMI — HDMI-219 — RACK
LAN — RJ45 — CAT-802 — RACK — NOTE: From Crestron Switch

LAPTOP
OFE
--
VGA OUT — 15HD — HD15A-002 — VGA IN — 15HD — DM OUT — RJ45 — SCAT-102 — WALL PLATE 1 (WP1) TO RACK (ER1)
NOTE: Mount on Wall Power Over DM
AUDIO OUT — 3.5mm — AUDIO IN — 3.5mm
HDMI OUT — HDMI — HDMI-002 — HDMI IN — HDMI

WALL PLATE CAT5-TX
CRESTRON
DM-TX-200-C-2G

PTZ CAMERA 1
1 BEYOND
1B-SC-PHQ
SDI OUT — BNC — SDI-108 — CAMERA 1 (CAM1-AV11A) TO RACK (ER1)
CEILING MOUNT
1 BEYOND
1B-SC-PM
NOTE: Power Over 1 Beyond Remote Power Kit

PTZ CAMERA 2
1 BEYOND
1B-SC-PHQ
SDI OUT — BNC — SDI-104 — CAMERA 2 (CAM2-AV11A) TO RACK (ER1)
CEILING MOUNT
1 BEYOND
1B-SC-PM
NOTE: Power Over 1 Beyond Remote Power Kit

PTZ CAMERA 3
1 BEYOND
1B-SC-PHQ
SDI OUT — BNC — SDI-105 — CAMERA 3 (CAM3-AV11A) TO RACK (ER1)
CEILING MOUNT
1 BEYOND
1B-SC-PM
NOTE: Power Over 1 Beyond Remote Power Kit

PTZ CAMERA 4
1 BEYOND
1B-SC-PHQ
SDI OUT — BNC — SDI-106 — CAMERA 4 (CAM4-AV11A) TO RACK (ER1)
CEILING MOUNT
1 BEYOND
1B-SC-PM
NOTE: Power Over 1 Beyond Remote Power Kit

PTZ CAMERA 5
1 BEYOND
1B-SC-PHQ
SDI OUT — BNC — SDI-107 — CAMERA 5 (CAM5-AV11A) TO RACK (ER1)
CEILING MOUNT
1 BEYOND
1B-SC-PM
NOTE: Power Over 1 Beyond Remote Power Kit

PTZ CAMERA 6
1 BEYOND
1B-SC-PHQ
SDI OUT — BNC — SDI-108 — CAMERA 6 (CAM6-AV11A) TO RACK (ER1)
CEILING MOUNT
1 BEYOND
1B-SC-PM
NOTE: Power Over 1 Beyond Remote Power Kit

PTZ CAMERA 7
1 BEYOND
1B-SC-PHQ
SDI OUT — BNC — SDI-109 — CAMERA 7 (CAM7-AV11A) TO RACK (ER1)
WALL MOUNT
1 BEYOND
1B-SC-PT-WM
NOTE: Power Over 1 Beyond Remote Power Kit

NOTE: Mount Behind Display Power Locally

CAT5-RX 1
CRESTRON
DM-RMC-SCALER-C
DM IN — RJ45 — HDMI OUT — HDMI — SCAT-201 — RACK (ER1) TO DISPLAY 1 (TV1) — HDMI-301
42" DISPLAY 1
NEC
E425
HDMI IN — HDMI
MOUNT CHIEF LTM1U

CAT5-RX 2
CRESTRON
DM-RMC-SCALER-C
DM IN — RJ45 — HDMI OUT — HDMI — SCAT-202 — RACK (ER1) TO DISPLAY 2 (TV2) — HDMI-302
42" DISPLAY 2
NEC
E425
HDMI IN — HDMI
MOUNT CHIEF LTM1U

CAT5-RX 3
CRESTRON
DM-RMC-SCALER-C
DM IN — RJ45 — HDMI OUT — HDMI — SCAT-203 — RACK (ER1) TO DISPLAY 3 (TV3) — HDMI-303
42" DISPLAY 3
NEC
E425
HDMI IN — HDMI
MOUNT CHIEF LTM1U

CAT5-RX 4
CRESTRON
DM-RMC-SCALER-C
DM IN — RJ45 — HDMI OUT — HDMI — SCAT-204 — RACK (ER1) TO DISPLAY 4 (TV4) — HDMI-304
42" DISPLAY 4
NEC
E425
HDMI IN — HDMI
MOUNT CHIEF LTM1U

CAT5-RX 5
CRESTRON
DM-RMC-SCALER-C
DM IN — RJ45 — HDMI OUT — HDMI — SCAT-205 — RACK (ER1) TO DISPLAY 5 (TV5) — HDMI-305
42" DISPLAY 5
NEC
E425
HDMI IN — HDMI
MOUNT CHIEF LTM1U

CAT5-RX 6
CRESTRON
DM-RMC-SCALER-C
DM IN — RJ45 — HDMI OUT — HDMI — SCAT-206 — RACK (ER1) TO DISPLAY 6 (TV6) — HDMI-306
42" DISPLAY 6
NEC
E425
HDMI IN — HDMI
MOUNT CHIEF LTM1U

CAT5-RX 7
CRESTRON
DM-RMC-SCALER-C
DM IN — RJ45 — HDMI OUT — HDMI — SCAT-207 — RACK (ER1) TO FRONT DISPLAY 7 (TV7) — HDMI-307
58" DISPLAY 7
NEC
E585
HDMI IN — HDMI
MOUNT CHIEF LTM1U

In Rack

Room Number

191

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Brookings, SD
Cedar Rapids, IA
Chicago, IL
Detroit, MI
Des Moines, IA

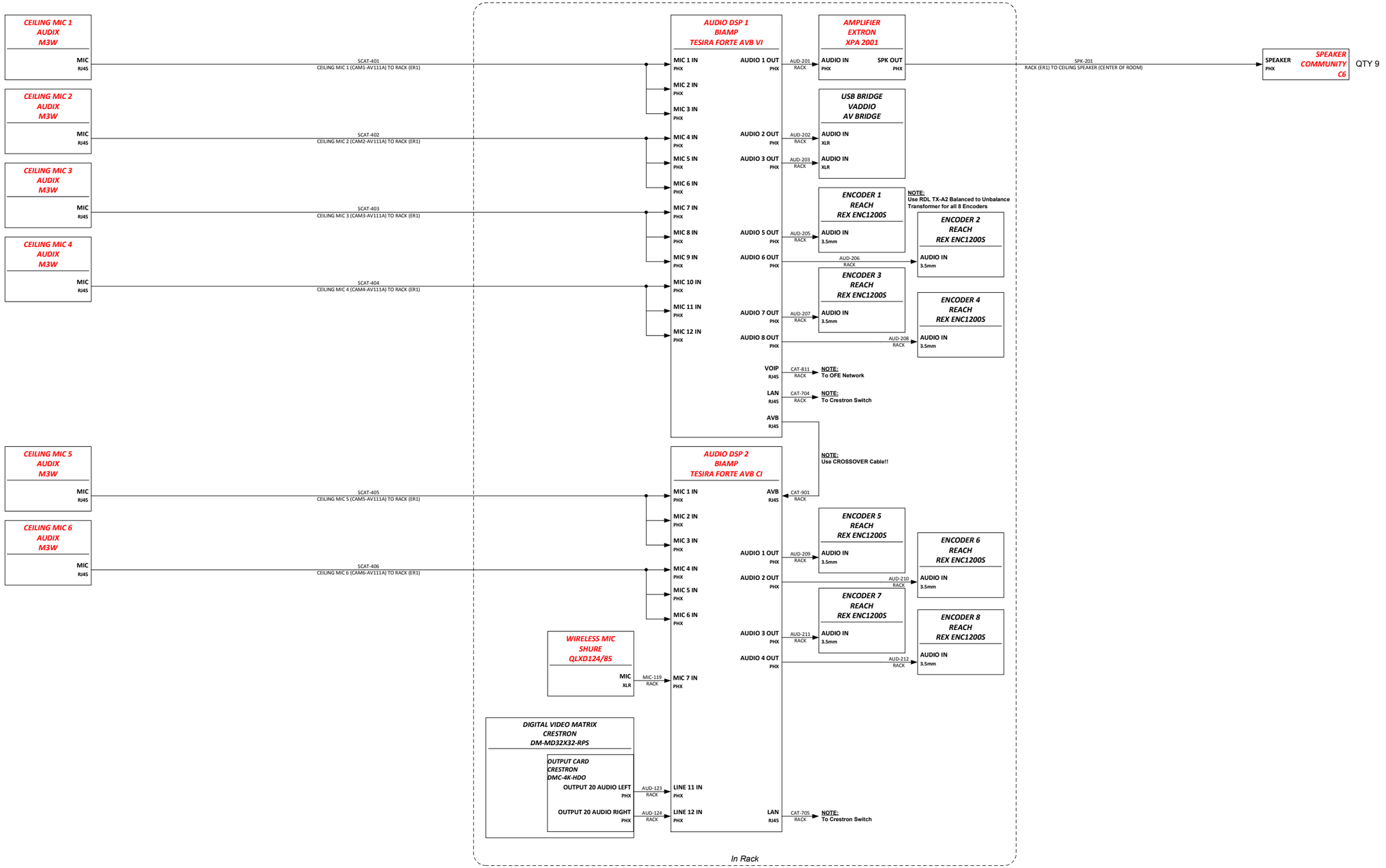
A PROJECT FOR:
Webster University – ISB Expansion Design
16010013

REVISIONS

A	BUILD	REVISED 03/23/2017
B	BUILD REV #1	REVISED 04/13/2017
C	BUILD REV #2	REVISED 04/30/2017
D	BUILD REV #3	REVISED 06/25/2017
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO: CADAVER LAB
DRAWING NUMBER: 1 of 40

AUDIO



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Des Moines, IA

A PROJECT FOR:

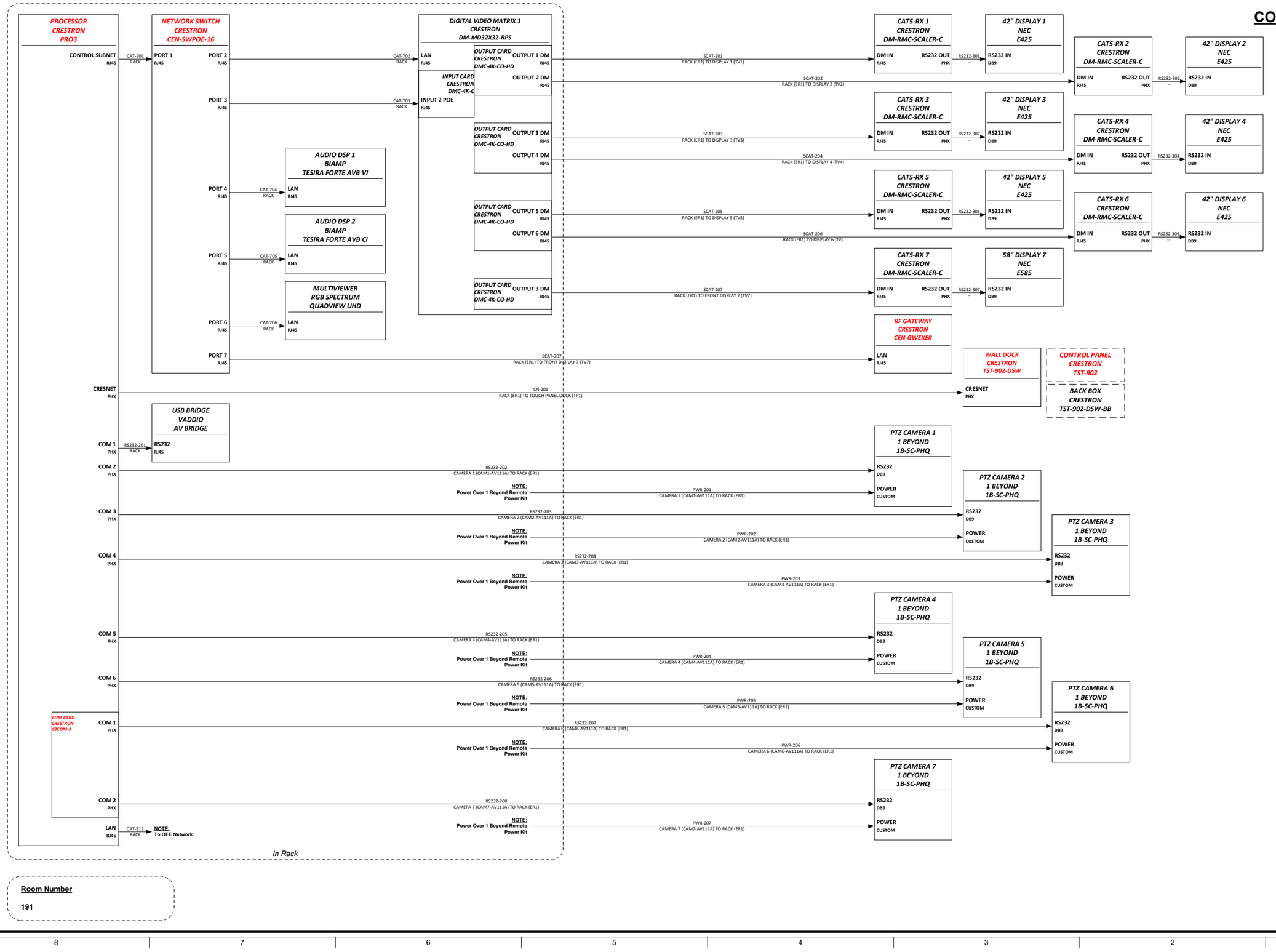
Webster University – ISB Expansion Design

16010013

REVISIONS			
A	BUILD	REVISED	03/23/2017
B	BUILD REV #1	REVISED	04/13/2017
C	BUILD REV #2	REVISED	04/30/2017
D	BUILD REV #3	REVISED	06/25/2017
E	BUILD REV #4	REVISED	06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: AUDIO: CADAVER LAB
DRAWING NUMBER: 2 of 40

CONTROL



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A PROJECT FOR:

Webster University – ISB Expansion Design

16010013

REVISIONS			
A	BUILD	REVISED	03/23/2017
B	BUILD REV #1	REVISED	04/13/2017
C	BUILD REV #2	REVISED	04/30/2017
D	BUILD REV #3	REVISED	06/25/2017
E	BUILD REV #4	REVISED	06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: CONTROL: CADAVER LAB
DRAWING NUMBER: 3 of 40

Cable Label/ Signal Abbreviations --Suggested Lengths

ABRV-LABEL	SIGNAL DESCRIPTION	CABLE DESCRIPTION	MANF	PART#	MIN -MAX CABLE LENGTH	TYP CONNECTOR-1	TYP CONNECTOR-2	TYP CONNECTOR-3
CN	Cresnet	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	1ft - 300ft	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
AX	Axlink	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	1ft - 300ft	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
SDI	Serial Digital Signal	Composite Video/ Digital Video/ Plenum	Liberty	20-CMP-VID-Coax-White	1ft - 175ft	LIBERTY-CM-RG59P-BNC	LIBERTY-CM-RG59P-RCA	NA
RGB	RGBHV Analog	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	1ft - 125ft	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
HD15	RGBHV Analog/ Or Component	3ft - 25ft (VGA) HD15 Male to Male	Liberty	E-MVGAM-M-(1-25)	1ft- 30ft	NA	NA	NA
HD15a	RGBHV Or Component with Audio	3ft - 25ft (VGA) HD15 Male to Male/ Ubal Audio	Liberty	E-MVGAMAM-M-(1-25)	1ft- 30ft	NA	NA	NA
HDMI	HDMI	3ft - 25ft HDMI Cable	Liberty	E-HDM-M-(1-25)	1ft- 30ft	NA	NA	NA
DVI	Digital TDMS video	3ft - 25ft DVI Cable	Liberty	Z400DVI-D/DL (1-25)	1ft- 30ft	NA	NA	NA
DVI-A	Analog DVI	DVI-A to 5 BNC	Liberty	E-DVI/A-5BNCF-1	1ft- 50ft	NA	NA	NA
SHRED	Analog Component / RGBHV	1ft, 3ft or 6ft HD15 to 5 BNC	Liberty	E-VGAM-5BNCF-(.5-3) E-VGAM-5BNCM-(3-6)	1ft- 50ft	NA	NA	NA
COMP	Component Video	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	1ft - 125ft	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
CATV	RF Base Band	CATV/MATV/ Plenum	Liberty	RG6-P-CATV-BLK	1ft - 300ft	LIBERTY-LCM-RG6M-F	NA	NA
SPK	70v Speaker	16AWG 70v Speaker Cable/ Plenum	Liberty	16-2C-P-WHT	1ft- 1000ft	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
SPK14	8ohm Speaker	14AWG Speaker Cable/ Plenum	Liberty	14-2C-P-BLK	1ft- 100ft	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
DC/SPK12	Low Voltage (DC)/ Large Format Speaker	12AWG Speaker Cable/ Plenum	Liberty	12-2C-P-BLK	1ft- 65ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
CAT/ LAN	10g Ethernet- HDBaseT-	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	1ft - 100ft	(Male)-LIBERTY- 106190	(Female Keystone) -LIBERTY-A68IPZA-STP	(Ethercon)-LIBERTY-NE8MC6-MO
RL	Relay	8 Conductor Plenum	Liberty	22-8C-PSH-WHT	1ft - 125ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
RS/ RS232	RS232	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	1ft - 125ft	(Male)-LIBERTY- 106190	Liberty- 32-281 (RJ45-DB9F)	Liberty- 32-284 (RJ45-DB9M)
IR	IR	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 200ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
AUD	Balanced Line Level Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 1000ft	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
UBAL	Unbalance Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 25ft	Liberty- 30-401-bk (3.5mm TRS)	Liberty-ZD06-r (RCA RED)	Libry- ZD06-w (RCA WHITE)
MIC	Balanced Mic Level	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 300ft	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ST	Balanced Line Level Stereo	2 pair 22/2 audio cable/ Plenum	Liberty	22-2P-CMP-SIAMEZ	1ft- 1000ft	(Provided) Eroblock 5 (EB5) or (EB3) x2	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ANT	RF Wireless Ant	50 ohm antenna cable/ Plenum	Liberty	RG8-CMP-BLK	1ft - 150ft	Liberty-112128 (BNC)	NA	NA
FIBER	Digital data over MultiMode fiber	2 Pair Multi Mode Fiber/ Plenum	Liberty	2FPINSM10-Z	3ft- 1000ft	(SC Connectors) Liberty-FASCM10	(LC Connectors) Liberty-FALCM10	NA
DMX	DMX 512 Theatrical Lighting	1 pair 22/2 cable / Plenum	Liberty	24-2P-P485-WHT	1ft- 500ft	BTX-CA-AAA5MBZ (XLR-5M)	BTX-CA-AAA5FBZ (XLR-5F)	NA

Cable Type Abbreviation (Cross check to table Above) — Cable Identification Number (Cross check to pull schedule below)

SCAT-101

Stage Wall Plate to projector

Pull Name
Point to point cable pull

CABLE PULL - CADAVER LAB ROOM 191

	PULL	NAME	NOTES
	FRONT DISPLAY 7 (TV7) TO RACK (ER1)	SCAT-301	SHIELDED CAT6A
	RACK (ER1) TO FRONT DISPLAY 7 (TV7)	SCAT-707	SHIELDED CAT6A
	RACK (ER1) TO FRONT DISPLAY 7 (TV7)	SCAT-207	SHIELDED CAT6A
Count	3		
	WALL PLATE 1 (WP1) TO RACK (ER1)	SCAT-102	SHIELDED CAT6A
Count	1		
	CAMERA 1 (CAM1-AV111A) TO RACK (ER1)	SDI-103	20-CMP-VID-COAX
	CAMERA 1 (CAM1-AV111A) TO RACK (ER1)	RS232-202	SHIELDED CAT6A
	CAMERA 1 (CAM1-AV111A) TO RACK (ER1)	PWR-201	16-2C
Count	3		
	CAMERA 2 (CAM2-AV111A) TO RACK (ER1)	SDI-104	20-CMP-VID-COAX
	CAMERA 2 (CAM2-AV111A) TO RACK (ER1)	RS232-203	SHIELDED CAT6A
	CAMERA 2 (CAM2-AV111A) TO RACK (ER1)	PWR-202	16-2C
Count	3		
	CAMERA 3 (CAM3-AV111A) TO RACK (ER1)	SDI-105	20-CMP-VID-COAX
	CAMERA 3 (CAM3-AV111A) TO RACK (ER1)	RS232-204	SHIELDED CAT6A
	CAMERA 3 (CAM3-AV111A) TO RACK (ER1)	PWR-203	16-2C
Count	3		
	CAMERA 4 (CAM4-AV111A) TO RACK (ER1)	SDI-106	20-CMP-VID-COAX
	CAMERA 4 (CAM4-AV111A) TO RACK (ER1)	RS232-205	SHIELDED CAT6A
	CAMERA 4 (CAM4-AV111A) TO RACK (ER1)	PWR-204	16-2C
Count	3		
	CAMERA 5 (CAM5-AV111A) TO RACK (ER1)	SDI-107	20-CMP-VID-COAX
	CAMERA 5 (CAM5-AV111A) TO RACK (ER1)	RS232-206	SHIELDED CAT6A
	CAMERA 5 (CAM5-AV111A) TO RACK (ER1)	PWR-205	16-2C
Count	3		
	CAMERA 6 (CAM6-AV111A) TO RACK (ER1)	SDI-108	20-CMP-VID-COAX
	CAMERA 6 (CAM6-AV111A) TO RACK (ER1)	RS232-207	SHIELDED CAT6A
	CAMERA 6 (CAM6-AV111A) TO RACK (ER1)	PWR-206	16-2C
Count	3		
	CAMERA 7 (CAM1-AV111) TO RACK (ER1)	SDI-109	20-CMP-VID-COAX
	CAMERA 7 (CAM1-AV111) TO RACK (ER1)	RS232-208	SHIELDED CAT6A
	CAMERA 7 (CAM1-AV111) TO RACK (ER1)	PWR-207	16-2C
Count	3		
	RACK (ER1) TO DISPLAY 1 (TV1)	SCAT-201	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO DISPLAY 2 (TV2)	SCAT-202	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO DISPLAY 3 (TV3)	SCAT-203	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO DISPLAY 4 (TV4)	SCAT-204	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO DISPLAY 5 (TV5)	SCAT-205	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO DISPLAY 6 (TV6)	SCAT-206	SHIELDED CAT6A
Count	1		
	CEILING MIC 1 (CAM1-AV111A) TO RACK (ER1)	SCAT-401	SHIELDED CAT6A
Count	1		
	CEILING MIC 2 (CAM2-AV111A) TO RACK (ER1)	SCAT-402	SHIELDED CAT6A
Count	1		
	CEILING MIC 3 (CAM3-AV111A) TO RACK (ER1)	SCAT-403	SHIELDED CAT6A
Count	1		
	CEILING MIC 4 (CAM4-AV111A) TO RACK (ER1)	SCAT-404	SHIELDED CAT6A
Count	1		
	CEILING MIC 5 (CAM5-AV111A) TO RACK (ER1)	SCAT-405	SHIELDED CAT6A
Count	1		
	CEILING MIC 6 (CAM6-AV111A) TO RACK (ER1)	SCAT-406	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO CEILING SPEAKER (CENTER OF ROOM)	SPK-201	16-2C
Count	1		
	RACK (ER1) TO TOUCH PANEL DOCK (TP1)	CN-201	LLINX-U-P
Count	1		

WIRE/DETAIL

37RU RACK
MIDDLE ATLANTIC WRK-37SA-32

1	RACK HEADER	1
2	DEDICATED PC ON 2RU SHELF MIDDLE ATLANTIC RC-2	2
3		3
4	RACK BLANK	4
5	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	5
6	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	6
7	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	7
8	RACK BLANK	8
9	USB BRIDGE VADDIO AV BRIDGE	9
10	RACK BLANK	10
11	MULTIVIEWER RGB SPECTRUM QUADVIEW	11
12	RACK BLANK	12
13	AUDIO DSP 1 BIAMP TESIRA FORTE AVB VI	13
14	RACK BLANK	14
15	AUDIO DSP 2 BIAMP TESIRA FORTE AVB CI	15
16	RACK BLANK	16
17	AMPLIFER ON 1RU SHELF EXTRON 60-190-01	17
18	RACK BLANK	18
19	NETWORK SWITCH CRESTRON CEN-SWPOE-16	19
20	RACK BLANK	20
21	PROCESSOR CRESTRON PRO3	21
22		22
23	RACK BLANK	23
24	DIGITAL VIDEO MATRIX CRESTRON DM-MD32X32-RPS	24
25		25
26		26
27		27
28		28
29		29
30		30
31		31
32		32
33		33
34		34
35		35
36		36
37		37

RACK ACCESSORIES

1	MIDDLE ATLANTIC	LVFD-37	VENTED FRONT DOOR WITH LOCK
1	MIDDLE ATLANTIC	MW-4QFT-FC	FAN TOP WITH CONTROLLER
1	MIDDLE ATLANTIC	CBS-WRK-32	CASTER BASE
1	MIDDLE ATLANTIC	LT-GN-WL	WORK LIGHT
3	MIDDLE ATLANTIC	PDT-1415C	VERTICAL POWER STRIP

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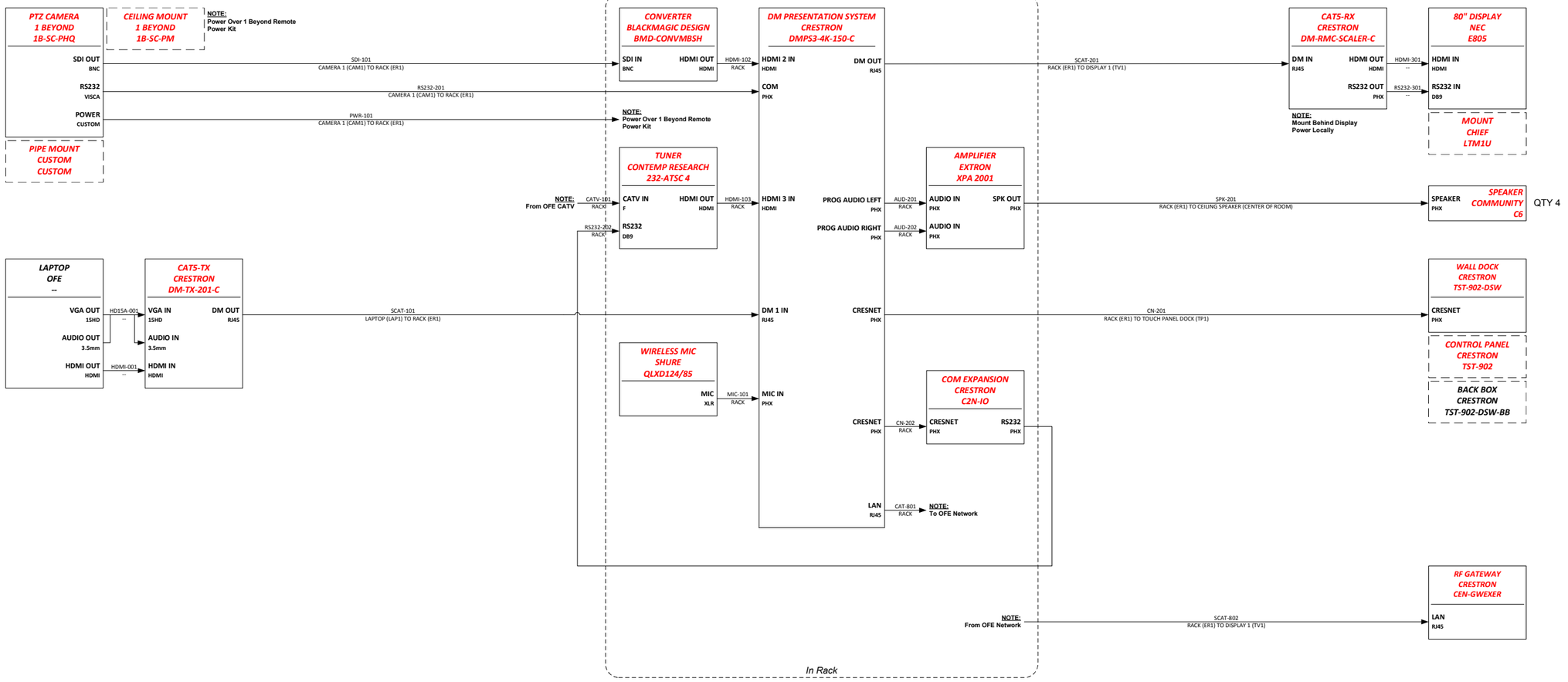
A PROJECT FOR:
Webster University – ISB Expansion Design
16010013

REVISIONS		
A	BUILD	REVISED 03/23/2017
B	BUILD REV #1	REVISED 04/13/2017
C	BUILD REV #2	REVISED 04/30/2017
D	BUILD REV #3	REVISED 06/25/2017
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: WIRE/DETAIL: CADAVER LAB
DRAWING NUMBER: 4 of 40

VIDEO/AUDIO/CONTROL



Room Number

174

CABLE PULL - TEACHING KITCHEN ROOM 174

	PULL	NAME	NOTES
	LAPTOP (LAP1) TO RACK (ER1)	SCAT-101	SHIELDED CAT6A
Count	1		
	CAMERA 1 (CAM1) TO RACK (ER1)	SDI-101	20-CMP-VID-COAX
	CAMERA 1 (CAM1) TO RACK (ER1)	RS232-201	SHIELDED CAT6A
	CAMERA 1 (CAM1) TO RACK (ER1)	PWR-101	16-2C
Count	3		
	RACK (ER1) TO DISPLAY 1 (TV1)	SCAT-201	SHIELDED CAT6A
	RACK (ER1) TO DISPLAY 1 (TV1)	SCAT-802	SHIELDED CAT6A
Count	2		
	RACK (ER1) TO CEILING SPEAKER (CENTER OF ROOM)	SPK-201	16-2C
Count	1		
	RACK (ER1) TO TOUCH PANEL DOCK (TP1)	CN-201	LLINX-U-P
Count	1		

14RU CREDENZA RACK
MIDDLE ATLANTIC CFR-14-18

1	RACK HEADER	14
2	POWER CONDITIONER MIDDLE ATLANTIC PD-915R	13
3	RACK BLANK	12
4	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	11
5	RACK BLANK	10
6	TUNER RACK MOUNT CONTEMP RESEARCH RK1	9
7	RACK BLANK	8
8	WIRELESS MIC SHURE QLXD124/85	7
9	RACK BLANK	6
10	AMPLIFER ON 1RU SHELF EXTRON 60-190-01	5
11	RACK BLANK	4
12		3
13	DM PRESENTATION SYSTEM CRESTRON DMPS3-300-C	2
14		1

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REVISIONS		
A	BUILD	REVISED 03/23/2017
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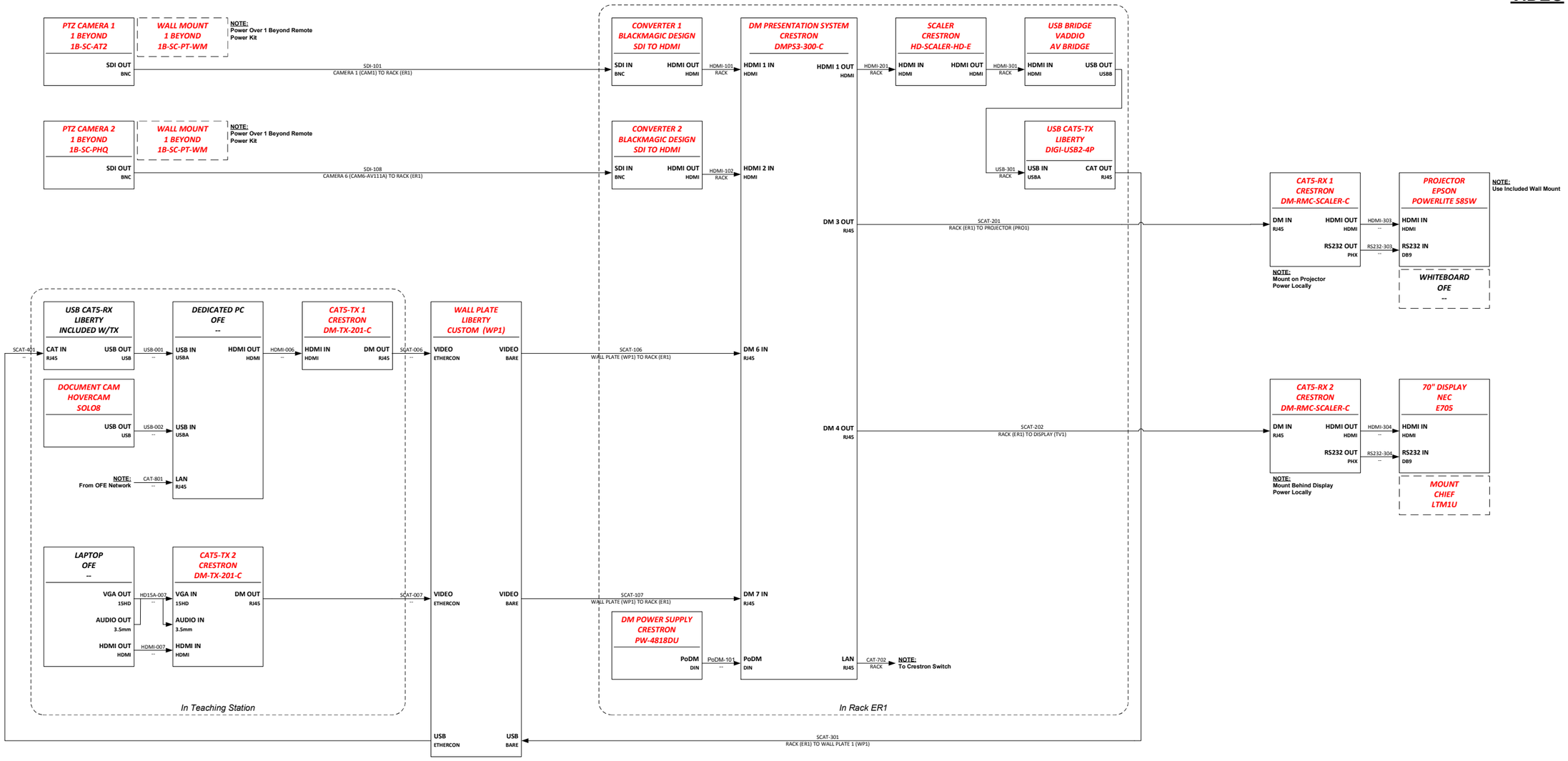
D	BUILD REV #3	REVISED 06/25/2017
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO/AUDIO/ CONTROL: TEACHING KITCHEN
DRAWING NUMBER: 5 of 40

VIDEO



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A PROJECT FOR:

Webster University – ISB Expansion Design

160100013

REVISIONS

A	BUILD	REVISED 03/23/2017
B	BUILD REV #1	REVISED 04/13/2017
C	BUILD REV #2	REVISED 04/30/2017
D	BUILD REV #3	REVISED 06/25/2017
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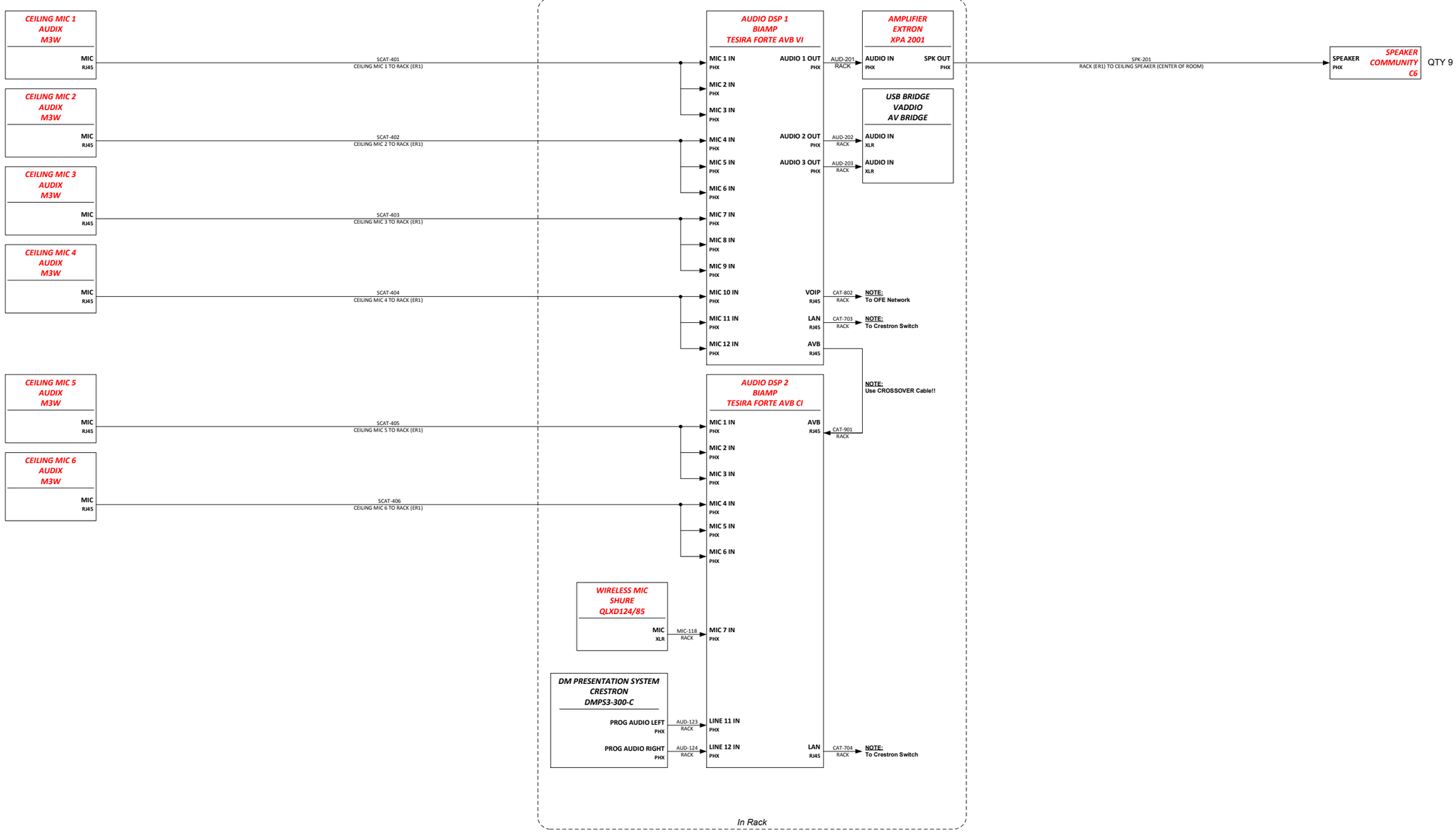
APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO: HEALTH ASSESSMENT LAB
DRAWING NUMBER: 6 of 40

AUDIO



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A PROJECT FOR:

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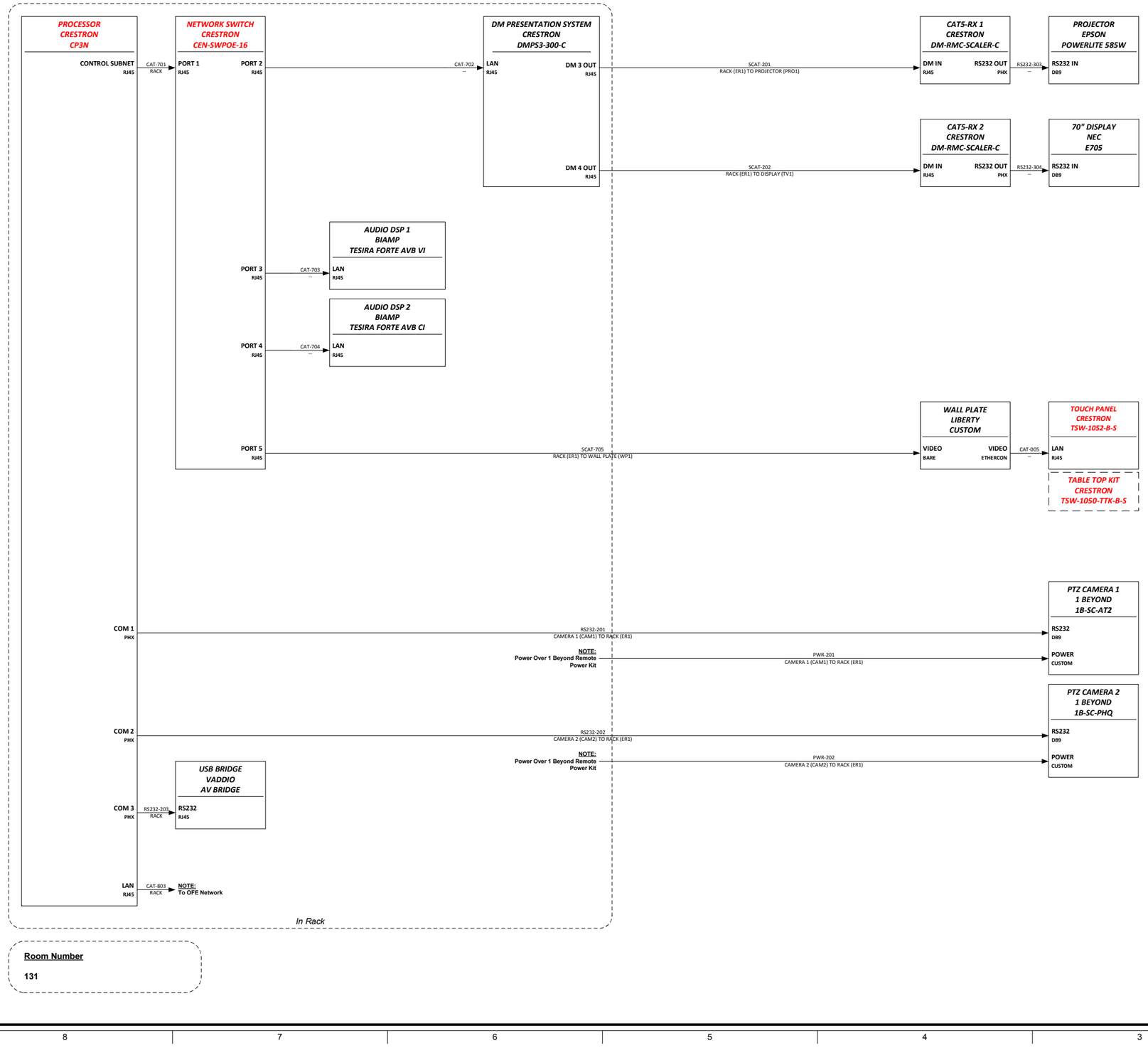
REVISIONS			
A	BUILD	REVISED	03/23/2017
B	BUILD REV #1	REVISED	04/13/2017
C	BUILD REV #2	REVISED	04/30/2017
D	BUILD REV #3	REVISED	06/25/2017
E	BUILD REV #4	REVISED	06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: AUDIO: HEALTH ASSESSMENT LAB
DRAWING NUMBER: 7 of 40

CONTROL



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APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: CONTROL: HEALTH ASSESSMENT LAB
DRAWING NUMBER: 8 of 40

Cable Label/ Signal Abbreviations --Suggested Lengths

ABRV-LABEL	SIGNAL DESCRIPTION	CABLE DESCRIPTION	MANF	PART#	MIN -MAX CABLE LENGTH	TYP CONNECTOR-1	TYP CONNECTOR-2	TYP CONNECTOR-3
CN	Cresnet	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	1ft - 300ft	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
AX	Axlink	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	1ft - 300ft	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
SDI	Serial Digital Signal	Composite Video/ Digital Video/ Plenum	Liberty	20-CMP-VID-Coax-White	1ft - 175ft	LIBERTY-CM-RG59P-BNC	LIBERTY-CM-RG59P-RCA	NA
RGB	RGBHV Analog	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	1ft - 125ft	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
HD15	RGBHV Analog/ Or Component	3ft - 25ft (VGA) HD15 Male to Male	Liberty	E-MVGAM-M-(1-25)	1ft- 30ft	NA	NA	NA
HD15a	RGBHV Or Component with Audio	3ft - 25ft (VGA) HD15 Male to Male/ Ubal Audio	Liberty	E-MVGAMAM-M-(1-25)	1ft- 30ft	NA	NA	NA
HDMI	HDMI	3ft - 25ft HDMI Cable	Liberty	E-HDM-M-(1-25)	1ft- 30ft	NA	NA	NA
DVI	Digital TDMS video	3ft - 25ft DVI Cable	Liberty	Z400DVI-D/DL (1-25)	1ft- 30ft	NA	NA	NA
DVI-A	Analog DVI	DVI-A to 5 BNC	Liberty	E-DVI/A-5BNCF-1	1ft- 50ft	NA	NA	NA
SHRED	Analog Component / RGBHV	1ft, 3ft or 6ft HD15 to 5 BNC	Liberty	E-VGAM-5BNCF-(.5-3) E-VGAM-5BNCM-(3-6)	1ft- 50ft	NA	NA	NA
COMP	Component Video	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	1ft - 125ft	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
CATV	RF Base Band	CATV/MATV/ Plenum	Liberty	RG6-P-CATV-BLK	1ft - 300ft	LIBERTY-LCM-RG6M-F	NA	NA
SPK	70v Speaker	16AWG 70v Speaker Cable/ Plenum	Liberty	16-2C-P-WHT	1ft- 1000ft	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
SPK14	8ohm Speaker	14AWG Speaker Cable/ Plenum	Liberty	14-2C-P-BLK	1ft- 100ft	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
DC/SPK12	Low Voltage (DC)/ Large Format Speaker	12AWG Speaker Cable/ Plenum	Liberty	12-2C-P-BLK	1ft- 65ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
CAT/ LAN	10g Ethernet- HDBaseT-	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	1ft - 100ft	(Male)-LIBERTY- 106190	(Female Keystone) -LIBERTY-A68IPZA-STP	(Ethercon)-LIBERTY-NE8MC6-MO
RL	Relay	8 Conductor Plenum	Liberty	22-8C-PSH-WHT	1ft - 125ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
RS/ RS232	RS232	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	1ft - 125ft	(Male)-LIBERTY- 106190	Liberty- 32-281 (RJ45-DB9F)	Liberty- 32-284 (RJ45-DB9M)
IR	IR	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 200ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
AUD	Balanced Line Level Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 1000ft	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
UBAL	Unbalance Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 25ft	Liberty- 30-401-bk (3.5mm TRS)	Liberty-ZD06-r (RCA RED)	Libry- ZD06-w (RCA WHITE)
MIC	Balanced Mic Level	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 300ft	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ST	Balanced Line Level Stereo	2 pair 22/2 audio cable/ Plenum	Liberty	22-2P-CMP-SIAMEZ	1ft- 1000ft	(Provided) Eroblock 5 (EB5) or (EB3) x2	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ANT	RF Wireless Ant	50 ohm antenna cable/ Plenum	Liberty	RG8-CMP-BLK	1ft - 150ft	Liberty-112128 (BNC)	NA	NA
FIBER	Digital data over MultiMode fiber	2 Pair Multi Mode Fiber/ Plenum	Liberty	2FPINSM10-Z	3ft- 1000ft	(SC Connectors) Liberty-FASCM10	(LC Connectors) Liberty-FALCM10	NA
DMX	DMX 512 Theatrical Lighting	1 pair 22/2 cable / Plenum	Liberty	24-2P-P485-WHT	1ft- 500ft	BTX-CA-AAA5MBZ (XLR-5M)	BTX-CA-AAA5FBZ (XLR-5F)	NA

WIRE/DETAIL

Cable Type Abbreviation *(Cross check to table Above)* — **Cable Identification Number** *(Cross check to pull schedule below)*

SCAT-101

Stage Wall Plate to projector

Pull Name *Point to point cable pull*

CABLE PULL - HEALTH ASSESSMENT LAB ROOM 131

	PULL	NAME	NOTES
	WALL PLATE (WP1) TO RACK (ER1)	SCAT-106	SHIELDED CAT6A
	WALL PLATE (WP1) TO RACK (ER1)	SCAT-107	SHIELDED CAT6A
	RACK (ER1) TO WALL PLATE (WP1)	SCAT-301	SHIELDED CAT6A
	RACK (ER1) TO WALL PLATE (WP1)	SCAT-705	SHIELDED CAT6A
Count	3		
	CAMERA 1 (CAM1) TO RACK (ER1)	SDI-101	20-CMP-VID-COAX
	CAMERA 1 (CAM1) TO RACK (ER1)	RS232-201	SHIELDED CAT6A
	CAMERA 1 (CAM1) TO RACK (ER1)	PWR-201	16-2C
Count	3		
	CAMERA 2 (CAM2) TO RACK (ER1)	SDI-102	20-CMP-VID-COAX
	CAMERA 2 (CAM2) TO RACK (ER1)	RS232-202	SHIELDED CAT6A
	CAMERA 2 (CAM2) TO RACK (ER1)	PWR-202	16-2C
Count	3		
	RACK (ER1) TO PROJECTOR (PRO1)	SCAT-201	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO DISPLAY (TV1)	SCAT-202	SHIELDED CAT6A
Count	1		
	CEILING MIC 1 TO RACK (ER1)	SCAT-401	SHIELDED CAT6A
Count	1		
	CEILING MIC 2 TO RACK (ER1)	SCAT-402	SHIELDED CAT6A
Count	1		
	CEILING MIC 3 TO RACK (ER1)	SCAT-403	SHIELDED CAT6A
Count	1		
	CEILING MIC 4 TO RACK (ER1)	SCAT-404	SHIELDED CAT6A
Count	1		
	CEILING MIC 5 TO RACK (ER1)	SCAT-405	SHIELDED CAT6A
Count	1		
	CEILING MIC TO RACK (ER1)	SCAT-406	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO CEILING SPEAKER (CENTER OF ROOM)	SPK-201	16-2C
Count	1		

14RU CREDENZA RACK
MIDDLE ATLANTIC CFR-14-18

1	RACK HEADER	14
2	POWER CONDITIONER MIDDLE ATLANTIC PD-915R	13
3	RACK BLANK	12
4	NETWORK SWITCH CRESTRON CEN-SWPOE-16	11
5	RACK BLANK	10
6	PROCESSOR CRESTRON CP3N	9
7	RACK BLANK	8
8	WIRELESS MIC SHURE QLXD124/85	7
9	RACK BLANK	6
10	AUDIO DSP 1 BIAMP TESIRA FORTE AVB VI	5
11	RACK BLANK	4
12	AUDIO DSP 2 BIAMP TESIRA FORTE AVB CI	3
13	RACK BLANK	2
14	AMPLIFER ON 1RU SHELF EXTRON 60-190-01	1

14RU CREDENZA RACK
MIDDLE ATLANTIC CFR-14-18

1	RACK HEADER	14
2	POWER CONDITIONER MIDDLE ATLANTIC PD-915R	13
3	RACK BLANK	12
4	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	11
5	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	10
6	AUDIO DSP 3 BIAMP TESIRA FORTE AVB AI	9
7	RACK BLANK	8
8	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	7
9	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	6
10	USB BRIDGE VADDIO AV BRIDGE	5
11	RACK BLANK	4
12		3
13	DM PRESENTATION SYSTEM CRESTRON DMPS3-300-C	2
14		1

LOCK EXHIBIT BOOKS

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A PROJECT FOR:

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16010013

REVISIONS

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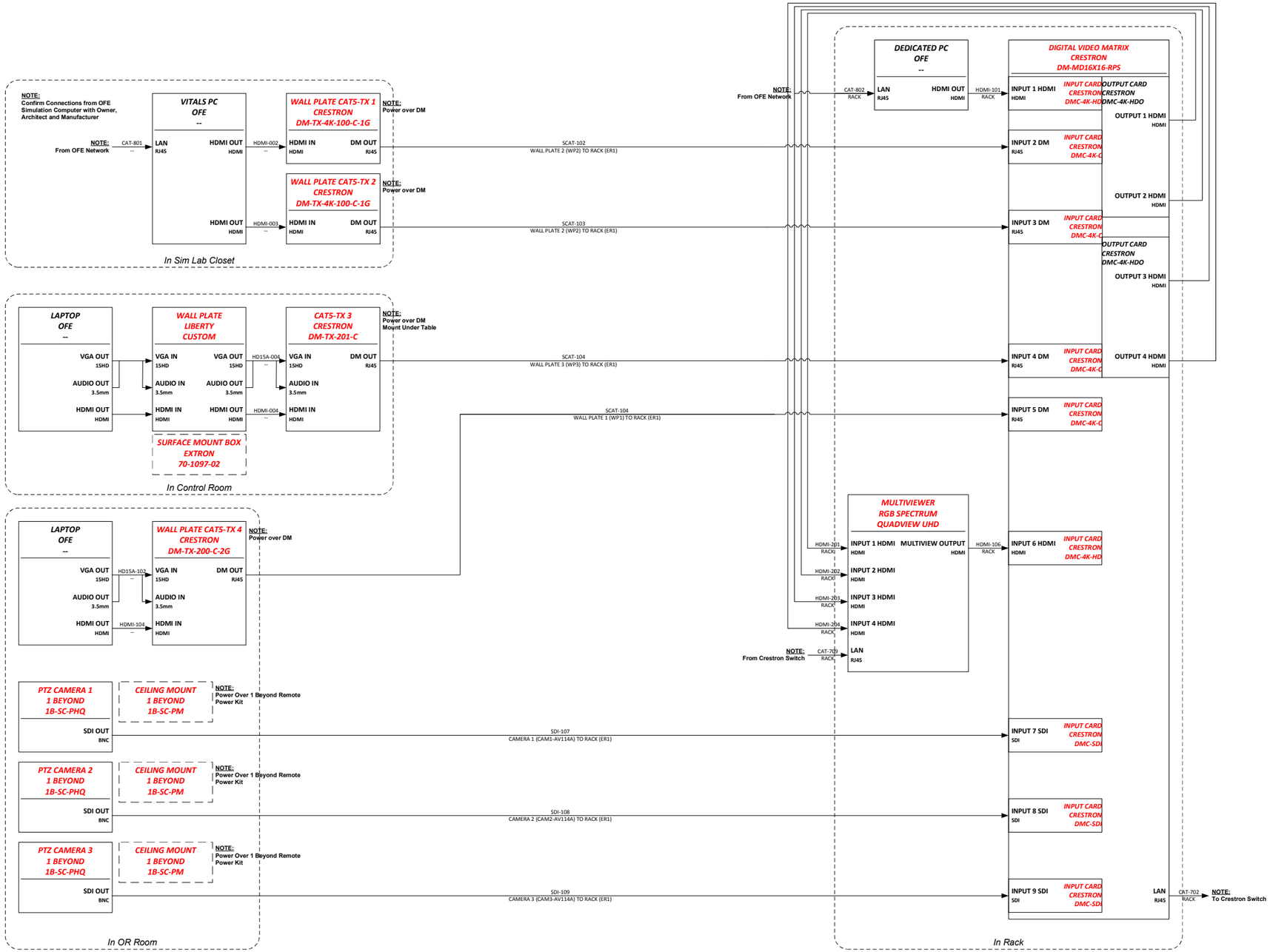
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: WIRE/DETAIL: HEALTH ASSESSMENT LAB
DRAWING NUMBER: 9 of 40

VIDEO



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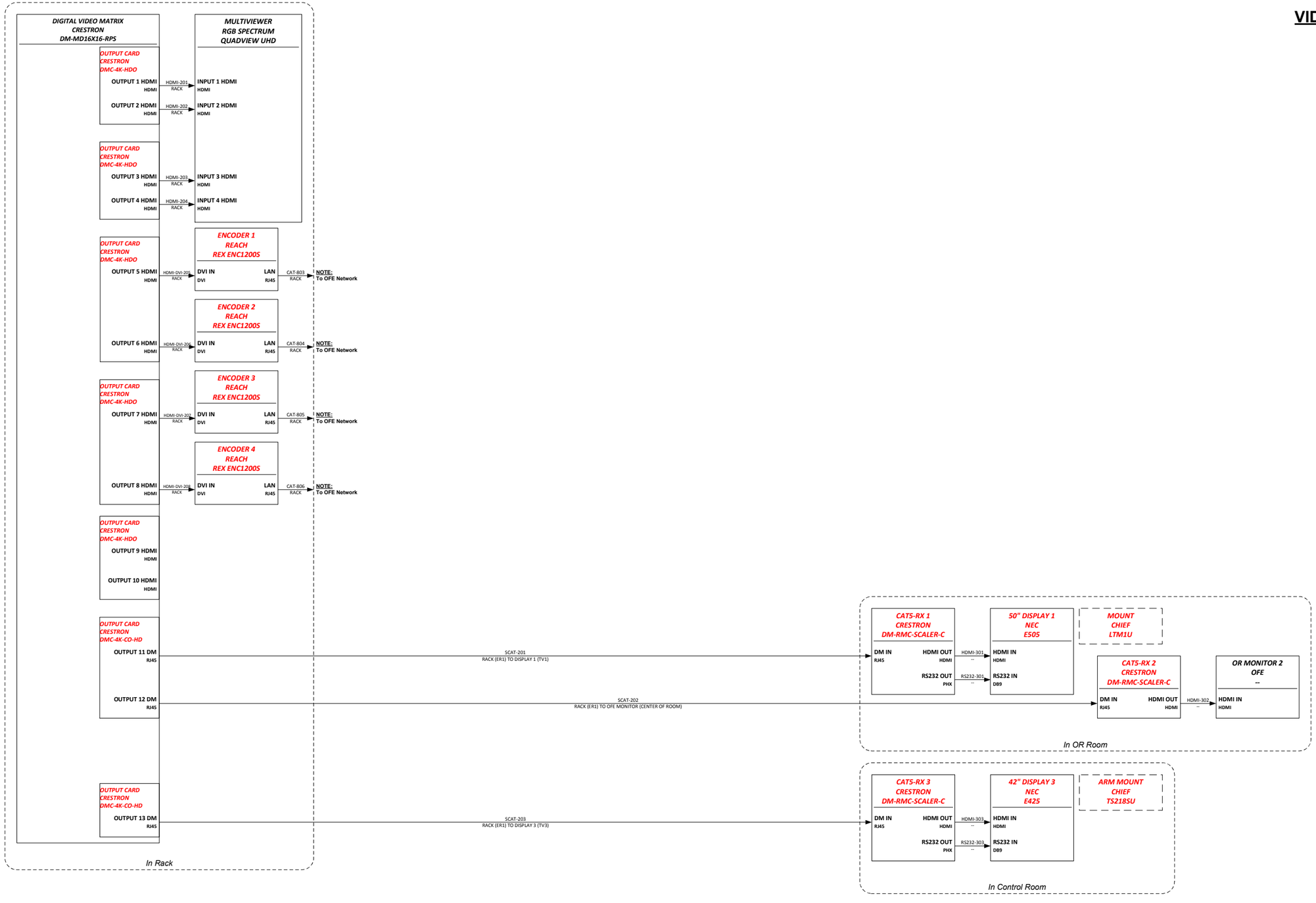
APPROVED BY	T. KERSTING
DESIGNED BY	T. KERSTING
DRAWN BY	T. KERSTING
DATE	6/29/2017
DRAWING TITLE	VIDEO INPUTS: SIM LAB
DRAWING NUMBER	10 of 40

VIDEO



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A PROJECT FOR:

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REVISIONS		
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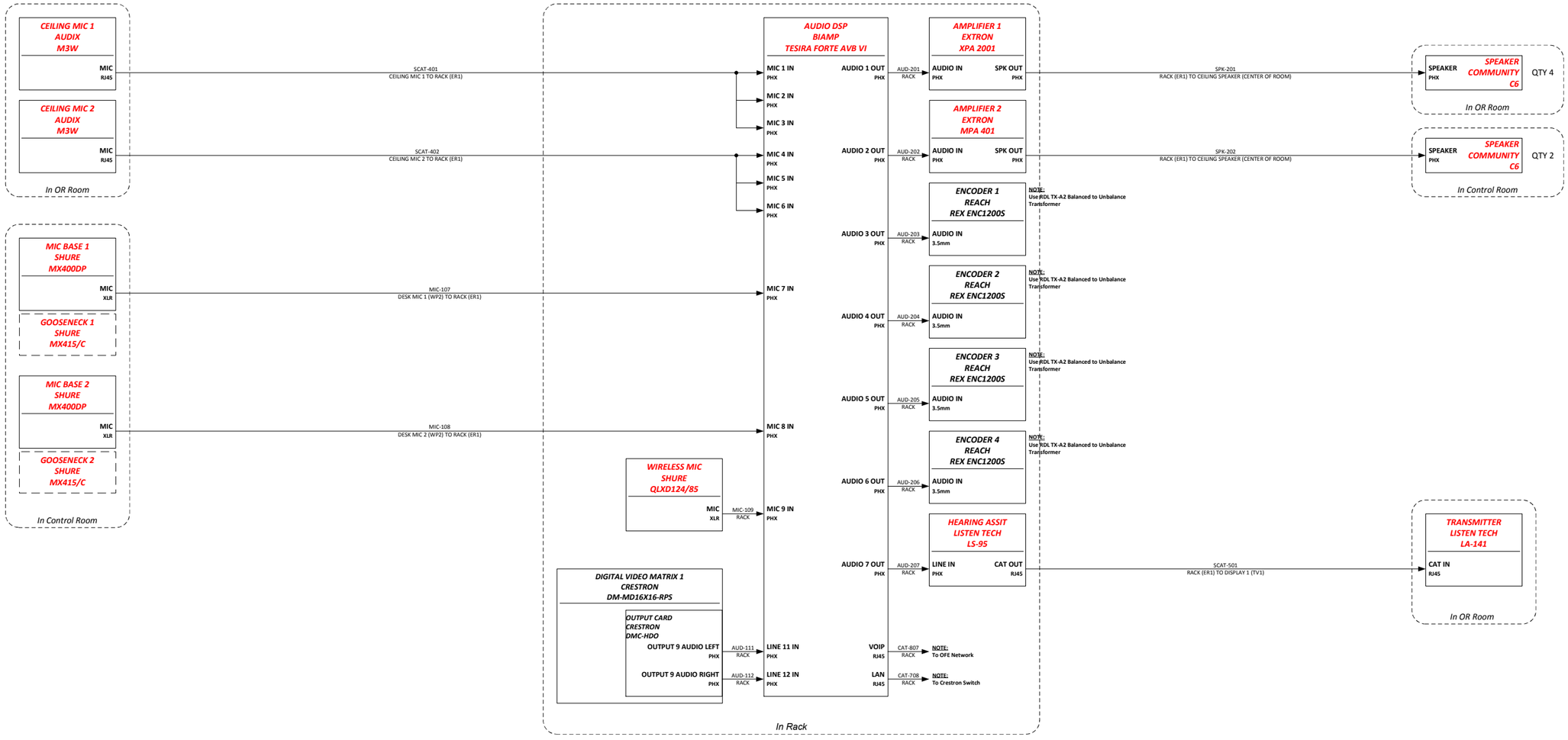
APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO OUTPUTS: SIM LAB
DRAWING NUMBER: 11 of 40

AUDIO



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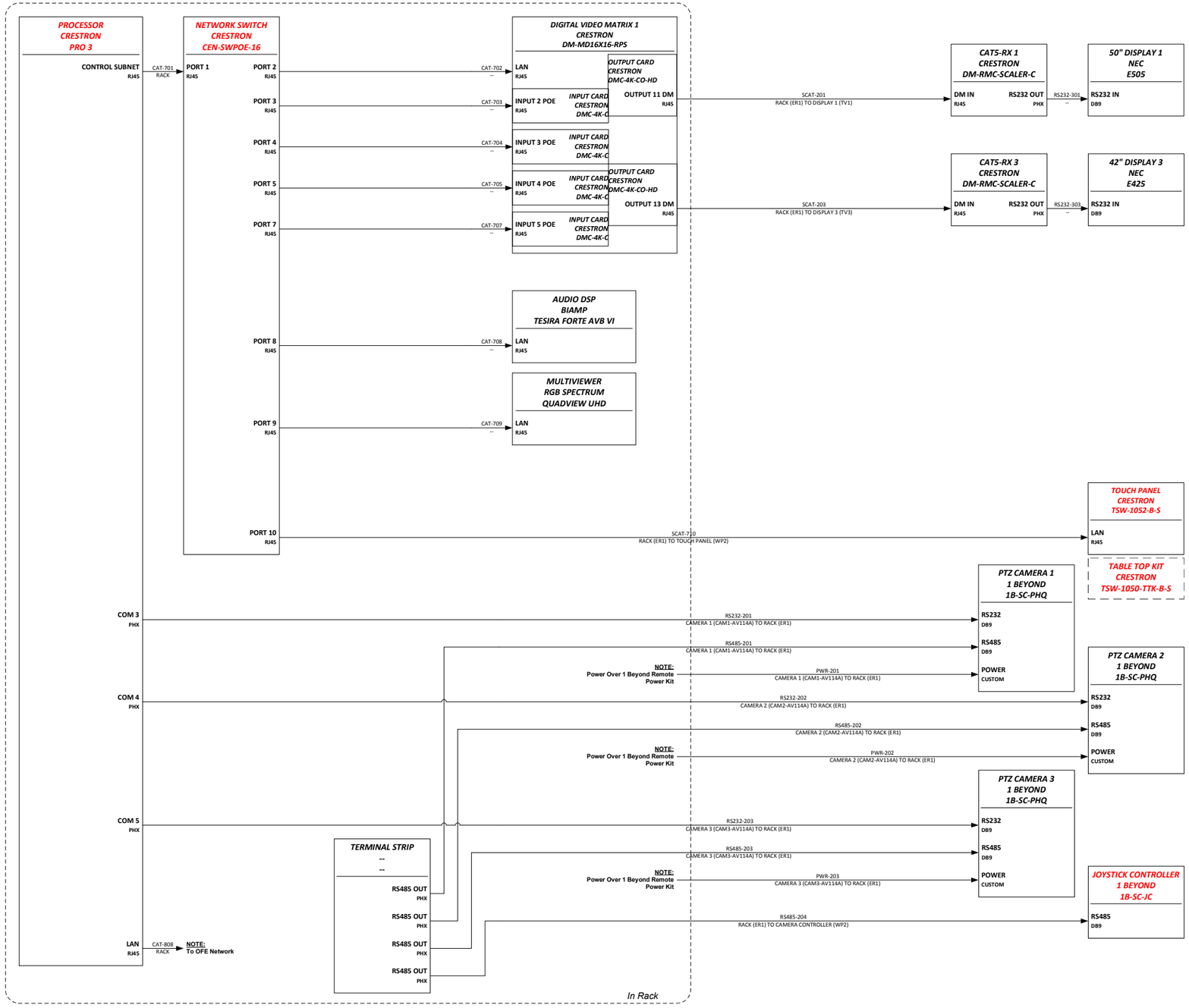
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: AUDIO: SIM LAB
DRAWING NUMBER: 12 of 40

CONTROL



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APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: CONTROL: SIM LAB
DRAWING NUMBER: 13 of 40

Cable Label/ Signal Abbreviations --Suggested Lengths

ABRV-LABEL	SIGNAL DESCRIPTION	CABLE DESCRIPTION	MANF	PART#	MIN -MAX CABLE LENGTH	TYP CONNECTOR-1	TYP CONNECTOR-2	TYP CONNECTOR-3
CN	Cresnet	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	1ft - 300ft	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
AX	Axlink	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	1ft - 300ft	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
SDI	Serial Digital Signal	Composite Video/ Digital Video/ Plenum	Liberty	20-CMP-VID-Coax-White	1ft - 175ft	LIBERTY-CM-RG59P-BNC	LIBERTY-CM-RG59P-RCA	NA
RGB	RGBHV Analog	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	1ft - 125ft	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
HD15	RGBHV Analog/ Or Component	3ft - 25ft (VGA) HD15 Male to Male	Liberty	E-MVGAM-M-(1-25)	1ft- 30ft	NA	NA	NA
HD15a	RGBHV Or Component with Audio	3ft - 25ft (VGA) HD15 Male to Male/ Ubal Audio	Liberty	E-MVGAMAM-M-(1-25)	1ft- 30ft	NA	NA	NA
HDMI	HDMI	3ft - 25ft HDMI Cable	Liberty	E-HDM-M-(1-25)	1ft- 30ft	NA	NA	NA
DVI	Digital TDMS video	3ft - 25ft DVI Cable	Liberty	Z400DVI-D/DL (1-25)	1ft- 30ft	NA	NA	NA
DVI-A	Analog DVI	DVI-A to 5 BNC	Liberty	E-DVI/A-5BNCF-1	1ft- 50ft	NA	NA	NA
SHRED	Analog Component / RGBHV	1ft, 3ft or 6ft HD15 to 5 BNC	Liberty	E-VGAM-5BNCF-(.5-3) E-VGAM-5BNCM-(3-6)	1ft- 50ft	NA	NA	NA
COMP	Component Video	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	1ft - 125ft	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
CATV	RF Base Band	CATV/MATV/ Plenum	Liberty	RG6-P-CATV-BLK	1ft - 300ft	LIBERTY-LCM-RG6M-F	NA	NA
SPK	70v Speaker	16AWG 70v Speaker Cable/ Plenum	Liberty	16-2C-P-WHT	1ft- 1000ft	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
SPK14	8ohm Speaker	14AWG Speaker Cable/ Plenum	Liberty	14-2C-P-BLK	1ft- 100ft	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
DC/SPK12	Low Voltage (DC)/ Large Format Speaker	12AWG Speaker Cable/ Plenum	Liberty	12-2C-P-BLK	1ft- 65ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
CAT/ LAN	10g Ethernet- HDBaseT-	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	1ft - 100ft	(Male)-LIBERTY- 106190	(Female Keystone) -LIBERTY-A68IPZA-STP	(Ethercon)-LIBERTY-NE8MC6-MO
RL	Relay	8 Conductor Plenum	Liberty	22-8C-PSH-WHT	1ft - 125ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
RS/ RS232	RS232	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	1ft - 125ft	(Male)-LIBERTY- 106190	Liberty- 32-281 (RJ45-DB9F)	Liberty- 32-284 (RJ45-DB9M)
IR	IR	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 200ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
AUD	Balanced Line Level Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 1000ft	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
UBAL	Unbalance Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 25ft	Liberty- 30-401-bk (3.5mm TRS)	Liberty-ZD06-r (RCA RED)	Libry- ZD06-w (RCA WHITE)
MIC	Balanced Mic Level	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 300ft	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ST	Balanced Line Level Stereo	2 pair 22/2 audio cable/ Plenum	Liberty	22-2P-CMP-SIAMEZ	1ft- 1000ft	(Provided) Eroblock 5 (EB5) or (EB3) x2	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ANT	RF Wireless Ant	50 ohm antenna cable/ Plenum	Liberty	RG8-CMP-BLK	1ft - 150ft	Liberty-112128 (BNC)	NA	NA
FIBER	Digital data over MultiMode fiber	2 Pair Multi Mode Fiber/ Plenum	Liberty	2FPINSM10-Z	3ft- 1000ft	(SC Connectors) Liberty-FASCM10	(LC Connectors) Liberty-FALCM10	NA
DMX	DMX 512 Theatrical Lighting	1 pair 22/2 cable / Plenum	Liberty	24-2P-P485-WHT	1ft- 500ft	BTX-CA-AAA5MBZ (XLR-5M)	BTX-CA-AAA5FBZ (XLR-5F)	NA

WIRE/DETAIL

Cable Type Abbreviation *(Cross check to table Above)* — **Cable Identification Number** *(Cross check to pull schedule below)*

SCAT-101
Stage Wall Plate to projector

Pull Name *Point to point cable pull*

CABLE PULL - SIM LAB ROOM 133

	PULL	NAME	NOTES
	WALL PLATE 3 (WP3) TO RACK (ER1)	SCAT-102	SHIELDED CAT6A
	WALL PLATE 3 (WP3) TO RACK (ER1)	SCAT-103	SHIELDED CAT6A
Count	2		
	WALL PLATE 2 (WP2) TO RACK (ER1)	SCAT-104	SHIELDED CAT6A
	RACK (ER1) TO TOUCH PANEL (WP2)	SCAT-710	SHIELDED CAT6A
	DESK MIC 1 (WP2) TO RACK (ER1)	MIC-107	22-2C
	DESK MIC 2 (WP2) TO RACK (ER1)	MIC-108	22-2C
	RACK (ER1) TO CAMERA CONTROLLER (WP2)	RS485-204	SHIELDED CAT6A
Count	5		
	WALL PLATE 1 (WP1) TO RACK (ER1)	SCAT-105	SHIELDED CAT6A
Count	1		
	CAMERA 1 (CAM1-AV114A) TO RACK (ER1)	SDI-107	20-CMP-VID-COAX
	CAMERA 1 (CAM1-AV114A) TO RACK (ER1)	RS232-201	SHIELDED CAT6A
	CAMERA 1 (CAM1-AV114A) TO RACK (ER1)	RS485-201	SHIELDED CAT6A
	CAMERA 1 (CAM1-AV114A) TO RACK (ER1)	PWR-201	16-2C
Count	4		
	CAMERA 2 (CAM2-AV114A) TO RACK (ER1)	SDI-108	20-CMP-VID-COAX
	CAMERA 2 (CAM2-AV114A) TO RACK (ER1)	RS232-202	SHIELDED CAT6A
	CAMERA 2 (CAM2-AV114A) TO RACK (ER1)	RS485-202	SHIELDED CAT6A
	CAMERA 2 (CAM2-AV114A) TO RACK (ER1)	PWR-202	16-2C
Count	4		
	CAMERA 3 (CAM3-AV114A) TO RACK (ER1)	SDI-109	20-CMP-VID-COAX
	CAMERA 3 (CAM3-AV114A) TO RACK (ER1)	RS232-203	SHIELDED CAT6A
	CAMERA 3 (CAM3-AV114A) TO RACK (ER1)	RS485-203	SHIELDED CAT6A
	CAMERA 3 (CAM3-AV114A) TO RACK (ER1)	PWR-203	16-2C
Count	4		
	RACK (ER1) TO DISPLAY 1 (TV1)	SCAT-201	SHIELDED CAT6A
	RACK (ER1) TO DISPLAY 1 (TV1)	SCAT-501	SHIELDED CAT6A
Count	2		
	RACK (ER1) TO OFE MONITOR (CENTER OF ROOM)	SCAT-202	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO DISPLAY 2 (TV2)	SCAT-203	SHIELDED CAT6A
Count	1		
	CEILING MIC 1 TO RACK (ER1)	SCAT-401	SHIELDED CAT6A
Count	1		
	CEILING MIC 2 TO RACK (ER1)	SCAT-402	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO CEILING SPEAKER (CENTER OF ROOM)	SPK-201	16-2C
Count	1		

12RU CREDENZA RACK MIDDLE ATLANTIC CFR-12-18

1	POWER CONDITIONER MIDDLE ATLANTIC PD-915R	14
2	RACK BLANK	13
3	NETWORK SWITCH CRESTRON CEN-SWPOE-16	12
4	RACK BLANK	11
5	PROCESSOR CRESTRON PRO3	10
6		9
7	RACK BLANK	8
8	MULTIVIEWER RGB SPECTRUM QUADVIEW	7
9	RACK BLANK	6
10	AUDIO DSP BIAMP TESIRA FORTE AVB VI	5
11	RACK BLANK	4
12	AMPLIFER 1 & 2 ON 1RU SHELF EXTRON 60-190-01	3

12RU CREDENZA RACK MIDDLE ATLANTIC CFR-12-18

1	POWER CONDITIONER MIDDLE ATLANTIC PD-915R	14
2	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	13
3	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	12
4	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	11
5	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	10
6	DIGITAL VIDEO MATRIX 1 CRESTRON DM-MD16X16-RPS	9
7		8
8		7
9		6
10		5
11		4
12		3

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A PROJECT FOR:
Webster University – ISB Expansion Design
160100013

REVISIONS

A	BUILD	REVISED 03/23/2017
B	BUILD REV #1	REVISED 04/13/2017
C	BUILD REV #2	REVISED 04/30/2017
D	BUILD REV #3	REVISED 06/25/2017
E	BUILD REV #4	REVISED 06/28/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: WIRE/DETAIL: SIM LAB
DRAWING NUMBER: 14 of 40

VIDEO

SCAT-301
RACK (ER1) TO WALL PLATE 2 (WP2)

USB WPCAT5-RX LIBERTY DL-USB2-WP-H
CAT IN RJ45 | USB OUT USB
NOTE: On Front Wall

USB-001 --

LAPTOP OFE --
USB IN USB | VGA OUT 15HD | AUDIO OUT 3.5mm | HDMI OUT HDMI

HD15A-001 --
HDMI-001 --

WALL PLATE CAT5-TX 1 CRESTRON DM-TX-200-C-2G
VGA IN 15HD | DM OUT RJ45 | AUDIO IN 3.5mm | HDMI IN HDMI
NOTE: Power over DM On Front Wall

SCAT-101
WALL PLATE 1 (WP1) TO RACK (ER1)

DOCUMENT CAM HOVERCAM SOLO8
USB OUT USB

USB-002 --

USB IN USB

WIRELESS VIDEO CRESTRON AM-100
LAN RJ45 | HDMI OUT HDMI

NOTE: From OFE Network
CAT-801 RACK
HDMI-102 RACK

BLU-RAY PLAYER DENON DN-500BD
HDMI OUT HDMI

HDMI-103 RACK

DIGITAL VIDEO MATRIX CRESTRON DM-MD8X8-RPS

INPUT 1 DM RJ45	INPUT CARD CRESTRON DMC-4K-C	OUTPUT CARD CRESTRON DMC-4K-CO	OUTPUT 1 DM RJ45
INPUT 2 HDMI HDMI	INPUT CARD CRESTRON DMC-4K-HD		
INPUT 3 HDMI HDMI	INPUT CARD CRESTRON DMC-4K-HD	OUTPUT CARD CRESTRON DMC-4K-CO-HD	OUTPUT 2 DM RJ45
INPUT 4 SDI SDI	INPUT CARD CRESTRON DMC-SDI		OUTPUT 3 DM RJ45
INPUT 5 SDI SDI	INPUT CARD CRESTRON DMC-SDI		
INPUT 6 DM RJ45	INPUT CARD CRESTRON DMC-4K-C		OUTPUT 4 DM RJ45
INPUT 7 DM RJ45	INPUT CARD CRESTRON DMC-4K-CO	OUTPUT CARD CRESTRON DMC-4K-HDO	OUTPUT 5 HDMI HDMI
		OUTPUT CARD CRESTRON DMC-4K-HDO	OUTPUT 6 HDMI HDMI
			OUTPUT 7 HDMI HDMI
			OUTPUT 8 HDMI HDMI
			LAN RJ45

PTZ CAMERA 1 1 BEYOND 1B-SC-PHQ
SDI OUT BNC

WALL MOUNT 1 BEYOND 1B-SC-PT-WM
NOTE: Power Over 1 Beyond Remote Power Kit

SDI-104
CAMERA 1 (CAM1) TO RACK (ER1)

PTZ CAMERA 2 1 BEYOND 1B-SC-PHQ
SDI OUT BNC

WALL MOUNT 1 BEYOND 1B-SC-PT-WM
NOTE: Power Over 1 Beyond Remote Power Kit

SDI-105
CAMERA 2 (CAM2) TO RACK (ER1)

VIDEO TABLE ANATOMAGE OFE
DP OUT DP

DP/HDMI-006 --

FLOOR BOX CAT5-TX 2 CRESTRON DM-TX-4K-100-C-1G
HDMI IN HDMI | DM OUT RJ45
NOTE: Power Over DM In Floor Box

SCAT-106
FLOOR BOX 1 (FB1) TO RACK (ER1)

DP/HDMI-007 --

FLOOR BOX CAT5-TX 3 CRESTRON DM-TX-4K-100-C-1G
HDMI IN HDMI | DM OUT RJ45
NOTE: Power Over DM In Floor Box

SCAT-107
FLOOR BOX 1 (FB1) TO RACK (ER1)

USB BRIDGE VADDIO AV BRIDGE
HDMI IN HDMI | USB OUT USBB

HDMI-205 RACK
USB-205 RACK

USB CAT5-TX LIBERTY DL-USB2-C
USB IN USBA | CAT OUT RJ45

STREAM/RECORD REACH BEE7
DVI 1 IN DVI | LAN RJ45
DVI 2 IN DVI

HDMI-DVI-206 RACK
HDMI-DVI-207 RACK
CAT-802 RACK
NOTE: To OFE Network

CAT-709 RACK
NOTE: To Crestron Switch

SCAT-201
RACK (ER1) TO DISPLAY 1 (TV1)

SCAT-202
RACK (ER1) TO DISPLAY 2 (TV2)

SCAT-203
RACK (ER1) TO DISPLAY 3 (TV3)

SCAT-204
RACK (ER1) TO DISPLAY 4 (TV4)

CAT5-RX 1 CRESTRON DM-RMC-SCALER-C
DM IN RJ45 | HDMI OUT HDMI | RS232 OUT PHX
NOTE: Mount Behind Display Power Locally

HDMI-301 --
RS323-301 --

70" DISPLAY 1 NEC E705
HDMI IN HDMI | RS232 IN DB9
MOUNT CHIEF LTM1U

CAT5-RX 2 CRESTRON DM-RMC-SCALER-C
DM IN RJ45 | HDMI OUT HDMI | RS232 OUT PHX
NOTE: Mount Behind Display Power Locally

HDMI-302 --
RS232-302 --

70" DISPLAY 2 NEC E705
HDMI IN HDMI | RS232 IN DB9
MOUNT CHIEF LTM1U

CAT5-RX 3 CRESTRON DM-RMC-SCALER-C
DM IN RJ45 | HDMI OUT HDMI | RS232 OUT PHX
NOTE: Mount Behind Display Power Locally

HDMI-303 --
RS232-303 --

70" DISPLAY 3 NEC E705
HDMI IN HDMI | RS232 IN DB9
MOUNT CHIEF LTM1U

CAT5-RX 4 CRESTRON DM-RMC-SCALER-C
DM IN RJ45 | HDMI OUT HDMI | RS232 OUT PHX
NOTE: Mount Behind Display Power Locally

HDMI-304 --
RS232-304 --

70" DISPLAY 4 NEC E705
HDMI IN HDMI | RS232 IN DB9
MOUNT CHIEF LTM1U

In Rack

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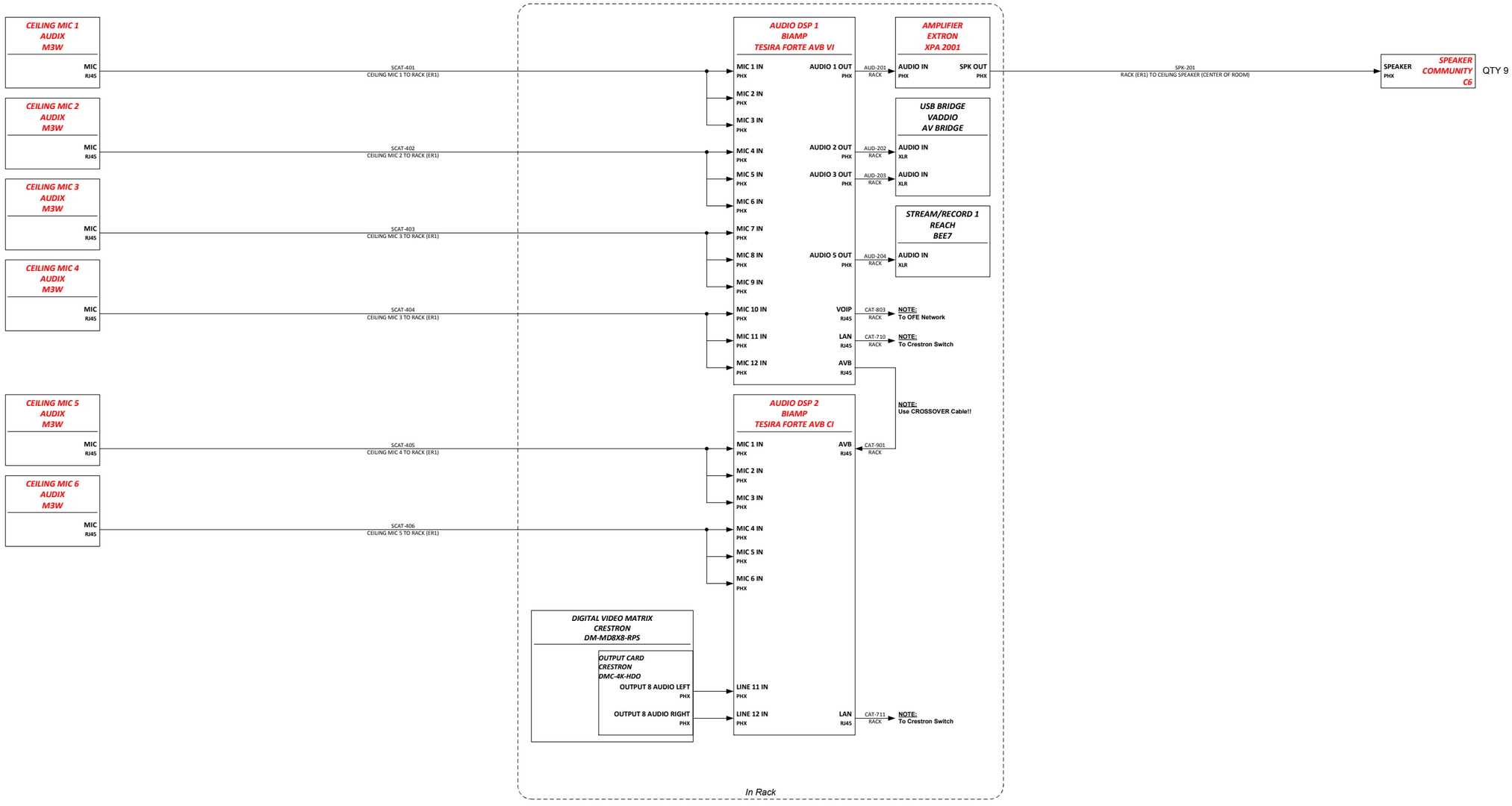
A PROJECT FOR:
Webster University – ISB Expansion Design

16010013

REVISIONS		
A	BUILD	REVISED 03/23/2017
B	BUILD REV #1	REVISED 04/13/2017
C	BUILD REV #2	REVISED 04/30/2017
D	BUILD REV #3	REVISED 06/25/2017
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO: DRY SKILS LAB
DRAWING NUMBER: 15 of 40

AUDIO



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A PROJECT FOR:

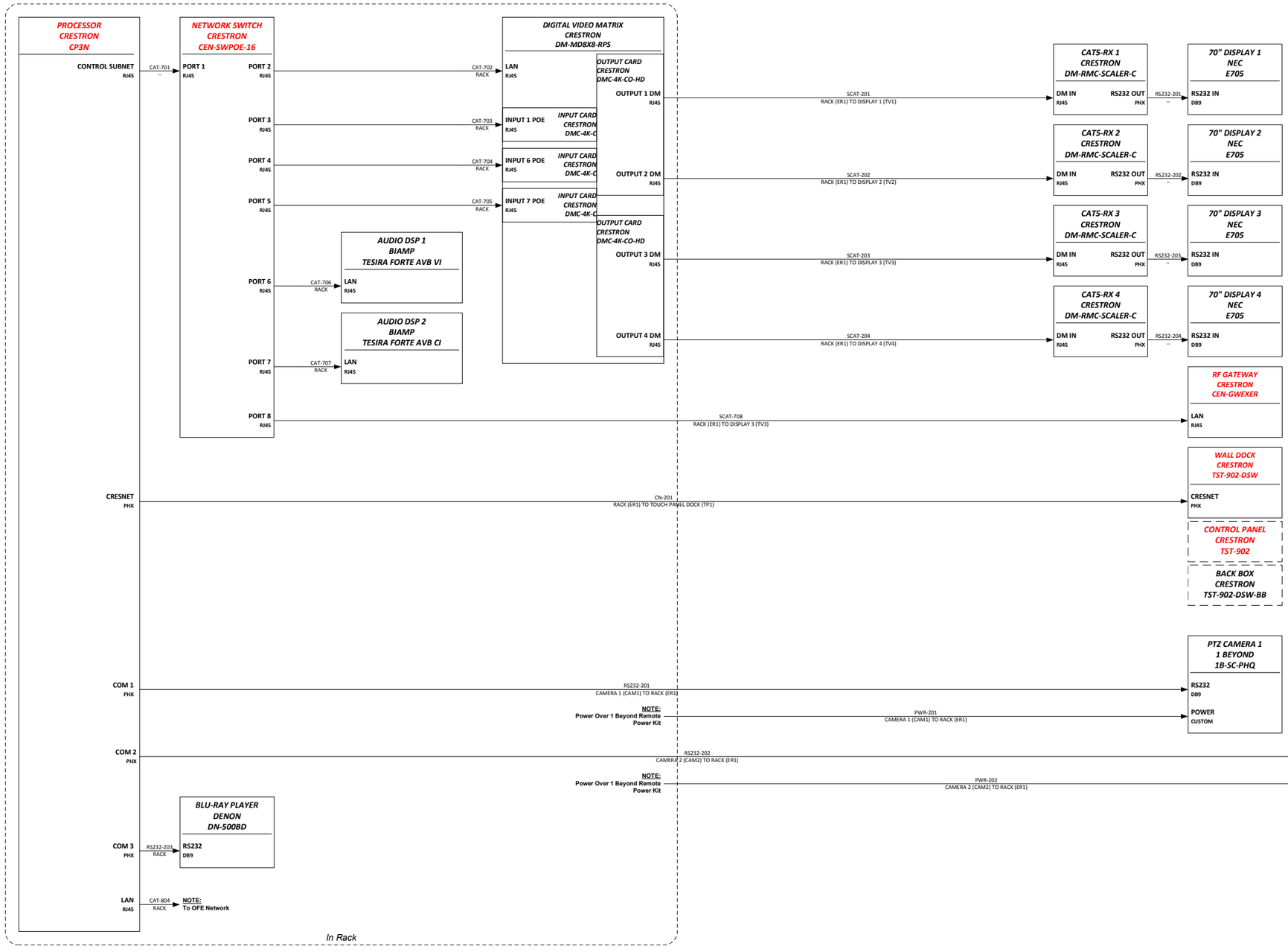
Webster University – ISB Expansion Design

160100013

REVISIONS		
A	BUILD	REVISED 03/23/2017
B	BUILD REV #1	REVISED 04/13/2017
C	BUILD REV #2	REVISED 04/30/2017
D	BUILD REV #3	REVISED 06/25/2017
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: AUDIO: DRY SKILLS LAB
DRAWING NUMBER: 16 of 40

CONTROL



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REVISIONS		
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C	BUILD REV #2	REVISED 04/30/2017
D	BUILD REV #3	REVISED 06/25/2017
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: CONTROL: DRY SKILLS LAB
DRAWING NUMBER: 17 of 40

Cable Label/ Signal Abbreviations --Suggested Lengths

ABRV-LABEL	SIGNAL DESCRIPTION	CABLE DESCRIPTION	MANF	PART#	MIN -MAX CABLE LENGTH	TYP CONNECTOR-1	TYP CONNECTOR-2	TYP CONNECTOR-3
CN	Cresnet	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	1ft - 300ft	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
AX	Axlink	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	1ft - 300ft	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
SDI	Serial Digital Signal	Composite Video/ Digital Video/ Plenum	Liberty	20-CMP-VID-Coax-White	1ft - 175ft	LIBERTY-CM-RG59P-BNC	LIBERTY-CM-RG59P-RCA	NA
RGB	RGBHV Analog	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	1ft - 125ft	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
HD15	RGBHV Analog/ Or Component	3ft - 25ft (VGA) HD15 Male to Male	Liberty	E-MVGAM-M-(1-25)	1ft- 30ft	NA	NA	NA
HD15a	RGBHV Or Component with Audio	3ft - 25ft (VGA) HD15 Male to Male/ Ubal Audio	Liberty	E-MVGAMAM-M-(1-25)	1ft- 30ft	NA	NA	NA
HDMI	HDMI	3ft - 25ft HDMI Cable	Liberty	E-HDM-M-(1-25)	1ft- 30ft	NA	NA	NA
DVI	Digital TDMS video	3ft - 25ft DVI Cable	Liberty	Z400DVI-D/DL (1-25)	1ft- 30ft	NA	NA	NA
DVI-A	Analog DVI	DVI-A to 5 BNC	Liberty	E-DVI/A-5BNCF-1	1ft- 50ft	NA	NA	NA
SHRED	Analog Component / RGBHV	1ft, 3ft or 6ft HD15 to 5 BNC	Liberty	E-VGAM-5BNCF-(.5-3) E-VGAM-5BNCM-(3-6)	1ft- 50ft	NA	NA	NA
COMP	Component Video	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	1ft - 125ft	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
CATV	RF Base Band	CATV/MATV/ Plenum	Liberty	RG6-P-CATV-BLK	1ft - 300ft	LIBERTY-LCM-RG6M-F	NA	NA
SPK	70v Speaker	16AWG 70v Speaker Cable/ Plenum	Liberty	16-2C-P-WHT	1ft- 1000ft	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
SPK14	8ohm Speaker	14AWG Speaker Cable/ Plenum	Liberty	14-2C-P-BLK	1ft- 100ft	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
DC/SPK12	Low Voltage (DC)/ Large Format Speaker	12AWG Speaker Cable/ Plenum	Liberty	12-2C-P-BLK	1ft- 65ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
CAT/ LAN	10g Ethernet- HDBaseT-	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	1ft - 100ft	(Male)-LIBERTY- 106190	(Female Keystone) -LIBERTY-A68IPZA-STP	(Ethercon)-LIBERTY-NE8MC6-MO
RL	Relay	8 Conductor Plenum	Liberty	22-8C-PSH-WHT	1ft - 125ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
RS/ RS232	RS232	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	1ft - 125ft	(Male)-LIBERTY- 106190	Liberty- 32-281 (RJ45-DB9F)	Liberty- 32-284 (RJ45-DB9M)
IR	IR	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 200ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
AUD	Balanced Line Level Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 1000ft	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
UBAL	Unbalance Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 25ft	Liberty- 30-401-bk (3.5mm TRS)	Liberty-ZD06-r (RCA RED)	Libry- ZD06-w (RCA WHITE)
MIC	Balanced Mic Level	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 300ft	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ST	Balanced Line Level Stereo	2 pair 22/2 audio cable/ Plenum	Liberty	22-2P-CMP-SIAMEZ	1ft- 1000ft	(Provided) Eroblock 5 (EB5) or (EB3) x2	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ANT	RF Wireless Ant	50 ohm antenna cable/ Plenum	Liberty	RG8-CMP-BLK	1ft - 150ft	Liberty-112128 (BNC)	NA	NA
FIBER	Digital data over MultiMode fiber	2 Pair Multi Mode Fiber/ Plenum	Liberty	2FPINSM10-Z	3ft- 1000ft	(SC Connectors) Liberty-FASCM10	(LC Connectors) Liberty-FALCM10	NA
DMX	DMX 512 Theatrical Lighting	1 pair 22/2 cable / Plenum	Liberty	24-2P-P485-WHT	1ft- 500ft	BTX-CA-AAA5MBZ (XLR-5M)	BTX-CA-AAA5FBZ (XLR-5F)	NA

WIRE/DETAIL

Cable Type Abbreviation *(Cross check to table Above)* — **Cable Identification Number** *(Cross check to pull schedule below)*

SCAT-101
Stage Wall Plate to projector

Pull Name *Point to point cable pull*

CABLE PULL - DRY SKILLS LAB ROOM 135

	PULL	NAME	NOTES
	WALL PLATE 1 (WP1) TO RACK (ER1)	SCAT-101	SHIELDED CAT6A
Count	1		
	WALL PLATE 2 (WP2) TO RACK (ER1)	SCAT-301	SHIELDED CAT6A
Count	1		
	CAMERA 1 (CAM1) TO RACK (ER1)	SDI-104	20-CMP-VID-COAX
	CAMERA 1 (CAM1) TO RACK (ER1)	RS232-201	SHIELDED CAT6A
	CAMERA 1 (CAM1) TO RACK (ER1)	PWR-201	16-2C
Count	3		
	CAMERA 2 (CAM2) TO RACK (ER1)	SDI-105	20-CMP-VID-COAX
	CAMERA 2 (CAM2) TO RACK (ER1)	RS232-202	SHIELDED CAT6A
	CAMERA 2 (CAM2) TO RACK (ER1)	PWR-202	16-2C
Count	3		
	FLOOR BOX 1 (FB1) TO RACK (ER1)	SCAT-106	SHIELDED CAT6A
	FLOOR BOX 1 (FB1) TO RACK (ER1)	SCAT-107	SHIELDED CAT6A
Count	2		
	RACK (ER1) TO DISPLAY 1 (TV1)	SCAT-201	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO DISPLAY 2 (TV2)	SCAT-202	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO DISPLAY 3 (TV3)	SCAT-203	SHIELDED CAT6A
	RACK (ER1) TO DISPLAY 3 (TV3)	SCAT-708	SHIELDED CAT6A
Count	2		
	RACK (ER1) TO DISPLAY 4 (TV4)	SCAT-204	SHIELDED CAT6A
Count	1		
	CEILING MIC 1 TO RACK (ER1)	SCAT-401	SHIELDED CAT6A
Count	1		
	CEILING MIC 2 TO RACK (ER1)	SCAT-402	SHIELDED CAT6A
Count	1		
	CEILING MIC 3 TO RACK (ER1)	SCAT-403	SHIELDED CAT6A
Count	1		
	CEILING MIC 4 TO RACK (ER1)	SCAT-404	SHIELDED CAT6A
Count	1		
	CEILING MIC 5 TO RACK (ER1)	SCAT-405	SHIELDED CAT6A
Count	1		
	CEILING MIC 6 TO RACK (ER1)	SCAT-406	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO CEILING SPEAKER (CENTER OF ROOM)	SPK-201	16-2C
Count	1		
	RACK (ER1) TO TOUCH PANEL DOCK (TP1)	CN-201	LLINX-U-P
Count	1		

14RU CREDENZA RACK
MIDDLE ATLANTIC CFR-14-18

1	RACK HEADER	14
2	POWER CONDITIONER MIDDLE ATLANTIC PD-915R	13
3	RACK BLANK	12
4	NETWORK SWITCH CRESTRON CEN-SWPOE-16	11
5	RACK BLANK	10
6	PROCESSOR CRESTRON CP3N	9
7	RACK BLANK	8
8	RACK BLANK	7
9	RACK BLANK	6
10	AUDIO DSP 1 BIAMP TESIRA FORTE AVB VI	5
11	RACK BLANK	4
12	AUDIO DSP 2 BIAMP TESIRA FORTE AVB CI	3
13	RACK BLANK	2
14	AMPLIFER ON 1RU SHELF EXTRON 60-190-01	1

14RU CREDENZA RACK
MIDDLE ATLANTIC CFR-14-18

1	RACK HEADER	14
2	POWER CONDITIONER MIDDLE ATLANTIC PD-915R	13
3	RACK BLANK	12
4	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	11
5	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	10
6	RACK BLANK	9
7	USB BRIDGE VADDIO AV BRIDGE	8
8	RACK BLANK	7
9	STREAM/RECORD REACH BEE7	6
10	RACK BLANK	5
11		4
12	DIGITAL VIDEO MATRIX CRESTRON DM-MD8X8-RPS	3
13		2
14		1

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Cedar Rapids, IA
Chicago, IL
Des Moines, IA

A PROJECT FOR:
Webster University – ISB Expansion Design
160100013

REVISIONS

A	BUILD	REVISED 03/23/2017
B	BUILD REV #1	REVISED 04/13/2017
C	BUILD REV #2	REVISED 04/30/2017
D	BUILD REV #3	REVISED 06/25/2017
E	BUILD REV #4	REVISED 06/28/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: WIRE/DETAIL: DRY SKILLS LAB
DRAWING NUMBER: 18 of 40

VIDEO/AUDIO/CONTROL

WIRELESS KEYBOARD & MOUSE OFE
USB OUT (USB)

USB-001 --

USB CAT5-TX LIBERTY DIGI-USB2-4P
USB IN (USBA) | CAT OUT (RJ45)

NOTE: Mount Behind Display Front Display

SCAT-301 DISPLAY 1 (TV1) TO RACK (ER1)

USB CAT5-RX LIBERTY INCLUDED W/TX
CAT IN (RJ45) | USB OUT (USB)

USB-101 RACK

DEDICATED PC OFE
USB IN (USBA) | HDMI OUT (HDMI)

USB-102 RACK

USB IN (USBA)

NOTE: From OFE Network

CAT-801 RACK

LAN (RJ45)

HDMI-101 RACK

DM PRESENTATION SYSTEM CRESTRON DMPS3-300-C
HDMI 1 IN (HDMI)
HDMI 1 OUT (HDMI)

HDMI-201 RACK

SCALER CRESTRON HD-SCALER-HD-E
HDMI IN (HDMI) | HDMI OUT (HDMI)

HDMI-301 RACK

USB BRIDGE VADDIO AV BRIDGE
HDMI IN (HDMI) | USB OUT (USBB)
AUDIO IN (XLR)
AUDIO IN (XLR)
RS232 (RJ45)

AUD-203 RACK

AUD-204 RACK

RS232-203 RACK

PTZ CAMERA 1 1 BEYOND 1B-SC-PHQ
SDI OUT (BNC)
RS232 (VISCA)
POWER (CUSTOM)

SDI-102 CAMERA 1 (CAM1) TO RACK (ER1)

RS232-201 CAMERA 1 (CAM1) TO RACK (ER1)

PWR-201 CAMERA 1 (CAM1) TO RACK (ER1)

NOTE: Power Over 1 Beyond Remote Power Kit

CONVERTER 1 BLACKMAGIC DESIGN BMD-CONVMBSH
SDI IN (BNC) | HDMI OUT (HDMI)

HDMI-102 RACK

HDMI 2 IN (HDMI)
COM A (DB9)

PTZ CAMERA 2 1 BEYOND 1B-SC-PHQ
SDI OUT (BNC)
RS232 (VISCA)
POWER (CUSTOM)

SDI-103 CAMERA 2 (CAM2) TO RACK (ER1)

RS232-202 CAMERA 2 (CAM2) TO RACK (ER1)

PWR-202 CAMERA 2 (CAM2) TO RACK (ER1)

NOTE: Power Over 1 Beyond Remote Power Kit

CONVERTER 2 BLACKMAGIC DESIGN BMD-CONVMBSH
SDI IN (BNC) | HDMI OUT (HDMI)

HDMI-103 RACK

HDMI 3 IN (HDMI)
COM B (DB9)

COM EXPANSION CRESTRON C2N-IO
CRESNET (PHX) | RS232 (PHX)

CN-202 RACK

CRESNET (PHX)

DM 3 OUT (RJ45)

5CAT-201 RACK (ER1) TO DISPLAY 1 (TV1)

CAT5-RX 1 CRESTRON DM-RMC-SCALER-C
DM IN (RJ45) | HDMI OUT (HDMI)
RS232 OUT (PHX)

HDMI-303 --

RS232-303 --

70" DISPLAY 1 NEC E705
HDMI IN (HDMI)
RS232 IN (DB9)

MOUNT CHIEF LTM1U

NOTE: Mount Behind Display Power Locally

COM EXPANSION CRESTRON C2N-IO
CRESNET (PHX) | RS232 (PHX)

CN-203 RACK

CRESNET (PHX)

DM 4 OUT (RJ45)

SCAT-202 RACK (ER1) TO DISPLAY 2 (TV2)

CAT5-RX 2 CRESTRON DM-RMC-SCALER-C
DM IN (RJ45) | HDMI OUT (HDMI)
RS232 OUT (PHX)

HDMI-304 --

RS232-304 --

70" DISPLAY 2 NEC E705
HDMI IN (HDMI)
RS232 IN (DB9)

MOUNT CHIEF LTM1U

NOTE: Mount Behind Display Power Locally

LAPTOP OFE
VGA OUT (15HD)
AUDIO OUT (3.5mm)
HDMI OUT (HDMI)

HD15A-004 --

HDMI-004 --

WALL PLATE CAT5-TX 1 CRESTRON DM-TX-200-C-2G
VGA IN (15HD) | DM OUT (RJ45)
AUDIO IN (3.5mm)
HDMI IN (HDMI) | POWER (PHX)

SCAT-104 WALL PLATE (WP1) TO RACK (ER1)

CAT5-RX CRESTRON DM-RMC-4K-100-C

HDMI-104 RACK

HDMI 4 IN (HDMI)

PWR-203 WALL PLATE (WP1) TO RACK (ER1)

POWER SUPPLY CRESTRON INCLUDED W/TX
POWER --

DM POWER SUPPLY CRESTRON PW-4818DU
PoDM (DIN)

PODM-101 RACK

PoDM (DIN)

LAPTOP OFE
HDMI OUT (HDMI)

HDMI-006 --

FLOOR BOX CAT5-TX 2 CRESTRON DM-TX-4K-100-C-1G
HDMI IN (HDMI) | DM OUT (RJ45)

NOTE: Power Over DM In Floor Box

SCAT-106 FLOOR BOX 1 (FB1) TO RACK (ER1)

DM 6 IN (RJ45)

LAPTOP OFE
HDMI OUT (HDMI)

HDMI-007 --

FLOOR BOX CAT5-TX 3 CRESTRON DM-TX-4K-100-C-1G
HDMI IN (HDMI) | DM OUT (RJ45)

NOTE: Power Over DM In Floor Box

SCAT-107 FLOOR BOX 2 (FB2) TO RACK (ER1)

DM 7 IN (RJ45)

CRESNET (PHX)

CN-201 RACK (ER1) TO TOUCH PANEL DOCK (TP1)

WALL DOCK CRESTRON TST-902-DSW
CRESNET (PHX)

CONTROL PANEL CRESTRON TST-902

BACK BOX CRESTRON TST-902-DSW-BB

PROG AUDIO LEFT (PHX)

PROG AUDIO RIGHT (PHX)

LAN (RJ45)

CAT-803 RACK

NOTE: To OFE Network

CEILING MIC 1 AUDIX M3W
MIC (RJ45)

SCAT-401 CEILING MIC 1 TO RACK (ER1)

CEILING MIC 2 AUDIX M3W
MIC (RJ45)

SCAT-402 CEILING MIC 2 TO RACK (ER1)

CEILING MIC 3 AUDIX M3W
MIC (RJ45)

SCAT-403 CEILING MIC 3 TO RACK (ER1)

AUDIO DSP BIAMP TESIRA FORTE AVB VI
MIC 1 IN (PHX)
MIC 2 IN (PHX)
MIC 3 IN (PHX)
MIC 4 IN (PHX)
MIC 5 IN (PHX)
MIC 6 IN (PHX)
MIC 7 IN (PHX)
MIC 8 IN (PHX)
MIC 9 IN (PHX)
MIC 10 IN (PHX)
LINE 11 IN (PHX)
LINE 12 IN (PHX)
RS232 (DB9)

AUDIO 1 OUT (PHX)
AUDIO 2 OUT (PHX)
AUDIO 3 OUT (PHX)
VOIP (RJ45)

AUD-201 RACK

AMPLIFIER EXTRON XPA 2001
AUDIO IN (PHX) | SPK OUT (PHX)

SPK-201 RACK (ER1) TO CEILING SPEAKER (CENTER OF ROOM)

SPEAKER COMMUNITY C6 (PHX) — QTY 6

NOTE: From OFE Network

SCAT-802 RACK (ER1) TO DISPLAY 1 (TV1)

RF GATEWAY CRESTRON CEN-GWEXER
LAN (RJ45)

WIRELESS MIC SHURE QLXD124/85
MIC (XLR)

MIC-110 RACK

AUD-111 RACK

AUD-112 RACK

RS232-203 RACK

CAT-804 RACK

NOTE: To OFE Network

In Rack

Room Number

140

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A PROJECT FOR:
Webster University – ISB Expansion Design
160100013

REVISIONS

A	BUILD	REVISED 03/23/2017
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C	BUILD REV #2	REVISED 04/30/2017
D	BUILD REV #3	REVISED 06/25/2017
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO/AUDIO/ CONTROL: VIDEO CONF ROOM
DRAWING NUMBER: 19 of 40

Cable Label/ Signal Abbreviations --Suggested Lengths

ABRV-LABEL	SIGNAL DESCRIPTION	CABLE DESCRIPTION	MANF	PART#	MIN -MAX CABLE LENGTH	TYP CONNECTOR-1	TYP CONNECTOR-2	TYP CONNECTOR-3
CN	Cresnet	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	1ft - 300ft	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
AX	Axlink	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	1ft - 300ft	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
SDI	Serial Digital Signal	Composite Video/ Digital Video/ Plenum	Liberty	20-CMP-VID-Coax-White	1ft - 175ft	LIBERTY-CM-RG59P-BNC	LIBERTY-CM-RG59P-RCA	NA
RGB	RGBHV Analog	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	1ft - 125ft	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
HD15	RGBHV Analog/ Or Component	3ft - 25ft (VGA) HD15 Male to Male	Liberty	E-MVGAM-M-(1-25)	1ft- 30ft	NA	NA	NA
HD15a	RGBHV Or Component with Audio	3ft - 25ft (VGA) HD15 Male to Male/ Ubal Audio	Liberty	E-MVGAMAM-M-(1-25)	1ft- 30ft	NA	NA	NA
HDMI	HDMI	3ft - 25ft HDMI Cable	Liberty	E-HDM-M-(1-25)	1ft- 30ft	NA	NA	NA
DVI	Digital TDMS video	3ft - 25ft DVI Cable	Liberty	Z400DVI-D/DL (1-25)	1ft- 30ft	NA	NA	NA
DVI-A	Analog DVI	DVI-A to 5 BNC	Liberty	E-DVI/A-5BNCF-1	1ft- 50ft	NA	NA	NA
SHRED	Analog Component / RGBHV	1ft, 3ft or 6ft HD15 to 5 BNC	Liberty	E-VGAM-5BNCF-(.5-3) E-VGAM-5BNCM-(3-6)	1ft- 50ft	NA	NA	NA
COMP	Component Video	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	1ft - 125ft	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
CATV	RF Base Band	CATV/MATV/ Plenum	Liberty	RG6-P-CATV-BLK	1ft - 300ft	LIBERTY-LCM-RG6M-F	NA	NA
SPK	70v Speaker	16AWG 70v Speaker Cable/ Plenum	Liberty	16-2C-P-WHT	1ft- 1000ft	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
SPK14	8ohm Speaker	14AWG Speaker Cable/ Plenum	Liberty	14-2C-P-BLK	1ft- 100ft	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
DC/SPK12	Low Voltage (DC)/ Large Format Speaker	12AWG Speaker Cable/ Plenum	Liberty	12-2C-P-BLK	1ft- 65ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
CAT/ LAN	10g Ethernet- HDBaseT-	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	1ft - 100ft	(Male)-LIBERTY- 106190	(Female Keystone) -LIBERTY-A68IPZA-STP	(Ethercon)-LIBERTY-NE8MC6-MO
RL	Relay	8 Conductor Plenum	Liberty	22-8C-PSH-WHT	1ft - 125ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
RS/ RS232	RS232	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	1ft - 125ft	(Male)-LIBERTY- 106190	Liberty- 32-281 (RJ45-DB9F)	Liberty- 32-284 (RJ45-DB9M)
IR	IR	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 200ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
AUD	Balanced Line Level Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 1000ft	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
UBAL	Unbalance Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 25ft	Liberty- 30-401-bk (3.5mm TRS)	Liberty-ZD06-r (RCA RED)	Libtry- ZD06-w (RCA WHITE)
MIC	Balanced Mic Level	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 300ft	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ST	Balanced Line Level Stereo	2 pair 22/2 audio cable/ Plenum	Liberty	22-2P-CMP-SIAMEZ	1ft- 1000ft	(Provided) Eroblock 5 (EB5) or (EB3) x2	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ANT	RF Wireless Ant	50 ohm antenna cable/ Plenum	Liberty	RG8-CMP-BLK	1ft - 150ft	Liberty-112128 (BNC)	NA	NA
FIBER	Digital data over MultiMode fiber	2 Pair Multi Mode Fiber/ Plenum	Liberty	2FPINSM10-Z	3ft- 1000ft	(SC Connectors) Liberty-FASCM10	(LC Connectors) Liberty-FALCM10	NA
DMX	DMX 512 Theatrical Lighting	1 pair 22/2 cable / Plenum	Liberty	24-2P-P485-WHT	1ft- 500ft	BTX-CA-AAA5MBZ (XLR-5M)	BTX-CA-AAA5FBZ (XLR-5F)	NA

WIRE/DETAIL

Cable Type Abbreviation *(Cross check to table Above)* — **Cable Identification Number** *(Cross check to pull schedule below)*

SCAT-101
Stage Wall Plate to projector

Pull Name
Point to point cable pull

CABLE PULL - VIDEO CONFERNCE ROOM 140

	PULL	NAME	NOTES
	WALL PLATE (WP1) TO RACK (ER1)	SCAT-104	SHIELDED CAT6A
	WALL PLATE (WP1) TO RACK (ER1)	PWR-203	16-2C
Count	1		
	CAMERA 1 (CAM1) TO RACK (ER1)	SDI-102	20-CMP-VID-COAX
	CAMERA 1 (CAM1) TO RACK (ER1)	RS232-201	SHIELDED CAT6A
	CAMERA 1 (CAM1) TO RACK (ER1)	PWR-201	16-2C
Count	3		
	CAMERA 2 (CAM2) TO RACK (ER1)	SDI-103	20-CMP-VID-COAX
	CAMERA 2 (CAM2) TO RACK (ER1)	RS232-202	SHIELDED CAT6A
	CAMERA 2 (CAM2) TO RACK (ER1)	PWR-202	16-2C
Count	3		
	FLOOR BOX 1 (FB1) TO RACK (ER1)	SCAT-106	SHIELDED CAT6A
Count	1		
	FLOOR BOX 2 (FB2) TO RACK (ER1)	SCAT-107	SHIELDED CAT6A
Count	1		
	DISPLAY 1 (TV1) TO RACK (ER1)	SCAT-301	SHIELDED CAT6A
	RACK (ER1) TO DISPLAY 1 (TV1)	SCAT-201	SHIELDED CAT6A
	RACK (ER1) TO DISPLAY 1 (TV1)	SCAT-802	SHIELDED CAT6A
Count	3		
	RACK (ER1) TO DISPLAY 2 (TV2)	SCAT-202	SHIELDED CAT6A
Count	1		
	CEILING MIC 1 TO RACK (ER1)	SCAT-401	SHIELDED CAT6A
Count	1		
	CEILING MIC 2 TO RACK (ER1)	SCAT-402	SHIELDED CAT6A
Count	1		
	CEILING MIC 3 TO RACK (ER1)	SCAT-403	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO CEILING SPEAKER (CENTER OF ROOM)	SPK-201	16-2C
Count	1		
	RACK (ER1) TO TOUCH PANEL DOCK (TP1)	CN-201	LLINX-U-P
Count	1		

14RU CREDENZA RACK
MIDDLE ATLANTIC CFR-14-18

1	RACK HEADER	14
2	POWER CONDITIONER MIDDLE ATLANTIC PD-915R	13
3	DEDICATED PC ON 2RU SHELF MIDDLE ATLANTIC RC-2	12
4		11
5	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	10
6	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	9
7	USB BRIDGE VADDIO AV BRIDGE	8
8	RACK BLANK	7
9	AUDIO DSP BIAMP TESIRA FORTE AVB VI	6
10	AMPLIFER ON 1RU SHELF EXTRON 60-190-01	5
11	RACK BLANK	4
12		3
13	DM PRESENTATION SYSTEM CRESTRON DMPS3-300-C	2
14		1

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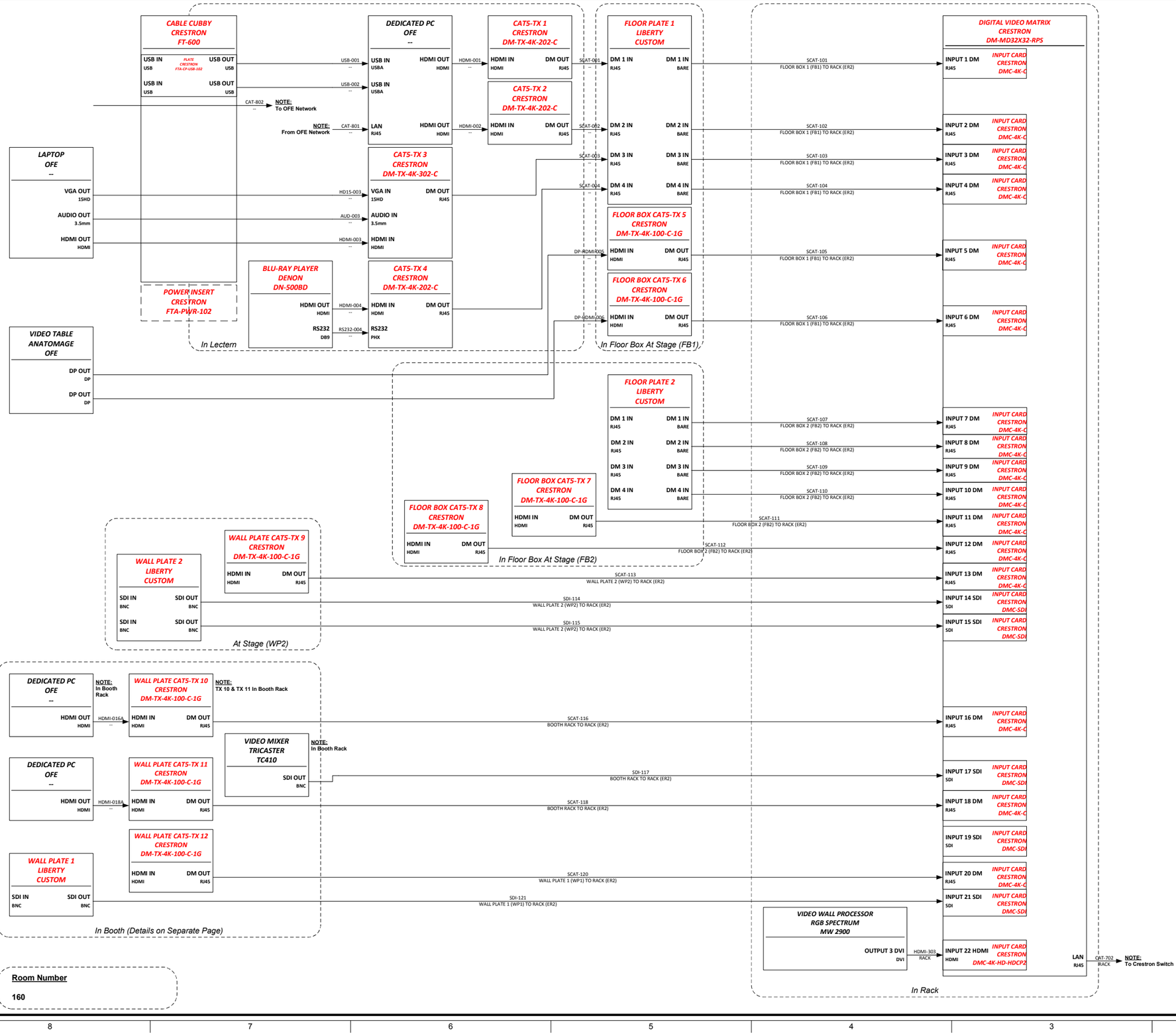
A PROJECT FOR:
Webster University – ISB Expansion Design
16010013

REVISIONS

A	BUILD	REVISED 03/23/2017
B	BUILD REV #1	REVISED 04/13/2017
C	BUILD REV #2	REVISED 04/30/2017
D	BUILD REV #3	REVISED 06/25/2017
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: WIRE/DETAIL: VIDEO CONF ROOM
DRAWING NUMBER: 20 of 40

VIDEO



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A PROJECT FOR:

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160100013

REVISIONS		
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D	BUILD REV #3	REVISED 06/25/2017
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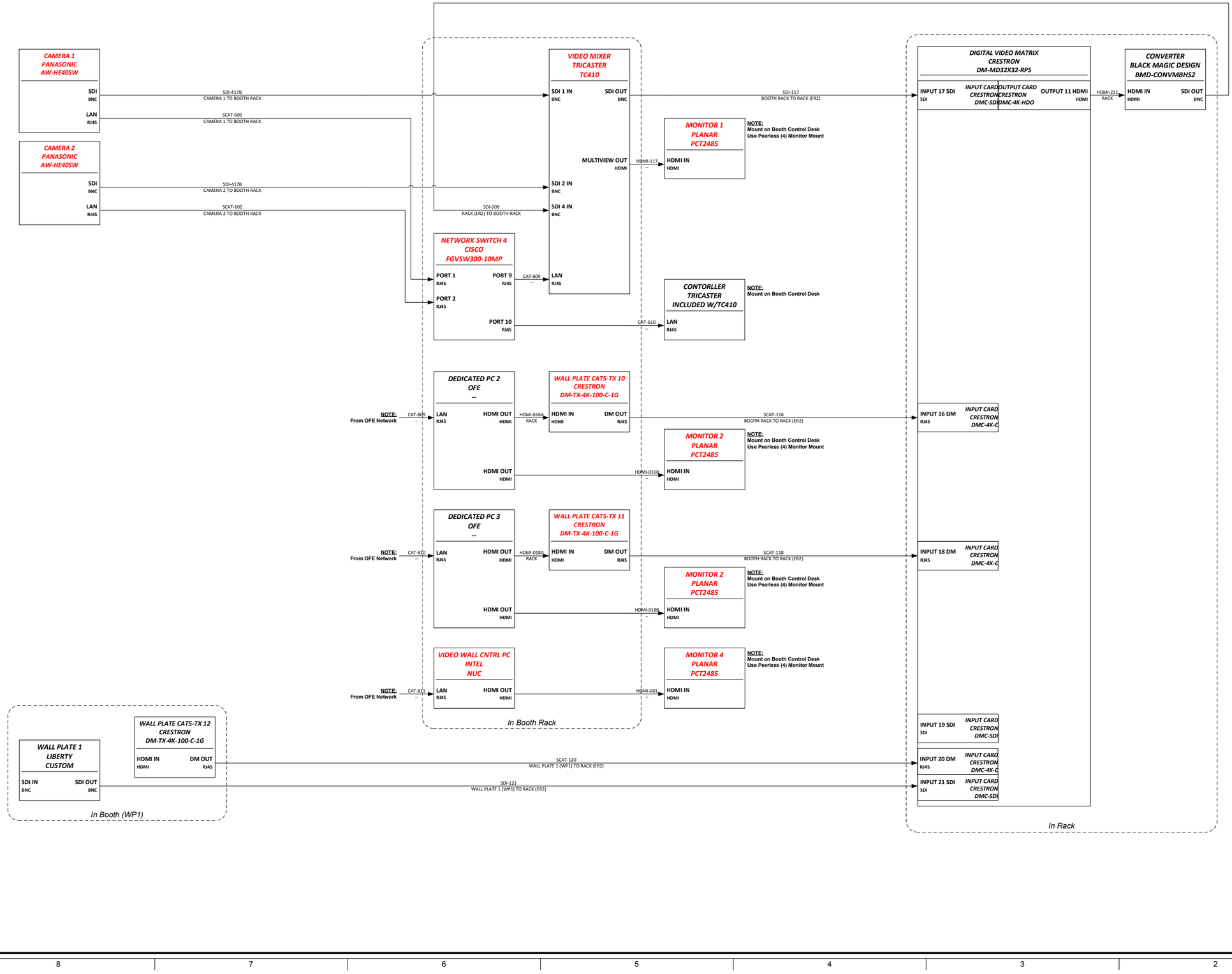
APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO INPUTS: LECTURE HALL
DRAWING NUMBER: 21 of 40

VIDEO



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A PROJECT FOR:

Webster University – ISB Expansion Design

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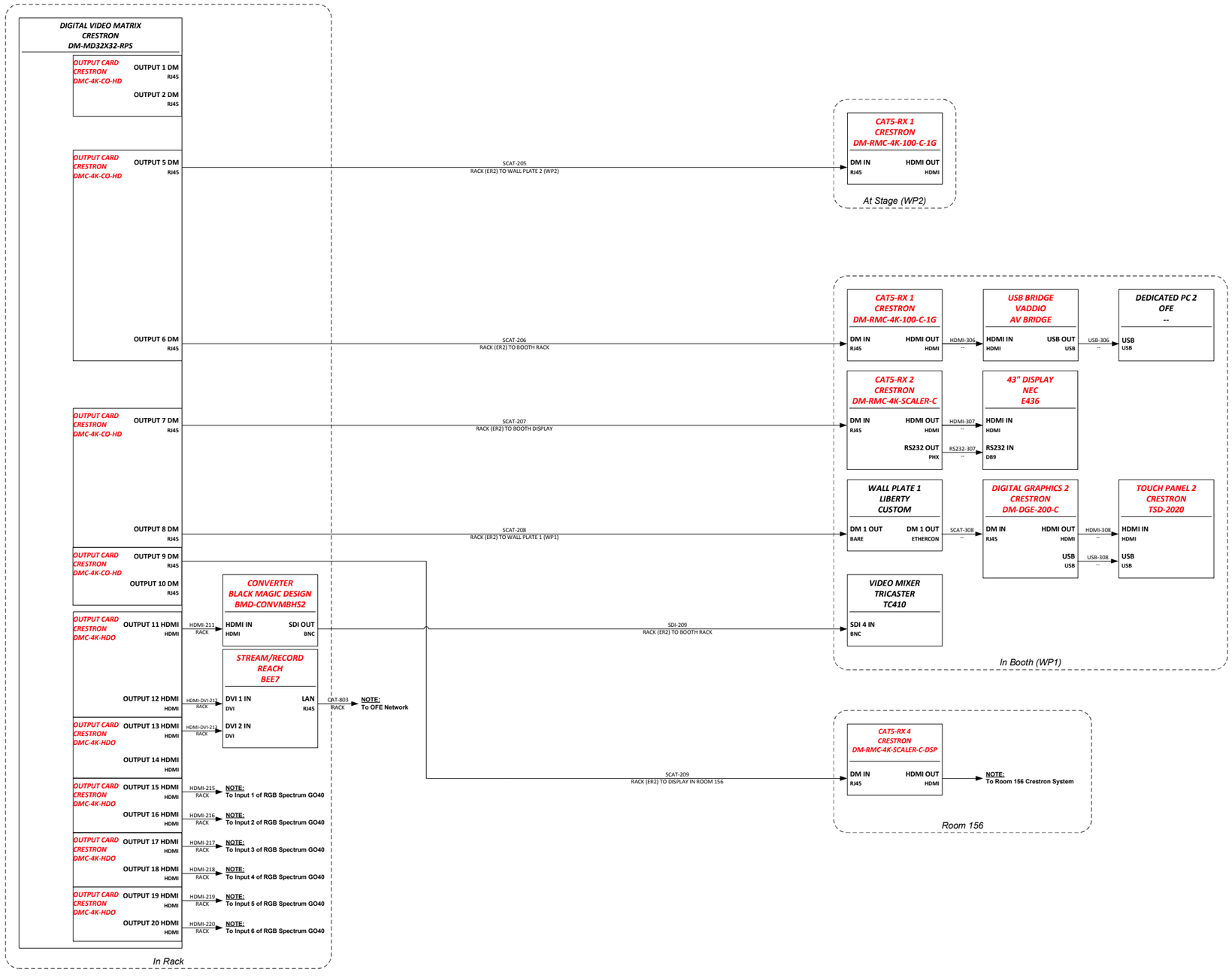
REVISIONS		
A	BUILD	REVISED 03/23/2017
B	BUILD REV #1	REVISED 04/13/2017
C	BUILD REV #2	REVISED 04/30/2017
D	BUILD REV #3	REVISED 06/25/2017
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO INPUTS: CAMERA & CONTROL BOOTH LECTURE HALL
DRAWING NUMBER: 22 of 40

VIDEO



Room Number

160

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A PROJECT FOR:

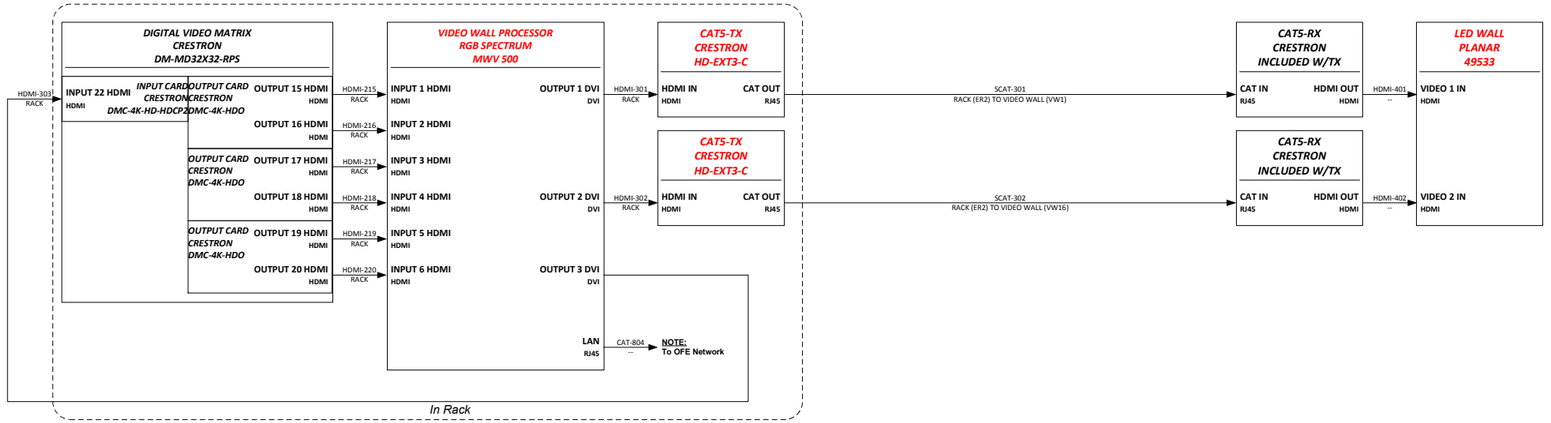
Webster University – ISB Expansion Design

16010013

REVISIONS			
A	BUILD	REVISED	03/23/2017
B	BUILD REV #1	REVISED	04/13/2017
C	BUILD REV #2	REVISED	04/30/2017
D	BUILD REV #3	REVISED	06/25/2017
E	BUILD REV #4	REVISED	06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO OUTPUTS: LECTURE HALL
DRAWING NUMBER: 23 of 40

VIDEO



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A PROJECT FOR:

Webster University – ISB Expansion Design

160100013

REVISIONS		
A	BUILD	REVISED 03/23/2017
B	BUILD REV #1	REVISED 04/13/2017
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E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO WALL: LECTURE HALL
DRAWING NUMBER: 24 of 40

AUDIO

HH WIRELESS MIC
SHURE
ULXD2/SM58
QTY 2

LAV WIRELESS MIC
SHURE
ULXD1
QTY 4

LAV MICROPHONE
SHURE
WL185
QTY 4

ANTENNA
SHURE
INCLUDED W/MIC
ANTENNA OUT BNC

ANTENNA BOOST
SHURE
UA830USTV
ANTENNA IN BNC
ANTENNA OUT BNC

NOTE:
Mount in at Stage

ANT-101
RACK (ER2) TO SPEAKER 1 (SPK1-AV117A)

ANTENNA
SHURE
INCLUDED W/MIC
ANTENNA OUT BNC

ANTENNA BOOST
SHURE
UA830USTV
ANTENNA IN BNC
ANTENNA OUT BNC

NOTE:
Mount in at Stage

ANT-102
RACK (ER2) TO SPEAKER 2 (SPK2-AV117A)

GOOSENECK MIC
SHURE
MX415/C
MIC OUT 5 PIN XLR

In Lectern

MIC-031

FLOOR PLATE 1
LIBERTY
CUSTOM
MIC IN 5 PIN XLR
MIC OUT BARE

In Floor Box At Stage (FB1)

MIC-111
FLOOR BOX 1 (FB1) TO RACK (ER2)

FLOOR PLATE 2
LIBERTY
CUSTOM
MIC IN 5 PIN XLR
MIC OUT BARE

In Floor Box At Stage (FB2)

MIC-112
FLOOR BOX 2 (FB2) TO RACK (ER2)

WALL PLATE 2
LIBERTY
CUSTOM
MIC IN XLR
MIC OUT BARE
MIC IN XLR
MIC OUT BARE

At Stage (WP2)

MIC-113
WALL PLATE 2 (WP2) TO RACK (ER2)

MIC-114
WALL PLATE 2 (WP2) TO RACK (ER2)

WALL PLATE 1
LIBERTY
CUSTOM
MIC IN XLR
MIC OUT BARE
MIC IN XLR
MIC OUT BARE

In Booth (WP1)

MIC-121
WALL PLATE 1 (WP1) TO RACK (ER2)

MIC-122
WALL PLATE 1 (WP1) TO RACK (ER2)

Room Number

160

DIGITAL VIDEO MATRIX
CRESTRON
DM-MD32X32-RPS
OUTPUT CARD
CRESTRON
DMC-HDO
OUTPUT 14 AUDIO LEFT PHX
OUTPUT 14 AUDIO RIGHT PHX

AUD-101
RACK

AUD-102
RACK

AUDIO DSP
BIAMP
TESIRA SERVER-IO AVB
INPUT CARD BIAMP SIC-4OC-4
INPUT 1 LINE PHX
INPUT 2 LINE PHX
OUTPUT CARD BIAMP SIC-4OC-4
OUTPUT 1 LINE PHX
OUTPUT 2 LINE PHX

AUD-201
RACK

AUD-202
RACK

AMPLIFIER 1
CROWN
DCI 2/600N
LINE 1 IN XLR
SPK 1 OUT NL4
LINE 2 IN XLR
SPK 2 OUT NL4

SPK-201
RACK (ER2) TO SPEAKER 1 (SPK1-AV117A)

SPK-202
RACK (ER2) TO SPEAKER 2 (SPK2-AV117A)

SPEAKER 1
RENKUS-HEINZ
TRX121 (90X60)
SPK IN NL4

SPEAKER 2
RENKUS-HEINZ
TRX121 (90X60)
SPK IN NL4

U BRACKET
RENKUS-HEINZ
UBRKT-121B

U BRACKET
RENKUS-HEINZ
UBRKT-121B

WIRELESS MIC 1
SHURE
ULXD4Q
ANTENNA IN BNC
MIC 1 OUT XLR
ANTENNA OUT BNC
MIC 2 OUT XLR
ANTENNA OUT BNC
MIC 3 OUT XLR
ANTENNA IN BNC
MIC 4 OUT XLR

MIC-105
RACK

MIC-106
RACK

MIC-107
RACK

MIC-108
RACK

AEC INPUT CARD BIAMP SEC-4
INPUT 5 MIC PHX
INPUT 6 MIC PHX
INPUT 7 MIC PHX
INPUT 8 MIC PHX

AMPLIFIER 2
QSC
RMX 2450A
LINE 1 IN XLR
BRIDGE OUT BARE

NOTE:
Set to Bridge Mono

AUD-203
RACK

SPK-203
RACK (ER2) TO SUBWOOFER (SUB1)

SUBWOOFER
RENKUS-HEINZ
DRS18-2
LINE IN XLR

OUTPUT 3 LINE PHX
OUTPUT 4 LINE PHX

AUD-204
RACK (ER2) TO BOOTH RACK

USB BRIDGE
VADDIO
AV BRIDGE
AUDIO IN XLR
AUDIO IN XLR

In Booth Rack

WIRELESS MIC 2
SHURE
ULXD4D
ANTENNA IN BNC
MIC 1 OUT XLR
ANTENNA IN BNC
MIC 2 OUT XLR

MIC-109
RACK

MIC-110
RACK

AEC INPUT CARD BIAMP SEC-4OC-4
INPUT 9 MIC PHX
INPUT 10 MIC PHX
INPUT 11 MIC PHX
OUTPUT CARD BIAMP SEC-4OC-4
OUTPUT 5 LINE PHX

HEARING ASSIST
LISTEN TECH
LS-95
LINE IN PHX
CAT OUT RJ45
CAT OUT RJ45

AUD-205
RACK

SCAT-501
RACK (ER2) TO SPEAKER 1 (SPK1-AV117A)

SCAT-502
RACK (ER2) TO SPEAKER 2 (SPK2-AV117A)

TRANSMITTER 1
LISTEN TECH
LA-141
CAT IN RJ45

TRANSMITTER 2
LISTEN TECH
LA-141
CAT IN RJ45

INPUT 12 MIC PHX
OUTPUT 6 LINE PHX

AUD-206
RACK (ER2) TO FLOOR BOX 1 (FB1)

FLOOR PLATE 1
LIBERTY
CUSTOM
AUDIO IN BARE
AUDIO OUT XLR

AUD-307

MONITOR
RENKUS-HEINZ
CF121M-2
AUDIO IN XLR

FLOOR PLATE 2
LIBERTY
CUSTOM
AUDIO IN BARE
AUDIO OUT XLR

In Floor Box At Stage (FB1)

INPUT 13 MIC PHX
INPUT 14 MIC PHX
INPUT 15 MIC PHX
INPUT 16 MIC PHX
OUTPUT 7 LINE PHX

AUD-207
RACK (ER2) TO FLOOR BOX 1 (FB1)

OUTPUT 8 LINE PHX

AUD-208
RACK (ER2) TO FLOOR BOX 2 (FB2)

OUTPUT 9 LINE PHX

AUD-209
RACK (ER2) TO FLOOR BOX 2 (FB2)

FLOOR PLATE 2
LIBERTY
CUSTOM
AUDIO IN BARE
AUDIO OUT XLR
AUDIO IN BARE
AUDIO OUT XLR

In Floor Box At Stage (FB2)

INPUT 17 MIC PHX
INPUT 18 MIC PHX
INPUT 19 MIC PHX
INPUT 20 MIC PHX
OUTPUT 10 LINE PHX

AUD-210
RACK (ER2) TO WALL PLATE 2 (WP2)

OUTPUT 11 LINE PHX

AUD-211
RACK (ER2) TO WALL PLATE 2 (WP2)

WALL PLATE 2
LIBERTY
CUSTOM
AUDIO IN BARE
AUDIO OUT XLR
AUDIO IN BARE
AUDIO OUT XLR

At Stage (WP2)

INPUT 21 MIC PHX
INPUT 22 MIC PHX
OUTPUT 12 LINE PHX

AUD-212
RACK (BR2) TO AUDIO MONITOR LEFT

OUTPUT 13 LINE PHX

AUD-213
RACK (ER2) TO AUDIO MONITOR RIGHT

AUDIO MONITOR
YAMAHA
MSP7
AUDIO IN XLR

AUDIO MONITOR
YAMAHA
MSP7
AUDIO IN XLR

WALL PLATE 1
LIBERTY
CUSTOM
AUDIO IN BARE
AUDIO OUT XLR
AUDIO IN BARE
AUDIO OUT XLR

OUTPUT 14 LINE PHX

AUD-214
RACK (ER2) TO WALL PLATE 1 (WP1)

OUTPUT 15 LINE PHX

AUD-215
RACK (ER2) TO WALL PLATE 1 (WP1)

In Booth

NOTE:
From OFE Network

CAT-805
RACK

VOIP 1
RJ45

PHONE CARD BIAMP SVC-2

NOTE:
From Crestron Switch

CAT-713
RACK

LAN
RJ45

OUTPUT 16 LINE PHX

AUD-216
RACK

STREAM/RECORD
REACH
BEE7
AUDIO IN XLR

In Rack

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A PROJECT FOR:

Webster University – ISB Expansion Design

16010013

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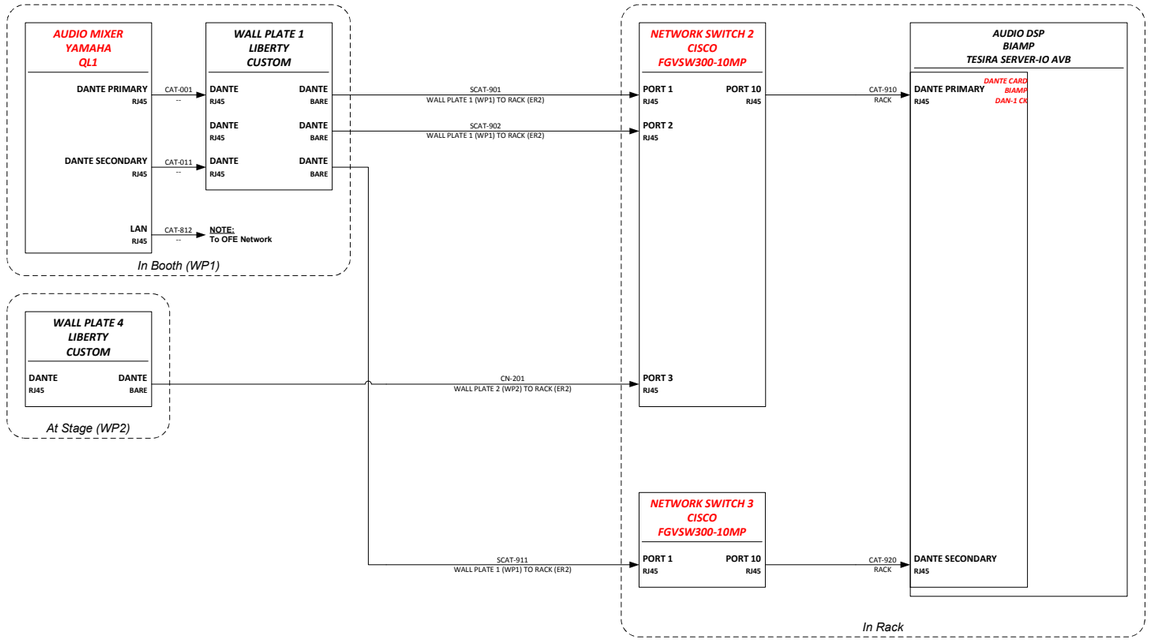
APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017

DRAWING TITLE:
AUDIO: LECTURE HALL

DRAWING NUMBER:
25 of 40

AUDIO



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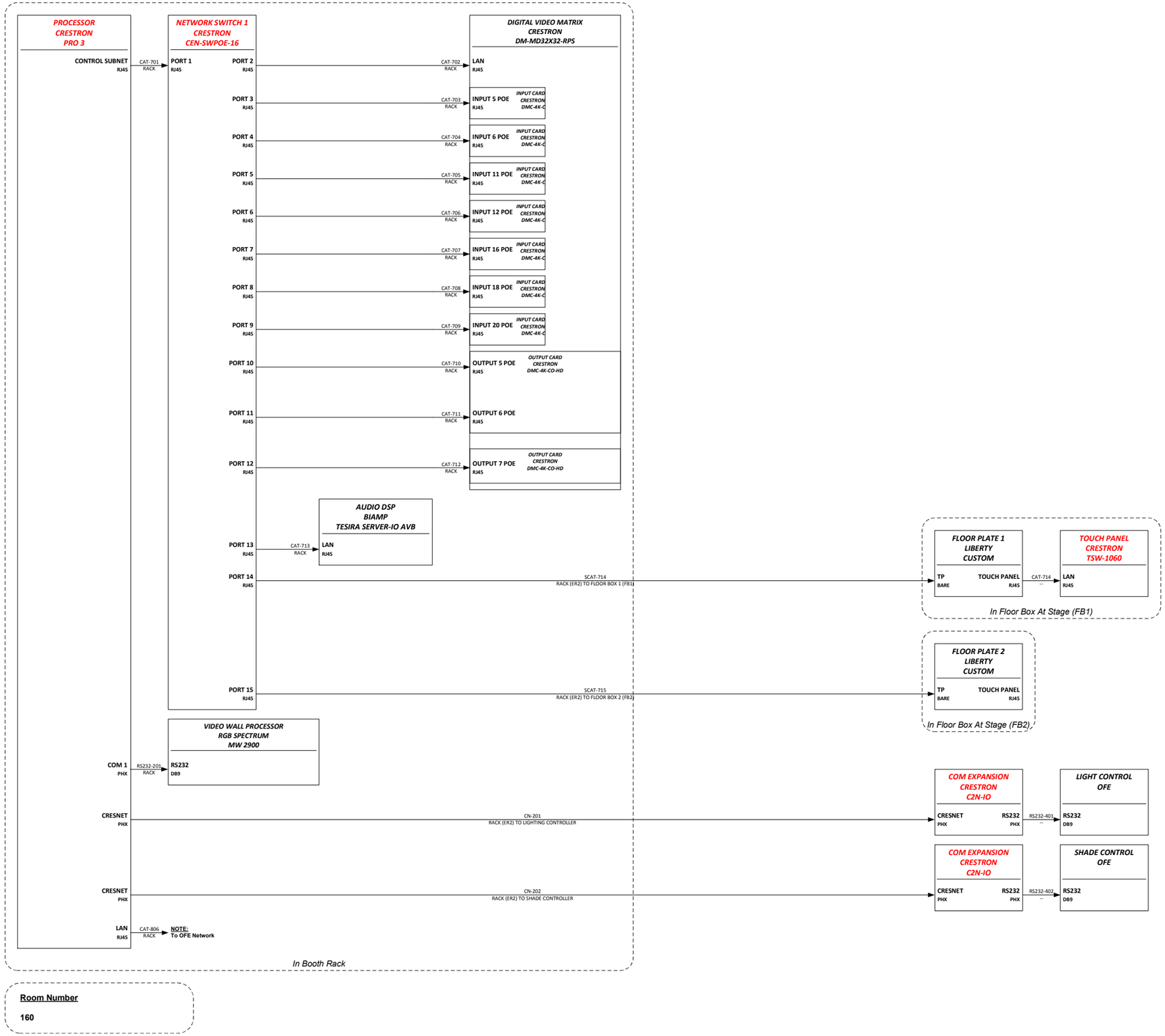
APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: AUDIO DANTE: LECTURE HALL
DRAWING NUMBER: 26 of 40

CONTROL



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APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: CONTROL: LECTURE HALL
DRAWING NUMBER: 27 of 40

RACKS

45RU RACK
MIDDLE ATLANTIC BGR-4532

1	CTI RACK HEADER	45
2	WIRELESS MIC 1 SHURE ULXD4Q	44
3	BLANK PANEL	43
4	WIRELESS MIC 2 SHURE ULXD4D	42
5	BLANK PANEL	41
6	AUDIO DSP BIAMP TESIRA SERVER-IO AVB	40
7		39
8		38
9	BLANK PANEL	37
10	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	36
11	BLANK PANEL	35
12	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	34
13	BLANK PANEL	33
14	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	32
15	BLANK PANEL	31
16		30
17	PROCESSOR CRESTRON PRO3	29
18		28
19	BLANK PANEL	27
20	NETWORK SWITCH 1 CRESTRON CEN-SWPOE-16	26
21	BLANK PANEL	25
22	VIDEO WALL PROCESSOR RGB SPECTRUM MW 2900	24
23		23
24	BLANK PANEL	22
25	STREAM/RECORD REACH BEE7	21
26	BLANK PANEL	20
27	DIGITAL VIDEO MATRIX CRESTRON DM-MD32X32-RPS	19
28		18
29		17
30		16
31		15
32		14
33		13
34		12
35		11
36		10
37		9
38		8
39		7
40		6
41	BLANK PANEL	5
42	AMPLIFIER 1 CROWN DCI 2/600N	4
43		3
44	AMPLIFIER 2 QSC RMX2450A	2
45		1

1	NETWORK SWITCH 2 CISCO FGVSW300-10MP	45
2	NETWORK SWITCH 3 CISCO FGVSW300-10MP	44
3		43
4		42
5		41
6		40
7		39
8		38
9		37
10		36
11		35
12		34
13		33
14		32
15		31
16		30
17		29
18		28
19		27
20		26
21		25
22		24
23		23
24		22
25		21
26		20
27		19
28		18
29		17
30		16
31		15
32		14
33		13
34		12
35		11
36		10
37		9
38		8
39		7
40		6
41		5
42		4
43		3
44		2
45		1

RACK ACCESSORIES

1	MIDDLE ATLANTIC	BVFD-45	VENTED FRONT DOOR
1	MIDDLE ATLANTIC	BSPN-45-32	SIDE PANELS
1	MIDDLE ATLANTIC	BGR-276FT-FC	FAN TOP WITH CONTROLLER
1	MIDDLE ATLANTIC	LF-HD	LEVELING FEET
4	MIDDLE ATLANTIC	PDT-2020C-RN	VERTICAL POWER STRIP
1	MIDDLE ATLANTIC	LACE-44-OWP	VERTICAL LACE BAR
1	MIDDLE ATLANTIC	LT-GN-WL	WORK LIGHT

8RU CREDENZA RACK
MIDDLE ATLANTIC CFR-8-18

1	RACK HEADER	8
2	POWER CONDITIONER MIDDLE ATLANTIC PD-915R	7
3	DEDICATED PC ON 2RU SHELF MIDDLE ATLANTIC RC-2	6
4		5
5	RACK BLANK	4
6		3
7	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	2
8	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	1

14RU BOOTH RACK
LOWELL LPR-1422

1	RACK HEADER	14
2	BLU-RAY PLAYER DENON DN-500BD	13
3	RACK DRAWER MIDDLE ATLANTIC D2LK	12
4		11
5	USB BRIDGE VADDIO AV BRIDGE	10
6	DEDICATED PC ON 2RU SHELF MIDDLE ATLANTIC RC-2	9
7		8
8	DEDICATED PC ON 2RU SHELF MIDDLE ATLANTIC RC-2	7
9		6
10	DEDICATED PC ON 2RU SHELF MIDDLE ATLANTIC RC-2	5
11		4
12	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	3
13	VIDEO MIXER TRICASTER TC410	2
14		1

1	NETWORK SWITCH 4 CISCO FGVSW300-10MP	14
2		13
3		12
4		11
5		10
6		9
7		8
8		7
9		6
10		5
11		4
12		3
13		2
14		1

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APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
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DATE: 6/29/2017
DRAWING TITLE: RACKS: LECTURE HALL
DRAWING NUMBER: 28 of 40

Cable Label/ Signal Abbreviations --Suggested Lengths

ABRV-LABEL	SIGNAL DESCRIPTION	CABLE DESCRIPTION	MANF	PART#	MIN -MAX CABLE LENGTH	TYP CONNECTOR-1	TYP CONNECTOR-2	TYP CONNECTOR-3
CN	Cresnet	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	1ft - 300ft	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
AX	Axlink	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	1ft - 300ft	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
SDI	Serial Digital Signal	Composite Video/ Digital Video/ Plenum	Liberty	20-CMP-VID-Coax-White	1ft - 175ft	LIBERTY-CM-RG59P-BNC	LIBERTY-CM-RG59P-RCA	NA
RGB	RGBHV Analog	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	1ft - 125ft	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
HD15	RGBHV Analog/ Or Component	3ft - 25ft (VGA) HD15 Male to Male	Liberty	E-MVGAM-M-(1-25)	1ft- 30ft	NA	NA	NA
HD15a	RGBHV Or Component with Audio	3ft - 25ft (VGA) HD15 Male to Male/ Ubal Audio	Liberty	E-MVGAMAM-M-(1-25)	1ft- 30ft	NA	NA	NA
HDMI	HDMI	3ft - 25ft HDMI Cable	Liberty	E-HDM-M-(1-25)	1ft- 30ft	NA	NA	NA
DVI	Digital TDMS video	3ft - 25ft DVI Cable	Liberty	Z400DVI-D/DL (1-25)	1ft- 30ft	NA	NA	NA
DVI-A	Analog DVI	DVI-A to 5 BNC	Liberty	E-DVI/A-5BNCF-1	1ft- 50ft	NA	NA	NA
SHRED	Analog Component / RGBHV	1ft, 3ft or 6ft HD15 to 5 BNC	Liberty	E-VGAM-5BNCF-(.5-3) E-VGAM-5BNCM-(3-6)	1ft- 50ft	NA	NA	NA
COMP	Component Video	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	1ft - 125ft	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
CATV	RF Base Band	CATV/MATV/ Plenum	Liberty	RG6-P-CATV-BLK	1ft - 300ft	LIBERTY-LCM-RG6M-F	NA	NA
SPK	70v Speaker	16AWG 70v Speaker Cable/ Plenum	Liberty	16-2C-P-WHT	1ft- 1000ft	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
SPK14	8ohm Speaker	14AWG Speaker Cable/ Plenum	Liberty	14-2C-P-BLK	1ft- 100ft	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
DC/SPK12	Low Voltage (DC)/ Large Format Speaker	12AWG Speaker Cable/ Plenum	Liberty	12-2C-P-BLK	1ft- 65ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
CAT/ LAN	10g Ethernet- HDBaseT-	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	1ft - 100ft	(Male)-LIBERTY- 106190	(Female Keystone) -LIBERTY-A68IPZA-STP	(Ethercon)-LIBERTY-NE8MC6-MO
RL	Relay	8 Conductor Plenum	Liberty	22-8C-PSH-WHT	1ft - 125ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
RS/ RS232	RS232	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	1ft - 125ft	(Male)-LIBERTY- 106190	Liberty- 32-281 (RJ45-DB9F)	Liberty- 32-284 (RJ45-DB9M)
IR	IR	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 200ft	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
AUD	Balanced Line Level Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 1000ft	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
UBAL	Unbalance Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 25ft	Liberty- 30-401-bk (3.5mm TRS)	Liberty-ZD06-r (RCA RED)	Libty- ZD06-w (RCA WHITE)
MIC	Balanced Mic Level	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	1ft- 300ft	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ST	Balanced Line Level Stereo	2 pair 22/2 audio cable/ Plenum	Liberty	22-2P-CMP-SIAMEZ	1ft- 1000ft	(Provided) Eroblock 5 (EB5) or (EB3) x2	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ANT	RF Wireless Ant	50 ohm antenna cable/ Plenum	Liberty	RG8-CMP-BLK	1ft - 150ft	Liberty-112128 (BNC)	NA	NA
FIBER	Digital data over MultiMode fiber	2 Pair Multi Mode Fiber/ Plenum	Liberty	2FPINSM10-Z	3ft- 1000ft	(SC Connectors) Liberty-FASCM10	(LC Connectors) Liberty-FALCM10	NA
DMX	DMX 512 Theatrical Lighting	1 pair 22/2 cable / Plenum	Liberty	24-2P-P485-WHT	1ft- 500ft	BTX-CA-AAA5MBZ (XLR-5M)	BTX-CA-AAA5FBZ (XLR-5F)	NA

Cable Type Abbreviation *(Cross check to table Above)*

Cable Identification Number *(Cross check to pull schedule below)*

SCAT-101

Stage Wall Plate to projector

Pull Name
Point to point cable pull

WIRE/DETAIL

CABLE PULL - LECTURE HALL ROOM 160

	PULL	NAME	NOTES
	FLOOR BOX 1 (FB1) TO RACK (ER2)	SCAT-101	SHIELDED CAT6A
	FLOOR BOX 1 (FB1) TO RACK (ER2)	SCAT-102	SHIELDED CAT6A
	FLOOR BOX 1 (FB1) TO RACK (ER2)	SCAT-103	SHIELDED CAT6A
	FLOOR BOX 1 (FB1) TO RACK (ER2)	SCAT-104	SHIELDED CAT6A
	FLOOR BOX 1 (FB1) TO RACK (ER2)	SCAT-105	SHIELDED CAT6A
	FLOOR BOX 1 (FB1) TO RACK (ER2)	SCAT-106	SHIELDED CAT6A
	RACK (ER2) TO FLOOR BOX 1 (FB1)	SCAT-714	SHIELDED CAT6A
	FLOOR BOX 1 (FB1) TO RACK (ER2)	MIC-111	22-2C
	RACK (ER2) TO FLOOR BOX 1 (FB1)	AUD-206	22-2C
	RACK (ER2) TO FLOOR BOX 1 (FB1)	AUD-207	22-2C
Count	10		
	FLOOR BOX 2 (FB2) TO RACK (ER2)	SCAT-107	SHIELDED CAT6A
	FLOOR BOX 2 (FB2) TO RACK (ER2)	SCAT-108	SHIELDED CAT6A
	FLOOR BOX 2 (FB2) TO RACK (ER2)	SCAT-109	SHIELDED CAT6A
	FLOOR BOX 2 (FB2) TO RACK (ER2)	SCAT-110	SHIELDED CAT6A
	FLOOR BOX 2 (FB2) TO RACK (ER2)	SCAT-111	SHIELDED CAT6A
	FLOOR BOX 2 (FB2) TO RACK (ER2)	SCAT-112	SHIELDED CAT6A
	RACK (ER2) TO FLOOR BOX 2 (FB2)	SCAT-715	SHIELDED CAT6A
	FLOOR BOX 2 (FB2) TO RACK (ER2)	MIC-112	22-2C
	RACK (ER2) TO FLOOR BOX 2 (FB2)	AUD-208	22-2C
	RACK (ER2) TO FLOOR BOX 2 (FB2)	AUD-209	22-2C
Count	10		

CABLE PULL - LECTURE HALL ROOM 160

	PULL	NAME	NOTES
	WALL PLATE 2 (WP2) TO RACK (ER2)	SCAT-113	SHIELDED CAT6A
	WALL PLATE 2 (WP2) TO RACK (ER2)	SDI-114	20-CMP-VID-COAX
	WALL PLATE 2 (WP2) TO RACK (ER2)	SDI-115	20-CMP-VID-COAX
	RACK (ER2) TO WALL PLATE 2 (WP2)	SCAT-205	SHIELDED CAT6A
	WALL PLATE 2 (WP2) TO RACK (ER2)	MIC-113	22-2C
	WALL PLATE 2 (WP2) TO RACK (ER2)	MIC-114	22-2C
	RACK (ER2) TO WALL PLATE 2 (WP2)	AUD-210	22-2C
	RACK (ER2) TO WALL PLATE 2 (WP2)	AUD-211	22-2C
	WALL PLATE 2 (WP2) TO RACK (ER2)	SCAT-903	SHIELDED CAT6A
Count	9		
	BOOTH RACK TO RACK (ER2)	SCAT-116	SHIELDED CAT6A
	BOOTH RACK TO RACK (ER2)	SDI-117	20-CMP-VID-COAX
	BOOTH RACK TO RACK (ER2)	SCAT-118	SHIELDED CAT6A
	RACK (ER2) TO BOOTH RACK	SDI-209	20-CMP-VID-COAX
	RACK (ER2) TO BOOTH RACK	SCAT-206	SHIELDED CAT6A
	RACK (ER2) TO BOOTH RACK	AUD-204	22-2C
	RACK (ER2) TO BOOTH RACK	SPARE	SHIELDED CAT6A
Count	7		
	CAMERA 1 TO BOOTH RACK	SDI-417A	20-CMP-VID-COAX
	CAMERA 1 TO BOOTH RACK	SCAT-601	SHIELDED CAT6A
Count	2		
	CAMERA 2 TO BOOTH RACK	SDI-417B	20-CMP-VID-COAX
	CAMERA 2 TO BOOTH RACK	SCAT-602	SHIELDED CAT6A
Count	2		
	RACK (ER2) TO BOOTH DISPLAY	SCAT-207	SHIELDED CAT6A
Count	1		

CABLE PULL - LECTURE HALL ROOM 160

	PULL	NAME	NOTES
	WALL PLATE 1 (WP1) TO RACK (ER2)	SCAT-120	SHIELDED CAT6A
	WALL PLATE 1 (WP1) TO RACK (ER2)	SDI-121	20-CMP-VID-COAX
	RACK (ER2) TO WALL PLATE 1 (WP1)	SCAT-208	SHIELDED CAT6A
	WALL PLATE 1 (WP1) TO RACK (ER2)	MIC-121	22-2C
	WALL PLATE 1 (WP1) TO RACK (ER2)	MIC-122	22-2C
	RACK (ER2) TO WALL PLATE 1 (WP1)	AUD-214	22-2C
	RACK (ER2) TO WALL PLATE 1 (WP1)	AUD-215	22-2C
	WALL PLATE 1 (WP1) TO RACK (ER2)	SCAT-901	SHIELDED CAT6A
	WALL PLATE 1 (WP1) TO RACK (ER2)	SCAT-902	SHIELDED CAT6A
	WALL PLATE 1 (WP1) TO RACK (ER2)	SCAT-911	SHIELDED CAT6A
Count	12		
	RACK (ER2) TO AUDIO MONITOR LEFT	AUD-212	22-2C
Count	1		
	RACK (ER2) TO AUDIO MONITOR RIGHT	AUD-213	22-2C
Count	1		
	RACK (ER2) TO DISPLAY IN ROOM 156	SCAT-209	SHIELDED CAT6A
Count	1		
	RACK (ER2) TO VIDEO WALL (VW1)	SCAT-301	SHIELDED CAT6A
	RACK (ER2) TO VIDEO WALL (VW1)	SCAT-717	SHIELDED CAT6A
	RACK (ER2) TO VIDEO WALL (VW16)	SCAT-302	SHIELDED CAT6A
	RACK (ER2) TO VIDEO WALL (VW16)	SCAT-718	SHIELDED CAT6A
Count	2		
	RACK (ER2) TO SPEAKER 1 (SPK1-AV117A)	SPK-201	12-2C
	RACK (ER2) TO SPEAKER 1 (SPK1-AV117A)	SCAT-501	SHIELDED CAT6A
	RACK (ER2) TO SPEAKER 1 (SPK1-AV117A)	ANT-101	RG8
Count	2		
	RACK (ER2) TO SPEAKER 2 (SPK2-AV117A)	SPK-202	12-2C
	RACK (ER2) TO SPEAKER 2 (SPK2-AV117A)	SCAT-502	SHIELDED CAT6A
	RACK (ER2) TO SPEAKER 2 (SPK2-AV117A)	ANT-102	RG8
Count	2		
	RACK (ER2) TO SUB WOOFER (SUB1)	SPK-203	12-2C
Count	1		
	RACK (ER2) TO LIGHTING CONTROLER	CN-201	LLINX-U-P
Count	1		
	RACK (ER2) TO SHADE CONTROLER	CN-202	LLINX-U-P
Count	1		

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A PROJECT FOR:
Webster University – ISB Expansion Design
16010013

REVISIONS			
A	BUILD	REVISED	03/23/2017
B	BUILD REV #1	REVISED	04/13/2017
C	BUILD REV #2	REVISED	04/30/2017
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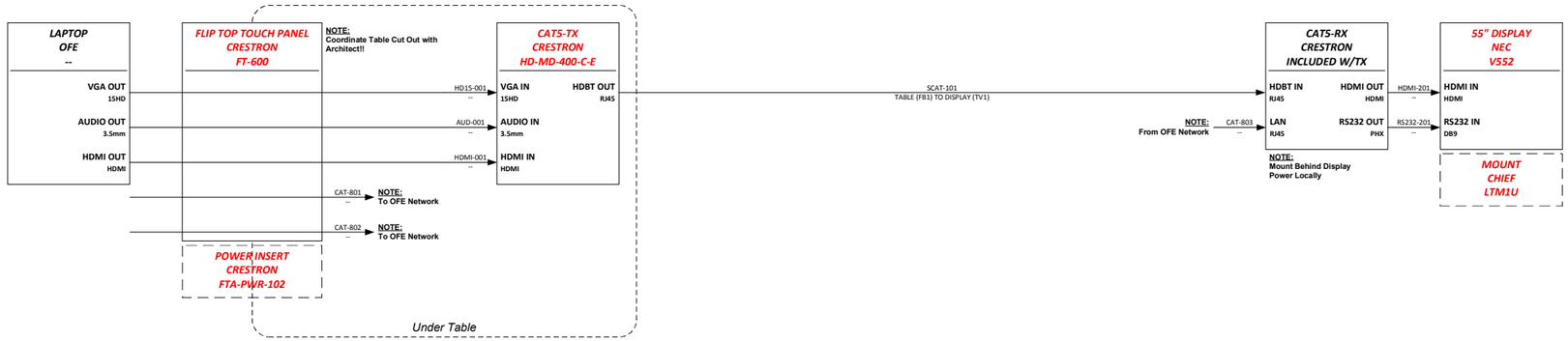
E	BUILD REV #4	REVISED	06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: WIRE/DETAIL: LECTURE HALL
DRAWING NUMBER: 29 of 40

VIDEO/AUDIO/CONTROL



Room Numbers

154, 204, 352

CABLE PULL - CONFERENCE ROOMS 154,204,352			
	PULL	NAME	NOTES
	TABLE (FB1) TO DISPLAY (TV1)	SCAT-101	SHIELDED CAT6A
Count	1		

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A PROJECT FOR:

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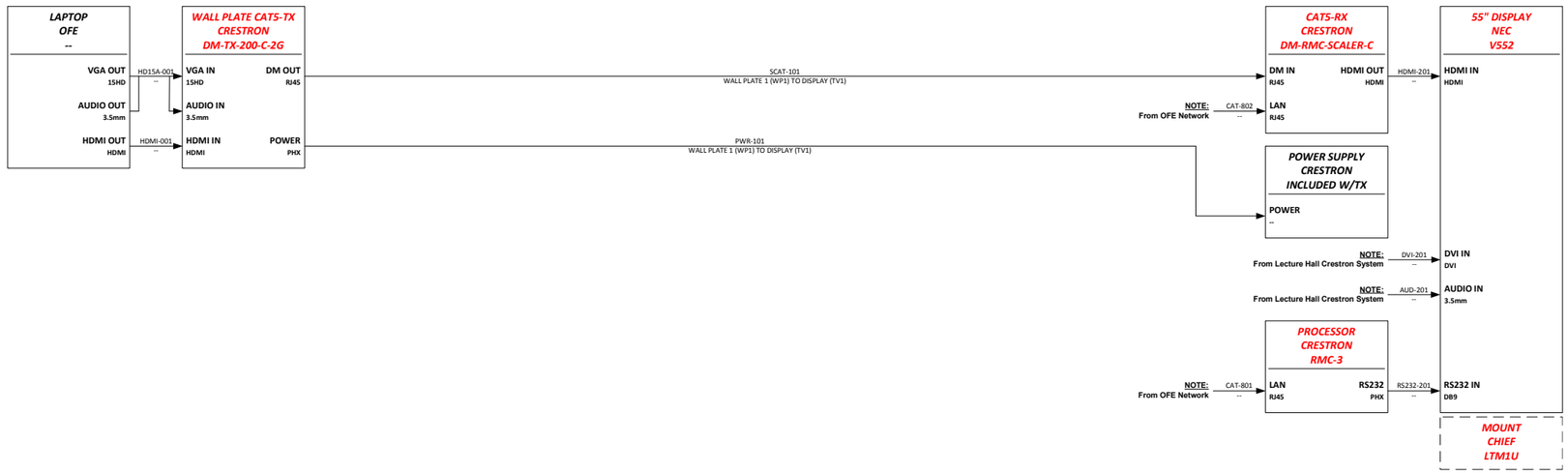
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO/AUDIO/ CONTROL: CONF ROOMS
DRAWING NUMBER: 30 of 40

VIDEO/AUDIO/CONTROL



Room Numbers

156

CABLE PULL - SMALL MEETING ROOM 156

	PULL	NAME	NOTES
	WALL PLATE 1 (WP1) TO DISPLAY (TV1)	SCAT-101	SHIELDED CAT6A
	WALL PLATE 1 (WP1) TO DISPLAY (TV1)	PWR-101	16-2C
Count	2		

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D	BUILD REV #3	REVISED 06/25/2017
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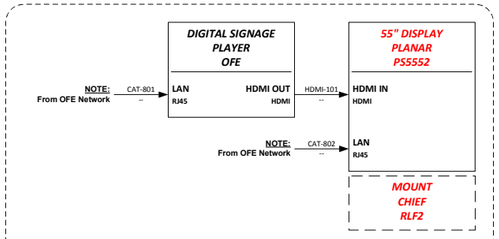
APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO/AUDIO/ CONTROL: SMALL MEETING ROOM
DRAWING NUMBER: 31 of 40

VIDEO/AUDIO/CONTROL



Typical 1 of 4

Room Number

1st Floor Elevator Lobby, 2nd Floor Elevator Lobby, 3rd Floor Elevator Lobby, 4th Floor Elevator Lobby

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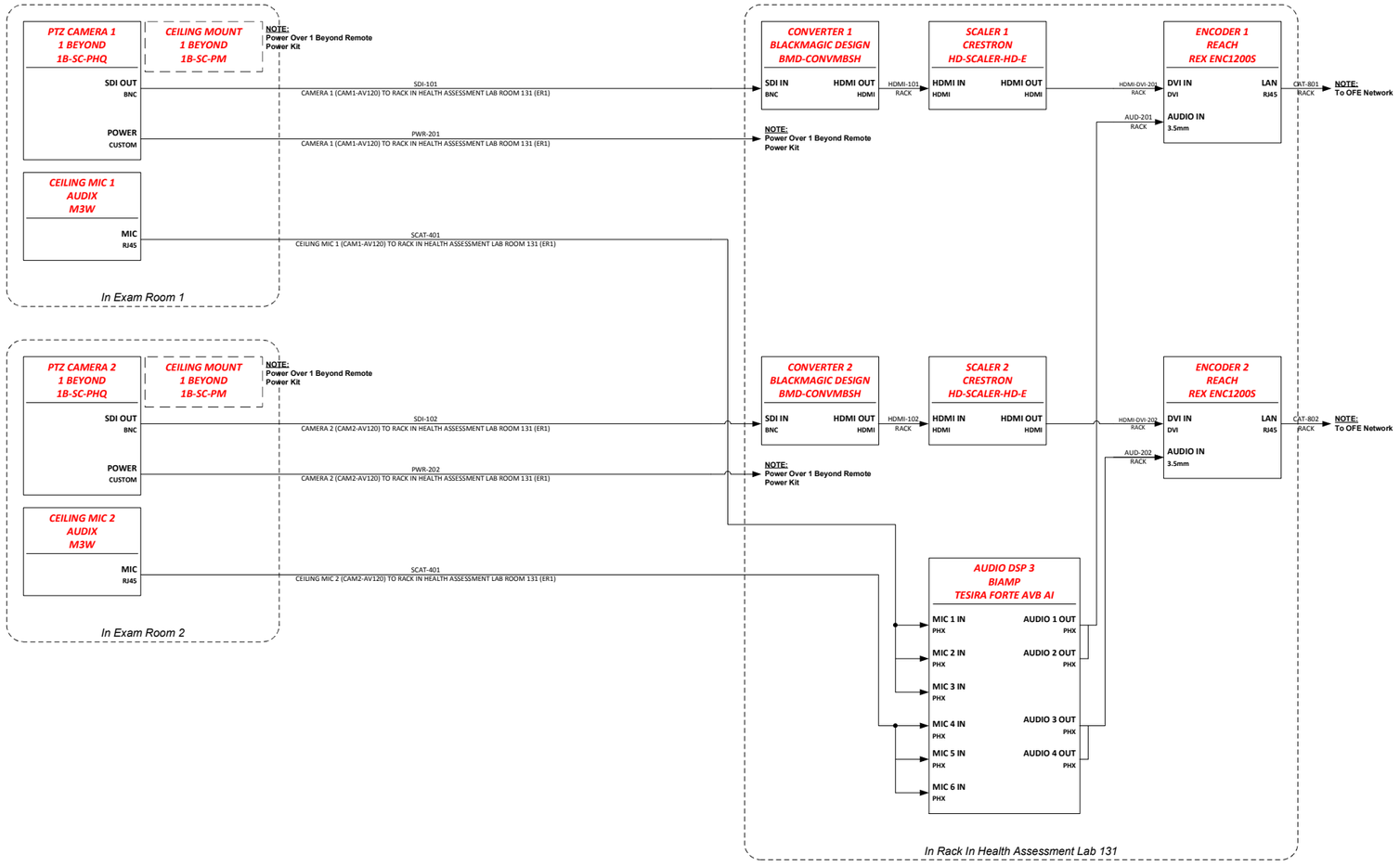
D	BUILD REV #3	REVISED 06/25/2017
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO/AUDIO/ CONTROL: DIGITAL SIGNAGE
DRAWING NUMBER: 32 of 40

VIDEO/AUDIO/CONTROL



Room Number

114 & 116

CABLE PULL - MOCK EXAM ROOMS 114, 116

	PULL	NAME	NOTES
	CAMERA 1 (CAM1-AV120) TO RACK IN HEALTH ASSESSMENT LAB ROOM 131 (ER1)	SDI-101	20-CMP-VID-COAX
	CAMERA 1 (CAM1-AV120) TO RACK IN HEALTH ASSESSMENT LAB ROOM 131 (ER1)	RS232-201	SHIELDED CAT6A
	CAMERA 1 (CAM1-AV120) TO RACK IN HEALTH ASSESSMENT LAB ROOM 131 (ER1)	PWR-201	16-2C
Count	3		
	CAMERA 2 (CAM-AV120) TO RACK IN HEALTH ASSESSMENT LAB ROOM 131 (ER1)	SDI-102	20-CMP-VID-COAX
	CAMERA 2 (CAM-AV120) TO RACK IN HEALTH ASSESSMENT LAB ROOM 131 (ER1)	RS232-202	SHIELDED CAT6A
	CAMERA 2 (CAM-AV120) TO RACK IN HEALTH ASSESSMENT LAB ROOM 131 (ER1)	PWR-202	16-2C
Count	3		
	CEILING MIC 1 (CAM1-AV120) TO RACK IN HEALTH ASSESSMENT LAB ROOM 131 (ER1)	SCAT-401	SHIELDED CAT6A
Count	1		
	CEILING MIC 2 (CAM2-AV120) TO RACK IN HEALTH ASSESSMENT LAB ROOM 131 (ER1)	SCAT-402	SHIELDED CAT6A
Count	1		

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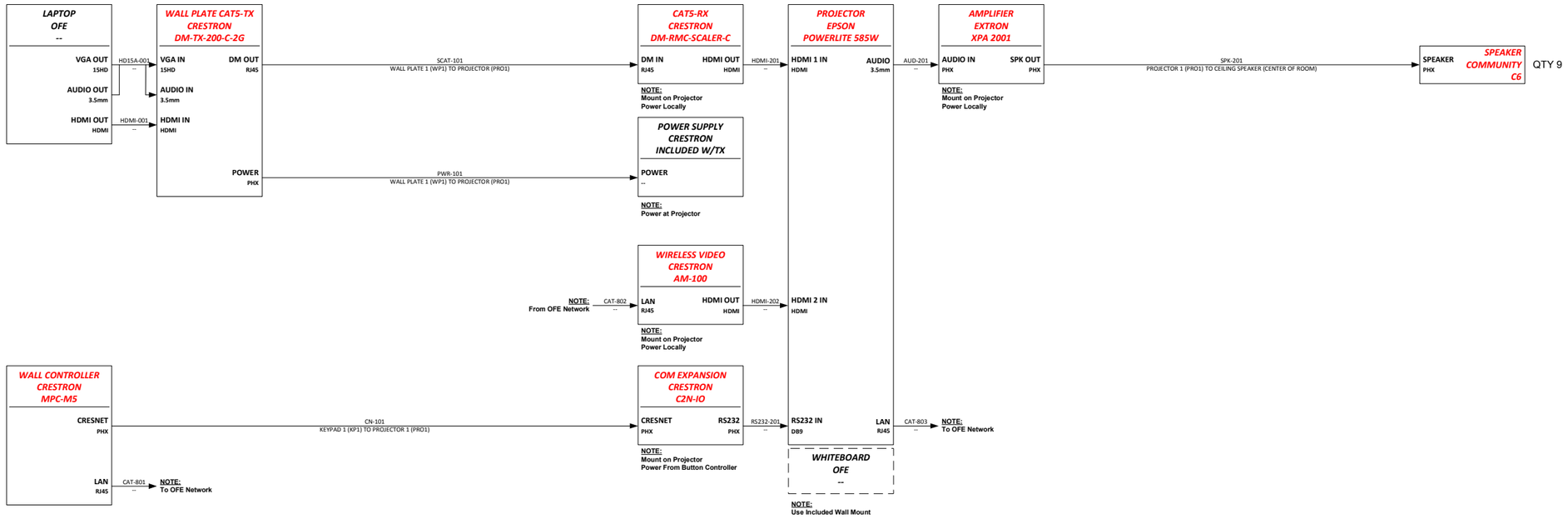
APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO/AUDIO/ CONTROL: MOCK EXAM ROOMS
DRAWING NUMBER: 33 of 40

VIDEO/AUDIO/CONTROL



Room Numbers

276, 284, 378, 383, 388, 391, 472, 480, 488, 491

CABLE PULL - GENERAL LABS 276, 284, 378, 383, 388, 391, 472, 480, 488, 491

	PULL	NAME	NOTES
	WALL PLATE 1 (WP1) TO PROJECTOR 1 (PRO1)	SCAT-101	SHIELDED CAT6A
	WALL PLATE 1 (WP1) TO PROJECTOR 1 (PRO1)	PWR-101	16-2C
Count	1		
	KEYPAD 1 (KP1) TO PROJECTOR 1 (PRO1)	CN-101	LLINX-U-P
Count	1		
	PROJECTOR 1 (PRO1) TO CEILING SPEAKER (CENTER OF ROOM)	SPK-201	16-2C
Count	1		

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E	BUILD REV #4	REVISED 06/29/2017

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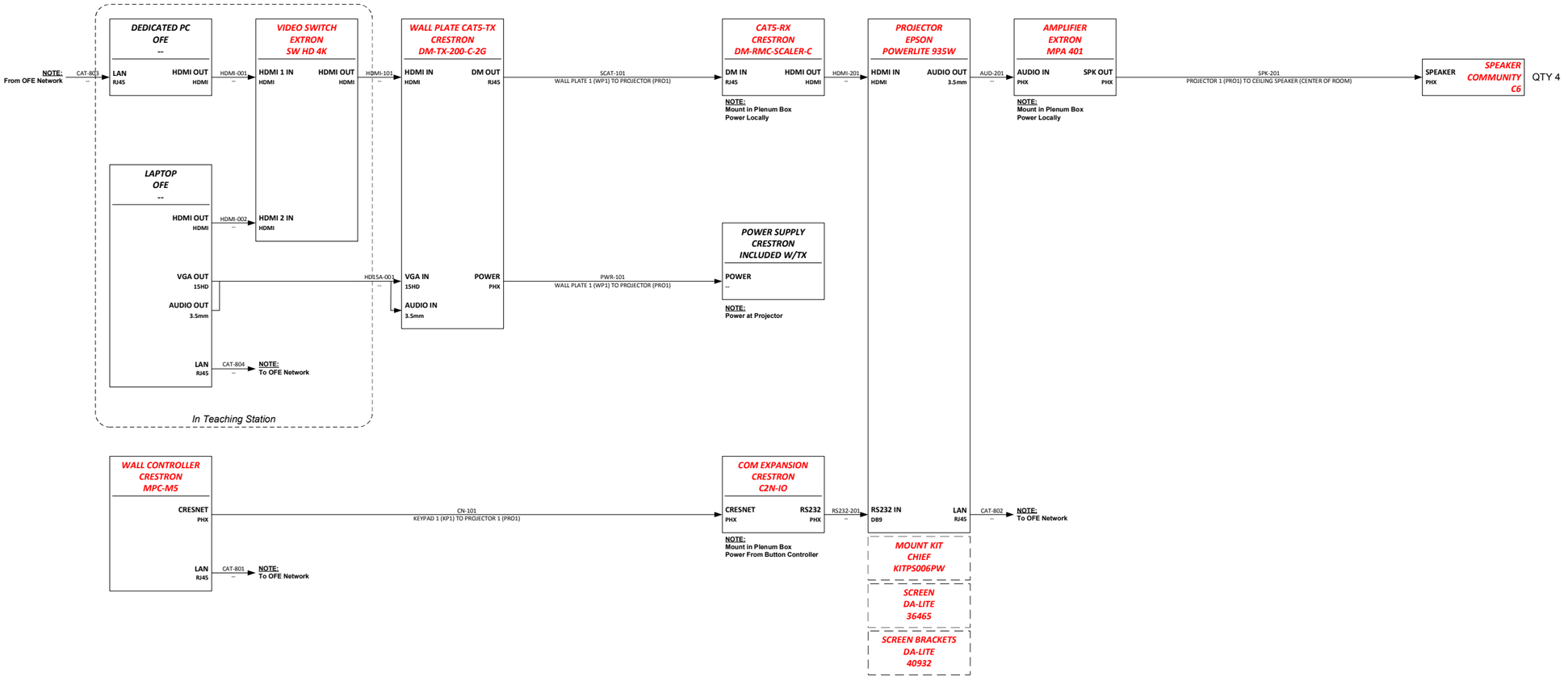
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO/AUDIO/ CONTROL: GENERAL LAB
DRAWING NUMBER: 34 of 40

VIDEO/AUDIO/CONTROL



Room Numbers

231, 233

CABLE PULL - GENERAL CLASSROOMS 231, 233

	PULL	NAME	NOTES
	WALL PLATE 1 (WP1) TO PROJECTOR 1 (PRO1)	SCAT-101	SHIELDED CAT6A
	WALL PLATE 1 (WP1) TO PROJECTOR 1 (PRO1)	PWR-101	16-2C
Count	1		
	KEYPAD 1 (KP1) TO PROJECTOR 1 (PRO1)	CN-101	LLINX-U-P
Count	1		
	PROJECTOR 1 (PRO1) TO CEILING SPEAKER (CENTER OF ROOM)	SPK-201	16-2C
Count	1		

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A PROJECT FOR:

Webster University – ISB Expansion Design

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REVISIONS			
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C	BUILD REV #2	REVISED	04/30/2017
D	BUILD REV #3	REVISED	06/25/2017
E	BUILD REV #4	REVISED	06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO/AUDIO/ CONTROL: GENERAL CLASSROOM
DRAWING NUMBER: 35 of 40

VIDEO/AUDIO/CONTROL

WIRELESS KEYBOARD & MOUSE OFE
USB OUT (USB)

USB-001 --

USB CAT5-TX LIBERTY DIGI-USB2-4P
USB IN (USBA) | CAT OUT (RJ45)

SCAT-301 DISPLAY 1 (TV1) TO RACK (ER1)

USB CAT5-RX LIBERTY INCLUDED W/TX
CAT IN (RJ45) | USB OUT (USB)

USB-101 RACK

DEDICATED PC OFE --
USB IN (USBA) | HDMI OUT (HDMI)
USB IN (USBA)
LAN (RJ45)

USB-102 RACK

NOTE: From OFE Network
CAT-801 RACK

HDMI-101 RACK

DM PRESENTATION SYSTEM CRESTRON DMPS3-300-C
HDMI 1 IN (HDMI)
HDMI 2 IN (HDMI)
COM A (DB9)
DM 6 IN (RJ45)
DM 3 OUT (RJ45)
DM 4 OUT (RJ45)
CRESNET (PHX)
CRESNET (PHX)
PROG AUDIO LEFT (PHX)
PROG AUDIO RIGHT (PHX)
PoDM (DIN)
LAN (RJ45)

HDMI-201 RACK

SCALER 1 CRESTRON HD-SCALER-HD-E
HDMI IN (HDMI) | HDMI OUT (HDMI)

HDMI-301 RACK

USB BRIDGE VADDIO AV BRIDGE
HDMI IN (HDMI) | USB OUT (USBB)
AUDIO IN (XLR)
AUDIO IN (XLR)
RS232 (RJ45)

AUD-203 RACK
AUD-204 RACK
RS232-203 RACK

PTZ CAMERA 1 BEYOND 1B-SC-PHQ
SDI OUT (BNC)
RS232 (VISCA)
POWER (CUSTOM)

WALL MOUNT 1 BEYOND WALL MOUNT

NOTE: Power Over 1 Beyond Remote Power Kit

SDI-102 CAMERA 1 (CAM1) TO RACK (ER1)
RS232-201 CAMERA 1 (CAM1) TO RACK (ER1)
PWR-201 CAMERA 1 (CAM1) TO RACK (ER1)

NOTE: Power Over 1 Beyond Remote Power Kit

CONVERTER BLACKMAGIC DESIGN BMD-CONVMBSH
SDI IN (BNC) | HDMI OUT (HDMI)

HDMI-102 RACK

SCALER 2 CRESTRON HD-SCALER-HD-E
HDMI IN (HDMI) | HDMI OUT (HDMI)

HDMI-202 RACK

HDMI-302 RACK

RECORDER CRESTRON CAPTURE HD PRO
HDMI IN (HDMI) | LAN (RJ45)
AUDIO IN (PHX)

CAT-805 RACK

NOTE: To OFE Network

LAPTOP OFE --
VGA OUT (15HD)
AUDIO OUT (3.5mm)
HDMI OUT (HDMI)

HD15A-006 --
HDMI-006 --

WALL PLATE CAT5-TX CRESTRON DM-TX-200-C-2G
VGA IN (15HD) | DM OUT (RJ45)
AUDIO IN (3.5mm)
HDMI IN (HDMI)

NOTE: Power Over DM

SCAT-106 WALL PLATE 1 (WP1) TO RACK (ER1)

CATS-RX CRESTRON DM-RMC-SCALER-C
DM IN (RJ45) | HDMI OUT (HDMI)
RS232 OUT (PHX)

HDMI-303 --
RS232-303 --

NOTE: Mount Behind Display Power Locally

65" DISPLAY NEC E655
HDMI IN (HDMI)
RS232 IN (DB9)

MOUNT CHIEF LTM1U

SCAT-203 RACK (ER1) TO DISPLAY 1 (TV1)

COM EXPANSION CRESTRON C2N-IO
CRESNET (PHX) | RS232 (PHX)

CN-202 RACK

SCAT-204 RACK (ER1) TO FLOOR BOX 1 (FB1-AV131) IN WANTITATIVE LAB 338

NOTE: To Quantitative Lab 338

WALL DOCK CRESTRON TST-902-DSW
CRESNET (PHX)

CN-201 RACK (ER1) TO TOUCH PANEL DOCK (TP1)

CONTROL PANEL CRESTRON TST-902

BACK BOX CRESTRON TST-902-DSW-BB

COM EXPANSION CRESTRON C2N-IO
CRESNET (PHX) | RS232 (PHX)

CN-203 RACK

DM POWER SUPPLY CRESTRON PW-4818DU
PoDM (DIN)

PODM-101 RACK

LAN (RJ45)

CAT-803 RACK

NOTE: To OFE Network

RF GATEWAY CRESTRON CEN-GWEXER
LAN (RJ45)

NOTE: From OFE Network
SCAT-802 RACK (ER1) TO DISPLAY 1 (TV1)

CEILING MIC 1 AUDIX M3W
MIC (RJ45)

SCAT-401 CEILING MIC 1 TO RACK (ER1)

CEILING MIC 2 AUDIX M3W
MIC (RJ45)

SCAT-402 CEILING MIC 2 TO RACK (ER1)

AUDIO DSP BIAMP TESIRA FORTE AVB VI
MIC 1 IN (PHX) | AUDIO 1 OUT (PHX)
MIC 2 IN (PHX)
MIC 3 IN (PHX) | AUDIO 2 OUT (PHX)
MIC 4 IN (PHX) | AUDIO 3 OUT (PHX)
MIC 5 IN (PHX) | AUDIO 4 OUT (PHX)
MIC 6 IN (PHX) | AUDIO 5 OUT (PHX)
LINE 11 IN (PHX)
LINE 12 IN (PHX)
RS232 (DB9) | VOIP (RJ45)

AUD-111 RACK
AUD-112 RACK
RS232-203 RACK

CAT-804 RACK

NOTE: To OFE Network

AMPLIFIER EXTRON MPA 401
AUDIO IN (PHX) | SPK OUT (PHX)

AUD-201 RACK

SPK-201 RACK (ER1) TO CEILING SPEAKER (CENTER OF ROOM)

SPEAKER COMMUNITY C6 (PHX) QTY 4

Room Number
325

In Rack

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A PROJECT FOR:
Webster University – ISB Expansion Design
16010013

REVISIONS		
A	BUILD	REVISED 03/23/2017
B	BUILD REV #1	REVISED 04/13/2017
C	BUILD REV #2	REVISED 04/30/2017
D	BUILD REV #3	REVISED 06/25/2017
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO/AUDIO/ CONTROL: INTERVIEW ROOM
DRAWING NUMBER: 36 of 40

Cable Label/ Signal Abbreviations --Suggested Lengths

ABRV-LABEL	SIGNAL DESCRIPTION	CABLE DESCRIPTION	MANF	PART#	MIN -MAX CABLE LENGTH	TYP CONNECTOR-1	TYP CONNECTOR-2	TYP CONNECTOR-3
CN	Cresnet	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	***1ft - 300ft***	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
AX	Axlink	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	***1ft - 300ft***	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
SDI	Serial Digital Signal	Composite Video/ Digital Video/ Plenum	Liberty	20-CMP-VID-Coax-White	***1ft - 175ft***	LIBERTY-CM-RG59P-BNC	LIBERTY-CM-RG59P-RCA	NA
RGB	RGBHV Analog	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	***1ft - 125ft***	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
HD15	RGBHV Analog/ Or Component	3ft - 25ft (VGA) HD15 Male to Male	Liberty	E-MVGAM-M-(1-25)	***1ft- 30ft***	NA	NA	NA
HD15a	RGBHV Or Component with Audio	3ft - 25ft (VGA) HD15 Male to Male/ Ubal Audio	Liberty	E-MVGAMAM-M-(1-25)	***1ft- 30ft***	NA	NA	NA
HDMI	HDMI	3ft - 25ft HDMI Cable	Liberty	E-HDM-M-(1-25)	***1ft- 30ft***	NA	NA	NA
DVI	Digital TDMS video	3ft - 25ft DVI Cable	Liberty	Z400DVI-D/DL (1-25)	***1ft- 30ft***	NA	NA	NA
DVI-A	Analog DVI	DVI-A to 5 BNC	Liberty	E-DVI/A-5BNCF-1	***1ft- 50ft***	NA	NA	NA
SHRED	Analog Component / RGBHV	1ft, 3ft or 6ft HD15 to 5 BNC	Liberty	E-VGAM-5BNCF-(.5-3) E-VGAM-5BNCM-(3-6)	***1ft- 50ft***	NA	NA	NA
COMP	Component Video	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	***1ft - 125ft***	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
CATV	RF Base Band	CATV/MATV/ Plenum	Liberty	RG6-P-CATV-BLK	***1ft - 300ft***	LIBERTY-LCM-RG6M-F	NA	NA
SPK	70v Speaker	16AWG 70v Speaker Cable/ Plenum	Liberty	16-2C-P-WHT	***1ft- 1000ft***	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
SPK14	8ohm Speaker	14AWG Speaker Cable/ Plenum	Liberty	14-2C-P-BLK	***1ft- 100ft***	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
DC/SPK12	Low Voltage (DC)/ Large Format Speaker	12AWG Speaker Cable/ Plenum	Liberty	12-2C-P-BLK	***1ft- 65ft***	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
CAT/ LAN	10g Ethernet- HDBaseT-	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	***1ft - 100ft***	(Male)-LIBERTY- 106190	(Female Keystone) -LIBERTY-A68IPZA-STP	(Ethercon)-LIBERTY-NE8MC6-MO
RL	Relay	8 Conductor Plenum	Liberty	22-8C-PSH-WHT	***1ft - 125ft***	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
RS/ RS232	RS232	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	***1ft - 125ft***	(Male)-LIBERTY- 106190	Liberty- 32-281 (RJ45-DB9F)	Liberty- 32-284 (RJ45-DB9M)
IR	IR	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	***1ft- 200ft***	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
AUD	Balanced Line Level Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	***1ft- 1000ft***	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
UBAL	Unbalance Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	**1ft- 25ft**	Liberty- 30-401-bk (3.5mm TRS)	Liberty-ZD06-r (RCA RED)	Libry- ZD06-w (RCA WHITE)
MIC	Balanced Mic Level	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	***1ft- 300ft***	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ST	Balanced Line Level Stereo	2 pair 22/2 audio cable/ Plenum	Liberty	22-2P-CMP-SIAMEZ	***1ft- 1000ft***	(Provided) Eroblock 5 (EB5) or (EB3) x2	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ANT	RF Wireless Ant	50 ohm antenna cable/ Plenum	Liberty	RG8-CMP-BLK	***1ft - 150ft***	Liberty-112128 (BNC)	NA	NA
FIBER	Digital data over MultiMode fiber	2 Pair Multi Mode Fiber/ Plenum	Liberty	2FPINSM10-Z	***3ft- 1000ft***	(SC Connectors) Liberty-FASCM10	(LC Connectors) Liberty-FALCM10	NA
DMX	DMX 512 Theatrical Lighting	1 pair 22/2 cable / Plenum	Liberty	24-2P-P485-WHT	***1ft- 500ft***	BTX-CA-AAA5MBZ (XLR-5M)	BTX-CA-AAA5FBZ (XLR-5F)	NA

WIRE/DETAIL

Cable Type Abbreviation *(Cross check to table Above)* — **Cable Identification Number** *(Cross check to pull schedule below)*

SCAT-101
Stage Wall Plate to projector

Pull Name
Point to point cable pull

CABLE PULL - INTERVIEW ROOM 325

	PULL	NAME	NOTES
	WALL PLATE 1 (WP1) TO RACK (ER1)	SCAT-106	SHIELDED CAT6A
Count	1		
	CAMERA 1 (CAM1) TO RACK (ER1)	SDI-102	20-CMP-VID-COAX
	CAMERA 1 (CAM1) TO RACK (ER1)	RS232-201	SHIELDED CAT6A
	CAMERA 1 (CAM1) TO RACK (ER1)	PWR-201	16-2C
Count	3		
	DISPLAY 1 (TV1) TO RACK (ER1)	SCAT-301	SHIELDED CAT6A
	RACK (ER1) TO DISPLAY 1 (TV1)	SCAT-203	SHIELDED CAT6A
	RACK (ER1) TO DISPLAY 1 (TV1)	SCAT-802	SHIELDED CAT6A
Count	2		
	RACK (ER1) TO FLOOR BOX 1 (FB1-AV131) IN QUANTITATIVE LAB 338	SCAT-204	SHIELDED CAT6A
Count	1		
	CEILING MIC 1 TO RACK (ER1)	SCAT-401	SHIELDED CAT6A
Count	1		
	CEILING MIC 2 TO RACK (ER1)	SCAT-402	SHIELDED CAT6A
Count	1		
	RACK (ER1) TO CEILING SPEAKER (CENTER OF ROOM)	SPK-201	16-2C
Count	1		
	RACK (ER1) TO TOUCH PANEL DOCK (TP1)	CN-201	LLINX-U-P
Count	1		

14RU CREDENZA RACK
MIDDLE ATLANTIC CFR-14-18

1	RACK HEADER	14
2	POWER CONDITIONER MIDDLE ATLANTIC PD-915R	13
3	DEDICATED PC ON 2RU SHELF MIDDLE ATLANTIC RC-2	12
4		11
5	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	10
6	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	9
7	USB BRIDGE VADDIO AV BRIDGE	8
8	RACK BLANK	7
9	AUDIO DSP BIAMP TESIRA FORTE AVB VI	6
10	AMPLIFER ON 1RU SHELF EXTRON 60-190-01	5
11	RACK BLANK	4
12		3
13	DM PRESENTATION SYSTEM CRESTRON DMPS3-300-C	2
14		1

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A PROJECT FOR:
Webster University – ISB Expansion Design
16010013

REVISIONS

A	BUILD	REVISED 03/23/2017
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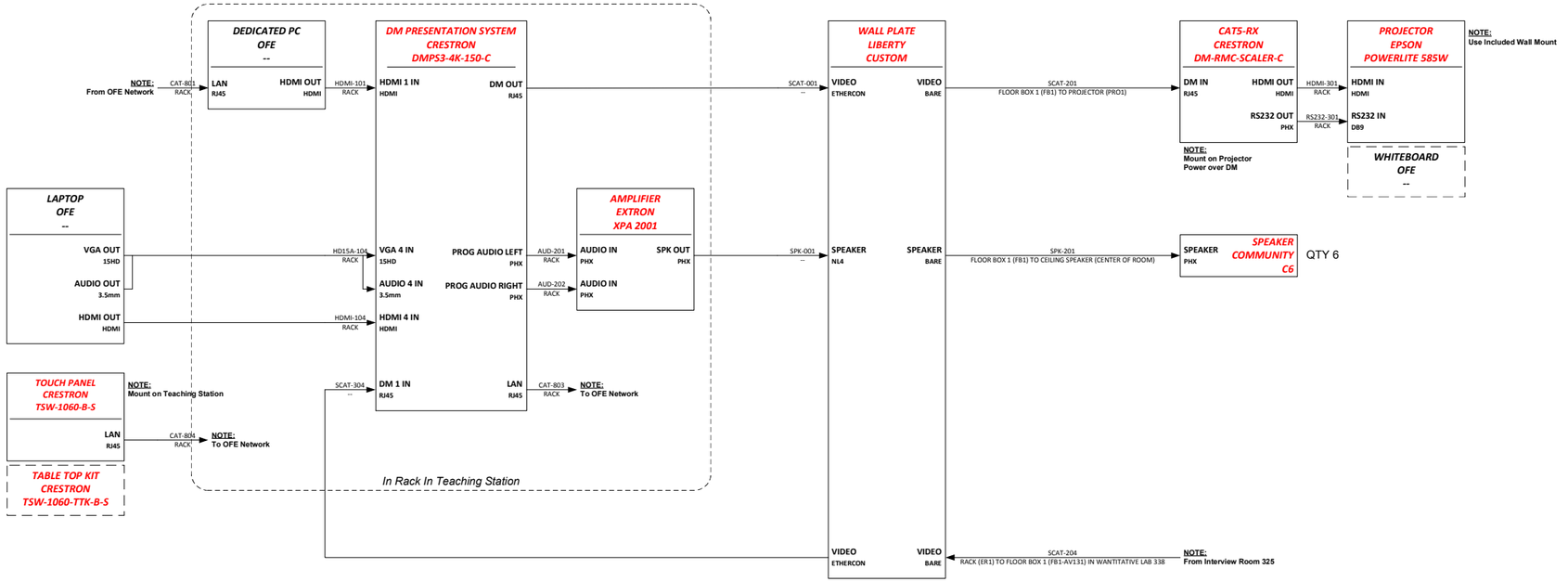
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: WIRE/DETAIL: INTERVIEW ROOM
DRAWING NUMBER: 37 of 40

VIDEO/AUDIO/CONTROL



Room Numbers

338

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A PROJECT FOR:

Webster University – ISB Expansion Design

16010013

REVISIONS

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APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO/AUDIO/ CONTROL: QUANTITATIVE LAB
DRAWING NUMBER: 38 of 40

Cable Label/ Signal Abbreviations --Suggested Lengths

ABRV-LABEL	SIGNAL DESCRIPTION	CABLE DESCRIPTION	MANF	PART#	MIN -MAX CABLE LENGTH	TYP CONNECTOR-1	TYP CONNECTOR-2	TYP CONNECTOR-3
CN	Cresnet	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	***1ft - 300ft***	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
AX	Axlink	AMX AXlink / Crestnet/ Plenum	Liberty	AXLINK-P	***1ft - 300ft***	(Provided) Eroblock 4 (EB4)	Liberty- EP-4-12 (XLR 4M)	Liberty- EP-4-11P (XLR 4F)
SDI	Serial Digital Signal	Composite Video/ Digital Video/ Plenum	Liberty	20-CMP-VID-Coax-White	***1ft - 175ft***	LIBERTY-CM-RG59P-BNC	LIBERTY-CM-RG59P-RCA	NA
RGB	RGBHV Analog	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	***1ft - 125ft***	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
HD15	RGBHV Analog/ Or Component	3ft - 25ft (VGA) HD15 Male to Male	Liberty	E-MVGAM-M-(1-25)	***1ft- 30ft***	NA	NA	NA
HD15a	RGBHV Or Component with Audio	3ft - 25ft (VGA) HD15 Male to Male/ Ubal Audio	Liberty	E-MVGAMAM-M-(1-25)	***1ft- 30ft***	NA	NA	NA
HDMI	HDMI	3ft - 25ft HDMI Cable	Liberty	E-HDM-M-(1-25)	***1ft- 30ft***	NA	NA	NA
DVI	Digital TDMS video	3ft - 25ft DVI Cable	Liberty	Z400DVI-D/DL (1-25)	***1ft- 30ft***	NA	NA	NA
DVI-A	Analog DVI	DVI-A to 5 BNC	Liberty	E-DVI/A-5BNCF-1	***1ft- 50ft***	NA	NA	NA
SHRED	Analog Component / RGBHV	1ft, 3ft or 6ft HD15 to 5 BNC	Liberty	E-VGAM-5BNCF-(.5-3) E-VGAM-5BNCM-(3-6)	***1ft- 50ft***	NA	NA	NA
COMP	Component Video	RGBHV mini high-res/ Plenum	Liberty	RGB5C-PLN	***1ft - 125ft***	LIBERTY-CM-RGB26-BNC	LIBERTY-CM-RGB26-RCA	NA
CATV	RF Base Band	CATV/MATV/ Plenum	Liberty	RG6-P-CATV-BLK	***1ft - 300ft***	LIBERTY-LCM-RG6M-F	NA	NA
SPK	70v Speaker	16AWG 70v Speaker Cable/ Plenum	Liberty	16-2C-P-WHT	***1ft- 1000ft***	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
SPK14	8ohm Speaker	14AWG Speaker Cable/ Plenum	Liberty	14-2C-P-BLK	***1ft- 100ft***	(Provided) Eroblock 2 (EB2)	(FASTENAL 714440)-IDEAL INSULATED FORK	NA
DC/SPK12	Low Voltage (DC)/ Large Format Speaker	12AWG Speaker Cable/ Plenum	Liberty	12-2C-P-BLK	***1ft- 65ft***	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
CAT/ LAN	10g Ethernet- HDBaseT-	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	***1ft - 100ft***	(Male)-LIBERTY- 106190	(Female Keystone) -LIBERTY-A68IPZA-STP	(Ethercon)-LIBERTY-NE8MC6-MO
RL	Relay	8 Conductor Plenum	Liberty	22-8C-PSH-WHT	***1ft - 125ft***	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
RS/ RS232	RS232	Category 7a Shielded Enhanced/ Plenum	Liberty	24-4P-P-L7SH-BLU	***1ft - 125ft***	(Male)-LIBERTY- 106190	Liberty- 32-281 (RJ45-DB9F)	Liberty- 32-284 (RJ45-DB9M)
IR	IR	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	***1ft- 200ft***	(Provided) Eroblock 2 (EB2)	Dolphin Connectors	NA
AUD	Balanced Line Level Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	***1ft- 1000ft***	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
UBAL	Unbalance Audio	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	**1ft- 25ft**	Liberty- 30-401-bk (3.5mm TRS)	Liberty-ZD06-r (RCA RED)	Libry- ZD06-w (RCA WHITE)
MIC	Balanced Mic Level	1 pair 22/2 cable/ Plenum	Liberty	22-1P-CMP-EZ-WHT	***1ft- 300ft***	(Provided) Eroblock 3 (EB3)	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ST	Balanced Line Level Stereo	2 pair 22/2 audio cable/ Plenum	Liberty	22-2P-CMP-SIAMEZ	***1ft- 1000ft***	(Provided) Eroblock 5 (EB5) or (EB3) x2	Liberty- NC3MEZY-NI	Liberty- NC3FEZY-NI
ANT	RF Wireless Ant	50 ohm antenna cable/ Plenum	Liberty	RG8-CMP-BLK	***1ft - 150ft***	Liberty-112128 (BNC)	NA	NA
FIBER	Digital data over MultiMode fiber	2 Pair Multi Mode Fiber/ Plenum	Liberty	2FPINSM10-Z	***3ft- 1000ft***	(SC Connectors) Liberty-FASCM10	(LC Connectors) Liberty-FALCM10	NA
DMX	DMX 512 Theatrical Lighting	1 pair 22/2 cable / Plenum	Liberty	24-2P-P485-WHT	***1ft- 500ft***	BTX-CA-AAA5MBZ (XLR-5M)	BTX-CA-AAA5FBZ (XLR-5F)	NA

Cable Type Abbreviation
(Cross check to table Above)

Cable Identification Number
(Cross check to pull schedule below)

SCAT-101
Stage Wall Plate to projector

Pull Name
Point to point cable pull

WIRE/DETAIL

CABLE PULL - QUANTITATIVE LAB 353

	PULL	NAME	NOTES
	FLOOR BOX 1 (FB1) TO PROJECTOR 1 (PRO1)	SCAT-201	SHIELDED CAT6A
Count	1		
	FLOOR BOX 1 (FB1) TO CEILING SPEAKER (CENTER OF ROOM)	SPK-201	16-2C
Count	1		

14RU CREDENZA RACK
MIDDLE ATLANTIC CFR-14-18

1	RACK HEADER	14
2	POWER CONDITIONER MIDDLE ATLANTIC PD-915R	13
3	RACK BLANK	12
4	DEDICATED PC ON 2RU SHELF MIDDLE ATLANTIC RC-2	11
5		10
6	RACK BLANK	9
7	RACK SHELF MIDDLE ATLANTIC UFA-8-F1	8
8	RACK BLANK	7
9	RACK BLANK	6
10	RACK BLANK	5
11	RACK BLANK	4
12	AMPLIFER ON 1RU SHELF EXTRON 60-190-01	3
13	RACK BLANK	2
14	DM PRESENTATION SYSTEM CRESTRON DMPS3-4K-150-C	1

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A PROJECT FOR:
Webster University – ISB Expansion Design
16010013

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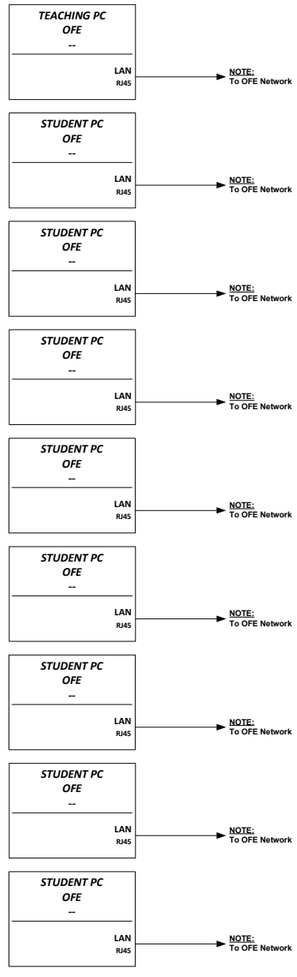
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: WIRE/DETAIL: QUANTITATIVE LAB
DRAWING NUMBER: 39 of 40

VIDEO/AUDIO/CONTROL



COLLABORATION SOFTWARE DISPLAYNOTE

Room Number

419

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A PROJECT FOR:

Webster University – ISB Expansion Design

160100013

REVISIONS		
A	BUILD	REVISED 03/23/2017
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C	BUILD REV #2	REVISED 04/30/2017
D	BUILD REV #3	REVISED 06/25/2017
E	BUILD REV #4	REVISED 06/29/2017

APPROVED BY: T. KERSTING
DESIGNED BY: T. KERSTING
DRAWN BY: T. KERSTING
DATE: 6/29/2017
DRAWING TITLE: VIDEO/AUDIO/CONTROL: TRANSLATION ROOM
DRAWING NUMBER: 40 of 40