

# STATEMENT OF WORK (SOW) Flint Magistrate Courtroom 114 - Courtroom Technology Upgrade Design and Install

#### **BACKGROUND INFORMATION**

The U.S. District Court – Michigan Eastern District has been upgrading the AV technology in its courtrooms over the past few years. We have installed a few systems in Detroit and one in each in our divisional courthouses in Ann Arbor, Bay City and Flint. The Courts standard system utilizes Crestron for control, Biamp for sound and Extron for annotation. Our Flint Magistrate Courtroom 114 located at 600 Church Street, Flint, Michigan, 48502, is next on our list for an AV technology upgrade.

#### **OBJECTIVE**

The purpose of this Statement of Work (SOW) is to provide the District Court with proposals on upgrading the courtroom technology equipment, Video Conference camera & control system, installation and programming. The Court will conduct a walkthrough of the courtroom on August 30, 2016 @10:00 AM and is asking contractors to attend. The Court will discuss the equipment and services requested on attachment A.

#### **SCOPE OF WORK**

The U.S. District Court – Michigan Eastern District's standard for courtroom AV equipment has been to use Crestron, Biamp and Extron. Equivalent equipment can be quoted and will be considered. Equivalent equipment quotes must be submitted with documentation and specifications on how the equipment conforms to existing installs and programming.

The install in this courtroom is different than our standard courtroom configuration. We want to install a video conference unit permanently in the courtroom and provide inputs/outputs for sending computer data/audio from the judge, clerk and lectern. The court started a design process through an AO BPA, but it was determined it was not cost effective to continue down that route. I have attached the equipment list and drawings from this design.

The AO design called for the VTC camera to be mounted at the lectern on a 55" display that would go up and down (see lectern preliminary drawing). There would be two displays mounted on the columns for courtroom viewing. There is also an interpreter piece to the design that utilizes IR. If the interpreter piece can be worked out in time, we would like it to be quoted. At the very least consideration for the interpreter should be considered in your design.

The existing speakers will be used. We want to upgrade the existing Biamp Audiaflex with the Biamp Tesira model and add a Shure dual wireless microphone to allow for a handheld and lapel to be used at the same time. The existing rack location will be used.

This courtroom is NOT scheduled for construction. Existing floor boxes will be used. Electrical and data path will need to be added to the columns for displays. We ask that you include any infrastructure needs as part of your quote.

Flint Magistrate Courtroom 114 Technology Upgrade:

- 1. Contractor walkthrough on August 30, 2016 @11:00 AM in Flint Michigan.
- 2. Equipment, Installation and Design Quote due on September 7, 2016 @5:00 PM EDT
- 3. Quotes must include amount of time needed to complete the project and length of lead time needed for start of project.
- 4. Review of Quotes and Awarding of contract (Subject to the Availability of Funds)
- 5. Installation and programming of equipment (to be approved by COTR)
- 6. Testing of Equipment and control system (to be approved by COTR)
- 7. Training IT and chambers personnel on the use of the equipment.
- 8. Power Point or equivalent presentation on courtroom operation.
- 9. Project sign off on completion of courtroom by COTR

#### **SECURITY REQUIRMENTS**

The contractor shall provide competent personnel to perform services under this contract. Work shall be performed in accordance with the best commercial practices, without unnecessary delays or interference with the Court's mission or functions. The Contracting Officer (CO) and the Contracting Officer's Technical Representative (COTR) reserves the right to judge the adequacy of the services provided, and may require the contractor to replace the support resource(s), if deemed inadequate. Formal U.S. Marshal Service security clearances are required prior to the start of any work. Personnel contracted by the Courthouse to provide services covered under this contract will be subjected to security background checks and U.S. Marshal daily inspections when entering the Courthouse. The contractor shall be responsible for completing a contractor clearance document for the contractor's employees performing said services. Upon completion, the document should be returned via fax or email to the Contracting Officer, Bill Truskowski, at 313-202-5843. This document enables the Court to complete a background check on the worker(s) provided by the contractor. The document MUST be completed prior to the contract work start date. Under no circumstances shall any court data and/or property be taken or removed from the court.

#### **DOCUMENTATION REQUIREMENTS**

The Contracting Officer (CO) will issue the winning bidder a purchase order based on the Statement of Work. The Court's purchase order will be the ONLY governing document for the procurement of goods and services from the contractor. The contractor shall be responsible for providing an invoice billed to the Court with net 30 day payment terms. The Court does not pay for services prior to them being rendered. Upon receipt of the invoice by the Court, and verification that work has been completed by the Court's Technical Representative, payment will be rendered to the contractor for the specified amount.

#### **CONTRACT CLAUSES**

Once the Award has been made, the Court reserves the right to cancel the contract with the contractor for failure to complete the work as specified in this agreement. The person(s) assigned by the contractor to perform the specified work shall not be deemed a U.S. District Court Employee, but shall be an employee of the contractor. The contractor warrants that its employees are adequately covered by workers compensation insurance and that it assumes total responsibility to pay all applicable federal, state and local withholding taxes and unemployment taxes, as well as social security, state disability insurance and all other payroll charges. The contract further warrants that the person(s) performing the work are certified and knowledgeable enough complete the work as specified in the statement of work. Other pertinent information will be provided to the contractor upon acceptance of the winning bid proposal. This information will include the following: 1) exact start and end time of daily work hours, 2) miscellaneous information (example: driving directions, and parking information).

#### **CONTRACT MANAGEMENT**

The administration of this contract will require coordination between the contracting officer, the COTR, and the contractor. The individuals cited below will be the court's primary points of contact during the performance period. In no event shall any understanding or agreement, modification, change order, or other matter in deviation from the terms of this contract between the contractor and a person other than the contracting officer be effective or binding upon the Court. All such actions must be formalized by a proper contractual document and signed by all parties.

**CONTRACTING OFFICER:** All administration of this contract will be effected by the contracting officer:

Bill Truskowski – Procurement Officer United States District Court 231 West Lafayette Blvd – Room 827 Detroit, MI 48226

Phone: 313-234-5362 Fax: 313-202-5843

Email: william truskowski@mied.uscourts.gov

Written communications shall make reference to the contract title and shall be mailed to the above address. The contracting officer is authorized to certify invoices for payment in accordance with the terms of this contract.

#### **CONTRACTING OFFICER TECHNICAL REPRESENTATIVE (COTR):**

#### The COTR for this contract is:

#### Jay Theisen - Systems Manager

United States District Court 231 West Lafayette Blvd. Detroit, MI 48226

Phone: 313-234-2618

Email: james theisen@mied.uscourts.gov

Upon award, the COTR will be responsible for coordinating the installation and performance of services with regards to this contract. *However, the COTR shall not be authorized to change any terms and conditions of the resultant contract, including, but not limited to, price.* 

#### Responsibilities of the COTR include:

- 1. Monitoring the performance of the contractor's employee(s) under the contract to ensure compliance with the contract requirements.
- 2. Ensuring that changes in work under the contract are not initiated before written authorization or modification is issues by the contracting officer.
- 3. Providing interpretation of the meaning of project specifications.
- 4. Accepting the contractor's equipment and services.

#### LIMITED USE OF DATA

Performance of this contract may require the contractor's employee(s) to access and use data and information proprietary to the government, which is of such a nature that its dissemination or use, other than in performance of this contract, would be adverse to the interest of the government and/or others. The contractor and/or contactor personnel shall not divulge or release data or information developed or obtained in performance of this contract. The contractor and its employees shall not use, disclose, or reproduce proprietary data other than as required in the performance of this contract.

#### **PLACE OF PERFORMANCE**

Delivery of equipment/services reflected on this contract shall be performed at the U.S. District Court, 600 Church Street, Flint, MI 48502. Work will be performed during hours that do not impact the activities of the Court or adjacent courtrooms. Performance may take place during normal work hours (8:00 am to 5:00 pm). However, installation must be restricted to dates that will not interfere with the Judge's schedule. Dates will be provided to the contractor upon successful award of contract.

#### **TYPE OF CONTRACT**

This contract shall be awarded on a **Technically Sound/Best Price and Past Performance Basis**. The awarding of this contract is subject to the availability of funds and approval from our Chief Judge. Winning contracting must be available for millwork contractor to review and discuss any and all AV equipment needs for the modification and construction of witness box, lectern and attorney tables.

#### **PROPOSAL DUE DATE**

Proposals are due no later than **September 7, 2016 @5:00 PM**. Offers will be subject to FAR 52.214-7, "Late Submissions, Modifications, and Withdrawal of Bids".

Submit a copy of the proposal, via email or fax to:

Bill Truskowski – Contracting Officer United States District Court 231 West Lafayette Blvd – Room 827

Detroit, MI 48226

Phone: 313-234-5362 Fax: 313-202-5843 Email: william truskowski@mied.uscourts.gov



## ATTACHMENT A Port Huron Courtroom - Courtroom Technology Upgrade

The U.S. District Court – Michigan Eastern District's standard for courtroom AV equipment has been to use Crestron, Biamp and Extron. Equivalent equipment can be quoted and will be considered. Equivalent equipment quotes must be submitted with documentation and specifications on how the equipment conforms to existing installs and programming.

Award winning contractor for this project must be able to attend construction meetings as necessary to coordinate installation and to provide requirements to construction contractor.

Spare AUDIO cable to be pulled to each floor box location and judge and clerks bench and witness box.

Pull Court supplied CAT cable from rack to network switch and terminate.

Pull string to be pulled to each floor box location and judge and clerks bench from rack.

System to be thoroughly tested and vetted by AV contractor before handoff to court.

Court to receive ALL source code and must approve ALL programming code

Presentation (PPS or equivalent) with updated images and instruction that can be provided to chambers to give to attorney's for operational purposes.

An Xpanel.exe of the control panel needs to be provided by contractor.

Sign off on courtroom completion by COTR.

#### **VIDEO CONFERENCE:**

1 each – CODEC and Camera(s). Courts standard is Cisco VTC. Camera to be used for Judge and Witness.

#### **DISPLAYS:**

2 each - 55" Displays with mounts to be mounted on columns behind bench

#### Lectern/Podium:

1 each - DM201c input (or equivalent)

1 each – 55" Display to be mounted on up/down mount provides by millworks

1 each - VTC camera

#### Judge Bench:

1 each - Crestron TSW-1050-B-S 10" Tabletop Touch Panel or Equivalent (with long enough whip to move to clerk in future)

1 each - Crestron DM201c input or Equivalent

1 each – Audio out line with mini connector – for use if we need to plug in a speaker at the judge's bench

#### **Witness Box:**

1 each – VTC Camera or share PTZ with Lectern?

#### Clerk Bench:

- 1 each Crestron DM201c input or Equivalent
- 1 each XLR Microphone jack
- 1 each Shure 18" Gooseneck microphones or equivalent

#### AUDIO:

1 each - Biamp Tesira to replace existing Audiaflex. With VOIP card and max I/O cards (same amount of I/O as previous Tesira systems) or equivalent.

- Reuse existing microphones
- Use Existing Speakers.

#### **CONTROL:**

Crestron Control System or Equivalent with as necessary for all inputs/outputs.

#### RACK:

Existing Rack Location remaining the same.

1 each – New Rack as needed. With Smoked Glass Door, Wood Top and Sides, Back, Casters and UPS. Long enough wire whips to pull rack out for service.

1 each - 24 Port Switch

2 each - 24 port patch panel or 1 each - 48 port patch panel

#### **ANNOTATION:**

NO ANNOTATION

#### **Attorney Tables - Prosecution & Defense**

ADDITIONAL MICS/JACKS TBD - Shure 18" Gooseneck microphones or equivalent

#### Judge Bench:

1 each - Crestron TSW-1050-B-S 10" Tabletop Touch Panel or Equivalent (with long enough whip to move to clerk in future)

1 each - Crestron DM201c input or Equivalent

1 each – Audio out line with mini connector – for use if we need to plug in a speaker at the judge's bench

#### **Clerk Bench:**

1 each - Crestron DM201c input or Equivalent

1 each - XLR Microphone jack

1 each - Shure 18" Gooseneck microphones or equivalent

#### **Court Reporter:**

1 each - FTR Audio Wiring for digital recordings (4 audio lines)

1 each – Audio line for Practical Devices XM4 Headphone amp.

1 each - Audio line for laptop recording

1 each – Practical Devices XM4 Headphone Amp or equivalent. Or better solution.

#### **Interpreter Solution:**

TO BE DISCUSSED AT WALK THROUGH

#### 1009 Loudspeaker, 2-way black small format 80W powered

Provide and install loudspeaker at VTC display as indicated. Set gain at loudspeaker at maximum level and attenuate only in rack-mounted equipment. Provide additional mounts as needed under this CLIN. All loudspeakers are to be securely mounted and not movable by the end users. Route only far-end codec audio to the speakers.

**Recommended Equipment** Behringer (Music Group) CE500A-BK or Equivalent:

#### 1010 Loudspeaker, 6.75"x11"x 1.75" surface mount

Provide and install surface mount loudspeaker at locations indicated. Provide surface mount raceway to match adjoining surface under this CLIN. Provide transformer for all loudspeakers connected for constant voltage usage.

**Recommended Equipment** Innovox Audio, LLC SL-1.1US-BLK-70V or Equivalent:

#### 1011 Panel, Interpreter box and control

Provide and install interpreter control box. Provide custom connections and pin configurations for cable and connectors provided. Provide switching functions as defined in specification.

**Recommended Equipment** Quantum 1952 Interpreter Control (P/N 001952) or Equivalent:

#### 1012 Server, Fixed AEC 12x8 with USB

Provide, install and configure DSP. Set all levels according to specifications. Provide routing matrix for mix minus-configuration.

**Recommended Equipment** Biamp Systems TesiraFORTÉ AVB CI or Equivalent:

#### 1013 Server, Fixed AEC 12x8 with VoIP and USB

Provide, install and configure DSP. Set all levels according to specifications. Provide routing matrix for mix minus-configuration.

**Recommended Equipment** Biamp Systems TesiraFORTÉ AVB VI or Equivalent:

#### 1014 Supply, 24 VDC 500mA power wall wart type

Provide and install power supplies for transformers. Mount supplies in secure location. Do not use power outlets that be used by staff or attorneys.

**Recommended Equipment** RDL - Radio Design Labs PS-24AS or Equivalent:

#### 1015 Switch, AVB ready 16-port managed

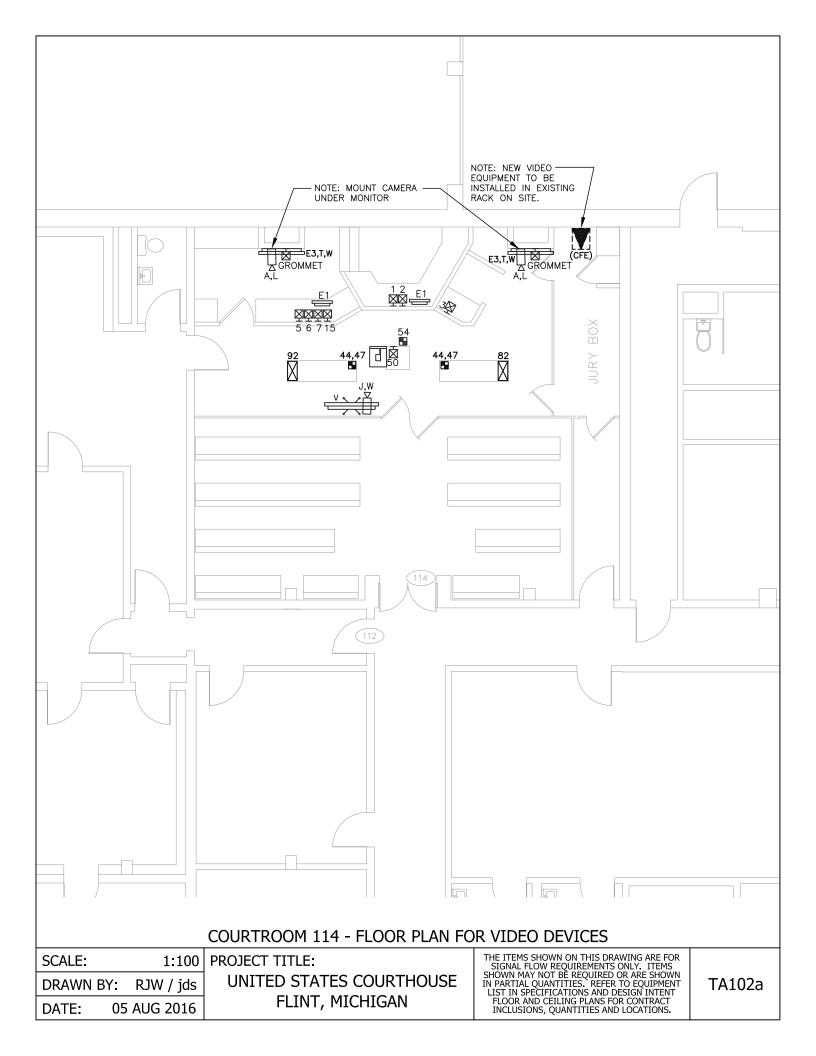
Provide switch and AVB license and install in AVB network. Configured as required for proper network functionality.

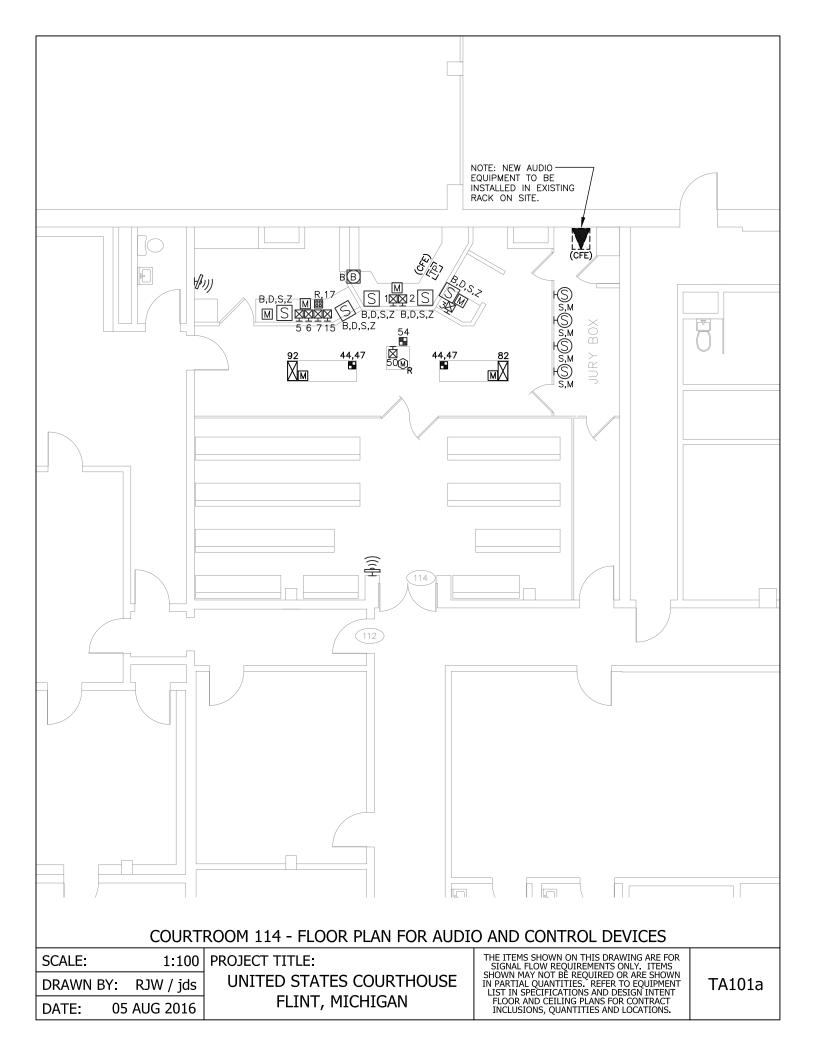
**Recommended Equipment** Netgear GS716Tv3 or Equivalent:

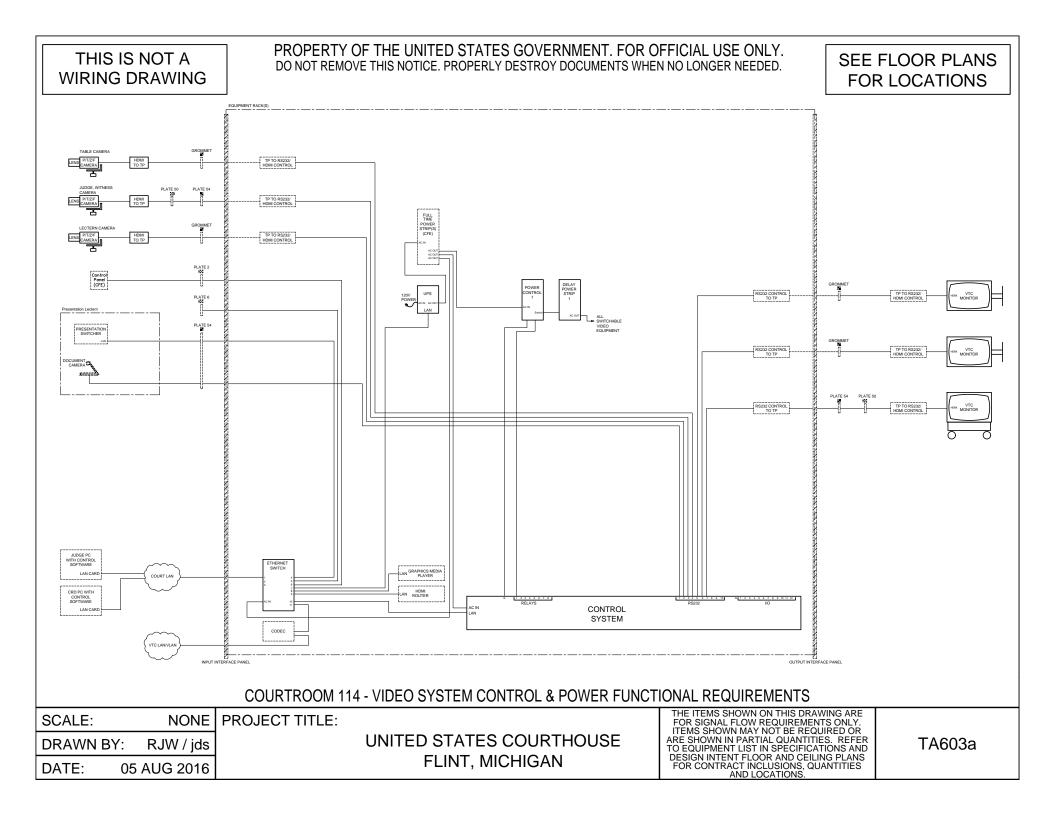
#### 1016 System, Dual emitter stereo IR assistive listening

Provide turnkey assistive listening system with modulator, emitters, headsets, brackets, charger and other accessories. Provide, charge, test and turn over to court staff wireless headsets. Assist in locating charge base at deputy area or in chambers. Provide power cable wire management. Mount emitters at location shown. Verify color of emitter prior to ordering.

**Recommended Equipment** Sennheiser SI1015-4000 Dual or Equivalent:



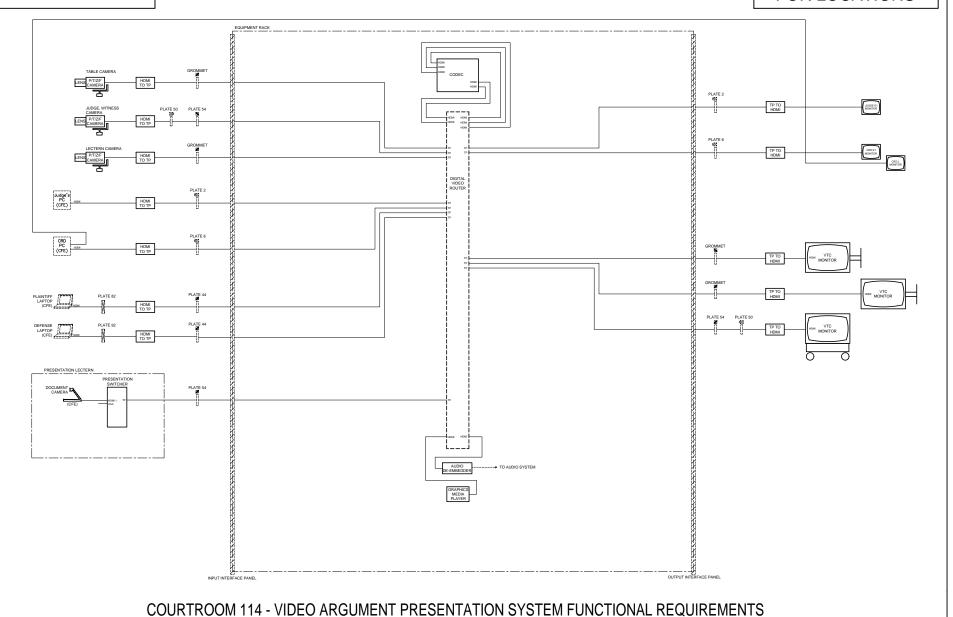




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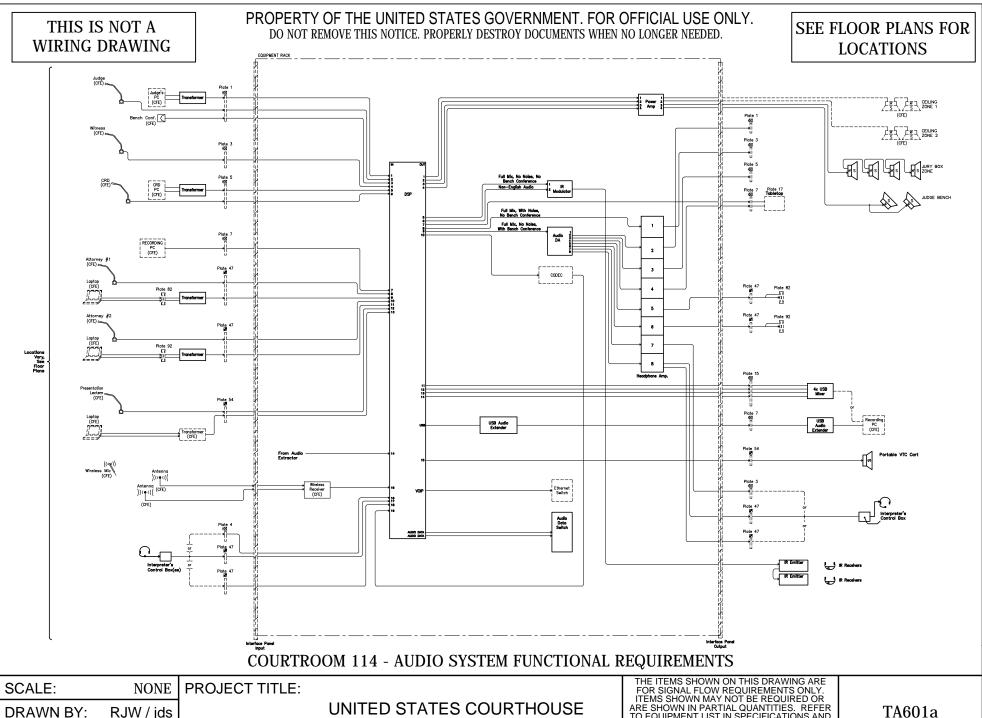
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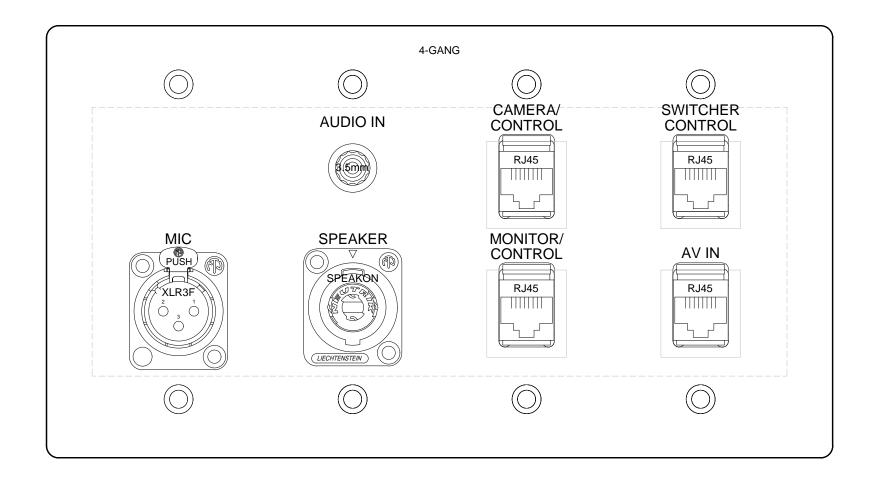
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#### COURTROOM 114 - PLATE #54 - FUNCTIONAL REQUIREMENTS

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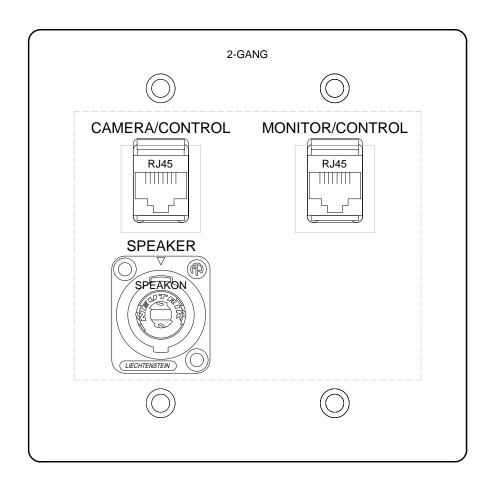
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#### COURTROOM 114 - PLATE #50 - FUNCTIONAL REQUIREMENTS

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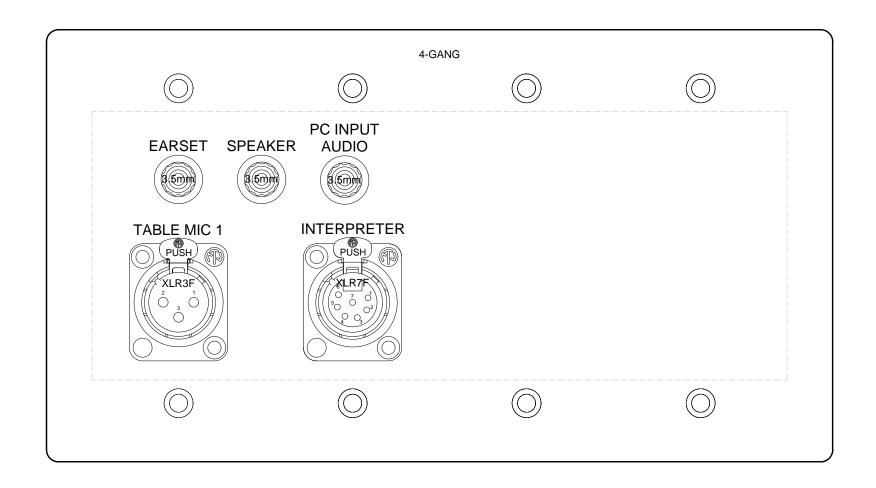
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#### COURTROOM 114 - PLATE #47 - FUNCTIONAL REQUIREMENTS

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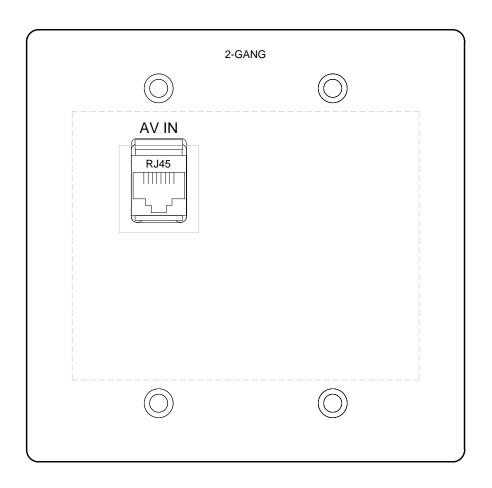
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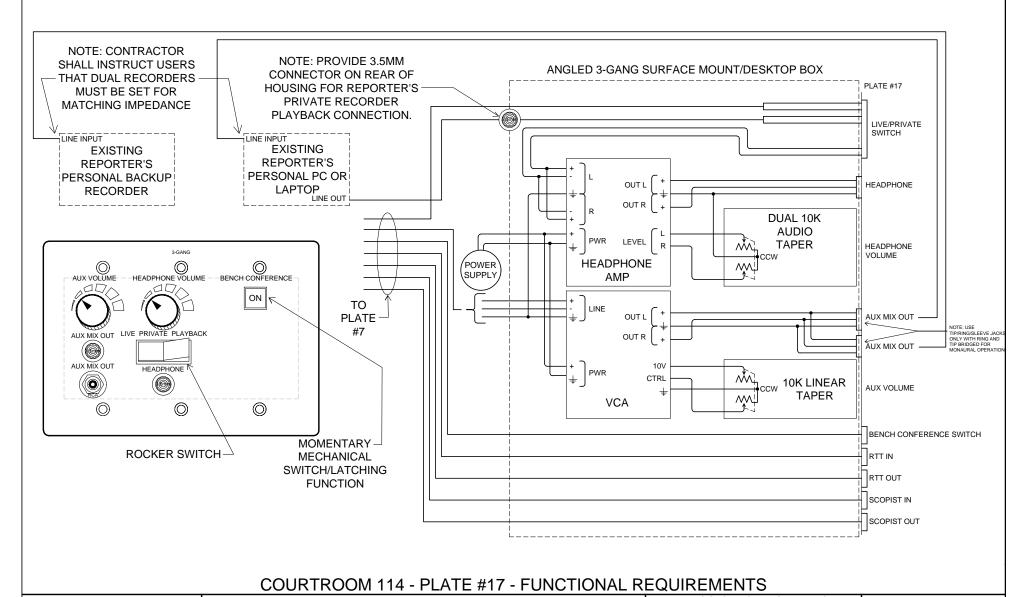
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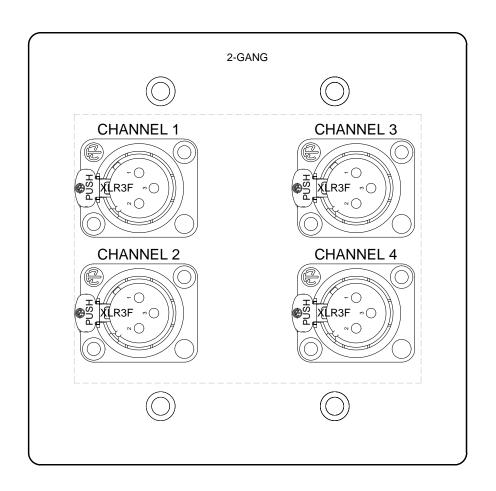
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#### COURTROOM 114 - PLATE #15 - FUNCTIONAL REQUIREMENTS

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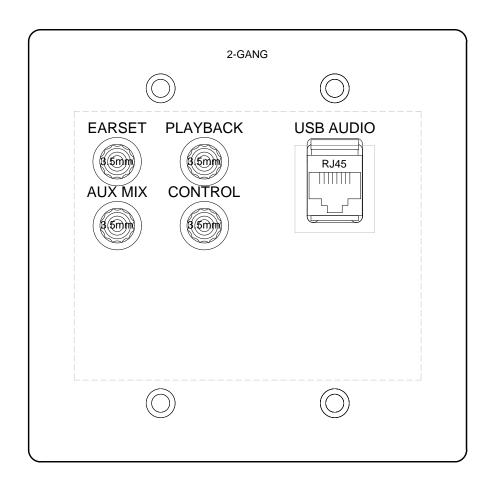
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#### COURTROOM 114 - PLATE #7 - FUNCTIONAL REQUIREMENTS

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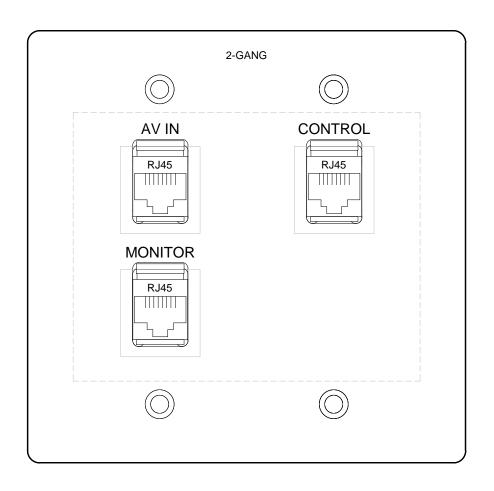
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#### COURTROOM 114 - PLATE #6 - FUNCTIONAL REQUIREMENTS

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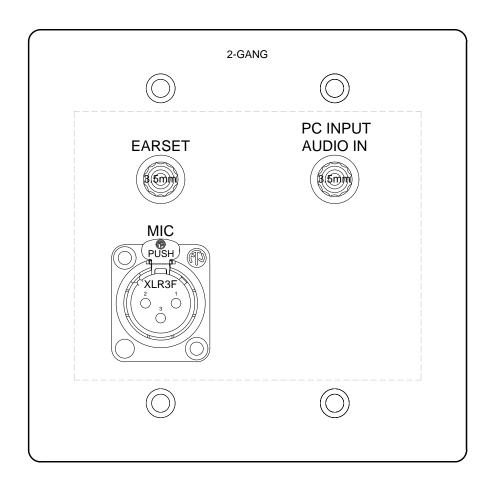
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#### COURTROOM 114 - PLATE #5 - FUNCTIONAL REQUIREMENTS

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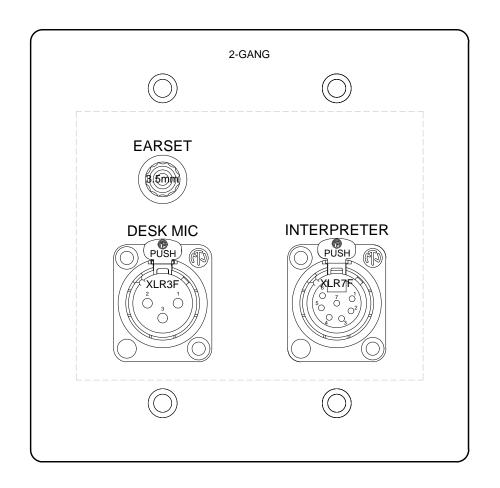
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#### COURTROOM 114 - PLATE #3 - FUNCTIONAL REQUIREMENTS

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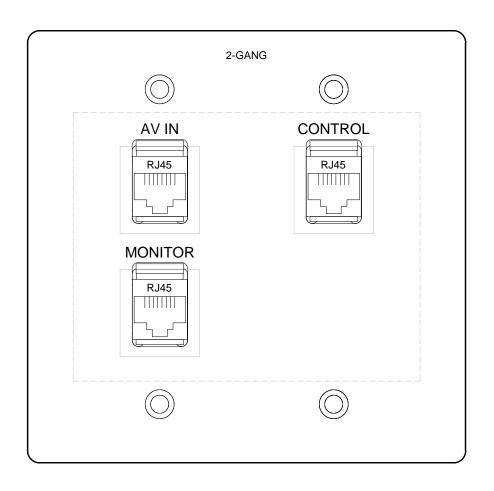
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#### COURTROOM 114 - PLATE #2 - FUNCTIONAL REQUIREMENTS

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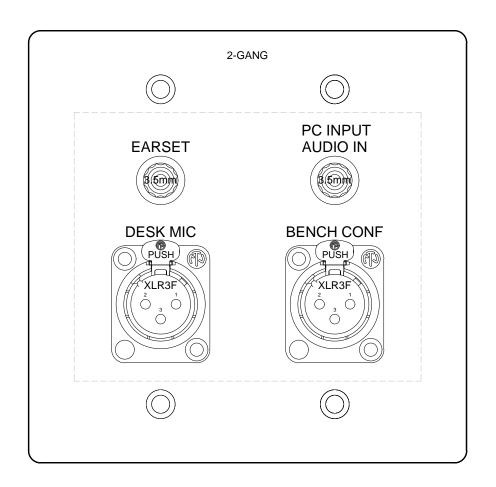
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#### COURTROOM 114 - PLATE #1 - FUNCTIONAL REQUIREMENTS

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DATE: 05 AUG 2016

PROJECT TITLE:

UNITED STATES COURTHOUSE FLINT, MICHIGAN

THE ITEMS SHOWN ON THIS DRAWING ARE FOR SIGNAL FLOW REQUIREMENTS ONLY. ITEMS SHOWN MAY NOT BE REQUIRED OR ARE SHOWN IN PARTIAL QUANTITIES. REFER TO EQUIPMENT LIST IN SPECIFICATIONS AND DESIGN INTENT FLOOR AND CEILING PLANS FOR CONTRACT INCLUSIONS, QUANTITIES AND LOCATIONS.

TA701a

**SCHEDULE B-1** 

The equipment listed on this page is for the Client Furnished Equipment
\*Note: Items on these sheetsa rea not included in the BASE BID and may or may not be awarded at time of bid. The cost quoted for bid on these items will be valid for ninty (90) days after the bid has been awarded.

	Item	-	ty Unit Price	Total Price
Client	Furnished Equipment Audio Systems Summ	nary (CFE)		
	Total Equipment/Material			
2000	Total Programming, Wiring, Installation, and Misc. Labor			-
3000	OPTIONAL MAINTENANCE			
3001	Year 1		Warranty	
3002	Year 2			
3003	Year 3			
3004	Year 4			
	Total Optional Maintenance			
4000	Fixed Price Line Item for Travel			
4001	Number of Trips x Cost per trip			
	TOTAL PRICE FOR SYSTEM			
Video	Systems			
Courtr	oom 114			
Courtr	oom Video Argument Presentation Systems	Functional Requirements * Refe	r to drawing <b>T</b>	ΓΑ602
1201	Camera, portable size 1-CCD progressive scan document	WolfVision, Inc. VZ-9 +3	1	
	Client Furnished Equipment Video Systems Materials Subtotal (CFE)			
	Client Furnished Equipment Video Systems Misc. Materials, Freight, Tax Subtotal (CFE)			
	Client Furnished Equipment Video Systems Programming, Wiring, Installation, and Misc. Labor Subtotal (CFE)			
	Client Furnished Equipment Video Systems System Subtotal (CFE)			
Client	Furnished Equipment Video Systems Sumr	nary (CFE)		
	Total Equipment/Material			
2000	Total Programming, Wiring, Installation, and Misc. Labor			
3000	OPTIONAL MAINTENANCE			
	Year 1		Warranty	
	Year 2			
3003	Year 3			
3004	Year 4			
	Total Optional Maintenance			
4000	Fixed Price Line Item for Travel			
4001	Number of Trips x Cost per trip			
	TOTAL PRICE FOR SYSTEM			
	1			

United States District Court, Flint, MI

Design Report

Schedule B

Page 15

The equipment listed on this page is for the Client Furnished Equipment
\*Note: Items on these sheetsa rea not included in the BASE BID and may or may not be awarded at time of bid. The cost quoted for bid on these items will be valid for ninty (90) days after the bid has been awarded.

SCHE	DULE B-1				
CLIN	ltem	Make/Model or Equivalent	Qty	Unit Price	Total Price
	Furnished Equipment				
	Systems				
	oom 114	4 * D £ 4 1 1 TA004			
	oom Audio Systems Functional Requiremen		1		
1194	Microphone, Black omnidirectional boundary	Shure Incorporated MX391B/O	1		
1195	Microphone, Cardiod switched 18" gooseneck desk stand	Shure Incorporated MX418D/C	6		
1196	Microphone, Wireless UHF receiver and lavalier	Shure Incorporated UT124/85	1		
Courtre TA603	oom AV Argument Presentation System Co	ntrol & Power Functional Requi	reme	nts * Refer	to drawing
1197	Panel, 5.7" tabletop wired color control touch	Crestron Electronics TPS-6	1		
	Client Furnished Equipment Audio Systems Materials Subtotal (CFE)				
	Client Furnished Equipment Audio Systems Misc. Materials, Freight, Tax Subtotal (CFE)				
	Client Furnished Equipment Audio Systems Programming, Wiring, Installation, and Misc. Labor Subtotal (CFE)				
	Client Furnished Equipment Audio Systems System Subtotal (CFE)				
Courtr	oom 127				
Courtr	oom Audio Systems Functional Requireme	nts * Refer to drawing TA601			
1198	Microphone, Black omnidirectional boundary	Shure Incorporated MX391B/O	1		
1199	Microphone, Cardiod switched 18" gooseneck desk stand	Shure Incorporated MX418D/C	9		
1200	Microphone, Wireless UHF receiver and lavalier	Shure Incorporated UT124/85	2		
	Client Furnished Equipment Audio Systems Materials Subtotal (CFE)				
	Client Furnished Equipment Audio Systems Misc. Materials, Freight, Tax Subtotal (CFE)				
	Client Furnished Equipment Audio Systems Programming, Wiring, Installation, and Misc. Labor Subtotal (CFE)				
	Client Furnished Equipment Audio Systems System Subtotal (CFE)				

United States District Court, Flint, MI Design Report

SCHE	DULE B-1				
CLIN	Item	Make/Model or Equivalent	Qty	Unit Price	<b>Total Price</b>
Plate #	44 * Refer to drawing TA744				
1191	Plate - See Drawings for Details	Custom N/A	2		
Plate #	50 * Refer to drawing TA750		·		
1192	Plate - See Drawings for Details	Custom N/A	1		
Plate #	54 * Refer to drawing TA754		·		
1193	Plate - See Drawings for Details	Custom N/A	1		
	Base Bid Video Systems Materials Subtotal (Base Bid)				
	Base Bid Video Systems Misc. Materials, Freight, Tax Subtotal (Base Bid)				
	Base Bid Video Systems Programming, Wiring, Installation, and Misc. Labor Subtotal (Base Bid)				
	Base Bid Video Systems System Subtotal (Base Bid)				
Base E	Bid Video Systems Summary (Base Bid)				
	Total Equipment/Material				
2000	Total Programming, Wiring, Installation, and Misc. Labor				
3000	OPTIONAL MAINTENANCE				
3001	Year 1			Warranty	
3002	Year 2				
3003	Year 3				
3004	Year 4				
	Total Optional Maintenance				
4000	Fixed Price Line Item for Travel				
4001	Number of Trips x Cost per trip				
	TOTAL PRICE FOR SYSTEM				

SCHE	DULE B-1				
CLIN	Item	Make/Model or Equivalent	Qty	<b>Unit Price</b>	Total Price
1174	Router, Cage for 16 slot by 16 slot	Crestron Electronics DM- MD16X16	1		
1175	Stand, 100x100 low profile VESA monitor table	Ergomart EGT SL102-100	5		
1176	Streamer, Rich media HDMI Content and HD-SDI camera recorder and	Crestron Electronics CAPTURE-HD-PRO	1		
1177	Switcher, Multi-format by DM and HDMI with audio	Crestron Electronics DMPS3- 100-C	1		
1178	Transmitter, DigitalMedia 8G STP	Crestron Electronics DM-TX-4K-202-C	8		
Plate #	2 * Refer to drawing TA702				
1179	Box, 2-Gang black surface mount wall back	Extron Electronics EWB 102 (60-1162-02)	1		
1180	Plate - See Drawings for Details	Custom N/A	1		
Plate #	4 * Refer to drawing TA704		1		1
1181	Box, 2-Gang black surface mount wall back	Extron Electronics EWB 102 (60-1162-02)	1		
1182	Plate - See Drawings for Details	Custom N/A	1		
Plate #	6 * Refer to drawing TA706				
1183	Box, 2-Gang black surface mount wall back	Extron Electronics EWB 102 (60-1162-02)	1		
1184	Plate - See Drawings for Details	Custom N/A	1		
Plate #	8 * Refer to drawing TA708				
1185	Box, 2-Gang black surface mount wall back	Extron Electronics EWB 102 (60-1162-02)	1		
1186	Plate - See Drawings for Details	Custom N/A	1		
Plate #	24 * Refer to drawing TA724				
1187	Plate - See Drawings for Details	Custom N/A	1		
Plate #	26 * Refer to drawing TA726			1	<u> </u>
1188	Plate - See Drawings for Details	Custom N/A	2		
Plate #	28 * Refer to drawing TA728		1	1	1
1189	Box, 4-Gang black surface mount wall back	Extron Electronics EWB 104 (60-1164-02)	1		
1190	Plate - See Drawings for Details	Custom N/A	2		

SCHE	DULE B-1			
CLIN	Item	Make/Model or Equivalent	Qty Unit Price	Total Price
Courtre	oom 127			
Courtre	oom Video Argument Presentation Systems	s Functional Requirements * Re	fer to drawing	ГА602
1153	Amplifier, 1x2 HDMI 4K distribution	Crestron Electronics HD-DA2- 4K-E	2	
1154	Amplifier, 1x4 HDMI 4K distribution	Crestron Electronics HD-DA4- 4K-E	1	
1155	Amplifier, 1x8 HDMI 4K distribution	Crestron Electronics HD-DA8- 4K-E	1	
1156	Annotator, HDCP compliant with DTP	Extron Electronics Annotator 300 (60-1316-01)	1	
1157	Camera, 1080p HDMI PTZ video conferencing	LifeSize Communications Camera 10x	2	
1158	Camera, 1-CCD Hi-Res evidence	WolfVision, Inc. VZ-8 Plus (4)	1	
1159	Card, 1 Channel HDBT input	Crestron Electronics DMC-4K-C-HDCP2	8	
1160	Card, 1-channel HDMI input	Crestron Electronics DMC-4K-HD-HDCP2	2	
1161	Card, 2-Channel HDMI output	Crestron Electronics DMC-4K-HDO	1	
1162	Card, 2-Channel scaling HDBT output	Crestron Electronics DMC-4K-CO-HD-HDCP2	7	
1163	Cart, Metal shelf and black 32"-60" flat panel portable	Peerless Industries, Inc SR560M	1	
1164	Cart, Presentation/Videoconferencing Black	Video Furniture International C2736-42	1	
1165	Codec, Dual camera and dual display rack mount VTC	LifeSize Communications ICON 800	1	
1166	Display, 55" 1920x1080 RS-232 controlled LED flat panel	Samsung DB55E	4	
1167	Extractor, HDMI audio	Extron Electronics HAE 100 (60-1075-01)	1	
1168	Filter, 20 1/16" W x 11 5/16" H 23.0" 16:9 Display privacy	3M Visual Systems Division PF23.0W9	2	
1169	Monitor, 22" 16:9 USB interface optical touch screen video	Planar PXL2230MW	3	
1170	Monitor, 23" 16:9 1920x1080 LED black	Hewlett-Packard E232-BLK	19	
1171	Mount, Single arm swing out black universal large flat panel wall	Chief Manufacturing Inc. PWRUB	2	
1172	Player, HD real-time media	BrightSign BrightSign HD1022	1	
1173	Receiver, DigitalMedia 4K/8G and room controller 100	Crestron Electronics DM-RMC- 4K-100-C	16	

SCHE	DULE B-1				
CLIN	ltem	Make/Model or Equivalent	Qty	Unit Price	Total Price
1147	Plate - See Drawings for Details	Custom N/A	1		
Plate #	15 * Refer to drawing TA715		I		
1148	Box, 2-Gang black surface mount wall back	Extron Electronics EWB 102 (60-1162-02)	1		
1149	Plate - See Drawings for Details	Custom N/A	1		
Plate #	444 * Refer to drawing TA744		I		
1150	Plate - See Drawings for Details	Custom N/A	2		
Plate #	50 * Refer to drawing TA750				
1151	Plate - See Drawings for Details	Custom N/A	1		
Plate #	54 * Refer to drawing TA754				
1152	Plate - See Drawings for Details	Custom N/A	1		
	Base Bid Video Systems Materials Subtotal (Base Bid)				
	Base Bid Video Systems Misc. Materials, Freight, Tax Subtotal (Base Bid)				
	Base Bid Video Systems Programming, Wiring, Installation, and Misc. Labor Subtotal (Base Bid)				
	Base Bid Video Systems System Subtotal (Base Bid)				

CLIN	Item	Make/Model or Equivalent	Qty Unit Price	Total Price
	Systems		acy omer noo	1014111100
	room 114			
Courtr	oom Video Argument Presentation Systems	s Functional Requirements * Re	efer to drawing	ГА602
1128	Camera, 1080p HDMI PTZ video conferencing	LifeSize Communications Camera 10x	3	
1129	Card, 1 Channel HDBT input	Crestron Electronics DMC-4K-C-HDCP2	8	
1130	Card, 1-channel HDMI input	Crestron Electronics DMC-4K-HD-HDCP2	2	
1131	Card, 2-Channel HDMI output	Crestron Electronics DMC-4K-HDO	2	
1132	Card, 2-Channel scaling HDBT output	Crestron Electronics DMC-4K-CO-HD-HDCP2	3	
1133	Cart, Metal shelf and black 32"-60" flat panel portable	Peerless Industries, Inc SR560M	2	
1134	Codec, Dual camera and dual display rack mount VTC	LifeSize Communications ICON 800	1	
1135	Display, 55" 1920x1080 RS-232 controlled LED flat panel	Samsung DB55E	3	
1136	Extractor, HDMI audio	Extron Electronics HAE 100 (60-1075-01)	1	
1137	Monitor, 23" 16:9 1920x1080 LED black	Hewlett-Packard E232-BLK	3	
1138	Mount, Tilt only large flat panel wall	Chief Manufacturing Inc. LTMU	2	
1139	Player, HD real-time media	BrightSign BrightSign HD1022	1	
1140	Receiver, DigitalMedia 4K/8G and room controller 100	Crestron Electronics DM-RMC- 4K-100-C	5	
1141	Router, Cage for 16 slot by 16 slot	Crestron Electronics DM- MD16X16	1	
1142	Switcher, HDMI and VGA x DM out presentation	Crestron Electronics DM-TX-4K-302-C	1	
1143	Transmitter, DigitalMedia 8G STP	Crestron Electronics DM-TX-4K-202-C	7	
Plate #	<sup>‡</sup> 2 * Refer to drawing TA702	1		
1144	Box, 2-Gang black surface mount wall back	Extron Electronics EWB 102 (60-1162-02)	1	
1145	Plate - See Drawings for Details	Custom N/A	1	
Plate #	t6 * Refer to drawing TA706			1
1146	Box, 2-Gang black surface mount wall back	Extron Electronics EWB 102 (60-1162-02)	1	

SCHE	DULE B-1				
CLIN	ltem	Make/Model or Equivalent	Qty	Unit Price	Total Price
1124	Switch, DPDT rocker selector	Wiring Products 7700024	1		
1125	Switch, SPST momentary with amber lens and 24 VDC square low voltage push button	Various See drawing	1		
Plate #	43 * Refer to drawing TA743				
1126	Plate - See Drawings for Details	Custom N/A	1		
Plate #	47 * Refer to drawing TA747				<u> </u>
1127	Plate - See Drawings for Details	Custom N/A	1		
	Base Bid Audio Systems Materials Subtotal (Base Bid)				
	Base Bid Audio Systems Misc. Materials, Freight, Tax Subtotal (Base Bid)				
	Base Bid Audio Systems Programming, Wiring, Installation, and Misc. Labor Subtotal (Base Bid)				
	Base Bid Audio Systems System Subtotal (Base Bid)				
Base E	Bid Audio Systems Summary (Base Bid)				
	Total Equipment/Material				
2000	Total Programming, Wiring, Installation, and Misc. Labor				
3000	OPTIONAL MAINTENANCE				_
3001	Year 1			Warranty	
3002	Year 2				
3003	Year 3				
3004	Year 4				
	Total Optional Maintenance				
4000	Fixed Price Line Item for Travel				
4001	Number of Trips x Cost per trip				
	TOTAL PRICE FOR SYSTEM			•	

	EDULE B-1	<u> </u>	- ·		
	Item	Make/Model or Equivalent	Qty	Unit Price	Total Price
1104	Switch, 24 port 10/100/1000 network	Cisco Systems, Inc. Catalyst 2960G-24TC-L	1		
1105	Transmitter, USB to TP	Extron Electronics USB Extender Plus T (60-1471-12)	3		
1106	UPS, 1000 VA 8 15A outlet IP enabled with battery backup rack mountable	Middle Atlantic Products UPS- 1000R-8IP	1		
Plate #	3 * Refer to drawing TA703				
1107	Box, 2-Gang black surface mount wall back	Extron Electronics EWB 102 (60-1162-02)	1		
1108	Plate - See Drawings for Details	Custom N/A	1		
Plate #	5 * Refer to drawing TA705				
	Box, 2-Gang black surface mount wall back	Extron Electronics EWB 102 (60-1162-02)	1		
1110	Plate - See Drawings for Details	Custom N/A	1		
Plate #	7 * Refer to drawing TA707				
	Box, 2-Gang black surface mount wall back	Extron Electronics EWB 102 (60-1162-02)	1		
1112	Plate - See Drawings for Details	Custom N/A	1		
Plate #	t17 * Refer to drawing TA717				
	Amplifier, 0 to 10 VDC remote line or microphone voltage controlled	RDL - Radio Design Labs ST- VCA3	1		
1114	Amplifier, stereo headphone	RDL - Radio Design Labs ST- SH2	1		
1115	Cable, 1 foot RJ45 blue data patch	Belkin A3L791-01-BLU-S	1		
1116	Cable, 1 foot RJ45 green data patch	Belkin A3L791-01-GRN-S	1		
1117	Cable, 6' 3.5mm to 3.5mm headphone extension	Radio Shack 42-2482	1		
1118	Headphones, No inline volume control portable 3.5mm stereo	Koss UR20	1		
1119	Housing, Black metal 3G table top angled equipment	FSR Inc. DSKB-3G with accessories	1		
1120	Plate - See Drawings for Details	Custom N/A	1		
1121	Potentiometer,10k 24mm dual audio taper	Various Alpha RV24B-10-15R1- A	1		
1121		Dini Kan Oamandian 450D400	1		
	Potentiometer,10k linear taper	Digi-Key Corporation 450D103-3-ND	'		

1084 S  1085 S  1086 T  1087 T  1088 T  1089 T  n  Courtroc	Supply, 24 VDC 500mA power wall wart type Switch, AVB ready 16-port managed System, Dual emitter stereo IR assistive istening Fransceiver, 4 channel duplex wireless base only Fransformer, 70V 15 Watt, 2.5/5/10/15 Fransformer, Unbalanced dual line level to mono balanced line level Fransmitter, RoHS compliant audio monitoring distribution streaming Fransmitter Company of the Compa	Make/Model or Equivalent  RDL - Radio Design Labs PS- 24AS  Netgear GS716Tv3  Sennheiser SI1015-4000 Dual  Revolabs 01-EXESYS4EX-BLK- NM  AMK Innovations Inc. T70V15W  RDL - Radio Design Labs TX-J2  Barix Instreamer 100 (P/N 2006.9059)  ntrol & Power Functional Require  Crestron Electronics CAGE3	5 1 1 5 5 1 reme	ents * Refe	r to drawing
1085   Si   Ii   1086   T   b   1087   T   1088   T   n   1089   T   n   1089   T	System, Dual emitter stereo IR assistive istening  Fransceiver, 4 channel duplex wireless base only  Fransformer, 70V 15 Watt, 2.5/5/10/15  Fransformer, Unbalanced dual line level to mono balanced line level  Fransmitter, RoHS compliant audio monitoring distribution streaming  Tom AV Argument Presentation System Compliant System System System System Compliant System S	Sennheiser SI1015-4000 Dual Revolabs 01-EXESYS4EX-BLK- NM AMK Innovations Inc. T70V15W RDL - Radio Design Labs TX-J2 Barix Instreamer 100 (P/N 2006.9059) ntrol & Power Functional Requirements	1 1 5 5 1 reme	ents * Refe	r to drawing
1086 T b 1087 T 1088 T n 1089 T n n Courtroo	istening  Fransceiver, 4 channel duplex wireless base only  Fransformer, 70V 15 Watt, 2.5/5/10/15  Fransformer, Unbalanced dual line level to mono balanced line level  Fransmitter, RoHS compliant audio monitoring distribution streaming  Fransmitter of the compliant audio monitoring distribution streaming  Fransmitter of the compliant audio monitoring distribution streaming	Revolabs 01-EXESYS4EX-BLK-NM  AMK Innovations Inc. T70V15W  RDL - Radio Design Labs TX-J2  Barix Instreamer 100 (P/N 2006.9059)  ntrol & Power Functional Requirements	1 5 5 1 reme	ents * Refe	r to drawing
1087 T 1088 T n 1089 T n Courtroc	Transformer, 70V 15 Watt, 2.5/5/10/15  Transformer, Unbalanced dual line level to mono balanced line level  Transmitter, RoHS compliant audio monitoring distribution streaming  Transmitter Presentation System Compliant System	NM AMK Innovations Inc. T70V15W RDL - Radio Design Labs TX-J2 Barix Instreamer 100 (P/N 2006.9059) ntrol & Power Functional Requirements	5 5 1 reme	ents * Refe	r to drawing
1088 T n 1089 T n	Fransformer, Unbalanced dual line level to mono balanced line level Fransmitter, RoHS compliant audio monitoring distribution streaming	RDL - Radio Design Labs TX-J2  Barix Instreamer 100 (P/N 2006.9059)  ntrol & Power Functional Requirements	5 1	ents * Refe	r to drawing
1089 T n Courtroc	mono balanced line level  Fransmitter, RoHS compliant audio  monitoring distribution streaming  om AV Argument Presentation System Col	Barix Instreamer 100 (P/N 2006.9059) ntrol & Power Functional Requi	1 reme	ents * Refe	r to drawing
n Courtro	monitoring distribution streaming om AV Argument Presentation System Co	2006.9059) ntrol & Power Functional Requi	reme	ents * Refe	to drawing
				ents * Refe	r to drawing
	Cage, Inboard expansion card	Crestron Electronics CAGE3	1		
1090 C					
	Card, 3 Port 3-Series RS-232/422;485 expansion slot	Crestron Electronics C3COM-3	1		
1092 C	Casters, Set of 4	Middle Atlantic Products CBS- ERK-25	1		
1093 E	Engine, Blank front panel 6 Com port control	Crestron Electronics AV3	1		
	Extender, DVI monitor and USB on 1 TP 100M	Gefen Inc. EXT-DVIKVM-ELR	1		
1095 lı	njector, Universal 100-250 Volts AC PoE	Crestron Electronics PWE- 4803RU	5		
1096 N	Mount. 10.1" Touch panel tabletop	Crestron Electronics TSW- 1050-TTK	2		
1097 C	Outlet, Cubby integrated duplex power	Crestron Electronics FTA-PWR-102	3		
1098 F	Panel, 10.1" Adaptable mount touch control	Crestron Electronics TSW- 1050-B-S	2		
	Panel, Cubby and integrated flip top 5" plack touch	Crestron Electronics FT-TS600-B	3		
	PDU, 8 outlet rear with 1 outlet front and no power switch 15A	Middle Atlantic Products PD- 915R-PL	1		
	Rack, 40RU (70") fully configured Audio/Video 25" deep	Middle Atlantic Products ERK- 4025-AV	1		
1102 F	Receiver, TP to USB	Extron Electronics USB Extender RX (60-1471-13)	4		
	Relay, 15A controlled stand alone 2 outlet 120VAC power	Middle Atlantic Products RLM- 15-1CA	2		

SCHE	DULE B-1				
CLIN	ltem	Make/Model or Equivalent	Qty	Unit Price	Total Price
Courtre	oom 127				
	oom Audio Systems Functional Requireme				
1062	Amplifier, 1:1x10 or 2:1x5 balanced audio distribution	Kramer Electronics Ltd. VM- 1610	1		
1063	Amplifier, 100 watt 8 channel 70V audio power	QSC Audio CX108V	1		
1064	Amplifier, 8-channel high-power headphone distribution	Behringer (Music Group) Powerplay PRO-8 HA8000	1		
1065	Bracket, TX series surface mounting	RDL - Radio Design Labs MB-1	5		
1066	Cabling, All expendables, misc materials, connectors and	Custom Cabling and Connectors	1		
1067	Card, 4 channel mic/line input with acoustic echo cancellation per channel input card	Biamp Systems SEC-4	7		
1068	Card, 4 channel server I/O output	Biamp Systems SOC-4	2		
1069	Expander, 4 channel mic/line output	Biamp Systems EX-OUT	2		
1070	Headset, Single ear with boom mic	Telex Communications, Inc. PH-150R	1		
1071	Interface, SIP compliant VoIP Audia frame	Biamp Systems VoIP-2	3		
1072	Loudspeaker, 2"x2"x24" miniature line array 70V	Innovox Audio, LLC MLA-16 BLK- 70V	5		
1073	Loudspeaker, 2-way black small format 80W powered	Behringer (Music Group) CE500A-BK	2		
1074	Loudspeaker, Custom backplate and a pair of low profile 8 ohm 4" automotive	JL Audio TR400-Cxi	3		
1075	Microphone, Black boundary mountable cardiod	Shure Incorporated CVB-B/C	4		
1076	Microphone, Black omnidirectional boundary	Shure Incorporated MX391B/O	2		
1077	Microphone, Cardiod switched 18" gooseneck desk stand	Shure Incorporated MX418D/C	4		
1078	Microphone, Super cardiod wired lavaliere	Shure Incorporated MX184	2		
1079	Microphone, Wireless with RF shielding lapel	Revolabs 01-EXEMICEX-BLK-	4		
1080	Panel, Interpreter box and control	Quantum 1952 Interpreter Control (P/N 001952)	1		
1081	Server, 48 channels of I/O and 1 DSP card with AVB interface	Biamp Systems SERVER-IO AVB	1		
1082	Server, Fixed AEC 12x8 with USB	Biamp Systems TesiraFORTÉ AVB CI	1		