

# **Town of Vienna**

Systems Upgrade September 28, 2018

## **Presented By:**

## **Brian Willey of Human Circuit**

9346 Gaither Road Gaithersburg, Maryland 20877 P. 240 864 4025 bwilley@humancircuit.com



## **PROJECT**

The Town of Vienna wants to increase the quality of the chamber video productions and ensure a higher level of system reliability.

## Legend



## **Control**

The current system design for control and signal routing is vulnerable to a single point of failure. The router has failed multiple times, most recently February 2018. When this occurs, routing of audio and video is lost.

#### **Control Surface**

The new design offers three points of control. In the event of a complete router failure, audio control will be available thru the iPad (Picture #1), dais touchscreen (Picture #2), and Production room web interface (Picture #3). If the controller fails, video can be manually routed at the router frame.



Picture #1 iPad



Picture #2 10.1" Touchscreen Dais





Picture #3
Desktop Monitor
Production Room

#### Router

The new router (below) has eight inputs (RED), five HDBaseT and three HDMI inputs, used as follows:



The new router has four output (GREEN), three HDBaseT and one HDMI output.

A Phoenix connection on the HDMI card will send program audio to the audio DSP.

The hallway/lobby display is currently connected to the router. Based on the new router configuration, this display will receive the cable TV tuner HDMI signal by way of the HDMI distribution amplifier in the Production room. This requires a new HDMI over fiber run.



## **Production**

The current graphic capabilities are limited and will be replaced.

#### **Package**

The CB Solo Production Pack includes a production switcher, three cameras, multiviewer, and character generator. An additional camera has been added for four cameras total.

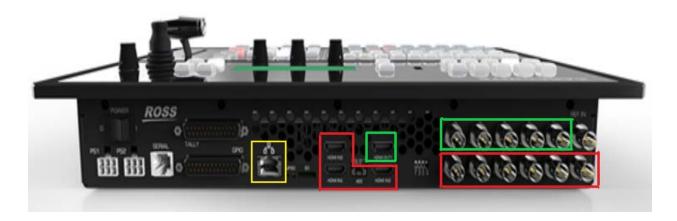


#### **Production Switcher**

The production switcher has nine inputs (RED) - six HD-SDI and three HDMI. The inputs will be used for the four HD-SDI cameras, a HDMI source from the router, and a HDMI from Production room computer. Two HD-SDI and one HDMI input are open and available for additional sources.







There are six outputs (GREEN) - five HD-SDI and one HDMI. The outputs will be used for Program out (HD-SDI) to an audio embedder. The audio embedder provides two outputs, one to the confidence monitor and one to the basement server room router. The Solo's internal multiviewer will connect via HDMI out (Green) to the monitor.

#### Inputs in RED are:

- 1. Four cameras (HD-SDI)
- 2. One DM program output (Fiber HDMI) Skype is a source selected from the DM router

## Outputs in GREEN are:

- 1. Two for Program and Multiviewer (HD-SDI)
- 2. One AV Bridge

The Solo production switcher will control the cameras over Ethernet (YELLOW) to serial conversion.

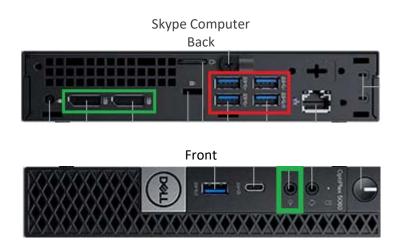
#### NPort® 5110A





## **Off-Site Council Member Meeting Participation**

The Town has requested Skype be integrated into the system to allow for Town of Vienna Council Members to join Board meetings from a remote location. This will be accomplished by providing a small form factor PC and a conference bridge integrated with the system upgrade.



A computer (above) will manage the Skype account and Council Member log-in. This computer will reside in the Production Room on the production desk. Display Port Out (Green) will connect to Transmitter (below) using HDMI In (Red). The Transmitter will send video content using HDBaseT over Cat6 Out (Green) to the DM Router located in the conference room rack. Line Audio out (Green) will send audio to the Biamp DSP in the Conference Room closet.



The DM router will route the Skype video signal to feed four audience and two dais monitors when selected by the control system. When content is displayed, the content will replace the Skype image on the displays and the Skype far end audio will be heard. Control through any interface (hardwire touch panel, iPad, and web interface) will select the source displayed on monitors.



Workflow with current design:

- 1. Skpye seen on Dais and Audience with Skype participant audio being heard along with other council members
- 2. When Audience and Dais monitors are in use, two audio scenarios exist:
  - 1. When content has no associated audio the Skype participant's audio can be heard
  - 2. When content has audio, such as a video, the Skype participant's audio cannot be heard



The AUX function on the Production Switcher (Above) will be used to select a camera feed or DM content to send to the Skype end-user via HDMI out (GREEN) to the AV Conference Bridge (Below) via HDMI in (Red).

## **AV Conference Bridge**



Program audio will be sent from the Biamp DSP to the AV Conference Bridge via XLR Audio Balanced in (Red).

The USB out (Green) will send audio video to the computer USB (Below) for Skype.

## **Skype Computer**





## **Skype System Best Practices**

The Skype integration is intended for one remote Council Member. However, Multiple remote Council Members are supported. Switching between multiple Council Members is a manual process executed in conjunction with other productions operations.

Human Circuit recommends not presenting content using Skype due to degrading quality.

#### Camera

The current Vaddio cameras will be replaced by the Ross PivotCam.

HD-SDI (GREEN) video and serial (BLUE) control.





#### **Character Generator**

The new character generator will allow for dynamic lower thirds, bugs, and PIPs.

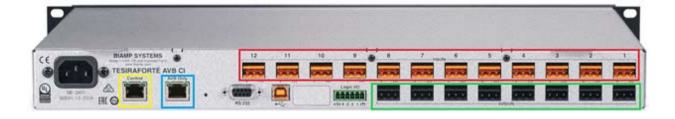


## **Audio Upgrade**

The new system will include a new digital signal processing (DSP) and assisted listening equipment.

## **Digital Signal Processor**

The DSP will include two frames connected by the AVB ports (LIGHT BLUE). There are twenty-four analog inputs (RED) on the two frames (one frame shown below) – sources include the dais microphone system, two table microphones, one podium microphone, five wireless microphones, and program audio from the router.



There are eight analog outputs (GREEN) – destinations include four zones of audio in the Chamber, two for the assisted listening systems, and two channels for audio monitoring and feeds the audio embedder.

Control is through Ethernet (YELLOW).



#### **Microphone System**

Current microphone system will be replaced to improve audio quality and provide individual microphone control. The Chair will use a dias mounted mute override to turn on/off all other dias microphones. All new microphones will have an individual button to toggle talk or mute.

## **Additional Upgrades**

The current wireless presentation system will be replaced to allow for expanded wireless capabilities for iOS, Android, and Windows devices.

A new UPS will be installed to enable proper shutdown of equipment and will offer increased protection from power interruptions.

A larger audience signal light and clock will be installed.

A larger Ethernet switch and equipment rack will be provided to accommodate additional equipment.

Replace existing Revolabs microphones.

Add second podium with microphone hardwired to floor plate



## **SCOPE OF WORK**

#### Human Circuit will:

#### Chamber

- Remove AMX equipment
  - Two receivers at dais displays
  - Four receivers at gallery displays
  - Four transmitters (1) left table, (2) right table, (1) dais at Clerk
- o Install Crestron control app on client furnished iPad
- Install Crestron 10" touch panel at dais for Council Chair, run Cat6 & connect to Ethernet port on Crestron transmitter at Clerk
- Install Crestron receivers on two dais displays & six gallery displays
- o Remove Vaddio cameras
- Install Ross cameras
- o Install DSan countdown clock in place of existing clock
- Install four Crestron transmitters
  - (1) left table, (2) right table, (1) dais at Clerk
- o Remove Taiden microphone system
- o Install eleven Shure microphones with individual bases
- o Run twelve new audio cables from rack to dias for microphones and toggle button
- o Install override (toggle talk/mute) button at Chair position

#### Chamber Conference Room

- o Remove
  - All equipment from existing rack
- o Install in 37 RU rack
  - Crestron video router and controller
  - APC UPS
  - Revolabs and Shure wireless mic receivers
  - Biamp Tesira system
  - QSC amplifier
  - Ross camera power supplies
  - HP network POE+ switch
  - Kramer VIA Go
  - Assisted Listening
  - Cable TV tuner

#### Hallway

- Remove AMX receiver from display
- o Install Crestron receiver on display
- o Kramer HDMI fiber run from basement to receiver



#### **Production Room**

- o Remove AMX and Vaddio equipment
- o Install Crestron receiver on display (which ones) (for content from tables & Clerk?)
- o Install Ross Xpression Live on all-in-one computer
- o Install display for multiviewer
- o Install Ross Carbonite Black Solo
- o Install new rack for the Wohler and Crestron router
- Install AV Bridge and PC for Skype use

## **NOTES & EXCLUSIONS**

- VASCUPP Contract
- Work to be scheduled 90-120 days from receipt of PO
- Control programming will duplicate current workflow
- Vienna to remove shelf in equipment closet.
- Vienna to redesign closet for enhance cooling. The louvers on the door to be block while keeping a bottom section open. A hole will need to be cut in to closet top. This will allow for cool air to enter the bottom and warmer to exit the top. This air circulation along with the fan will provide increase cooling capabilities than currently exist.

#### **PROJECT INVESTMENT**

The total cost to complete the Project Description and Scope of Work as specified in this proposal, with integration labor and all associated charges is provided below.

**Project Cost** \$152,408.70

Please see the attached Sales Quote SQ61335 for itemized pricing of the project.



## HUMANCIRCUIT Sales Quotation Number: SQ61355

9346 Gaither Rd., Gaithersburg, MD 20877-1416 240-864-4000 • www.humancircuit.com

Sales Quotation Date: 09/28/18

Page: 1

## Sold To:

Town of Vienna Tony Mull 127 Center Street, South Vienna, VA 22180 **United States** 

Customer ID: C3423 Terms: Net 20 Days

Prices for specified quantities are valid for a period of 30 days.

## Ship To:

Town of Vienna 127 Center Street, South Vienna, VA 22180 **United States** 

Salesperson: **Brian Willey** Telephone No.: 240-864-4025

Fax No.

E-mail: bwilley@humancircuit.com

Qty.	MFR	Model	Description	Unit Price	Extended Priced
Pkg No.	: CHAMBER CO	NTROL -			
1	CRESTRON	CRESTRONAPPPAD	App f/Crestron for iPad®	120.00	120.00
1	CRESTRON	TSW1060BS	10.1" Touch Screen Black Smooth	1,752.00	1,752.00
1	CRESTRON	CP3	Control System Processor	1,314.00	1,314.00
2	CRESTRON	DMRMC4K100C	Receiver & Room Controller	657.00	1,314.00
4	CRESTRON	DMRMC4K100C	Receiver & Room Controller	657.00	2,628.00
1	DSAN	ASL4ND3	Audience Signal Light with 4" Dig. Display & 3-Color Lights	817.00	817.00
4	CRESTRON	DMTX201C	HDMI/VGA to CAT5e Transmitter	949.00	3,796.00
1	CRESTRON	DMMD8X8RPS	8x8 DigitalMedia Switcher w/Redundant Power Supply	4,015.00	4,015.00
5	CRESTRON	DMC4KZC	Input Card	803.00	4,015.00
3	CRESTRON	DMC4KHDHDCP2	HDMI Input Card	584.00	1,752.00
3	CRESTRON	DMC4KZCOHD	Output Card	955.88	2,867.64
1	CRESTRON	DMC4KHDO	2-Channel 4K HDMI Output Card for DM Switchers	1,323.53	1,323.53
1	KRAMER	CPAOCHXL230	Optical HDMI Plenum Cable-230'	620.50	620.50
1	KRAMER	CPAOCHXL98	Active HDMI Plenum Cable 98'	357.00	357.00
1	KRAMER	VM2H2	4K HDMI Distribution Amplifier	370.00	370.00



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Page: 2

Qty.	MFR	Model	Description	Unit Price	Extended Priced
1	ATLAS	MS10C	Floor Stand Chroma	59.99	59.99
1	CRESTRON	TSW1060TTKBS	Tabletop Kit Black Smooth	183.82	183.82
Total for	CHAMBER CONTI	ROL			27,305.48
Pkg No.	: PRODUCTION	UPGRADE -			
1	ROSS	CBSOLOPKG1	Solo 3 Camera Production System	14,603.82	14,603.82
1	ROSS	PSU12V9A6PIN	12V 9A Power Supply w/6 Pin Connector	574.20	574.20
1	ROSS	PIVOTCAM20	20x Zoom PTZ Camera	2,415.12	2,415.12
2	ROSS	CARBONITEOTR1DAY	Onsite Operational Training, 1 Day	1,700.00	3,400.00
1	ROSS	CARBONITECOM1DAY	Carbonite Commissioning - 1 Day	1,700.00	1,700.00
1	ROSS	XPRESSIONOTR1DAY	Xpression Operational Training 1 Day	1,700.00	1,700.00
1	ROSS	TRAVELPRE001	Pre-Paid Serivce Expense Trip 1	2,333.33	2,333.33
1	ROSS	TRAVELPRE002	Pre-Paid Service Expense Trip 2	3,000.00	3,000.00
1	ROSS	CBSOLODESKMOUNTKIT	Carboinite Black Solo Desk Mount Kit	42.63	42.63
1	DELL	CUSTOMDELL	Precision Workstation T3620 Mini Tower	2,005.25	2,005.25
2	DELL	P2418HZ	24" Monitor	305.24	610.48
1	MIDDLE ATL	RK8	8 Space 14" Rack 16" Deep	161.85	161.85
2	ROSS	RVSTPMOX5150A	Serial to Ethernet Converter	333.21	666.42
1	MARSHALL E	VLCD241MD3G	24" LCD Desk Rack Mount W/ HDMI & 3G	1,747.60	1,747.60



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Page: 3

Qty.	MFR	Model	Description	Unit Price	Extended Priced
Total for	PRODUCTION UPO	GRADE			34,960.70
Pkg No.	: TECHNOLOGY	CLOSET -			
1	MIDDLE ATL	53726	37 Space (64 3/4") KD Rack Frame, 26" Deep	535.81	535.81
1	MIDDLE ATL	SP53726	Pair of Side Panels Black Finish	492.37	492.37
1	MIDDLE ATL	5W	Set of 4 Casters	64.74	64.74
1	MIDDLE ATL	5AR3726	Split Rear Rail Kits	135.44	135.44
2	MIDDLE ATL	PD2420SCNS	Long 24 Outlet Single 20 Amp Circuit	182.30	364.60
2	MIDDLE ATL	PB5A	Slim5 Power Brackets	15.33	30.66
1	MIDDLE ATL	5FANK	Slim-5 Fan Kit, 2 Fans	141.41	141.41
1	MIDDLE ATL	FC41CA	Fan Controller.(4) Cord, Thermostatic	229.15	229.15
1	APC	SMT2200RM2UC	Smart-UPS LCD Power	1,567.50	1,567.50
1	HP	JG539A#ABA	24 Port PoE+ Switch	460.45	460.45
1	KRAMER	VIAGO	Wireless Presentation Device	506.60	506.60
Total for	TECHNOLOGY CLO	OSET		<u> </u>	4,528.73
Pkg No.	: AUDIO UPGRA	ADE -			
1	SHURE	MX418DC	Cardioid Desktop Gooseneck Condenser Mic, Programmable	299.00	299.00
3	BIAMP	TESIRAFORTEAVBVT	DSP AI AVB Fixed I/O Server	3,507.02	10,521.06
1	SHURE	SLX12485SM58G4	Diversity Rcvr,Bodypack Trnsmtr Cardioid Lav.Mic,HH Trnsmtr	1,111.00	1,111.00
1	MOTU	MOTUAVBSWITCH	5-port AVB Ethernet Switch AVB-SWITCH	421.88	421.88



Sales Quotation Number: SQ61355 Sales Quotation Date: 09/28/18

Page:

4

Qty.	MFR	Model	Description	Unit Price	Extended Priced
Total for A	AUDIO UPGRADE				12,352.94
Pkg No.	: SERVICE -				
4	REVOLABS	01HDTBLMICDR11	HD Mic, RF-Armor Table Top, Uni-directional	295.18	1,180.72
Total for \$	SERVICE				1,180.72
Pkg No.	: ASST LISTENIN	IG -			
1	WILLIAMS	HHSY1	Hearing HotSpot Server W/ 1-8 Channels 8 Mono/4 Stereo	5,570.50	5,570.50
Total for A	ASST LISTENING			 	5,570.50
Pkg No.	: DIAS MIC REPL	ACEMENT -			
11	SHURE	MX418DC	Cardioid Desktop Gooseneck Condenser Mic, Programmable	299.00	3,289.00
1	BIAMP	TESIRAEXLOGIC	Tesira PoE Logic Expander w/16 Logic GPIO	546.36	546.36
		EMENT			3,835.36
<b>Ркд No.</b> 1	: <b>SKYPE -</b> VADDIO	9998215000	AV Bridge Conference	2,283.60	2,283.60
1	CRESTRON	DMTX201C	HDMI/VGA to CAT5e Transmitter	955.88	955.88
1	DELL	CUSTOMDELL	Optiplex 5060 Small Form Factor	872.21	872.21
Total for \$	SKYPE				4,111.69
Pkg No.	: PODIUM -				
1	INTERP	CUSTOMLECTURN	Custom Lecturn to Match Existing Furniture	4,062.50	4,062.50



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Page: 5

Qty.	MFR	Model	Description	Unit Price	Extended Priced
1	SHURE	MX418C	18" Gooseneck Condensor Microphone, Cardiod	235.20	235.20
1	SHURE	A400SMXLR	A400SM Shock Mount & A400XLR I Insert Packaged Combination	32.00	32.00
1	RADIO DESI	DXLR2F	Plate with dual 3-Pin XLR Females	20.08	20.08
Total for I	PODIUM				4,349.78
112	HCI	VASCUPPE	Engineering	168.30	18,849.60
96	HCI	VASCUPPPS	Project Supervisor	92.70	8,899.20
72	HCI	VASCUPPI	Integration	80.55	5,799.60
32	HCI	VASCUPPPM	Project Management	128.70	4,118.40
80	HCI	VASCUPPP	Programming	124.20	9,936.00
1	HCI	MATERIALS	Materials	3,200.00	3,200.00
4	HCI	TRAVEL	Travel Expenses	860.00	860.00
1					

Total: 152,408.70



## **TERMS & CONDITIONS**

Following are the general terms and conditions of the proposal and the statement of work:

- 1. Purchase Orders received by Human Circuit for the project must match the SOW. As the SOW is adjusted Human Circuit must receive a modification to the PO reflecting those changes.
- 2. After the formal project kick-off meeting Human Circuit will provide the name of a Project Management contact responsible for the project (scheduling, status reports, and delivery). Upon initial communication with Human Circuit's Project Management contact, the client must provide all contact names and information (email address, phone(s) and fax number) for the project. These contacts must include, but are not limited to, A.) Contract Technical Manager (responsible for all technical decisions), B.) Director of Project Management (responsible for billing and contract decisions) and C.) Scheduling Manager (responsible for all scheduling for the project).
- 3. Human Circuit, Inc. will provide a schedule of delivery after the formal project kick-off meeting initiated by the assigned Project Management contact. The schedule will include engineering/design phases, equipment ordering/receipt, off-site and on-site system building, system testing, end-user training and final acceptance of the complete system. The Client will be responsible for formal acceptance of the project schedule by signature.

The delivery schedule as indicated within the submitted proposal is estimated and not guaranteed. A final schedule will be submitted after the formal kick-off meeting.

#### 4. Insurance & Site Security:

The risk of loss for all products and materials shall pass to Client upon delivery to project site. Human Circuit reserves a security interest in all product and materials delivered to site until the entire amount due has been paid. Client is responsible for providing secure and lockable spaces for all product, materials and Human Circuit tools and equipment. Client should also have appropriate insurance coverage.

- 5. Fees associated with permitting or licensing are not included unless detailed in the cost proposal. Any additional costs incurred by Human Circuit for permitting and licensing that are not detailed in the current cost proposal will be passed onto the Client.
- 6. Customer Furnished Equipment:

Human Circuit will not be responsible for any additional costs related to equipment that is not in working order. If equipment is found to be in an unsatisfactory condition, Human Circuit will recommend a solution for repair or replacement of deficient gear. If Customer Furnished Equipment causes project delays, additional fees and costs will be incurred by the Client.

#### 7. Returns:

- No returns without prior authorization
- Some merchandise cannot be returned



- Authorized returns are subject to a restocking fee
- Equipment and software returned to Human Circuit, Inc. without a Return Authorization number will be refused
- Authorized returns must include the original packing material, and are subject to inspection prior to any credit or exchange being approved
- Handling and Insurance charges are additional
- All claims for damaged equipment and software must be submitted to Human Circuit, Inc. within 5 days of receipt of merchandise by Client (or 48 hrs. to company if drop-shipped)
- 8. At substantial completion (full use of the system), Human Circuit team members will inform the client's representative of the project's status. Final invoicing will take place within one business day after notice of substantial completion. Final system documentation will be delivered within the timeline illustrated in the project Gantt chart after substantial completion. In some circumstances system training may be provided after substantial completion. Part of the system acceptance procedure may include the generation of a minor punch list. A punch list is considered to be minor in scope and will not affect day to day use of the system. In some circumstances systems training and documentation may be provided after system acceptance.
- 9. Any training must begin immediately after system testing is complete in order to facilitate the "system acceptance" milestone. All training days (both manufacturer and Human Circuit) will be scheduled to begin no later than one week after completion of testing and will occur over consecutive days until complete. If the Client is unable to accommodate the training schedule, then a separate purchase order will be generated in order to separate the completed job from training.
- 10. Human Circuit utilizes "progress billing" and will provide invoices based on milestones. Please see below for Payment Terms.

#### 11. Payment Terms:

- 40% NET 20 at contract/purchase order
- 25% NET 20 at equipment order
- 25% NET 20 at equipment delivery
- 10% NET 20 at system acceptance

NOTE: A Service Charge of 1.5% will be added to unpaid balances monthly on any overdue account. Standard Human Circuit payment terms are NET 20.

#### 12. Taxes:

Unless otherwise stated in the cost Proposal the quoted line item prices are exclusive of any applicable sales or use taxes. Human Circuit is required by law to charge applicable sales tax in the States of Maryland, Virginia, and the District of Columbia, and Human Circuit will add on to the amount otherwise charged all sales taxes which it is required to collect in these jurisdictions. The Client is solely responsible for paying all sales and use taxes in any other jurisdiction. All items "drop shipped" to a project location from a vendor are subject to the state's sales tax of the project location. The Client agrees that any sales and use taxes in such other jurisdictions will be paid for by the Client. The Client agrees to fully indemnify Human Circuit for all liabilities (including



penalties and interest as well as taxes) arising from failure to pay sales tax in any jurisdiction other than the States of Maryland, Virginia, and the District of Columbia.

13. All prices within the cost proposal are valid for a period of 30 days.

#### 14. Labor Rate Detail:

Labor costs reflected in the cost proposal unless noted reflect work performed between the hours of 9:00 am and 5:00 pm, Monday through Friday, with the exception of federal holidays ("Normal Work Hours"). In the event that Client elects to have the work performed beyond Normal Work Hours, and Human Circuit agrees, then Client agrees to pay additional labor fees.

#### 15. Installation Warranty:

Human Circuit warrants that all materials and workmanship directly related to the installation and integration of the system will be free from defects for a period of one year from the acceptance of the system. Human Circuit passes through to the client all manufacturer warranties. Each manufacturer sets the start date of their warranties after purchase by Human Circuit. Human Circuit will work with manufacturers to time the start of the warranty at client's acceptance of the system, but cannot guarantee compliance by all manufacturers. At conclusion of the project Human Circuit will provide full warranty information for the system(s) and all hardware and software.

#### 16. Non-Confidentiality of System:

The Client agrees that by acceptance of this document Human Circuit has the right to execute press releases, photograph or videotape the System and may use, display, publish, distribute, transmit or broadcast the said photographs or videos for marketing purposes such as press releases, website, brochures, etc. Any third party wanting to use this material will need to get express permission from the Client and Human Circuit Inc. All images are copyright protected.

#### 17. Seller's Liability:

Seller's entire liability with respect to integration services, no matter the cause, will be limited to general money damages in an amount not to exceed the aggregate fee(s) paid by Buyer for the integration services. Under no circumstances will seller be liable for any loss of revenues or profits, any claim or demand against buyer by any other party, or special, consequential or indirect damages of any kind whatsoever, even if seller has been advised as to the possibility of such damages.

#### 18. Governing Law and Venue:

This agreement shall be construed and enforced in accordance with the local law the state of Maryland. The parties hereby consent to and submit to the jurisdiction of the federal and state courts located in the state of Maryland and any other action or suit under this agreement shall only be brought by the parties in the federal or state court with proper jurisdiction over the subject matter established or sitting in the state of Maryland. The parties shall not raise in connection therewith, and hereby waive, any defenses based upon the venue, the inconveniences of the forum, the lack of personnel jurisdiction, the sufficiency of service of process or the like in any such action or suit brought in the state of Maryland.



Human Circuit shall maintain the following insurance:

- A. Statutory Workmen's Compensation Insurance, under the laws of the State of Maryland and any other laws that may applicable thereto.
- B. Coverage "B" Employers Liability must have limits of at least \$100,000;
- C. Professional Liability/Errors and Omissions, subject to limits of \$1,000,000 for each occurrence and \$3,000,000 aggregate.
- D. Comprehensive General Liability Insurance, subject to limits of \$1,000,000 for each occurrence and \$3,000,000 aggregate.

All CERTIFICATES OF INSURANCE will provide within 30 days of a request from Client or prior to cancellation, nonrenewal or change in policy terms and

Approved by:	Date: