



# **Council Chamber**

## **Audiovisual and Broadcast Systems Specification**

October 17, 2016

## INTRODUCTION

This project for audiovisual systems integration services for the City of Tustin (City) is to address audiovisual and broadcast systems upgrade requirements for the City's Council Chamber. The purpose of this application is to provide a complete state-of-the-art upgrade to the City's Council Chamber AV and Broadcast systems.

The following locations are included in this project.

1. City Council Chamber
2. Broadcast Control Room and Storage Room
3. Council Chamber Lobby

## RFP Schedule

The City of Tustin reserves the right to modify these dates if extenuating circumstances necessitate.

<b>Release of RFP</b>	October 17, 2016
<b>Question Deadline</b>	October 28, 2016 by 11:00 a.m.
<b>Proposal Deadline</b>	November 14, 2016 by 3:00 p.m.
<b>Award Contract</b>	December 6, 2016**

**\*\*Tentative City Council contract award date, subject to change at City's discretion**

## SCOPE OF WORK

Audiovisual Contractor is to verify AV systems, electrical requirements, conduit, heat load data, and interior design considerations unique to the audiovisual systems which have been incorporated in this specification and equipment list.

The Audiovisual Contractor shall provide complete, turnkey audiovisual systems performing all of the services and functions as described herein, together with all other apparatus, cable, materials, labor, tools, transportation, and any other resources necessary to provide complete systems.

The Audiovisual Contractor is to provide the following services to the City as required. Specifically, the scope of work is to include, but is not limited to:

- AV and Broadcast System Detailed Engineering
- Equipment Coordination and Supply
- Construction coordination
- System Production
- Control System Configuration and Programming
- Factory Acceptance Testing

- System Installation
- Site Acceptance Testing
- Final Testing and Systems Performance Verification
- Substantial Completion
- User Training
- Documentation Submittals
- Systems Acceptance
- Day One Support
- Final Acceptance
- Preventive Maintenance, Remote Monitoring and System Warranty

#### AV and Broadcast System Detailed Engineering

- Detailed engineering of final systems configuration – Audiovisual Contractor is to perform final AV systems engineering and design to meet the functional criteria identified.
- Confirm the accuracy of the system designs. The Audiovisual Contractor shall identify any or all items necessary to ensure that the installed systems meet the functional requirements outlined in the Specification.
- System fabrication and interface drawings – Detailed system fabrication, interface, rack elevation and signal flow drawings are to be prepared in AutoCAD format.

#### Equipment Coordination and Supply

- Supply of all required equipment to provide turnkey systems, including, but not limited to, all primary equipment components listed in the Primary Equipment List provided.
- Supply of interface and mounting components - Audiovisual Contractor is to supply interface and mounting components and cabling, connectors and installation materials.
- Coordination and storage of procured equipment - Audiovisual Contractor is to coordinate receipt and storage of all procured equipment at Audiovisual Contractor's facility for pre-assembly and fabrication prior to site installation.
- Provide lectern and technical furniture as specified.
- Coordinate with the City Representative on the final selection of all technical furniture including design details (make/model), available options, dimensions, cable management needs, color, and finish.
- Coordinate with the City's representative and Architect regarding OFCI furniture or work specified in other construction documents as required allowing for a neat and professional installation of integrated technology system components. This includes, but is not limited to,

integrated table/lectern “cubbies”, table-top microphones, cable management grommets, etc., and furnishing manufacturer’s cutout templates to others when requested.

- Coordinate with the City’s Representative on cable management needs and equipment installation requirements in all spaces.
- Secure from City private IP addresses for use by Ethernet equipped audiovisual devices. No Ethernet equipped device shall be connected to the City’s network without permission of the City’s Representative. This shall include, but is not limited to configuration parameters such as DHCP, IP addresses, subnet information, VLAN setup and authorization.
- Confirm all Ethernet equipped audiovisual devices to be connected to the City’s network with the City’s Representative.

#### Construction Coordination

- Prior to the GC’s start of demolition and work in the Chamber, Control Room and Storage Room, Audiovisual Contractor is to de-install all existing audiovisual components and legacy audiovisual cabling, except those components, devices and cabling identified in this document to be reused in the new systems. The Audiovisual Contractor is not to de-install networking, cable company interface, modulation or transmission equipment and cabling. Remove all unnecessary audiovisual cabling from conduit, j-boxes, Chamber, Control Room and Storage Room. Provide all de-installed equipment not to be reused to the City for disposition. Dispose of all de-installed cabling and connectors. Coordinate with the City’s Representative for this work.
- Communicating and coordinating directly with the City and other trades complying with all requirements as defined under this Scope of Work and elsewhere, to fulfill all requirements of this specification.
- Schedule installation operations in sequence required in order to obtain best completion results.
- Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
- Verify required cable lengths for all bulk cable or manufactured cable assemblies prior to ordering.
- Site review and construction completion verification – Audiovisual Contractor is to review the site and confirm completion of the construction site work by related trades prior to the delivery of sensitive electronic equipment. All construction is to be complete prior to on-site installation. This work includes, but is not limited to, completed demolition, completed structural construction, completed wet work, and an environment free of dust and debris before equipment is moved into place.

### System Production

- Off-site pre-installation system construction - Upon receipt of equipment, Audiovisual Contractor is to begin the construction and assembly of approved systems. This work is to be done in the Audiovisual Contractor's facility. Systems are to be fully assembled, wired, programmed and tested prior to delivery to the site.

### Control System Configuration and Programming

- AV Control system configuration and programming – Audiovisual Contractor is to configure and develop control system programming code and touch panel graphical user interface (GUI) pages and code to provide efficient and intuitive system operation. The control system manufacturer's standard application development environment is to be used for all programming and configuration. Complete operating code is to be loaded and tested in Audiovisual Contractor's facility prior to system installation.
- Develop and install all custom software for DSP and other devices as required to optimize system performance.
- Provide copies to the City of the executable (uncompiled) programming control code for all devices.

### Factory Acceptance Testing

- Factory acceptance testing (FAT) - After all systems are assembled and programming installed, pre-installation factory acceptance testing (FAT) is to be performed in the Audiovisual Contractor's facility.

### System Installation

- On-site system installation – Once the site is verified as completely prepared and acceptable for receipt of the electronic systems, the AV systems are to be transported to the site and installed. Complete system installation to supporting infrastructure (conduit, electrical, cabling, etc.) is to be performed by Audiovisual Contractor.
- Furnish and/or install all equipment as specified.
- Coordinate with the City to determine final channel selection for all wireless devices and resolve conflicts where they may occur.
- Furnish to the City's Representative, upon completion, all accessories and ancillary items included with the manufacturer's equipment but not used for the physical installation of the device. This shall include all user manuals, remote controls, batteries, tools, installation hardware, carrying cases, protective covers, etc.

- Furnish all lifts, ladders, scaffolding or other resources as needed for proper safe installation. Coordinate with other trades as needed.
- Interconnect all components, both internal and external to rack cabinets.
- Ensure that all cabling, equipment, and terminations are installed in accordance with accepted industry standards, approved Shop Drawings, manufacturer's recommendations and as stipulated herein.
- Provide cable management hardware as required including; hardware required internal to rack cabinets; hardware required between pieces of equipment not housed in rack cabinets; and hardware required to extend cabling from rack cabinets and equipment to the greater facility cabling infrastructure.
- Provide custom cover plates, wall plates, I/O connection plates, floor box insert plates as required. Coordinate with the City's Representative on the final selection of finishes.
- Ensure that all equipment, with the exception of portable equipment, is firmly fastened or attached in place. A safety factor of at least four shall be utilized for all brackets, fasteners and attachments. Provide safety retention cables for overhead equipment such as loudspeakers, projectors, etc.
- Ensure that all equipment mounting styles and locations comply with current ADA Standards for Accessible Design.
- Provide all display mounts, including clamps or support assemblies back to structural members.
- Field verify all display and mount locations and resolve any obstruction conflicts for optimal performance and serviceability. The Audiovisual Contractor shall reference the system, equipment, mounting and infrastructure drawings to accommodate all displays and field verify measurements to confirm integration in the space.
- Equipment Delivery and Storage - Costs of all shipping to the site, and of all unusual storage requirements, shall be borne by the Audiovisual Contractor. It shall be the responsibility of the Audiovisual Contractor to make appropriate arrangements, and to coordinate for the proper acceptance, handling, protections, and storage of equipment so delivered.

#### Site Acceptance Testing

- Site acceptance testing (SAT) - After all AV systems are installed, Audiovisual Contractor shall perform final testing and adjustments to ensure compliance with the established performance criteria.

#### Final Testing and Systems Performance Verification

- Final Tests

- A. System Performance Verification Scheduling - Upon completion of the Audiovisual Contractor's site acceptance testing and verification of system performance and complete functionality, and at a time that is mutually acceptable to the Audiovisual Contractor and City's Representative, the Audiovisual Contractor shall assist the City's Representative in final system tests and adjustments. The Audiovisual Contractor shall allow eight (8) hours to perform the tests. The Audiovisual Contractor's representatives assisting in the performance of these tests shall be thoroughly familiar with the details of the system and shall include the field supervisor responsible for installing the system.
- B. Demonstration - To demonstrate the good working order of all playback devices in the system the Audiovisual Contractor shall make available high quality source materials for all audio and video media types represented in the system. To demonstrate the good working order of all computer/video displays the Audiovisual Contractor shall make available a computer/video signal generator or generators, capable of outputting all signal types included in the system designs.
- C. The Audiovisual Contractor shall:
1. Load source material into all input sources and a laptop computer.
  2. Switch randomly between all sources and demonstrate that all functions of the control system are working properly and tracking correctly.
  3. Demonstrate that the displays have been optimized for all sources.
  4. Demonstrate that the system meets the criteria as outlined in this Specification.
- D. Punch List Report and Correction
1. Following the completion of the Systems Performance Verification, the City is to issue a punch list report to the Audiovisual Contractor, identifying omissions, adjustments, and corrections to the work necessary to meet the requirements of the Specification.
  2. The Audiovisual Contractor shall correct all punch list items resulting in fully functional systems that meet all requirements of the Specification and can be utilized by the City as-intended.

#### Substantial Completion

- The project shall be deemed substantially complete by the City at the stage in the progress of the work where the systems are sufficiently complete in accordance with the Specification so that the City can utilize the systems for their intended use.

#### User Training

- User training - Once all systems are installed and final testing and adjustments have been completed, Clerk, Staff and Video Operator operational training is to be performed and a System Acceptance Certificate is to be executed. An allowance of sixteen (16) hours of operational training is to be included. Additional operational training and manufacturer specific operational training may be provided upon request at additional charge.

### Documentation Submittals

- Within two weeks of the successful completion of Final Tests and punch-listing, the Audiovisual Contractor shall prepare and submit a Final Documentation set to the City's Representative. All documentation shall list the City, Project Name, City Representative, and Audiovisual Contractor.
- All documents and drawings shall be submitted in the following format:
  - A. Electronically in PDF and CAD format
  - B. Two (2) printed copies of all documents and drawings. The documentation shall be bound in three ring binders with covers and spines listing the City, Project Name, City Representative, and Audiovisual Contractor.
- The Final Documentation Submittal shall include:
  - A. As-Built Drawings - The as-built drawings must reflect the complete and final configuration of the systems, including:
    1. System Signal Flow – Complete functional system signal flow drawings of all systems described herein and meeting the functions indicated in the Specification. System Signal Flow drawings to illustrate and identify each major component indicating signal flow; signal type and equipment interconnectivity; all used and unused input and output connections for all devices; connector types; specific manufacturer and model number labels for each component; physical location callout indicating the components physical location (i.e. equipment rack #, lectern, wall mounted, etc.); cable fan-outs; wire/cable tags; 70 volt loudspeaker tap settings; amplifier/loudspeaker zone assignments; and other details as needed to accurately document the signal interconnectivity of the systems.
    2. Rack elevations
    3. Custom panel details
    4. Patch bay layouts
    5. A listing of each supplied item with manufacturer, model number and serial number
    6. Operator's manuals for each piece of equipment supplied by the Audiovisual Contractor
    7. The Audiovisual Contractor shall include any additional drawings which are necessary to properly document the as-built systems, but not included in the RFP documents.
  - B. Software
    1. Where custom software is developed as part of this project, the system source code, passwords, and any associated related files, referenced files, and development software (and all relevant documentation and license) used to compile, develop, and build, etc. the executable code must be furnished and installed. The source code should be well documented in accordance with industry software engineering practices.
    2. The software developer shall retain intellectual property rights; the City shall have a license in perpetuity for use as it applies solely to this project, including the right to modify or enhance the software. The software code may not be sold or used, in part

or in whole, in any other project or application other than that intended by this specification, in part or in whole, by the City or any other party.

3. If a Subcontractor is used to write the software, the Audiovisual Contractor shall include, as part of the Final Documentation submittal, a signed letter on the Subcontractor's letterhead, granting the City, use, and modification rights of the code and documentation as defined herein. The software shall be submitted to the City's Representative on DVD-ROM, inserted into a plastic sleeve appropriate for each media type, and included in the binders.

C. IP Addressing Schedule

1. AN IP Addressing Schedule is to be provided. The IP Addressing Schedule shall list, at a minimum, for each provided device requiring an IP address and connected to any network:
  - a. Product manufacturer and model
  - b. LAN port connection location
  - c. Assigned Static IP address
  - d. Product MAC address
2. The IP Addressing Schedule shall be submitted electronically in Microsoft Excel .xls format, compatible with Windows 7 or newer operating systems.

D. System training materials

Systems Acceptance

- Coordinate and conduct an acceptance walk-through and sign-off session with the City's Representative.
- Submit a "sign-off" document for the systems.

Day One Support

- Audiovisual Contractor is to provide one system engineer on-site for the first live council meeting that is to utilize the new system. The Audiovisual Contractor's engineer assisting in day one support shall be thoroughly familiar with the details and operation of the systems.

Final Acceptance

- Final Acceptance shall be granted by the City based on the successful completion of the following activities:
  - A. All items required to obtain Substantial Completion have been achieved.
  - B. Any punch list corrections not required to obtain Substantial Completion have been completed by the Audiovisual Contractor and accepted by the City.

- C. The Audiovisual Contractor's Final Documentation Submittals have been reviewed by the City and deemed to be complete.
- D. The Audiovisual Contractor has provided all required training for the City as defined herein.
- E. Any remaining items required by the Specification, but not listed above, have been completed by the Audiovisual Contractor.

#### Preventive Maintenance, Remote Monitoring and System Warranty

- Service support – A complete and comprehensive program of preventive maintenance, remote monitoring and diagnosis, service and warranty support shall be provided for the warranty period of the first year from the date of Final Acceptance of the AV systems. Maintenance and System Warranty support is to include, at a minimum:
  - A. Rapid response within two hours of service request during normal business hours. Requests received after hours are to be responded to next business day.
  - B. Remote network based monitoring and diagnostic support
  - C. Unlimited telephone support between the hours of 8:30am-5pm, PST M-F
  - D. Reinstallation and alignment of repaired equipment
  - E. Four (4) preventive maintenance visits per year
  - F. Unlimited emergency support of all equipment
  - G. All required parts and repair costs for equipment breakdown
- Audiovisual Contractor is to provide pricing for an optional preventive maintenance and warranty service agreement, which is to be consistent with the requirements of the first year agreement, for years two, three and four as a part of their response.

#### Work Excluded

- Providing conduit, power receptacles, junction boxes, cable raceways, electrical back-boxes, and floor boxes.
- Providing lighting fixtures, lighting dimming systems, lighting controllers, and lighting system low voltage AV interfaces at the dimmer side.
- Providing millwork except where otherwise specified herein.
- Providing wall or ceiling mounted projection screens.

- Providing blocking as required to support wall-mounted audiovisual components.
- Providing telecommunications structured cabling systems, including horizontal and backbone cabling and termination, voice and data face plates, associated racks and cabinets, raceway, and cable management.

#### Quality Assurance

- Unless otherwise stated, all equipment for this installation is to be new, less than one year from the date of manufacture, and without blemish or defect.
- All electrical, electronic and optical equipment furnished by the Audiovisual Contractor shall be a product of companies regularly engaged in the manufacture of electrical, electronic or optical equipment.
- The equipment shall be the latest model or type offered which meets the applicable specifications at the time of the submittal. Discontinued items replaced by newer models or versions are prohibited and should not be submitted for review. It shall be the Audiovisual Contractor's responsibility to submit to the City's Representative information regarding discontinued products listed in the specification. If a product listed is discontinued prior to installation, the Audiovisual Contractor shall submit a request to provide the manufacturer's replacement model.
- Request shall include name of material, product or equipment to be provided and a complete description of the proposed item including drawings, performance and test data and other information necessary to demonstrate that the replacement is to meet all intentions of this Specification or required for a complete evaluation.
- Audiovisual Contractor shall assume and bear all responsibility for coordinating and performing related changes in the Work necessitated by such replacement item. This includes, but is not limited to, changes to other related audiovisual components, changes to architectural integration details, and changes to required infrastructure.
- Quality of workmanship and fabrication of all equipment and components, which are custom fabricated shall be comparable to professional equipment produced by specialized manufacturers of the trade involved and shall be verified by observation. Only firms having 10 years' experience in all aspects of the fabrication and installation of similar systems shall be allowed to perform the work.
- The work specified herein shall be accomplished by a single Audiovisual Contractor professionally engaged and qualified in the design, fabrication, installation, checkout and warranty contract management of systems such as those described in this Specification.
- The Audiovisual Contractor shall have complete responsibility for the systems described herein and shall be the single contract point for the City's Representative with respect to all work specified herein.

- The Audiovisual Contractor shall maintain the same project manager and field supervisor throughout the installation, and where practical, maintain the same installers.
- The Audiovisual Contractor shall supply and install any incidental equipment needed in order to result in a complete and operable system without claim for additional payment, even if such equipment is not listed in this Specification.
- All work related to this Specification shall be completed in a professional manner by qualified workers.

## Reliability

### General

- The systems are designed for professional quality operation over a period of several years without the need for continual maintenance.

### Services

- The Audiovisual Contractor shall guarantee all equipment, materials, and labor for a period of 1 year from the date of final acceptance.
- Audiovisual Contractor shall maintain permanent fabrication, service and support facilities within fifty (50) miles of the Project site during the Work and Warranty period.
- Within 24 hours of notification, the Audiovisual Contractor shall answer all service calls and requests for information.
- Within 96 hours of original notification, the Audiovisual Contractor shall furnish emergency service to restore operation of the system, replacing defective materials, repairing faulty workmanship, making temporary repairs, and providing loaner equipment as necessary, all at no cost.
- The Audiovisual Contractor shall notify the City before any service call whether such call is or is not covered under warranty. The City may be billed for non-warranty calls. The Audiovisual Contractor shall notify the City of any service call or work to be performed for which charges may be incurred before such work commences.
- As part of the RFP Response, the Audiovisual Contractor shall provide the City with a proposal to extend the Warranty to cover Year 2, Year 3, and Year 4 of operation. These offerings are to include all parts and all labor; all conditions and restrictions listed above and elsewhere in this document apply.

## FUNCTIONAL SPECIFICATION

The Chamber audiovisual and broadcast systems functional description is outlined below.

### A. PROJECT DESCRIPTION

The Council Chamber and related control systems is to be upgraded to utilize current, reliable and supportable technology to allow the City to conduct Council and Committee meetings and other presentations requiring internal AV support and broadcast. The new Council Chamber AV system is to include a direct view LED video wall and LED displays, local sound reinforcement, audio and video recording, multiple cameras and presentation distribution to cable broadcast and online streaming. An integrated control system is to be used to allow easy and intuitive user control of the system. The control system is to provide full system control, including selection and control of source devices, presentation switching, and audio control. The adjacent Council Chamber Lobby is to support overflow of live non delayed video and audio and separate presentations.

Facility electronic, electrical, millwork, structural and infrastructural design, engineering and modification are required to support the intended upgrade, but are to be performed by others. All old equipment and associated racks are to be removed except where identified to be reused. All wiring is to be dressed and terminated properly. Cable wiring management is to be put in place for easy access, testing and replacement of cables as needed. Cables and cords are to be labeled as well as all outlets and connections.

### B. DAIS

The Council Chamber has a five-position dais at the front of the room. The Mayor's location is to have a LED display, two (2) mounted gooseneck microphones, 7" touch panel and video name plate. Each Councilmember location is to have a LED display, one (1) mounted gooseneck microphone, 7" touch panel and video name plate. The new 7" touch panels are to replace and be located in the same position as the existing touch panels at each of the positions. Microphone mute and voting functions are to be available on the touch panels. The microphones are to be used for local sound reinforcement, audio conferencing, recording, and distribution to broadcast.

The video name plates are to display the full name and title or position of the Council or Committee Member seated at the location and have the ability to display a graphical background behind the name and title. Audiovisual Contractor is to confirm and gain approval of the graphical content with the City's Representative prior to implementation. The video name plate background graphic is also to change background color to green, red or yellow clearly indicating a Yes, No or Abstain vote at each of the voting locations when the voting results are activated by the Clerk.

The existing displays, touch panels, microphones and shock mounts are to be removed, modifications made (by the Audiovisual Contractor) to adjust the control panel and microphone mounting openings to accommodate the new touch panels and microphone mounts and microphones to be installed.

The Audiovisual Contractor is also responsible for installing the video name plate and supporting hardware. Removal of the existing illuminated area on the face of the dais, millwork, and electrical modifications to accommodate the video name plates are to be performed by the GC.

### C. STAFF POSITIONS

The Council Chamber has six Staff positions and the Clerk position adjacent to the dais in the front of the room.

#### Clerk

The Clerk position is to have two local computers with corresponding monitor and keyboard and mouse; HDMI, VGA and Audio laptop input at the existing table top pop-up location, a 10" touch panel and an existing lavalier microphone that is to be reused.

One Clerk computer (Granicus PC) is to be dedicated to running Granicus meeting management software to provide agenda management, minutes creation and request-to-comment functionality. The second computer is to be used for in-room presentations (Presentation PC). The Clerk's Granicus PC is not a directly available source for display in the room. A Granicus public display PC is to be located in the control room and is to be available as a source for display in the room. Additionally, the existing pop-up laptop input device which is located at the Clerks position is to be modified to accept HDMI and VGA with audio (to be used one at a time) to allow for presentation from a portable laptop computer.

The Clerk's touch panel is to be the primary Chamber presentation control point for use during Council meetings to control the AV presentation systems and is to be used to select and control the presentation media to be displayed in the Chamber, voting, speaker timing, lighting preset selection, presentation audio volume, microphone control, and video preview of sources. Microphone control is to include master "all-microphone" and individual microphone mute/unmute and gain level adjustment capability for all Council Member, Staff and wireless microphones and the current presentation source. Source gain level adjustment from the Clerk position is to adjust the presentation source volume level output in the Chamber only, and is not to affect the presentation source output level to the broadcast system.

The Clerk's touch panel is to be programmed with several preset meeting types and conditions appropriate for each. The touch panel is to control selection of the current Council or Committee to utilize the room; controlling indication on the digital name plates of the participants or any who are absent; changing of names and positions of meeting participants for display; and activation, closing, time allowance and display for voting.

The Clerk's touch panel is to be used to preview and select all presentation sources to be displayed in the Chamber and distributed to the Council Member and Staff displays. The Clerk's touch panel is to be programmed to allow the selection of any available source to preview or the outbound broadcast signal in a window on the touch screen for confidence monitoring, which is to be surrounded by control function buttons, or, by touching the preview/confidence monitor window on the touch screen, the window is to go to full screen on the touch panel. Touching the screen,

when full screen viewing mode is invoked is to cause the window to revert to the standard size with surrounding control functionality available.

#### Staff

Each of the six (6) Staff positions are to be outfitted with a LED display, a 5" touch panel that is to be replaced, and be located at the same location as the existing microphone mute and Presentation PC slide control button panels and an existing lavalier microphone that is to be reused.

Individual Staff position lavalier microphone mute and Presentation PC slide advance functions are to be available on the Staff position touch panels.

The existing Clerk and Staff displays and button control panels are to be removed, modifications made (by the Audiovisual Contractor) to adjust the control panel mounting openings to accommodate the new touch panels to be installed.

#### D. PODIUM

The existing podium is to be de-installed and provided to the City for disposition. A new custom motorized, ADA compliant, rotating podium with LED display, 5" touch control panel, gooseneck microphone and HDMI laptop input is to be provided to be located and installed at the existing podium location.

The Audiovisual Contractor is to de-install the existing speaker time light indicator, light source and power supply currently installed in the existing lectern and is to integrate these devices into the new lectern and new AV control system to provide visual indication of speaker timing for a speaker at the lectern.

The HDMI laptop input, new microphone and microphone mount and 5" touch control panel are to be installed in the podium surface. The touch panel is to be programmed to allow mute/unmute of the lectern microphone and slide control on the Presentation PC. The Clerk's touch panel is to override the local podium mute/unmute control.

The new podium is to rotate to support speakers presenting in both the direction of the dais and the audience to allow for use in various meeting types. The podium is to be motorized to allow height adjustment to comply with current ADA requirements.

#### E. VIDEO AND COMPUTER SOURCES

Presentation sources to be available for display in the Council Chamber are to be the Presentation PC and laptop input at the Clerk position, a laptop input at the podium, an auxiliary laptop input in the Broadcast Control Room, Granicus Public Display PC, Time Warner and Cox cable set top box feeds from the Broadcast Control Room, and Broadcast Program Output.

#### F. VIDEO DISPLAY

The Chamber is to utilize a new high-brightness 135" direct view LED display on a custom floor supported mount, two (2) 65" wall mounted audience support displays, one (1) 55" LookThru OLED display mounted adjacent to the dais and LED displays at the Council, Clerk, Staff and podium positions, all capable of displaying full high definition 1080p images. The existing video projector and mount is to be removed. The LED display is to be installed behind the Council positions, the 65" displays are to be wall mounted adjacent to the audience area and the 55" OLED display is to be mounted next to the dais. The 135" and 65" displays are to be used to display a single presentation source image from any of the available computer or video input devices. The Council, Staff and podium displays are to be grouped as three individual groups and are to be used to display a single presentation source image for each group from any of the available computer or video input devices. The OLED display's primary source is to be a digital graphics generator with the City seal displayed, but may have any other available source routed to the unit. Selection of the source to be displayed on the display systems is to be controlled by the Clerk's or Broadcast Control Room touch panels.

#### G. AUDIO REINFORCEMENT AND ASSISTED LISTENING

Seven (7) gooseneck microphones, seven (7) lavalier microphones, two (2) wireless lavalier microphones, two (2) wireless handheld microphones and four (4) wireless gooseneck microphones are to be used for voice reinforcement and presentation support. All wireless microphones are to be rechargeable via docking charging stations located in the Broadcast Control Room or Storage Room. The video and computer sources are to provide media audio. A multi-zone distributed loudspeaker system is to be employed for mixed media, audio conferencing, and voice audio reinforcement in the Council Chamber and Chamber Lobby Overflow Area. The existing ceiling mounted speakers are to be removed and replaced with new ceiling mounted speakers. The existing Chamber Lobby Overflow Area speakers are to be removed and new speakers installed. The loud speakers are to be amplified from the audio equipment rack located in the Storage Room. The audio is to be mixed and managed using a DSP based mixer/router that is to provide equalization, limiting, and feedback control. Volume level for the Council Chamber systems is to be available via the control system and is to be controlled remotely from the Clerk's touch panel.

An assisted listening system is to be supplied and installed to support additional audio reinforcement in the Chamber. The system is to utilize an under carpet induction hearing loop for use with compatible hearing aids and seven (7) rechargeable belt-pack style receivers that can be used with attached head phones.

Selection of the audio source to be distributed to the Chamber Lobby is to be selected via the Clerk's touch panel. When Chamber "overflow mode" is selected for audio and video distribution to the Chamber Lobby, volume level for the Chamber Lobby speaker systems are to be controlled via the Clerk's touch panel. When the Chamber Lobby system is in "stand-alone mode" allowing audio and video input from the local input in the Chamber Lobby, volume level for the Chamber Lobby speaker systems is to be controlled via the local Chamber Lobby touch panel.

#### H. VOTING SYSTEM

The voting system is to be integrated with the control system, automatically loading each Council or Committee Member's name into the voting system when the corresponding meeting type is selected. Identification of absent Council or Committee Members, setting the time allowed for Members to cast a vote or changing names to accommodate new members is to be easily performed utilizing the Clerk or Operator touch panel. No programming or additional cost is to be required to maintain the current voting system participants.

The Clerk is to initiate a vote utilizing the touch panel at the Clerk's location. Council or Committee Members are to vote (Yes, No, or Abstain) using the 7" touch panel at each Member position at the dais. After all members have voted, the Clerk is to end the vote and select the results of the vote for display on the large room display, on all in-Chamber confidence monitors and to change the color of the background of the video name plate to the corresponding color of the Yes, No or Abstain vote for each voting position. Voting results also are to be distributed for broadcast.

#### I. VIDEO NAME PLATE SYSTEM

The video name plate system is to be integrated with the control system, automatically loading and displaying each Council or Committee Member's name when the corresponding meeting type is selected. Identification of absent Council or Committee Members or changing names to accommodate new members is to be easily performed utilizing the Clerk or Operator touch panel. No programming or additional cost is to be required to maintain the current named participants.

The Clerk is to initiate a meeting type utilizing the touch panel at the Clerk's location. Once Council or Committee Members have voted (Yes, No, or Abstain) the color of the background of the video name plate is to change to the corresponding color of the Yes, No or Abstain vote for each voting position.

#### J. SPEAKER TIMER

The existing speaker timer indicator housing and lens, LED light source and power supply are to be de-installed from the existing lectern in the Chamber and are to be integrated into the new lectern. The speaker timer system is to be integrated with and activated by the new control system. The Clerk is to set the time allowed for speakers and initiate the speaker timer utilizing the touch panel at the Clerk's location. The speaker timer indicator is to illuminate Green during the speaker's period to speak, Yellow when there is a designated period of time before the speakers allotted time is over and Red when the full time allotted has expired.

#### K. CAMERA SYSTEM

A high definition multi-camera system is to be utilized for cable broadcast and video archival of meetings. There are to be five (5) remotely controlled cameras located in the Council Chamber. The cameras are to have integral remotely controlled pan and tilt motors and are to utilize power zoom and focus lenses. Cameras shall be single-chip broadcast quality cameras equipped with a multi-element 30x optical glass auto-focus zoom lenses. Remote control of white balance, color

correction, and other available settings and controls is to be available via camera control units (CCU) to be located in the Broadcast Control Room racks. High quality lenses, suitable for broadcast use, shall be capable of remote control of focus, zoom, and iris. The integral lenses shall be capable of close-up head shots of people seated at the dais and other locations. Joystick type camera and touch screen production controllers, integrated with the production switcher, are to be located in the Broadcast Control Room for control of all cameras pan, tilt, zoom, focus, and other controls as required. One (1) camera is to be located in the center rear of the chamber, two (2) cameras are to be wall mounted adjacent to the audience area and two (2) cameras are to be wall mounted in the front of the chamber on opposing sides of the dais to capture staff and presenters from the podium.

#### L. BROADCAST MONITORING

A 40" display configured with multiple windows provided by a multi-viewer shall be installed in the Broadcast Control Room for easy viewing by the Operator and shall provide broadcast production monitoring. All available camera and presentation sources, the currently selected presentation source displayed in the Council Chamber and broadcast preview and program are to be available for simultaneous viewing. Operator control of video and audio routing is to be performed utilizing a 10" touch panel control interface. All cameras video signals are to be distributed to a dedicated window and to individual inputs of a high definition video production switcher. Program video from the switcher is to be distributed to multiple outputs sufficient to provide program video to all video recording devices and to the cable broadcast modulators. Video and mixed voice reinforcement and media audio is to be embedded in the video with the video distribution signal. The digital video recording and playback system is to include software programmable for unattended looping playback on a time scheduled basis. The monitoring, routing and control equipment is to be located in racks or in the operator's console in the Broadcast Control Room and is to be controlled from the Control Room operator's position.

#### M. BROADCAST SYSTEM

The broadcast system is to be housed in the Control Room. The broadcast system is to provide selection and complete control of the cameras, as well as selection of all source devices for the broadcast feed. Camera feeds in HD-SDI and Computer inputs from the Council Chamber utilizing high resolution digital HDMI signals are to be scan converted and scaled to a common digital output format and frequency for distribution to the broadcast system components. Selection of sources for broadcast is to be through a broadcast-quality video production switcher with six (6) inputs that are to be paired with a 22" touchscreen multi-viewer that allows all presets and camera positions to be displayed and activated by touching the "video thumbnail" of the preset. The touchscreen multi-viewer is to be configured to display six input windows and two larger "Preview" and "Program" windows with red and green tally window borders. In addition, each camera input can have up to 12 stored "video thumbnail" preset camera shots. Character and graphical overlay is to be accomplished with a high-quality, keying, down-stream character generator. Source preview and program monitoring is to be through the 40" display with multi-viewer configured to provide continuous monitoring of all cameras, Chamber current presentation source, character generator, presentation switcher and broadcast program.

One (1) 22" monitor is to be used for preview of the character generator and one (1) 19" display is to provide continuous confidence monitoring of incoming cable feeds from Time Warner and Cox via OFE provided set top boxes and broadcast signal output. Both units are to be mounted in the Broadcast Control Room.

Broadcast output is to be distributed to two (2) press plates with two (2) HD-SDI and two (2) XLR audio connections, OFE Agenda Management System HD-SDI encoder for web steaming and recording, a Cable Cast system for broadcast distribution and recording, a Blu-Ray DVD Recorder, and two cable modulators (Time Warner and Cox). The Cable Cast system is to also be used to play live broadcast and time scheduled looping video and audio to the OFE cable modulators 24/7.

All broadcast video and control equipment is to be housed in or on a custom broadcast style operator console system which is to incorporate racks, desk space, and other accessories as required to provide a workspace which is ergonomically designed for long session operator use, aesthetically pleasing and operator-friendly.

Source audio for the broadcast and recording is to be available as mixed microphone and media audio from the Council Chamber which shall be distributed to multiple outputs on the digital audio mixer/router for distribution to the broadcast system recorders and the cable system modulators (supplied by others). A pair of stereo speakers are to also be included for monitoring of available audio signals. Monitor speaker source selection and volume control is to be available from the operator touch panel.

All audio and video signals into and out of all devices in the broadcast system are to be routed through digital routing systems located in the Broadcast Control Room racks.

## N. CONTROL SYSTEM

### 1. GENERAL DESCRIPTION

An integrated AV control system is to be included in the Council Chamber system. Functionality of the control system is to include, but is not limited to, system power control, selection and control of source devices to be displayed on the displays, presentation router control, microphone muting, Chamber ceiling speaker volume level control, and video source preview. The primary control point of the presentation system is to be located at the Clerk's position in the Council Chamber. Duplicate control capabilities are to also be provided in the Broadcast Control Room. The control system is to be connected to rack mounted networked and controlled UPS units located in the control room and storage room racks and interfaced to the control system. In the event of power outage, the UPS units are to provide sufficient power to shut down the system in an appropriate fashion without damaging any equipment. When power is restored to the system, the AV systems are to power up and return to the default state automatically. A system to allow remote monitoring, troubleshooting, and connection to all controlled devices shall also be provided.

### 2. CONTROL SYSTEM FUNCTIONALITY GUIDE

#### GENERAL GUIDELINES

A. Touch Control Panels

Touch Control Panels are to allow the operator to have access to Council Chamber presentation system controls for system power, display source selection, and video preview of any source.

The control system is to sufficiently control all devices necessary to allow, upon source selection, seamless and automatic distribution of a selected Council Chamber presentation source device to the video display and to the production system in high definition video. Additionally, audio from the selected source device shall be automatically selected and routed to the audio mixer while all unselected source devices are muted.

Control pages, panels or buttons are to be laid out logically and symmetrically with a minimum of page flips, pop-ups or button changes for standard control functions. Background colors and button colors shall be coordinated with the City prior to site installation.

B. Microphone Mute

All table mounted gooseneck microphones shall have an adjacent mute button on the corresponding touch panel mounted in the dais, staff or podium millwork. All microphone mute buttons are to provide visual status feedback of the microphone mute function. The podium microphone mute function is to be controlled locally from the podium touch panel, but may be overridden by the Clerk's touch panel.

O. LIGHTING AND ROOM DIMMING SYSTEM MODIFICATIONS

1. DAIS LIGHTING

The existing mounted dais spot lighting fixtures are to be replaced by the Audiovisual Contractor with new energy efficient LED theatrical type lighting fixtures to support appropriate illumination of the Council members at the dais for video production. The electrical circuits currently supporting the existing fixtures are to be reused to provide 120v power to the new fixtures. The new fixtures are to be dimmable and are to support appropriate color temperature and lighting levels of the participants at the dais and key lighting of the rear wall area and are to integrate with the other room lighting to provide room illumination supporting the Council, Committee and public activities in the room.

2. CHAMBER LIGHTING

The existing ceiling mounted house lighting fixtures is to be replaced by new energy efficient LED fixtures by the GC. The new fixtures are to support appropriate color temperature and lighting levels to provide proper room illumination and are to interface to the dimming system.

### 3. DIMMING SYSTEM REPLACEMENT

The existing Council Chamber lighting dimming system and low-voltage interface for connection to the AV control system is to be replaced by the CG with a new, current technology dimming system and interface. The new dimming system is to interface to the new integrated control system to be provided and installed by the Audiovisual Contractor as a part of this project and is to be used to control the new fixtures and circuits of lighting installed in the Chamber.

#### P. DAIS MILLWORK MODIFICATIONS

The Council Chamber dais and staff millwork is to be modified to accommodate the new AV control components by the Audiovisual Contractor. Modifications for the digital name plates are to be coordinated for performance by the GC.

#### Q. COUNCIL CHAMBER LOBBY OVERFLOW

The Council Chamber Lobby Overflow system shall provide a live un-delayed broadcast audio and video feed from the Council Chamber or a local input feed for Lobby presentations. Selection of the Council Chamber feed as the current feed to the system is to be controlled by the Clerk's or Broadcast Operator's touch panels, disabling the local Lobby touch panel. The video feed shall be displayed on a new 75" LED display. Audio for the Lobby is to be supported by a sound bar speaker system attached to the display and mount. A local Lobby PC or video and audio input and touch panel is to be installed below the display and speaker unit.

## PRODUCTS

- Cabling
  - A. The following table lists cabling products and types that have been pre-approved for use on this project. This is not an all-inclusive list of the cabling products and types required to complete this project. The Audiovisual Contractor shall reference the cabling products in this table as a baseline of performance for each cable category.

<b>Type/Application</b>	<b>Description</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Comment</b>
Microphone or Line Level Audio	22 AWG STP	Belden	9451	or equal
Microphone or Line Level Audio	22 AWG STP Plenum	Belden	9451P	or equal
Audio – Coax -Digital	19 AWG Coax	Belden	1694F	or equal
Audio Line – Digital Ready – Single Pair	24 AWG STP	Belden	1800B	or equal
Audio Line – Digital Ready – Single Pair	24 AWG STP Plenum	Belden	1801B	or equal
Audio Line – Digital Ready – Multi Pair (2)	24 AWG STP	Belden	1802B	or equal
Audio Line – Digital Ready – Multi Pair (4)	24 AWG STP	Belden	1803F	or equal
Audio Line – Digital Ready – Multi Pair (8)	24 AWG STP	Belden	1805F	or equal
Audio Line – Digital Ready – Multi Pair (12)	24 AWG STP	Belden	1806F	or equal
Audio Line – Digital Ready – Multi Pair (16)	24 AWG STP	Belden	1850F	or equal
Audio Line – Digital Ready – Multi Pair (24)	24 AWG STP	Belden	1852F	or equal
Digital Audio – CAT6	23 AWG UTP	Belden	4812	or equal
Digital Audio – CAT6	23 AWG UTP Plenum	Belden	4813	or equal
Mic – 26 Pair Snake	22 AWG STP	Gepco	GA1826GFC	or equal
Mic – 32 Pair Snake	22 AWG STP	Gepco	GA1832GFC	or equal
Loudspeaker or LV Power Supply, 10 AWG	10 AWG UTP	Belden	5T00UP	or equal
Loudspeaker or LV Power Supply, 10 AWG	10 AWG UTP Plenum	Belden	6T00UP	or equal
Loudspeaker or LV Power Supply, 12 AWG	12 AWG UTP	Belden	5000UE	or equal
Loudspeaker or LV Power Supply, 12 AWG	12 AWG UTP Plenum	Belden	6000UE	or equal
Loudspeaker or LV Power Supply, 14 AWG	14 AWG UTP	Belden	5100UE	or equal

Type/Application	Description	Manufacturer	Model No.	Comment
Loudspeaker or LV Power Supply, 14 AWG	14 AWG UTP Plenum	Belden	6100UE	or equal
Loudspeaker or LV Power Supply, 16 AWG	16 AWG UTP	Belden	5200UE	or equal
Loudspeaker or LV Power Supply, 16 AWG	16 AWG UTP Plenum	Belden	6200UE	or equal
Loudspeaker or LV Power Supply, 18 AWG	18 AWG UTP	Belden	5300UE	or equal
Loudspeaker or LV Power Supply, 18 AWG	18 AWG UTP Plenum	Belden	6300UE	or equal
Precision Video	RG-59 Coax	Belden	1505A	or equal
Precision Video	RG-59 Coax Plenum	Belden	1506A	or equal
Precision Video	RG-6 Coax	Belden	1694A	or equal
Precision Video	RG-6 Coax Plenum	Belden	1695A	or equal
Precision Video	RG-7 Coax	Belden	1794A	or equal
Precision Video	RG-11 Coax	Belden	7731A	or equal
Precision Video	RG-11 Coax Plenum	Belden	7732A	or equal
RF, 50 ohm	RG58 Coax	Belden	8240	or equal
RF, 50 ohm	RG58 Coax Plenum	Belden	82240	or equal
RF, 50 ohm, low loss	RG8X/RF240 Coax	Times Microwave	LMR-240-PVC	or equal
RF, 50 ohm, low loss	RG8X/RF240 Coax Plenum	Times Microwave	LMR-240-LLPL	or equal
S-Video – Siamese	Dual 30 AWG Coax	Belden	1807A	or equal
S-Video -Round	Dual 30 AWG Coax	Belden	1808A	or equal
S-Video	Dual 30 AWG Coax Plenum	Belden	7700A	or equal
Component Video	Three 25 AWG Coax	Belden	1277R	or equal
Component Video	Three 25 AWG Coax Plenum	Belden	1277P	or equal
RGBHV	Five 25 AWG Coax	Belden	1279R	or equal
RGBHV	Five 26 AWG Coax Plenum	Belden	1279P	or equal
RGBHV Super High Resolution	Five 18 AWG Coax	Belden	7712A	or equal
VGA, mini-hi res with EDID	3-26 AWG coaxial, 7-26 AWG single and 2-26 AWG STP	Extron	MHRVGA	or equal
VGA, mini-hi res with EDID	3-26 AWG coaxial, 7-26 AWG single and 2-26 AWG STP, Plenum	Extron	MHRVGAP	or equal

Type/Application	Description	Manufacturer	Model No.	Comment
HDBaseT Shielded CAT5e+	4-Pair CAT5e+ F/UTP 350 MHz	Belden	1212F	or equal
HDBaseT Shielded CAT5e+	4-Pair CAT5e+ F/UTP 350 MHz, Plenum	Belden	1213F	or equal
HDBaseT Unshielded CAT6A	4-Pair CAT6A U/UTP 625 MHz	Belden	10GX12	or equal
HDBaseT Unshielded CAT6A	4-Pair CAT6A U/UTP 625 MHz, Plenum	Belden	10GX13	or equal
USB Extension Shielded CAT5e+	4-Pair CAT5e+ F/UTP 350 MHz	Belden	1212F	or equal
USB Extension Shielded CAT5e+	4-Pair CAT5e+ F/UTP 350 MHz, Plenum	Belden	1213F	or equal
RS232 (Tx,Rx,Gnd)	22 AWG STP	Belden	9451	or equal
RS232 (Tx,Rx,Gnd)	22 AWG STP Plenum	Belden	9451P	or equal
Control (RS-232/422)	2-Pair 24 AWG Stranded TC	Belden	8102	or equal
Control (RS-232/422)	2-Pair 24 AWG Stranded TC Plenum	Belden	82502	or equal
Ethernet Control Unshielded CAT5e	4-Pair CAT 5e U/UTP 200 MHz	Belden	1583A	or equal
Ethernet Control Unshielded CAT5e	4-Pair CAT 5e U/UTP 200 MHz, Plenum	Belden	1585A	or equal
Crestron DM 4K Ultra Cable Shielded CAT7a	4-Pair 7a S/FTP 1000 MHz	Crestron	DM-CBL-ULTRA-NP	or equal
Crestron DM 4K Ultra Cable Shielded CAT7a	4-Pair 7a S/FTP 1000 MHz, Plenum	Crestron	DM-CBL-ULTRA-P	or equal
Crestron DM 4K Ultra Cable Shielded CAT7a	4-Pair 7a S/FTP 1000 MHz, Low Smoke	Crestron	DM-CBL-ULTRA-LSZH	or equal
Crestron (Cresnet) Cable	2-18 AWG UTP with 2-22 AWG STP	Crestron	CRESNET-NP	or equal
Crestron (Cresnet) Cable	2-18 AWG UTP with 2-22 AWG STP Plenum	Crestron	CRESNET-P	or equal

- Equipment

- A. Refer to Appendix A for equipment list.

- B. Connectors, Adapters and Assemblies

1. Field terminated connectors shall be compatible and approved for use for a specific cable type and application by the cable and equipment manufacturer.
2. Connectors shall be manufactured by Neutrik, Switchcraft, AMP, Amphenol, Kings, Canare, Crestron, Extron, or equal.
3. Manufacturer constructed cable adapters and assemblies shall be furnished as manufactured by Crestron or Extron, or equal.

- C. Crestron Digital Media System, or equal, Required Cable and Connectors.
1. Crestron Digital Media, or equal, category cabling shall be Crestron DM-CBL-ULTRA shielded CAT7a, or equal.
  2. Crestron Digital Media, or equal, category cabling connectors landed at Crestron, or equal, equipment shall be Crestron DM-CONN, or equal.
  3. Crestron, or equal, category cable connections for Crestron Digital Media, or equal, cabling terminations at the room boundaries shall be color-coded Neutrik EtherCON, or equal, Cat6 rated shielded panel connectors, and DM compliant shielded Cat6 rated inline connector, in the appropriate color-coded Neutrik EtherCON connector carrier, or equal. All wires within the cable must be connected and shielded.
  4. All RJ-45 style connections provided by the Audiovisual Contractor for Crestron, or equal, control over Ethernet on an Audiovisual Contractor provided (Crestron, or equal) network switch, shall be mechanically keyed with color-specific positive and negative keying features to prevent unintentional mating with unlike keyed or non-keyed patch cables at the room boundaries (wall panels or floor box panels).
- D. Custom panels
1. Custom panels shall be machined aluminum, nominal thickness 0/125", with beveled edges and a brushed, anodized finish. Confirm with the City's Representative required finish color for each panel location.
  2. All panel connectors shall be labeled with engraved lettering, minimum 0/10" letter height, and provided with contrasting paint fill.
- E. AV Rack Accessories
1. Provide manufacturers rack mount adapters where available.
  2. Where manufacturers rack mount adapters are not available, provide Middle Atlantic Products RSH4S-series custom rack shelf adapters, with -C clamping option as required, or equal.
  3. Blank rack panels: Middle Atlantic Products EB-series, or equal.
  4. Vented rack panels: Middle Atlantic Products VT-series, or equal.
  5. Rack screws, lacer bars and accessories: Middle Atlantic Products, or equal.
- F. AV Rack Power Distribution Equipment
1. Where the Technical Power supply to the rack is IG (isolated ground), provide a power distribution system within the rack that maintains the integrity of the IG system.
  2. Vertical power strips: Middle Atlantic Products PDT-series, or equal.
  3. Rack rail power strips: Middle Atlantic Products PD-series, or equal.
  4. Provide a sufficient number of AC convenience outlets to accommodate all installed equipment plus an extra 20% spare capacity.

## EXECUTION

- Installation Practices
  - A. General
    1. All equipment shall be installed in accordance with this Specification, approved Shop Drawings, and manufacturer's recommendations.
    2. All equipment with the exception of portable equipment shall be firmly fastened or attached in place. A safety factor of at least four shall be utilized for all brackets, fasteners and attachments. Provide safety retention cables for overhead equipment such as loudspeakers, projectors, etc.
    3. In the installation of equipment and cable, consideration shall be given not only to operational efficiency, but also to overall aesthetic factors.
    4. The Audiovisual Contractor shall ensure that all equipment is installed such that proper cooling and ventilation is insured.
    5. All equipment shall be installed in a manner, which prevents hum, RF/EMI/EMF interference, and mechanical vibration based noises (e.g. fan mounts, etc.)
    6. Cameras, displays, projectors, lenses, and mirrors shall be solidly mounted and braced so that there is to be no observable movement in the image induced by motor vibration or other mechanical operations.
    7. All equipment shall be protected from construction dust and debris until final acceptance of the system.
    8. All equipment shall be protected from theft until final acceptance of the system.
  - B. Seismic Restraints
    1. All hanging or free-standing equipment and cabinets furnished including but not limited to racks, loudspeakers, projection screens, and TV monitors shall be secured to substantial building structures. The equipment described shall resist seismic acceleration in any direction up to a limit of the greater of 1.0 G or the limit prescribed by the local governing codes.
    2. Maintain electrical isolation between the equipment racks and building steel.
  - C. Equipment Racks and Equipment Rack Cable Management
    1. Racks shall be installed in such a way so as to permit access to all equipment for service.
    2. Racks are considered complete components and should be completely assembled and tested at the Audiovisual Contractors facility prior to onsite installation.
    3. All equipment in racks shall be fitted with vent panels and/or fans as required to provide ventilation and cooling according to equipment manufacturer's recommendations.
    4. Unused front facing rack spaces shall be fitted with blank rack panels.
    5. Adjacent racks shall be bolted together with appropriate ganging hardware.
    6. Use rear and mid rails for intermediate terminations. Maintain accessibility to the rear of the equipment.
    7. Mid rails must be used to support equipment weighing more than 50 pounds.
    8. As a general practice, all power cables, control cables, and high-level cables shall be dressed to the left rear of an equipment rack. Audio and video cables shall be

dressed to the right rear of the rack. Audio, video and control cables shall be bundled separately and spaced not less than three (3) inches apart.

9. Internal equipment rack cabling shall be supported by lacing strips, support brackets, or other cable management systems as required to ensure that all cabling is supported in both the vertical and horizontal planes within the rack.
10. With the exception of ganged equipment rack assemblies, cabling routed between equipment racks or pieces of equipment exterior to equipment racks, or extending to the greater facility cabling infrastructure, shall be completely protected, end-to-end, by a raceway, wire-way, or duct appropriately sized for the cable run.
11. Cabling between rolling pieces of equipment not housed in rack cabinets or a rolling equipment rack and any device to which it is connected, shall be protected by a split-loom corrugated tubing wrap or other such flexible cable management system appropriately sized for the cable run.
12. Any controls not to be adjusted by the user and accessible from the front of the equipment rack must be furnished with security panels.
13. Unless otherwise approved in writing by the City's Representative, equipment rack(s) shall be completely assembled, tested and programmed in the Audiovisual Contractor's shop. No rack assembly shall be performed at the project site.

#### D. Video Displays

1. Turn off or disable all eco, green or energy saving modes on all flat panel and projector displays where displays are to be controlled by an external control system.
2. Video settings should be adjusted on all flat panel displays to optimize color and contrast. Any dynamic contrast modes within flat panel displays shall be disabled.

#### E. Cabling

1. All cabling and termination shall be executed in adherence to standard industry practices and as outlined in:
  - a. AV Installation Handbook: Best Practices for Quality Audiovisual Systems: InfoComm International, latest edition.
  - b. Philip Giddings -Audio Systems Design and Installation: Boston Focal Press, latest edition.
  - c. Kenneth T. Deschler -Cable System Design and Installation: McGraw-Hill, Inc. latest edition.

#### F. Cable Installation

1. Non-contiguous cable support mechanisms such as hangers, rings, and hooks shall not be spaced farther than four (4) feet apart. All manufactured raceways used for cables shall be installed according to the raceway manufacturer's specifications.
2. Cable runs shall be supported with devices designed for this purpose and are to be installed independent of any other structural component.
3. Cables routed vertically up walls, or between floors as vertical riser, shall be supported with clamps or other mechanisms. These supports shall occur at least three times per floor.
4. The Audiovisual Contractor shall maintain, or where not already existing, provide through penetration fire stop systems to prevent the spread of fire through openings made in fire-rated walls or floors to accommodate penetrating items such as conduit, cables or other pathway. Fire stop shall restore floor and wall to the

original fire rated integrity and shall be waterproof. The fire stop systems and products shall have been tested in accordance with the procedures of U.L. and material shall be U.L. classified as materials for use in through-penetration fire stops.

5. The fire stop system shall comply with the NEC and with NFPA 101-Life Safety Code (latest edition) and shall be made available for inspection by the local inspection authorities prior to cable system acceptance. The Audiovisual Contractor shall be responsible for verifying the fire rating of all walls and floors affected by his work.
6. Cable pulling tension may not exceed manufacturer recommendations. Where cable-pulling lubricant is used, the lubricant must be compatible (non-damaging) with the conduit and cable sleeve materials and must not harden over time to prevent future pulls.
7. Cable stapling of any recognized media type shall not be permitted.
8. Cables shall be dressed in conveniently sized bundles and either laced or banded. Lacing or banding shall not be so tight as to deform cable bundles.
9. Cabling installed with a bend radius less than that recommended by the cabling manufacturer is not acceptable.
10. Cables and bundles terminating at equipment or connector panels shall be supported so as not to put strain on connections or connectors.
11. All cables, with the exception of video or pulse cables, which must be cut to an electrical length, shall be cut to the length dictated by the run. No splices shall be permitted in any pull boxes without prior approval of the City's Representative.
12. Cabling for equipment mounted in drawers or on slides shall be provided with a service loop of appropriate length. A cable management support for the service loop shall be provided to prevent the service loop travel from interfering with the operation of the drawer or slide, or snagging on adjacent cabling.
13. Microphone level, line level, loudspeaker level, and video lines shall be run in separate conduits, trough, raceway divider, and cable bundles. Low voltage DC and control may be run along with any but microphone or line level runs.

#### G. Termination

1. All termination components must meet or exceed all specifications for given media type and application as described in this document and system drawings.
2. Crimp on connectors shall be installed only on the appropriate size cable using the manufacturer recommended crimp tool and die set.
3. Connections to electronic devices providing screw terminals shall be terminated using the appropriate gauge insulated spade or ring crimp terminal connector and crimp tool.
4. All mechanical solder-on connectors shall be attached to cable ends using rosin core solder.
5. Audio signal cable shields shall be protected with the appropriate gauge Teflon or heat-shrinkable tubing. The jacket end of each audio cable shall be fitted with the appropriate gauge heat shrinkable tubing to provide additional protection to the base of the shield or shield foil. This also applies to the inside of mechanical connectors and cables that terminate at partitioned barrier strips.

## H. Category Cabling and Connectors for AV Systems

### 1. General

- a. All category cabling installed by the Audiovisual Contractor to support AV Systems connectivity shall meet the equipment manufacturer's specifications for cable and connector types, installation methods and routing, separation distance from adjacent services, maximum number of disconnect points and maximum overall cable run lengths required to meet the systems design performance criteria. The category cabling system shall be tested, verified and documented to meet the ANSI/TIA-568-C.2 Standard, including all applicable Addenda.

### 2. Digital Media Distribution Systems

- a. Audiovisual Contractor provided signal distribution equipment that requires RJ-45 style connectors at room boundary wall panel or floor box panel connections, with the exception of those connecting a piece of AV equipment to the City's LAN, shall be color-coded Neutrik EtherCON Cat6 rated shielded panel connectors, or equal and DM compliant shielded Cat6 rated inline connectors in the appropriate color-coded Neutrik EtherCON connector carrier, or equal. Manufacturer approved RJ45 cable connectors shall be used at all manufacturer equipment connections. All wires within the cable must be connected and shielded.
- b. Each digital media RJ-45 receptacle, permanently installed cable, equipment cord, patch cord and patch panel is to be of a color or have markings that are nonstandard with the voice/data system, and be plainly and permanently labeled "AV ONLY".

### 3. AV Control Ethernet Systems

- a. Audiovisual Contractor provided network equipment and connections for AV equipment control over Ethernet: all RJ-45 style room boundary wall panel or floor box panel connections provided by the Audiovisual Contractor shall be mechanically keyed with color-specific positive and negative keying features to prevent unintentional mating with unlike keyed or non-keyed patch cables.
- b. Each AV control RJ-45 receptacle, permanently installed category cable, equipment cord patch cord and patch panel is to be of a color or have markings that are non-standard with the voice/data system, and be plainly and permanently labeled "AV ONLY – NOT DATA".

### 4. AV USB Extension Systems

- a. Audiovisual Contractor provided equipment and connections for USB extension over category cable: all RJ-45 style room boundary wall panel or floor box panel connections provided by the Audiovisual Contractor shall be mechanically keyed with color-specific positive and negative keying features to prevent unintentional mating with unlike keyed or non-keyed patch cables.
- b. Each USB extension RJ-45 receptacle, permanently installed category cable, equipment cord patch cord and patch panel is to be of a color or have markings that are non-standard with the voice/data system, and be plainly and permanently labeled "AV ONLY – NOT DATA".

- I. Digital Video Signal Cable Installation and Testing
  1. General
    - a. All digital video signal cabling installed by the Audiovisual Contractor to support AV Systems connectivity shall meet the equipment manufacturer's specifications for cable and connector types, installation methods and routing, separation distance from adjacent services, maximum number of disconnect points and maximum overall cable run lengths required to meet the systems design performance criteria. The cabling system shall be tested, verified and documented.
  2. When issues (such as cable length) compromise specifications or the integrity of the audiovisual system, active cable equalization, twisted pair extenders, or fiber-optic extenders shall be employed as appropriate.
    - a. When using twisted pair extenders, the type of cable used and its shielding must comply with the extender manufacturer's recommendations for optimum performance.
    - b. When using products that draw power from the +5V line, the system must be configured to ensure that source power is not overdrawn.
  3. The bend radius of each cable shall not be less than the minimum recommended by the cable manufacturer.
  4. System interconnects shall not exceed the minimum required for system functionality.
  5. Cable splices, joiners, and gender changers shall not be used.
- J. Labels / Wire Markers
  1. Except where otherwise indicated, all rack-mounted equipment, switches, controls, and interface panels shall be clearly labeled.
    - a. Panels and plates shall be a minimum 1/8" thick anodized aluminum etched and epoxy filled unless otherwise specified.
    - b. Rack mounted equipment shall be labeled with engraved and filled plastic laminate. Where appropriate, the function of, or the input, output, or loudspeaker(s), served by each device shall be indicated. Other methods of labeling rack mounted equipment may be accepted pending prior approval by the City's Representative.
    - c. All cables shall be permanently identified at each end by machine printed cable markers.
    - d. Every cable shall have a unique tag number identifier for each cable. The Audiovisual Contractor shall include this unique tag number on the As-Built signal flow documentation.
    - e. Cable markers shall be placed two (2) inches from where the cable exits the strain relief of the connector, but never within a cable bundle.
    - f. Each cable marker shall include, in addition to the unique tag number identifier, the name of the origination and destination equipment termination at each cable end.

K. Grounding

1. Except to avoid system noise, data errors, safety hazards, and equipment damage, all devices and cabling shall be installed using a consistent grounding scheme. All devices shall be grounded and all ground conductors shall follow a star topology. The grounding system topology should be such that each equipment rack and each piece of signal bearing equipment is connected so that there is never more than a single path to ground. This section offers guidelines for grounding and shielding methodology. Grounding and shielding methodology may need to be augmented or modified for certain pieces of equipment or interconnections in order to meet the requirements of other sections of this specification. The Audiovisual Contractor shall be responsible for making necessary alterations in accordance with industry practices.
  - a. Grounding and shielding systems shall be executed in adherence to standard industry practices and as outlined in:
    - i. AV Installation Handbook: Best Practices for Quality Audiovisual Systems – Second Edition: InfoComm International, 2009
    - ii. Basics of Audio and Visual Systems Design handbook. Section 10, “Technical Power and Grounding Systems” – Revised Edition: InfoComm International 2003
  - b. Ground conductors referred to in this section shall be 10AWG insulated solid copper cable. Ground conductors shall be terminated using a closed ring lug, of proper size for each application, which shall be connected to system electronic components and the equipment rack master bus using nuts, bolts, and lock washers.
  - c. Under no circumstances shall an AC neutral conductor be used to ground equipment.
  - d. Power Distribution within Equipment Racks
    - i. A “master ground bus” shall be established in the equipment rack(s) serving each area. The master ground bus shall consist of a copper bus bar, which shall be electrically bonded to the equipment rack, and of sufficient size to accommodate all attached ground conductors.
    - ii. For installations with multiple ganged equipment racks, each equipment rack chassis shall be connected to the master ground bus bar via an electrically bonded jumper.
    - iii. The Audiovisual Contractor shall ensure that each equipment rack remains electrically isolated from any other ground source, including conduits, raceways, and building steel.
    - iv. Active components having a grounded AC line cord shall be grounded using the supplied AC line cord connected to the equipment rack power distribution system. Removing the ground pin from a 3-conductor equipment power cord, or the use of ground defeat plugs is prohibited.
    - v. For active components that do not have a grounded AC line cord, the component’s chassis shall be connected to the master ground bus bar using a ground conductor.
    - vi. For passive signal carrying components, which have no AC line cord, the component’s chassis shall be connected to the master ground bus bar using a ground conductor.

- e. Interconnection
  - i. All connectors used on system I/O panels shall be electrically isolated from the panel and provide a pass through (uninterrupted) ground connection.
  - ii. Microphone cable shields shall be connected to the microphone frame and grounded only at the preamplifier input connector.
  - iii. All audio interconnections with cable lengths greater than 10 feet shall use balanced (symmetrical) signaling.
  - iv. All audio signal cable shields shall be grounded only at the input connection of each device. Signal cable shields, both connected to devices and floating, shall be protected by the appropriate gauge heat shrinkable tubing. Shields at the output connector shall be folded back over the cable jacket and covered with heat-shrinkable tubing. Do not cut off unused shields.
  - v. Coaxial video and RF shields shall be connected at both ends.
  
- Control System & Software Design
  - A. Crestron Control System
    - 1. The Crestron control system processing equipment is to provide local control for devices as specified. Each processor shall be equipped with Ethernet expansion cards and memory expansion as required to support their operation. A connection between the processors, the AV LAN and the building LAN is to provide communications between these devices and the remote monitoring and diagnostic support system.
  
  - B. Graphical User Interface/Touch Panels
    - 1. General
      - a. The following guidelines are not intended to limit the creativity of the Audiovisual Contractor when designing the software nor are they all-inclusive. Rather, they are concepts and guidelines to insure that a fully functional, easy to operate control system is provided for the City.
      - b. The Control System shall employ an easy to use, intuitive, touch panel graphical user interface. Touch panel control shall be icon based and utilize graphical representations that mimic the actual device for all devices under control. In every case where the device under control offers feedback, the Control System shall provide indication on the touch panel(s) of individual component control state conditions.
      - c. A “Quit”, “System Shutdown” or similar button shall be available from the Main Menu. When the User has selected this button, a confirmation screen indicating that the shutdown sequence has been selected, and a message is to pop-up reminding the User to remove all media such as DVD or Blu-Ray discs. A second button press shall be required to initiate the power down sequence. If a lamp-based component such as a video projector has a significant cool down and warm-up time between it’s on and off state, the warning should indicate that this particular device is to be unavailable for a specified period of time. This might be done using a graphical

- representation of a clock, a countdown timer, bar graph, etc.
- d. All pages shall maintain a consistent graphical “look and feel”.
- e. The opening page should have, at a minimum, a City logo, a large button to start the system, and the ability to control the lighting system without powering up the entire system.
- f. After system start-up, the primary page or main menu in each system application shall display (at a minimum) a room identifier; all relevant input sources grouped together, all environmental controls grouped together, a quit option, a date icon displaying the current date, and a clock indicating current local time.
- g. The Audiovisual Contractor is to determine with the City’s Representative those control panels requiring passwords and limited access.
- h. Each touch panel shall provide a method for service personnel to access detailed system information and configuration menus. This information might be accessed by service personnel via a hidden button and/or by entering a password.
- i. The information page should include the following: “System Installed by \_\_\_\_\_, ph. , and website address; “Programming Supplied by \_\_\_\_\_, “Program Name”; “Compiler Version X.0”; “Panel File #”; and other relevant system software information.

## 2. Video Preview Function

- a. Where specified components permit, a video preview function shall be provided on the touch panel.
- b. The video preview function shall operate such that, when any video source is selected, its output is to be automatically routed to a video preview window on the touch panel.
- c. Touching the video preview window on the touch panel is to toggle the video display between a predetermined sized video window and full screen display on the touch panel.
- d. Control buttons for the selected video source device shall always be present below the video preview window and/or overlaid onto the full screen display.
- e. Switching and control shall be such that a user may preview and cue video on the touch panel from a selected video source device at the same time that program material is running, uninterrupted, on the systems primary display device and sound reinforcement system.
- f. Pressing a video source device button followed by pressing a ‘display’ (or similarly labeled) button is to route the source’s video signal to the primary display.

## 3. Audio Control

- a. A volume control icon shall be available to the User at any time there is an audio enabled system.
- b. A clearly visible mute button with positive feedback to an on/off indicator on the touch panel shall also be included.
- c. The Audiovisual Contractor shall set the system’s master gain control such that the user has a reasonable range of audio level, but the maximum level

is set below that which could allow the user to inadvertently cause harm to system components or cause feedback in the system.

- d. The control system shall automatically reset the audio levels to an indexed preset level each time the system is shut down or restarted.
- e. Pressing a video source device button followed by pressing a 'display' (or similarly labeled) button is to route the source's video signal to the primary display. The source device's audio is to be simultaneously routed to the room's sound reinforcement system (audio follow).
- f. In systems with multiple assignable video displays:
  - i. The video preview window shall include a button, or buttons, representing each assignable video display connected to the system. Where touch panel size permits, this should take the form of a graphical representation of the room with a display assignment button showing the relative location of each display.
  - ii. Pressing a video source device button followed by pressing a display assignment button is to route the source's video signal to that display. This process can be repeated to assign a single video source to multiple displays.
- g. In systems with multiple assignable video displays and a single sound reinforcement system:
  - i. A method shall be provided by which users may select which video source's audio signal is to be routed to the room's sound reinforcement system (audio break away).
- h. In systems with multiple assignable video displays and a multiple sound reinforcement system:
  - i. A method shall be provided by which users may select which video source's audio signal is to be routed to each sound reinforcement system (audio break away).

#### 4. Lighting Control

- a. Touch panel layouts is to include lighting preset recalls in each room. A minimum of five scene presets should be provided. For lighting zones where a dimming system is employed, the touch panel shall include "Brighter" and "Dimmer" or "Plus" and "Minus" buttons allowing the User to increase or decrease the level of lighting for any given preset.

#### 5. Controlled Devices

- a. Wherever possible, the Control System shall provide positive feedback of individual component control-state conditions to the touch panel. For example, the touch panel page to control a Blu-Ray or DVD player shall have a status window indicating the status of the device (such as "Play Mode") or the absence of media (such as "No Disc"). If environmental controls are triggered with a particular device, the trigger for that environmental control should be feedback from the device rather than a simple button push. For example, if the control system is to automatically lower the lights when the DVD player is placed in "Play" mode, the control system should not directly trigger the lighting preset from the "Play" button press, but rather by first confirming that a disc is present in the player and that the player is in fact in

“Play” mode.

- b. All control system processors shall be programmed with an Auto Shutdown feature. Auto Shutdown is to automatically power down a system at a given time unless overridden by the local User or System Administrator. The Auto Shutdown feature shall function as follows: For any given room, when Auto Shutdown is set to “On”, the system is to power down at a time specified by the City’s Representative, 10:00 PM for example. Ten minutes prior to the specified time, the touch panel shall display a warning message and beep indicating that the system is to shut down unless the local defeat button on the panel is pressed within the ten-minute time limit. Pressing the local defeat button is to delay the Auto Shutdown sequence by one-hour, or other set length of time as requested by the City’s Representative. Fifty minutes after the one-hour delay button has been pressed, the warning message and beep indicating that the system is to shut down unless the local defeat button on the panel is pressed within the ten-minute time limit is to appear. This sequence shall continue so long as the operator continues to press the delay button.

END OF SPECIFICATION

## TERMS AND CONDITIONS

### 1.1 Insurance Requirements

**The Proposer shall furnish with the proposal proof of the following minimum insurance coverage.** These minimum levels of coverage are required to be maintained for the duration of the project and during the maintenance thereafter:

1. **General Liability and Automobile Liability Coverage** - \$1,000,000 per occurrence for bodily injury and property damage. If Commercial General Liability Insurance or other form with a general limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
2. **Professional Liability Coverage** - \$2,000,000 per occurrence (note: A “claims made” policy is acceptable). If consultant provides “claims made” coverage, consultant shall also agree in writing to either:
  - a) Purchase Tail Insurance in the amount required by the resulting agreement to cover claims made within five years of completion of vendor’s services under the agreement.
  - b) Maintain professional liability insurance coverage with the same carrier, or with an equivalent carrier in the amount required by the resulting

agreement five years after completion of vendor's services under the agreement.

3. **Worker's Compensation Coverage** - State statutory limits.

Deductibles, Self-Insurance Retentions, or Similar Forms of Coverage Limitations or Modifications, must be declared to and approved by the City of Tustin, which reserves the right to deny authorization to use such limitations.

**The Proposer is encouraged to contact its insurance carriers during the proposal stage to ensure that the insurance requirements can be met if selected for negotiation of a contract agreement. All insurance shall be endorsed to be primary and the City's insurance shall not be contributory. The City shall be named as Additional Insured and no policy may be modified or cancelled prior to thirty (30) days written notice.**

**Certificates of insurance and insurer endorsements evidencing the required insurance shall be provided. The worker's compensation policy shall be endorsed to waive subrogation rights against the City and its officials, officers, employees, and agents.**

**1.2 Standard Form of Agreement**

The vendor will enter into an agreement with the City based upon the contents of the RFP and the vendor's proposal. The City's standard form of agreement is included as Attachment B. **The Proposer shall carefully review the agreement, and include with the proposal a description of any exceptions requested to the standard contract. If there are no exceptions, a statement to that effect shall be included in the proposal.**

**1.3 Disclaimer**

This RFP does not commit the City to award a contract, or to pay any costs incurred in the preparation of the proposal. The City reserves the right to extend the due date for the proposal, to accept or reject any or all proposals received as a result of this request, to negotiate with any qualified vendor, or to cancel this RFP in part or in its entirety. The City may require the selected vendor to participate in negotiations and to submit such technical, fee, or other revisions of their proposals as may result from negotiations.

**1.4 Assigned Representatives**

The City will assign a responsible representative to administer the contract, and to assist the vendor in obtaining information. The vendor also shall assign a responsible representative (project manager) and an alternate, who shall be identified in the proposal. The vendor's representative will remain in responsible charge of the vendor's duties from the notice-to-proceed through project completion. If the vendor's primary representative should be unable to continue with the project, then the alternate representative identified in the proposal shall become the project manager. The City's representative shall first approve any substitution of representatives or subcontractors identified in the proposal in writing. The City reserves the right to review and approve/disapprove all key staff and subcontractor substitution or removal, and may consider such changes not approved to be a breach of contract.

## **1.5 City Business License**

A city business license will be required of the vendor and any subcontractors for services performed in connection with any agreement entered into through this RFP process.

## **ADMINISTRATION SPECIFICATIONS**

### **2.1 The City of Tustin's Rights to Proposals**

All proposals, upon submission to the City of Tustin shall become its property for use as deemed appropriate. By submitting a proposal, the Proposer covenants not to make any claim for or have any right to damages because of any misinterpretation or misunderstanding of the specification, or because of any misinformation or lack of information. The City of Tustin reserves the right to take one or more of the following actions as determined in the best interest of the organization:

1. to accept or reject in whole or in part any or all proposals;
2. to cancel this RFP in whole or in part without prior notice. Thereafter, City may issue a solicitation for new proposals;
3. City makes no guarantee as to the usage of the services by City;
4. to waive, at its discretion, any minor errors, informalities or irregularities, which the City deems correctable or otherwise not warranting rejection of the RFP;
5. to correct any arithmetic errors in any or all proposals submitted;
6. to negotiate with any Proposer(s) as necessary to serve the best interest of the City and to negotiate the final contract(s) with the most responsive, responsible Proposer
7. to investigate the qualifications of any Proposer under consideration;
8. to disqualify a proposal upon evidence of collusion with the intent to defraud or other illegal practices on the part of the Proposer;
9. to require confirmation of information furnished by the Proposer;
10. to award one contract for the total SYSTEM, or make multiple awards if it is in the best interest of the City.
11. to utilize any or all the ideas from proposals submitted;
12. to change the proposal's due date upon appropriate notification;
13. to adopt any or all of a vendor's proposal; and
14. to negotiate modifications to the scope and fee with selected Proposer(s) prior to contract award.

### **2.2 Interviews/On-Site Demonstrations/Equipment Testing**

City reserves the right to conduct interviews, and/or to require on-site demonstrations and/or product testing with some or all of the Proposers at any point during the evaluation process. However, City may determine that interviews/on-site demonstrations/equipment testing are not necessary. In the event interviews/on-site demonstrations/equipment testing are conducted, information provided during the interview/on-site demonstrations/equipment testing shall be taken into consideration when evaluating the stated criteria. City shall not reimburse the Proposer for the costs associated with the interview/on-site demonstrations/equipment testing process. Equipment testing will be held at a time and place specified by the City. The Proposer's key project team members will be invited to attend the

interview and/or on-site demonstrations and/or equipment testing. The Proposers should be prepared to discuss at the interview, their specific experience providing services and equipment similar to those described in this RFP, project approach, estimated work effort, available resources, and other pertinent things distinguishing the Proposer from others.

### **2.3 Proposal Instructions**

Deadline for submitting proposals is 3:00 p.m., Thursday, November 10, 2016. Mail or deliver to City Hall, City Clerk's Office, 300 Centennial Way, Tustin, CA 92780. Three (3) copies of each submission are required along with one electronic copy on CD or DVD. All submissions must be sealed in a package with reference to "RFP for Council Chamber AV" on the outside. Proposals received after the deadline will be returned, unopened, to the Proposer.

### **2.4 Addendum and Supplements to the RFP**

If it becomes necessary to revise any part of this RFP, an addendum or revision will be transmitted to all prospective vendors by email and will be posted on the City's website. Questions concerning the RFP document must be submitted in writing to City of Tustin, Attn: Sean Tran, 300 Centennial Way, Tustin, CA 92780, or email at [stran@tustinca.org](mailto:stran@tustinca.org). Questions will be received through October 28, 2016, at 11:00 a.m. Responses to all questions will be distributed in writing via email to all known Proposers and will be posted on the City of Tustin's website ([www.tustinca.org](http://www.tustinca.org)) as an addendum by November 4th. Proposers are cautioned that any statements made by the contact person that materially change any portion of the RFP shall not be relied upon unless subsequently ratified by a formal written amendment to this RFP.

### **2.5 Award of Contract**

The City reserves the right to reject any and all Proposals. A formal contract award is anticipated for the best overall vendor as determined by the Evaluation Committee and approved by City Council as a result of this RFP. The City reserves the right, in its sole discretion, to waive minor irregularities in proposals. A minor irregularity is a variation of the RFP, which does not affect the funding request, or gives one party an advantage or benefit not enjoyed by the other parties, or adversely impacts the interest of the City. Waivers, when granted, shall in no way modify the RFP requirements or excuse the party from full compliance with the RFP specifications and other contract requirements, if the party is awarded the contract.

### **2.6 False or Misleading Statements**

Any submittals containing, in the opinion of the City, false or misleading statements will be rejected.

### **2.7 Prospective Vendor Costs**

Costs for developing submittals are entirely the responsibility of the vendor and shall not be chargeable in any manner to the City.

### **2.8 Evaluation Process**

The City will form an Evaluation Committee to review all submittals received by the deadline. Any submittal failing to meet any of the qualifications documented in this RFP

may be rejected. The purpose for the Evaluation Committee is to recommend which vendor is best able to provide, install, maintain and support the SYSTEM, to the City's requirements, and within the City's budget. A submission in response to this RFP indicates your acceptance of the City's evaluation criteria.

## **2.9 Clarification of Proposals**

The City reserves the right to obtain clarification information on any item in any vendor's submittal or to obtain additional related information necessary to properly evaluate the submittal. Failure of a vendor to respond to a request for more information may result in the proposal being rejected.

## **2.10 Confidential Information**

All responses to this RFP become the property of City and will be kept confidential until such time as recommendation for award of contract has been announced. Thereafter, proposals are subject to public inspection and disclosure under the California Public Records Act (Cal. Government Code Section 6250, et seq.). If a vendor believes that any portion of its proposal is exempt from public disclosure, such portion may be marked "confidential." City will use reasonable means to ensure that such confidential information is safeguarded but will not be held liable for inadvertent disclosure of such materials, data and information. Proposals marked "confidential" in their entirety will not be honored and City will not deny public disclosure of all or any portion of proposals so marked. By submitting information with portions marked "confidential", the Proposer represents it has a good faith belief that such material is exempt from disclosure under the California Public Records Act and agrees to reimburse the City for, and to indemnify, defend and hold harmless City, its officials, officers, employees and agents from and against: (a) any and all claims, damages, losses, liabilities, suits, judgments, fines, penalties, costs and expenses including, (collectively, "Claims") arising from or relating to OCFA's non-disclosure of any such designated portions of a proposal if disclosure is deemed required by law or court order. Additionally, City may request that the Proposer directly defend any action for disclosure of any information marked confidential.

## **2.11 City Use of RFP Ideas**

The City reserves the right to use any and all service and product ideas presented from prospective vendors. Selection or rejection of a vendor does not affect this right.

## **2.12 Copyrights and Patents**

The vendor shall hold the City of Tustin and its officers, agents, servants, and employees harmless from liability of any nature or kind because of any copyrighted information, secret or proprietary process, patented or unpatented invention, disclosed or used in response to this RFP, and agrees to defend, at its own expense, any and all actions brought against the City of Tustin or its officers, agents, servants, or employees or the Vendor alleging or arising from unauthorized use of such information, process or invention.

### **2.13 Reliance on Information**

VENDORS MAY RELY ONLY UPON WRITTEN INFORMATION AND/OR INSTRUCTIONS FROM THE CITY GIVEN HEREIN OR SUBSEQUENT TO THE ISSUANCE OF THIS RFP. VENDOR MAY NOT RELY ON ANY ORAL INFORMATION AND/OR INSTRUCTIONS GIVEN WITH REGARD TO THIS RFP.

Any City response to a question or request for clarification by a vendor will be made in the form of an addendum to the RFP, which will be sent via email to all parties to whom the RFP has been issued not later than five (5) business days prior to the due date for receipt of the Proposal and will become part of the RFP.

### **2.14 Replacement of Incompatible Staff**

The City reserves the right to request and receive a replacement for any vendor staff member whom the City, in its sole and absolute discretion, determines is not working effectively with the City's staff assigned to this project, or who is inadequately qualified to perform the services to be provided, or who is unsuitable to be performing services in secure areas.

### **2.15 Security Check**

All vendor personnel and subcontractors are required to pass an extensive security background check before they will be allowed to perform any services for the City. The vendor or individual employees of the vendor may be excluded from providing services based on the results of the background checks, in the sole and absolute discretion of the City. All proposals should acknowledge this fact, and project timelines should reflect this fact.

**Appendix A**

• **Equipment List**

Line #	Qty	Manufacturer	Part No.	Description
<b>Chamber Display Equipment</b>				
1	19	Samsung	ILO15E	1.5mm Direct View LED Cabinet
2	1	Samsung	SBB-IS08E	S-Box
3	1	RPV	RPMM-L-XA-FA-6x3	Custom LED Mounting Solution, Including Onsite Project Management (Reference RPV Quote #: Int-SB-12548-D)
4	2	Samsung	DM65E	65" 1080P Professional Display
5	2	Chief	TS525TU	Large THINSTALL Dual Swing Arm Wall Display Mount - 25" Extension
6	2	Chief	TA500	Large THINSTALL™ In-Wall Swing Arm Accessory for TS525TU
7	2	Crestron	DM-RMC-4K-SCALER-C	4K Receiving Scaler
<b>Podium Display Equipment</b>				
8	1	Samsung	DB-22D-P	22" 1080P Professional Display
9	1	Crestron	DM-RMC-4K-SCALER-C	4K Receiving Scaler
<b>Clerk Desk Display Equipment</b>				
10	2	Samsung	DB-22D-P	22" 1080P Professional Display
11	2	Chief	K1D120B	Kontour™ K1D Dynamic Desk Clamp Mount, 1 Monitor
12	1	Crestron	DM-RMC-4K-SCALER-C	4K Receiving Scaler
<b>Staff Desks Display Equipment</b>				
13	5	Samsung	S19B420S19B420B	Confidence Monitor - 18.5" Wide, 16:9 Aspect Ratio 1366 x 768 Resolution with Stand
14	2	Crestron	DM-RMC-4K-SCALER-C	4K Receiving Scaler
15	1	Crestron	HD-DA4-4K-E	1x4 4K HDMI® Distribution Amplifier
16	1	Crestron	HD-DA2-4K-E	1x2 4K HDMI® Distribution Amplifier
<b>Dais Display Equipment</b>				
17	5	Samsung	S19B420S19B420B	Confidence Monitor - 18.5" Wide, 16:9 Aspect Ratio 1366 x 768 Resolution with Stand
18	1	Planar	L055-S	55" Transparent OLED Display 1080P
19	2	Crestron	DM-RMC-4K-SCALER-C	4K Receiving Scaler
20	1	Crestron	HD-DA8-4K-E	1x8 4K HDMI® Distribution Amplifier
21	5	Samsung	S24E450D	Name/Voting Display - 24" LED 1080P Display
22	5	Chief	K1S120B	Kontour™ K1S Dynamic Mount, 1 Monitor
23	6	Crestron	DGE-100	Digital Graphics Engine 100
<b>Lobby Display Equipment</b>				
24	1	Samsung	DM75E	75" 1080P Professional Display
25	1	Chief	TS525TU	Large THINSTALL Dual Swing Arm Wall Display Mount - 25" Extension
26	1	Chief	TA500	Large THINSTALL™ In-Wall Swing Arm Accessory for TS525TU
27	1	Crestron	DM-RMC-4K-SCALER-C	4K Receiving Scaler

<b>Video Source and Routing</b>				
28	1	Crestron	TT-100-B-T	Connect It™ Cable Caddy w/120V Outlet, No Cables, Black Textured
29	4	Crestron	DM-TX-4K-100-C-1G-B-T	4K DigitalMedia 8G+® Transmitter 100, Black Textured (1 Podium, 1 Operator, 1 Lobby)
30	1	Extron	OFE - HSA-402	Cable Cubby
31	1	Extron	70-1076-02	AAP – Architectural Adapter Plate for HDMI, DisplayPort, VGA, Stereo Audio, and USB
32	2	OFE	OFE	Clerk PC (Only One is a source)
33	2	Logitech	MK520	Wireless Keyboard and Mouse Combo
34	1	Crestron	USB-EXT-DM-LOCAL	USB over Ethernet Extender with Routing, Host Module
35	1	Crestron	SW-VMK-WIN	TouchPoint® Virtual Mouse & Keyboard Software for Windows®
36	1	Crestron	DM-TX-4K-302-C	4K DigitalMedia 8G+® Transmitter 302 (Clerk)
37	1	OFE	OFE	Time Warner Set Top Box
38	1	Crestron	DM-MD-16X16	16x16 DigitalMedia™ Switcher
39	3	Crestron	DMC-4K-HD-HDCP2	4K HDMI® Input Card for DM® Switchers
40	5	Crestron	DMC-4K-C-HDCP2	HDBaseT® Certified 4K DigitalMedia 8G+® Input Card for DM® Switchers
41	2	Crestron	DMC-4K-HDO	2-Channel 4K Scaling HDMI® Output Card for DM® Switchers
42	4	Crestron	DMC-4K-CO-HD-HDCP2	2-Channel HDBaseT® Certified 4K DigitalMedia 8G+® Output Card for DM® Switchers
<b>Broadcast Equipment</b>				
43	5	Vaddio	999-9917-000W	RoboSHOT™ 30 QCCU System (White)
44	1	Vaddio	999-5655-000	ProductionVIEW HD-SDI MV
45	1	Vaddio	999-5520-022	TeleTouch 22" HD Touch Screen LCD Monitor
46	1	Blackmagic Design	BMD-CONVMCAUDS4K	Mini Converter Audio to SDI 4K
47	1	Compix	CynerG1	CynerG1 - single channel
48	1	Compix	Mechanical Bypass Relay	Mechanical Bypass Relay
49	1	Samsung	DB-22D-P	22" 1080P Professional Display
50	1	Chief	K1D120B	Kontour™ K1D Dynamic Desk Clamp Mount, 1 Monitor
51	1	Logitech	MK520	Wireless Keyboard and Mouse Combo
52	1	Blackmagic Design	BMD-HDL-MULTIP6G/16	16 Window Multi-Viewer
53	1	Blackmagic Design	BMD-VHUBSMART6G1212	Smart Videohub 12x12
54	5	Blackmagic Design	BMD-CONVMBHS24K	Mini Converter - HDMI to SDI 4K
55	1	Crestron	HD-DA2-4K-E	1x2 4K HDMI® Distribution Amplifier
56	1	Samsung	DM40E	40" 1080p Professional Display
57	1	JVC	JVC SR-HD2700US	Blu-ray Disc & HDD Recorder w HD-SDI Input
58	1	OFE-Granicus	OFE	OFE-Granicus Encoder
59	1	Leightronix	Ultra Nexus HD	HD Video Server/System Controller

60	1	TVOne	C2-2855	CORIO2 Universal Scaler
61	1	Extron	60-692-21	DA 6AV EQ - Six Output Composite Video and Stereo Audio Distribution Amplifier with Gain and EQ Controls
62	1	OFE-Time Warner	OFE	Time Warner Modulator
63	1	OFE-Cox	OFE	Cox Modulator
64	1	Samsung	UN194000AFXZA	Confidence Monitor 19" with Composite Video Input
65	2	Custom	Custom WP	Custom Wall Plate Press (2 HDSDI and 4 XLR)
<b>Chamber Microphones</b>				
66	7	Clock Audio	C33E SR RF HALO	15.7" Semi Rigid Gooseneck Microphone with LED Halo and RF Filter
67	7	Clock Audio	SM95	Shock Mount 5 Pin XLR
68	7	OFE	OFE	OFE Wired Lavalier Microphone with Pre-Amp
69	2	Shure	MXW2/SM86	Handheld Transmitter with SM86® Microphone (Includes one SB902 Battery)
70	2	Shure	WL185	Microflex® Cardioid Lavalier Microphone
71	2	Shure	MXW1/O	Bodypack Transmitter with Integrated Omnidirectional Microphone and 4-Pin Mini Connector (TA4M) (Includes one SB901 Battery)
72	4	Shure	MX405LP/C	5" Microphones for Gooseneck Microphone Transceiver
73	4	Shure	MXW8	Wireless Gooseneck Microphone
74	2	Shure	MXWNC58	8-CH Networked Charging Station
75	2	Shure	MXWAPT8	8-CH Access Point Transceiver
76	2	Shure	MXWAN18	8-CH Network Interface
<b>Chamber Audio DSP, Distribution, and Assisted Listening</b>				
77	1	Biamp	TesiraFORTÉ AVB VI	TesiraFORTÉ DSP fixed I/O Server with 12 Analog Inputs, 8 Analog Outputs, 8 Channels Configurable USB Audio, 128 x 128 Channels of AVB, Acoustic Echo Cancellation (AEC) Technology, VOIP Interface
78	2	Biamp	TesiraFORTÉ AVB CI	TesiraFORTÉ DSP Fixed I/O Server with 12 Analog Inputs, 8 Analog Outputs, 8 Channels Configurable USB Audio and Acoustic Echo Cancellation (AEC) Technology
79	1	Biamp	EX-LOGIC	Tesira PoE Logic Expander with 16 Logic GPIO (4 GPIO are Configurable for Potentiometer Interface)
80	1	Motu	9305	5 Port AVB Switch
81	1	Electro-Voice	PA 4150L 120V	Four Channel Class AB Commercial Power Amplifier, 4 x 160 watts at 4 ohms, Compact 2RU Chassis, 110/120 vac Operation

82	1	Electro-Voice	CPS 4.5 120V	CPS4.5 4-Channel Power Amplifier, 4 x 500W into 2, or 4 Ohms, or 70V/100V Direct Drive, 2U, ready for RCM-810 IRIS-Net Remote Control Module, In/Outputs Phoenix Type, 120V
83	14	Electro-Voice	EVID C8.2	8" Coaxial speaker with horn loaded Ti coated tweeter - complete with back can enclosure, tile rails, and mounting ring - for 70v/100v or 8-ohm operation. Taps at 30, 15, 7.5, 3.75, and 1.88 watts (pair)
84	11	Atlas	FC104T72	4" Speaker with Transformer (Retrofit Hard Lid)
85	11	Custom	Custom	Hard Lid Speaker Retrofit Kit
86	1	Innovox	FS-H2	Professional Sound Bar Speaker Kit (75" DM75E Lobby)
87	1	Electro-Voice	S-40W	120-watt 5-1/4-inch Two-Way, 100° x 100°, Weather Resistant, Flying and Stand Mount (optional - requires S-40MBW hardware), white polystyrene (pair)
88	1	Listen Technologies	MLD5	Multi-Loop Driver
89	3	Listen Technologies	FB1.8	Flat Insulated Copper Cable 164 ft. (50 m)
90	3	Listen Technologies	PWT	Adhesive Install/Warning Tape 164 ft.
91	100	Listen Technologies	LA-396-14-G	14 AWG Hearing Loop Cable - Green (Per ft.)
92	100	Listen Technologies	LA-396-14-R	14 AWG Hearing Loop Cable - Red (Per ft.)
93	7	Listen Technologies	LP-IL-1	Hearing Loop Receiver with Lanyard Package
<b>System Control</b>				
94	1	Netgear	GS752TP-100NAS	ProSAFE 48-port POE Gigabit Smart Switch
95	1	Crestron	AV3	3-Series Control System®
96	1	Crestron	CAGE3	Control Card Expansion Cage for AV3
97	1	Crestron	C3COM-3	3-Series™ Control Card – 3 COM Ports
98	1	Crestron	ST-IO	Cresnet Module with 8 Relays and 4 Analog/Digital Inputs. Includes PW-1205 Power Supply
99	2	Crestron	TSW-1052-B-S	10.1" Touch Screen, Black Smooth
100	2	Crestron	TSW-1050-TTK-B-S	Tabletop Kit for TSW-1050 & TSW-1052, Black Smooth
101	5	Crestron	TSW-752-B-S	7" Touch Screen, Black Smooth
102	1	Crestron	TSW-752-W-S	7" Touch Screen, White Smooth
103	7	Crestron	TSW-552-B-S	5" Touch Screen, Black Smooth
104	1	Custom	Monitoring	Custom Remote Monitoring System, Network Based
105	1	OFE	OFE	OFE - Lighting Interface 232

<b>Support Equipment</b>				
106	1	DWI	Custom	Custom Swivel Podium (Reference DWI Quote #: 5697)
107	1	Custom	Custom	Broadcast Console With Rack Storage
108	8	Videssence	E025-32K-D/PM-120 (custom white )	ExceLED 25 watt 32K Phase-Dimmable Studio Fixture
109	2	Middle-Atlantic	ERK-4428LRD	Full Height Stand Alone Rack, 44RU, 22"w X 28"d X 81.25"h
110	2	Middle-Atlantic	CBS-ERK-28R	Caster Kit w/Hardware, 3.75" Add to Rack Height
111	1	Middle-Atlantic	ERK-4QFT-FC	Rack Top, Multi Fan System, Thermostatic Controller
112	6	Middle-Atlantic	PDT-1015C-NS	Rack Power Strip, 10 Outlet, Vertical
113	2	Middle-Atlantic	UPS-2200R-8IP	UPS, 2200a, RS-232 and IP Control, (8) Contolled Outlets, Rack Mount
114	LOT	TBD	Various	Miscellaneous Rack Accessories (Shelves, Lacing Bars, Rack Mounts, Etc.)
<b>Miscellaneous</b>				
115	1	TBD	MISC	Miscellaneous Installation Equipment

## **CONSULTANT SERVICES AGREEMENT**

THIS AGREEMENT FOR CONSULTANT SERVICES, is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_, by and between the CITY OF TUSTIN, a municipal corporation, hereafter referred to as “City”, and \_\_\_\_\_, a California Corporation, hereinafter referred to as “Consultant”.

### **RECITALS**

WHEREAS, City requires the services of a consultant to furnish the necessary design and build services for the Council Chamber Audio-Visual Equipment Project hereinafter referred to as “Project”; and

WHEREAS, City has prepared a Request for Proposal (RFP) dated October 2016, a copy of which is attached hereto, marked as Exhibit “A” and is by this reference incorporated into this Agreement; and

WHEREAS, in response to City’s RFP, Consultant has submitted to City a proposal dated \_\_\_\_\_, a copy of which is attached hereto marked as Exhibit “B” and is by this reference incorporated into this Agreement; and

WHEREAS, Consultant is qualified to provide the necessary services for the Project and desires to provide said services to City; and

WHEREAS, City desires to retain the services of Consultant for said Project.

NOW, THEREFORE, for the consideration and upon the terms and conditions hereinafter set forth, the parties agree as follows:

### **AGREEMENT**

#### **Section 1: Scope of Consultant’s Services**

Consultant shall perform all work necessary to complete in a manner satisfactory to City, the services set forth in Exhibit “A” and Exhibit “B” in accordance with the terms and conditions of this Agreement.

## **Section 2: Order of Precedence**

In the event of a conflict between or among any of the documents comprising this Agreement, the following order of precedence shall govern the provision in question:

1. This Agreement
2. City's Request for Proposal (Exhibit "A")
3. Consultant's Proposal (Exhibit "B")

## **Section 3: Time for Completion**

The time for completion of the work to be performed by Consultant is an essential condition of this Agreement. Consultant shall prosecute regularly and diligently the work of this Agreement according to reasonable schedules established by the City for various items described and as outlined within Consultant's proposal. Consultant shall not be accountable for delays in the progress of its work caused by any condition beyond its control and without the fault or negligence of Consultant.

## **Section 4: Compensation**

- A. The compensation to be paid under this Agreement shall be as set forth in Exhibit "B", which shall not exceed a total cost of \$\_\_\_\_\_.
- B. Consultant shall submit detailed invoices, based upon the actual work performed accompanied by backup documentation as requested by the City.
- C. Progress payments for work completed shall be paid by City as the work progresses, within thirty (30) days of the date of Consultant's invoice.
- D. Consultant shall provide City with a monthly itemization of all work performed, and the fees accrued thereon, in complete and sufficient detail to fully apprise City thereof.

## **Section 5: Independent Contractor**

Consultant's relationship to City in the performance of this Agreement is that of an independent contractor. Consultant's personnel performing services under this Agreement shall at all times be under Consultant's exclusive direction and control and shall be employees of Consultant and not employees of City. Consultant shall pay all wages, salaries and other amounts due its employees in connection with this Agreement and shall be responsible for all reports and obligations respecting them, such as social security,

income tax withholding, unemployment compensation, worker's compensation and similar matters.

### **Section 6: Indemnification**

Consultant agrees to indemnify, defend and hold City, its officers, agents, employees, successors and assigns harmless from any loss, damage, injury, sickness, death, or other claim made by any person and from all costs, expenses and charges including attorney's fees caused by or arising out of Consultant's, its officers', agents', subcontractors', or employees' negligent acts, negligent errors, or negligent omissions or willful misconduct, or conduct for which the law imposes strict liability on Consultant in the performance or failure to perform this Agreement.

### **Section 7: Insurance**

- A. Consultant shall maintain in full force and effect during the term of this Agreement policies of commercial general liability and automobile liability insurance (each of which shall include property damage and bodily injury) and each with limits of at least \$1,000,000 combined single limit coverage per occurrence.
- B. Consultant shall maintain in full force and effect during the term of this Agreement a policy of professional liability insurance coverage with limits of at least \$1,000,000 combined single limit coverage per claim or per occurrence. If Consultant provides claims made professional liability insurance, Consultant shall also agree in writing either (1) to purchase tail insurance in the amount required by this Agreement or to cover claims made within five (5) years of the completion of Consultant's service under this Agreement, or (2) to maintain professional liability insurance coverage with the same carrier, or with an equivalent carrier in the amount required by this Agreement for at least five (5) years after completion of Consultant's services under this Agreement. Consultant shall also provide evidence to the City of the purchase of the required tail insurance or continuation of the professional liability policy by executing the attached Letter Agreement on Consultant's letterhead.
- C. Consultant shall carry and pay for such workers' compensation insurance as is required to fully protect Consultant and its employees under California Worker's Compensation Insurance Law. The insurance company shall agree to waive all rights of subrogation against the City for losses paid under the policy, which losses arose from the work performed by the named insured.
- D. Other applicable insurance requirements are: (1) Name the City, its officials and employees as additional insured on the commercial general liability and automobile liability insurance policies. (2) The insurance shall be issued by a company authorized by the Insurance Department of the State of California and rated A, VII (seven) or better (if an admitted carrier) or A-, X (ten) or better (if offered by a surplus

line broker), by the latest edition of Best's Key Rating Guide, except that the City will accept workers' compensation insurance rated B-, VII (seven) or better, or from the State Compensation fund. (3) The insurance shall not be cancelled, except after thirty (30) days written prior notice to the City; and (4) The commercial general liability and automobile liability insurance shall each be primary as respects the City, and any other insurance maintained by the City shall be in excess of this insurance and not contribute to it.

- E. Upon execution of this Agreement, Consultant shall provide to City certificates of insurance and insurer endorsements evidencing the required insurance. Insurer endorsements (or a copy of the policy binder if applicable) shall be provided as evidence of meeting the requirements of Subsections (1)(3) and (4) of Section 7D above and the waiver of subrogation requirement in Section 7C above. If self-insured for worker's compensation, Consultant shall submit to City a copy of its certification of self-insurance issued by the Department of Industrial Relations.

### **Section 8: Termination of Agreement**

- A. City and Consultant shall each have the right to terminate any or all of the services covered by this Agreement at any time or any reason by giving ten (10) business days written advance notice to the other party.
- B. Upon termination of this Agreement, Consultant shall be paid for services rendered by the effective date of the termination.
- C. Upon termination of this Agreement or completion of the Project, all documents relating to the Project shall become the sole property of City. Should City terminate this Agreement pursuant to subparagraph A. of this Section, Consultant shall within ten (10) business days of receipt of notice of termination, provide City with all documents within Consultant's possession relating to this Agreement and the Project, including but not limited to all completed documents and all drafts of uncompleted documents.

### **Section 9: Notice**

Any notice allowed or required to be given shall be effective upon personal delivery thereof, or upon depositing thereof in the United States Postal Service, certified mail, upon receipt requested, postage prepaid, addressed as follows:

To City: City of Tustin  
Attn.: Sean Tran, Acting Finance Director  
300 Centennial Way  
Tustin, CA 92780-3715

To Consultant: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Section 10: Miscellaneous Provisions**

- A. Consultant shall proceed immediately and diligently to perform the services provided for in this Agreement upon receipt of notice from City to proceed therewith.
- B. No part of this Agreement may be assigned by Consultant without the prior written approval of City.
- C. This Agreement shall extend to and be binding upon and inure to the benefit of heirs, executors, administrators, successors and assigns of the respective parties hereto.
- D. Consultant shall perform all services required under this Agreement using that degree of care and skill ordinarily exercised under similar conditions in similar localities, and shall be responsible for all errors and omissions for services performed by Consultant under the terms of this Agreement.
- E. Consultant certifies that there shall be no discrimination against any employee who is employed in the work covered by this Agreement, or against any application for such employment, because of race, religion, color, sex, or national origin including but not limited to, the following: employment, upgrading, demotion or transfer, recruitment, or recruitment advertising, lay-off or termination, rate of pay or other forms of compensation, and selection for training, including apprenticeship.
- F. This Agreement shall be interpreted in accordance with California Law. The parties agree that the Orange County Superior Court is the exclusive venue for any lawsuits by either party regarding this Agreement.

IN WITNESS WHEREOF, this Agreement was executed by the parties on the date and year first above written.

“CITY”  
CITY OF TUSTIN

By \_\_\_\_\_  
Sean Tran

Title Acting Finance Director

“CONSULTANT”  
\_\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_