



**City of El Segundo
Audio-Visual System Upgrade**

**Request for Proposal
RFP 20-04**

9/3/2020



CONTENTS

1.0 – INTRODUCTION	4
2.0 – TERMS & CONDITIONS	4
2.1 – GOOD FAITH	5
2.2 – RIGHT TO CANCEL	5
2.3 – NOT AN AWARD	5
2.4 – PROPERTY OF THE CITY	5
2.5 – CITY NOT LIABLE FOR COSTS	5
2.6 – CITY’S EXPECTATIONS	5
2.7 – WAIVER OF MINOR ADMINISTRATIVE IRREGULARITIES	5
2.8 – PROPOSAL REJECTION; NO OBLIGATION TO BUY	6
2.9 – RIGHT TO AWARD	6
2.10 – WITHDRAWAL OF PROPOSALS	6
2.11 – NON-ENDORSEMENT	6
2.12 – PROPRIETARY PROPOSAL MATERIAL	6
2.13 – ERRORS IN PROPOSAL	6
3.0 – EVALUATION CRITERIA	6
4.0 – ABOUT US	7
4.1 – CURRENT ENVIRNOMENTS	8
5.0 – PROJECT OBJECTIVE	9
6.0 – SCHEDULE	9
☐ By 9/3/2020: SUBMIT RFP TO VENDORS	9
7.0 - RFP DELIVERABLES	9
7.1 – PRE-PROPOSAL WALKTHROUGH BY APPT. 9/14- 9/18/2020	10
7.2 – PROPOSAL DUE DATE 10/7/2020	10
7.3 – COUNCIL CHAMBER SYSTEM	10
7.4 – NEW PRODUCTION CONTROL ROOM	11
7.5 – WEST CONFERENCE ROOM	11
7.6 – WEST GARDEN CONFERENCE ROOM	11
7.7 – HUMAN RESOURCES CONFERENCE ROOM	11
7.8 – FUNCTIONAL AND SYSTEM REQUIREMENTS RESPONDERS	11



7.9 – CERTIFICATIONS AND QUALIFICATIONS	12
7.10 – VENDOR PROFILE	13
7.11 – SUPPLEMENTAL SERVICES	15
7.12 – PRICING PROPOSAL	15
7.13 – VENDOR INFORMATION	15
ATTACHMENT – 1: INSTALLATION SERVICES AGREEMENT	16
ATTACHMENT– 2: SPECIFICATION AND DRAWINGS	16



1.0 – INTRODUCTION

The purpose of this Request for Proposal is to solicit sealed proposals for the audio-visual equipment upgrade for the City of El Segundo (“the City”) Council Chamber, West Conference, West Garden Conference and the Human Resources Conference Rooms in the regulatory processes of land use planning and zoning applications, building construction permitting, inspections, final approvals, fee calculations and collection, code enforcement management, business licenses, and citizen inquiries.

The objective of the City is to replace the outdated audio-visual and broadcasting equipment and install a state-of-the-art audio-visual system that provides an integrated solution for council meetings in chamber, closed sessions and for viewers online and television. The City would like to petition vendors who provides all services, including hardware, software, installation, training, conversion, and other services as required.

We are looking for a vendor that can provide: Audio-Visual Systems and Production Control Room Upgrade

Please confirm that you will be participating in the proposal process by 9/8/2020. We believe the information provided with this document is sufficient to draft your proposal. However, if you feel it necessary for an onsite visit you may do so from 9/14–9/18/2020. Please schedule an appointment with the Information Systems Department at (310) 524-2334.

Please direct any inquiries regarding this RFP no later than 5:00 PM on 9/25/2020 to:

Darlene Fennell
Project Manager
City of El Segundo
350 Main Street
El Segundo, CA 90245
E: dfennell@elsegundo.org

Responses will be provided no later than 5:00 PM on 9/30/2020.

2.0 – TERMS & CONDITIONS

This Request for Proposal (RFP) and all related materials provided by the City are considered proprietary and confidential. Disclosure of all or part of this document is strictly prohibited without prior written consent from the City of El Segundo. The City reserves the right to select those respondents it deems qualified and to terminate negotiations, up to and including during the final contracting phase, without incurring liability.

This RFP is not an offer or a contract and does not in any way bind the City to an obligation, or impose liability for any costs or expenses incurred by your company in creating the response. In the event that



modifications, clarification or additions to the RFP become necessary, your company will be notified in writing. Prospective bidders shall not take advantage of any apparent errors or omissions in the RFP document; in the event that any errors or omissions are discovered, respondent shall notify the City immediately.

The City expects all vendors to abide by these terms and conditions.

2.1 – GOOD FAITH

This RFP has been compiled in good faith. The information contained within is selective and subject to the City's updating, expansion, revision and amendment.

2.2 – RIGHT TO CANCEL

The City reserves the right to change any aspect of, terminate, or delay this RFP, the RFP process and/or the program, which is outlined within this RFP at any time, and notice must be given in a timely manner thereafter.

2.3 – NOT AN AWARD

Recipients of this proposal are advised that nothing stated herein, or any part thereof, or any communication during the evaluation and selection process, should be construed as constituting, offering or awarding a contract, representation or agreement of any kind between the City and any other party, save for a formal written contract, properly executed by both parties. A sample of the City's proposed contract is attached to this RFP.

2.4 – PROPERTY OF THE CITY

Responses to this RFP will become the property of the City and will form the basis of negotiations of an agreement between the City and the successful vendor.

All materials and source files produced as a result of an award will be owned by the City of El Segundo.

2.5 – CITY NOT LIABLE FOR COSTS

The City is not liable and will not be responsible for any costs incurred by any vendor(s) for the preparation and delivery of the RFP responses; nor will the City be liable for any costs incurred prior to the execution of an agreement, including but not limited to, presentations by vendor(s) to the City.

2.6 – CITY'S EXPECTATIONS

During the review of this document, please note the City's emphasis on the expectations, qualities, and requirements necessary to be positioned as a successful vendor.

2.7 – WAIVER OF MINOR ADMINISTRATIVE IRREGULARITIES

The City reserves the right, at its sole discretion, to waive minor administrative irregularities contained in any proposal.



2.8 – PROPOSAL REJECTION; NO OBLIGATION TO BUY

The City reserves the right to reject any or all proposals at any time without penalty. The City reserves the right to refrain from contracting with any vendor. The release of this RFP does not compel the City to purchase. The City may elect to proceed further with this project by interviewing firm(s) well suited to this project, conducting site visits or proceeding with an award.

2.9 – RIGHT TO AWARD

The City reserves the right to make an award without further discussion of the proposal submitted. Therefore, the proposal should be submitted initially with the most favorable terms the vendor can offer. The City reserves the right to award the entire project to a single vendor or split the award to separate vendors for specific work.

2.10 – WITHDRAWAL OF PROPOSALS

Vendors may withdraw a proposal that has been submitted at any time up to the RFP closing date and time. To accomplish this, a written request signed by an authorized representative of the vendor must be submitted to City. The vendor may submit another proposal at any time up to the RFP closing date and time.

2.11 – NON-ENDORSEMENT

As a result of the selection of a vendor to supply products and/or services to the City is neither endorsing nor suggesting that the vendor's product is the best or only solution. The vendor agrees to make no reference to the City in any literature, promotional material, brochures, sales presentation or the like without the express written consent of the City.

2.12 – PROPRIETY PROPOSAL MATERIAL

Any information contained in the proposal that is proprietary must be clearly designated. Marking the entire proposal as proprietary will be neither accepted nor honored. If a request is made to view a vendor's proposal, the City will comply according to the California Public Records Act. If any information is marked as proprietary in the proposal, such information will not be made available until the affected vendor has been given an opportunity to seek a court injunction against the requested disclosure.

2.13 – ERRORS IN PROPOSAL

The City will not be liable for any errors in vendor proposals. Vendors will not be allowed to alter proposal documents after the deadline for proposal submission.

3.0 – EVALUATION CRITERIA

An evaluation team will evaluate the RFP proposals received from each vendor. Prior to the selection and award to the successful vendor, the City reserves the right to require the vendor to participate in a presentation to the evaluation team (and others) of the items contained in the proposal response, and any other items deemed appropriate and/or relevant by the City.



If an award is made as a result of this RFP, it will be awarded to the vendor whose proposal is most advantageous to the City with price and other factors including, but not limited to:

- Responses to this RFP including Functional and System Requirement Matrix that will be provided
- Demonstrated technical ability and expertise
- Financial stability, reference calls and/or recommendations
- Presentation(s) to the City evaluation team
- Any additional criteria deemed appropriate by the City which would lend itself to establishing the vendor's viability to perform the work as outlined

When determining whether a vendor is responsible or when evaluating a vendor's proposal, the following factors will be considered, any one of which will suffice to determine if a vendor is either not a responsible vendor or if the vendor's proposal is not the most advantageous to the City:

- The ability, capacity, and skill of the vendor to perform the contract or provide the service required.
- The character, integrity, reputation, judgment, experience and efficiency of the vendor.
- Whether the vendor can perform the contract within the time specified.
- The quality of performance of previous public and private contracts or services.
- Such other information as may be secured having a bearing on the decision to award the contract.
- Any other reason deemed proper by the City.

4.0 – ABOUT US

El Segundo is a city in Los Angeles County, California, United States. El Segundo (in Spanish, meaning "The Second") was named after the nearby refinery, then Standard Oil's second in California. Located on the Santa Monica Bay, adjacent the Los Angeles International Airport, the City was incorporated on January 18, 1917. The population was 16,654 at the 2010 census, up from 16,033 at the 2000 census.

The City has fourteen (14) Departments:

- Elected Officials – City Council
- City Manager's Office
- City Attorney
- City Clerk
- City Treasurer
- Finance
- Fire
- Human Resources
- Information Systems
- Library
- Planning and Building Safety
- Police
- Public Works



- Recreation and Parks

4.1 – CURRENT ENVIRONMENT

The City Council Chamber currently has an audio-visual system that was originally installed in 2010. There have been repairs and replacements over the years, the last being 2016. The equipment has reached its end of life and maintenance and repair have become increasingly difficult. The video system consists of standard definition analog cameras with a single screen and projector. The equipment in the control room is equally as outdated. The control room has experienced numerous critical component failures. All of the equipment has exceeded its expected life cycle.

Council Chamber:

The Council Chamber's audio-visual equipment was originally installed in 2010. There have been repairs and replacements over the years, the last being 2016. The current audio-visual system equipment consists of a projector and screen, with poor image quality due to the outdated standard definition analog projection, outdated SD cameras that have reached end of life, and maintenance and repair has become increasingly difficult. The audio-video system currently does not support interaction during remote meetings for members and constituents. Limiting involvement and responsiveness.

Control Room:

The Control Room is in need of new equipment and reorganization. During usage this room is occupied by more than one technician at a time, the equipment is not situated to provide a well-designed layout for operations. The Control Room has had numerous critical component failures, resulting in temporary repairs to keep the system functional.

West Conference Room:

The West Conference Room which is used primarily for the Executive Team meetings also functions as the Closed Session Room and Council Meeting overflow room. This is the most widely used conference room at City Hall due to its occupancy capability. It is also used most often for external associates meetings. Unfortunately, the audio-visual system is not an accurate representation of the technological hub that the City of El Segundo has become, as the home of several advanced technology companies. This conference room has an outdated and difficult conference system to connect to and operate. This room will undergo renovation to increase the size and space, making this upgrade more essential. This need has become more significant with the recent restrictions imposed through the pandemic.

West Garden Conference Room:

This conference room is often used for staff meetings and auditors. The system is outdated and does not provide easy use for video conferencing. The audio-visual equipment is in need of upgrade as well as the monitors and telephone.

Human Resources Conference Room:

This conference room is used for staff meetings and interviews. The system is outdated and does not provide easy use for video conferencing. The audio-visual equipment is in need of upgrade as well as the



monitors and telephone. Currently, this conference room offers a monitor and project and screen, this equipment is also in need of upgrade.

5.0 – PROJECT OBJECTIVE

The primary objectives of the City Audio-Visual Equipment Upgrade project are:

- Promote the professional brand of the City with a visually dynamic design
- Provide enhanced viewing from various locations throughout the chambers for audience and council members
- High Definition (HD) all digital system
- HD Cameras to capture clear, crisp images
- Robust live streams to multiple platforms (City Website, YouTube, Facebook, etc.)
- Better clearer PowerPoint presentation graphics for remote and in-chamber viewers
- Cleaner more audible sound
- Assistive listening devices for the hearing impaired
- Closed captioning for the hearing impaired viewer
- Telephone call-in system for remote council members, presenters, vendors, public communication, etc.
- Enhanced archive meetings will decrease staff time for following-up on meeting initiatives
- Greatly enhance customer engagement and communication
- Maintenance/Support for new equipment

6.0 – SCHEDULE

- By 9/3/2020: Submit RFP to vendors
- By 9/8/2020: Receive vendor confirmation to participate in RFP
- Attend pre-proposal walkthrough meeting from 9/14 – 9/18/2020
- By 10/7/2020: Receive vendor proposals
- By 10/20/2020: Vendor review/decision
- 11/23/2020: Project start date

7.0 - RFP DELIVERABLES

The City of El Segundo is requesting proposals from qualified audio-visual vendors to provide state-of-the-art audio-visual systems for the Council Chamber, West Conference, West Garden and Human Resources Conference Rooms. It is expected that the new systems will offer better communication and representation for the City and its public.



7.1 – PRE-PROPOSAL WALKTHROUGH

Pre-proposal walkthrough meetings will be held in the Council Chamber, West Conference, Human Resources and West Garden Conference Rooms from September 14-18, 2020. The contact person is Darlene Fennell, Project Manager, telephone number (310) 524-2334.

7.2 – PROPOSAL DUE DATE

Each proposal must be submitted in a sealed envelope and clearly marked with the RFP name to the City of El Segundo Office of the City Clerk, at 350 Main Street, El Segundo, CA 90245. The proposal due date is 10/7/2020 by 11:00 AM.

7.3 – COUNCIL CHAMBER SYSTEM

Microphone System

- Install two 4RU Vertical Panel Mounted (VPM) Racks, to house the Chamber terminal equipment, final location to be verified in field.
- Run new 22/2 Star Quad Shielded Microphone Cabling from the Dais and Connector Panel locations to the VPM location.
 - 5 Microphones are located on the Dais.
 - 3 Microphones are located on the East Staff Table.
 - 2 Microphones are located on the West Staff Table.
 - 1 Microphone is located on the Podium.
 - Install a Ceiling Confidence Microphone.

Cameras:

- Install four Remote Controlled Pan/Tilt/Zoom Cameras, with two located above the double rear entry doors, one in the Northwest Corner and one in the Northeast Corner.

Speakers:

- Install 6 Ceiling Speakers in 3- Zones (Front, Center, and Rear) in the Council Chamber.
- Install 3 Ceiling Speakers as 1 Zone in the Lobby area, 1 outside the Double Rear Entry Door, and 1 Near the Cabinet in the Hallway on the wall outside the Chamber.
- Install a WiFi Access Point in the Ceiling towards the front of the Chamber.

Monitors:

- Install two 90" Flat Panel Displays on Articulating Mounts on the East and West Walls. There is an existing furred out panel on each of these walls. This panel shall be cut out in the area where the Articulating Mount is to be located and the Mount structurally secured to the brick wall behind the furred out panel.
- A 110 VAC, 10 Amp Duplex Outlet is required to be installed at each location for powering the 90" Flat Panel Display and AV System Receiver.



7.4 – NEW PRODUCTION CONTROL ROOM

- Install the new 3-Bay Production Console w/ Articulating Monitor and Speaker Mounts.
- Install the Middle Atlantic WR-37-32 Slide Out/Rotate Vertical Equipment Rack in the closet area of the PCR.
- Install all equipment in the Console
- Install all equipment in the Vertical Equipment Rack.

7.5 – WEST CONFERENCE ROOM

Microphone System:

- Fixed IO DSP with 4 analog inputs, 4 analog outputs, 8 channels configurable USB audio 128 x 128 channels AVB
- Low profile Beamtracking ceiling microphone with PoE + amp, white
- Low profile expansion Beamtracking ceiling microphone, white
- In ceiling low profile 6.5” passive coaxial loudspeaker
- 5 port expansion device

Cameras:

- DSP USB
- Conference SHOT AV Camera
- USB 3.0 Type A to Type B Active Cable 20m

Monitors:

- 4K Monitor

7.6 – WEST GARDEN CONFERENCE ROOM

- Monitor - 75” LED Display
- Receiver
- Wall Plate Transmitter
- Encoder/Decoder

7.7 – HUMAN RESOURCES CONFERENCE ROOM

Speakers:

- In ceiling low profile coaxial loudspeakers

Cameras:

- UVC Pan/Zoom/Tilt Camera
- Monitors:
- 86” Interactive Touch Display

7.8 – FUNCTIONAL AND SYSTEM REQUIREMENTS RESPONSES

The audio-visual system specification and equipment requirements will be provided to each vendor who chooses to participate in this RFP. The evaluation of how well the vendor satisfies our requirements and whether it has achieved the mandatory functional and technical requirements may be made from this document alone. We are not obligated to check other materials to make a decision.



7.9 – CERTIFICATIONS AND QUALIFICATIONS

Certifications

The consultant shall hold the following Certifications:

- C-7 Low Voltage License
- AVIXA CTS-D and CTS-I Certification
- Crestron Certified Programmer
- Crestron NVX Certification
- BiAmp Tesira Certification

Qualifications and Experience

Consultants must possess a minimum of 5 years of experience in the Audio-Visual installation field. Consultant must provide a list of projects that are similar in scope to the services requested to demonstrate the firm's depth of experience and familiarity with similar projects. For each project, please include the following information, at a minimum:

- Year started and completed (if relevant)
- Contracting Agency + Department
- Project Description
- Key Personnel Assigned
- Contract Value

Experience and Qualifications of Key Personnel

The consultant shall provide resumes indicating the experience and qualifications for the key personnel identified in the organization chart. Consultant shall also include the number and type of additional support personnel who will be providing services. At a minimum, the resume for each team member should include:

- Name
- Position and Role for This Project
- Degrees and Certifications
- Professional Memberships/Registrations
- Summary of Experience
- Work on Representative Project Similar in Scope

If sub-consultants are to be used as part of this proposal, a resume of the sub-consultant and relevant experience is to be included in the same format.

References

Consultant must provide at least three (3) references for which consultant has provided services similar in scope as set forth in the RFP within the last five (5) years. Reference information should include:

- Name of agency
- Name of agency project manager



- Email address and telephone number of contact person
- Description of project or services provided

7.10 – VENDOR PROFILE

- Explain in one page or less how your solution will differentiate you from other vendors and why you should be chosen as our partner. List the unique features that give your company a competitive edge in project field.
- Provide a brief overview of your company (furnish your business philosophy, mission statement, management structure, organization chart, etc.)
- Provide a profile of the project specific item team, including experience and recent/relevant project specific item created, contact information (the City's expectation is to have a single point of authority /accountability). Note: the City will NOT award the contract to a vendor who does not have a single point of accountability. Indicate your understanding of and compliance with this request.
- Include names of two to five current customers (title and phone numbers) that have had a scope of work similar to that described in this proposal and a letter of recommendation from each.
- Please include reference name of former customers, if any, (title and phone numbers and the reasons for disengagement of your services).

7.11 – SUPPLEMENTAL SERVICES

Provide an overview of support services offered and recommended, including at a minimum:

- Management agreement
- User support – hours of service, average/guaranteed response times, resources available
- System enhancements – approach to user enhancement requests
- On-going and on-line training resources
- System back-up, redundancy, disaster recovery services

7.12 – PRICING PROPOSAL

The pricing proposal must be comprehensive and complete, including all taxes, and list any available discount or CPI increases. Pricing must be valid for at least 180 days from the RFP due date. All one-time and recurring cost must be fully disclosed and broken down by the following major categories:

- Installation – provide full installation cost, if any, system configuration, testing and initial training, and any other costs related to the system implementation in year 1.
- Project Management and Business Analysis– provide cost for full implementation
- On-going training, annual maintenance and support – Indicate the total cost, percent increase, and any other cost that may be incurred over in year 2 through 10.
- Any costs that may be incurred in the implementation of the system that are not specifically requested by the RFP or disclosed in the proposal will be disallowed during contract negotiations.
- Cost estimate should include all vendor costs and be detailed by category/role.



- Prevailing wage – provide cost that includes an hourly wage pursuant to Labor Code §1720, and as specified in the 8 California Code §16000, that Contractors must pay its employees a prevailing wage.

Example: Base Proposal (includes project start-to-finish services)

	BASE PROPOSAL	HRS	\$/HR	TOTAL PRICE
1	Engineering	0	\$0	\$0
2	Coordination	0	\$0	\$0
3	Equipment	0	\$0	\$0
4	Configuration	0	\$0	\$0
5	Installation			\$0
6				\$0
7				\$0
	Vendor may add lines as needed			
	TOTAL:	0		\$0

Additional Services

	DESCRIPTION	TOTAL PRICE
1	Vendor may add additional lines as needed	\$0
	TOTAL:	\$0

Ongoing/Annual Costs

	DESCRIPTION	PRICE	DISCOUNT	TERM	NET PRICE
1	Training	\$0	\$0	12mo	\$0
2	Maintenance	\$0	\$0		
3	Support				

Reimbursable expenses

- Alternate A:** This proposal includes no reimbursable expenses.
- Alternate B:** This proposal includes the following reimbursable expenses which will be reimbursed at cost:

Type of Expense	Maximum \$ Per Item	Cumulative \$ Maximum
Parking		
Meals		
Travel		



7.13 – VENDOR INFORMATION

Please include the below information when submitting your proposal.

- NAME OF COMPANY:
FEDERAL EMPLOYEE ID NUMBER (FEIN):
COMPANY WEBSITE ADDRESS:

- MAILING ADDRESS:
CITY / STATE:
ZIP:

- EMAIL ADDRESS
PHONE:
FAX:

- SIGNED:
PRINTED SIGNATURE:

- TITLE:

- DATE:

Please submit proposal to:

City of El Segundo – Council Chamber Audio-Visual System Upgrade
RFP: El Segundo RFP 20-04
Attn: Office of the City Clerk
350 Main Street
El Segundo, CA 90245



ATTACHMENT – 1: Installation Services Agreement

The City of El Segundo standard installation services agreement.

ATTACHMENT – 2: Specifications and Drawings

Documentation that details the system requirements.



**SERVICES AGREEMENT
BETWEEN
THE CITY OF EL SEGUNDO AND**

THIS INSTALLATION SERVICES AGREEMENT ("Agreement") is made and entered into this _____ day of _____, 20_____, by and between the CITY OF EL SEGUNDO, a general law city and municipal corporation ("CITY") and _____, a _____ ("CONTRACTOR"). The Parties agree as follows:

1. CONSIDERATION.

- A. As partial consideration, CONTRACTOR agrees to perform the work listed in the SCOPE OF SERVICES, below;
- B. As additional consideration, CONTRACTOR and CITY agree to abide by the terms and conditions contained in this Agreement;
- C. As additional consideration, CITY agrees to pay CONTRACTOR for CONTRACTOR's services not to exceed a total of _____ for the entire term of this Agreement. CITY will pay for work on the basis of the hourly rates and cost reimbursement rates as specified in Exhibit "B," which is incorporated by reference.

2. TERM. The term of this Agreement will be from _____, 20____, to _____, 20_____.

3. SCOPE OF SERVICES.

- A. CONTRACTOR will perform the installation services listed in the attached Exhibit "A," which is incorporated by reference. The provisions contained in this Agreement supersede any conflicting provisions in Exhibit A.
- B. CONTRACTOR will, in a workmanlike manner, furnish all of the labor, technical, administrative, professional and other personnel, all supplies and materials, equipment, printing, vehicles, transportation, office space and facilities, and all tests, testing and analyses, calculation, and all other means whatsoever, except as herein otherwise expressly specified to be furnished by CITY, necessary or proper to perform and complete the work and provide the professional services required of CONTRACTOR by this Agreement.
- C. CONTRACTOR will, using a standard of care equal to, or greater than, the degree of skill and diligence ordinarily used by reputable professionals, with a level of experience and training similar to CONTRACTOR,

performing under circumstances similar to those required by this Agreement, furnish all of the labor, technical, administrative, professional and other personnel, all supplies and materials, equipment, printing, vehicles, transportation, office space and facilities, and all tests, testing and analyses, calculation, and all other means whatsoever, except as herein otherwise expressly specified to be furnished by CITY as specified in Exhibit A, Scope of Services, necessary or proper to perform and complete the work and provide the professional services required of CONTRACTOR by this Agreement.

4. PREVAILING WAGES.

- A. Pursuant to Labor Code § 1720, and as specified in 8 California Code of Regulations § 16000, CONTRACTOR must pay its workers prevailing wages. It is CONTRACTOR's responsibility to interpret and implement any prevailing wage requirements and CONTRACTOR agrees to pay any penalty or civil damages resulting from a violation of the prevailing wage laws.
- B. In accordance with Labor Code § 1773.2, copies of the prevailing rate of per diem wages are available upon request from CITY's Engineering Division or the website for State of California Prevailing wage determination at <http://www.dir.ca.gov/DLSR/PWD>. CONTRACTOR must post a copy of the prevailing rate of per diem wages at the job site.
- C. CITY directs CONTRACTOR's attention to Labor Code §§ 1777.5, 1777.6 and 3098 concerning the employment of apprentices by CONTRACTOR or any subcontractor.
- D. Labor Code § 1777.5 requires CONTRACTOR or subcontractor employing tradesmen in any apprenticeship occupation to apply to the joint apprenticeship committee nearest the site of the public works project and which administers the apprenticeship program in that trade for a certificate of approval. The certificate must also fix the ratio of apprentices to journeymen that will be used in the performance of the contract. The ratio of apprentices to journeymen in such cases will not be less than one to five except:
 - i. When employment in the area of coverage by the joint apprenticeship committee has exceeded an average of 15 percent in the 90 days before the request for certificate, or
 - ii. When the number of apprentices in training in the area exceeds a ratio of one to five, or
 - iii. When the trade can show that it is replacing at least 1/30 of its membership through apprenticeship training on an annual basis state-wide or locally, or

- iv. When CONTRACTOR provides evidence that CONTRACTOR employs registered apprentices on all of his contracts on an annual average of not less than one apprentice to eight journeymen.
 - v. CONTRACTOR is required to make contributions to funds established for the administration of apprenticeship programs if CONTRACTOR employs registered apprentices or journeymen in any apprenticeable trade on such contracts and if other contractors on the public works site are making such contributions.
 - vi. CONTRACTOR and any subcontractor must comply with Labor Code §§ 1777.5 and 1777.6 in the employment of apprentices.
 - vii. Information relative to apprenticeship standards, wage schedules and other requirements may be obtained from the Director of Industrial Relations, ex-officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.
- E. CONTRACTOR and its subcontractors must keep an accurate certified payroll records showing the name, occupation, and the actual per diem wages paid to each worker employed in connection with this Agreement. The record will be kept open at all reasonable hours to the inspection of the body awarding the contract and to the Division of Labor Law Enforcement. If requested by CITY, CONTRACTOR must provide copies of the records at its cost.

5. PAYMENTS.

- A. For CITY to pay CONTRACTOR as specified by this Agreement, CONTRACTOR must submit a detailed invoice to CITY.
- B. Payments for work will only be made after CITY issues a written notice to proceed. All work is subject to all other terms and provisions of this Agreement.

6. FAMILIARITY WITH WORK.

- A. By executing this Agreement, CONTRACTOR represents that CONTRACTOR has
 - i. Thoroughly investigated and considered the scope of services to be performed;
 - ii. Carefully considered how the services should be performed; and

- iii. Understands the facilities, difficulties, and restrictions attending performance of the services under this Agreement.
- B. If services involve work upon any site, CONTRACTOR warrants that CONTRACTOR has or will investigate the site and is or will be fully acquainted with the conditions there existing, before commencing the services hereunder. Should CONTRACTOR discover any latent or unknown conditions that may materially affect the performance of the services, CONTRACTOR will immediately inform CITY of such fact and will not proceed except at CONTRACTOR's own risk until written instructions are received from CITY.

7. INSURANCE.

- A. Before commencing performance under this Agreement, and at all other times this Agreement is effective, CONTRACTOR will procure and maintain the following types of insurance with coverage limits complying, at a minimum, with the limits set forth below:

<u>Type of Insurance</u>	<u>Limits (combined single)</u>
Commercial general liability:	\$2 Million
Professional Liability	\$1 Million
Business automobile liability	\$1 Million
Workers compensation	Statutory requirement

- B. Commercial general liability insurance will meet or exceed the requirements of ISO-CGL Form No. CG 00 01 11 85 or 88, or equivalent. The amount of insurance set forth above will be a combined single limit per occurrence for bodily injury, personal injury, and property damage for the policy coverage. Liability policies will be endorsed to name CITY, its officials, and employees as "additional insureds" under said insurance coverage and to state that such insurance will be deemed "primary" such that any other insurance that may be carried by CITY will be excess thereto. CITY's additional insured status will apply with respect to liability and defense of suits arising out of CONTRACTOR's acts or omissions. Such insurance will be on an "occurrence," not a "claims made," basis and will not be cancelable or subject to reduction except upon thirty (30) days prior written notice to CITY.
- C. Professional liability coverage will be on an occurrence basis if such coverage is available, or on a claims made basis if not available. When coverage is provided on a claims made basis, CONTRACTOR will continue to maintain the insurance in effect for a period of three years after this Agreement expires or is terminated ("extended insurance"). Such extended insurance will have the same coverage and limits as the policy that was in effect during the term of this Agreement, and will cover CONTRACTOR for all claims made by CITY arising out of any errors or

omissions of CONTRACTOR, or its officers, employees or agents during the time this Agreement was in effect.

- D. Automobile coverage will be written on ISO Business Auto Coverage Form CA 00 01 06 92, including symbol 1 (Any Auto).
- E. CONTRACTOR will furnish to CITY valid Certificates of Insurance evidencing maintenance of the insurance required under this Agreement, a copy of an Additional Insured Endorsement as required herein, and such other evidence of insurance or copies of policies as may be reasonably required by CITY from time to time. Insurance must be placed with insurers with a current A.M. Best Company Rating equivalent to at least a Rating of "A:VII." Certificate(s) must reflect that the insurer will provide thirty (30) day notice of any cancellation of coverage. CONTRACTOR will require its insurer to modify such certificates to delete any exculpatory wording stating that failure of the insurer to mail written notice of cancellation imposes no obligation, and to delete the word "endeavor" with regard to any notice provisions.
- F. Should CONTRACTOR, for any reason, fail to obtain and maintain the insurance required by this Agreement, CITY may obtain such coverage at CONTRACTOR's expense and deduct the cost of such insurance from payments due to CONTRACTOR under this Agreement or terminate.
- G. CONTRACTOR agrees to waive all rights of subrogation against the CITY and its officers, officials, employees, agents, representatives, and certified volunteers for losses arising from work performed by CONTRACTOR under the terms of this Agreement.

8. TIME FOR PERFORMANCE. CONTRACTOR will not perform any work under this Agreement until:

- A. CONTRACTOR furnishes proof of insurance as required under Section 7 of this Agreement; and
- B. CITY gives CONTRACTOR a written notice to proceed.
- C. Should CONTRACTOR begin work in advance of receiving written authorization to proceed, any such professional services are at CONTRACTOR's own risk.

9. TERMINATION.

- A. Except as otherwise provided, CITY may terminate this Agreement at any time with or without cause. Notice of termination will be in writing.
- B. CONTRACTOR may terminate this Agreement upon providing written notice to CITY at least thirty (30) days before the effective termination

date.

- C. Should the Agreement be terminated pursuant to this Section, CITY may procure on its own terms services similar to those terminated.
- D. By executing this document, CONTRACTOR waives any and all claims for damages that might otherwise arise from CITY's termination under this Section.

10. INDEMNIFICATION.

- A. *Indemnification for Professional Services.* CONTRACTOR will save harmless and indemnify, including, without limitation, CITY's defense costs (including reasonable attorney's fees), from and against any and all suits, actions, or claims, of any character whatever, brought for, or on account of, any injuries or damages sustained by any person or property resulting or arising from any negligent or wrongful act, error or omission by CONTRACTOR or any of CONTRACTOR's officers, agents, employees, or representatives, in the performance of this Agreement, except for such loss or damage arising from CITY's sole negligence or willful misconduct.
- B. *Indemnification for other Damages.* CONTRACTOR indemnifies and holds CITY harmless from and against any claim, action, damages, costs (including, without limitation, attorney's fees), injuries, or liability, arising out of this Agreement, or its performance. Should CITY be named in any suit, or should any claim be brought against it by suit or otherwise, whether the same be groundless or not, arising out of this Agreement, or its performance, CONTRACTOR will defend CITY (at CITY's request and with counsel satisfactory to CITY) and will indemnify CITY for any judgment rendered against it or any sums paid out in settlement or otherwise.
- C. For purposes of this section "CITY" includes CITY's officers, officials, employees, agents, representatives, and certified volunteers.
- D. It is expressly understood and agreed that the foregoing provisions will survive termination of this Agreement.

11. INDEPENDENT CONTRACTOR. CITY and CONTRACTOR agree that CONTRACTOR will act as an independent contractor and will have control of all work and the manner in which it is performed. CONTRACTOR will be free to contract for similar service to be performed for other employers while under contract with CITY. CONTRACTOR is not an agent or employee of CITY and is not entitled to participate in any pension plan, insurance, bonus or similar benefits CITY provides for its employees. Any provision in this Agreement that may appear to give CITY the right to direct CONTRACTOR as to the details of doing the work or to exercise a measure of control over the work means that CONTRACTOR will follow the direction of the CITY as to end results of the work only.

12. NOTICES.

- A. All notices given or required to be given pursuant to this Agreement will be in writing and may be given by personal delivery or by mail. Such noticing does not include day-to-day communications between CITY's and CONTRACTOR's project managers. Notice sent by mail will be addressed as follows:

To CITY: Information Systems Department
 City of El Segundo
 350 Main Street
 El Segundo, CA 90245

To CONTRACTOR:

- B. When addressed in accordance with this paragraph, notices will be deemed given upon deposit in the United States mail, postage prepaid. In all other instances, notices will be deemed given at the time of actual delivery.
- C. Changes may be made in the names or addresses of persons to whom notices are to be given by giving notice in the manner prescribed in this paragraph.

13. TAXPAYER IDENTIFICATION NUMBER. CONTRACTOR will provide CITY with a Taxpayer Identification Number.

14. WAIVER. A waiver by CITY of any breach of any term, covenant, or condition contained in this Agreement will not be deemed to be a waiver of any subsequent breach of the same or any other term, covenant, or condition contained in this Agreement, whether of the same or different character.

15. CONSTRUCTION. The language of each part of this Agreement will be construed simply and according to its fair meaning, and this Agreement will never be construed either for or against either party.

16. SEVERABLE. If any portion of this Agreement is declared by a court of competent jurisdiction to be invalid or unenforceable, then such portion will be deemed modified to the extent necessary in the opinion of the court to render such portion enforceable and, as so modified, such portion and the balance of this Agreement will continue in full force and effect.

17. CAPTIONS. The captions of the paragraphs of this Agreement are for convenience of reference only and will not affect the interpretation of this Agreement.

18. **WAIVER.** Waiver of any provision of this Agreement will not be deemed to constitute a waiver of any other provision, nor will such waiver constitute a continuing waiver.

19. **INTERPRETATION.** This Agreement was drafted in and will be construed in accordance with the laws of the State of California, and exclusive venue for any action involving this agreement will be in Los Angeles County.

20. **AUTHORITY/MODIFICATION.** This Agreement may be subject to and conditioned upon approval and ratification by the El Segundo City Council. This Agreement is not binding upon CITY until executed by the City Manager. The Parties represent and warrant that all necessary action has been taken by the Parties to authorize the undersigned to execute this Agreement and to engage in the actions described herein. This Agreement may be modified by written agreement. CITY's City Manager may execute any such amendment on behalf of CITY.

21. **ACCEPTANCE OF ELECTRONIC SIGNATURES.** The Parties agree that this Agreement, agreements ancillary to this Agreement, and related documents to be entered into in connection with this Agreement will be considered signed when the signature of a party is delivered by electronic (.pdf) or facsimile transmission. Such electronic or facsimile signature will be treated in all respects as having the same effect as an original signature.

22. **EFFECT OF CONFLICT.** In the event of any conflict, inconsistency, or incongruity between any provision of this Agreement, its attachments, the purchase order, or notice to proceed, the provisions of this Agreement will govern and control.

23. **CAPTIONS.** The captions of the paragraphs of this Agreement are for convenience of reference only and will not affect the interpretation of this Agreement.

24. **FORCE MAJEURE.** Should performance of this Agreement be prevented due to fire, flood, explosion, war, terrorist act, embargo, government action, civil or military authority, the natural elements, or other similar causes beyond the Parties' control, then the Agreement will immediately terminate without obligation of either party to the other.

25. **ENTIRE AGREEMENT.** This Agreement and its one attachment constitute the sole agreement between CONTRACTOR and CITY respecting the Scope of Services. To the extent that there are additional terms and conditions contained in Exhibit "A" that are not in conflict with this Agreement, those terms are incorporated as if fully set forth above. There are no other understandings, terms or other agreements expressed or implied, oral or written.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF the parties hereto have executed this Agreement the day and year first hereinabove written.

CITY OF EL SEGUNDO

NAME

Scott Mitnick,
City Manager

Name,
Title

ATTEST:

Tracy Weaver,
City Clerk

Taxpayer ID No. _____

Business License No. _____

State License No. _____

APPROVED AS TO FORM:

Mark D. Hensley,
City Attorney



COUNCIL CHAMBER

and

CONFERENCE ROOM

AUDIO-VISUAL EQUIPMENT UPGRADE

SPECIFICATIONS

CITY OF EL SEGUNDO
Information Systems
Department
350 Main Street
El Segundo, CA 90254
(310) 524-2300

INTRODUCTION

This project will address the outdated audio-visual system in the City of El Segundo Council Chamber. The Council Chamber audio-visual system was originally installed in 2010. There have been repairs and replacements over the years, the last being 2016. The equipment has reached its end of life and maintenance and repair have become increasingly difficult. This project will provide a complete state-of-the-art upgrade to the audio-visual equipment for the Council Chamber and Production Control Room, the West Conference, Human Resources and West Garden Conference Rooms.

The AV Presentation System is based on Crestron DM-NVX digital transmission and reception, where video and audio sources are encoded into an IP Network Signal, fed into a Network Switch, then distributed to destinations and decoded back to video and audio signals for display or feeds into other systems. The Crestron DM-NVX system is very robust, with low-latency and high quality. In addition, matrix routing of source to destination can be provided, allowing for two selected sources to be presented on each of the Chamber Displays.

It is intended that the System may be operated in two ways:

- Basic Operation for Meetings and Presentations within the room without an operator or being recorded.
- Full Operation for Meetings and Presentations with an Operator in the Production Control Room and being recorded.

The following areas are included in the project:

- Council Chamber
- Council Chamber Lobby
- Production Control Room
- West Conference Room
- Human Resources Conference Room
- West Garden Conference Room

Council Chamber system AV feeds are as follows:

- 3- East Staff Table Computer or Laptop inputs, with the capability of a Portable Document Camera as a source.
- 2- West Staff Table Computer or Laptop inputs, with the capability of a Portable Document Camera as a source.
- 1- Podium Laptop input.
- 1- Wireless Presentation Gateway input, for wireless presentations from a user laptop or mobile device.
- 1- Annotation Input with a wireless tablet used for the interactive annotation.
- 1- BluRay/DVD/Digital Media Source

- 1- Solid State Player Video Source
- 1- Production Switcher System Source

Council Chamber system AV destinations are as follows:

- Chamber East Wall 90" Flat Panel Display (FPD)
- Chamber West Wall 90" FPD
- City Hall Chamber Foyer FPD
- West Conference Room AV System
- Mayor's Office FPD
- Production Control Room System

The Audio System is based on BiAmp TesiraForte components, or equivalent, which allows for matrix mixing and signal processing with distribution to the following locations:

- Council Chamber Ceiling Loudspeakers
- City Hall Chamber Foyer Ceiling Loudspeakers
- West Conference Room AV System
- Mayor's Office FPD
- Assisted Listening System Transmitter
- Production Control Room System
- An Audio Press Panel with 6-Line-Level Audio Outputs located inside the East Rear Door.

The Control System is based on a Crestron Control Processors along with two 10" Touch Control Screens, one at the Clerk Desk location, and one in the Production Control Room (PCR).

Control Functions to be provided are:

- System On/Off.
- Microphone Volume Control and Muting
- Ceiling Loudspeaker Volume and Muting
- Source to Destination AV Signal Routing
- Video Display Muting (Blanking)
- Audio Teleconference Control (VoIP System Interface)
- Light Switch Control

The Television Production System (TPS) shall have the following feeds:

- 4- Remote Controlled HD Pan/Tilt/Zoom Cameras in the Council Chamber
 - A. Remote Camera Controller with Presets in the PCR.
 - B. One CAT6 Shielded Cable between each Camera and the PCR is used for Power, Control, and Video.
- 2- Presentation System Source Feeds (from Council Chamber)

- 1- Blu-Ray/DVD Player Feed
- 1- Solid State Media Player Feed
- 1- Networked Input for Graphics

The TPS shall have the following destinations:

- Blu-Ray/HD Recorder
- Streaming Media Encoder
- Spectrum Cable (via existing Fiber to El Segundo High School)
- Granicus Encoder (via existing Fiber to El Segundo High School)
- Chamber AV System

For communication and monitoring purposes between the Chamber and PCR the following shall be provided:

- A Ceiling Confidence Microphone in the Chamber fed to a Listening Station in the PCR.
- An Intercom between the PCR and the Clerk Location. The Clerk location shall have a desktop unit with a speaker, telephone style handset, and visual call light indicator.
- A Talkback Microphone from the PCR to the Clerk Audio System for Operator to speak to the Chamber, for setup or when necessary.

The West Conference Room AV System consists of the following components:

- Three Ceiling Mounted Beamtracking Microphones
 - a. The 3- Microphone/Amplifier Network Boxes and 5 Port PoE Switch
 - b. Wireless Video Gateway for laptop and mobile devices
 - c. 2 Conference table mounted Flip-Tops connected via Floor Core Pedestal, each including:
 - i. 2- HDMI Cables with a Digital Adapter Set for most Digital Video Sources on Gravity Retractors
 - ii. 1- USB Cable for connection to the Interactive Display or for UVC Video Teleconferencing Connection.
 - iii. 1- RJ45 Network Cable Connected to the City Network. A floor mounted low-profile raceway shall be used to route the cabling from the table to the system. The Flip-Top shall also contain an AC Power Outlet and Dual USB Charging Port.
 - d. A feed from the Council Chamber AV System.
 - e. A Wall Mounted Pan/Tilt Zoom Camera for UVC Video Teleconferencing.
 - f. A City Furnished Room PC, rack mounted in the Downstairs Production Control Room (PCR) Rack.
- Teleconferencing shall be integrated by a Voice Over IP interface within the Audio DSP.
- AV Destinations
 - a. An 86" Interactive Video Display located on the Front (North) Wall

- b. A 75" Display located on the West Wall
- c. A 75" Display located on the East Wall.
- d. The Council Chamber AV System
- e. The System shall be controlled by a 10.1" Apple iPad. Functions controlled shall be as follows:
 - i. System On/Off
 - ii. Source Selection, Routing, and Volume
 - iii. Display Control
 - iv. Room Volume
 - v. Teleconference Dialing, Connection, Volume Control and Mute/Privacy.
 - vi. Pan/Tilt/Zoom Camera Control
 - vii. Microphone Volume.
 - viii. Shade Control

The Human Resources Conference Room AV System consists of the following components:

- A. A Ceiling Mounted Beamtracking Microphone to actively track and intelligently mix conversations within the room.
 - a. Wireless Video from a local Wireless Presentation Gateway for Laptop or Mobile Device sources. Mounted under the Table.
 - b. 1- Conference Table Mounted Flip-Top connected via a Bridge between the Conference Table and the wall.
 - i. 1- HDMI Cable with a Digital Adapter Set for most Digital Video Sources on Gravity Retractor
 - ii. 1- USB Cable for connection to the Interactive Display or for UVC Video Teleconferencing Connection.
 - iii. 1- RJ45 Network Cable Connected to the City Network. A floor mounted low-profile raceway shall be used to route the cabling from the table to the system. The Flip-Top shall also contain an AC Power Outlet and Dual USB Charging Port.
 - c. A Wall Mounted Pan/Tilt Zoom Camera for UVC Video Teleconferencing.

The Teleconferencing shall be integrated by a Voice Over IP interface within the Audio DSP.

- B. AV Destinations for the system include:
 - a. An 86" Interactive Video Display located on the West Wall.
- C. A Conference Table with 6-8 Seats and a Bridge connecting to the wall under the Display.
- D. The System shall be controlled by a 10.1" Apple iPad, or equivalent. Functions controlled shall be as follows:
 - a. System On/Off

- b. Source Selection, Routing, and Volume
- c. Display Control
- d. Room Volume
- e. Teleconference Dialing, Connection, Volume Control and Mute/Privacy.
- f. Pan/Tilt/Zoom Camera Control
- g. Microphone Volume.

The Garden Conference Room AV System consists of the following components:

- A. On the West Wall, a 76" Display with Integrated TV Tuner.
- B. Single Gang Wall Mounted Crestron DM Lite HDMI Input/Transmitter
- C. A Crestron DM-NVX Decoder mounted behind the Display connected to the Downstairs Production Control Room rack.
- D. Control of the Sources and Volume shall be via the supplied Display Remote Control.

SCOPE OF WORK

The audio-visual contractor is to verify the AV system, electrical requirements, conduits, heat load data and interior design consideration unique to the audio-visual system which have been incorporated in this specification and equipment list.

The audio-visual contractor shall provide complete turnkey audio-visual system performing all of the services and function as described herein, together with all other apparatus, cable, material, labor, tools, transportation and any other resources necessary to provide complete systems.

The audio-visual 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
- Schedule of Value
- Equipment coordination and supply
- Supporting facility construction and coordination
- System production
- Control system configuration and programming
- Factory acceptance training
- System installation
- Site acceptance testing
- Final testing and systems performance verification
- User training
- Submittal documentation

- System acceptance
- Day One Support
- Final acceptance
- Maintenance

Schedule of Values

Detailed schedule apportioning the original contract amount and change orders among all cost codes divisions or portions of the work.

AV and Broadcast Detailed Engineering

- Detailed engineering of final system configuration – audio-visual contractor is to perform final AC system engineering and design to meet the functional requirements identified.
- Confirm the accuracy of the system designs. The audio-visual contractor shall identify any or all items necessary to ensure that the installed system meet the functional requirements outlined in the specification
- Systems fabrication and interface drawings – detailed system fabrication, interface, rack, or elevation and signal flow drawings are to be prepared in Auto CAD or Vision 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 – audio-visual contractor is to supply interface and mounting components and cabling, connectors and installation
- Coordinate and storage of procured equipment – audio-visual contractor is to coordinate receipt and storage of all procured equipment at audio-visual contractor’s facility for pre-assembly and fabrication prior to installation
- Provide podium and technical furniture as specified
- Coordinate with the city representatives 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 representative furniture or work, as required allowing for a neat and professional installation of integrated technology system components. This includes, but is not limited to, integrated table/podium “cubbies”, table top, microphones, cable management grommets, etc.
- Coordinate with the city representative on cable management needs and equipment installation requirements in all spaces
- Secure from city private IP addresses for use by Ethernet equipped audio-visual devices. No Ethernet equipped device shall be connected to the City network without permission

of the City 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 audio-visual devices to be connected to the City network with the City representative.

Supporting Facility Construction and Coordination

- Audio-visual contractor is to design, engineer, provide an install and/or modify all required cable, conduit, boxes, high voltage AC power, supporting structure and mill work as a part of their work to support the intent and application of the systems identified in this specification
- Audio-visual contractor is to de-install all existing audio-visual components and legacy audio-visual cabling, except those components, devices, and cabling identified in this document to be requested in the new system. The audio-visual contractor is not to de-install networking, unnecessary audio-visual cabling from conduit, j-boxes, Chamber and Control 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 representative for this work.
- Communicating and coordinating directly with the city and other trades complying with all requirements as defined under his 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 - audio-visual 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 onsite 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

- Offsite pre-installation system construction – upon receipt of equipment, audio-visual contractor is to begin the construction and assembly of approved systems. This work is to be done in the audio-visual contractor's facility. Systems are to be fully assembled, wired, programmed and tested prior to delivery to the site.

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 audio-visual contractor's facility.

System Installation

- On-site 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 audio-visual 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 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 cabling management hardware as required including; hardware required internet 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 greater facility cabling infrastructure.
- Provide custom cover plates, well 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 audio-visual 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 – cost of all shipping to the site, and of all unusual storage requirements, shall be borne by the audio-visual contractor. It shall be the responsibility of the audio-visual 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, audio-visual contractor shall perform final testing and adjustments to ensure compliance with the established performance criteria.

Final Testing and Systems Performance Verification

- Final Test
 - A. System performance verification scheduling – upon completion of the audio-visual contractor’s site acceptance a verification of system performance and complete functionality, and at a time that is mutually acceptable to the audio-visual contractor and city representative, the audio-visual contractor shall assist the city representative in final system tests and adjustments. The audio-visual contractor shall allow eight (8) hours to perform the test. The audio-visual contractor’s representative assisting in the performance of these test 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 audio-visual 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 signal generator or generators, capable of outputting all signal types included in the system designs.
 - C. The audio-visual 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 system performance verification, the City is to issue a punch list report to the audio-visual contractor, identifying omissions, adjustments, and corrections to the work necessary to meet the requirements of the specifications.
 2. The audio-visual contractor shall correct all punch list items resulting in full functional systems that meet all requirements of the specification and can be utilized by the City as intended.
- E. 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 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.
 - A. Provide the following training:
 1. Council Chamber System
 - a. 4 Hours of Operator Training
 - b. 4 Hours of Technician Training
 2. Production Control Room
 - a. 8 Hours of Operator Training
 - b. 8 Hours of Technician Training
 - B. Additional operational training and manufacturer specific operational training may be provided upon request at additional charge.
 - C. Successful Bidder shall also be onsite for the 1st Meeting, Post-Commissioning, to assist City Operations staff.

Submittal Documentation

- Within two weeks of the successful completion of final tests and punch-listing, the audio-visual 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 audio-visual 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 document and drawings. The documentation shall be bound in three ring binders with covers and spine listing the City, Project Name, City representative and audio-visual 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; manufacturer and model number labels for each component; physical location callout indicating the components physical location (i.e. equipment rack #, podium, wall mounted, etc.); cable fan-outs; wire/cable as; 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. Operators’ manuals for each piece of equipment supplied by the audio-visual contractor
 7. The audio-visual 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 rebated files, referenced files, and development software (and all relevant documentation and licenses) 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 for 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 audio-visual contractor shall include, as a part of the final documentation submittal, a signed letter on the subcontractor 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 CD-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. Produce manufacturer and model
 - b. LAN port connection location
 - c. Assigned static IP address
 - d. Product MAC address
2. The IP address schedule shall be submitted electronically in Microsoft Excel .xls format, compatible with Windows 7 or newer operating systems.

D. System training materials

System Acceptance

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

Day One Support

- Audio-visual contractor is to provide one system engineer on-site for the first live Council meeting that is to utilize the new system. The audio-visual 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 audio-visual contractor and accepted by the City.
 - C. The audio-visual contractor's final submittals documentations have been reviewed by the City and deemed to be complete.

- D. The audio-visual contractor has provided all required training for the City as defined herein.
- E. Any remaining items required by the specifications, but not listed above, have been completed by the audio-visual contractor.

Maintenance

- Service support – a complete and comprehensive program of preventative maintenance, remote monitoring and diagnosis, service and warranty support shall be provided for the warranty period of the first year from the date of installation of the AV system. Maintenance and system warranty support is to include, at a minimum:
 - A. Rapid response within two (2) 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 8:30 am – 5:00 pm, PST Monday – Friday.
 - 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 repaid costs for equipment breakdown
- Audio-visual 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.
- The City shall provide a remote VPN or secure remote access into the AV system for troubleshooting and system update purposes.

Work Excluded

- Providing lighting fixtures
- Providing wall or ceiling mounted projection screens
- 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 audio-visual 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 audio-visual 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 audio-visual 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.
- Audio-visual 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 audio-visual 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 audio-visual 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 audio-visual contractor shall have complete responsibility for the systems described herein and shall be the single contact point for the City's representative with respect to all work herein.
- The audio-visual contractor shall maintain the same project manager and field supervisor throughout the installation, and where practical, maintain the same installers.
- The audio-visual 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 audio-visual contractor shall guarantee all equipment, materials, and labor for a period of 1 year from the date of final acceptance.
- Audio-visual 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 audio-visual contractor shall answer all service calls and requests for information.
- Within 96 hours of original notification, the audio-visual 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 audio-visual 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 audio-visual 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 audio-visual 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.

Commissioning

- Provide a Commissioning Spreadsheet showing all system functions and signal routing are verified and tested including but not limited to:
 - A. Microphone Level & Mute Control
 - B. Loudspeaker Zone Level & Mute Control as well as intelligibility within the room
 - C. Assisted Listening Receive Level Verification
 - D. Camera Operation and Preset Control
 - E. Source to Destination Routing
 - F. Feeds to El Segundo are working.
 - G. Local Recording is verified
 - H. Streaming Video to Internet
 - I. Audio Press/Interconnect Panel signal connections
 - J. Intercom and Talkback
 - K. Confidence Microphone

FUNCTIONAL SPECIFICATION

PROJECT DESCRIPTION

The Council Chamber and related control systems are 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 audio-visual (AV) support and broadcast. The new Council Chamber AV system is to include a LED displays, interface devices at each of the member position and a new podium solution, 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, audio control and interface for display of the agenda management and voting systems.

An adjacent Council Chamber lobby will have speaker installation to support overflow of the live non-delayed audio to accompany the existing LED display of the proceedings in the Chamber.

Facility electronic, high voltage electrical, millwork, structural and infrastructure design, engineering and modification are required to support the intended upgrade, which are to be performed as a part of the audio-visual contractor's work.

The existing systems shall be removed (except when noted) and replaced. All existing equipment, associated equipment racks and cabling are to be removed, except where identified to be reused.

All wiring is to be dressed, terminated and labeled properly, allowing for efficient serviceability. Cable wiring management is to be put in place for easy access, testing and replacement of cables as needed.

Devices, cable and connections are to be labeled to match and correlate to the AV system as-built drawings.

Demolition

- Chamber Demolition Tasks
 - A. The existing dais and podium gooseneck microphones and the staff table desktop gooseneck microphones are in good condition and shall be re-used for the upgrade, with old cabling & connectors removed and replaced with new cabling, connectors and connector panels.
 - B. Currently the microphone cabling runs under the raised flooring area under the dais to a small rack located in the northeast corner of the Council Chamber through a conduit stubbed up behind the rack. This cabling as well as the rack shall be removed. The conduits in this corner shall be cut down flush to the floor and capped off.
 - C. There are also connector panels and/or low voltage openings located on the front of the raised dais for microphone, video and network connections. These

shall be removed and replaced with new connector panels as described in the package.

- D. The existing ceiling video projector and mount shall be removed. The electrical circuit for this can be repurposed for the new 90" flat panel displays to be mounted on the east and west walls as described in the package.
 - E. The existing electric roll down projection screen on the east side of the room shall be removed. The electrical power switch for this shall also be removed and replaced with a blank plate.
 - F. The two video cameras and their mounts located on the east and west walls shall be removed and holes patched with a color matching filler.
 - G. The two video cameras and their mounts located on the south wall above the double entry doors shall be removed. Two new video cameras are to be located in the same locations, but efforts are to be made to patch any remaining visible mounting holes.
 - H. Any cabling used in the existing system, with the exception of City network cabling, shall be removed. This includes all cabling between the Council Chamber and the production Control Room located in the basement.
- Production Control Room Demolition Tasks
 - A. Disconnect and remove any all non-essential in-room cabling and equipment.
 - 1. Equipment to be retained are the SDI to optical fiber converters, fiber transmitters and the wall mounted fiber patch panel and fiber cabling. Caution must be taken not to damage the exiting fiber.
 - 2. The City shall determine which additional equipment is to be retained or E-wasted.
 - B. Remove the existing table and desk rack.
 - C. As noted above, all cabling between the Production Control Room and the Council Chambers is to be removed.

New Chamber Systems

- A. Install two 4RU vertical panel mounted (VPM) racks under the dais desk (final location to be verified in Field) to house the Chamber terminal equipment.
- B. Run new 22/2 Star Quad Shielded microphone cabling from the dais and connector panel locations to the VPM location.
 - 1. 5-Microphones are located on the dais. These are directly wired to the VPM location.
 - 2. 3-Microphones are located on the east staff table. These are connected to a connector panel on the front of the raised dais area, which is wired to the VPM location.
 - 3. 2-Microphones are located on the west staff table. These are connected to a connector panel on the front of the raised dais area, which is wired to the VPM location.

4. 1-Microphone is located on the podium. This is connected to a connector panel on the front of the raised dais area, which is wired to the VPM location.
- C. New CAT6 Shielded Cabling for computer sources shall be run from the connector panels above to the VPM location.
**NOTE: Utilize Neutrik Ethercon connectors and jacks for all DM-NVX signals.*
 - D. A 22/2 Shielded Audio Cable for intercom shall be run from the east table connector panel to the Production Control Room.
 - E. Install 6 flip top table compartments with AC and USB power and cable pass-throughs in the following locations:
 1. East Staff Table- 3 compartments
 2. West Staff Table- 2 compartments
 3. Podium- 1 compartment
 - F. Cover any existing non-used cutout with a matching trim piece.
 - G. Mount the Crestron DM-NVX Encoders under the tables and in the podium.
 - H. Provide cabling between the encoders, microphones and connector panels.
 - I. Provide a custom ADA compliant variable height podium with gooseneck microphone connector, LED light, and cutout for new cable cubby.
 - J. Provide a floor core and flush insert under the podium, with connections for DM-NVX, microphone, City LAN and AC power. Provide cabling which can be disconnected and stored below the podium if the City chooses to move the podium.
**NOTE: Floor must be X-rayed prior to coring to determine optimum location for the core.*
 - K. Alternatively, should the City decide not to core, for the podium, provide cabling long enough to reach the podium connector panel. Provide covering for the cables on the floor with cable carpet covering. Color to be determined.
 - L. A pathway between the dais and connector panels to the ceiling must be established through the raised floor area. There are existing cables that run under the raised area behind the East side step, with a plastic raceway up to the ceiling next to the furred out panel. Access should be made through this area for cabling, and a new framed vertical raceway for the new cabling shall be provided and painted to match existing panel.
 - M. Install four remote controlled Pan/Tilt/Zoom cameras, with two located above the double rear entry doors, one in the northwest corner and one in the northeast corner.
 - N. Install 6 ceiling speakers in 3- zones (front, center, and rear) in the Council Chamber. Provide 3- 16/2 cables for each zone to the under dais VPM.
 - O. Install 3 ceiling speakers as 1 zone in the lobby area with 1 outside the double rear entry door, 1 near the rest rooms and 1 near the cabinet in the hallway on

the wall outside the Chamber. Provide 1- 16/2 cable for this zone to the under dais VPM.

- P. Install a WiFi access point in the ceiling towards the front of the Chamber. Provide a CAT6 shielded cable run to the under dais VPM.
- Q. Install a ceiling confidence microphone. Provide a 22/2 shielded audio cable to the Production Control Room.
- R. Install two 90" flat panel displays on mounts on the east and west walls. There is an existing furred out panel on each of these walls. This panel shall be cut out in the area where the articulating mount is to be located and the mount structurally secured to the brick wall behind the furred out panel.
- S. A 110 VAC, 10 Amp duplex outlet is required to be installed at each location for powering the 90" flat panel display and AV system receiver.
- T. For the audio Press/Interconnect panel, install a 2-gang surface mount box just inside the southeast corner of the Chamber. This shall be populated with 2- BNC connections (1 for an HD-SDI Video Input to the Production System, and 1- for an HD-SDI video output from the Production System), 1- 3-Pin XLR male as a program audio output, and 1-3 Pin XLR female as an audio input to the system. Provide a wood trimmed race way to the ceiling that color matches the existing wood trim in the foyer. Run a 22/2 shielded audio cable to the VPM, in addition to 2 RG-6 HDSI coaxial cables and a 22/2 shielded audio cable to the Production Control Room.
- U. Replace the 3- Chamber light switches with 3- Crestron InfiNET switches.
- V. Run a CAT7 shielded cable from the VPM to the PCR as the network link between the Chamber and the PCR network switches.
- W. Run a CAT6 shielded cable from the VPM to the West Conference Room AV System.
- X. Run a CAT6 shielded cable from the VPM to the lobby foyer FPD.
- Y. Run a CAT6 shielded cable from the VPM to Mayor's Office FPD.
- Z. Mount the following components in the VPMs:
 - 1. Network Switch and PoE Injector
 - 2. BiAmp Tesiraforte' DSP and Input Expander
 - 3. BiAmp Audio Power Amplifier
 - 4. Crestron RF/InfiNET Gateway
 - 5. Assisted Listening Transmitter
 - 6. Uninterruptible Power Supply
- AA. Terminate and test all cabling.

- New Production Control Room System.

**NOTE: Adequate Cooling and Ventilation needs to be provided by the City for this room to properly operate.*

- A. Pull in all cabling from Council Chamber and bundle to the appropriate location within the room.
- B. Laguna Designs shall Install the new 3-bay production console with articulating monitor and speaker mounts.
- C. Install the Middle Atlantic WR-37-32 slide out/rotate vertical equipment rack in the closet area of the PCR. Remove the door and hinges to this room if not already done.
- D. Install all equipment in the console
 - 1. Production camera switcher control surface.
 - 2. Production camera pan/tilt/zoom control surface
 - 3. Production switcher multi-view monitor on articulating mount
 - 4. Production video monitor on articulating mount.
 - 5. Graphics/Control computer monitor on articulating mount.
 - 6. 2 Tannoy audio monitors on articulating mounts.
 - 7. Production audio mixer
 - 8. Blu-Ray/DVD player
 - 9. Solid State media player
 - 10. Crestron 10" Touch Control Screen.
 - 11. Chamber confidence microphone speaker station
 - 12. Clerk intercom base station
 - 13. Audio VU/monitor.
 - 14. HD-SDI to USB converter for zoom or UVC
- E. Install all equipment in the vertical equipment rack.
 - 1. Uninterruptible power supply
 - 2. Vertical power distribution strips
 - 3. BiAmp TesiraForte' DSP
 - 4. Crestron Control Processor
 - 5. Crestron XiO Director Chassis for DM-NVX management
 - 6. Network Switch
 - 7. Network Patch Panel
 - 8. Production Switcher/Controller Chassis
 - 9. Blu-Ray/HDD recorder
 - 10. Streaming encoder
 - 11. Video signal converters
 - 12. Annotator Chassis
 - 13. SDI 40x40 Routing Switcher
 - 14. 2- Channel frame synchronizer for feeds to El Segundo High School for channel distribution.
- F. Run necessary cabling between the console and rack.
- G. Terminate and test all cabling

West Conference Room Audio-Visual System

The West Conference Room AV System consists of the following components:

- A. The West Conference Room AV System is based on Crestron DM-NVX digital transmission and reception, where video and audio sources are encoded into an IP Network Signal, fed into a Network Switch, then distributed to destinations and decoded back to video and audio signals for display or feeds into other systems. The Crestron DM-NVX system is very robust, with low-latency and high quality. In addition, matrix routing of source to destination can be provided, allowing for separate sources to be routed to different displays.
- B. Three Ceiling Mounted Beamtracking Microphones to actively track and intelligently mix conversations within the room. The audio picked up by these microphones will be digitally distributed to an Audio DSP Matrix Mixer for Teleconferencing purposes to remote callers. Echo is cancelled for superb intelligibility on the 'Far' side.
- C. The 3- Microphone/Amplifier Network Boxes and 5 Port PoE Switch for these devices shall be in a fully enclosed Ceiling Box mounted to fit in a 2x2 Ceiling Tile Space. This enclosure also includes a power strip and fan.
**NOTE: 110V AC- 15 Amp Circuit needs to be provided for this enclosure.*
- D. Sources for the system include:
 1. A City Furnished Room PC, rack mounted in the Downstairs Production Control Room (PCR) Rack.
 2. Wireless Video from a local Wireless Presentation Gateway for Laptop or Mobile Device sources.
 3. 2- Conference Table Mounted Flip-Tops connected via Floor Core Pedestal, each including:
 - a. 2- HDMI Cables with a Digital Adapter Set for most Digital Video Sources on Gravity Retractors
 - b. 1- USB Cable for connection to the Interactive Display or for UVC Video Teleconferencing Connection.
 - c. 1- RJ45 Network Cable Connected to the City Network. A floor mounted low-profile raceway shall be used to route the cabling from the table to the system. The Flip-Top shall also contain an AC Power Outlet and Dual USB Charging Port.
 4. A feed from the Council Chamber AV System.
 5. A Wall Mounted Pan/Tilt Zoom Camera for UVC Video Teleconferencing.
- E. The Audio from these devices shall also be distributed to the Tesira SERVER-IO AVB Audio DSP located in the downstairs PCR for local reinforcement within the room via a connection through the Ceiling Mic System (mentioned above) Amplifier and 6 Ceiling Loudspeakers, as well as being routed to the 'Far' Side during a Tele-Conference if required.

The Teleconferencing shall be integrated by a Voice Over IP interface within the Audio DSP.

- F. Destinations for the system include:
 - 1. An 86" Interactive Video Display located on the Front (North) Wall
 - 2. A 75" Display located on the West Wall
 - 3. A 75" Display located on the East Wall.
 - 4. The Council Chamber AV System
- G. 3- Remote Controlled Window Shades shall be provided. Power and Control for the Shades shall be via a Crestron Motor Power Supply and Ethernet to Cresnet Bridge & Hub mounted above the Ceiling Enclosure (mentioned above).
- H. The System shall be controlled by a 10.1" Apple iPad that can be docked to its charging desktop base or removed for operation. It shall be connected wirelessly to the City WiFi system and ported to the AV Network.
- I. Functions controlled shall be as follows:
 - 1. System On/Off
 - 2. Source Selection, Routing, and Volume
 - 3. Display Control
 - 4. Room Volume
 - 5. Teleconference Dialing, Connection, Volume Control and Mute/Privacy.
 - 6. Pan/Tilt/Zoom Camera Control
 - 7. Microphone Volume.
 - 8. Shade Control

Human Resources Conference Room Audio-Visual System

The Human Resources Conference Room AV System consists of the following components:

- A. The Human Resources AV System is based on Crestron DM-NVX digital transmission and reception, where video and audio sources are encoded into an IP Network Signal, fed into a Network Switch, then distributed to destinations and decoded back to video and audio signals for display or feeds into other systems. The Crestron DM-NVX system is very robust, with low-latency and high quality.
- B. A Ceiling Mounted Beamtracking Microphone to actively track and intelligently mix conversations within the room. The audio picked up by this microphone will be digitally distributed to an Audio DSP Matrix Mixer for Teleconferencing purposes to remote callers. Echo is cancelled for superb intelligibility on the 'Far' side.
- C. Sources for the system include:
 - 1. Wireless Video from a local Wireless Presentation Gateway for Laptop or Mobile Device sources. Mounted under the Table.

2. 1- Conference Table Mounted Flip-Top connected via a Bridge between the Conference Table and the wall.
 - i. 1- HDMI Cable with a Digital Adapter Set for most Digital Video Sources on Gravity Retractor
 - ii. 1- USB Cable for connection to the Interactive Display or for UVC Video Teleconferencing Connection.
 - iii. 1- RJ45 Network Cable Connected to the City Network. A floor mounted low-profile raceway shall be used to route the cabling from the table to the system. The Flip-Top shall also contain an AC Power Outlet and Dual USB Charging Port.
 3. A feed from the Council Chamber AV System.
 4. A Wall Mounted Pan/Tilt Zoom Camera for UVC Video Teleconferencing.
- D. The Audio from these devices shall also be distributed to a TesiraForte' Audio DSP located in the Closet Rack for local reinforcement within the room via a connection through the Ceiling Mic System (mentioned above) Amplifier and 2-Ceiling Loudspeakers, as well as being routed to the 'Far' Side during a Tele-Conference if required.

The Teleconferencing shall be integrated by a Voice Over IP interface within the Audio DSP.

- E. Destinations for the system include:
1. An 86" Interactive Video Display located on the West Wall.
- F. A Conference Table with 6-8 Seats and a Bridge connecting to the wall under the Display.
- G. The System shall be controlled by a 10.1" Apple iPad that can be docked to its charging desktop base or removed for operation. It shall be connected wirelessly to the City WIFI system and ported to the AV Network.
- H. Functions controlled shall be as follows:
1. System On/Off
 2. Source Selection, Routing, and Volume
 3. Display Control
 4. Room Volume
 5. Teleconference Dialing, Connection, Volume Control and Mute/Privacy.
 6. Pan/Tilt/Zoom Camera Control
 7. Microphone Volume.
- I. On the West Wall, a 76" Display with Integrated TV Tuner.
- J. On the West Wall, below the display, a Single Gang Wall Mounted Crestron DM Lite HDMI Input/Transmitter connected via CAT6 Shielded Cable to a Crestron DM Lite Receiver behind the Display.

- K. A Crestron DM-NVX Decoder mounted behind the Display connected to the Downstairs Production Control Room rack. This shall be utilized for viewing any Source connected to the Chamber or West Conference Room AV Systems. Control of this source shall be made via the Production Control Room Touch Panel.
- L. Control of the Sources and Volume shall be via the supplied Display Remote Control.

Garden Conference Room Audio-Visual System

The Garden Conference Room AV System consists of the following components:

- A. On the West Wall, a 76" Display with Integrated TV Tuner.
- B. On the West Wall, below the display, a Single Gang Wall Mounted Crestron DM Lite HDMI Input/Transmitter connected via CAT6 Shielded Cable to a Crestron DM Lite Receiver behind the Display.
- C. A Crestron DM-NVX Decoder mounted behind the Display connected to the Downstairs Production Control Room rack. This shall be utilized for viewing any Source connected to the Chamber or West Conference Room AV Systems. Control of this source shall be made via the Production Control Room Touch Panel.
- D. Control of the Sources and Volume shall be via the supplied Display Remote Control.
- E. Training
 - 1. Provide the following training:
 - a. Garden Conference Room
 - 1. 1 Hour of Operator Training
- F. Documentation- to be provided on paper and electronically where applicable.
 - 1. Provide Quick Reference Guides for the Garden Conference Room System
 - 2. Provide Single Line Drawings for all As-Built Systems.
 - 3. Provide a spreadsheet with all equipment serial numbers and IP Address information.
 - 4. Provide a suggested Preventive Maintenance list.

Cabling

The following cable types (or equivalent) shall be utilized for the system cabling:

A. Council Chamber – Production Control Room

SDI VIDEO COAX	RUNS BETWEEN CHAMBER & CONTROL ROOM	RG-6	PLENUM	BELDEN	1695A	VIOLET
SYNC COAX	RUNS BETWEEN CHAMBER & CONTROL ROOM	RG-6	PLENUM	BELDEN	1695A	RED
SDI VIDEO COAX	WITHIN CONTROL ROOM	MINI RG-59	RISER	BELDEN	1855A	VIOLET
SYNC COAX	WITHIN CONTROL ROOM	MINI RG-59	RISER	BELDEN	1855A	RED
MICROPHONE	WITHIN CHAMBER	STAR QUAD		BELDEN	1172A	BLACK
SPEAKER LEVEL	WITHIN CHAMBER & LOBBY	18 AWG	PLENUM	BELDEN	6300UE	GRAY
LINE LEVEL AUDIO	ALL	22 AWG	PLENUM	BELDEN	9451P	BROWN
CAT7	RUNS BETWEEN CHAMBER & CONTROL ROOM	23AWG	PLENUM	LIBERTY	24-4P-P-L7SH	BLUE
CAT6A SH (DM-NVX)	ALL	23 AWG	PLENUM	BELDEN	10GX63F	YELLOW
CAT6 (LAN)	ALL	23 AWG	PLENUM	BELDEN	2413	GREEN

1. Approximate length between the Production Control Room Main Equipment rack and the Council Chamber ceiling access point is 100'. Within the Chamber cable distances vary between locations, between 30 and 75'.
2. Insure that there is adequate tail length in each location for proper dressing and termination.

B. West Conference Room

SPEAKER LEVEL	WITHIN ROOM	18 AWG	PLENUM	BELDEN	6300UE	GRAY
CAT6A SH (DM-NVX)	ALL	23 AWG	PLENUM	BELDEN	10GX63F	YELLOW
CAT6 (LAN)	ALL	23 AWG	PLENUM	BELDEN	2413	GREEN

1. Approximate length between the Production Control Room Main Equipment Rack and the West Conference Room is ~200’.
2. Ensure that there is adequate tail length in each location for proper dressing and termination.

C. HR Conference Room

SPEAKER LEVEL	WITHIN ROOM	18 AWG	PLENUM	BELDEN	6300UE	GRAY
CAT6A SH (DM-NVX)	ALL	23 AWG	PLENUM	BELDEN	10GX63F	YELLOW
CAT6 (LAN)	ALL	23 AWG	PLENUM	BELDEN	2413	GREEN

1. Approximate length between the Production Control Room Main Equipment Rack and the Human Resources Conference Room is ~275’.
2. Ensure that there is adequate tail length in each location for proper dressing and termination.

D. City shall provide:

1. Network connections (LAN or WiFi) for all presentation computers
2. Laptops, computers, NUCs, displays for presentation sources
3. VoIP Connection for Audio TeleConferencing.

Certification and References

- Certifications:

The consultant shall hold the following Certifications:

- A. C-7 Low Voltage License
- B. AVIXA CTS-D and CTS-I Certification
- C. Crestron Certified Programmer
- D. Crestron NVX Certification
- E. BiAmp Tesira Certification

- Experience and Qualifications of Key Personnel:

The consultant shall provide resumes indicating the experience and qualifications for the key personnel identified in the organization chart. Consultant shall also include the number and type of additional support personnel who will be providing services. At a

minimum, the resume for each team member should include:

- A. Name
 - B. Position and Role for This Project
 - C. Degrees and Certifications
 - D. Professional Memberships/Registrations
 - E. Summary of Experience
 - F. Work on Representative Project Similar in Scope
- If sub-consultants are to be used as part of this proposal, a resume of the sub-consultant and relevant experience is to be included in the same format.
 - References:
Consultant must provide at least three (3) references for which consultant has provided services similar in scope as set forth in the RFP within the last two (2) years. Reference information should include:
 - A. Name of agency
 - B. Name of agency project manager
 - C. Email address and telephone number of contact person
 - D. Description of project or services provided
 - Summary of Relevant Projects:
Proposers should highlight representative projects that are similar in scope to the services requested to demonstrate the firm's depth of experience and familiarity with similar projects. For each project, please include the following information, at a minimum:
 - A. Year started and completed (if relevant)
 - B. Contracting Agency + Department
 - C. Project Description
 - D. Key Personnel Assigned
 - E. Contract Value

END OF SPECIFICATION



COUNCIL CHAMBER

AUDIO-VISUAL EQUIPMENT UPGRADE EQUIPMENT

BILL OF MATERIALS

CITY OF EL SEGUNDO
Information Systems Department
350 Main Street
El Segundo, CA 90254
(310) 524-2300

**City of El Segundo - Council Chamber AV &
Production System AV Upgrade - Core Podium**

Please include the price for the items listed:

<u>QTY</u>	<u>MFR</u>	<u>MODEL</u>	<u>DESCRIPTION</u>	<u>MSRP</u>	<u>Ext MSRP</u>
Audio System					
1	Biamp	TesiraFORTÉ AVB CI	Fixed I/O DSP with 12 analog inputs, 8 analog outputs, 8 channels configurable USB audio, 128 x 128 channels of AVB, and AEC technology (all 12 inputs)	\$0.00	\$0.00
1	Biamp	TesiraFORTÉ AVB VT	Fixed I/O DSP with 12 analog inputs, 8 analog outputs, 8 channels configurable USB audio, 128 x 128 channels of AVB, AEC technology (all 12 inputs), 2 channel VoIP, and standard FXO telephone interface	\$0.00	\$0.00
1	Biamp	AMP-A460H	4 channel, 60W half-rack amplifier with mounting bracket	\$0.00	\$0.00
10	Crestron	SAROS IC6T-W-T	Saros® 6.5" 2-Way In-Ceiling Speaker, White Textured (Each Price- Must Be Sold In Pairs)	\$0.00	\$0.00
1	Shure	ULXD4D-G50	Dual Channel Digital Wireless Receiver	\$0.00	\$0.00
2	Shure	ULXD2/SM58-G50	Handheld Wireless Transmitter	\$0.00	\$0.00
1	Shure	SBC200-US	2 Bay Charging Station	\$0.00	\$0.00
2	Shure	SB900A	Rechargeable Lilon Battery	\$0.00	\$0.00
1	Listen Technologies	LS-58-072	Listen Technologies LS-58-072 LS-56 Advanced Level I Stationary RF System	\$0.00	\$0.00
1	Louroe	ASK-4® #101RM	ASK-4® #101RM Ceiling Speaker/Base Station Audio Monitoring Kit	\$0.00	\$0.00
1	RTS	MS-2002	2 Channel Intercom Master Station	\$0.00	\$0.00
1	RTS	MCP-90-18	18" Gooseneck Mic for Above	\$0.00	\$0.00
1	RTS	SS-1002-P	Desktop Intercom Station	\$0.00	\$0.00
1	RTS	HS-6A(BLACK)	Telephone Style Handset w/ Push to Talk Button	\$0.00	\$0.00
5	Extron	60-804-01	ASA 141 Audio Summing Adapters	\$0.00	\$0.00

Broadcast System					
1	Panasonic	AW-RP150	Touchscreen Remote Camera Controller	\$0.00	\$0.00
1	IDX	IA-70A	12 Volt DC Power Supply for Above	\$0.00	\$0.00
1	IDX	CA4XLR-B	4 Pin XLR- 10' DV Power Cable	\$0.00	\$0.00
4	Panasonic	AW-HE42W	AW-HE42 Full-HD Professional PTZ Camera with 3G-SDI)	\$0.00	\$0.00
4	Panasonic	FEC-40WMW	Professional PTZ Wall Mount-White	\$0.00	\$0.00
1	Viewsonic	VP3268-4K	32" Monitor for Multiview	\$0.00	\$0.00
1	CalRecycle	NA	Electronic Waste Recycling Fee	\$0.00	\$0.00
1	Blackmagic Design	ATEM 1 M/E Production Studio 4K	1 M/E Production Switcher	\$0.00	\$0.00
1	Blackmagic Design	ATEM 1 M/E Advanced Panel	1 M/E Production Control Panel	\$0.00	\$0.00
1	Blackmagic Design	GPI and Tally Interface	Adds 8 Tally relay contacts to any ATEM switcher.	\$0.00	\$0.00
3	Blackmagic Design	Teranex Mini HDMI to SDI Converter	HDMI to SDI Converter w/Analog Audio Embed	\$0.00	\$0.00
1	Blackmagic Design	Teranex Mini SDI to HDMI Converter	SDI to HDMI Converter	\$0.00	\$0.00
2	Blackmagic Design	Teranex Mini SDI to Audio Converter	SDI to Audio Converter- De-Embedder	\$0.00	\$0.00
1	Blackmagic Design	Teranex Mini Audio to SDI Converter (Embedder)	Audio to SDI Converter - Embedder	\$0.00	\$0.00
7	Blackmagic Design	Teranix Mini Smart Panel	Front Smart Panel for Mini Converter	\$0.00	\$0.00
3	Blackmagic Design	Teranex Mini Rack Shelf	Rack Shelf for 3 Teranex Mini Units	\$0.00	\$0.00
1	Blackmagic Design	Hyperdeck Studio Mini	Miniaturized Broadcast Playback/Record Deck	\$0.00	\$0.00
1	Blackmagic Design	Smart VideoHub 12g 40 x 40	40 x 40 SDI Video Router 12g	\$0.00	\$0.00
1	ESE	DV-319P2	Sync Generator w/Dual Rack Mount	\$0.00	\$0.00
1	ESE	ES-201	1x4 Video Distribution Amp with Independent Gain Control (for Tri-Level Sync to Cameras)	\$0.00	\$0.00
1	JVC	SR-HD2700US	BLURAY/HDD Recorder	\$0.00	\$0.00

1	Marshall	V-LCD171MD-3G	17" LCD Desk rack mount with HDMI and 3G Input (1920X1080) Waveform monitor and audio display,	\$0.00	\$0.00
1	CalRecycle	NA	Electronic Waste Recycling Fee	\$0.00	\$0.00
1	Matrox	Monarch HDX	Streaming Encoder	\$0.00	\$0.00
1	Matrox	MRCH/RACK/KIT	Rack Kit for Above	\$0.00	\$0.00
1	Mackie	802VLZ4	8 Input Mixer	\$0.00	\$0.00
2	Tannoy	REVEAL 402	Active Studio Audio Monitor	\$0.00	\$0.00
1	Blackmagic Design	Audio Monitor 12G	Audio Monitor	\$0.00	\$0.00
1	Monoprice	14891 Microphone	Desktop Talkback Microphone	\$0.00	\$0.00
1	AJA	FS-2	Dual Channel Frame Synchronizer	\$0.00	\$0.00
1	Epiphan	Avio.SDI	SDI to USB Converter for UCC	\$0.00	\$0.00

AV Presentation System

3	Crestron	DM-NVX-350	DM NVX™ 4K60 4:4:4 HDR Network AV Encoder/Decoder	\$0.00	\$0.00
5	Crestron	DM-NVX-E30	DM NVX™ 4K60 4:4:4 HDR Network AV Encoder	\$0.00	\$0.00
7	Crestron	DM-NVX-D30	DM NVX™ 4K60 4:4:4 HDR Network AV Decoder	\$0.00	\$0.00
1	Crestron	DM-NVX-351	DM NVX™ 4K60 4:4:4 HDR Network AV Encoder/Decoder with Downmixing	\$0.00	\$0.00
1	Crestron	DM-XIO-DIR-80	DM XiO Director™ Virtual Switching Appliance for 80 Endpoints	\$0.00	\$0.00
1	Barco	CSE-200	Wireless Presentation Gateway	\$0.00	\$0.00
1	WilliamsAV	VP-S1	Presenter Hub	\$0.00	\$0.00
1	Lumens	PS752	Desktop Document Camera w/HDMI Out	\$0.00	\$0.00
1	Tascam	BD-MP1	Multi-Format Professional Blu-ray Player Offering DVD/CD SD Card and USB Flash Memory Playback	\$0.00	\$0.00
2	Sharp	PN-LE901	90" Professional LCD HD Display	\$0.00	\$0.00
2	CalRecycle	NA	Electronic Waste Recycling Fee	\$0.00	\$0.00
2	Chief	PNRUB	Articulating Wall Mount for Large Displays	\$0.00	\$0.00
Control System					
1	Crestron	PRO3	Control Processor	\$0.00	\$0.00

2	Crestron	TSW-1060-NC-B-S	10.1 in. Touch Screen without Camera, Microphone, or PinPoint™ Beacon, Black Smooth	\$0.00	\$0.00
2	CalRecycle	NA	Electronic Waste Recycling Fee	\$0.00	\$0.00
6	Crestron	FT2-202-MECH-B	FlipTop™ FT2 Series, 202 Size, Mechanical, Black, 6 Module Slots	\$0.00	\$0.00
6	Crestron	FT2A-PWR-US-2	AC Power Outlet Module for FT2 Series, Dual, US NEMA 5, Type B, w/2 Under-Table Outlets & Cord	\$0.00	\$0.00
6	Crestron	FT2A-CHGR-USBA-BASIC	USB-A Charger BASIC	\$0.00	\$0.00
3	Crestron	CLW-SWEX-P-W-T	Cameo® Wireless In-Wall Switch, 120V, White Textured	\$0.00	\$0.00
1	Crestron	CEN-GWEXER	nfiNET EX® Network and ER Wireless Gateway	\$0.00	\$0.00
1	Crestron	PWE-4803	PoE Injector	\$0.00	\$0.00
1	Apple	iPAD	iPad 32GB WiFi 10.4"	\$0.00	\$0.00
1	CalRecycle	NA	Electronic Waste Recycling Fee	\$0.00	\$0.00
1	Ubiquiti	UAP-AC-PRO	WiFi Access Point for Annotator	\$0.00	\$0.00
Network System					
	All switches must include 3 years of TAC/OS and 3 years of NBD hardware support			\$0.00	\$0.00
1	Extreme Networks	X450-G2-48P-10GE4 w/ AVB LICENSE	Enterprise class 48 port PoE switch - AV control room	\$0.00	\$0.00
1	Extreme Networks	X450-G2-24T-10GE4 w/AVB LICENSE	Enterprise class 24 port switch - Council chambers	\$0.00	\$0.00
1	PoE Texas	AT-4-56V120V	PoE Injector	\$0.00	\$0.00
1	Viewsonic	VP2785-2K	27" Computer Display for Above w/VESA Mount	\$0.00	\$0.00
1	Leviton	42S55-S48	48 Port Shielded Blank Keystone Patch Panel	\$0.00	\$0.00
48	Leviton	61SJK-RW6	Atlas -X1 - Shielded CAT 6 Quick Port Jacks	\$0.00	\$0.00
36	L-COM	TRD695DSZ-BLK-1	1' Shielded CAT6 Patch Cables	\$0.00	\$0.00
Equipment Housing and power Distribution					
1	Middle Atlantic	RSH4A2M JVC SRHD2700U	Custom Rack Shelf	\$0.00	\$0.00
1	Middle Atlantic	UPS-2200R-IP	PREMIUM SERIES UPSRACKMOUNT POWER, 8 OUTLET, 2150VA/1650W, WEB ENABLED	\$0.00	\$0.00

1	Middle Atlantic	UPS-S500R	SELECT SERIES UPS BACKUP POWER, 1RU, 500VA	\$0.00	\$0.00
1	Middle Atlantic	UPS-S1000R	SELECT SERIES UPS BACKUP POWER, 1RU, 1000VA	\$0.00	\$0.00
2	Middle Atlantic	UPS-IPCARD	UPS, NETWORK INTERFACE CARD	\$0.00	\$0.00
2	Middle Atlantic	VPM-4	Vertical Panel Mount Rack, 4RU	\$0.00	\$0.00
1	Middle Atlantic	WR-37-32	WR SERIES RACK, 37 RU SLIDE OUT & ROTATE	\$0.00	\$0.00
1	Middle Atlantic	UQFP-4RT	Fan Panel	\$0.00	\$0.00
1	Middle Atlantic	MW-4QFT-FC	Fan Top w/ Controller	\$0.00	\$0.00
2	Middle Atlantic	PDT-1615C-NS	Vertical Power Strip	\$0.00	\$0.00
2	Middle Atlantic	QBP-2	Blower Panel	\$0.00	\$0.00
1	Laguna Designs	Delta Custom	3 Bay Production Console- Estimate #18951	\$0.00	\$0.00
1	TBD	PNL-CHAMBER INTERCONNECT	2 Gang Panel w/ 2- BNC, 1- XLRF, 1 - XLRM	\$0.00	\$0.00
1	TBD	PNL-STAFF LEFT	3 Gang Panel - Staff Left w/ 2- XLRF, 2 Ethercon 2- RJ45	\$0.00	\$0.00
1	TBD	PNL-STAFF RIGHT	4 Gang Panel - Staff Right w/ 3 - XLRF, 1- XLRM, 3- Ethercon, 5- RJ45	\$0.00	\$0.00
1	DWI	SERIES 710	Custom Sit-Stand Lectern - Quotation #7253	\$0.00	\$0.00
1	LEGRAND	8ATC2Pxx -PODIUM ALTERNATIVE	8" Recessed Prewired Surface Style Poke-Thru Assembly (Finish TBD)	\$0.00	\$0.00
1	RCI	RCIWS8ATC-3 PODIUM ALTERNATIVE	Walker Wiremold Style 8AT Center Device Plate 3-Gang w/ 1- XLRF, 2- Ethercon, 1- RJ45	\$0.00	\$0.00

Material Subtotal:			\$0.00
Sales Tax:			
Installation Labor:			
Programming Labor:			
Miscellenous:			
Engineering:			
Project Management:			
Travel:			
Performance Bond:			
Certified Payroll:			
Waiver of Subrogation:			
Project Total:			\$0.00

**City of El Segundo - Council Chamber AV &
Production System AV Upgrade - Surface Podium**

Please include the price for the items listed:

<u>QTY</u>	<u>MFR</u>	<u>MODEL</u>	<u>DESCRIPTION</u>	<u>MSRP</u>	<u>EXT MSRP</u>
Audio System					
1	Biamp	TesiraFORTÉ AVB CI	Fixed I/O DSP with 12 analog inputs, 8 analog outputs, 8 channels configurable USB audio, 128 x 128 channels of AVB, and AEC technology (all 12 inputs)	\$0.00	\$0.00
1	Biamp	Tesira EX-AEC	4 channel mic/line input expander with AEC and PoE+	\$0.00	\$0.00
1	Biamp	TesiraFORTÉ AVB VT	Fixed I/O DSP with 12 analog inputs, 8 analog outputs, 8 channels configurable USB audio, 128 x 128 channels of AVB, AEC technology (all 12 inputs), 2 channel VoIP, and standard FXO telephone interface	\$0.00	\$0.00
1	Biamp	AMP-A460H	4 channel, 60W half-rack amplifier with mounting bracket	\$0.00	\$0.00
10	Crestron	SAROS IC6T-W-T	Saros® 6.5" 2-Way In-Ceiling Speaker, White Textured (Each Price- Must Be Sold In Pairs)	\$0.00	\$0.00
1	Shure	ULXD4D-G50	Dual Channel Digital Wireless Receiver	\$0.00	\$0.00
2	Shure	ULXD2/SM58-G50	Handheld Wireless Transmitter	\$0.00	\$0.00
1	Shure	SBC200-US	2 Bay Charging Station	\$0.00	\$0.00

2	Shure	SB900A	Rechargeable Lilon Battery	\$0.00	\$0.00
1	Listen Technologies	LS-58-072	Listen Technologies LS-58-072 LS-56 Advanced Level I Stationary RF System	\$0.00	\$0.00
1	Louroe	ASK-4® #101RM	ASK-4® #101RM Ceiling Speaker/Base Station Audio Monitoring Kit	\$0.00	\$0.00
1	RTS	MS-2002	2 Channel Intercom Master Station	\$0.00	\$0.00
1	RTS	MCP-90-18	18" Gooseneck Mic for Above	\$0.00	\$0.00
1	RTS	SS-1002-P	Desktop Intercom Station	\$0.00	\$0.00
1	RTS	HS-6A(BLACK)	Telephone Style Handset w/ Push to Talk Button	\$0.00	\$0.00
5	Extron	60-804-01	ASA 141 Audio Summing Adapters	\$0.00	\$0.00
Broadcast System					
1	Panasonic	AW-RP150	Touchscreen Remote Camera Controller	\$0.00	\$0.00
1	IDX	IA-70A	12 Volt DC Power Supply for Above	\$0.00	\$0.00
1	IDX	CA4XLR-B	4 Pin XLR- 10' DV Power Cable	\$0.00	\$0.00
4	Panasonic	AW-HE42W	AW-HE42 Full-HD Professional PTZ Camera with 3G-SDI)	\$0.00	\$0.00
4	Panasonic	FEC-40WMW	Professional PTZ Wall Mount- White	\$0.00	\$0.00
1	Viewsonic	VP3268-4K	32" Monitor for Multiview	\$0.00	\$0.00
1	CalRecycle	NA	Electronic Waste Recycling Fee	\$0.00	\$0.00
1	Blackmagic Design	ATEM 1 M/E Production Studio 4K	1 M/E Production Switcher	\$0.00	\$0.00
1	Blackmagic Design	ATEM 1 M/E Advanced Panel	1 M/E Production Control Panel	\$0.00	\$0.00

1	Blackmagic Design	GPI and Tally Interface	Adds 8 Tally relay contacts to any ATEM switcher.	\$0.00	\$0.00
3	Blackmagic Design	Teranex Mini HDMI to SDI Converter	HDMI to SDI Converter w/Analog Audio Embed	\$0.00	\$0.00
1	Blackmagic Design	Teranex Mini SDI to HDMI Converter	SDI to HDMI Converter	\$0.00	\$0.00
2	Blackmagic Design	Teranex Mini SDI to Audio Converter	SDI to Audio Converter- De-Embedder	\$0.00	\$0.00
1	Blackmagic Design	Teranex Mini Audio to SDI Converter (Embedder)	Audio to SDI Converter - Embedder	\$0.00	\$0.00
7	Blackmagic Design	Teranix Mini Smart Panel	Front Smart Panel for Mini Converter	\$0.00	\$0.00
3	Blackmagic Design	Teranex Mini Rack Shelf	Rack Shelf for 3 Teranex Mini Units	\$0.00	\$0.00
1	Blackmagic Design	Hyperdeck Studio Mini	Miniaturized Broadcast Playback/Record Deck	\$0.00	\$0.00
1	Blackmagic Design	Smart VideoHub 12g 40 x 40	40 x 40 SDI Video Router 12g	\$0.00	\$0.00
1	ESE	DV-319P2	Sync Generator w/Dual Rack Mount	\$0.00	\$0.00
1	ESE	ES-201	1x4 Video Distribution Amp with Independent Gain Control (for Tri-Level Sync to Cameras)	\$0.00	\$0.00
1	JVC	SR-HD2700US	BLURAY/HDD Recorder	\$0.00	\$0.00
1	Marshall	V-LCD171MD-3G	17" LCD Desk rack mount with HDMI and 3G Input (1920X1080) Waveform monitor and audio display,	\$0.00	\$0.00
1	CalRecycle	NA	Electronic Waste Recycling Fee	\$0.00	\$0.00
1	Matrox	Monarch HDX	Streaming Encoder	\$0.00	\$0.00
1	Matrox	MRCH/RACK/KIT	Rack Kit for Above	\$0.00	\$0.00
1	Mackie	802VLZ4	8 Input Mixer	\$0.00	\$0.00
2	Tannoy	REVEAL 402	Active Studio Audio Monitor	\$0.00	\$0.00

1	Blackmagic Design	Audio Monitor 12G	Audio Monitor	\$0.00	\$0.00
1	Monoprice	14891 Microphone	Desktop Talkback Microphone	\$0.00	\$0.00
1	AJA	FS-2	Dual Channel Frame Synchronizer	\$0.00	\$0.00
1	Epiphan	Avio.SDI	SDI to USB Converter for UCC	\$0.00	\$0.00

AV Presentation System

3	Crestron	DM-NVX-350	DM NVX™ 4K60 4:4:4 HDR Network AV Encoder/Decoder	\$0.00	\$0.00
5	Crestron	DM-NVX-E30	DM NVX™ 4K60 4:4:4 HDR Network AV Encoder	\$0.00	\$0.00
7	Crestron	DM-NVX-D30	DM NVX™ 4K60 4:4:4 HDR Network AV Decoder	\$0.00	\$0.00
1	Crestron	DM-NVX-351	DM NVX™ 4K60 4:4:4 HDR Network AV Encoder/Decoder with Downmixing	\$0.00	\$0.00
1	Crestron	DM-XIO-DIR-80	DM XiO Director™ Virtual Switching Appliance for 80 Endpoints	\$0.00	\$0.00
1	Barco	CSE-200	Wireless Presentation Gateway	\$0.00	\$0.00
1	WilliamsAV	VP-S1	Presenter Hub	\$0.00	\$0.00
1	Lumens	PS752	Desktop Document Camera w/HDMI Out	\$0.00	\$0.00
1	Tascam	BD-MP1	Multi-Format Professional Blu-ray	\$0.00	\$0.00
2	Sharp	PN-LE901	90" Professional LCD HD Display	\$0.00	\$0.00
2	CalRecycle	NA	Electronic Waste Recycling Fee	\$0.00	\$0.00
2	Chief	PNRUB	Articulating Wall Mount for Large Displays	\$0.00	\$0.00

Control System

1	Crestron	PRO3	Control Processor	\$0.00	\$0.00
2	Crestron	TSW-1060-NC-B-S	10.1 in. Touch Screen without Camera, Microphone, or PinPoint™ Beacon, Black Smooth	\$0.00	\$0.00

2	CalRecycle	NA	Electronic Waste Recycling Fee	\$0.00	\$0.00
6	Crestron	FT2-202-MECH-B	FlipTop™ FT2 Series, 202 Size, Mechanical, Black, 6 Module Slots	\$0.00	\$0.00
6	Crestron	FT2A-PWR-US-2	AC Power Outlet Module for FT2 Series, Dual, US NEMA 5, Type B, w/2 Under-Table Outlets & Cord	\$0.00	\$0.00
6	Crestron	FT2A-CHGR-USBA-BASIC	USB-A Charger BASIC	\$0.00	\$0.00
3	Crestron	CLW-SWEX-P-W-T	Cameo® Wireless In-Wall Switch, 120V, White Textured	\$0.00	\$0.00
1	Crestron	CEN-GWEXER	nfiNET EX® Network and ER Wireless Gateway	\$0.00	\$0.00
1	Crestron	PWE-4803	PoE Injector	\$0.00	\$0.00
1	Apple	iPAD	iPad 32GB WiFi 10.4"	\$0.00	\$0.00
1	CalRecycle	NA	Electronic Waste Recycling Fee	\$0.00	\$0.00
1	Ubiquiti	UAP-AC-PRO	WiFi Access Point for Annotator	\$0.00	\$0.00
Network System					
All switches must include 3 years of TAC/OS and 3 years of NBD hardware support				\$0.00	
1	Extreme Networks	X450-G2-48P-10GE4 w/ AVB LICENSE	Enterprise class 48 port PoE switch - AV control room	\$0.00	\$0.00
1	Extreme Networks	X450-G2-24T-10GE4 w/AVB LICENSE	Enterprise class 24 port switch - Council chambers	\$0.00	\$0.00
1	PoE Texas	AT-4-56V120V	PoE Injector	\$0.00	\$0.00
1	Viewsonic	VP2785-2K	27" Computer Display for Above w/VESA Mount	\$0.00	\$0.00
1	Leviton	42S55-S48	48 Port Shielded Blank Keystone Patch Panel	\$0.00	\$0.00
48	Leviton	61SJK-RW6	Atlas -X1 - Shielded CAT 6 Quick Port Jacks	\$0.00	\$0.00
36	L-COM	TRD695DSZ-BLK-1	1' Shielded CAT6 Patch Cables	\$0.00	\$0.00

Equipment Housing and power Distribution

1	Middle Atlantic	RSH4A2M JVC SRHD2700U	Custom Rack Shelf	\$0.00	\$0.00
1	Middle Atlantic	UPS-2200R-IP	PREMIUM SERIES UPSRACKMOUNT POWER, 8 OUTLET, 2150VA/1650W, WEB ENABLED	\$0.00	\$0.00
1	Middle Atlantic	UPS-S500R	SELECT SERIES UPS BACKUP POWER, 1RU, 500VA	\$0.00	\$0.00
1	Middle Atlantic	UPS-S1000R	SELECT SERIES UPS BACKUP POWER, 1RU, 1000VA	\$0.00	\$0.00
2	Middle Atlantic	UPS-IPCARD	UPS, NETWORK INTERFACE CARD	\$0.00	\$0.00
2	Middle Atlantic	VPM-4	Vertical Panel Mount Rack, 4RU	\$0.00	\$0.00
1	Middle Atlantic	WR-37-32	WR SERIES RACK, 37 RU SLIDE OUT & ROTATE	\$0.00	\$0.00
1	Middle Atlantic	UQFP-4RT	Fan Panel	\$0.00	\$0.00
1	Middle Atlantic	MW-4QFT-FC	Fan Top w/ Controller	\$0.00	\$0.00
2	Middle Atlantic	PDT-1615C-NS	Vertical Power Strip	\$0.00	\$0.00
2	Middle Atlantic	QBP-2	Blower Panel	\$0.00	\$0.00
1	Laguna Designs	Delta Custom	3 Bay Production Console- Estimate #18951	\$0.00	\$0.00
1	TBD	PNL-CHAMBER INTERCONNECT	2 Gang Panel w/ 2-BNC, 1- XLRF, 1- XLRM	\$0.00	\$0.00
1	TBD	PNL-STAFF LEFT	3 Gang Panel - Staff Left w/ 2- XLRF, 2 Ethercon 2- RJ45	\$0.00	\$0.00
1	TBD	PNL-STAFF RIGHT	4 Gang Panel - Staff Right w/ 3 -XLRF, 1- XLRM, 3- Ethercon, 5- RJ45	\$0.00	\$0.00
1	TBD	PNL-PODIUM	3 Gang Panel w/ 1- XLRF, 2- Ethercon, 2- RJ45	\$0.00	\$0.00
1	SAFCORD	CC-SC-4-30	Velcro Carpet Cord Cover - Color TBD- 4" Wide x 30'	\$0.00	\$0.00

1	DWI	SERIES 710	Custom Sit-Stand Lectern - Quotation #7253	\$0.00	\$0.00
---	-----	------------	--	--------	--------

		Material Subtotal:	\$0.00
		Sales Tax:	
		Installation Labor:	
		Programming Labor:	
		Miscellaneous:	
		Engineering:	
		Project Management:	
		Travel:	
		Performance Bond:	
		Certified Payroll:	
		Waiver of Subrogation:	
		Project Total:	\$0.00



CONFERENCE ROOMS

AUDIO-VISUAL EQUIPMENT UPGRADE EQUIPMENT

BILL OF MATERIALS

CITY OF EL SEGUNDO
Information Systems Department
350 Main Street
El Segundo, CA 90254
(310) 524-2300

CITY OF EL SEGUNDO - WEST CONFERENCE ROOM AV SYSTEM BILL OF MATERIALS

Please include the price of the item listed:

<u>QT</u>	<u>MFR</u>	<u>MODEL</u>	<u>DESCRIPTION</u>	<u>MSRP</u>	<u>EXT MSRP</u>
1	Newline Interactive	TT-8619IP	86" Interactive Touch Display	\$0.00	\$0.00
2	NEC	C751Q	75" UHD LED Display	\$0.00	\$0.00
3	Chief	PSMH2079	Heavy Duty Wall Mount	\$0.00	\$0.00
1	Atlona	AT-HDVS--CAM	Camera	\$0.00	\$0.00
1	BiAmp	Tesira EX-UBT	PoE AVB/USB expander with Bluetooth® wireless technology	\$0.00	\$0.00
3	BiAmp	Parle' TCM-XA	ceiling microphone w/ PoE+ amp, available in black or white	\$0.00	\$0.00
3	BiAmp	desono C-IC6	In-ceiling, low-profile, 6.5" passive coaxial loudspeaker for conferencing applications (sold in pairs); available with black, red, or white grill	\$0.00	\$0.00
1	BiAmp	TesiraCONNECT TC-5D	5-port expansion device w/ Dante	\$0.00	\$0.00
1	Middle Atlantic	ECB2S-CR	CEILING BOX WITH DRY CONTACT CONTROLLED RECEPTACLES AND FAN	\$0.00	\$0.00
1	Middle Atlantic	ECB-SHELF	Additional Shelf for Above	\$0.00	\$0.00
1	Crestron	DM-NVX-D30	DM NVX® 4K60 4:4:4 HDR Network AV Decoder	\$0.00	\$0.00
2	Crestron	DM-NVX-350	DigitalMedia 8G+® 4K60 4:4:4 HDR DM NVX® 4K60 4:4:4 HDR Network AV Encoder/Decoder	\$0.00	\$0.00
4	Crestron	DM-NVX-352	DM NVX® 4K60 4:4:4 HDR Network AV Encoder/Decoder with Dante® Audio	\$0.00	\$0.00
1	Crestron	USB-EXT-DM-REMOTE	USB over Ethernet Extender with Routing, 4-Port Device Module	\$0.00	\$0.00
2	Crestron	FT2-700-ELEC-B	FlipTop™ FT2 Series Cable Management System, 700 Size, Electrical, Black	\$0.00	\$0.00

2	Crestron	FT2A-CHGR-USBA-BASIC	USB Rapid Charging Module for FT2 Series, Mechanical	\$0.00	\$0.00
2	Crestron	FT2A-PWR-US-2	AC Power Outlet Module for FT2 Series, Dual, US NEMA 5, Type B, w/2 Under-Table Outlets & Cord	\$0.00	\$0.00
4	Crestron	FT2A-CBLR-GR-4K-HD	Gravity Cable Retractor for FT2 Series, HDMI to HDMI, 18 Gbps	\$0.00	\$0.00
2	Crestron	FT2A-CBLR-GR-CAT6	Gravity Cable Retractor for FT2 Series, RJ-45 to RJ-45, CAT6	\$0.00	\$0.00
2	Crestron	FT2A-CBLR-GR-USB	Gravity Cable Retractor for FT2 Series, USB-A to USB-A with USB-B male adapter, USB 2.0	\$0.00	\$0.00
2	Crestron	FT2A-CBLR-GR-USB	Gravity Cable Retractor for FT2 Series, USB-A to USB-A with USB-B male adapter, USB 2.0	\$0.00	\$0.00
1	Crestron	FT2A-PLT-BLANK-10	Blank Plate Modules for FT2 Series, Qty. 10	\$0.00	\$0.00
2	Crestron	FT2A-UTK-SHELF	Under-Table Utility Shelf for FT2 Series	\$0.00	\$0.00
2	Crestron	FT2A-UTK-CLOAK-WIDE	Under-Table Cloak for FT2-1400 Gravity Cable Retractors	\$0.00	\$0.00
1	Crestron	CSA-PWS10S-HUB-ENET	10-Motor Power Supply with Ethernet to Cresnet® Bridge and Cresnet Hub	\$0.00	\$0.00
1	Barco	CSE-200	Wireless presentation system	\$0.00	\$0.00
1	Apple	iPad 10.2 - 32GB	32 GB iPad Space Gray	\$0.00	\$0.00
1	iPort	IPOINT-LUXE-CASE	iPad Mounting Case	\$0.00	\$0.00
1	iPort	IPOINT-LUXE-BASESTATION	iPad Charging BaseStation	\$0.00	\$0.00
1	LEGRAND	8ATC2Pxx	8" Recessed Prewired Surface Style Poke-Thru Assembly (Finish TBD)	\$0.00	\$0.00
1	RCI	RCIWS8ATC-3	Walker Wiremold Style 8AT Center Device Plate 3-Gang w/ 6- RJ45	\$0.00	\$0.00

3	TBD	WINDOW SHADES	Consult with the the City for fabric finishes to match the CR table and carpeting.	\$0.00	
1	TBD	CONFERENCE TABLE	Consult with the the City for finishes to match the carpet and shades.	\$0.00	
1	Middle Atlantic	MISC	Blank Plates, Cable Management	\$0.00	\$0.00
1	MISC	IM	Installation Materials, Cables & Connectors	\$0.00	\$0.00

- 1 System Design & Drawing
- 1 System Installation
- 1 BiAmp Programming
- 1 Crestron Programming
- 1 Project Management
- 1 System Comissioning
- 1 System Docs
- 1 System Training

CITY OF EL SEGUNDO HUMAN RESOURCES CONFERENCE ROOM AV SYSTEM BILL OF MATERIALS

Please include the price of the items listed:

<u>QT</u>	<u>MFR</u>	<u>MODEL</u>	<u>DESCRIPTION</u>	<u>MSRP</u>	<u>EXT MSRP</u>
1	Newline Interactive	TT-8619IP	86" Interactive Touch Display	\$0.00	\$0.00
1	Chief	PSMH2079	Heavy Duty Wall Mount	\$0.00	\$0.00
1	Atlona	AT-HDVS--CAM	UVC Pan/Tilt/Zoom Camera	\$0.00	\$0.00
1	BiAmp	TesiraFORTE AVB VT4	Fixed I/O DSP with 4 analog inputs, 4 analog outputs, 8 channels configurable USB audio, 128 x 128 channels of AVB, AEC technology (all 4 inputs), 2 channel VoIP, and standard FXO telephone interface	\$0.00	\$0.00
1	BiAmp	Tesira EX-UBT	PoE AVB/USB expander with Bluetooth® wireless technology	\$0.00	\$0.00
1	BiAmp	Parle' TCM-XA	Low profile Beamtracking ceiling microphone w/ PoE+ amp, available in black or white	\$0.00	\$0.00
1	BiAmp	desono C-IC6	In-ceiling, low-profile, 6.5" passive coaxial loudspeaker for conferencing applications (sold in pairs); available with black, red, or white grill	\$0.00	\$0.00
2	BiAmp	TesiraCONNECT TC-5	5 Port AVB Network Switch	\$0.00	\$0.00
1	Crestron	RMC3	3-Series® Room Media Controller	\$0.00	\$0.00
1	Crestron	RMK-IFE-1U	IFE Rack Mount Kit	\$0.00	\$0.00
2	Crestron	DM-NVX-350	DigitalMedia 8G+® 4K60 4:4:4 HDR DM NVX® 4K60 4:4:4 HDR Network AV Encoder/Decoder	\$0.00	\$0.00
1	Crestron	USB-EXT-DM-REMOTE	USB over Ethernet Extender with Routing, 4-Port Device Module	\$0.00	\$0.00
1	Crestron	FT2-700-ELEC-B	FlipTop™ FT2 Series Cable Management System, 700 Size, Electrical, Black	\$0.00	\$0.00
1	Crestron	FT2A-CHGR-USBA-BASIC	USB Rapid Charging Module for FT2 Series, Mechanical	\$0.00	\$0.00
1	Crestron	FT2A-PWR-US-2	AC Power Outlet Module for FT2 Series, Dual, US NEMA 5, Type B, w/2 Under-Table Outlets & Cord	\$0.00	\$0.00

1	Crestron	FT2A-CBLR-GR-4K-HD	Gravity Cable Retractor for FT2 Series, HDMI to HDMI, 18 Gbps	\$0.00	\$0.00
1	Crestron	FT2A-CBLR-GR-CAT6	Gravity Cable Retractor for FT2 Series, RJ-45 to RJ-45, CAT6	\$0.00	\$0.00
1	Crestron	FT2A-CBLR-GR-USB	Gravity Cable Retractor for FT2 Series, USB-A to USB-A with USB-B male adapter, USB 2.0	\$0.00	\$0.00
1	Crestron	FT2A-CBLR-GR-USB	Gravity Cable Retractor for FT2 Series, USB-A to USB-A with USB-B male adapter, USB 2.0	\$0.00	\$0.00
1	Crestron	FT2A-PLT-BLANK-10	Blank Plate Modules for FT2 Series, Qty. 10	\$0.00	\$0.00
2	Crestron	FT2A-UTK-SHELF	Under-Table Utility Shelf for FT2 Series	\$0.00	\$0.00
1	Crestron	FT2A-UTK-CLOAK-WIDE	Under-Table Cloak for FT2-1400 Gravity Cable Retractors	\$0.00	\$0.00
1	Barco	CSE-200	Wireless presentation system	\$0.00	\$0.00
1	Apple	iPad 10.2 - 32GB	32 GB iPad Space Gray	\$0.00	\$0.00
1	iPort	IPOINT-LUXE-CASE	iPad Mounting Case	\$0.00	\$0.00
1	iPort	IPOINT-LUXE-BASESTATION	iPad Charging BaseStation	\$0.00	\$0.00
				\$0.00	
				\$0.00	
				\$0.00	
1	Middle Atlantic	MISC	Blank Plates, Cable Management	\$0.00	\$0.00
1	MISC	IM	Installation Materials, Cables & Connectors	\$0.00	\$0.00

- 1 System Design & Drawing
- 1 System Installation
- 1 BiAmp Programming
- 1 Crestron Programming
- 1 Project Management
- 1 System Commissioning
- 1 System Docs
- 1 System Training

CITY OF EL SEGUNDO GARDEN CONFERENCE ROOM AV SYSTEM BILL OF MATERIALS

Please include the price for items listed:

<u>QT</u>	<u>MFR</u>	<u>MODEL</u>	<u>DESCRIPTION</u>	<u>MSRP</u>	<u>EXT MSRP</u>
1	NEC	C751Q-AVTQ	75" UHD LED Display w/ATSC TUNER	\$0.00	\$0.00
1	Chief	PSMH2079	Heavy Duty Wall Mount	\$0.00	\$0.00
1	Crestron	HD-TX-101-C-1G-E- W-T	DM Lite Wall Plate Transmitter	\$0.00	\$0.00
1	Crestron	HD-RXC-101-C-E	DM Lite RecEIVER	\$0.00	\$0.00
1	Crestron	DM-NVX-350	DigitalMedia 8G+® 4K60 4:4:4 HDR DM NVX® 4K60 4:4:4 HDR Network AV Encoder/Decoder	\$0.00	\$0.00
1	Middle Atlantic	MISC	Blank Plates, Cable Management	\$0.00	\$0.00
1	MISC	IM	Installation Materials, Cables & Connectors	\$0.00	\$0.00

- 1 System Design & Drawing
- 1 System Installation
- 1 Project Management
- 1 System Comissioning
- 1 System Docs
- 1 System Training



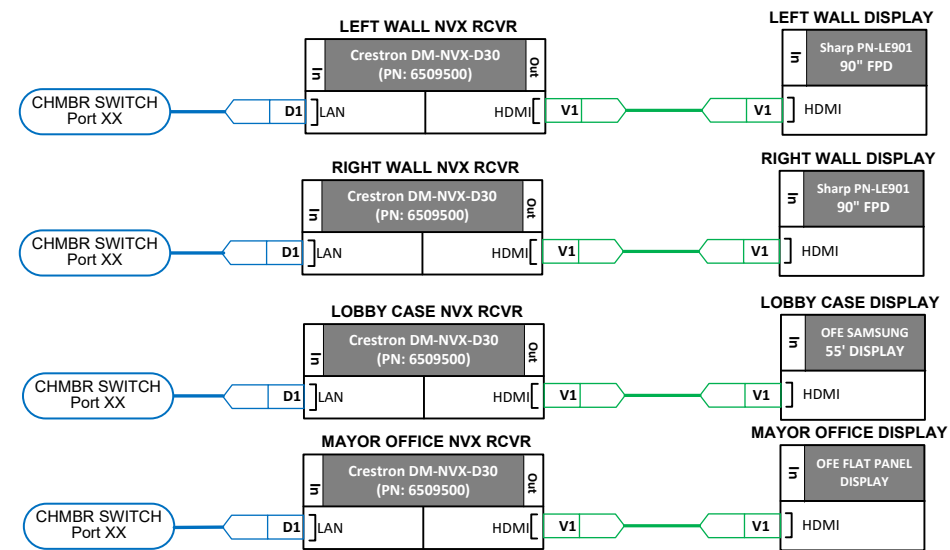
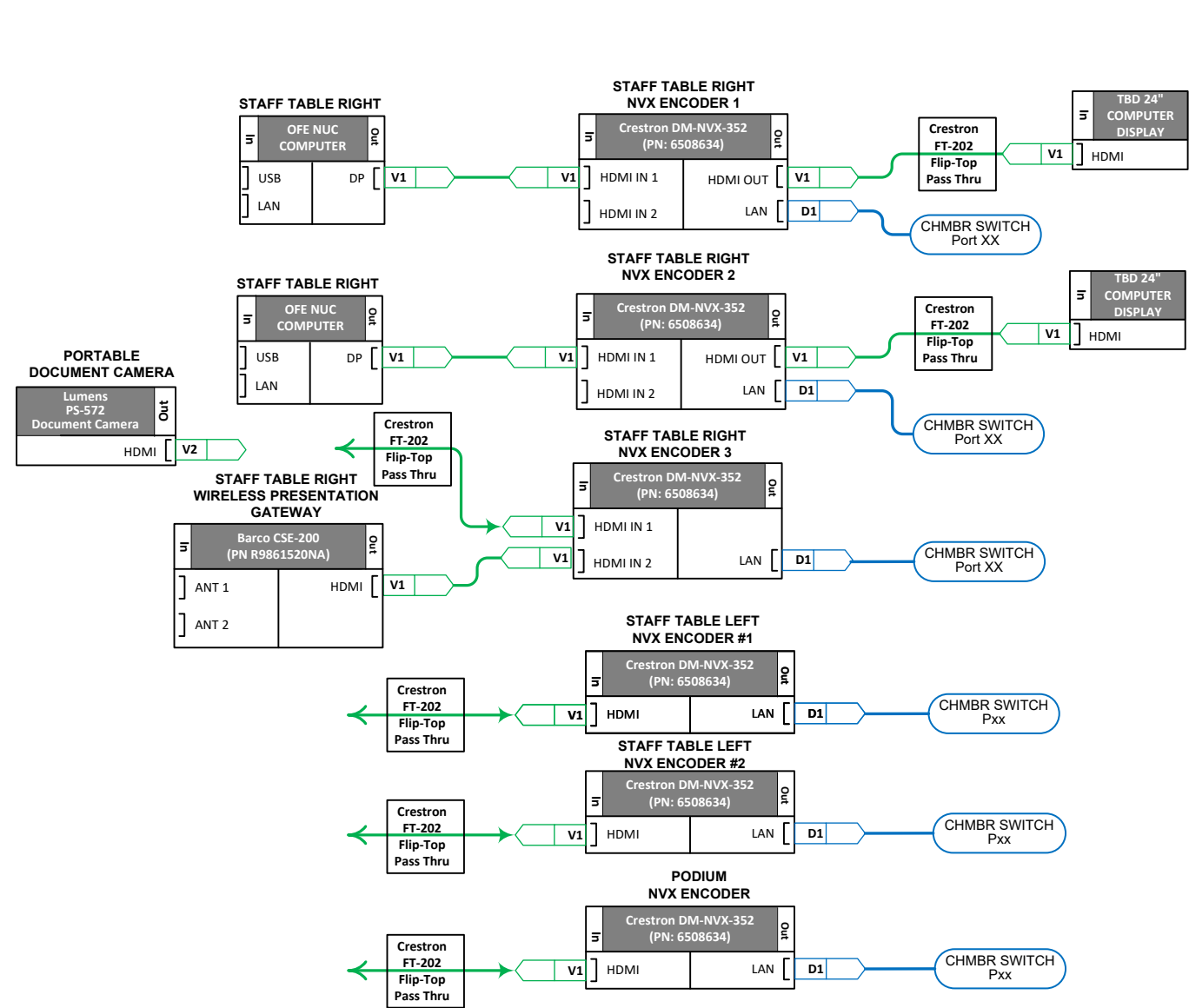
COUNCIL CHAMBER

AUDIO-VISUAL EQUIPMENT UPGRADE EQUIPMENT

DRAWINGS

CITY OF EL SEGUNDO

Information Systems Department
350 Main Street
El Segundo, CA 90254
(310) 524-2300



Connector/Signal/Cable Type

- D1: CAT6-SHIELDED RJ45S**
- V1: HDMI PREMADE HDMI**
- V2: BNC – MINI-COAX HDSDI**

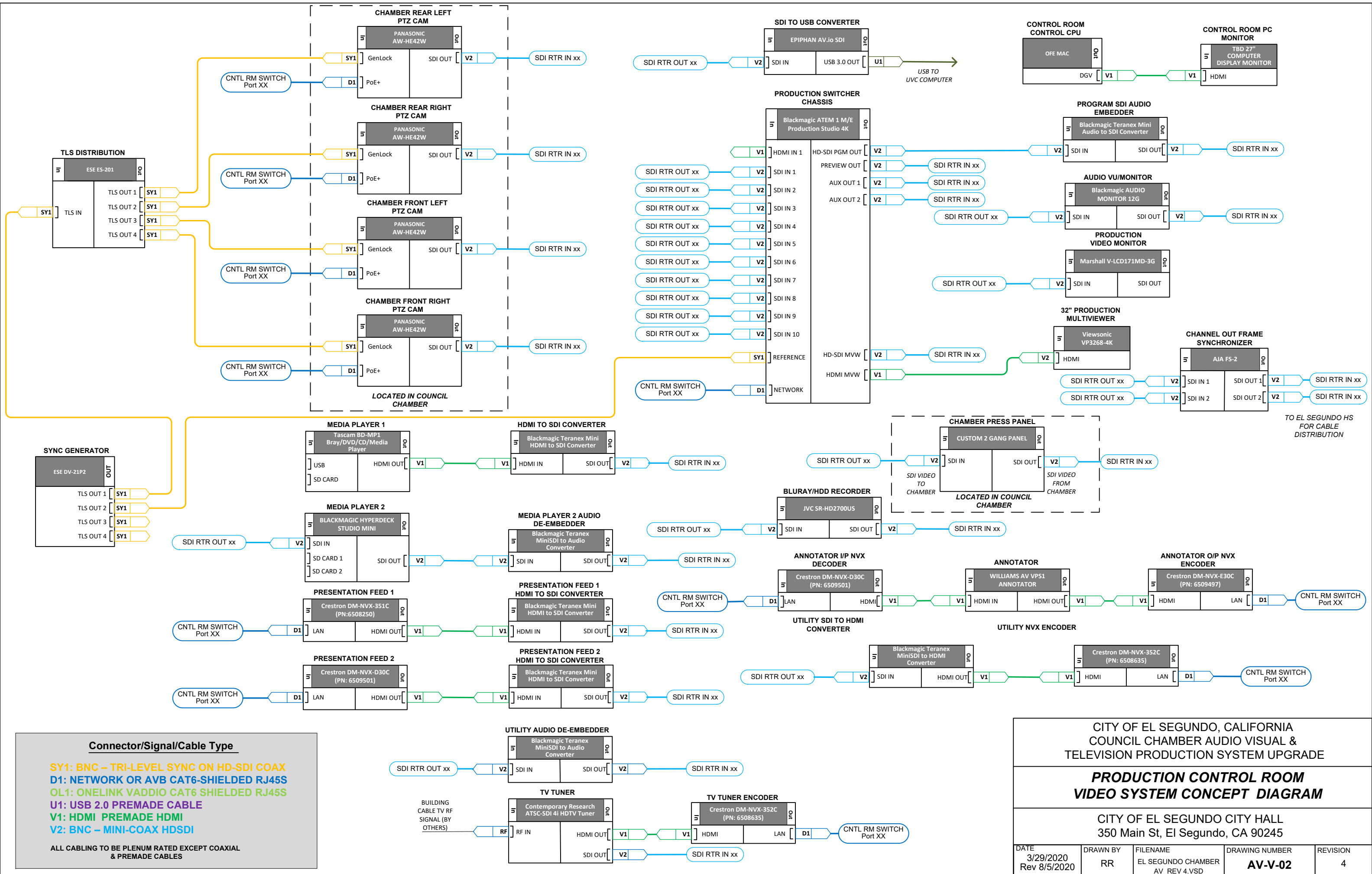
ALL CABLING TO BE PLENUM RATED EXCEPT COAXIAL & PREMADE CABLES

CITY OF EL SEGUNDO, CALIFORNIA
COUNCIL CHAMBER AUDIO VISUAL &
TELEVISION PRODUCTION SYSTEM UPGRADE

**COUNCIL CHAMBER & UPPER LEVEL
VIDEO SYSTEM CONCEPT DIAGRAM**

CITY OF EL SEGUNDO CITY HALL
350 Main St, El Segundo, CA 90245

DATE	DRAWN BY	FILENAME	DRAWING NUMBER	REVISION
3/29/2020	RR	EL SEGUNDO CHAMBER AV_REV 4.VSD	AV-V-01	3



Connector/Signal/Cable Type

- SY1: BNC – TRI-LEVEL SYNC ON HD-SDI COAX
- D1: NETWORK OR AVB CAT6-SHIELDED RJ45S
- OL1: ONELINK VADDIO CAT6 SHIELDED RJ45S
- U1: USB 2.0 PREMADE CABLE
- V1: HDMI PREMADE HDMI
- V2: BNC – MINI-COAX HDSDI

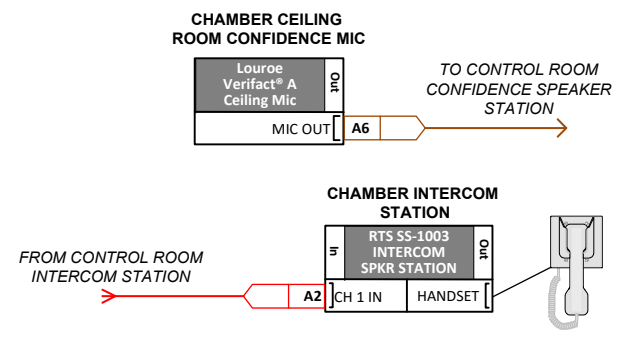
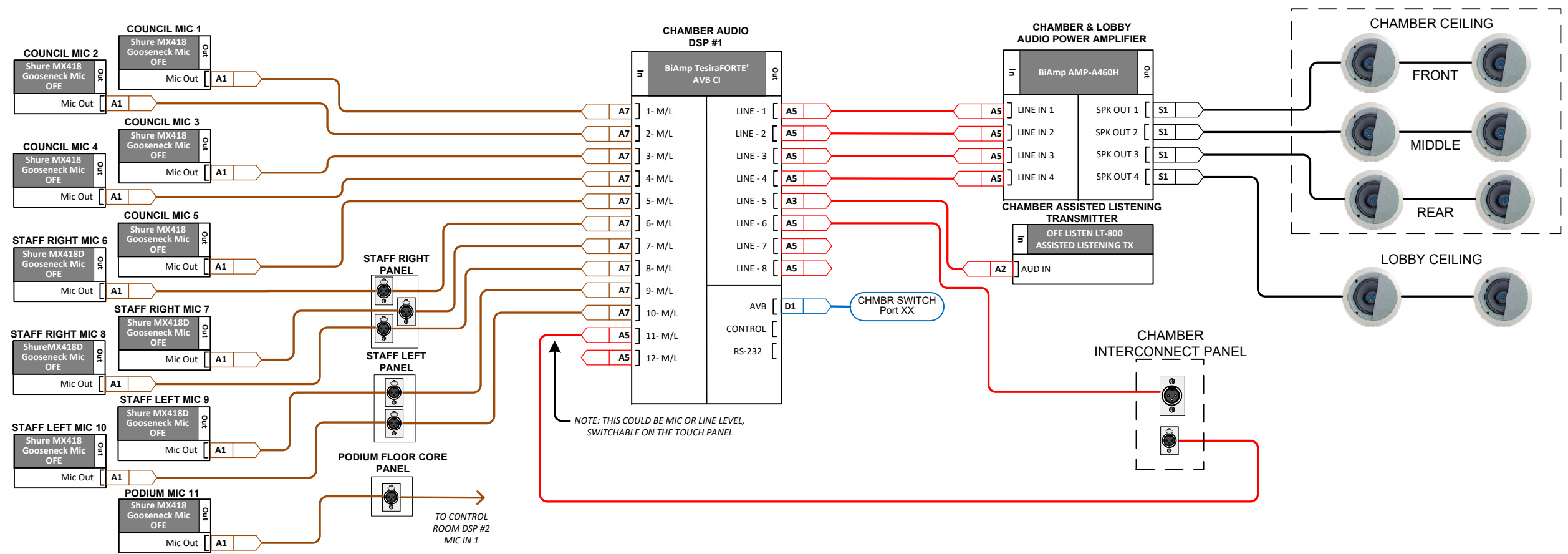
ALL CABLING TO BE PLENUM RATED EXCEPT COAXIAL & PREMADE CABLES

CITY OF EL SEGUNDO, CALIFORNIA
 COUNCIL CHAMBER AUDIO VISUAL &
 TELEVISION PRODUCTION SYSTEM UPGRADE

**PRODUCTION CONTROL ROOM
 VIDEO SYSTEM CONCEPT DIAGRAM**

CITY OF EL SEGUNDO CITY HALL
 350 Main St, El Segundo, CA 90245

DATE 3/29/2020 Rev 8/5/2020	DRAWN BY RR	FILENAME EL SEGUNDO CHAMBER AV_REV 4.VSD	DRAWING NUMBER AV-V-02	REVISION 4
-----------------------------------	----------------	--	----------------------------------	---------------

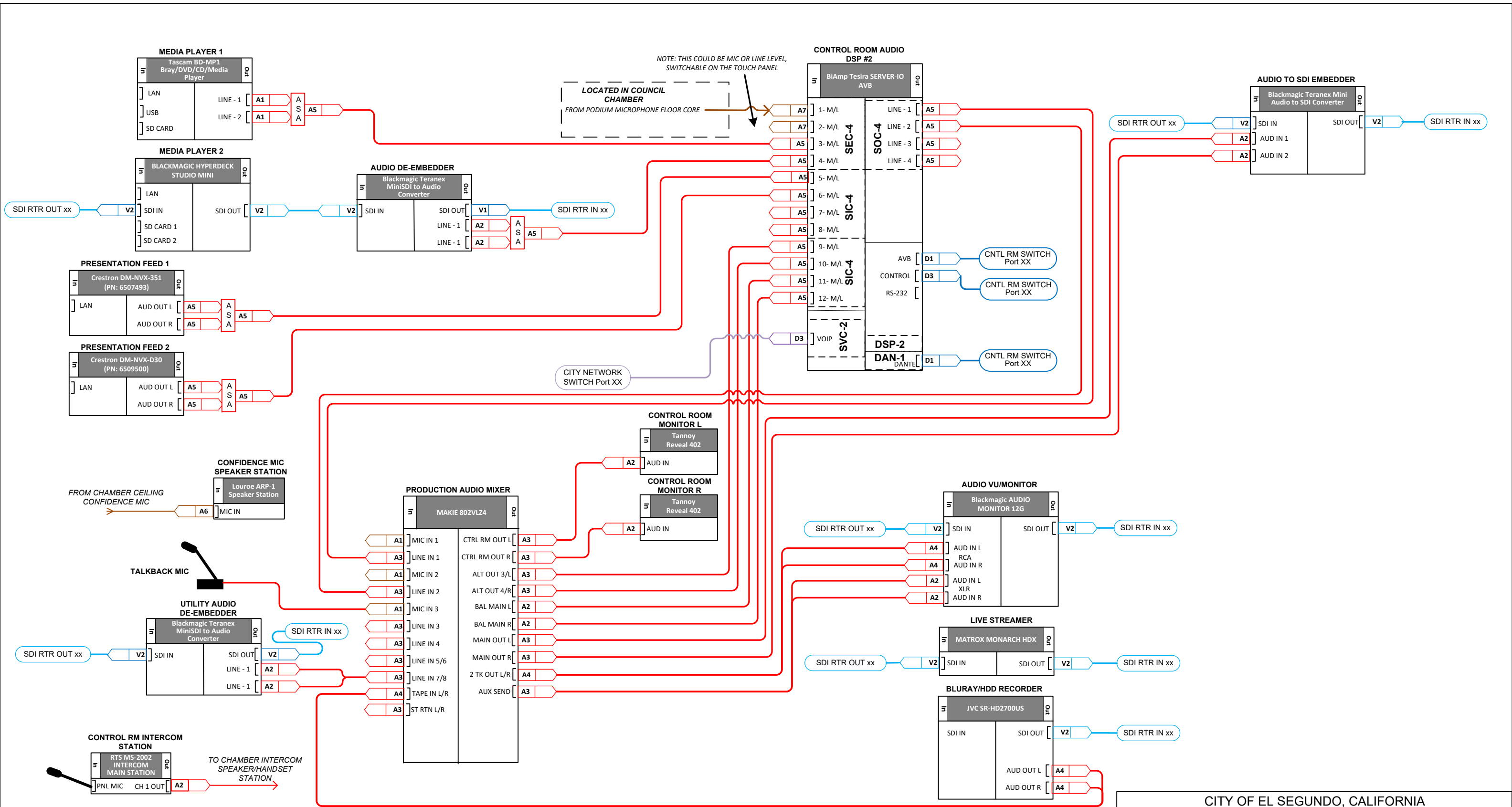


Connector/Signal/Cable Type

A1: XLR MIC LEVEL 22/2 SHIELDED
 A2: XLR LINE LEVEL 22/2 SHIELDED
 A3: 1/4" TRS LINE LEVEL 22/2 SHIELDED
 A4: RCA OR RCAx2 LINE LEVEL 22/2 SHIELDED
 A5: PHOENIX LINE LEVEL 22/2 SHIELDED
 A6: TERMINALS MIC LEVEL 22/2 SHIELDED
 A7: PHOENIX MIC LEVEL 22/2 SHIELDED
 D1: CAT6-SHIELDED RJ45S
 S1: PHOENIX 70V SPEAKER LEVEL 18-2

ALL CABLING TO BE PLENUM RATED EXCEPT COAXIAL CABLE

CITY OF EL SEGUNDO, CALIFORNIA COUNCIL CHAMBER AUDIO VISUAL & TELEVISION PRODUCTION SYSTEM UPGRADE				
COUNCIL CHAMBER AUDIO SYSTEM CONCEPT DIAGRAM				
CITY OF EL SEGUNDO CITY HALL 350 Main St, El Segundo, CA 90245				
DATE 3/29/2020 Rev 8/4/2020	DRAWN BY RR	FILENAME EL SEGUNDO CHAMBER AV_REV 4.VSD	DRAWING NUMBER AV-A-01	REVISION 4



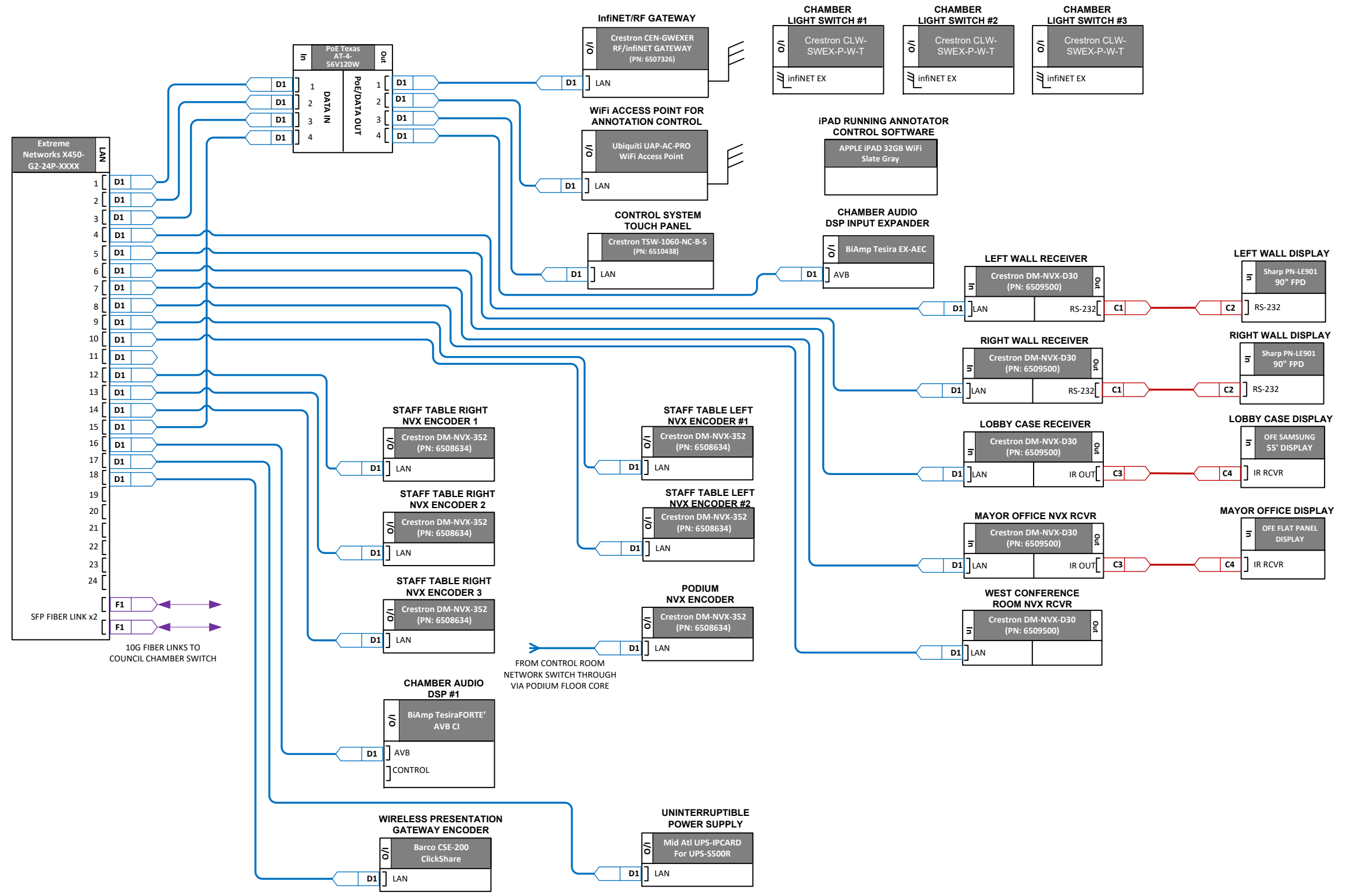
Connector/Signal Type
A1: XLR MIC LEVEL 22/2 SHIELDED
A2: XLR LINE LEVEL 22/2 SHIELDED
A3: 1/4" TRS LINE LEVEL 22/2 SHIELDED
A4: RCA OR RCAx2 LINE LEVEL 22/2 SHIELDED
A5: PHOENIX LINE LEVEL 22/2 SHIELDED
A6: TERMINALS MIC LEVEL 22/2 SHIELDED
V1: HDMI PREMADE HDMI
V2: BNC - MINI-COAX HDSDI

CITY OF EL SEGUNDO, CALIFORNIA
 COUNCIL CHAMBER AUDIO VISUAL &
 TELEVISION PRODUCTION SYSTEM UPGRADE

**PRODUCTION CONTROL ROOM
 AUDIO CONCEPT DIAGRAM**

CITY OF EL SEGUNDO CITY HALL
 350 Main St, El Segundo, CA 90245

DATE 3/29/29 Rev 8/4/2020	DRAWN BY RR	FILENAME EL SEGUNDO CHAMBER AV_REV 4.VSD	DRAWING NUMBER AV-A-02	REVISION 4
---------------------------------	----------------	--	----------------------------------	---------------



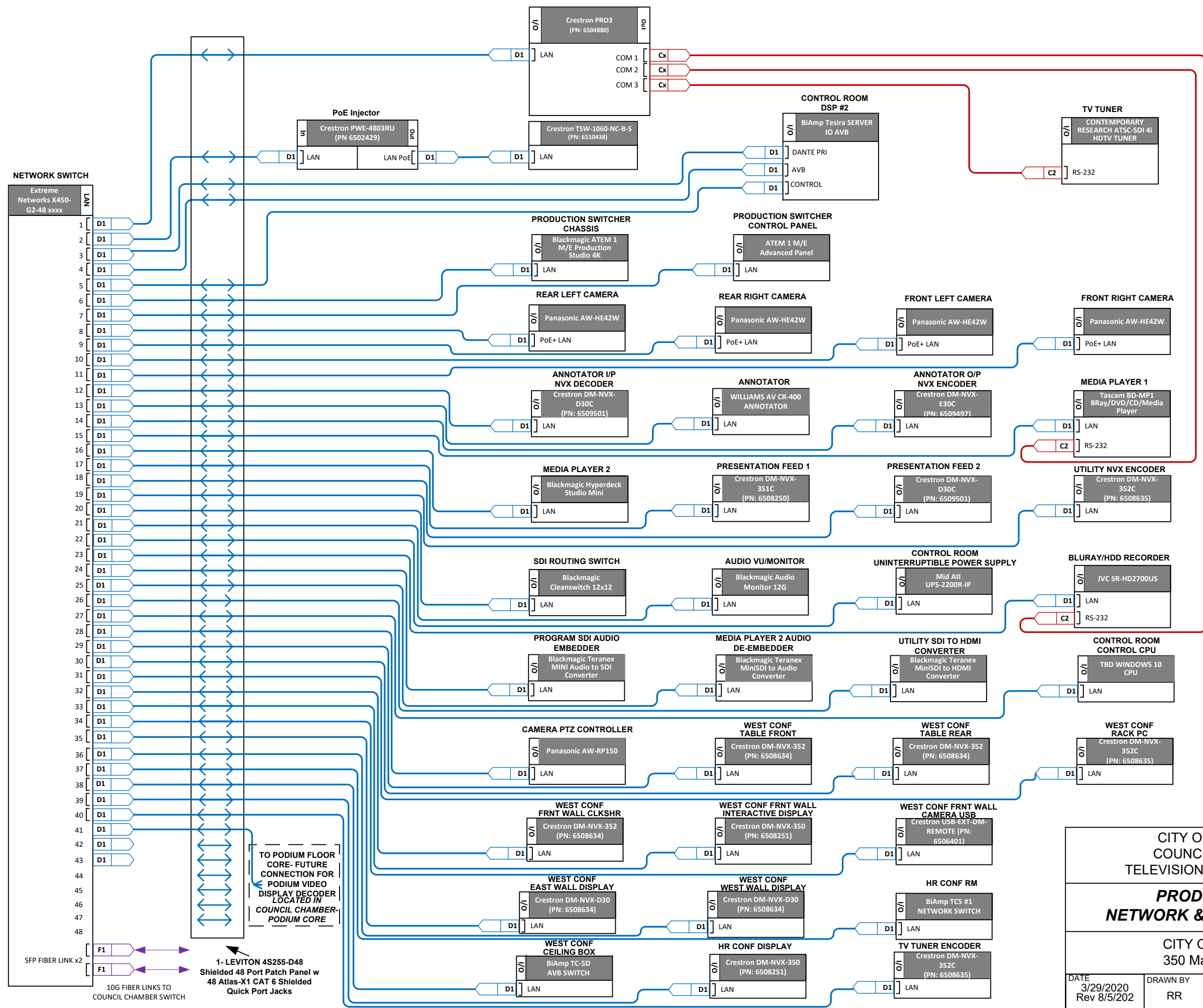
Connector/Signal/CableType
D1: CAT6-SHIELDED RJ45S
D2: CAT7-SHIELDED RJ45S
C1: CRESTRON COM PHX 22/2 SHIELDED
C2: RS-232 COM 9 PIN 22/2 SHIELDED
C3: CRESTRON IR PHX 22/2 SHIELDED
C4: DEVICE IR EMITTER
F1: DUAL LC MULTIMODE FIBER
 ALL CABLING TO BE PLENUM RATED EXCEPT COAXIAL & PREMADE CABLES.

CITY OF EL SEGUNDO, CALIFORNIA
 COUNCIL CHAMBER AUDIO VISUAL &
 TELEVISION PRODUCTION SYSTEM UPGRADE

**COUNCIL CHAMBERS & UPPER LEVEL
 NETWORK & CONTROL CONCEPT DIAGRAM**

CITY OF EL SEGUNDO CITY HALL
 350 Main St, El Segundo, CA 90245

DATE 3/29/2020 Rev 8-5-2020	DRAWN BY RR	FILENAME EL SEGUNDO CHAMBER AV_REV 4.VSD	DRAWING NUMBER AV-N-01	REVISION 4
-----------------------------------	----------------	--	----------------------------------	---------------



Connector/Signal Type
D1: CAT6-SHIELDED RJ45S
D2: CAT7-SHIELDED RJ45S
C1: CRESTRON COM PHX 22/2 SHIELDED
C2: RS-232 COM 9 PIN 22/2 SHIELDED
C3: CRESTRON IR PHX 22/2 SHIELDED
F1: DUAL LC MULTIMODE FIBER
 ALL CABLING TO BE PLENUM RATED EXCEPT COAXIAL & PREMADE CABLES.

CITY OF EL SEGUNDO, CALIFORNIA
 COUNCIL CHAMBER AUDIO VISUAL &
 TELEVISION PRODUCTION SYSTEM UPGRADE

**PRODUCTION CONTROL ROOM
 NETWORK & CONTROL CONCEPT DIAGRAM**

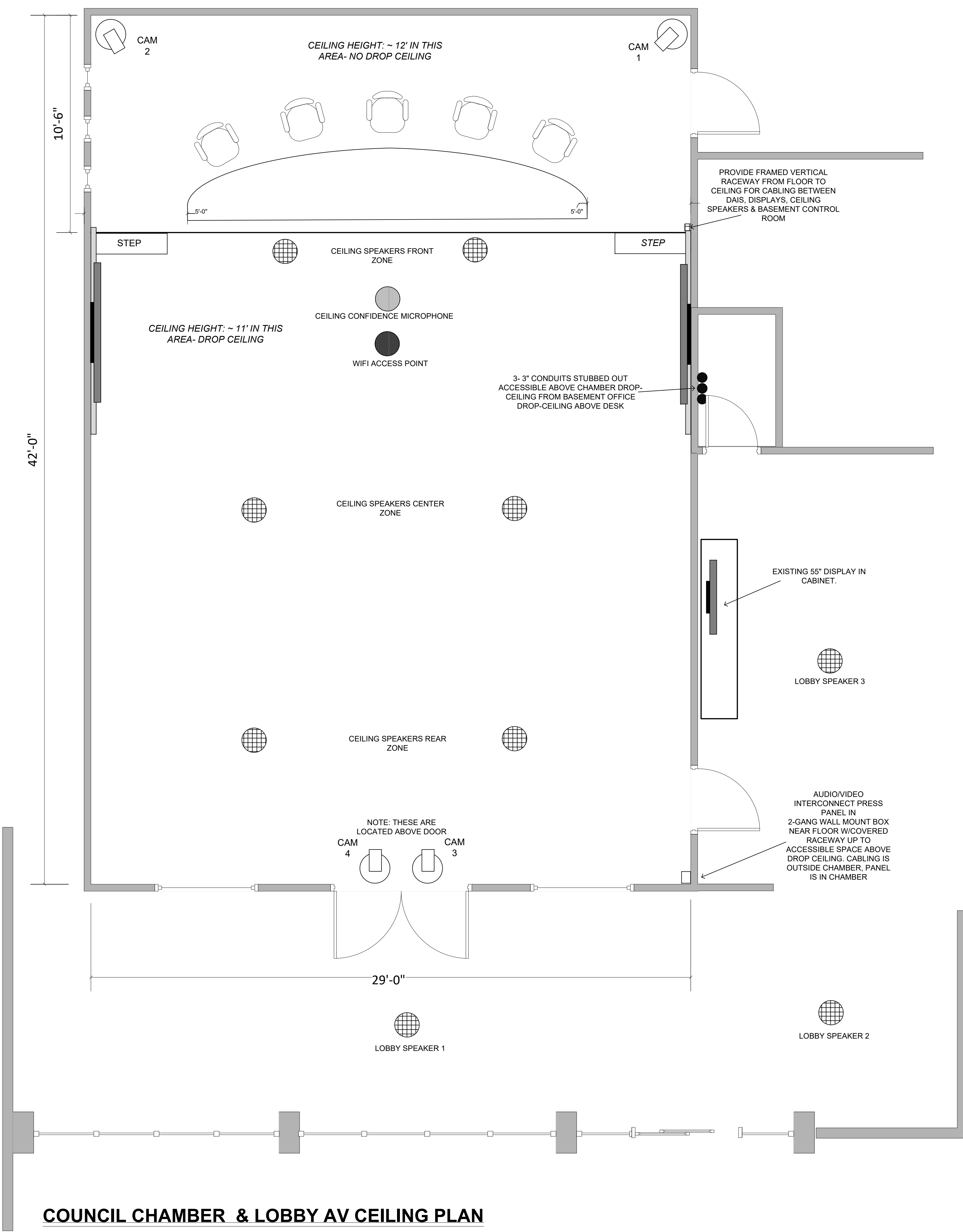
CITY OF EL SEGUNDO CITY HALL
 350 Main St, El Segundo, CA 90245

DATE 3/29/2020 Rev 8/5/202	DRAWN BY RR	FILENAME EL SEGUNDO CHAMBER AV_REV 4.VSD	DRAWING NUMBER AV-N-02	REVISION 4
----------------------------------	----------------	--	----------------------------------	---------------

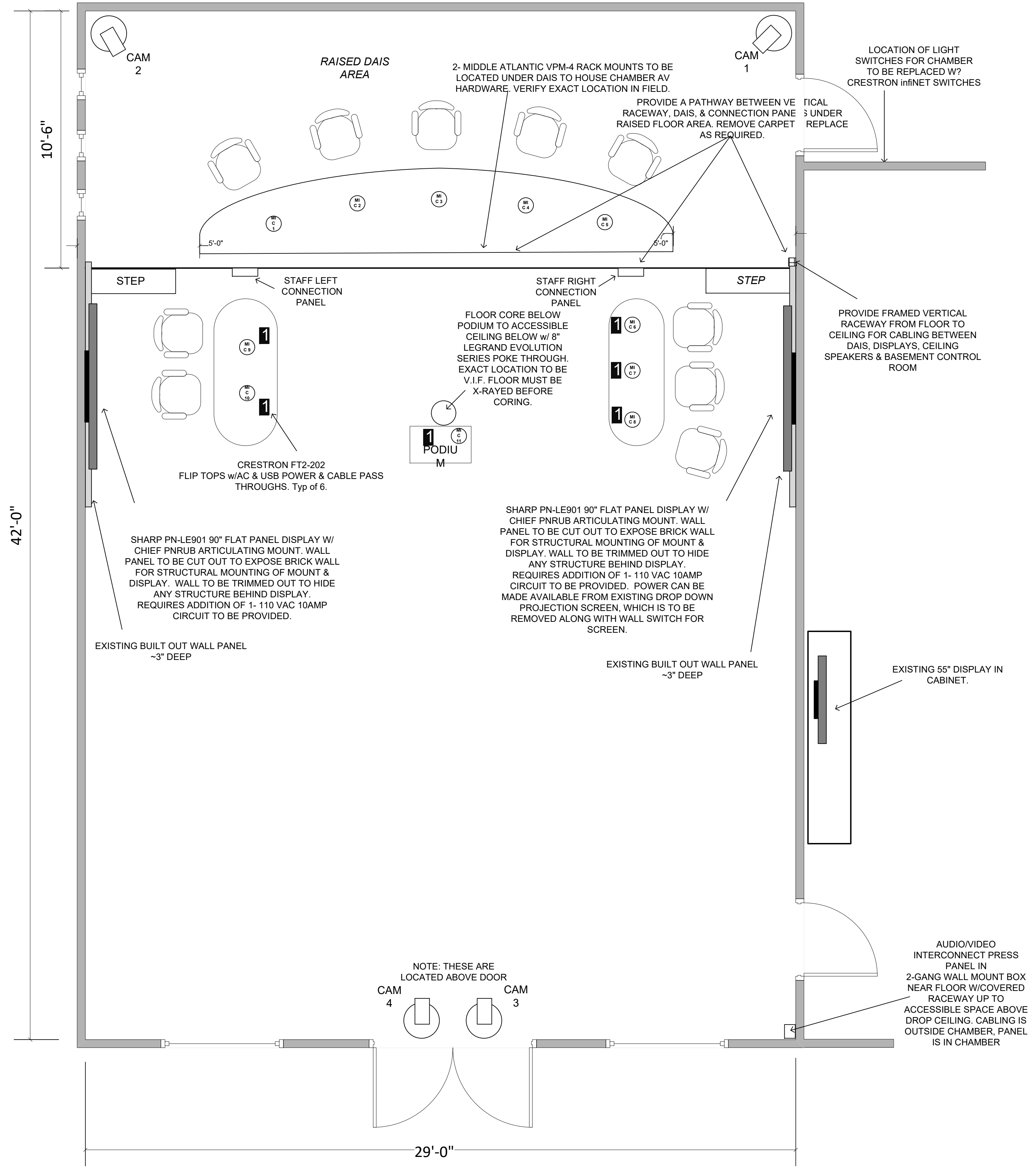
TO PODIUM FLOOR
 CORE- FUTURE
 CONNECTION FOR
 PODIUM VIDEO
 DISPLAY DECODER
 LOCATED IN
 COUNCIL CHAMBER-
 PODIUM CORE

1- LEVITON 4S255-D48
 Shielded 48 Port Patch Panel w
 48 Atlas-X1 CAT 6 Shielded
 Quick Port Jacks

SFP FIBER LINK x2
 10G FIBER LINKS TO
 COUNCIL CHAMBER SWITCH

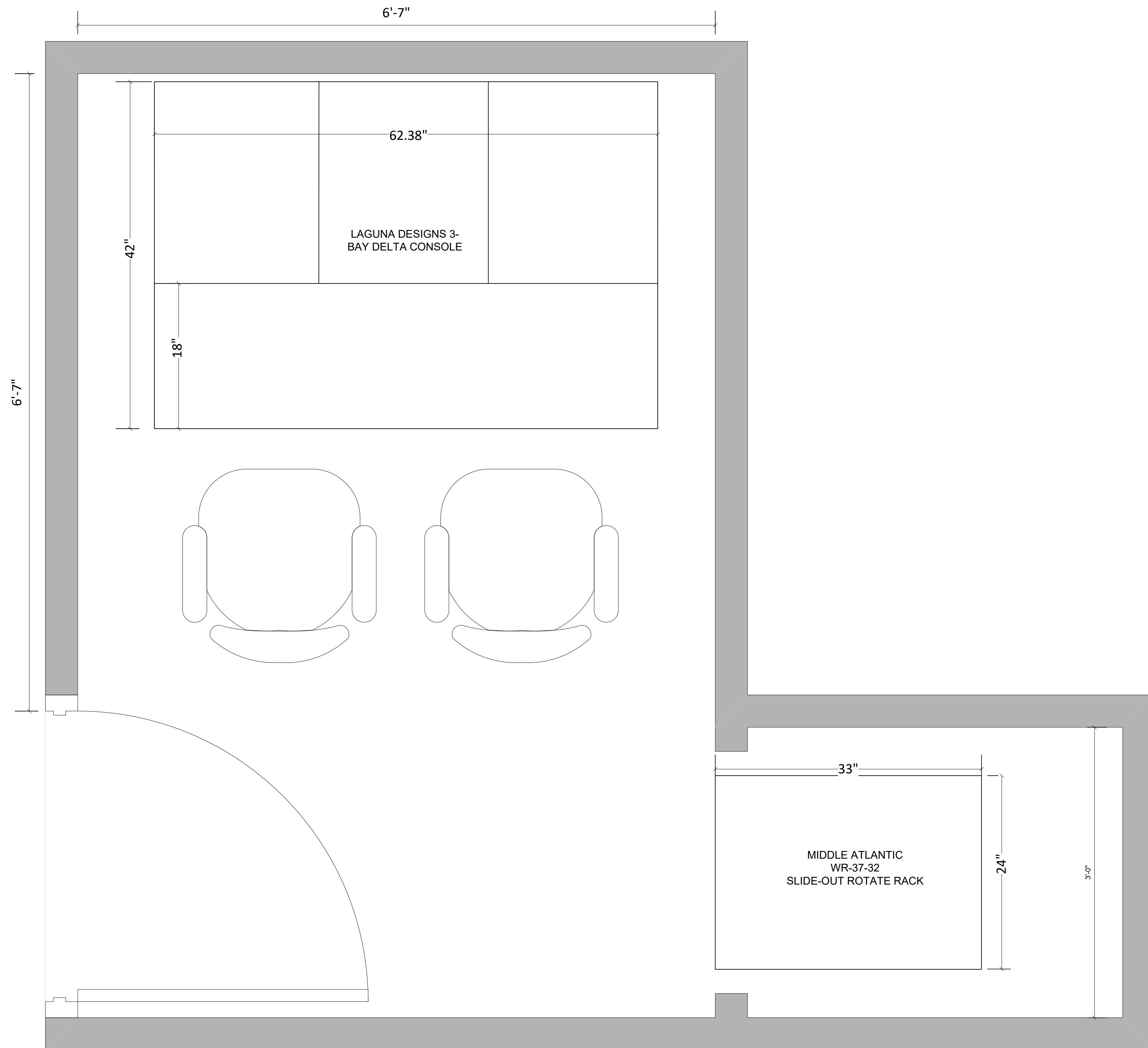


COUNCIL CHAMBER & LOBBY AV CEILING PLAN



COUNCIL CHAMBER & LOBBY AV FLOOR PLAN

CITY OF EL SEGUNDO, CALIFORNIA COUNCIL CHAMBER AUDIO VISUAL & TELEVISION PRODUCTION SYSTEM UPGRADE				
CHAMBER AV CEILING & FLOOR PLANS				
CITY OF EL SEGUNDO CITY HALL 350 Main St, El Segundo, CA 90245				
DATE 3/29/2020	DRAWN BY RR	FILENAME EL SEGUNDO CHAMBER AV_REV 4.VSD	DRAWING NUMBER AV-P-01	REVISION 3



BASEMENT PRODUCTION CONTROL ROOM

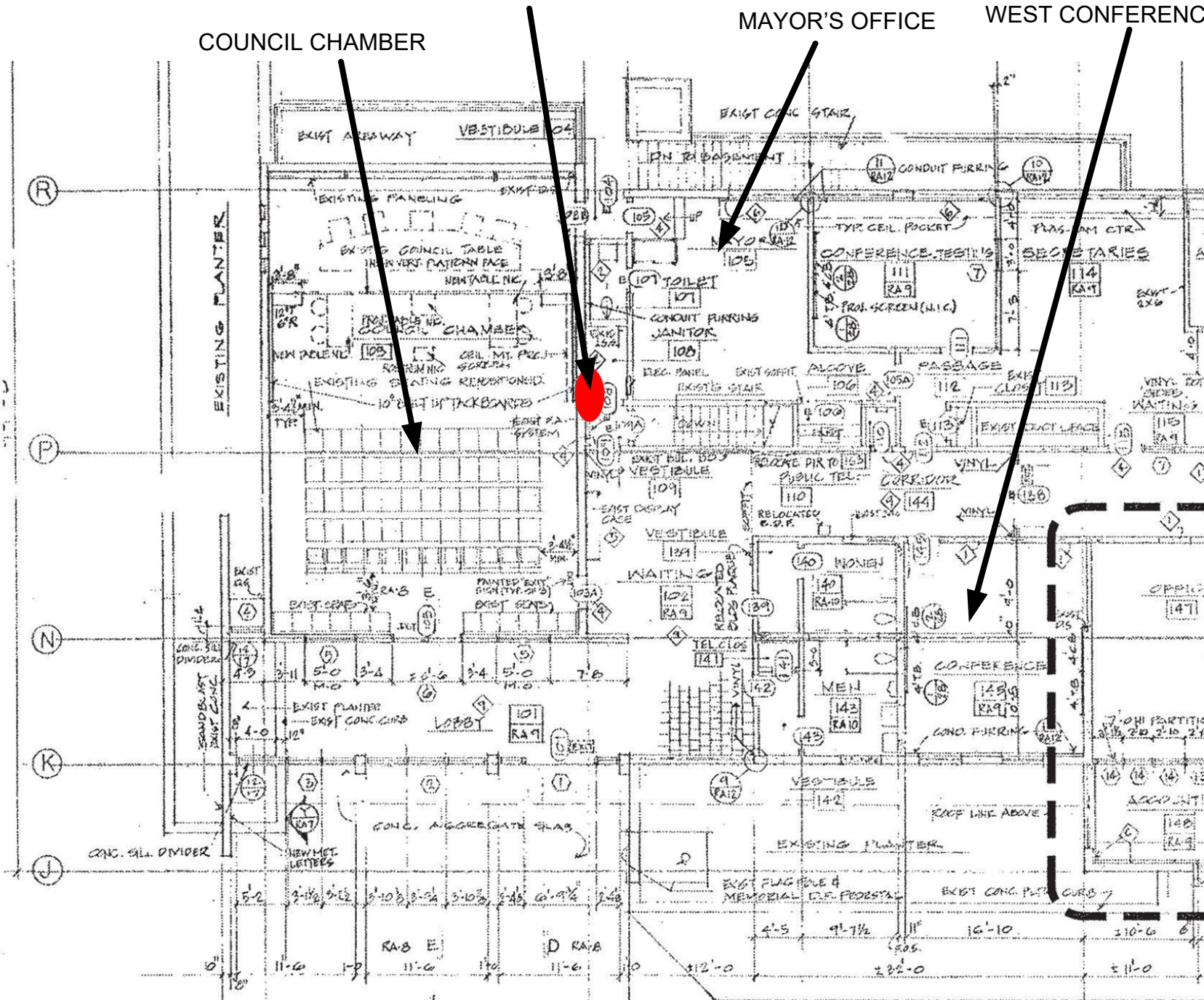
CITY OF EL SEGUNDO, CALIFORNIA COUNCIL CHAMBER AUDIO VISUAL & TELEVISION PRODUCTION SYSTEM UPGRADE				
<i>PRODUCTION CONTROL ROOM NETWORK & CONTROL CONCEPT DIAGRAM</i>				
CITY OF EL SEGUNDO CITY HALL 350 Main St, El Segundo, CA 90245				
DATE 3/29/2020	DRAWN BY RR	FILENAME EL SEGUNDO CHAMBER AV_REV 4.VSD	DRAWING NUMBER AV-P02	REVISION 3

LOCATION OF STUBBED OUT CONDUITS
ACCESSIBLE ABOVE CHAMBER CEILING

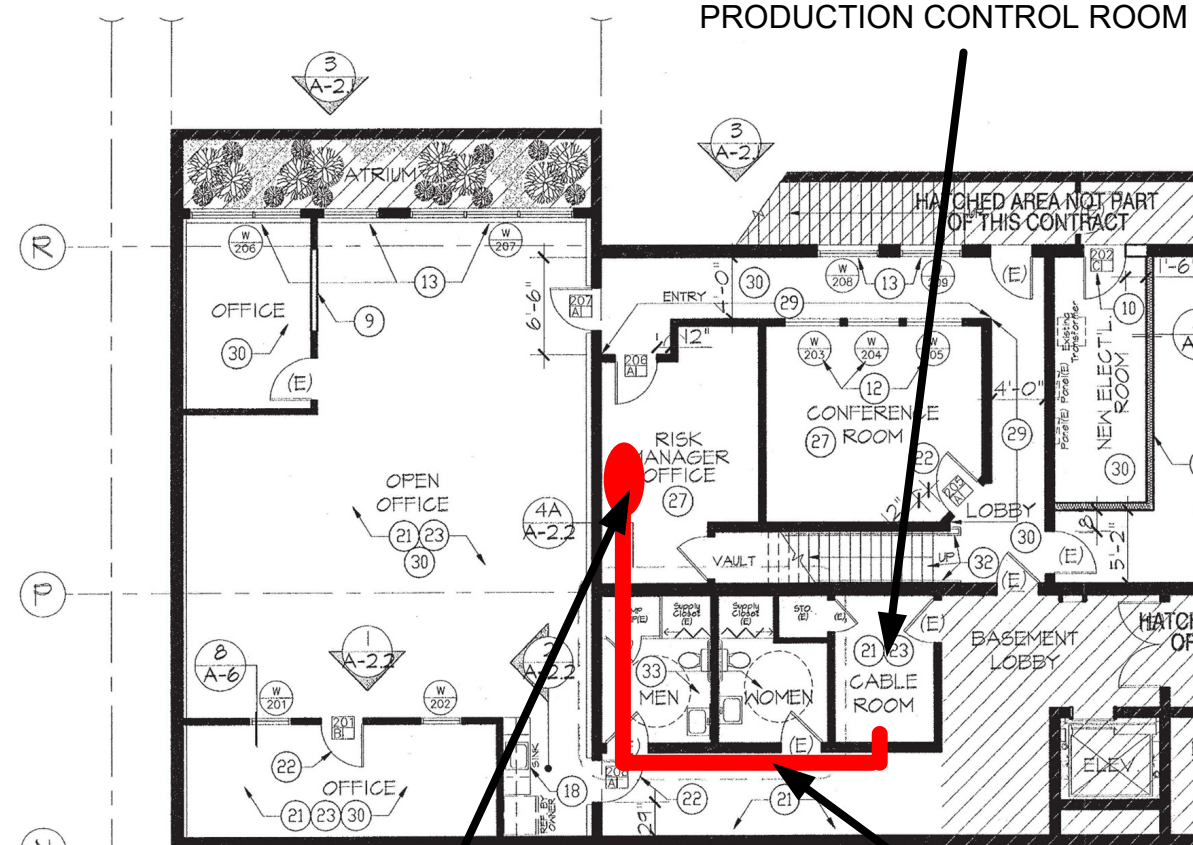
COUNCIL CHAMBER

MAYOR'S OFFICE

WEST CONFERENCE ROOM



PRODUCTION CONTROL ROOM



LOCATION OF CONDUITS TO CHAMBER
ABOVE DROP CEILING

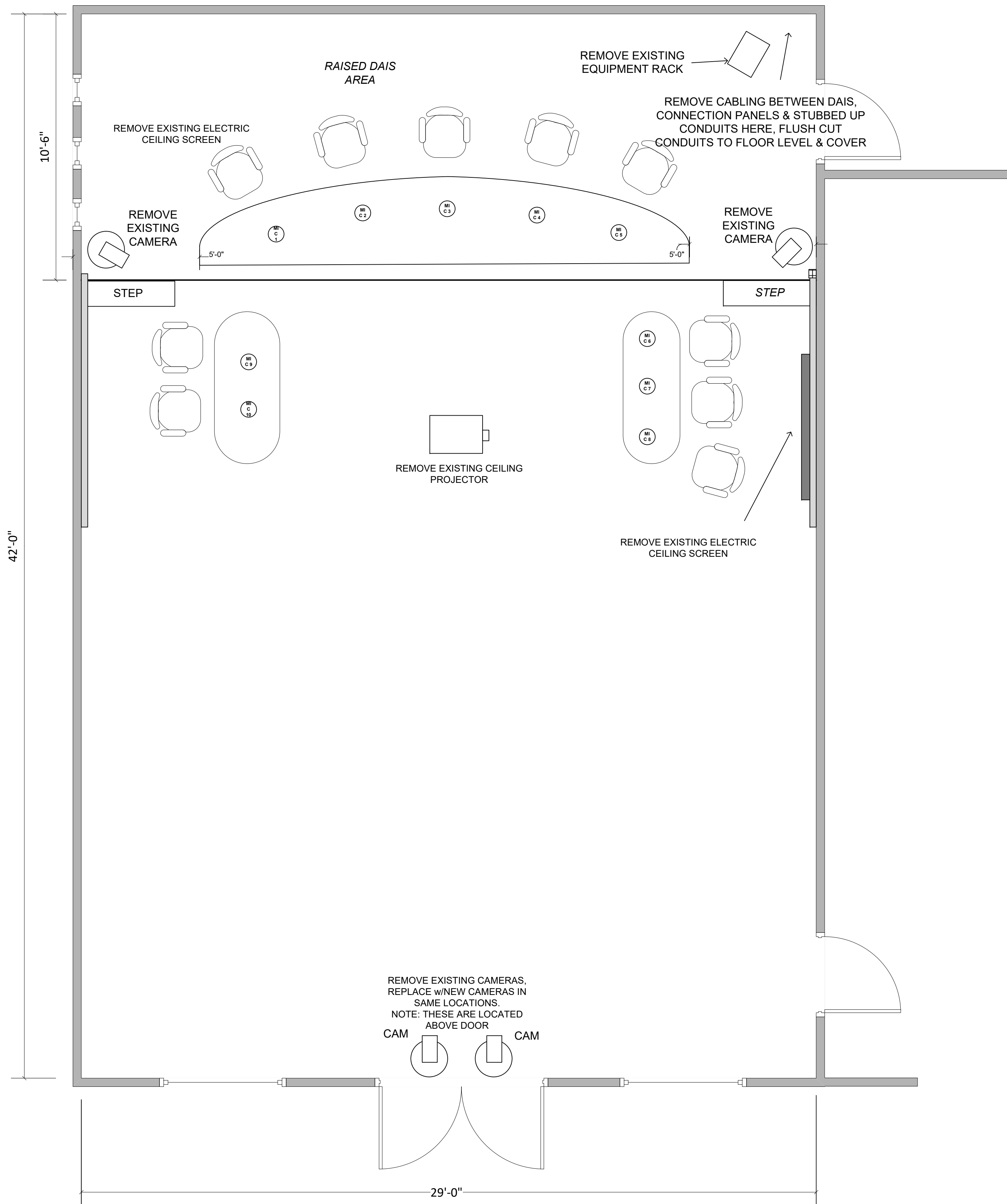
EXISTING CABLE PATH IN BASEMENT
CEILING

CITY OF EL SEGUNDO, CALIFORNIA
COUNCIL CHAMBER AUDIO VISUAL &
TELEVISION PRODUCTION SYSTEM UPGRADE

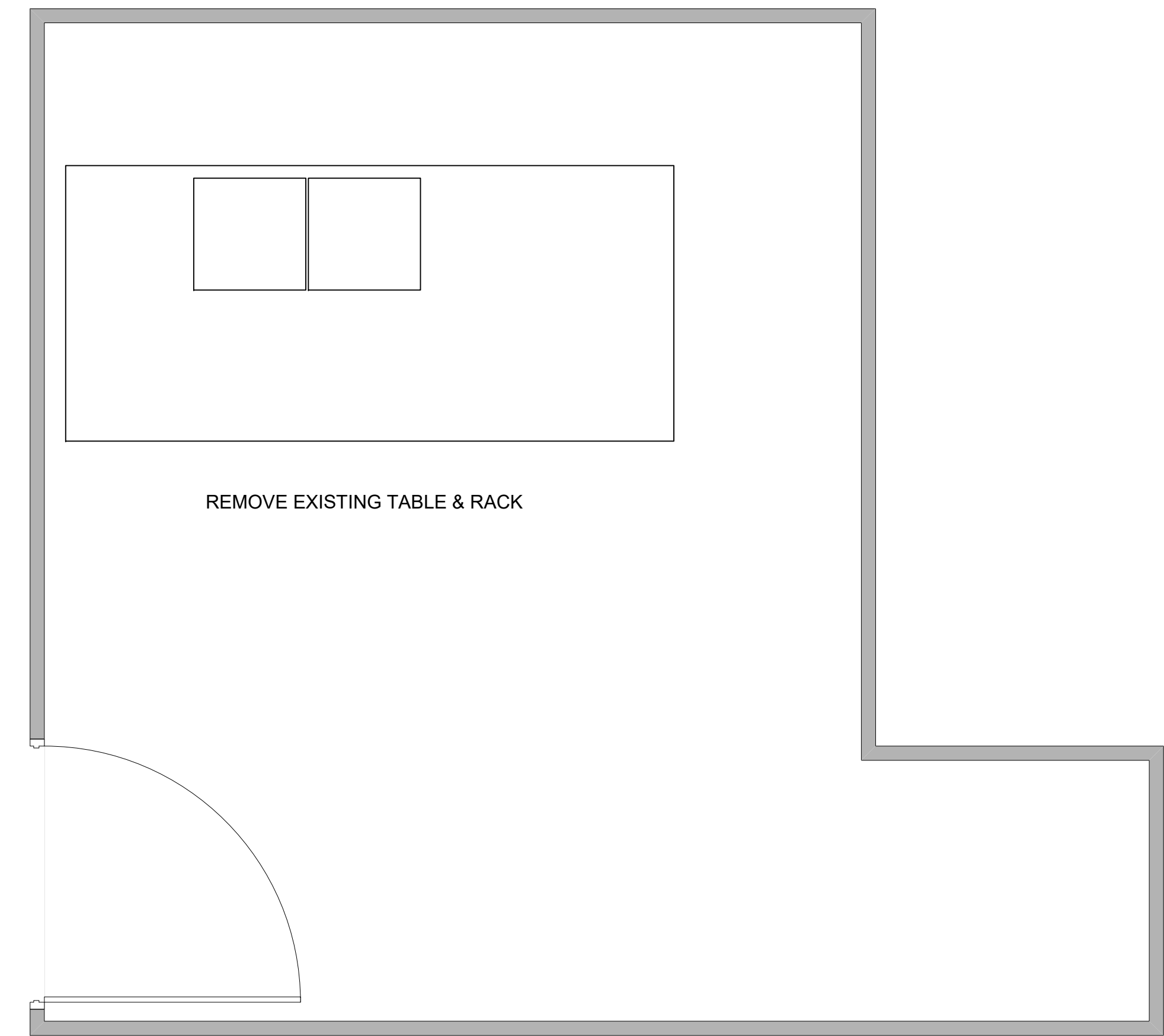
**CABLE PATHWAY & CONDUIT
LOCATION**

CITY OF EL SEGUNDO CITY HALL
350 Main St, El Segundo, CA 90245

DATE	DRAWN BY	FILENAME	DRAWING NUMBER	REVISION
3/29/2020	RR	EL SEGUNDO CHAMBER AV_REV 4.VSD	AV-P-03	3

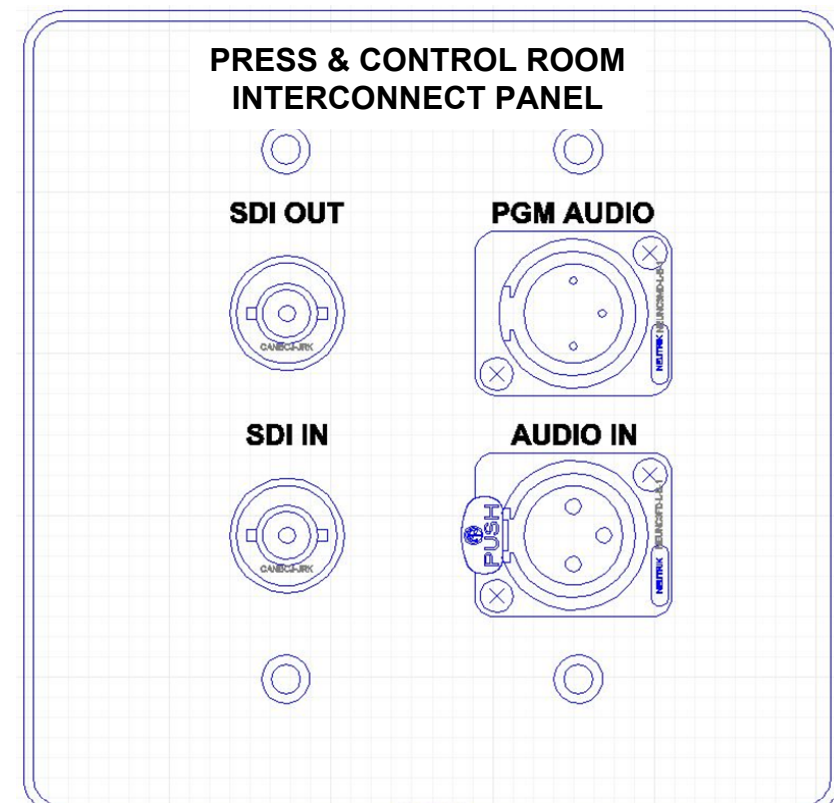
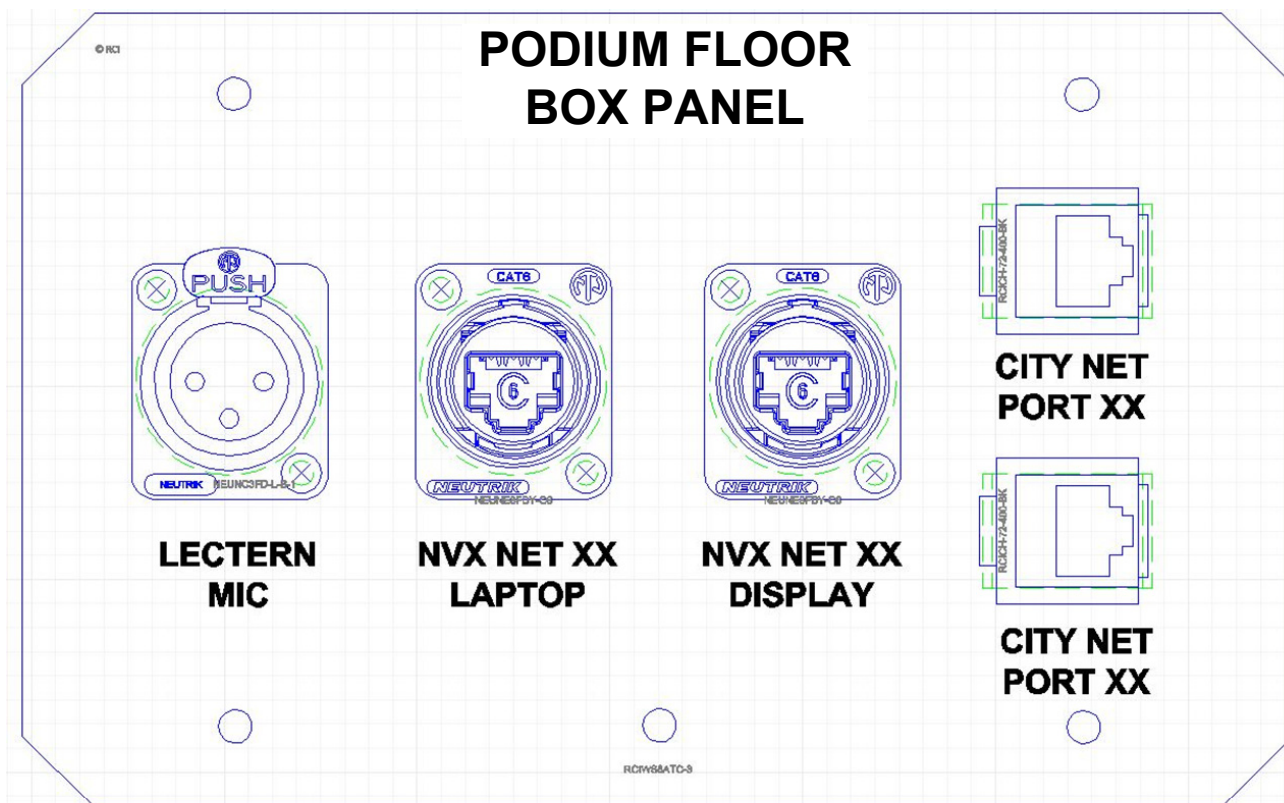
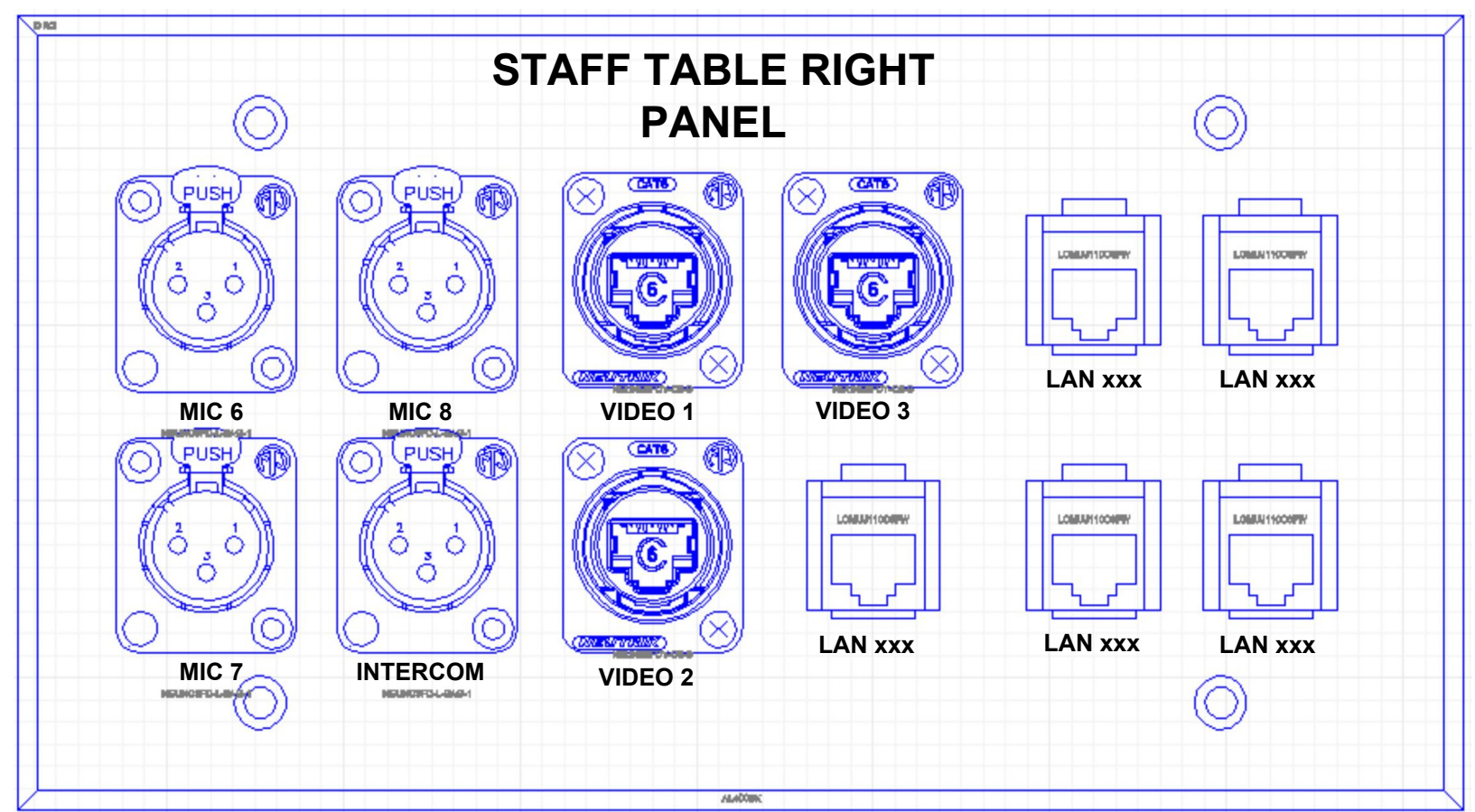
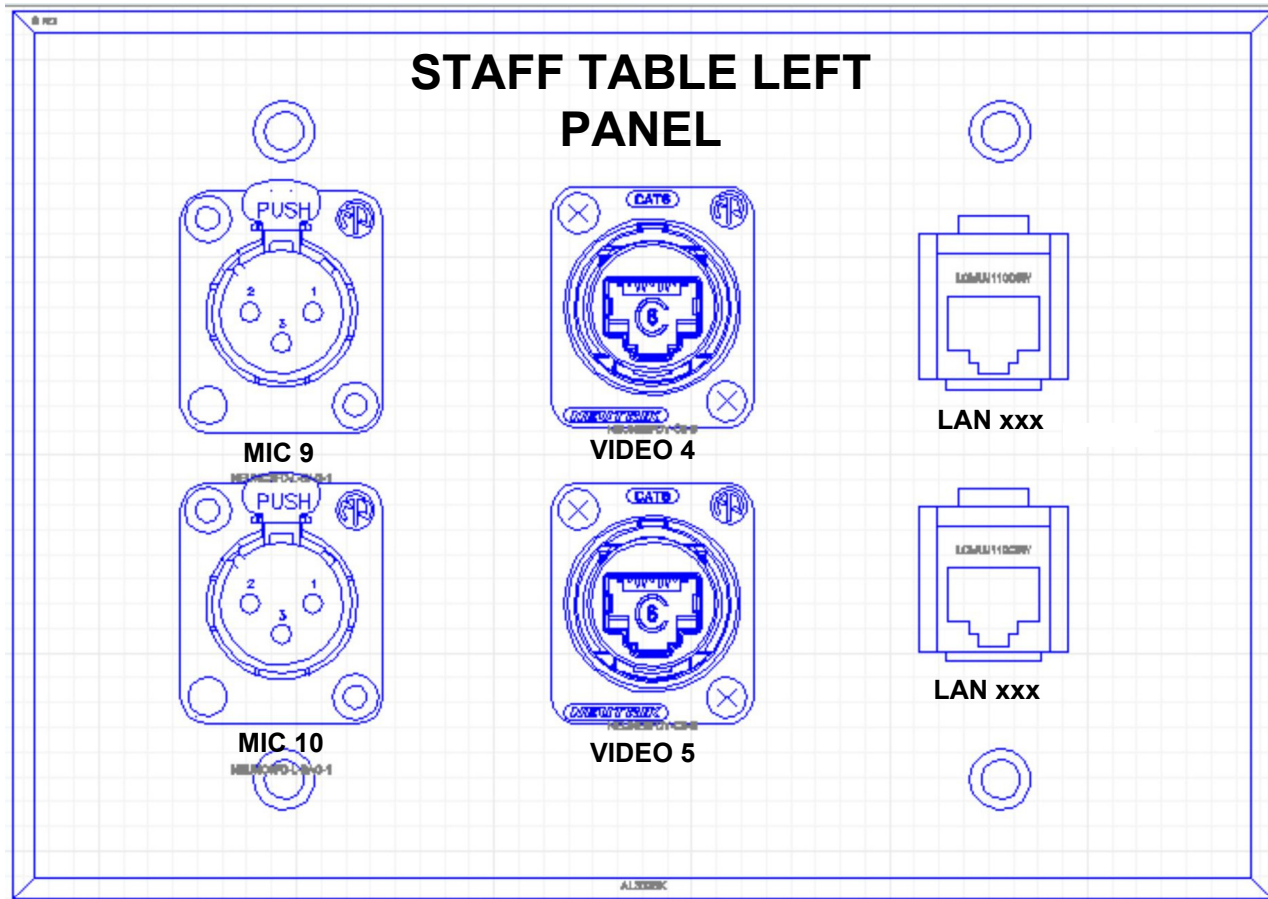


COUNCIL CHAMBER DEMOLITION PLAN



PRODUCTION CONTROL DEMOLITION PLAN

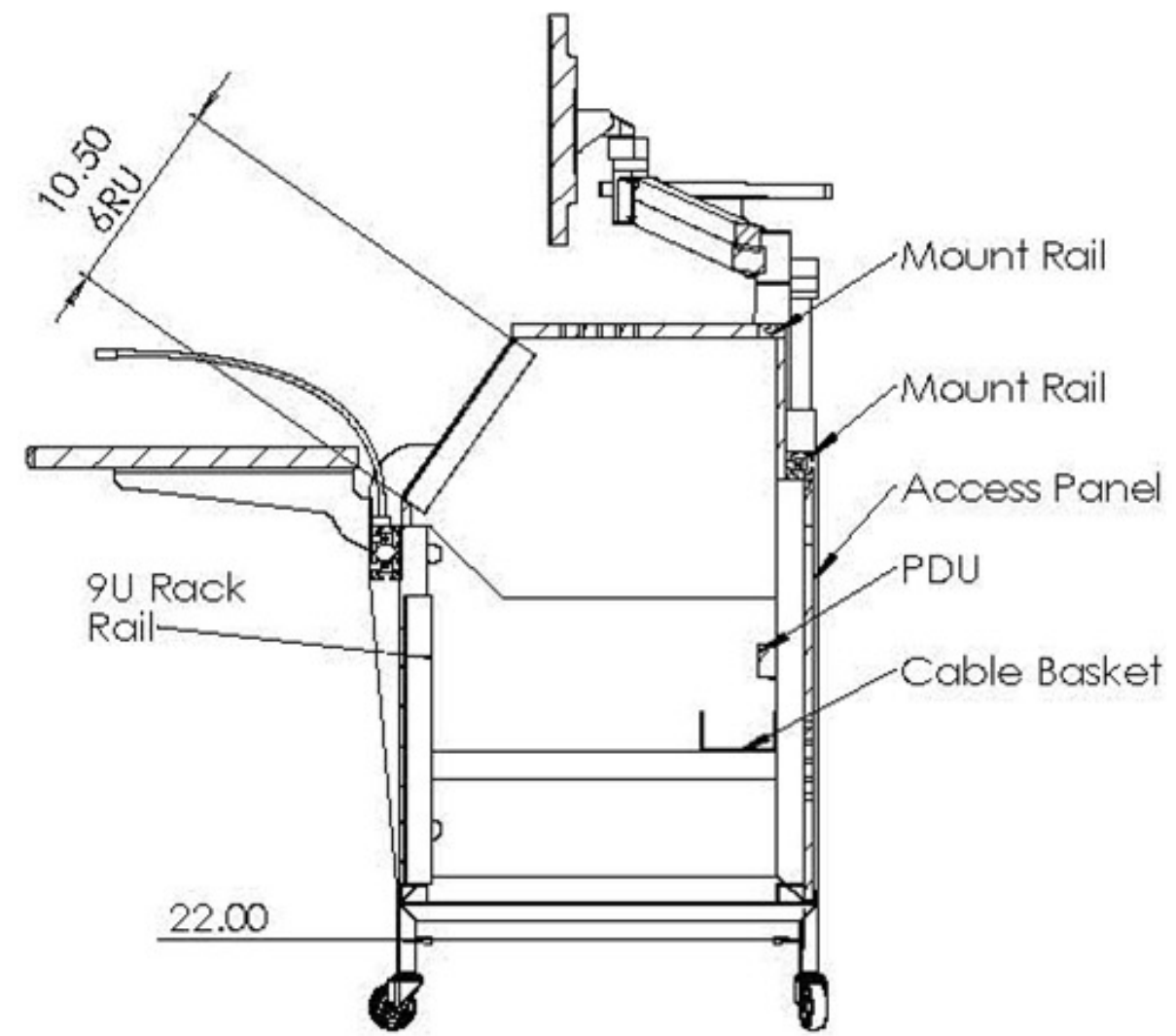
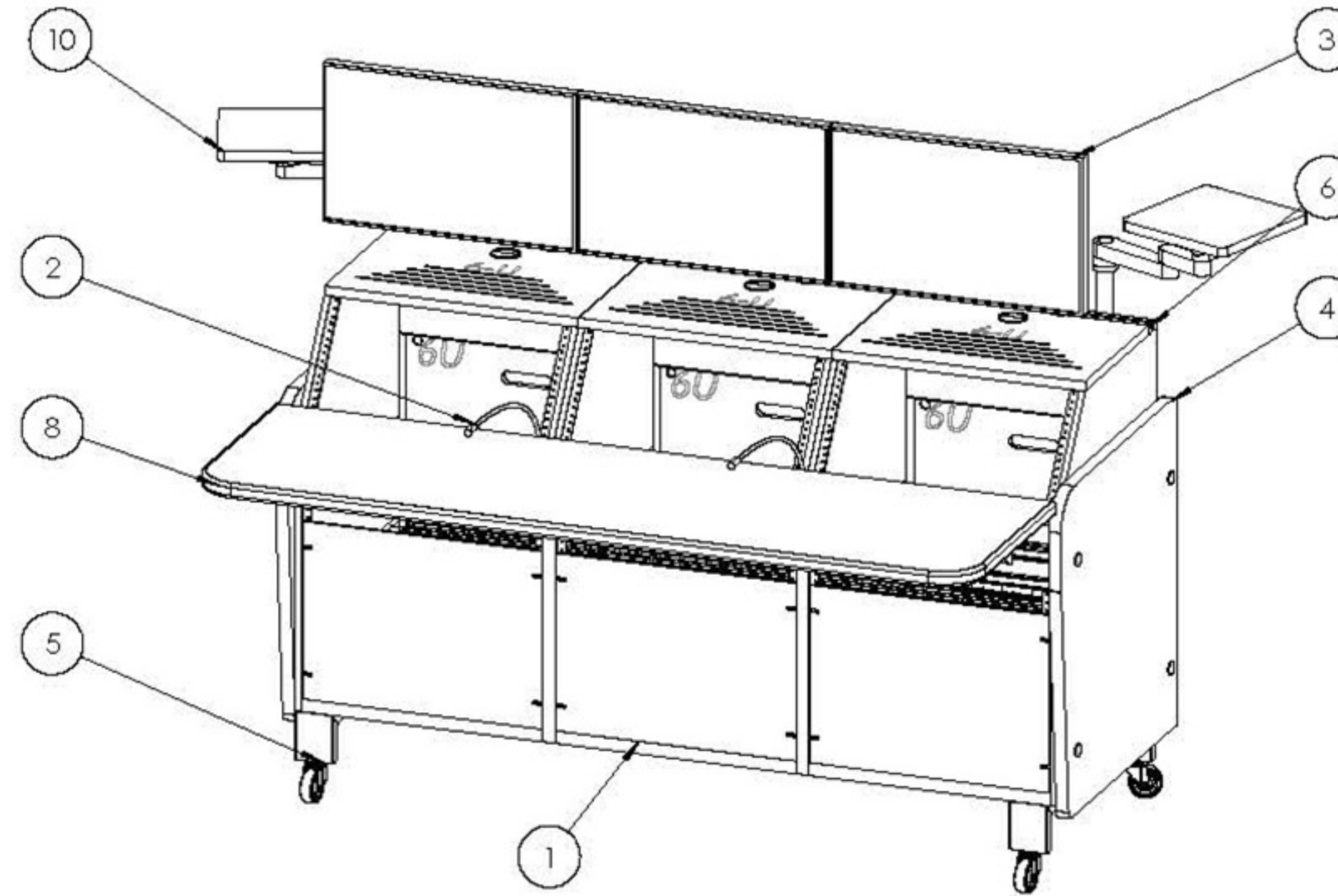
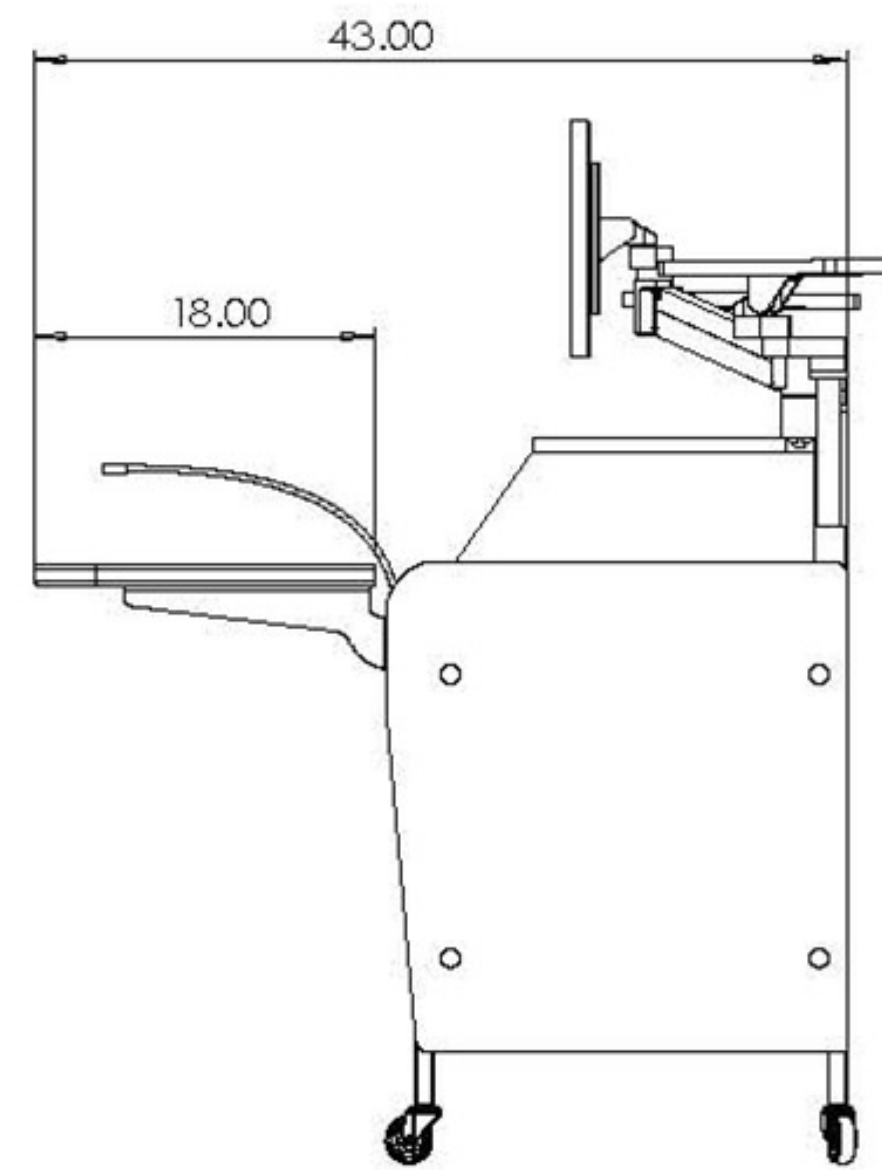
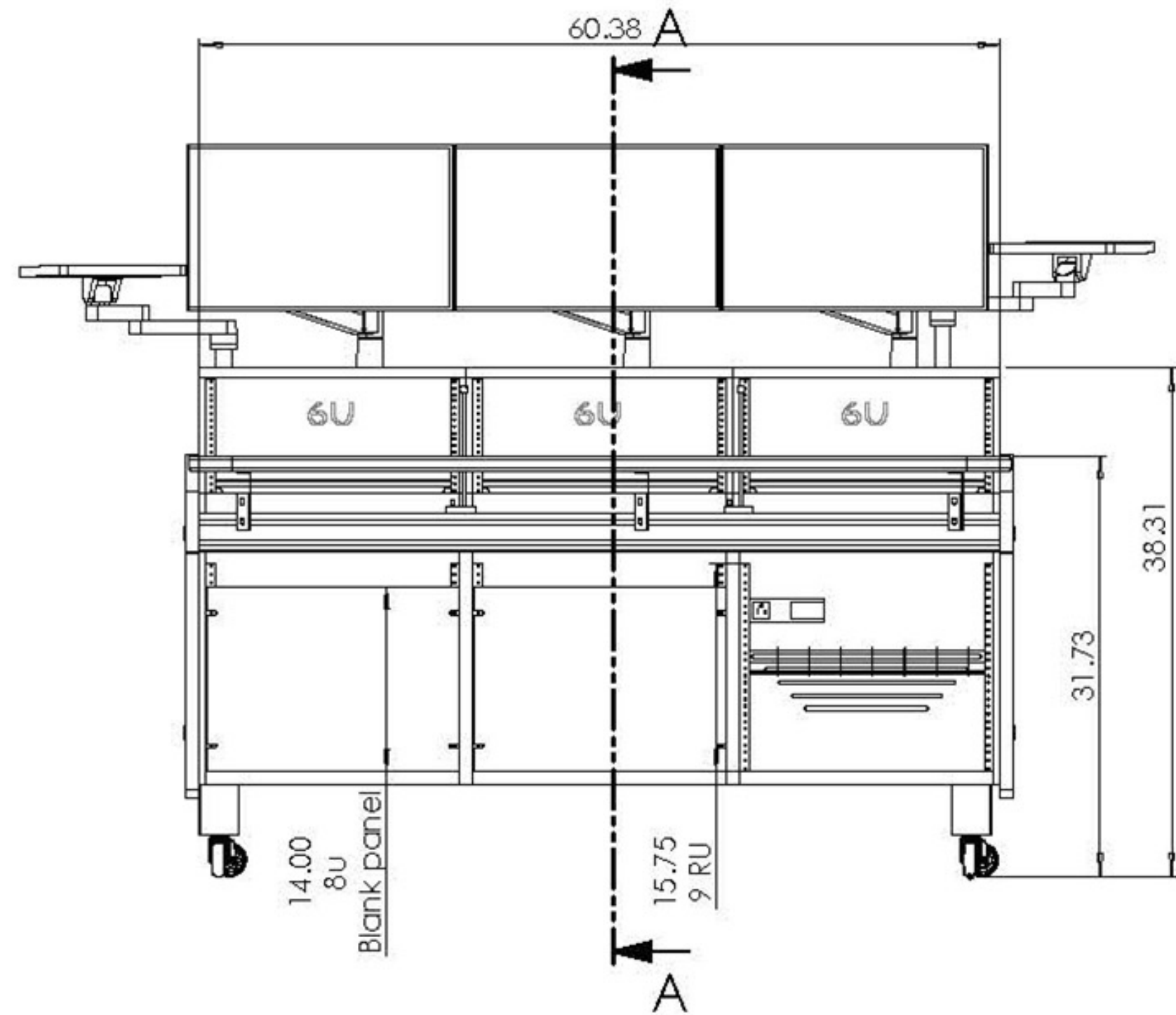
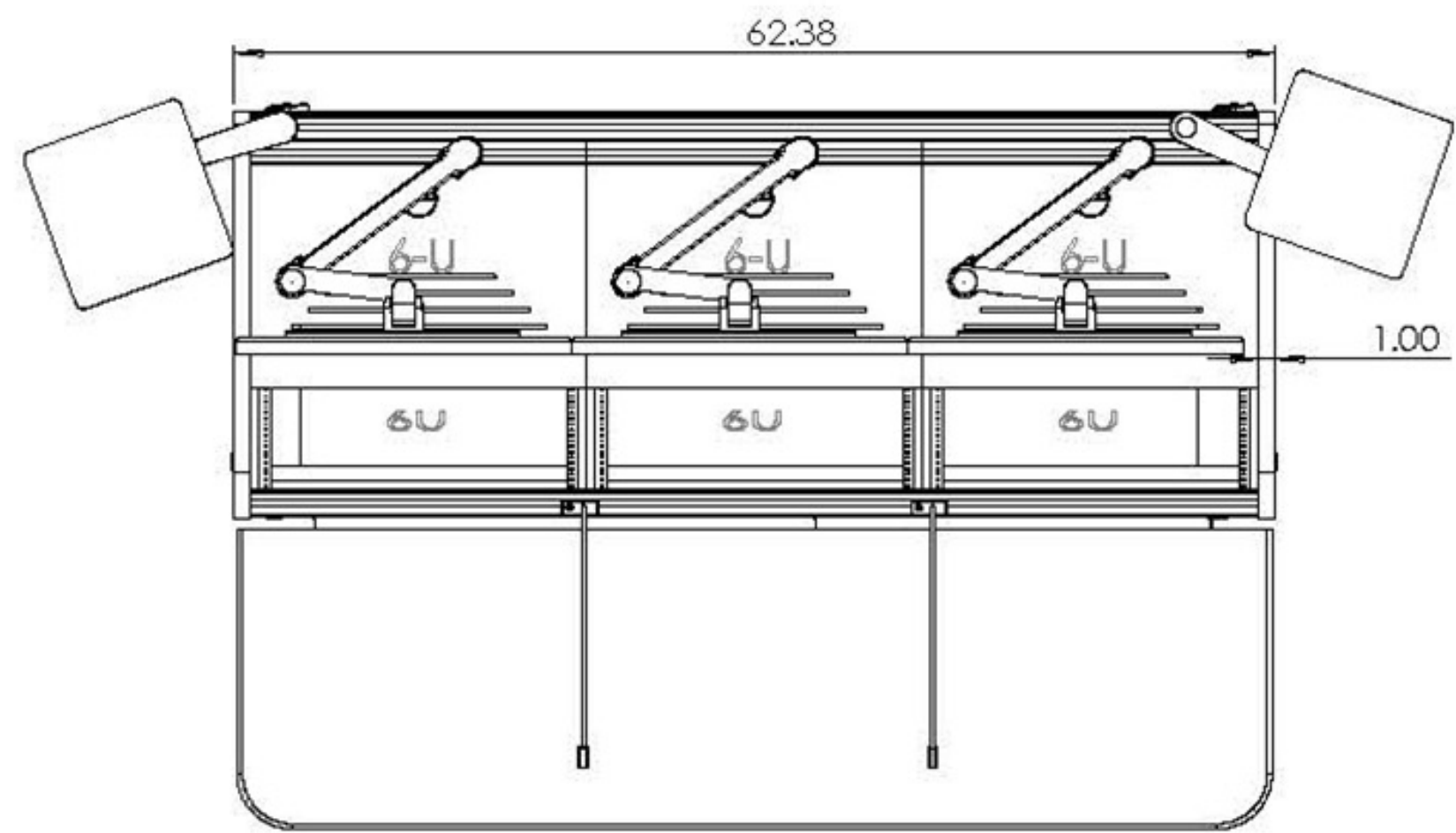
CITY OF EL SEGUNDO, CALIFORNIA COUNCIL CHAMBER AUDIO VISUAL & TELEVISION PRODUCTION SYSTEM UPGRADE				
AV DEMOLITION PLAN				
CITY OF EL SEGUNDO CITY HALL 350 Main St, El Segundo, CA 90245				
DATE 3/29/2020	DRAWN BY RR	FILENAME EL SEGUNDO CHAMBER AV_REV 4.VSD	DRAWING NUMBER AV-D-01	REVISION 3



CITY OF EL SEGUNDO, CALIFORNIA COUNCIL CHAMBER AUDIO VISUAL & TELEVISION PRODUCTION SYSTEM UPGRADE				
CHAMBER CONNECTION PANELS				
CITY OF EL SEGUNDO CITY HALL 350 Main St, El Segundo, CA 90245				
DATE 3/29/2020 Rev 8/5/2020	DRAWN BY RR	FILENAME EL SEGUNDO CHAMBER AV_REV 4.VSD	DRAWING NUMBER AV-DTL-01	REVISION 4

NOT TO SCALE

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	PB22-3	22" Deep 3 Bay Pedestal Base	1
2	LED Light	18" Goose Neck Red/white	2
3	LAG ARM_	LAG 800 SUPPORTS 7.5 TO 25LB MONITORS	3
4	SP-PED	Side Panel	2
5	Ped Tube Foot assem 3in wide	Ped Foot Intermediate	2
6	T-22 6UF	22" Deep 6 Unit Turret with flat top and rear rail	3
7	Cantilever	14 in	3
8	Console Surface^951 Console	Laminate with Black Vinyl Edge	1
9	AC-SPA-P	Right Platform	1
10	AC-SPA-P	Articulated Speaker Stand- Up to 25 lbs.	1



SECTION A-A



1060 Ortega Way Ste C, Placentia, CA, 92870
www.lagunadesigns.com

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF LAGUNA DESIGNS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF LAGUNA DESIGNS IS PROHIBITED.

UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN INCHES	TOLERANCES:	Admin	3/24/2020
FRACTIONALS:	DECIMALS:		
ANGLES: 30° CHS BEND ±	TWO PLACE DECIMAL ±		
	THREE PLACE DECIMAL ±		
HIDDEN GEOMETRIC TOLERANCING PER:			
ABC			
FINISH			
DO NOT SCALE DRAWING			
		Sheet1	
		TITLE: 951 Console	
		SIZE	DWG. NO.
		C	019632
		SCALE: 1:12	SHEET 1 OF 1

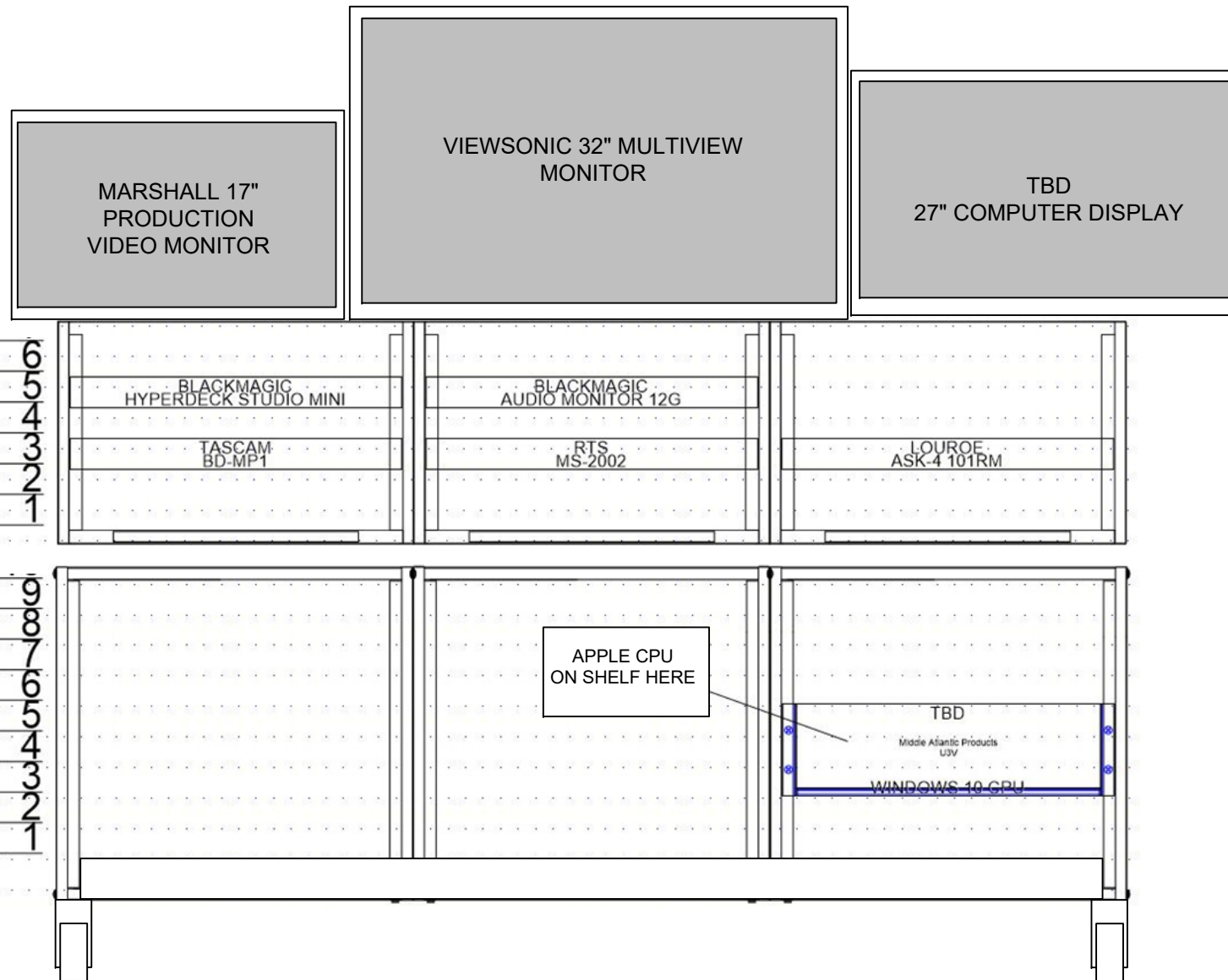
CITY OF EL SEGUNDO, CALIFORNIA
COUNCIL CHAMBER AUDIO VISUAL &
TELEVISION PRODUCTION SYSTEM UPGRADE

**PRODUCTION CONTROL
CONSOLE**

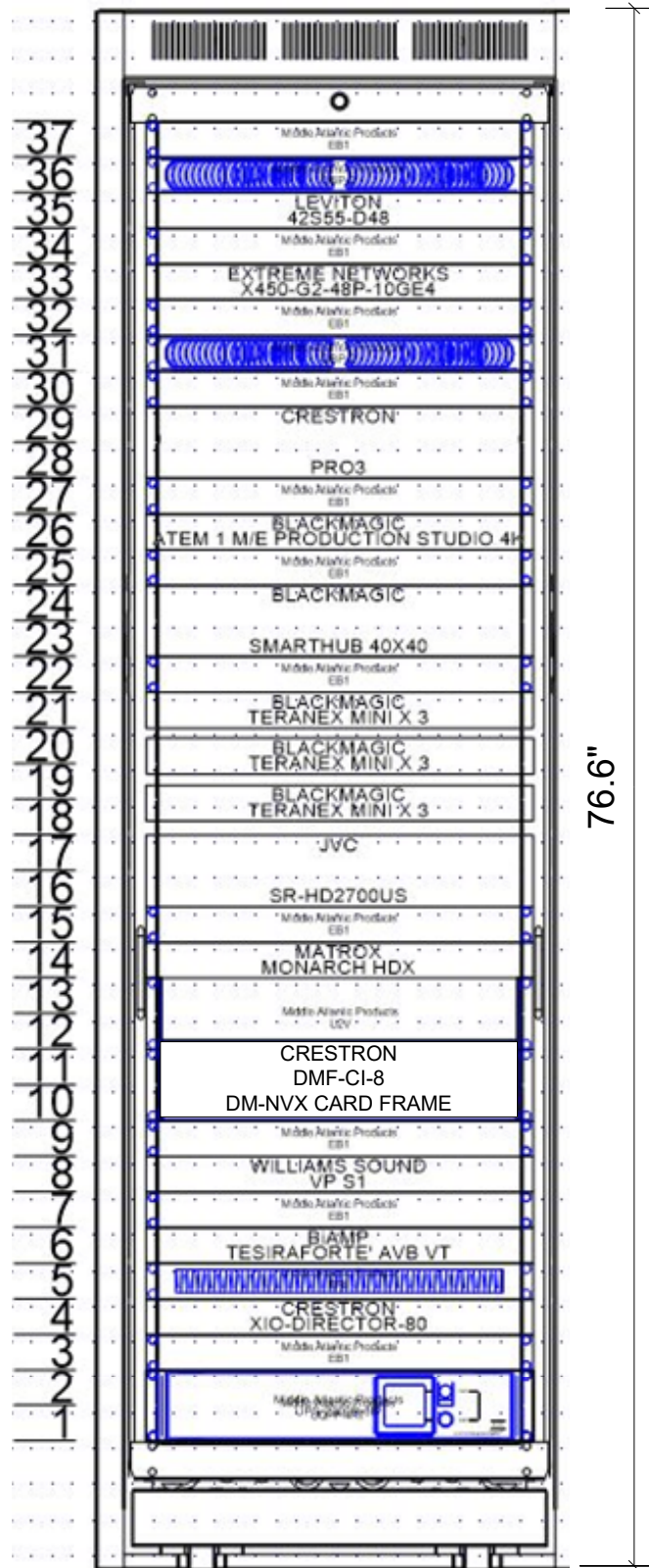
CITY OF EL SEGUNDO CITY HALL
350 Main St, El Segundo, CA 90245

DATE	DRAWN BY	FILENAME	DRAWING NUMBER	REVISION
3/29/2020	RR	EL SEGUNDO CHAMBER AV_REV 4.VSD	AV-DTL-02	3

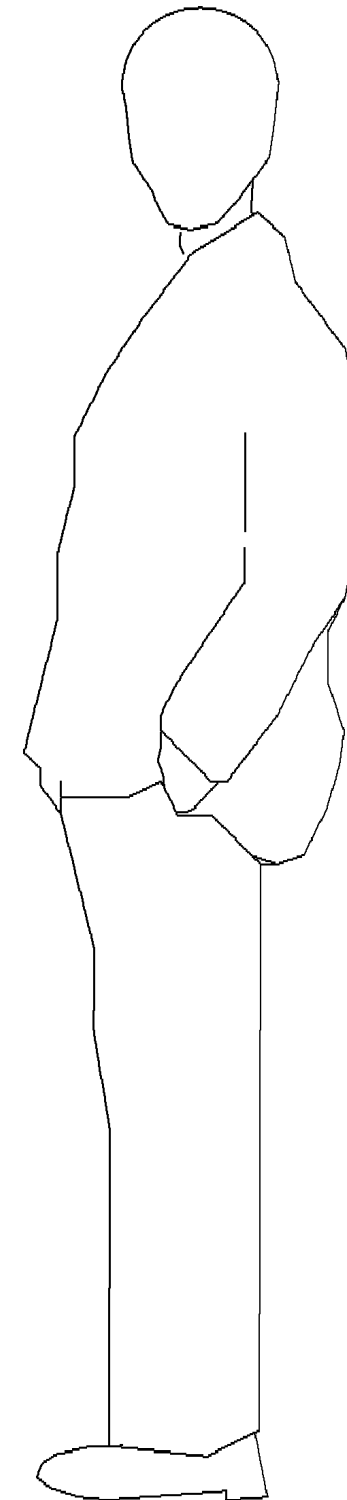
THESE DISPLAYS ARE ON
ARTICULATING MOUNTS



LAGUNA DESIGNS
3 BAY DELTA CONSOLE



MIDDLE ATLANTIC
WR-37-32
SLIDE OUT & ROTATE RACK



76.6"

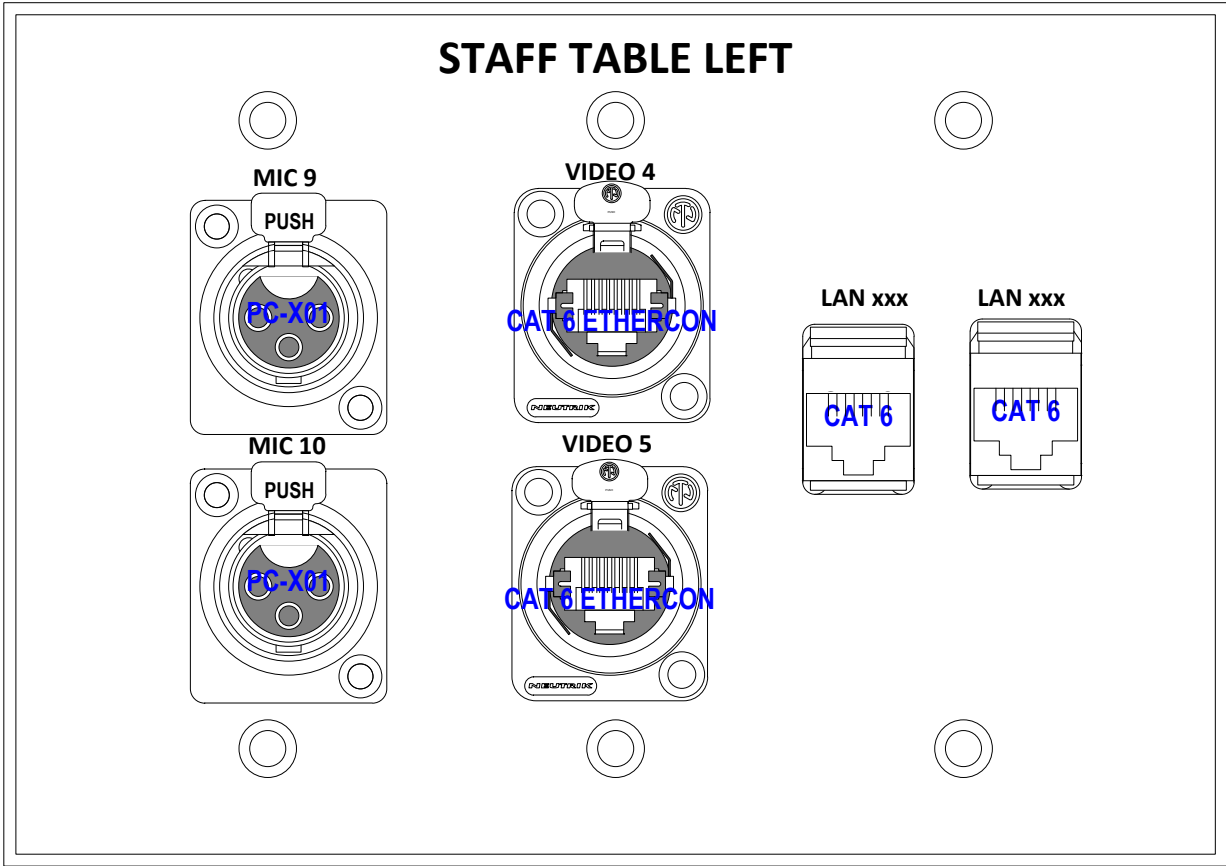
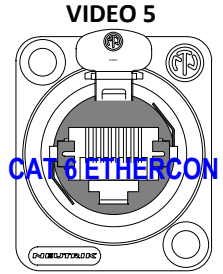
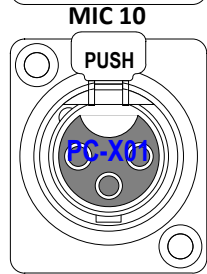
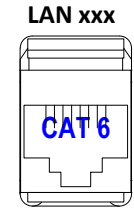
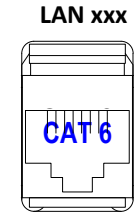
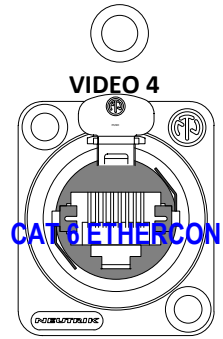
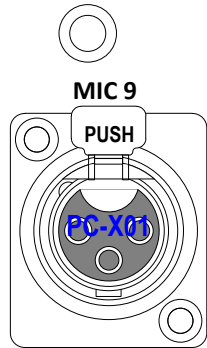
CITY OF EL SEGUNDO, CALIFORNIA
COUNCIL CHAMBER AUDIO VISUAL &
TELEVISION PRODUCTION SYSTEM UPGRADE

**PRODUCTION CONTROL ROOM
RACK AND CONSOLE ELEVATION CONCEPT**

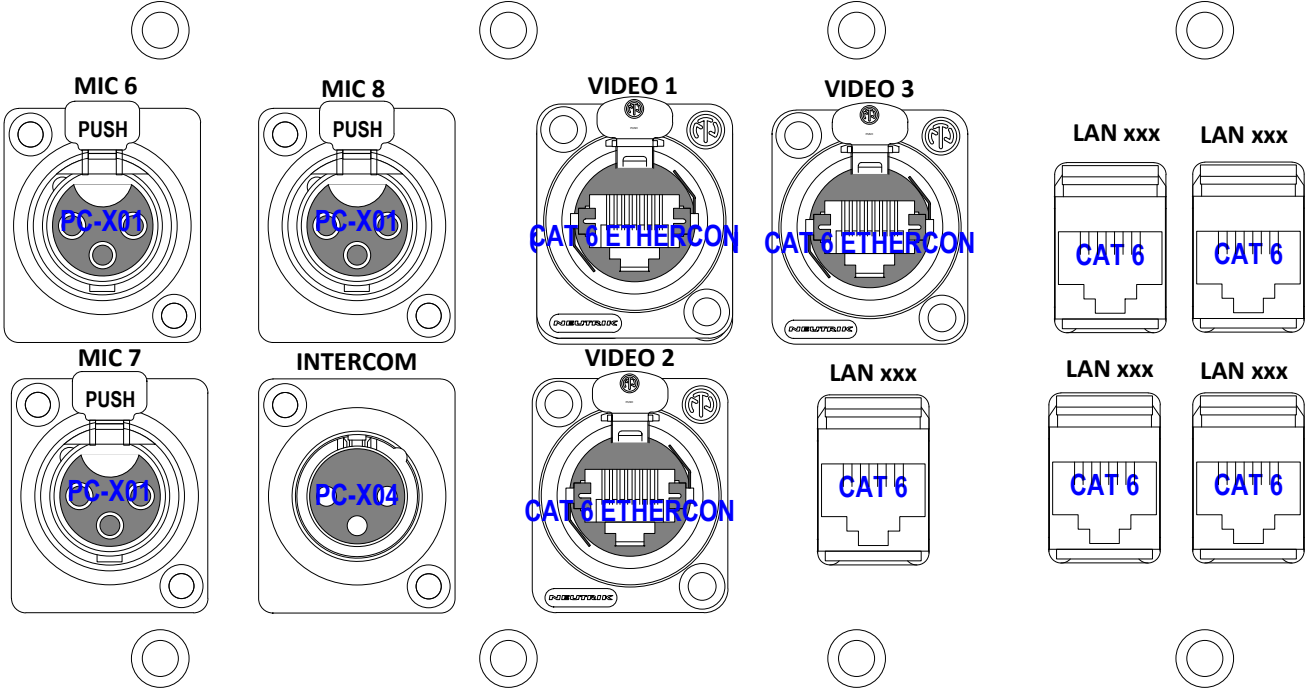
CITY OF EL SEGUNDO CITY HALL
350 Main St, El Segundo, CA 90245

DATE	DRAWN BY	FILENAME	DRAWING NUMBER	REVISION
3/29/2020 Rev 8/5/2020	RR	EL SEGUNDO CHAMBER AV_REV 4.VSD	AV-DTL-03	4

STAFF TABLE LEFT



STAFF TABLE RIGHT





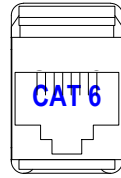
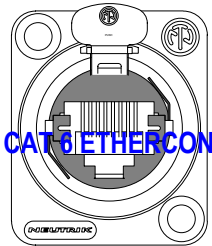
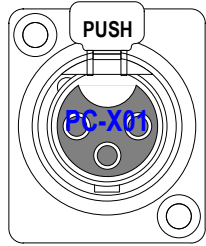
PODIUM



MIC 11

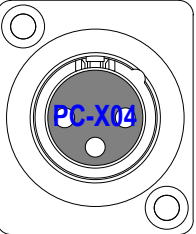
VIDEO 6

LAN xxx

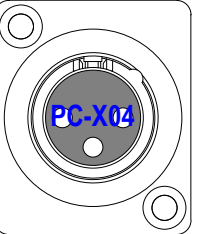


○ **PRESS PANEL** ○

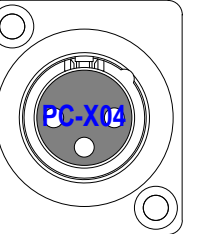
AUDIO 1



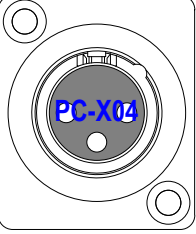
AUDIO 2



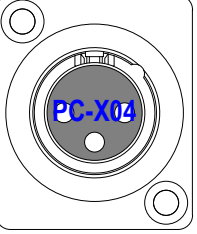
AUDIO 3



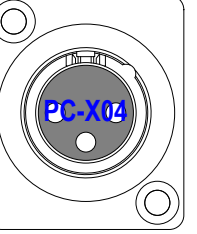
AUDIO 4



AUDIO 5



AUDIO 6





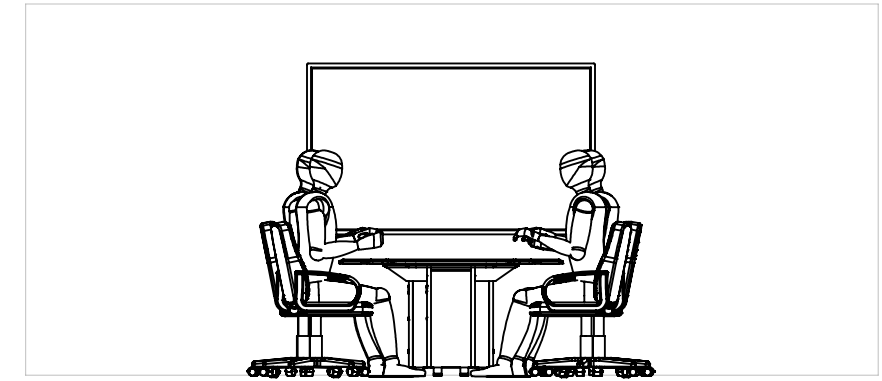
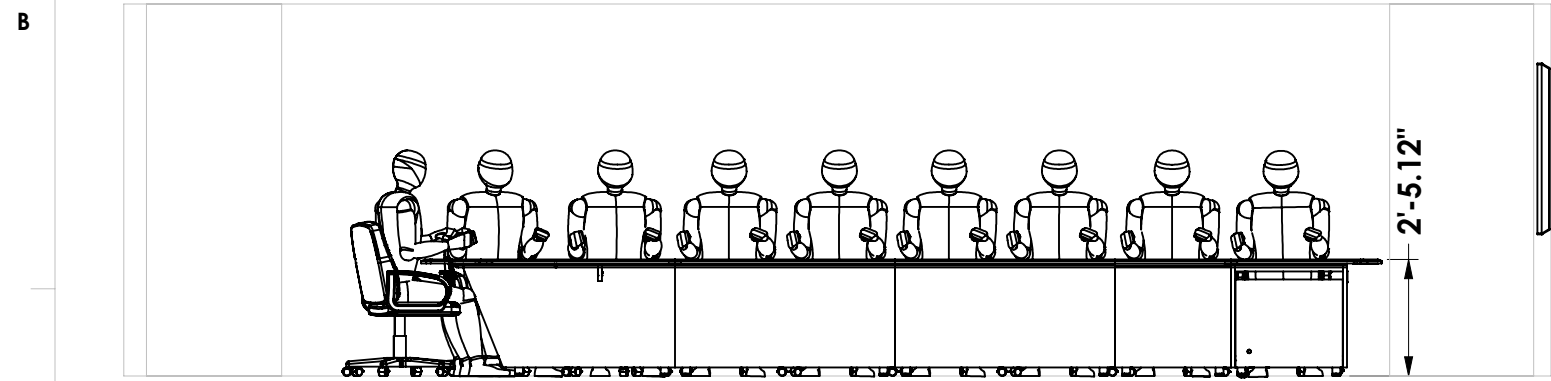
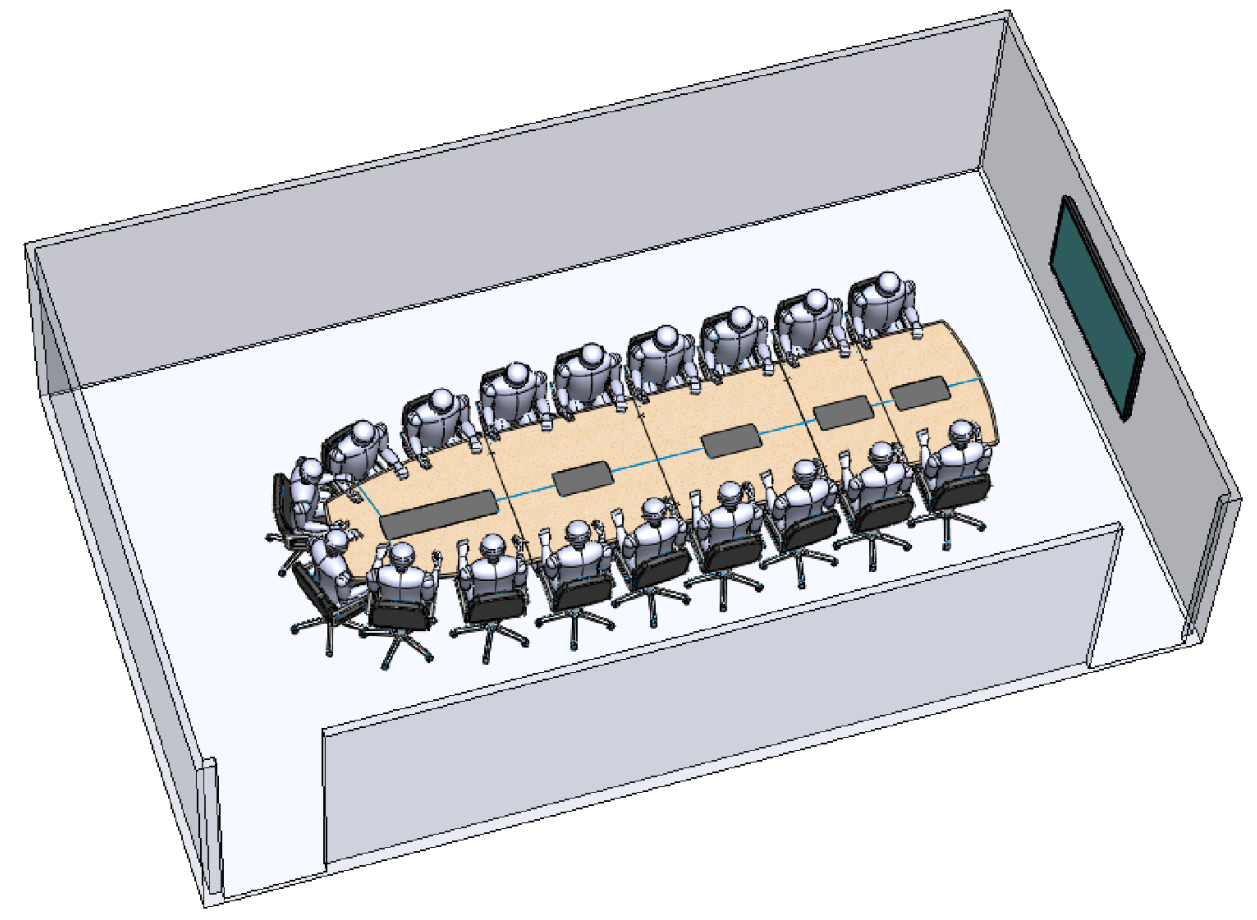
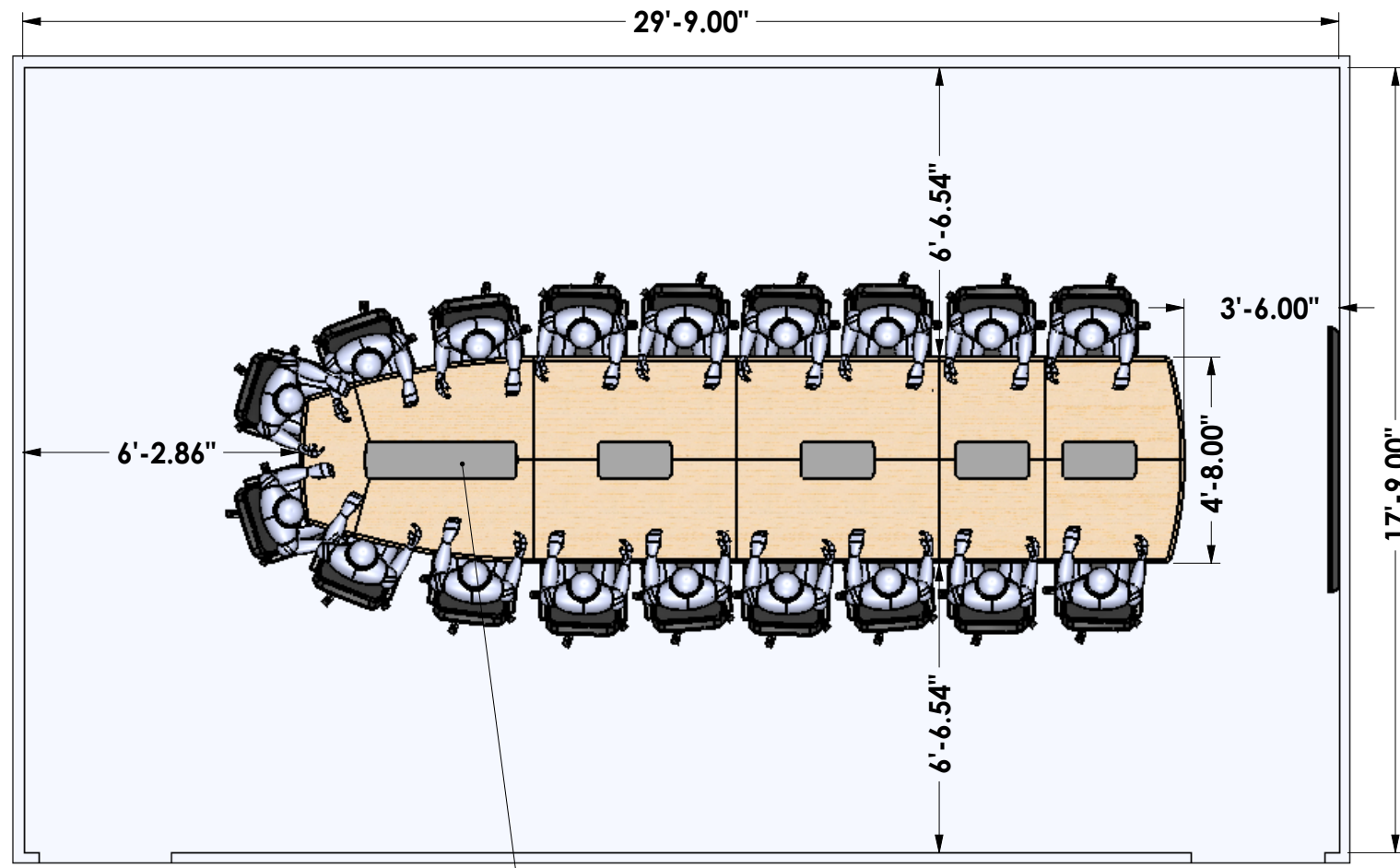
CONFERENCE ROOMS

AUDIO-VISUAL EQUIPMENT UPGRADE EQUIPMENT

DRAWINGS

CITY OF EL SEGUNDO

Information Systems Department
350 Main Street
El Segundo, CA 90254
(310) 524-2300



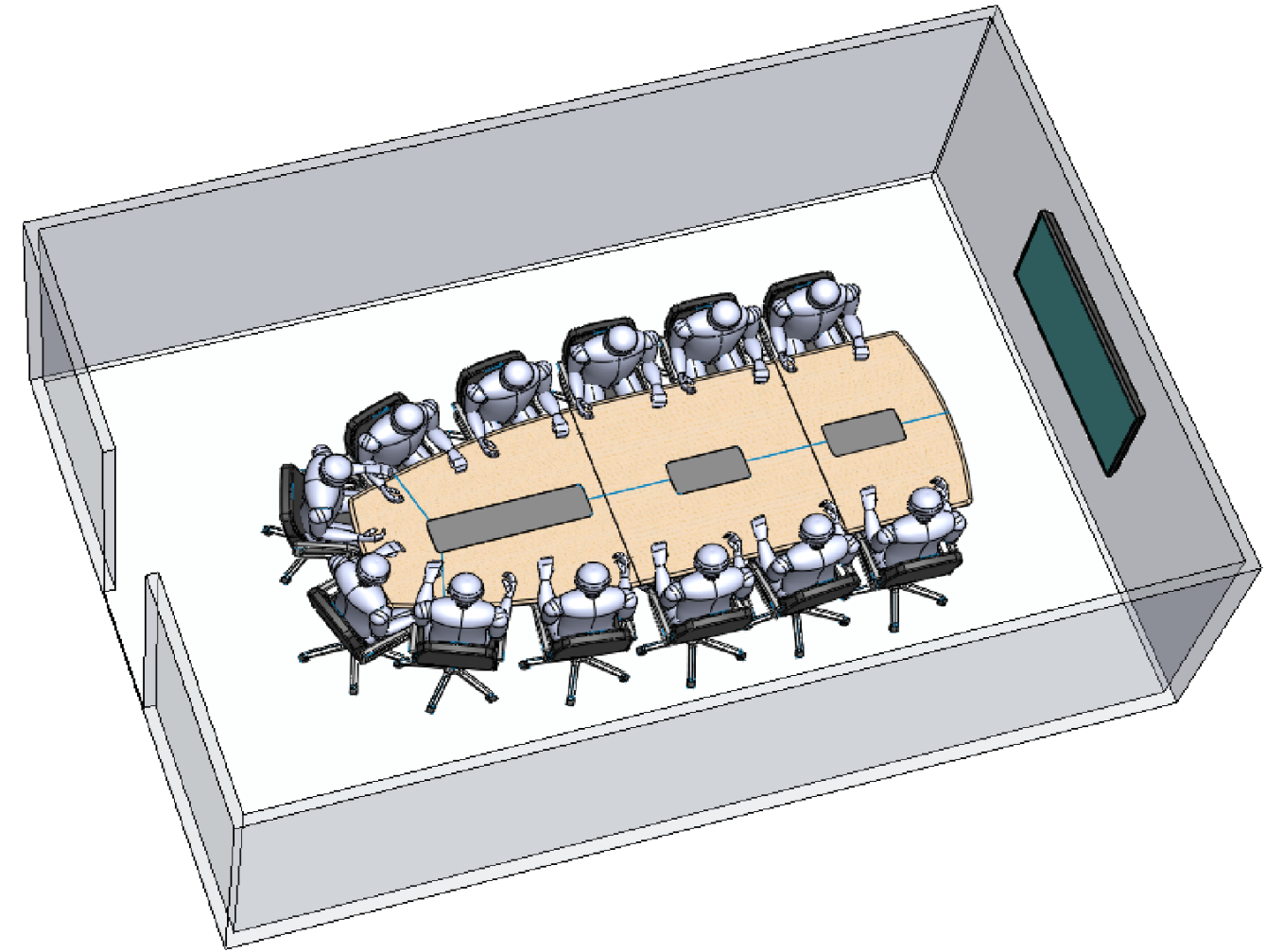
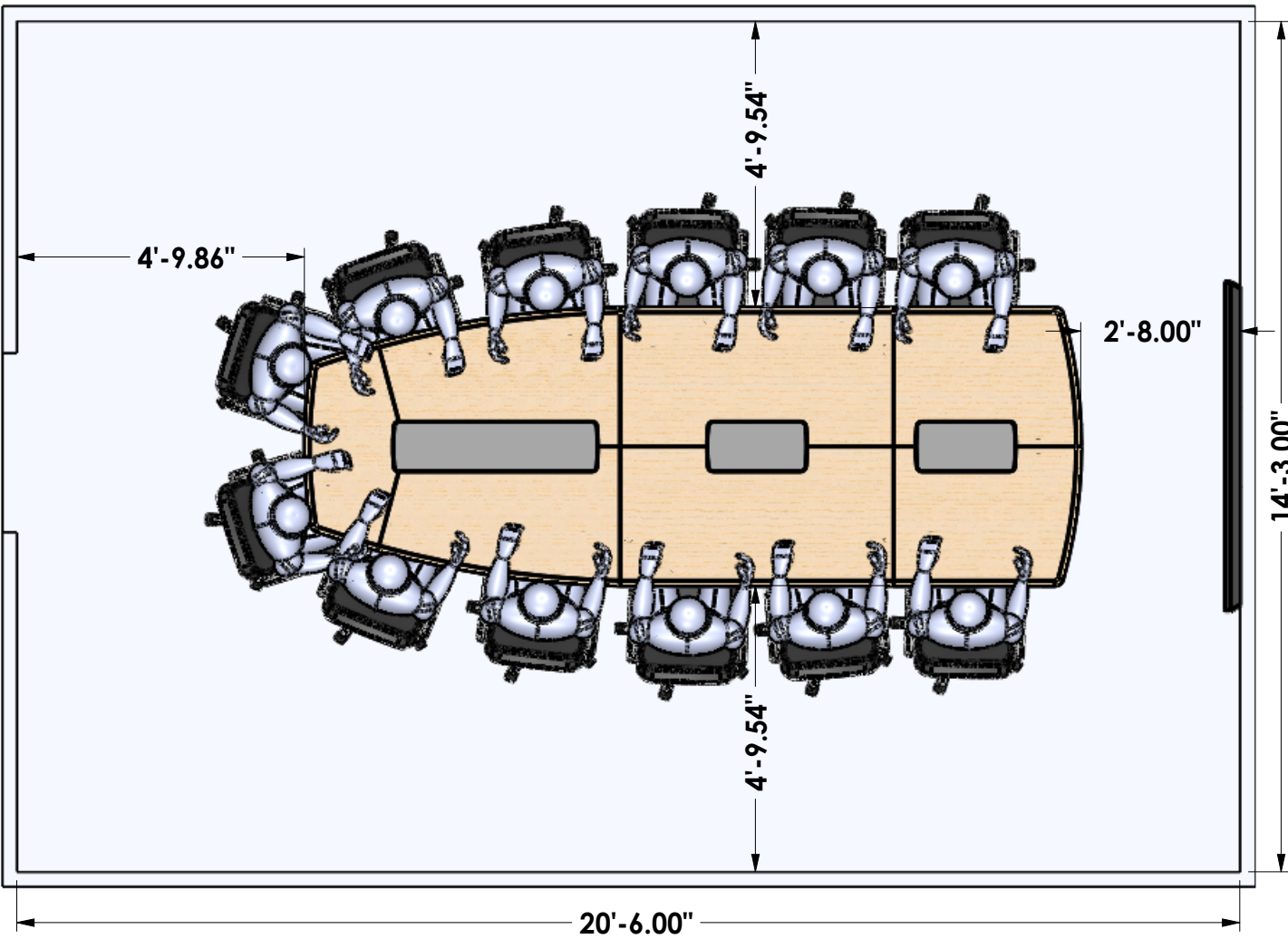
ELECTRONIC COPY IS MASTER. DO NOT USE UNLESS STAMPED AND APPROVED			APPLICATION	
			T3600	
DRAWN	NAME	DATE: YMD	TITLE:	REV
CHECKED	M.Fischer		EL SEGUNDO WEST CONF	00
DESIGNED	M.Fischer		DWG. NO.	
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF AVFI. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF AVFI IS PROHIBITED.			MATRIX AV AUG 4 2020	
			SIZE B	SHEET:1 OF 1

D

C

B

A

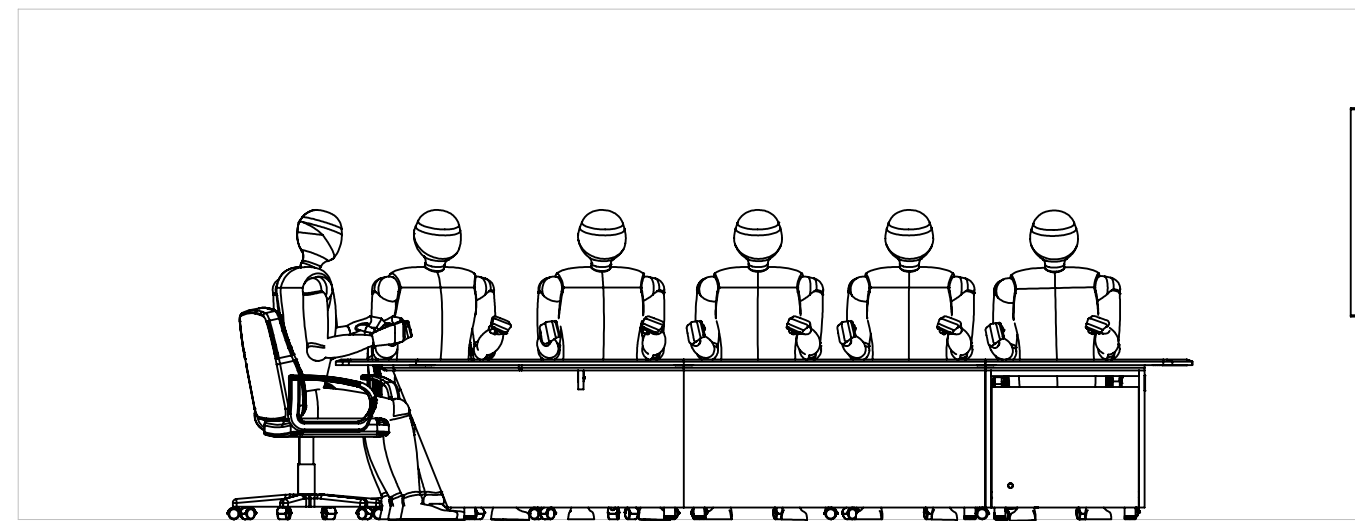


D

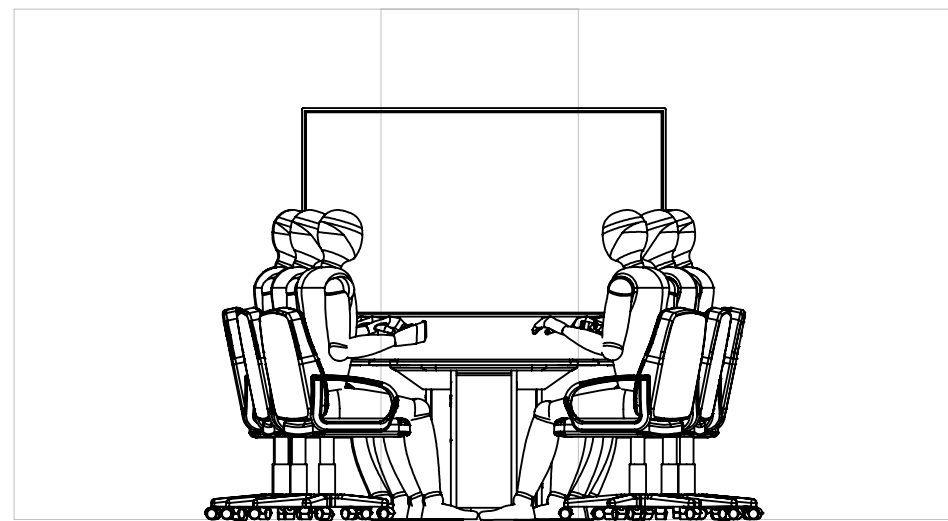
C

B

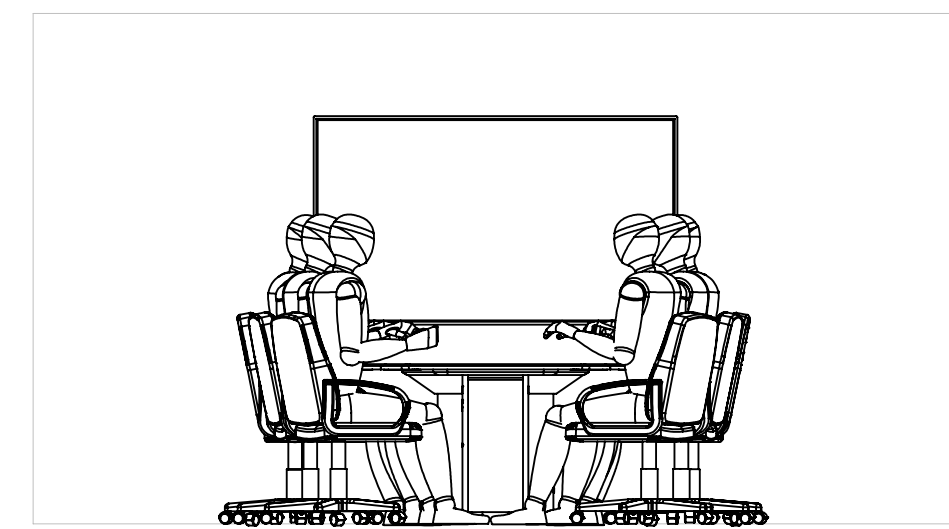
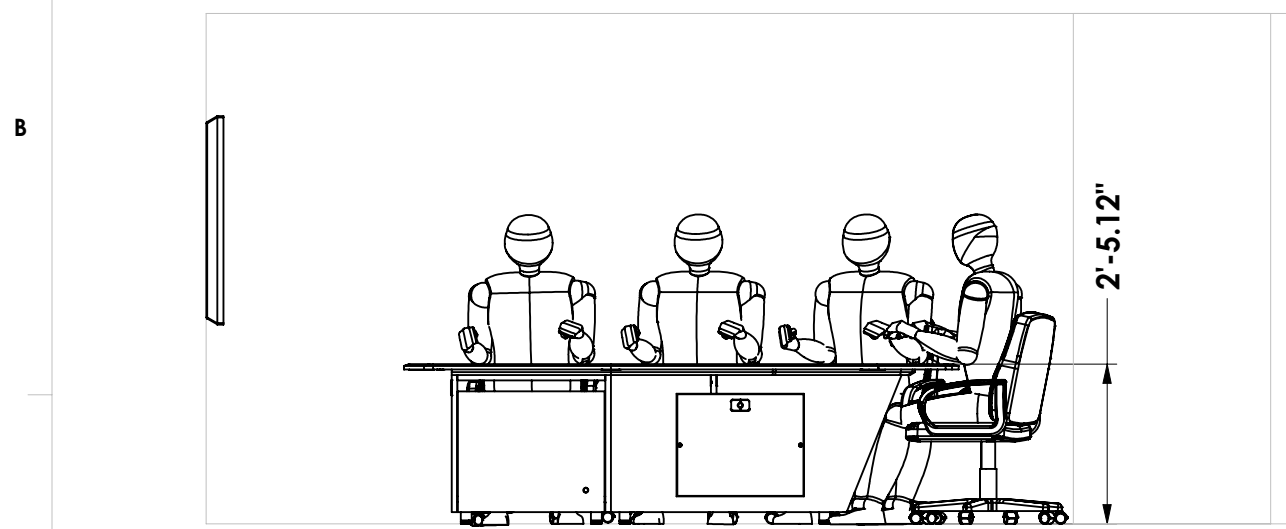
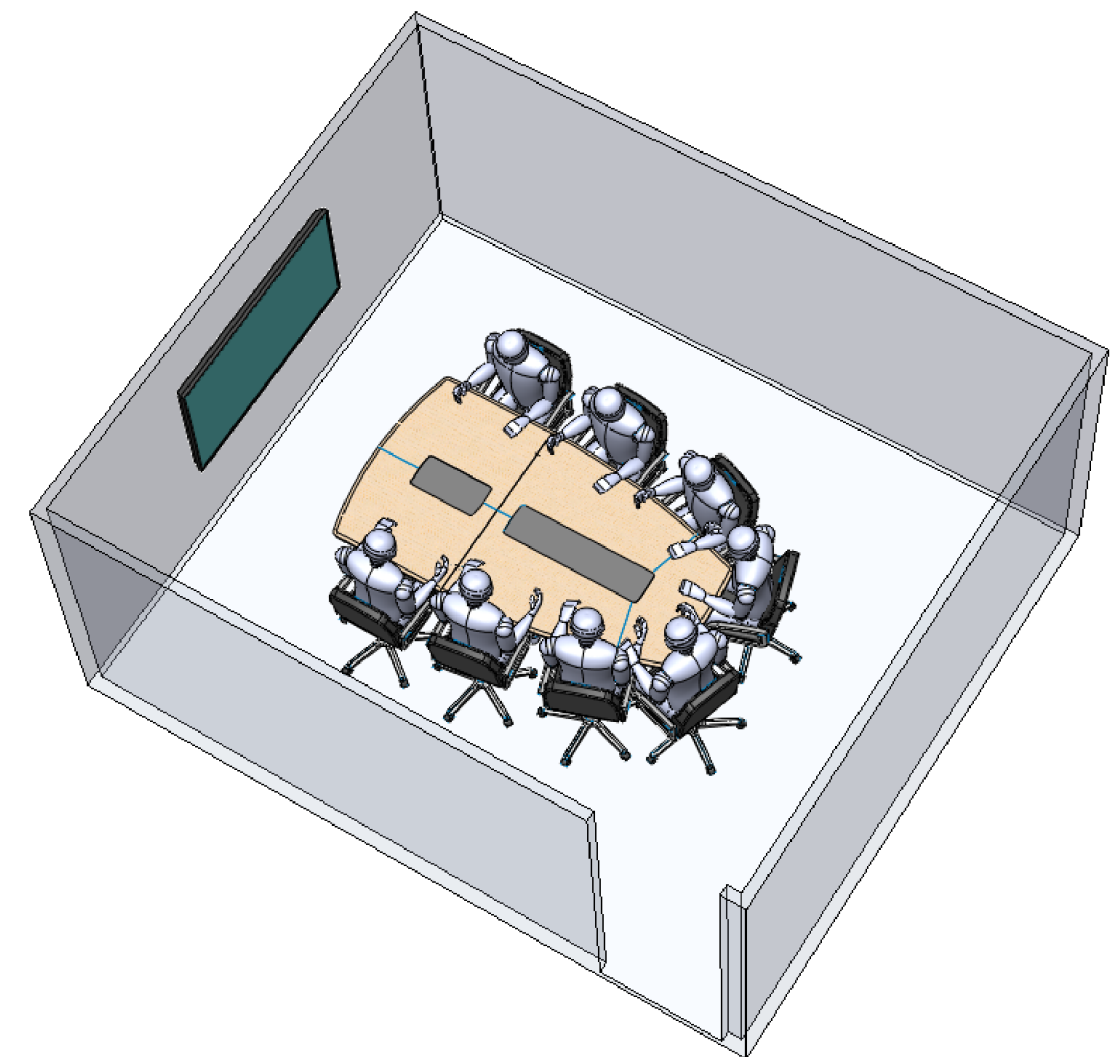
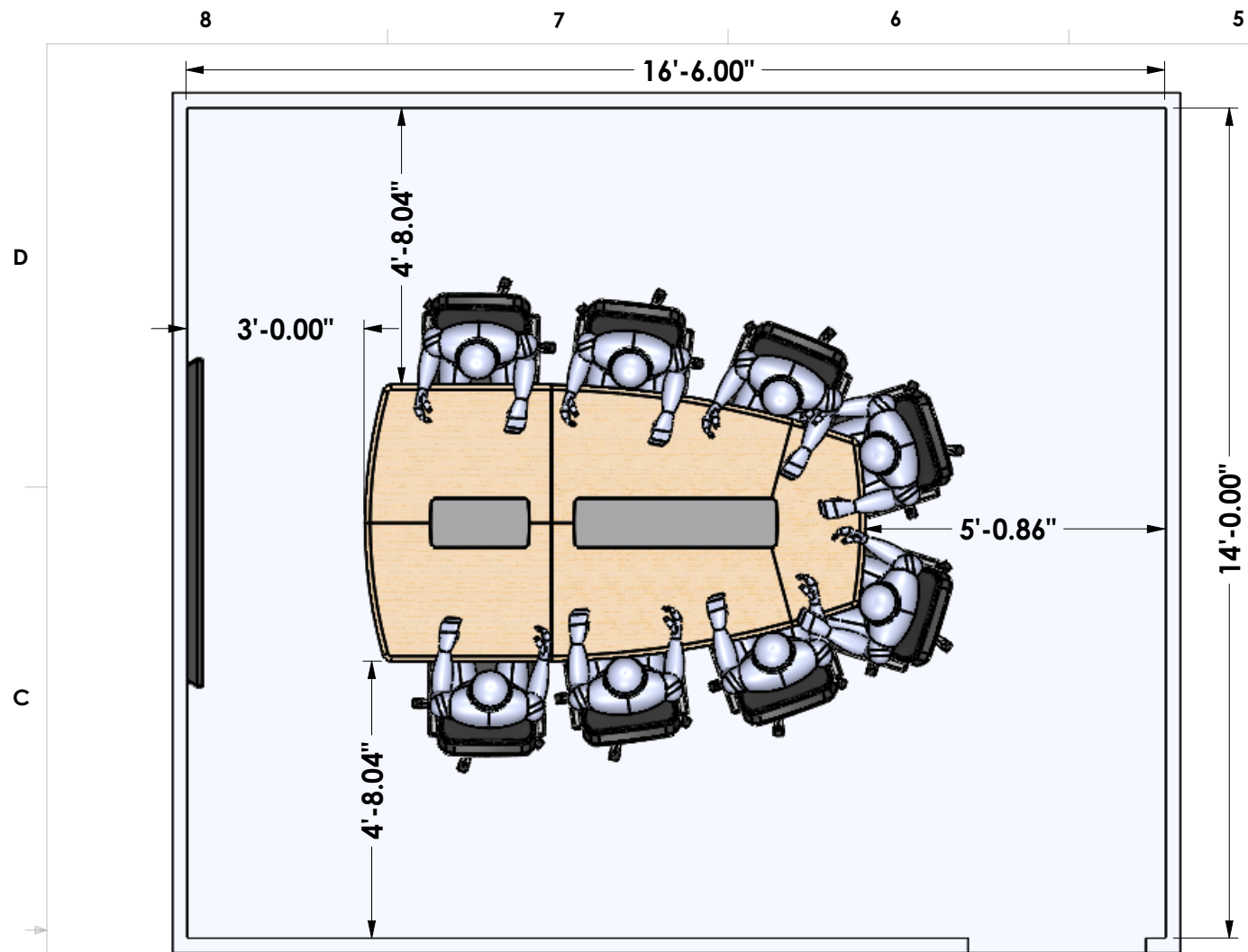
A




36FR EXT44 36RR



ELECTRONIC COPY IS MASTER. DO NOT USE UNLESS STAMPED AND APPROVED		APPLICATION T3600	 REV 00
DRAWN	NAME M.Fischer	DATE: YMD	
CHECKED	M.Fischer		TITLE: HR Conference room.
DESIGNED			DWG. NO. MATRIX AV
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF AVFI. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF AVFI IS PROHIBITED.			SCALE: 1:64
		SIZE B	SHEET:1 OF 1



ELECTRONIC COPY IS MASTER. DO NOT USE UNLESS STAMPED AND APPROVED			APPLICATION	
NAME	DATE: YMD		T3600	
DRAWN	M.Fischer		TITLE:	REV
CHECKED	M.Fischer		Garden Conference room	00
DESIGNED			DWG. NO.	
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF AVFI. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF AVFI IS PROHIBITED.			Matrix-AV	
SCALE:	SIZE	SHEET:	1 OF 1	
1:64	B	1		