



**Trenton Hansen, Ph.D.**  
**Superintendent**

4850 Pedley Road, Jurupa Valley, CA 92509 T (951) 360-4100

Date: September 19, 2024

Re: 24-25-03PD - Jurupa USD Districtwide Exterior Cameras – Addendum #1

TO ALL BIDDERS:

The following changes, omissions, and/or additions to the Bid Documents and/or Project Manual and/or Drawings shall apply to proposals made for and to the execution of the various parts of the work affected thereby, and all other conditions shall remain the same. All parties of interest shall take careful note of the addendum so that the proper allowances may be made in strict accordance with the Addendum.

***Bidder shall acknowledge receipt of this addendum in the space provided on the Bid Form. Failure to do so may subject Bidder disqualification.***

In case of conflict between Drawings, bid documents and this addendum, this addendum shall govern.

**ITEM #1**      **Replace the Bid Form in its entirety with the Bid Form Revised attached below.**

**ITEM #2**      **Response to RFI Questions:**

**Question:** Would the District be open to viewing a demo of potential solutions?

**Answer:** Contractors may submit proposed alternative solutions by using the Request for Substitution at Time of Bid form, and following the procedures outlined in Section 19 of the Instructions to Bidders. Any substitutions must be equal or exceed the specifications and requirements outlined in the bid documents.

**Question:** Do we have to have a C-7 license or would C-10 be acceptable?

**Answer:** Only a C-7 license is acceptable for this project.

**Question:** The bid documents requirement is C-7. Per the CSLB SECTION 28 05 00 - GENERAL ELECTRONIC SAFETY SYSTEMS REQUIREMENTS requires C-10. Also, C-7 contractors cannot perform the electrical work under section 28 05 00. We are asking the district to consider letting C-10 contractor to bid this project. Per CSLB a C-10 contractor is allowed to perform the electrical and low voltage work.

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**Answer:** The first addendum removes the requirements for electrical work. Please review the revised documents.

**Question:** Due to the issues involving Verkada security breaches (see link below), Valitus is interested to know if an equal from leading brands, Axis and Milestone, would be acceptable?

**Answer:** Yes, the district will consider product substitutions, assuming the contractor follows the Request for Substitution at Time of Bid form and the procedures outlined in Section 19 of the Instructions to Bidders. Any substitutions must equal or exceed the specifications and requirements outlined in the bid documents.

**Question:** The exterior cameras are labeled with (E) for Existing, (N) for New, and (F) for Future. However, some cameras, such as those on Sheet T1.01, page 297, do not have labels. Which of the three types are they, i.e. (E), (N), or (F)?

**Answer:** The missing camera locations and final camera schedule have been clarified in Addendum 1. Further clarifications are to be released in Addendum 2.

**ITEM #3      Revisions to Plans (*Revised Plans attached below*):**

1. Revised Camera Schedule with updated quantities attached below.
2. Security general note #1 from all T0.00 sheets to be removed.
3. Technology plan general note #1 from all T0.00 sheets to be removed.
4. Security general note #2 from all T0.00 sheets to be replaced with:
  - a. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. Security general note #6 from all T0.00 sheets to be removed.
6. Technology plan general note #12 from all T0.00 sheets to be removed.
7. Removed: General note #1 from all T1.01 sheets
8. Replaced: General note #3 from all T1.01 sheets
  - a. ALL CAMERAS' HEIGHT AND EXACT LOCATION TO BE DETERMINED IN FIELD BY CONTRACTOR AND OWNER'S REPRESENTATIVE.
9. Added: General note to all T1.01 sheets
  - a. (Blue dot indication) Camera Locations for Existing Project
  - b. Please make note of "BIDDERS NOTE" on Jurupa Valley High School and Mission Middle School's T1.01 sheets.
  - c. Please make note of adjusted locations of stadium cameras on Patriot High School's T1.01 sheet.

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**ITEM #4      Revisions to Specifications (*Revised Specifications attached below*):**

- A. Section 27 00 00 Basic Materials & Methods:
  - 1. Replaced 3.11 C. with: Provide one (1) electronic operation and maintenance manual for each building. Provide one (1) electronic as- built floor plan for each building. As-builts to be turned over prior to punch walk.
  
- B. Section 27 15 00 Communications Horizontal Cabling:
  - 1. Remove all references to CAT 5 and CAT 6 cabling in their entirety. Cabling shall be CAT 6A.
  
- C. Section 27 15 00 Communications Horizontal Cabling: The following additional sections have been revised:
  - 1. 1.2 A. – Removed section in its entirety.
  - 2. 1.2 B. – Removed section in its entirety.
  - 3. 1.2 C. – Removed section in its entirety.
  - 4. 1.2 D. – Removed section in its entirety
  - 5. 1.7 C. – Removed reference to CAT 5 and CAT 6 cabling systems.
  - 6. 2.3 B. – Removed section referencing CAT 6 in its entirety.
  - 7. 2.4 B. – Removed section referencing CAT 6 in its entirety.
  - 8. 2.5 A. Faceplates – Replaced section in its entirety with:
    - a. Flush-mounted Plastic Faceplates:
      - i. 1-port single-gang plastic wallplate with ID windows.
        - 1. Colors: white
        - 2. Part Number: Leviton 42080-1WS (white)
      - ii. 2-port single-gang plastic wallplate with ID windows.
        - 1. Colors: white
        - 2. Part Number: Leviton 42080-2WS (white)
      - iii. 3-port single-gang plastic wallplate with ID windows.
        - 1. Colors: white
        - 2. Part Number: Leviton 42080-3WS (white)
      - iv. 4-port single-gang plastic wallplate with ID windows.
        - 1. Colors: white
        - 2. Part Number: Leviton 42080-4WS (white)
    - b. Flush-Mounted Stainless Steel Faceplates
      - i. 1-port single-gang stainless steel with ID windows.
        - 1. Part Number: Leviton 43080-1L1
      - ii. 2-port single-gang stainless steel with ID windows.
        - 1. Part Number: Leviton 43080-1L2
    - c. Surface-Mounted outlet boxes:
      - i. 1-port QuickPort surface-mount box, plastic, with ID window
        - 1. Color: white
        - 2. Part Number: Leviton 41089-1WP

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- ii. 2-port QuickPort surface-mount box, plastic, with ID window
        - 1. Color: white
        - 2. Part Number: Leviton 41089-2WP
  - 9. 2.5 - Added: Cabling that is ran exterior or through underground conduits shall be indoor/outdoor rated CAT6A. Berk-Tek reel P/N: 11142753.
  - 10. 2.7 C. - Removed section referencing CAT 6 in its entirety.
  - 11. 3.2 – Added Cabling Installation Instructions previously included in Specification Section 28 23 00 to this Section.
- D. Section 28 05 00 General Electronic Safety Systems & Requirements:
- 1. 1.2G – Removed section in its entirety.
  - 2. 1.10B – Replaced with: Legible redlines are required to be turned over prior to the Owner punch walk. Upon submitting request for final payment, Contractor shall turn over to the Owner, revised and final as built drawings showing “as installed” work.
  - 3. 1.13 – Replaced with: Bid opening contractors wishing to propose systems which differ in manufacturer, features, functions, or operating characteristics from those outlined in these specifications must do so in writing using the Request for Substitution at Time of Bid form, and following the procedures outlined in Section 19 of the Instructions to Bidders.
- E. Section 28 23 00 Video Surveillance Systems:
- 1. 2.01 A. – Replaced with: The cabling to each camera location on this project shall be provided and installed by the CONTRACTOR.
  - 2. 2.05 A.23 – Added section – Cameras identified as 270 degree cameras must have a 5MP or greater resolution. Cameras identified as 180 degree cameras must have a 3MP or greater resolution. Cameras identified as 90 degree cameras must have a 1.5MP or greater resolution.
  - 3. 2.05 A.24 – Added section – Camera system must be capable of recognition of faces and objects. The ability to upload an image of a facial picture for searching through video is necessary. Objects must be able to be searched by colors and description.
  - 4. 2.05 A.25 – Added section – Camera system must be capable of detecting and alerting on loitering in areas determined by owner.
  - 5. 2.05 A.26 – Added section – Camera system must be capable of accepting and processing application program interface (API) calls to perform tasks and get information.
  - 6. 1.03 B. – Added: Cameras and/or VSS (camera system) must not be included in the FCC or NDAA Prohibited manufacturers list.
  - 7. 3.01 H. – Added: The password for each camera will be changed to a strong password and given to the district project manager.

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8. 3.01 I. – Added: Contractor will use a spreadsheet hosted by the district to track which cables have been patched over at which schools. District staff will identify and configure network ports for use. Contractor to turn over MAC addresses of equipment prior to installation.
9. 3.02 Cabling/Conduit Installation: Moved this section in its entirety to Specification Section 27 15 00 Communications Horizontal Cabling.
10. 3.03 Equipment Rack Configuration: Moved this section in its entirety to Specification Section 27 15 00 Communications Horizontal Cabling.

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**BID FORM REVISED**

TO: Jurupa Unified School District, acting by and through its Governing Board, herein called "District".

FROM: \_\_\_\_\_

1. Pursuant to and in compliance with your Notice Inviting Bids and other documents relating thereto, the undersigned bidder, having familiarized himself with the terms of the Contract, the local conditions affecting the performance of the Contract, the cost of the work at the place where the work is to be done, with the Drawings and Specifications, Addenda, and other Contract Documents, hereby proposes and agrees to perform within the time stipulated, the Contract, including all of its component parts, and everything required to be performed, including its acceptance by the District, and to provide and furnish any and all labor, materials, tools, expendable equipment, and utility and transportation services necessary to perform the Contract and complete all of the Work in a workmanlike manner required in connection with the construction of:

BID SCHEDULE NO.

24-25-03PD – Jurupa USD Districtwide Exterior Cameras

in the District described above, all in strict conformance with the drawings and other Contract Documents on file at the Purchasing Office of said District for amounts set forth herein.

2. BIDDER ACKNOWLEDGES THE FOLLOWING ADDENDUM:

Number	Number	Number	Number	Number	Number	Number	Number
_____	_____	_____	_____	_____	_____	_____	_____

Acknowledge the inclusion of all addenda issued prior to bid in the blanks provided above. Your failure to do so may render your bid non-responsive.

3. a. TOTAL CASH PURCHASE PRICE IN WORDS & NUMBERS:

\_\_\_\_\_ DOLLARS  
(\$ \_\_\_\_\_)

b. PROPOSED VIRTUAL SECURITY SYSTEM MANUFACTURER:

\_\_\_\_\_

4. PROJECT ALLOWANCE: The cash purchase price listed above is inclusive of the allowance specified in the bid documents. Any balance shall be returned to the District at the conclusion of the Project.

5. TIME FOR COMPLETION: The District may give a notice to proceed within ninety (90) days of the award of the bid by the District. Once the Contractor has received the notice to proceed, the Contractor shall complete the work in the time specified in the Agreement. By submitting this bid, Contractor has thoroughly studied this Project and agrees that the Contract Time for this Project is adequate for the timely and proper completion of the Project. Further, Contractor has included in the analysis of the time required for this Project, Rain Days, Governmental Delays, and the requisite time to complete Punch List.

6. In the event that the District desires to postpone giving the notice to proceed beyond this ninety (90) day period, it is expressly understood that with reasonable notice to the Contractor, giving the notice to proceed may be postponed by the District. It is further expressly understood by the Contractor, that the Contractor shall not be entitled to any claim of additional compensation as a result of the postponement of giving the notice to proceed.

7. If the Contractor believes that a postponement will cause a hardship to it, the Contractor may terminate the contract with written notice to the District within ten (10) days after receipt by the Contractor of the District's notice of postponement. Should the Contractor terminate the Contract as a result of a notice of postponement, the District shall have the authority to award the Contract to the next lowest responsible bidder, if applicable.

8. It is understood that the District reserves the right to reject any or all bids and/or waive any irregularities or informalities in this bid or in the bid process. The Contractor understands that it may not withdraw this bid for a period of ninety (90) days after the date set for the opening of bids.

9. Attached is bid security in the amount of not less than ten percent (10%) of the bid:

\$ \_\_\_\_\_

Bid bond (10% of the Bid), certified check, or cashier's check (**circle one**)

10. The required List of Designated Subcontractors is attached hereto.

11. The required Non-Collusion Declaration is attached hereto.

12. The Substitution Request Form, if applicable, is attached hereto.

13. It is understood and agreed that if written notice of the acceptance of this bid is mailed, telegraphed, or delivered to the undersigned after the opening of the bid, and within the time this bid is required to remain open, or at any time thereafter before this bid is withdrawn, the undersigned will execute and deliver to the District a Contract in the form attached hereto in accordance with the bid as accepted, and that he or she will also furnish and deliver to the District the Performance Bond and Payment Bond, all within five (5) calendar days after award of Contract, and that the work under the Contract shall be commenced by the undersigned bidder, if awarded the Contract, by the start date provided in the District's Notice to Proceed, and shall be completed by the Contractor in the time specified in the Contract Documents.

14. The names of all persons interested in the foregoing proposal as principals are as follows:

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(IMPORTANT NOTICE: If bidder or other interested person is a corporation, state the legal name of such corporation, as well as the names of the president, secretary, treasurer, and manager thereof; if a co-partnership, state the true names of the firm, as well as the names of all individual co-partners comprising the firm; if bidder or other interested person is an individual, state the first and last names in full.)

15. PROTEST PROCEDURES. If there is a bid protest, the grounds shall be submitted as set forth in the Instructions to Bidders.

16. The undersigned bidder shall be licensed and shall provide the following California Contractor's license information:

License Number: \_\_\_\_\_  
License Expiration Date: \_\_\_\_\_  
Name on License: \_\_\_\_\_  
Class of License: \_\_\_\_\_  
DIR Registration Number: \_\_\_\_\_

If the bidder is a joint venture, each member of the joint venture must include the above information.

17. Time is of the essence regarding this Contract, therefore, in the event the bidder to whom the Contract is awarded fails or refuses to post the required bonds and return executed copies of the Agreement form within five (5) calendar days from the date of receiving the Notice of Award, the District may declare the bidder's bid deposit or bond forfeited as damages.

18. The bidder declares that he/she has carefully examined the location of the proposed Project, that he/she has examined the Contract Documents, including the Plans, General Conditions, Supplemental Conditions, Addenda, and Specifications, all others documents and requirements that are attached to and/or contained in the Project Manual, all other documents issued to bidders and read the accompanying instructions to bidders, and hereby proposes and agrees, if this proposal is accepted, to furnish all materials and do all work required to complete the said work in accordance with the Contract Documents, in the time and manner therein prescribed for the unit cost and lump sum amounts set forth in this Bid Form.

19. DEBARMENT. In addition to seeking remedies for False Claims under Government Code section 12650 et seq. and Penal Code section 72, the District may debar a Contractor pursuant to Article 15 of the General Conditions if the Board, or the Board may designate a hearing officer who, in his or her discretion, finds the Contractor has done any of the following:

- a. Intentionally or with reckless disregard, violated any term of a contract with the District;
- b. Committed an act or omission which reflects on the Contractor's quality, fitness or capacity to perform work for the District;
- c. Committed an act or offense which indicates a lack of business integrity or business honesty; or
- d. Made or submitted a false claim against the District or any other public entity. (See Government Code section 12650, et seq., and Penal Code section 72)

20. DESIGNATION OF SUBCONTRACTORS. In compliance with the Subletting and Subcontracting Fair Practices Act (California Public Contract Code section 4100 et seq.) and any amendments thereof, each bidder shall list subcontractors on the District's form Subcontractor list. This subcontractor list shall be submitted with the bid and is a required form



I agree to receive service of notices at the e-mail address listed below.

I, the below-indicated bidder, declare under penalty of perjury that the information provided and representations made in this bid are true and correct.

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Proper Name of Company

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Name of Bidder Representative

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Street Address

---

City, State, and Zip

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(        )  
Phone Number

---

(        )  
Fax Number

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E-Mail

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Signature of Bidder Representative

**NOTE:** If bidder is a corporation, the legal name of the corporation shall be set forth above together with the signature of authorized officers or agents and the document shall bear the corporate seal; if bidder is a partnership, the true name of the firm shall be set forth above, together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership; and if bidder is an individual, his signature shall be placed above.

*All signatures must be made in permanent blue ink.*

Jurupa Unified Districtwide Camera Project - Camera Schedule by Site\_Addendum 01

<b>Site</b>	<b>Address</b>	<b>Camera Quantity</b>	
Camino Real Elementary	4655 Camino Real	3	
Granite Hill Elementary	9371 Granite Hill	3	
Indian Hills Elementary	7750 Linares	3	
Mission Bell Elementary	4020 Conning Street	3	
Pacific Avenue Academy of Music	6110 45th Street	3	
Pedley Elementary	5871 Hudson Street	3	
Peralta Elementary	6450 Peralta Place	3	
Rustic Lane Elementary	6420 Rustic Lane	3	
Sky Country Elementary	5520 Lucretia	3	
Stone Avenue Elementary	5111 Stone Avenue	3	
Sunnyslope Elementary	7050 38th Street	3	
Van Buren Elementary	9501 Jurupa Road	3	
West Riverside Elementary	5671 42nd Street	7	
Mira Loma Middle School	5051 Steve Street	3	
Mission Middle School	5961 Mustang Lane	14	
Nueva Vista High School	6836 34th Street	4	
Jurupa Valley High School	10551 Bellegrave	22	Quantity Updated
Patriot High School	4355 Camino Real	15	
Rubidoux High School	4250 Opal Street	9	
Learning Center (Adult Alternative Education)	4041 Pacific Avenue	6	Site Name Updated
School Readiness Center (Listed on Plans as Family Resource & Childcare Center)	5960 Mustang Lane	4	Site Name Updated
Maintenance & Operations	4740 Pedley Road	3	
Education Center & Parent Center	4850 Pedley Road	10	Combined Sites
Professional Development Center	10223 Bellegrave Avenue	3	
		<b>136</b>	

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PAN-DUCT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANS/IEEE, IBC, AND THE NEC.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA #1 FIELD OF VIEW	1.
	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
	UNDERGROUND/FLOOR CONDUIT	
	CONDUIT UP	
	CONDUIT DOWN	
	CONDUIT WITH CONTINUATION	
	CONDUIT SLEEVE	
	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

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- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "#1" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01AA	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR-#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
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RANCHO CUCAMONGA  
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ADULT ALTERNATIVE EDUCATION  
 SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 4041 PACIFIC AVE, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



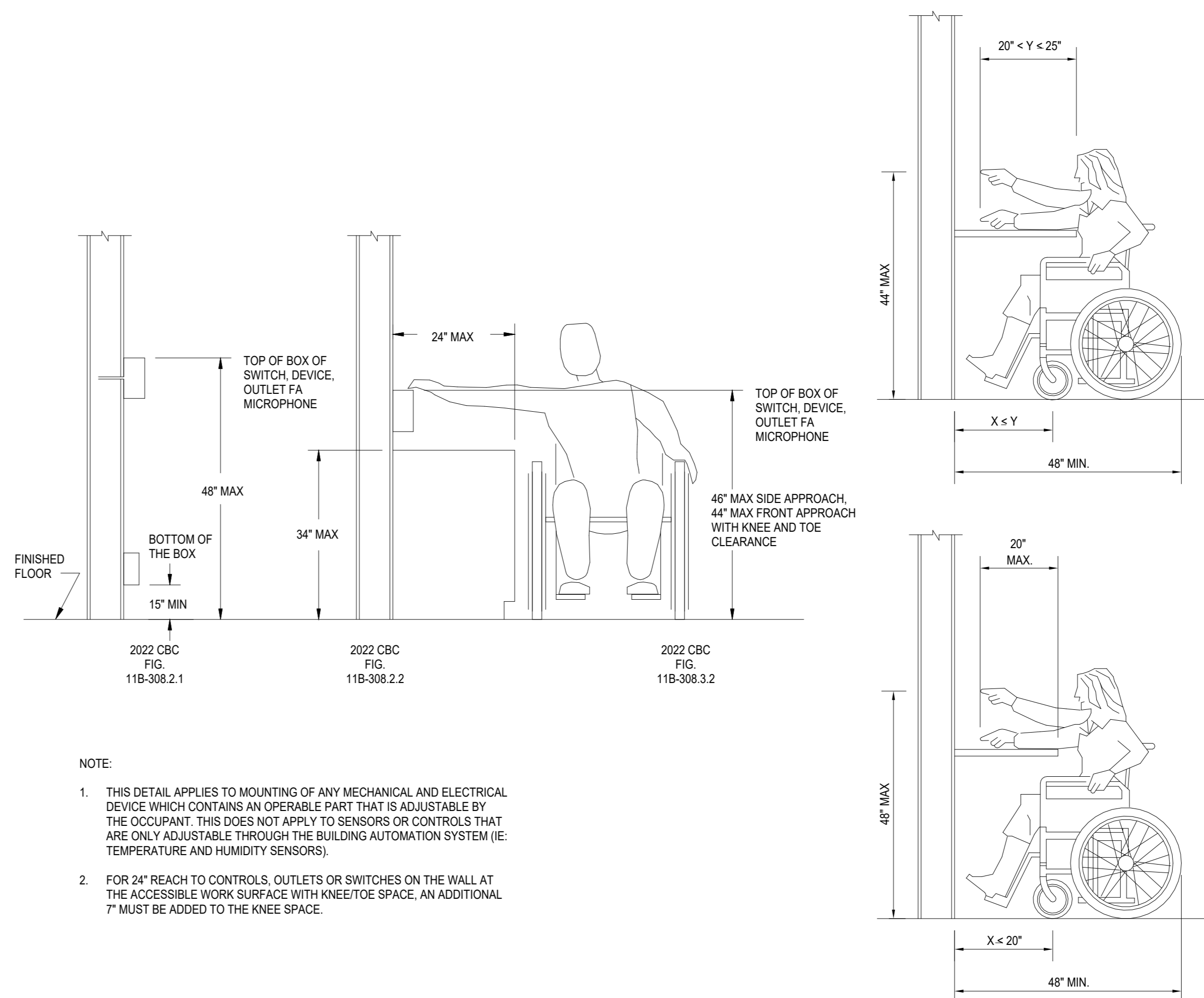
ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

REVISIONS		
No.	Description	Date
1	ADDENDUM 01	9/18/24

TECHNOLOGY COVER SHEET

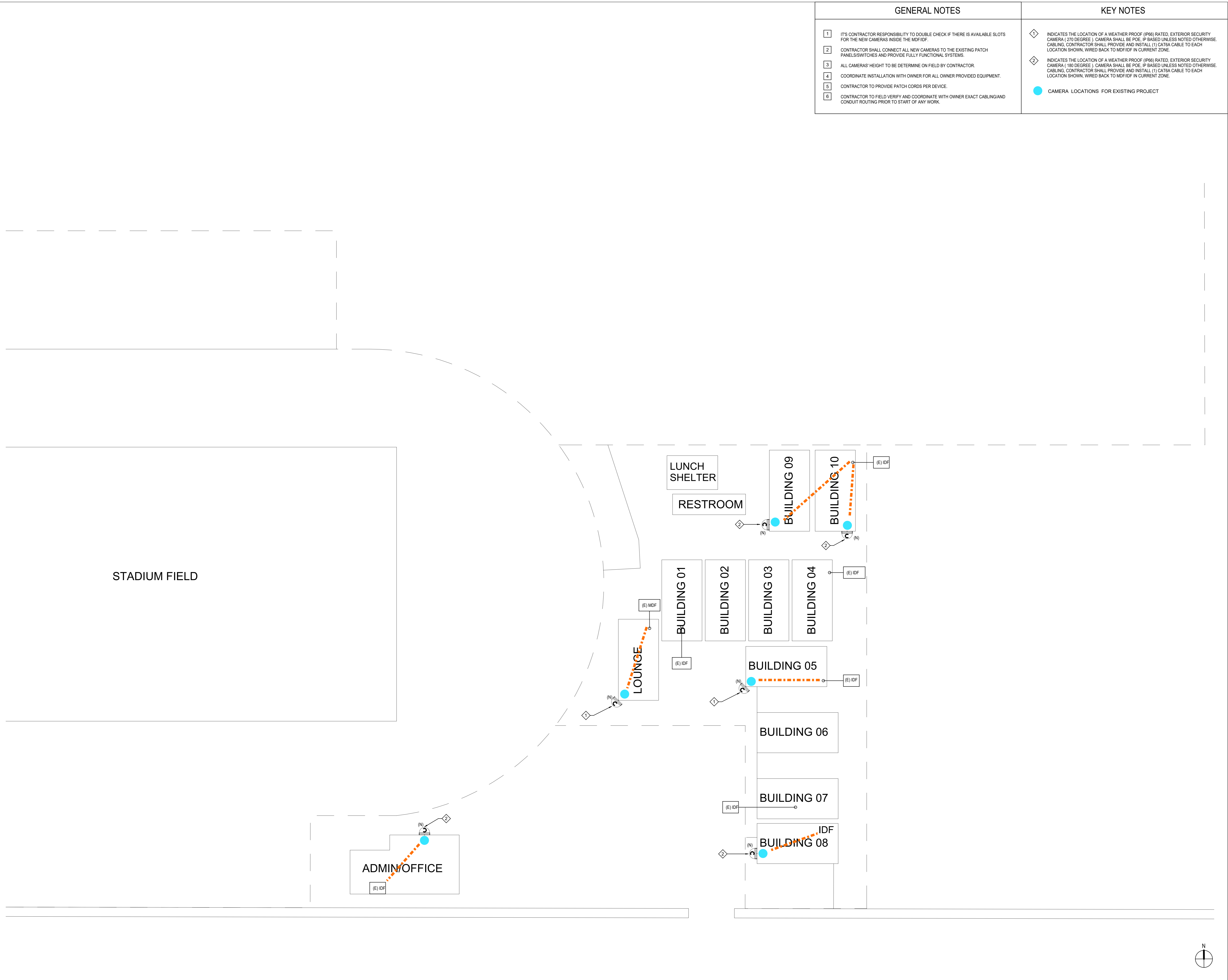
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- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
  - FOR 24" REACH TO CONTROLS, OUTLETS OR SWITCHES ON THE WALL AT THE ACCESSIBLE WORK SURFACE WITH KNEE/TOE SPACE, AN ADDITIONAL 7" MUST BE ADDED TO THE KNEE SPACE.

GENERAL NOTES	
1	IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
2	CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
3	ALL CAMERAS' HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
4	COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
5	CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
6	CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING/AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.

KEY NOTES	
◇	INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE) CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.
◇	INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE) CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.
●	CAMERA LOCATIONS FOR EXISTING PROJECT



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**ADULT ALTERNATIVE EDUCATION  
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4041 PACIFIC AVE, JURUPA VALLEY, CA 92509

KEY PLAN

ENGINEER

ARCHITECT

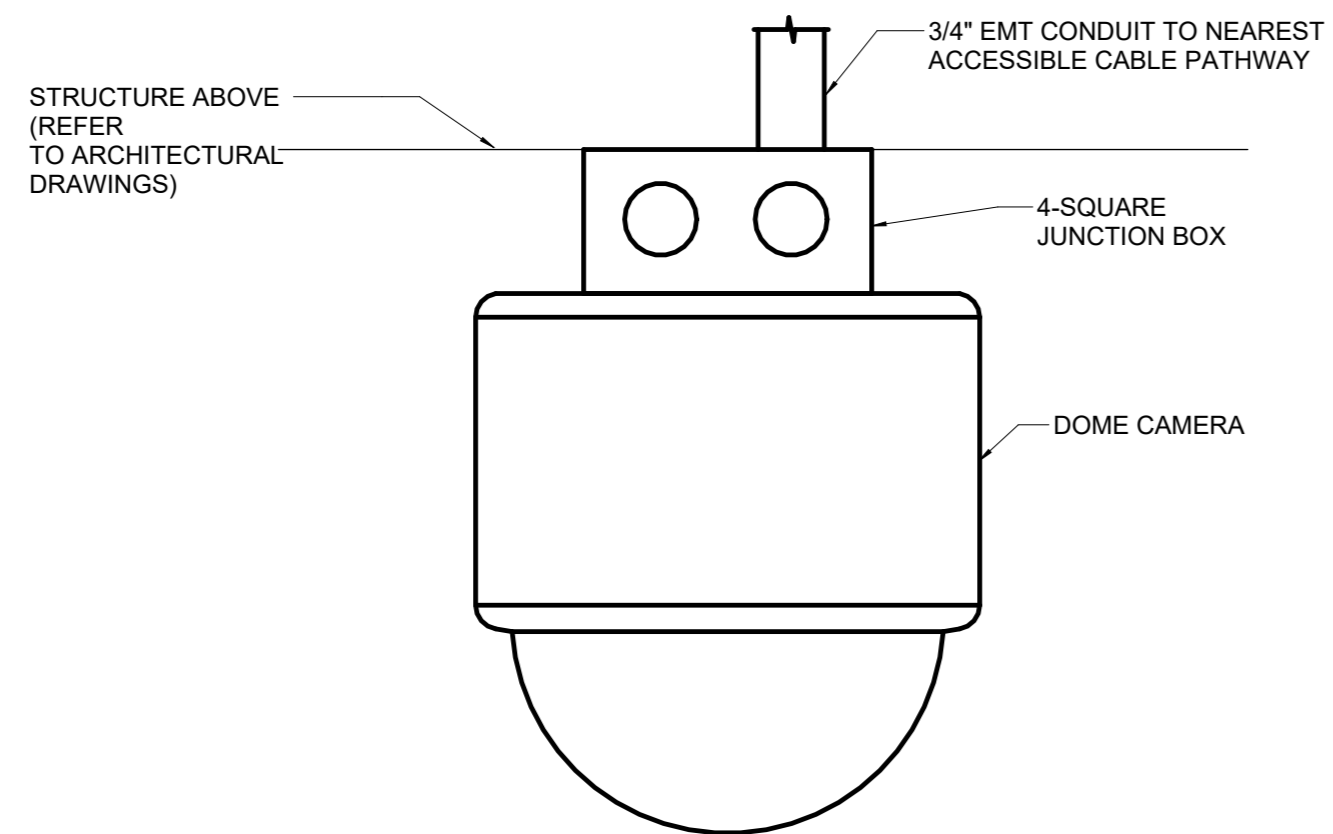
CLIENT	
JURUPA UNIFIED SCHOOL DISTRICT	
PROJECT NUMBER	
DATE:	12/20/23
DRAWN BY:	Author
CHECKED BY:	Checker

REVISIONS		
No.	Description	Date
1	Addendum 1	8/12/24

**TECHNOLOGY SITE  
PLAN**

**T1.01AA**

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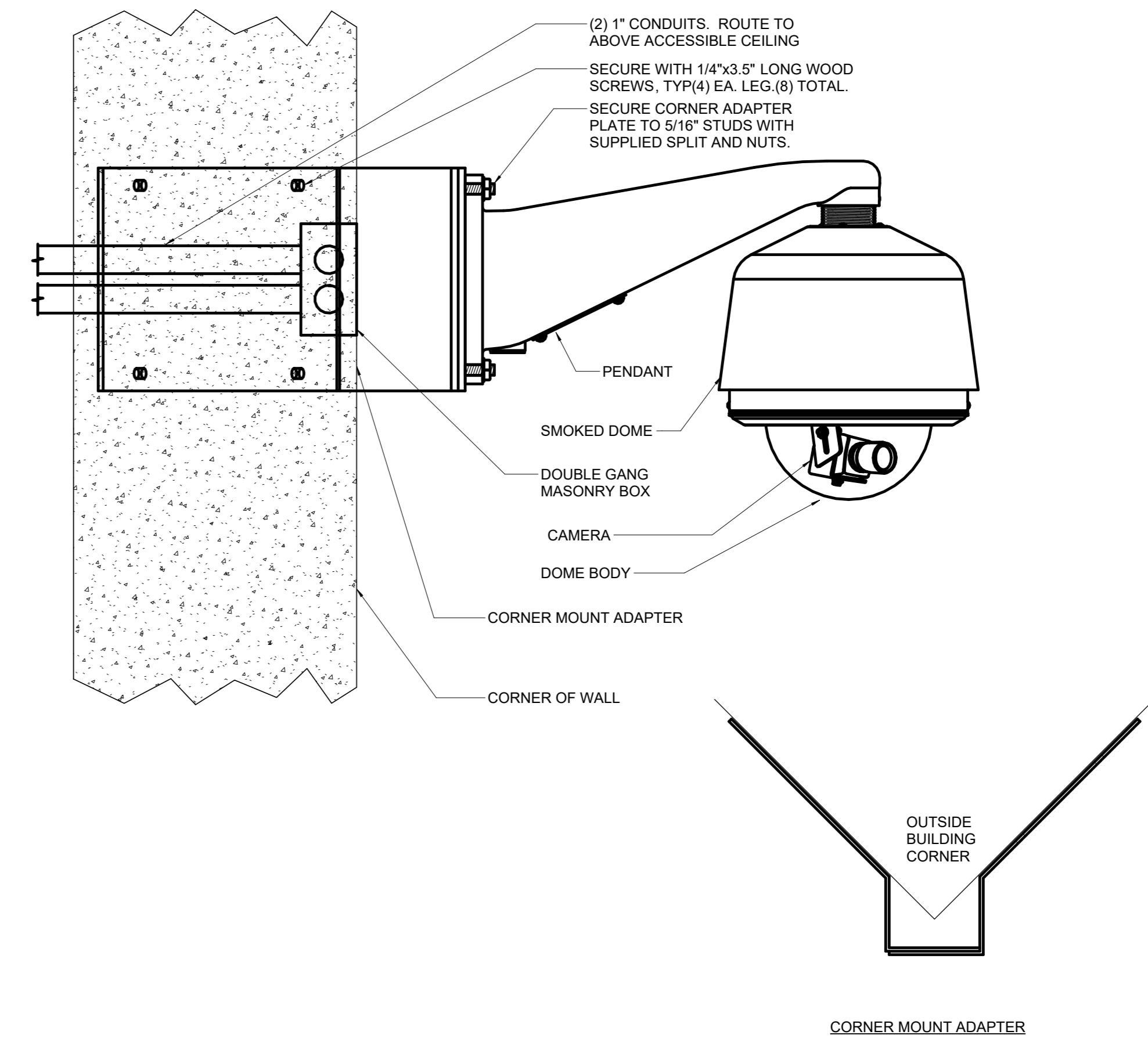


**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

**4 EXTERIOR SURFACE CEILING CAMERA MOUNTING**

N.T.S.

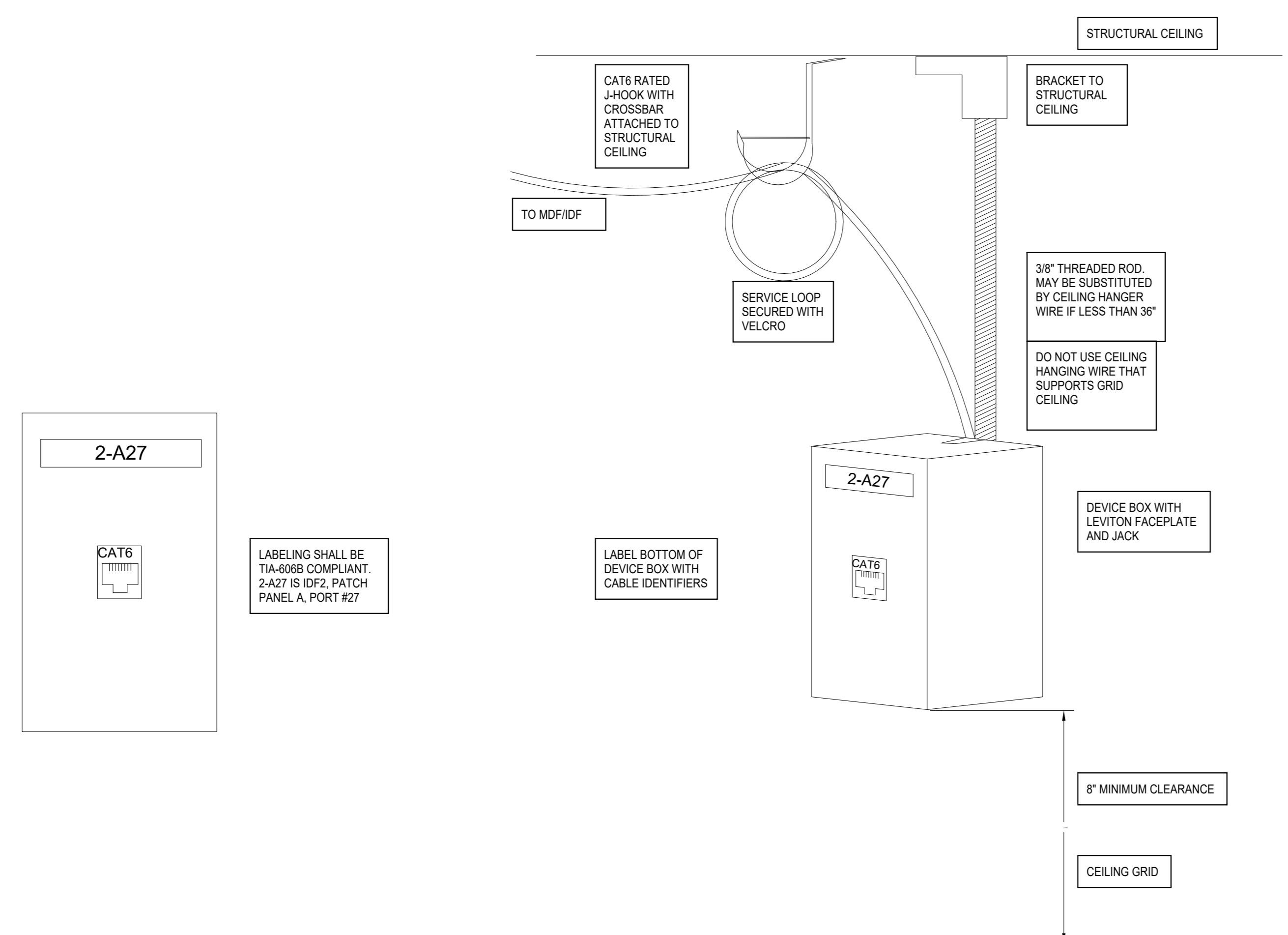


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONRY FASTENERS. DO NOT ANCHOR TO FACE BRICK. SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION INFORMATION.

**1 EXTERIOR CORNER MOUNT CAMERA DETAIL**

3" = 1'-0"

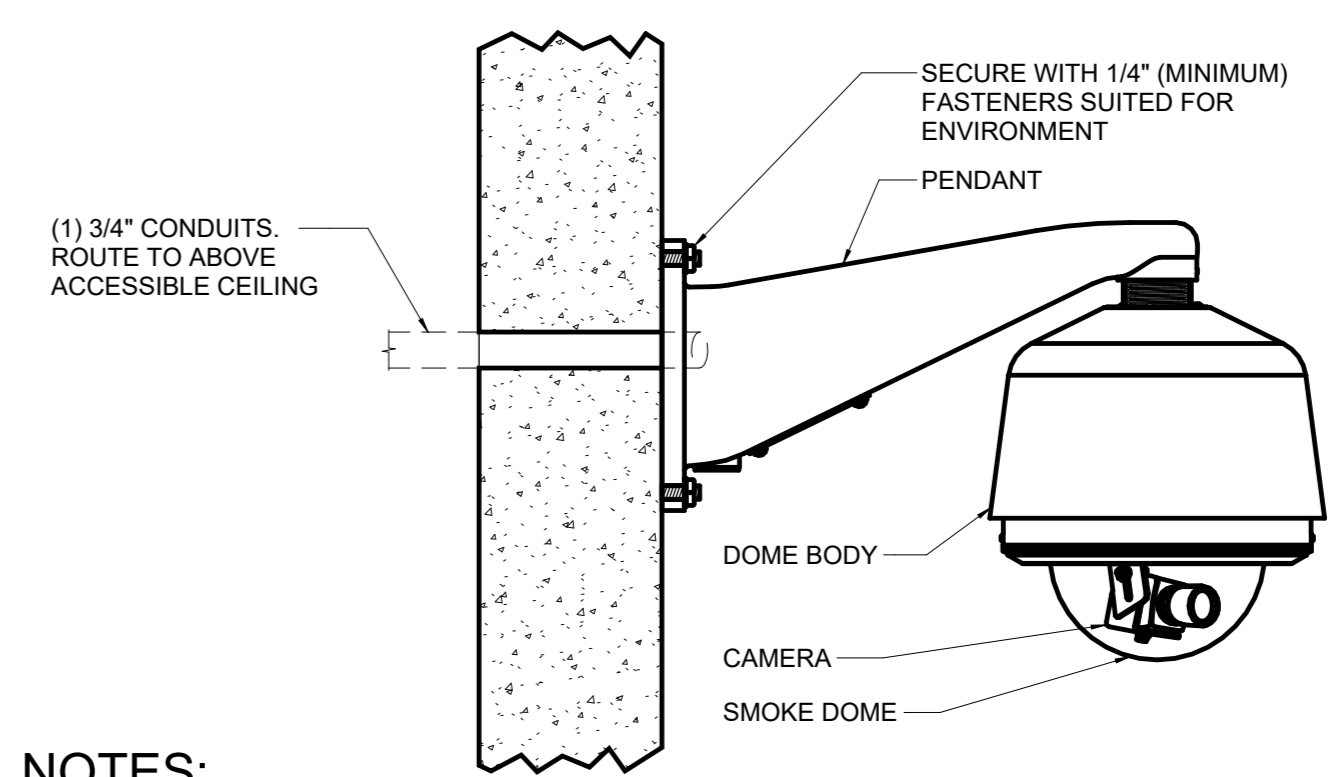


**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSEST ENDS OF ALL CABLES. INSTALL LABEL 1" FROM THE END OF THE CABLE JACKET AT BOTH ENDS.
- CABLE LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THAN 1/8" IN HEIGHT.

**5 SINGLE PORT LABELING**

N.T.S.

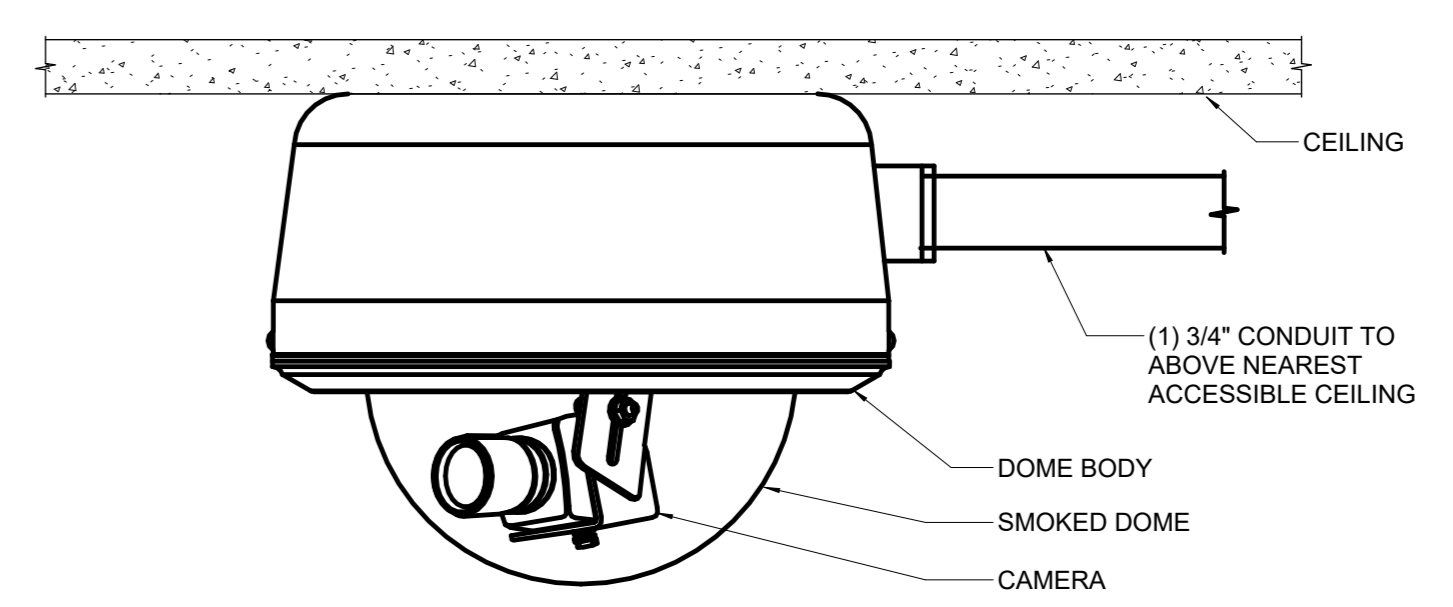


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONARY FASTENERS. DO NOT ANCHOR TO FACE OF BRICK.
- SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**2 EXTERIOR WALL MOUNTED CAMERA**

3" = 1'-0"



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3 EXPOSED MOUNT FIXED CAMERA CEILING**

6" = 1'-0"

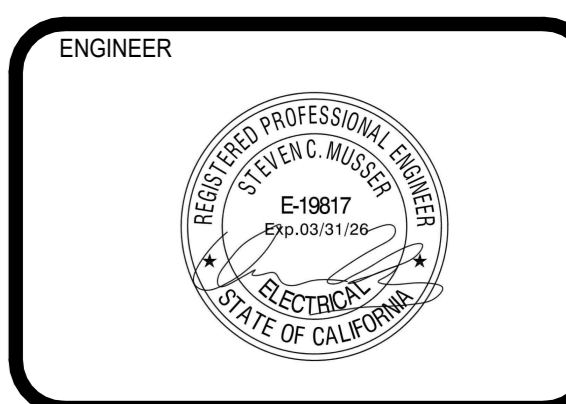


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KEY PLAN



ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER

DATE: 12/20/23  
DRAWN BY: Author  
CHECKED BY: Checker

No.	Description	Date

**TECHNOLOGY  
DETAILS**

**T6.01**

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PANDUIT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSI/RITA, IBC/S, AND THE NEC.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P&K.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRADES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
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SHEET  
T0.00  
T1.01CR  
T6.01

DESCRIPTION  
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TECHNOLOGY SITE PLAN  
TECHNOLOGY DETAILS

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CAMINO REAL ES SECURITY CAMERAS

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4655 CAMINO REAL, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

CLIENT

PROJECT NUMBER

DATE: 12/20/23

DRAWN BY: TA

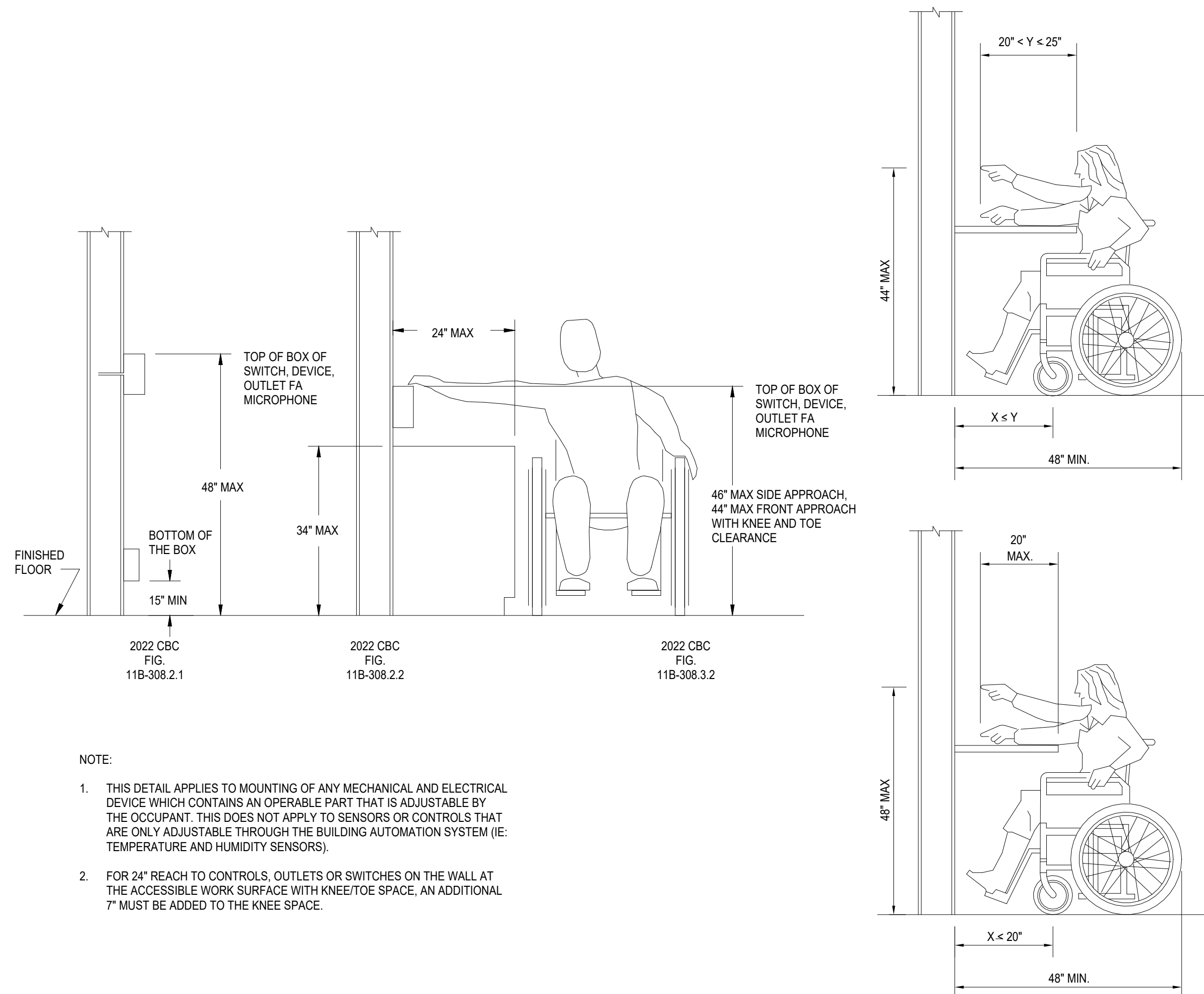
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REVISIONS

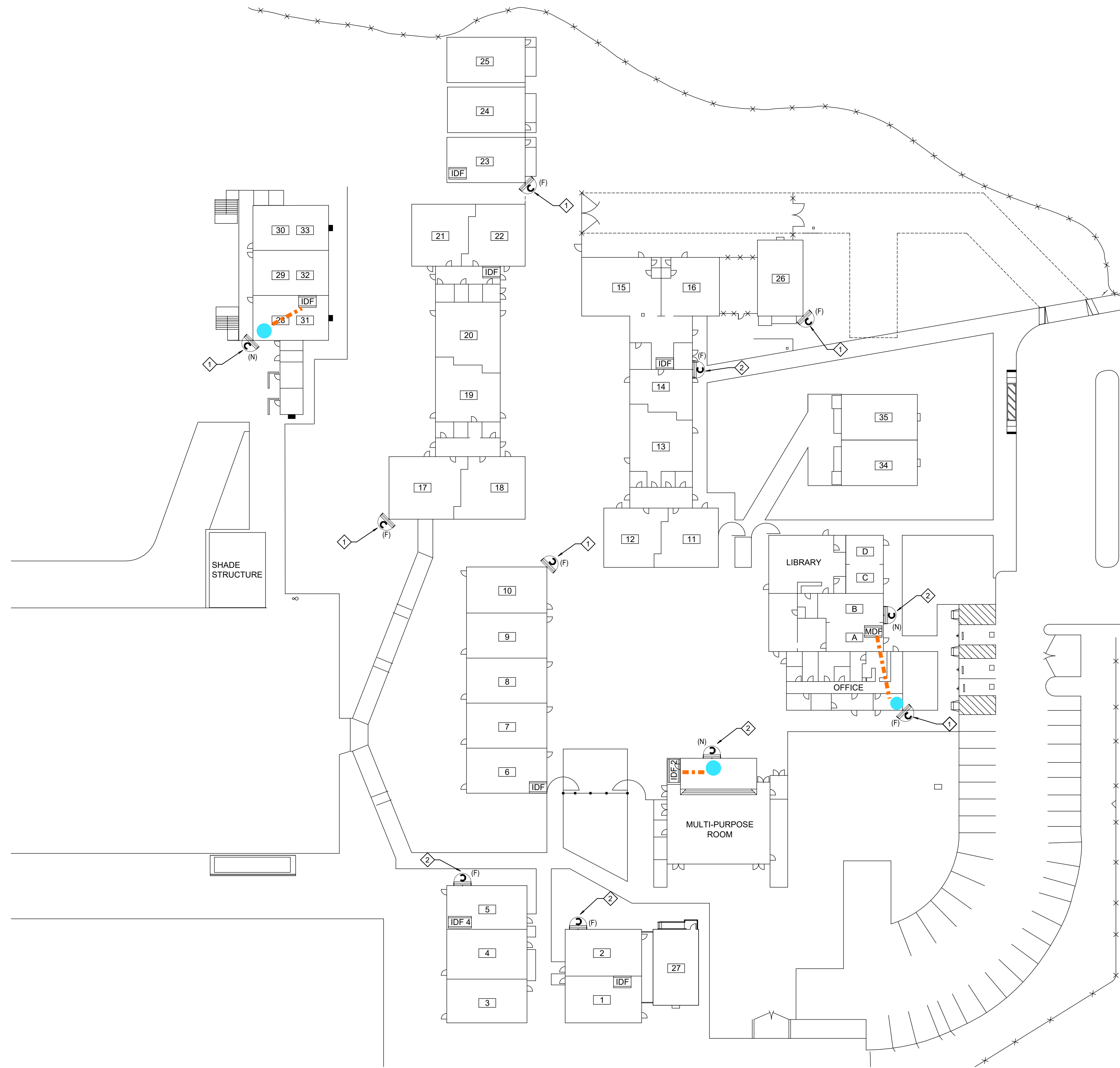
No.	Description	Date
1	ADDENDUM 01	9/18/24

TECHNOLOGY COVER SHEET

T0.00



- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
  - FOR 24\"/>

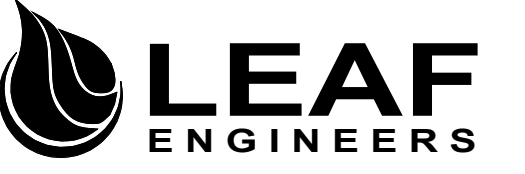


KEY NOTES

- 1 INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE) CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.
- 2 INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE) CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.

GENERAL NOTES

- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
  - 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
  - 3 ALL CAMERAS HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
  - 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
  - 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
  - 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.
- CAMERA LOCATIONS FOR EXISTING PROJECT



RANCHO CUCAMONGA  
8163 Rochester Ave., Ste 100  
Rancho Cucamonga, CA 91730  
909-987-5909

CAMINO REAL ES SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
4655 CAMINO REAL, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER

ARCHITECT

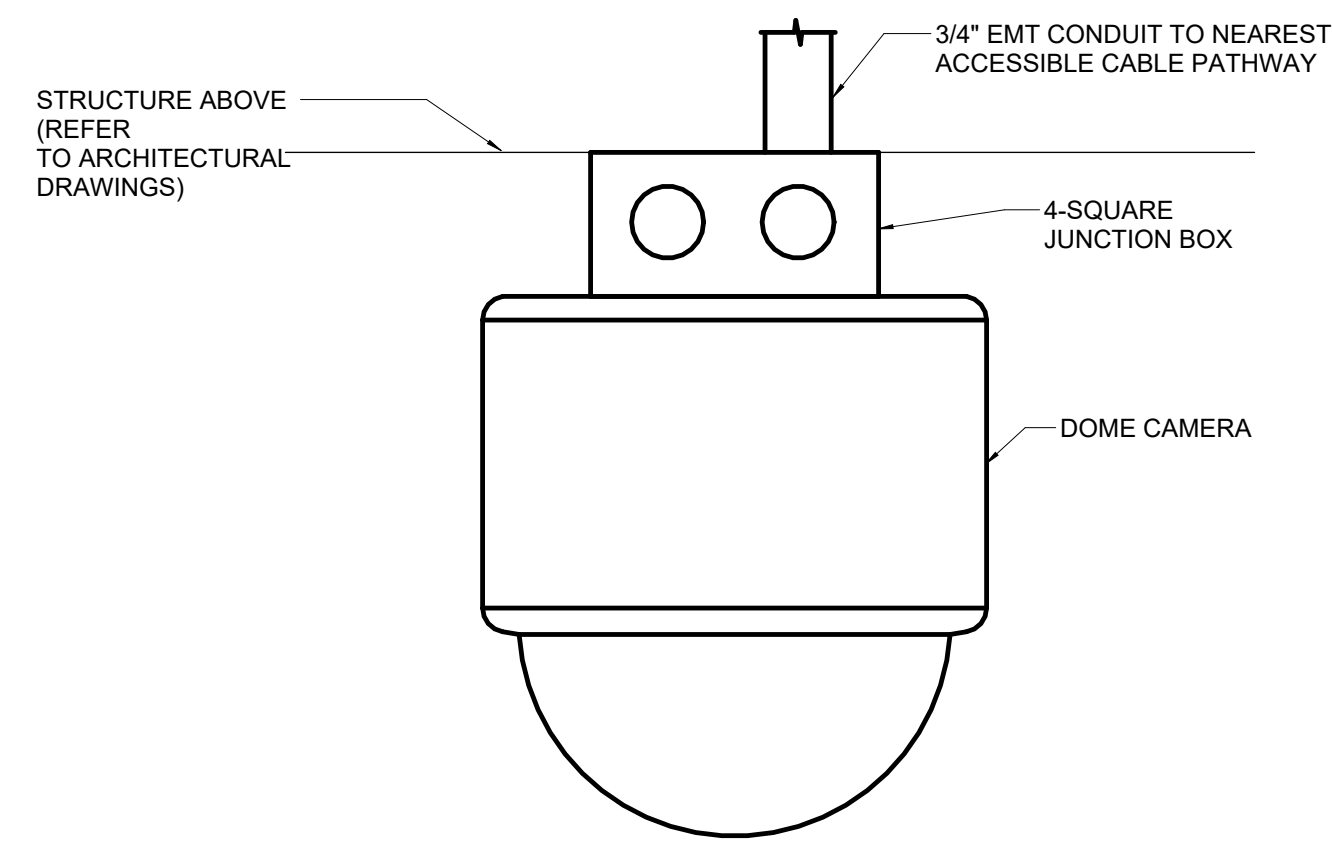
CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER  
DATE: 12/20/23  
DRAWN BY: Author  
CHECKED BY: Checker

No.	Description	Date
1	Addendum 1	8/12/24

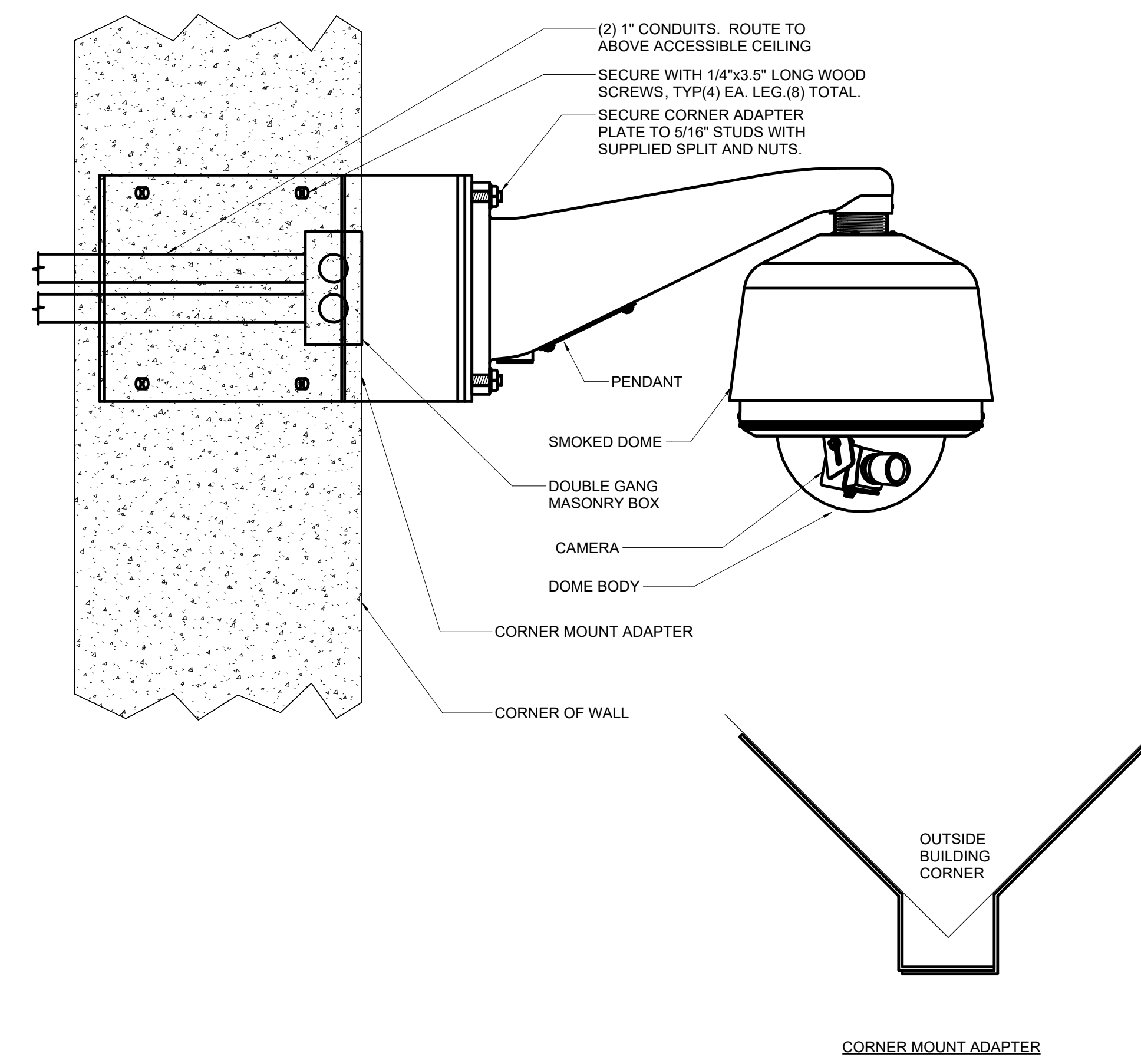
TECHNOLOGY SITE PLAN

T1.01CR



**NOTES:**

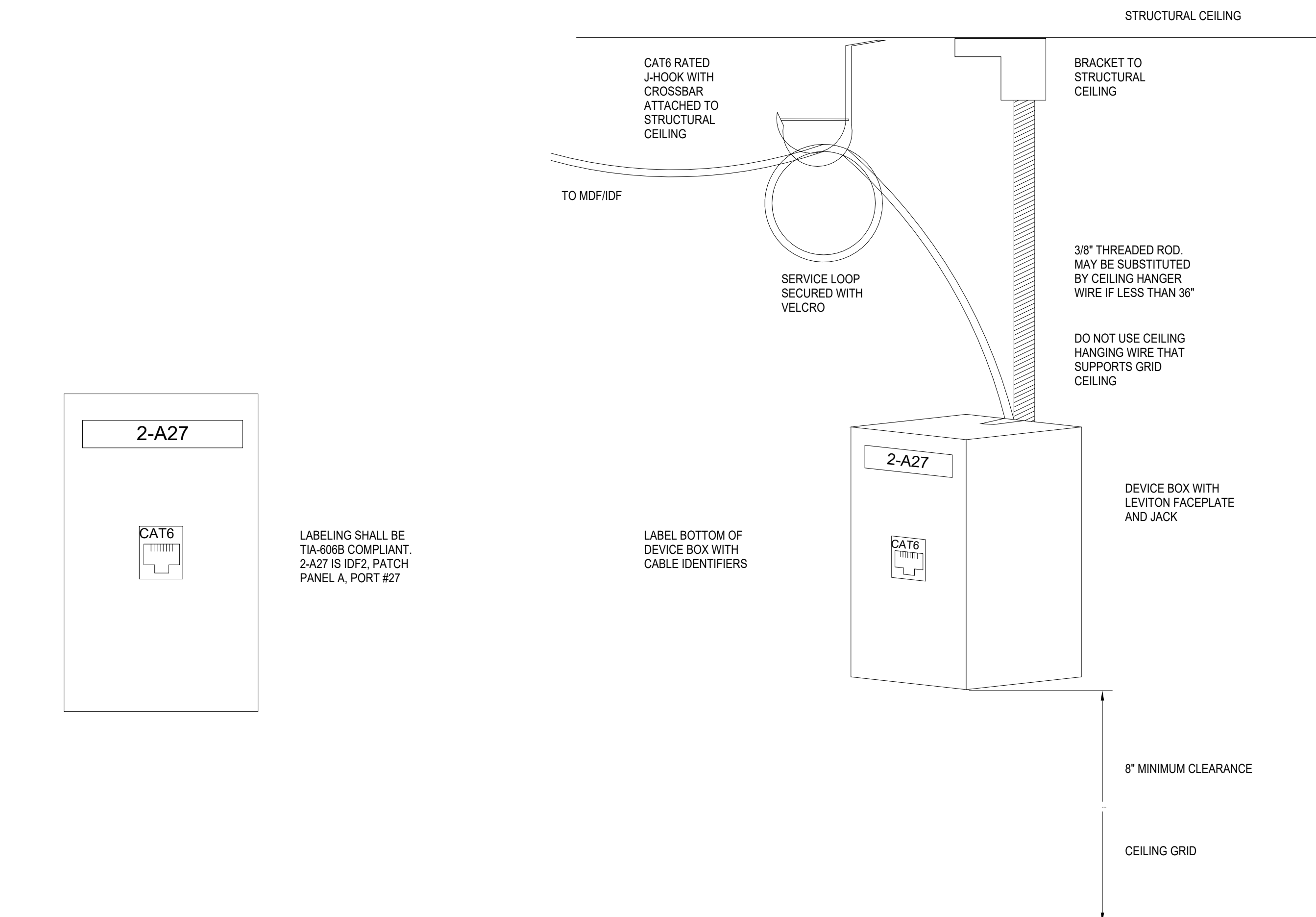
- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
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**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**4** EXTERIOR SURFACE CEILING CAMERA MOUNTING  
N.T.S.

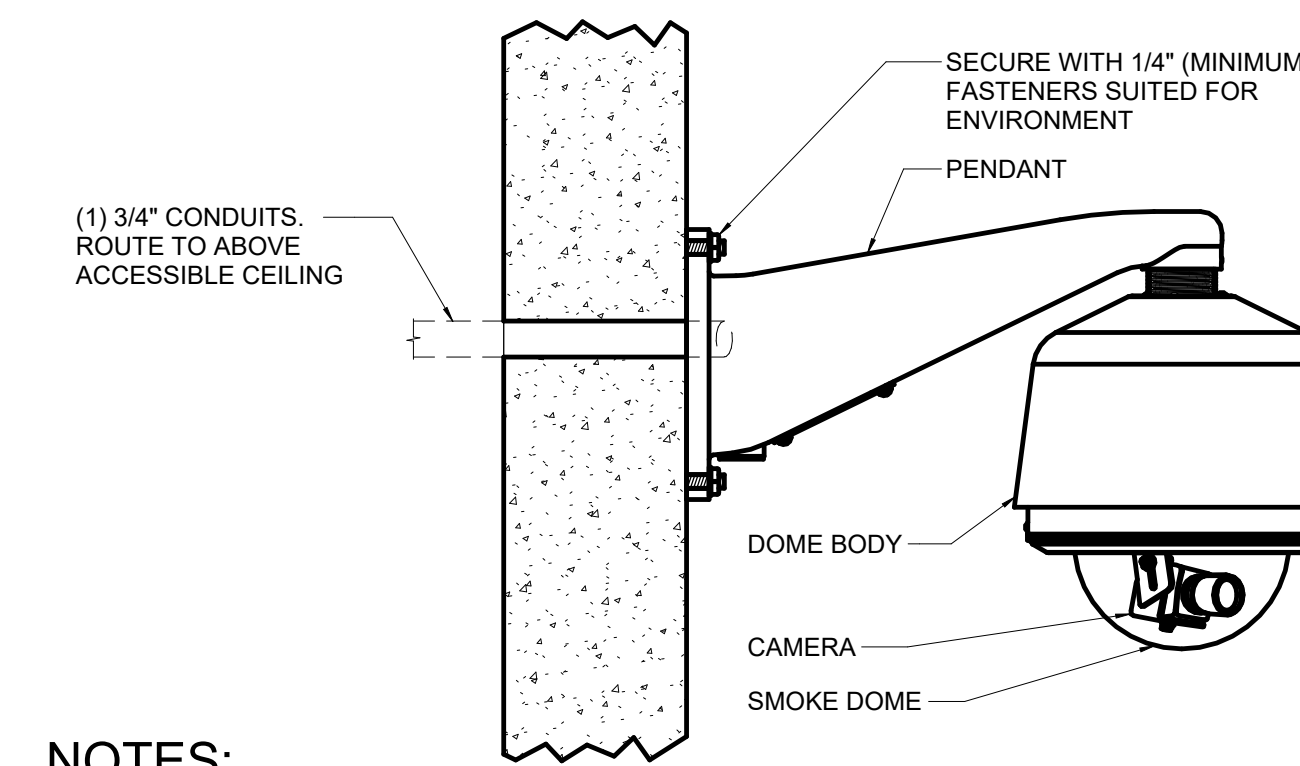


**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1\"/>

**5** SINGLE PORT LABELING  
N.T.S.

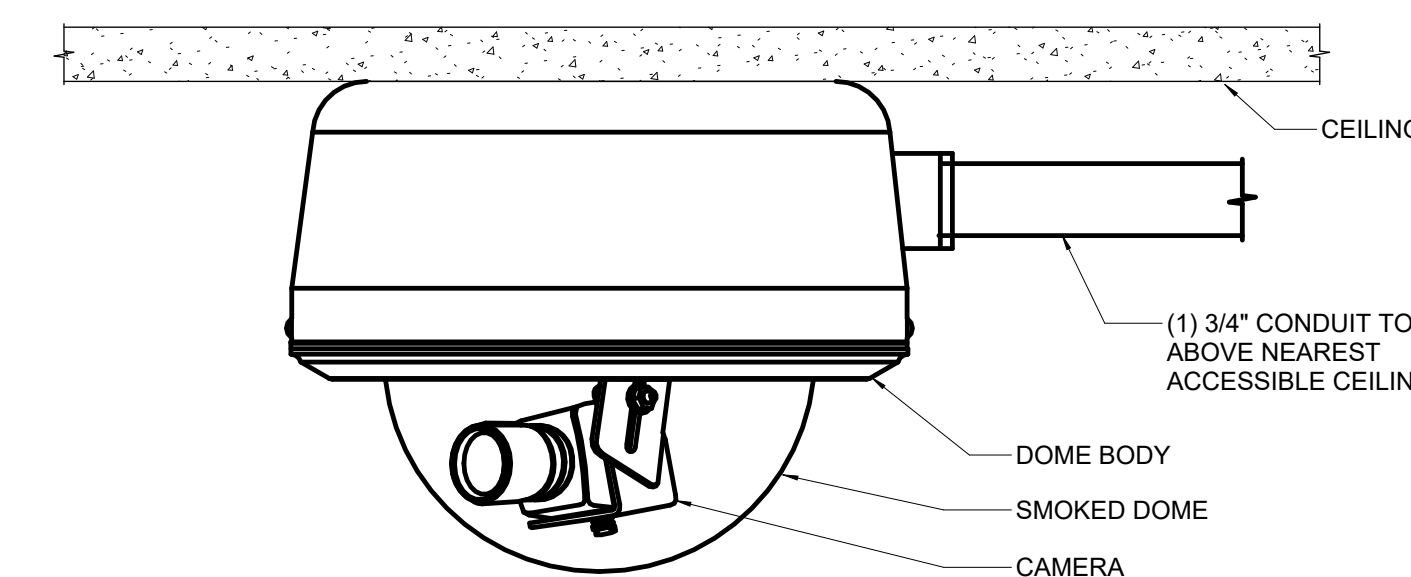
**1** EXTERIOR CORNER MOUNT CAMERA DETAIL  
3\"/>



**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**2** EXTERIOR WALL MOUNTED CAMERA  
3\"/>



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3** EXPOSED MOUNT FIXED CAMERA CEILING  
6\"/>



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CAMINO REAL ES SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
4655 CAMINO REAL, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

CLIENT		
JURUPA UNIFIED SCHOOL DISTRICT		
PROJECT NUMBER		
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12/20/23		
DRAWN BY:		
Author		
CHECKED BY:		
Checker		
REVISIONS		
No.	Description	Date

TECHNOLOGY  
DETAILS

T6.01



SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PAN-DUCT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSIBRIA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATIONS ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
	UNDERGROUND/FLOOR CONDUIT	
	CONDUIT UP	
	CONDUIT DOWN	
	CONDUIT WITH CONTINUATION	
	CONDUIT SLEEVE	
	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "R" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR.	DESCRIPTION:
AFB	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR-#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
+#	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR  
 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR  
 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR  
 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
 TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
 NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES, 2016 EDITION  
 UL 484 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION  
 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION  
 UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)  
 ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



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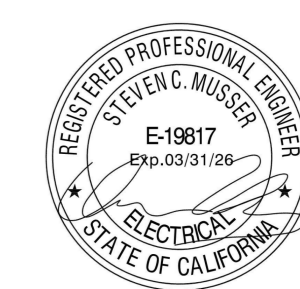
EDUCATIONAL CENTER AND PARENT CENTER SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 4850 PEDLEY RD, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

CLIENT PROJECT NUMBER

DATE: 12/20/23

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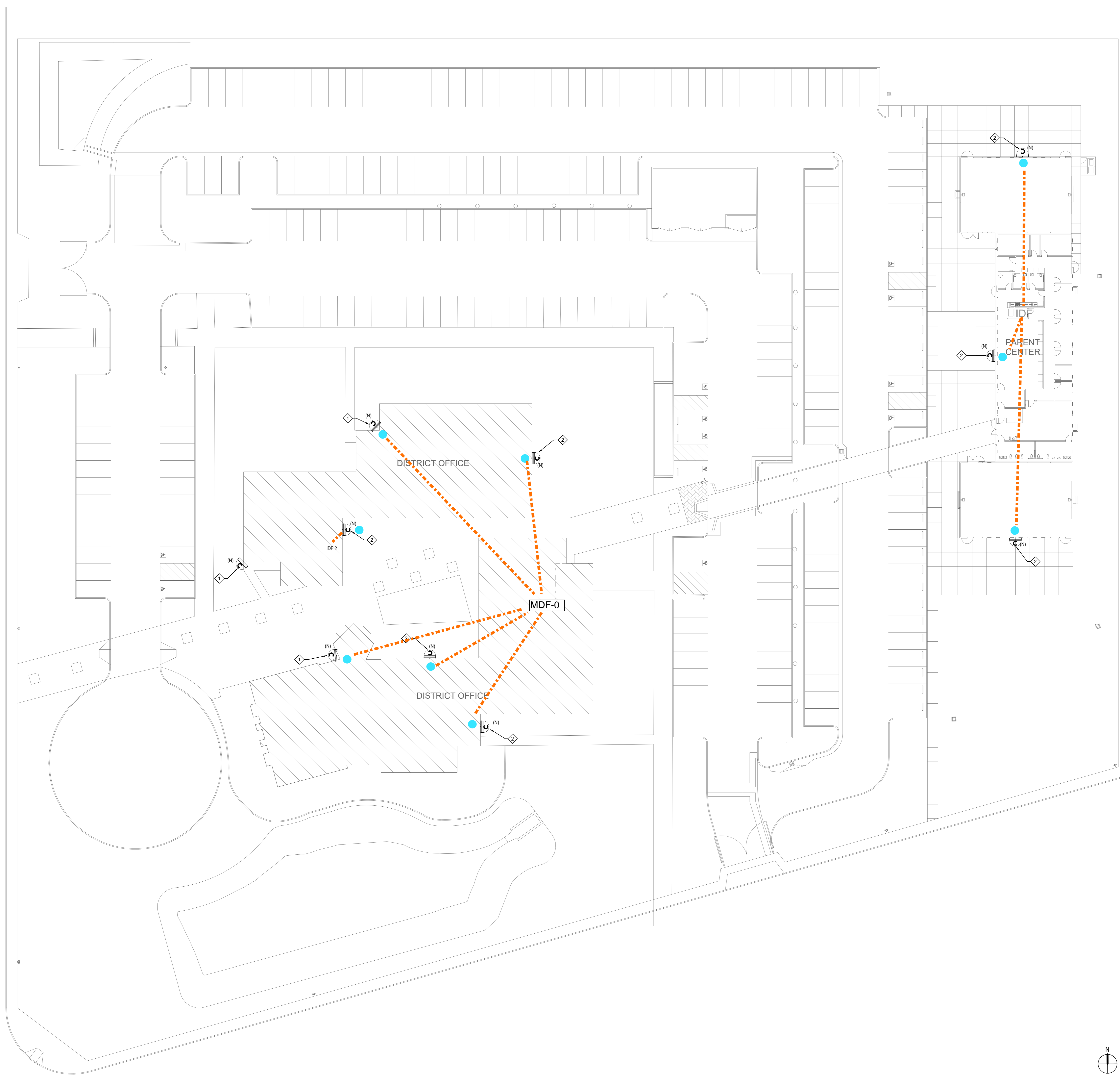
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TECHNOLOGY COVER SHEET

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**EDUCATIONAL CENTER AND PARENT CENTER SECURITY CAMERAS**  
JURUPA UNIFIED SCHOOL DISTRICT  
4850 PEDLEY RD, JURUPA VALLEY, CA 92509

KEY PLAN

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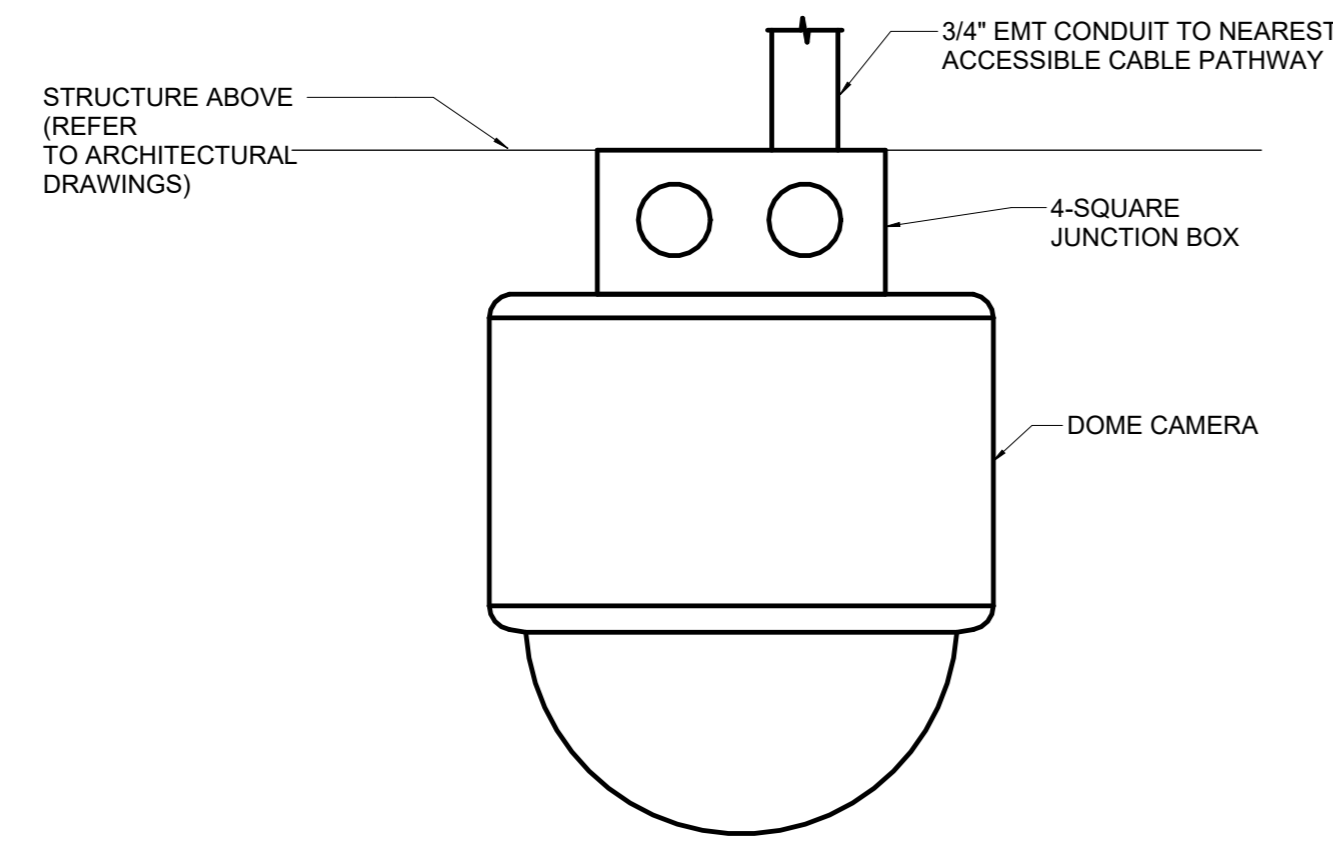
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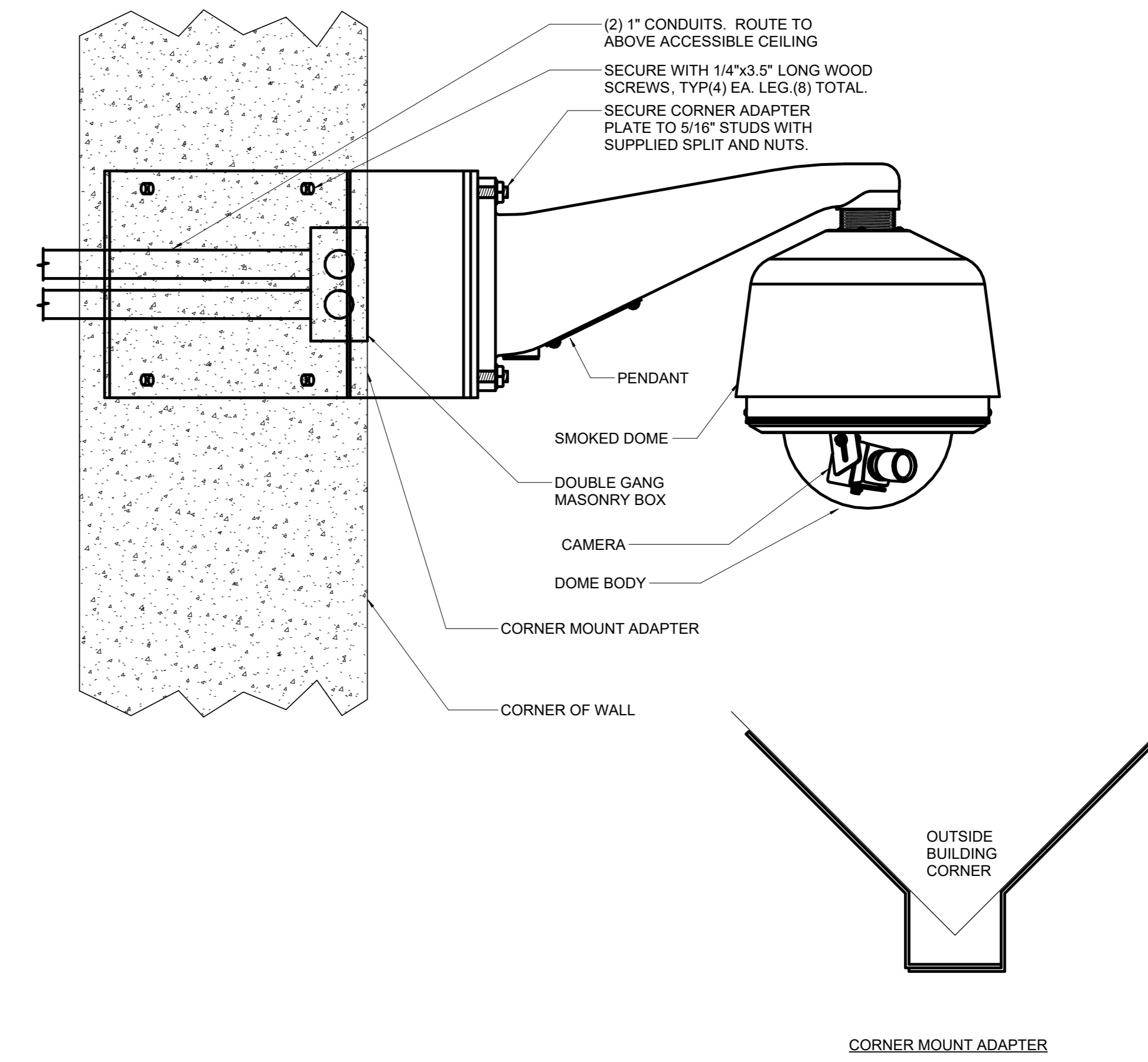
TECHNOLOGY SITE PLAN

**T1.01**



**NOTES:**

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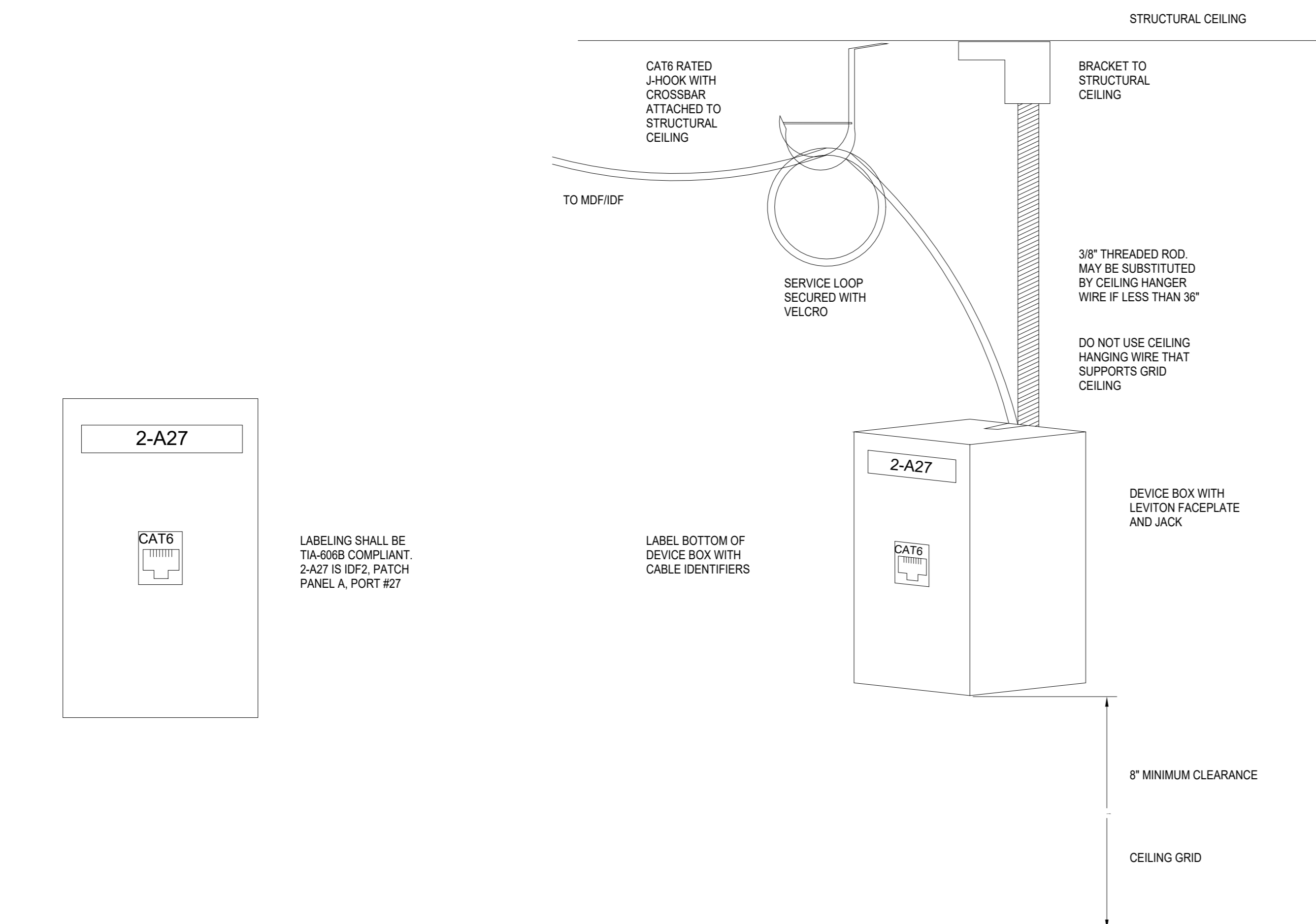


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONRY FASTENERS. DO NOT ANCHOR TO FACE BRICK. SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION INFORMATION.

**4** EXTERIOR SURFACE CEILING CAMERA MOUNTING

N.T.S.



**NOTES:**

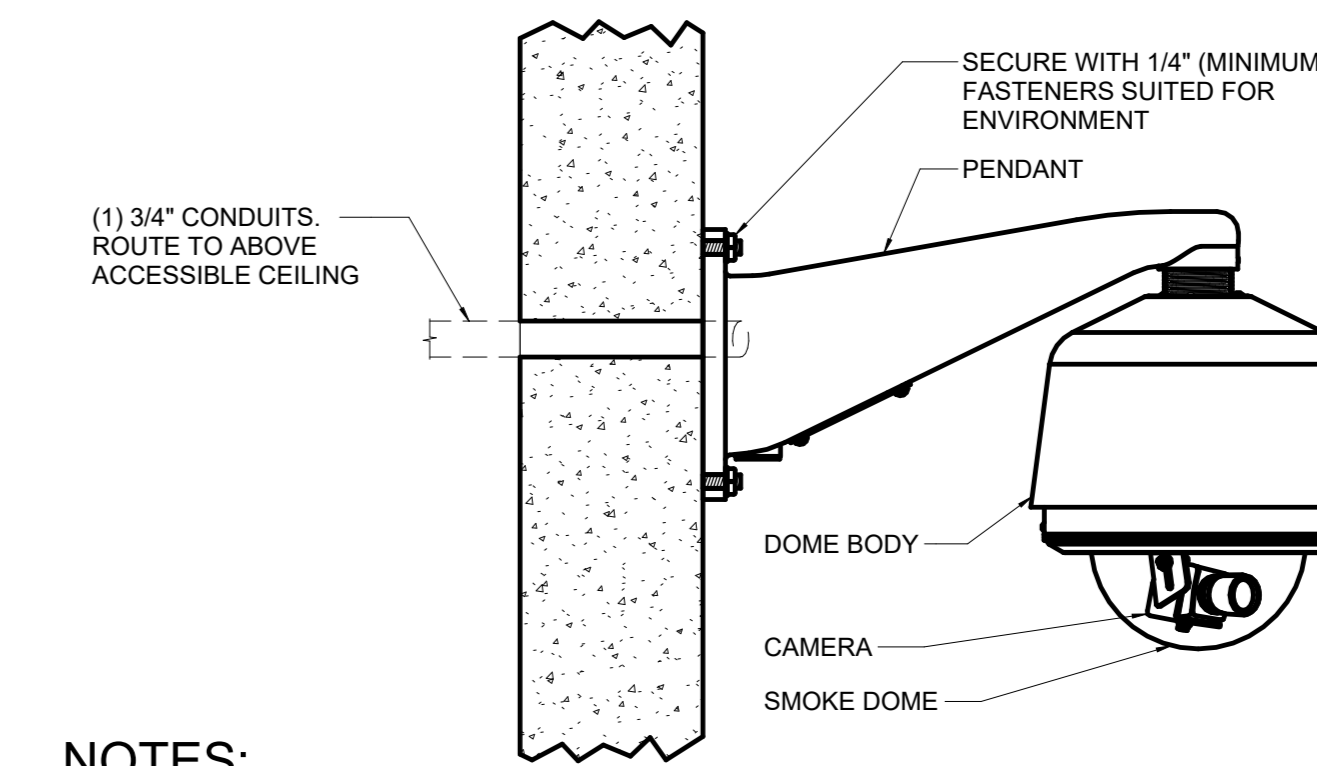
- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSEST ENDS OF ALL CABLES. INSTALL LABEL 1" FROM THE END OF THE CABLE JACKET AT BOTH ENDS.
- CABLE LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THAN 1/8" IN HEIGHT.

**5** SINGLE PORT LABELING

N.T.S.

**1** EXTERIOR CORNER MOUNT CAMERA DETAIL

3" = 1'-0"

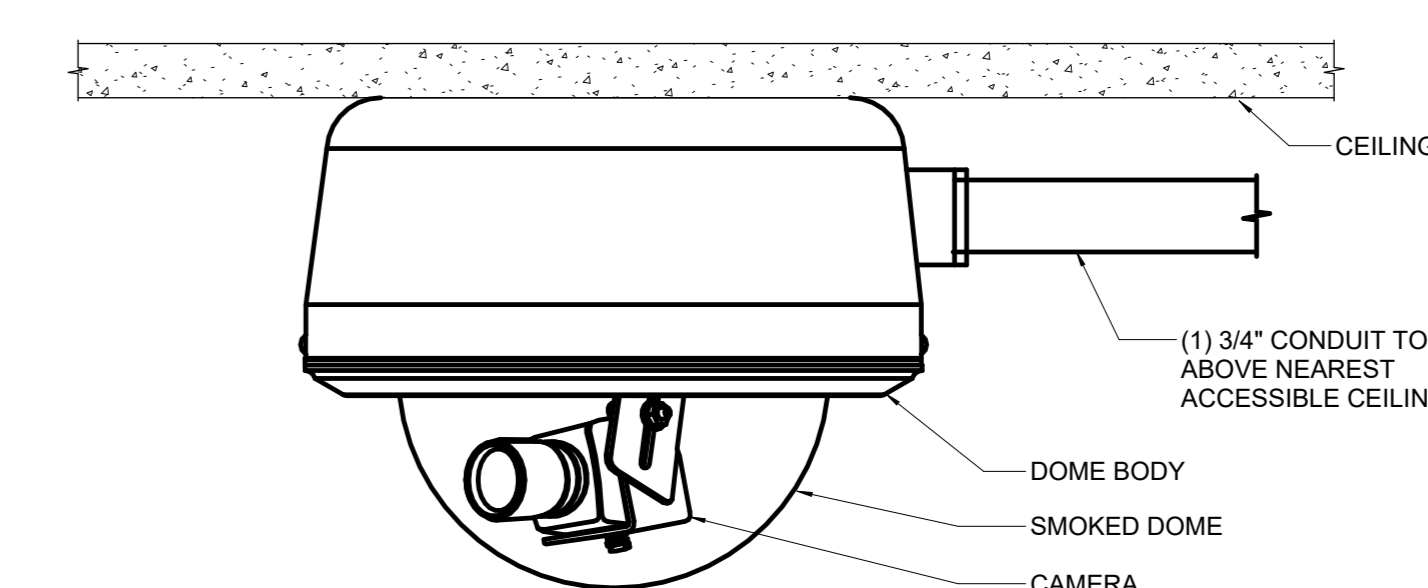


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONARY FASTENERS. DO NOT ANCHOR TO FACE OF BRICK.
- SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**2** EXTERIOR WALL MOUNTED CAMERA

3" = 1'-0"



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3** EXPOSED MOUNT FIXED CAMERA CEILING

6" = 1'-0"



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EDUCATIONAL CENTER AND PARENT  
CENTER SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
4850 PEDLEY RD, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

REVISIONS		
No.	Description	Date

TECHNOLOGY  
DETAILS

T6.01

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE ACCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PAN-DUCT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSI/RITA, IBC/S, AND THE NEC.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND FRK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRADES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE ACCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
	UNDERGROUND/FLOOR CONDUIT	
	CONDUIT UP	
	CONDUIT DOWN	
	CONDUIT WITH CONTINUATION	
	CONDUIT SLEEVE	
	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "#\" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01FR	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
#H	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 OCR  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 OCR  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 OCR  
 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 OCR  
 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 OCR  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 OCR  
 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 OCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 OCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 OCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 OCR  
 TITLE 19 OCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
 NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES, 2016 EDITION  
 UL 484 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION  
 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION  
 UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)  
 ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.  
 SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



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FAMILY RESOURCE AND CHILD CARE CENTER

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 5960 MUSTANG LANE, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



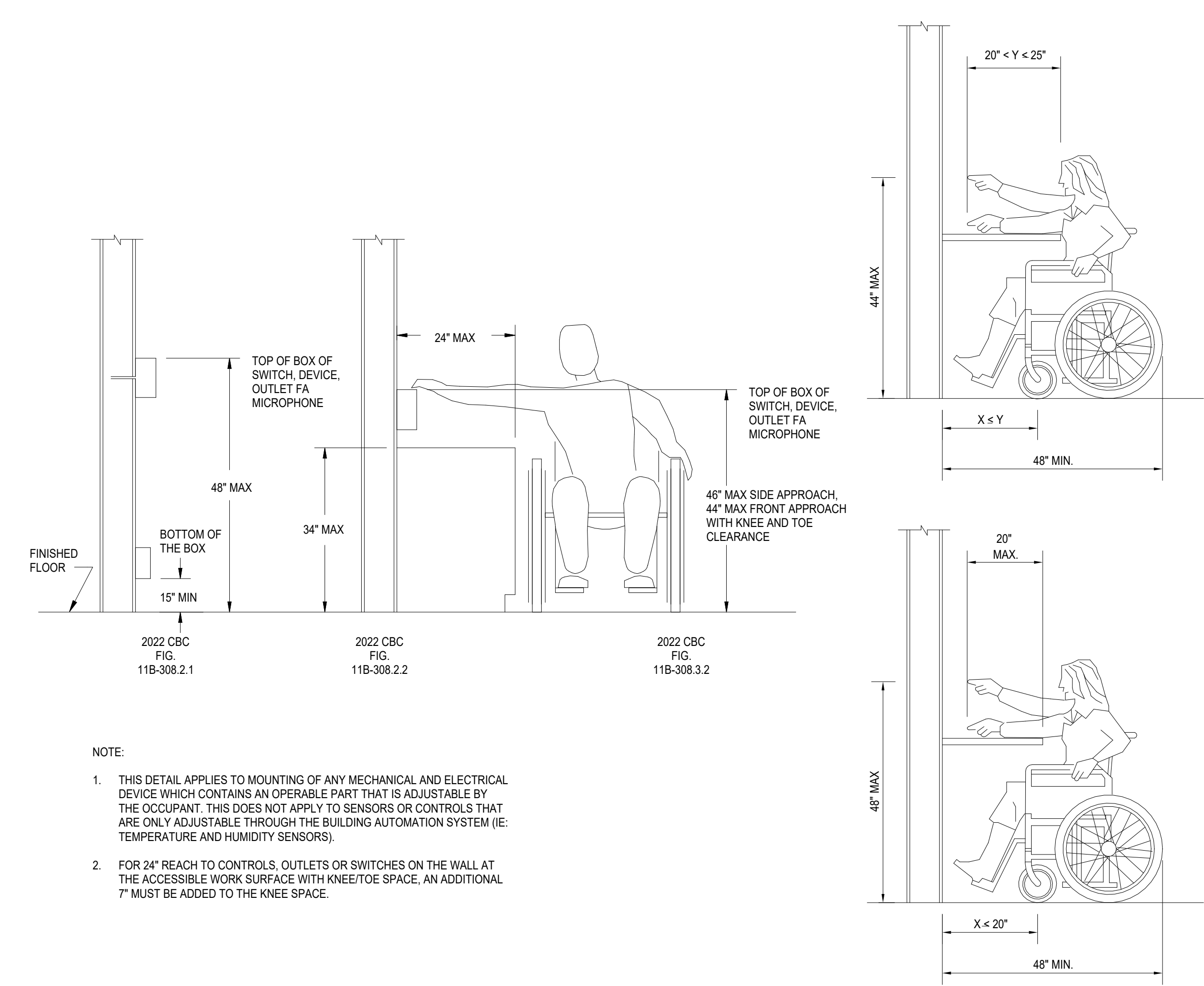
ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

CLIENT		
JURUPA UNIFIED SCHOOL DISTRICT		
PROJECT NUMBER		
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DATE:	12/20/23	
DRAWN BY:	TA	
CHECKED BY:	RDC	
REVISIONS		
No.	Description	Date
1	ADDENDUM 01	9/18/24

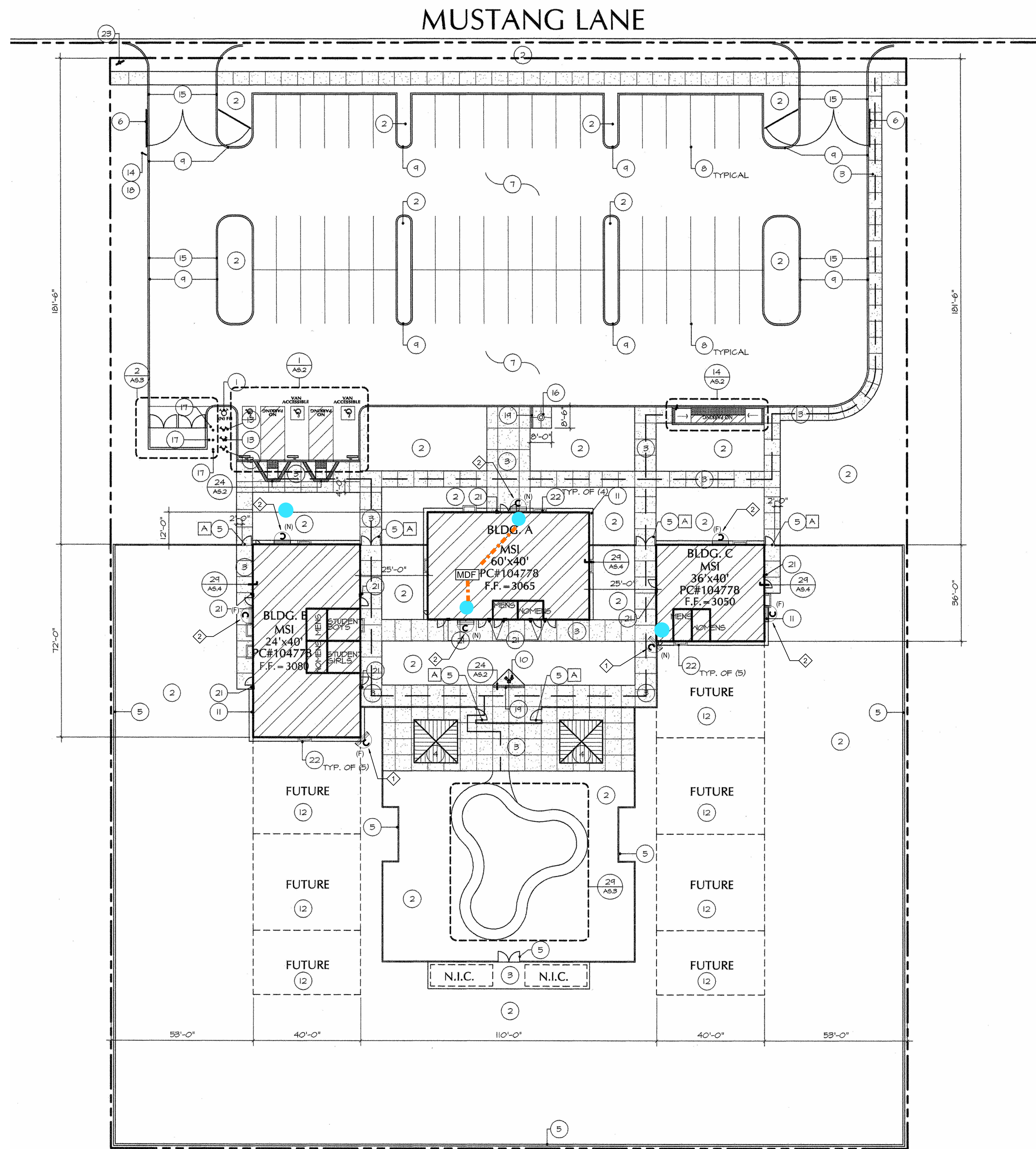
TECHNOLOGY COVER SHEET

T0.00



- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE: TEMPERATURE AND HUMIDITY SENSORS).
  - FOR 24\" REACH TO CONTROLS, OUTLETS OR SWITCHES ON THE WALL AT THE ACCESSIBLE WORK SURFACE WITH KNEE/TOE SPACE, AN ADDITIONAL 7\" MUST BE ADDED TO THE KNEE SPACE.

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KEY NOTES

- 1 INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT5A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.
- 2 INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT5A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.

GENERAL NOTES

- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
  - 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
  - 3 ALL CAMERAS HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
  - 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
  - 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
  - 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.
- CAMERA LOCATIONS FOR EXISTING PROJECT



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**FAMILY RESOURCE AND CHILD CARE CENTER**  
JURUPA UNIFIED SCHOOL DISTRICT  
5960 MUSTANG LANE, JURUPA VALLEY, CA 92509

KEY PLAN

ENGINEER

ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER

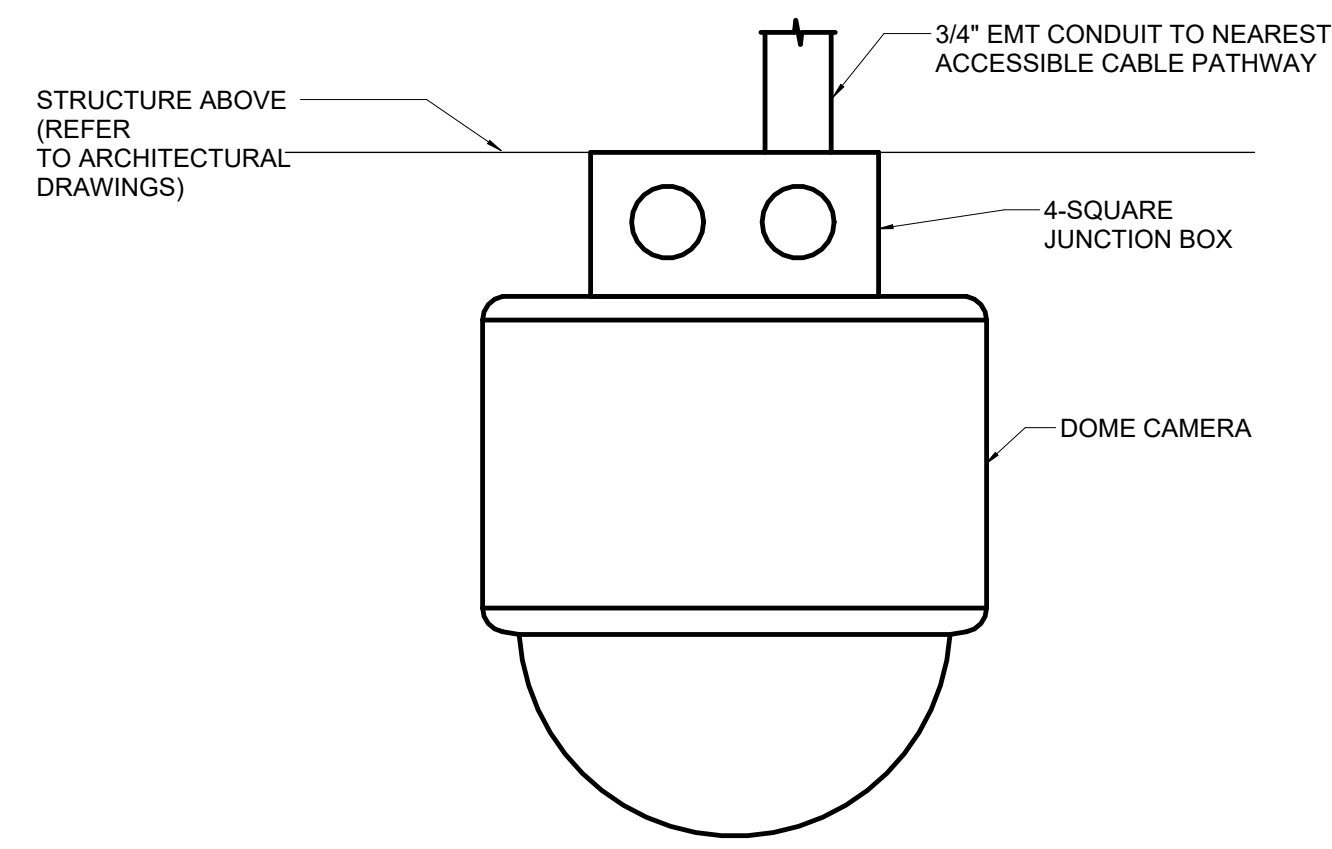
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DRAWN BY:	Author
CHECKED BY:	Checker

REVISIONS

No.	Description	Date
1	Addendum 1	9/12/24

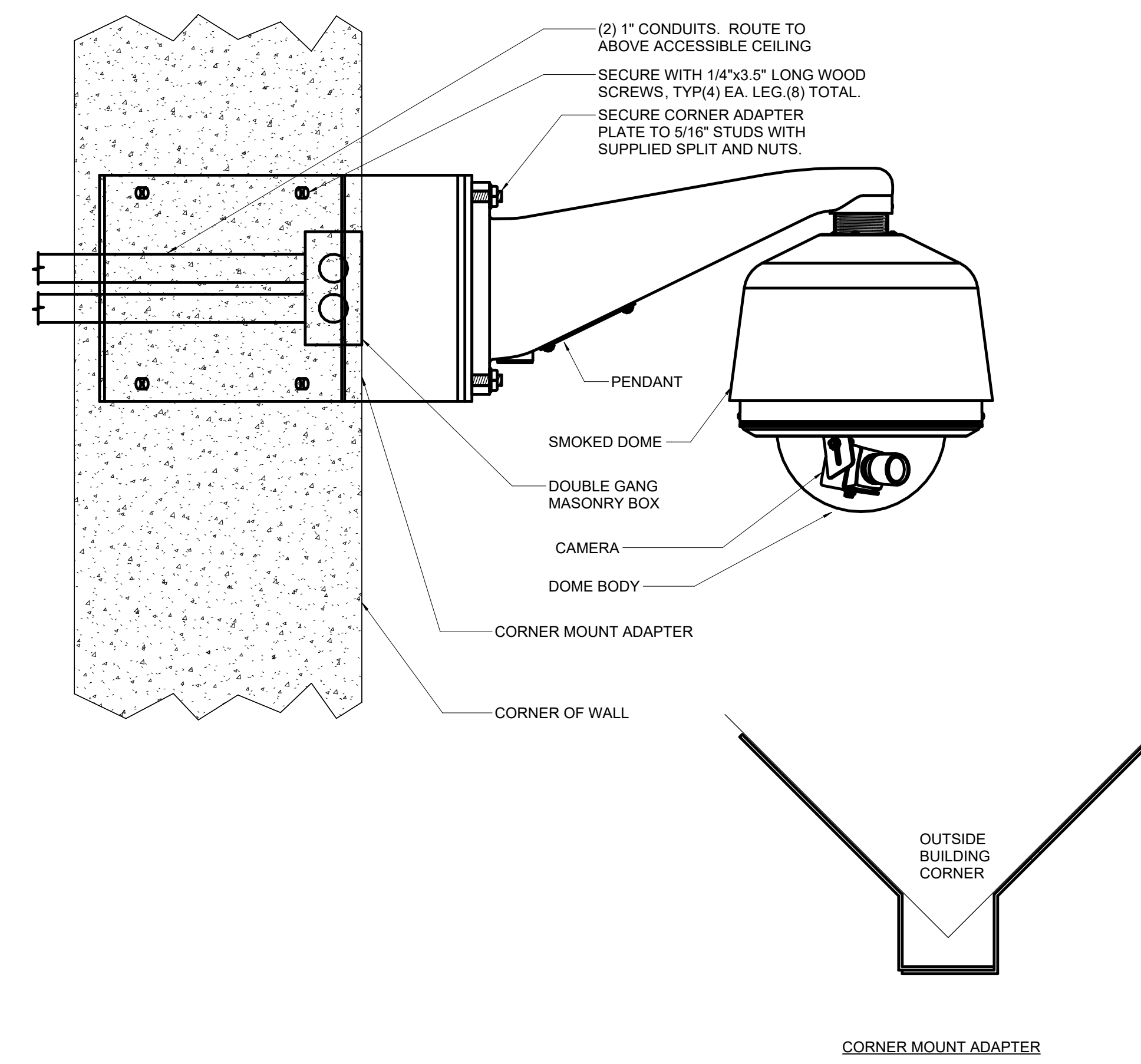
TECHNOLOGY SITE PLAN

**T1.01FR**



**NOTES:**

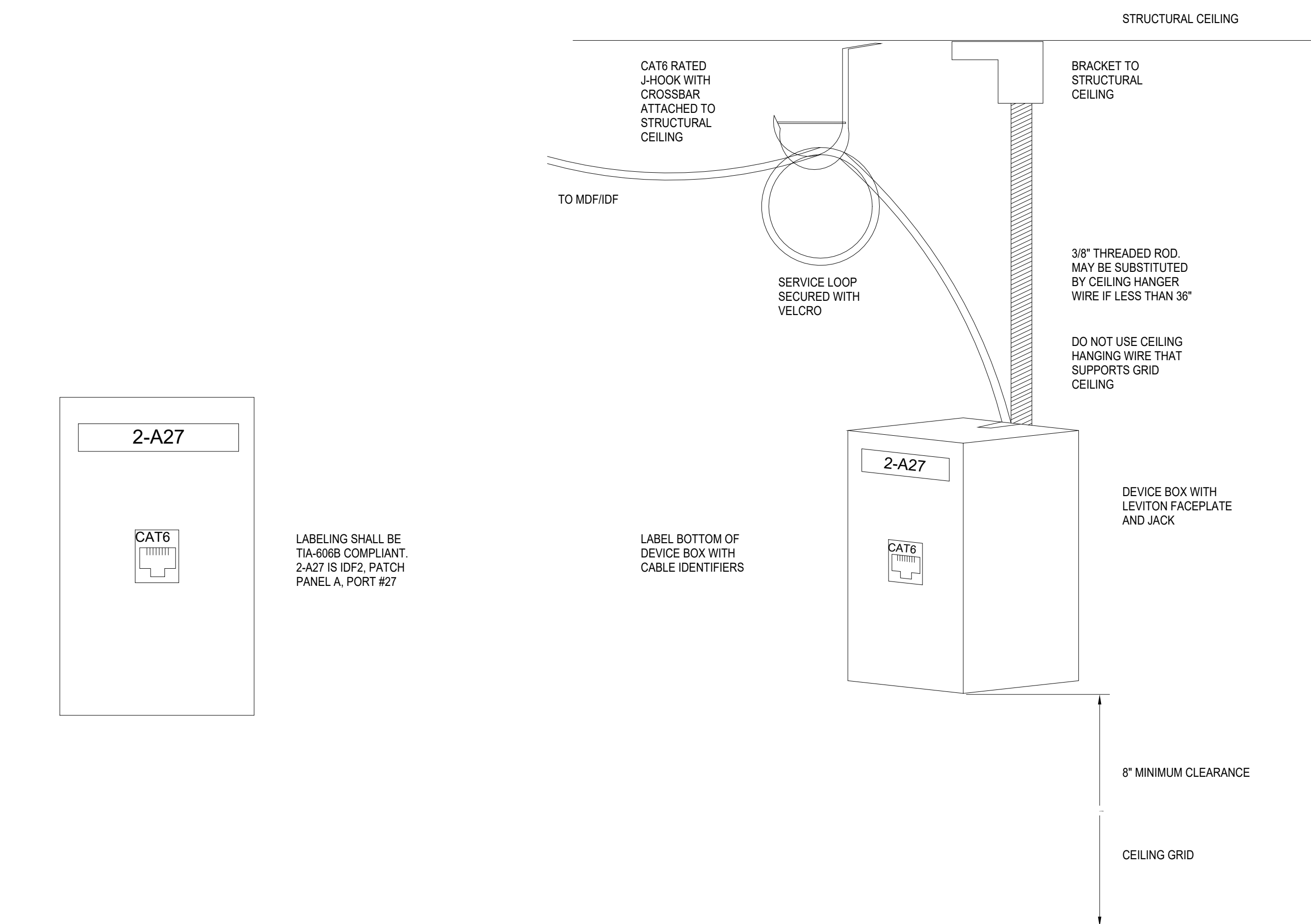
- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2.4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.



**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**4** EXTERIOR SURFACE CEILING CAMERA MOUNTING  
N.T.S.

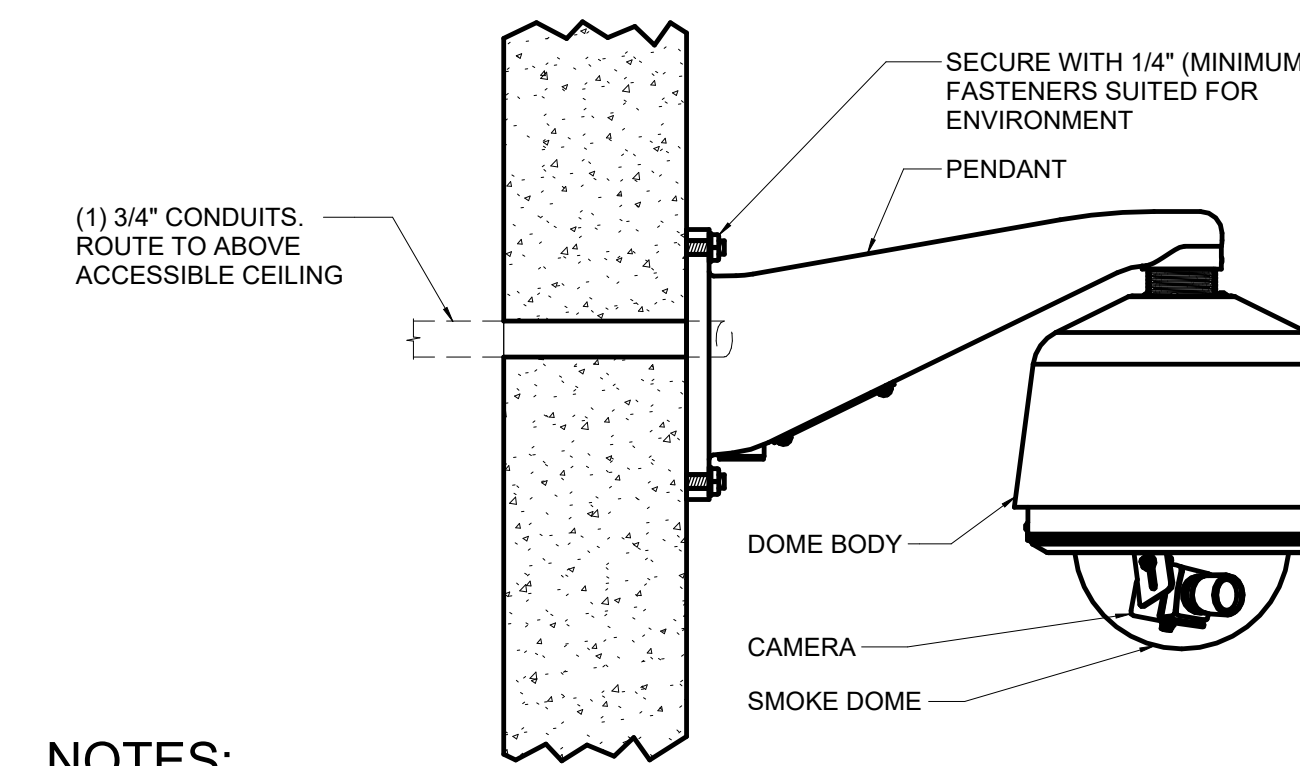


**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1\"/>

**5** SINGLE PORT LABELING  
N.T.S.

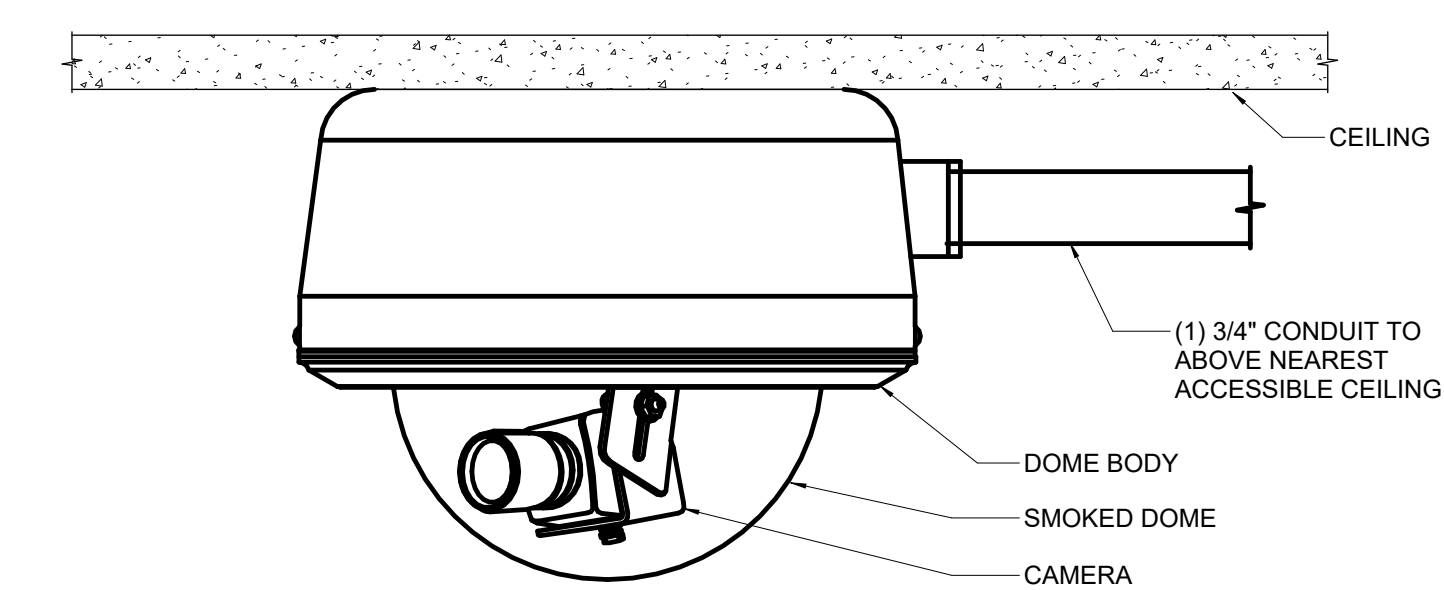
**1** EXTERIOR CORNER MOUNT CAMERA DETAIL  
3\"/>



**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**2** EXTERIOR WALL MOUNTED CAMERA  
3\"/>



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3** EXPOSED MOUNT FIXED CAMERA CEILING  
6\"/>



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**FAMILY RESOURCE AND CHILD CARE CENTER**

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KEY PLAN



ENGINEER



ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER  
DATE: 12/20/23  
DRAWN BY: Author  
CHECKED BY: Checker

REVISIONS		
No.	Description	Date

**TECHNOLOGY DETAILS**

**T6.01**

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PAN-DUIT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSIFLATA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
	UNDERGROUND/FLOOR CONDUIT	
	CONDUIT UP	
	CONDUIT DOWN	
	CONDUIT WITH CONTINUATION	
	CONDUIT SLEEVE	
	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "R" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

SHEET T0.00  
T1.01GH  
T6.01

DESCRIPTION  
TECHNOLOGY COVER SHEET  
TECHNOLOGY SITE PLAN  
TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

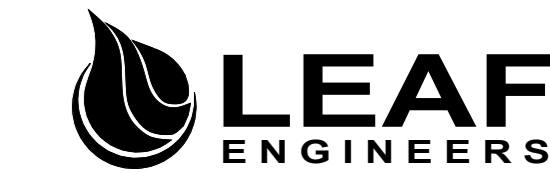
ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SIM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
#H	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR  
 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR  
 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR  
 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
 TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
 NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES, 2016 EDITION  
 UL 484 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION  
 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION  
 UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)  
 ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION  
 FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



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GRANITE HILLS ES SECURITY CAMERAS

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9371 GRANITE HILL DR, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



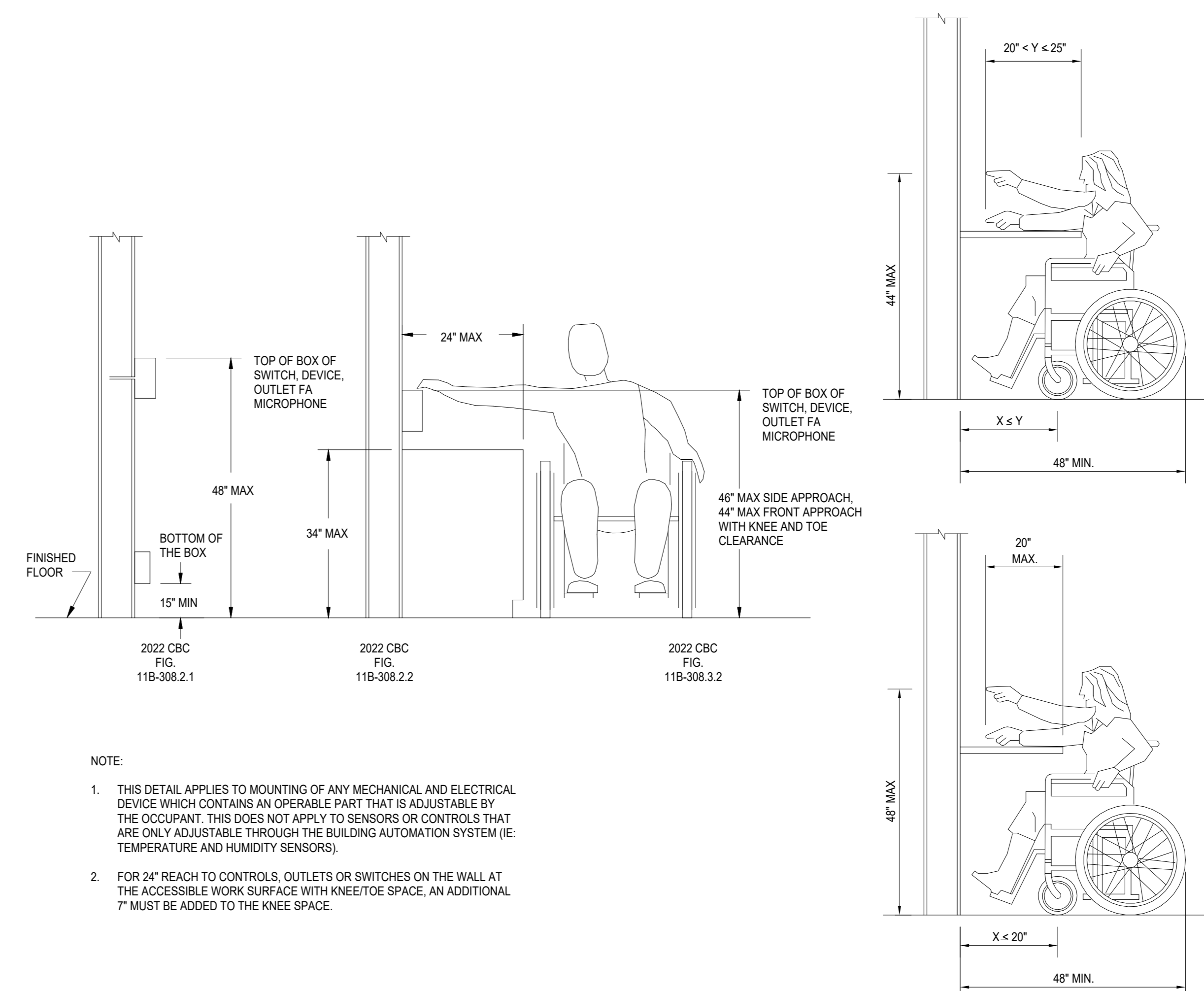
ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

No.	Description	Date
1	ADDENDUM 01	9/18/24

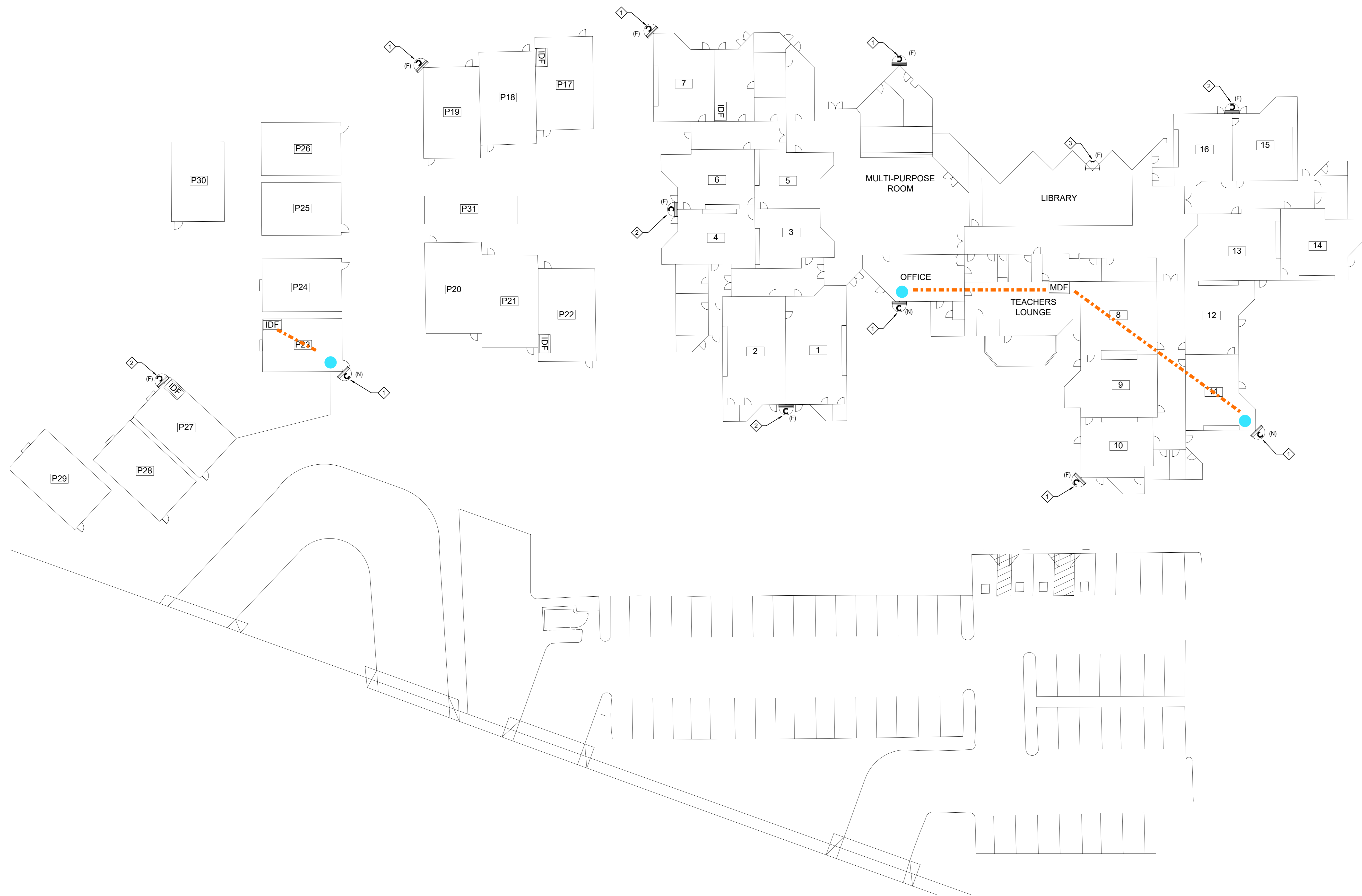
TECHNOLOGY COVER SHEET

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- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
  - FOR 24" REACH TO CONTROLS, OUTLETS OR SWITCHES ON THE WALL AT THE ACCESSIBLE WORK SURFACE WITH KNEE/TOE SPACE, AN ADDITIONAL 7" MUST BE ADDED TO THE KNEE SPACE.

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KEY NOTES

- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.
- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.
- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (90 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.

GENERAL NOTES

- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
  - 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
  - 3 ALL CAMERAS' HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
  - 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
  - 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
  - 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.
- CAMERA LOCATIONS FOR EXISTING PROJECT



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**GRANITE HILLS ES SECURITY CAMERAS**  
JURUPA UNIFIED SCHOOL DISTRICT  
9371 GRANITE HILL DR, JURUPA VALLEY, CA 92509

KEY PLAN

ENGINEER

ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

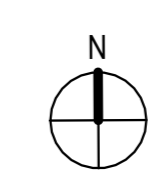
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DATE: 12/20/23  
DRAWN BY: Author  
CHECKED BY: Checker

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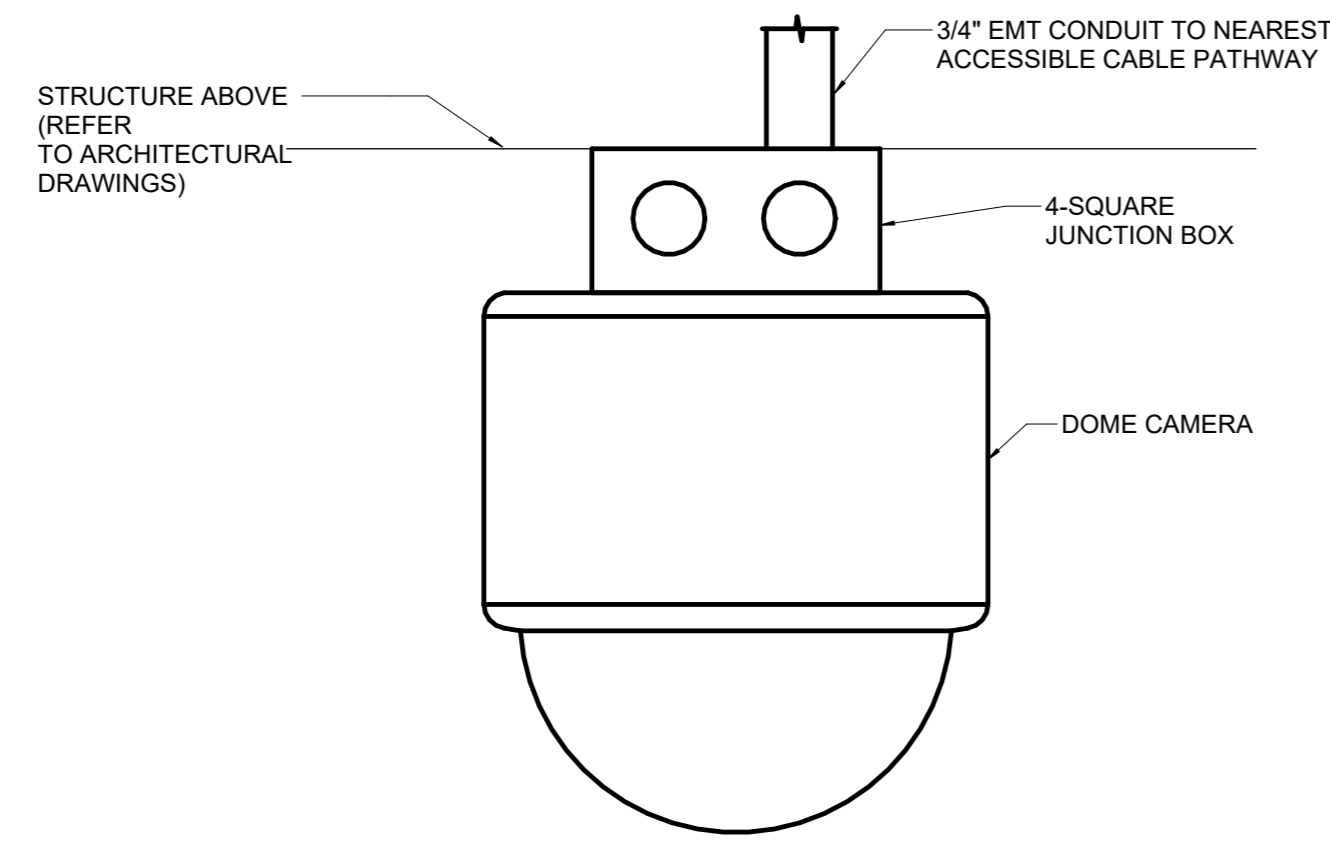
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1	Addendum 1	9/12/24

TECHNOLOGY SITE PLAN

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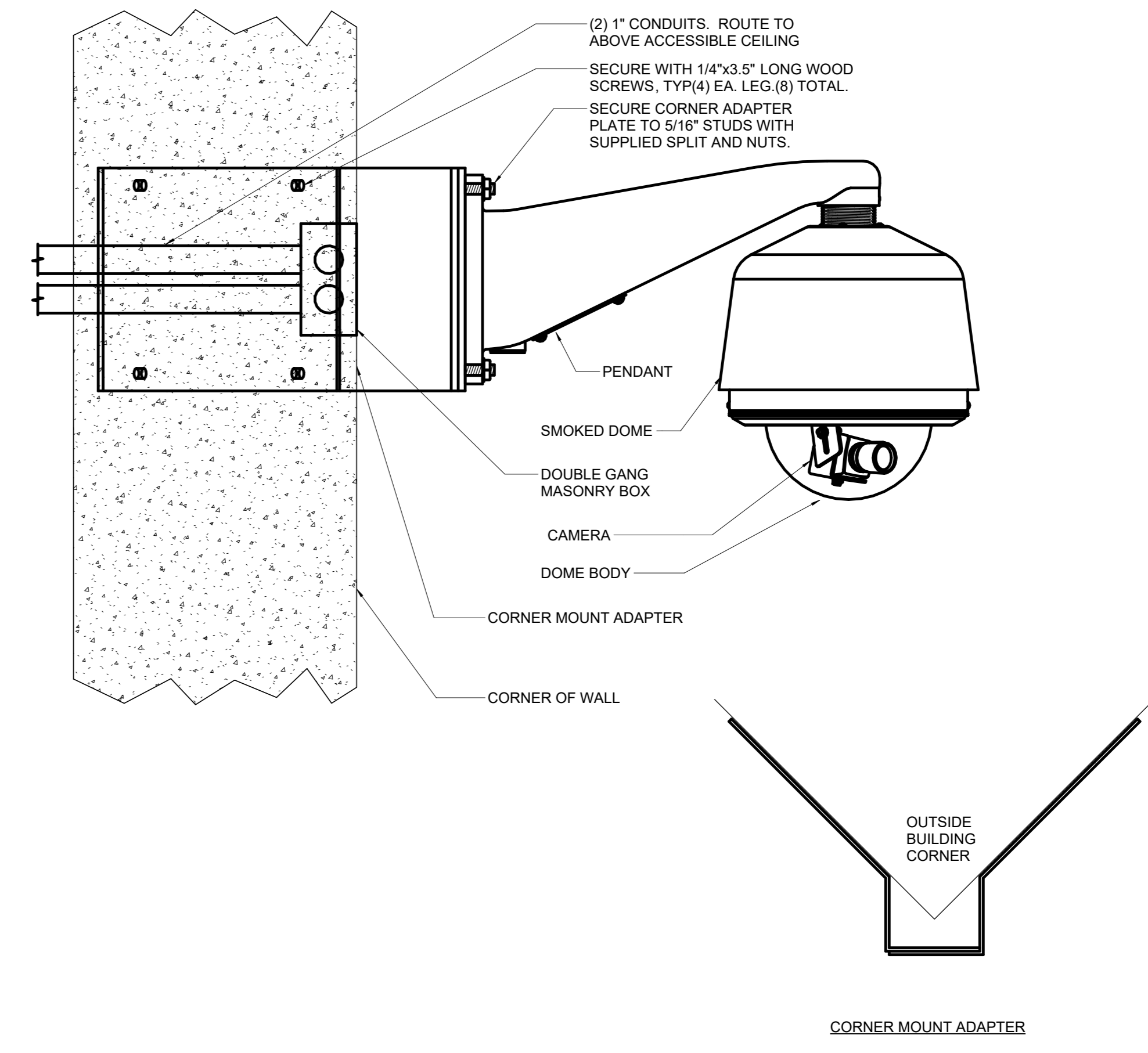






**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL, IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

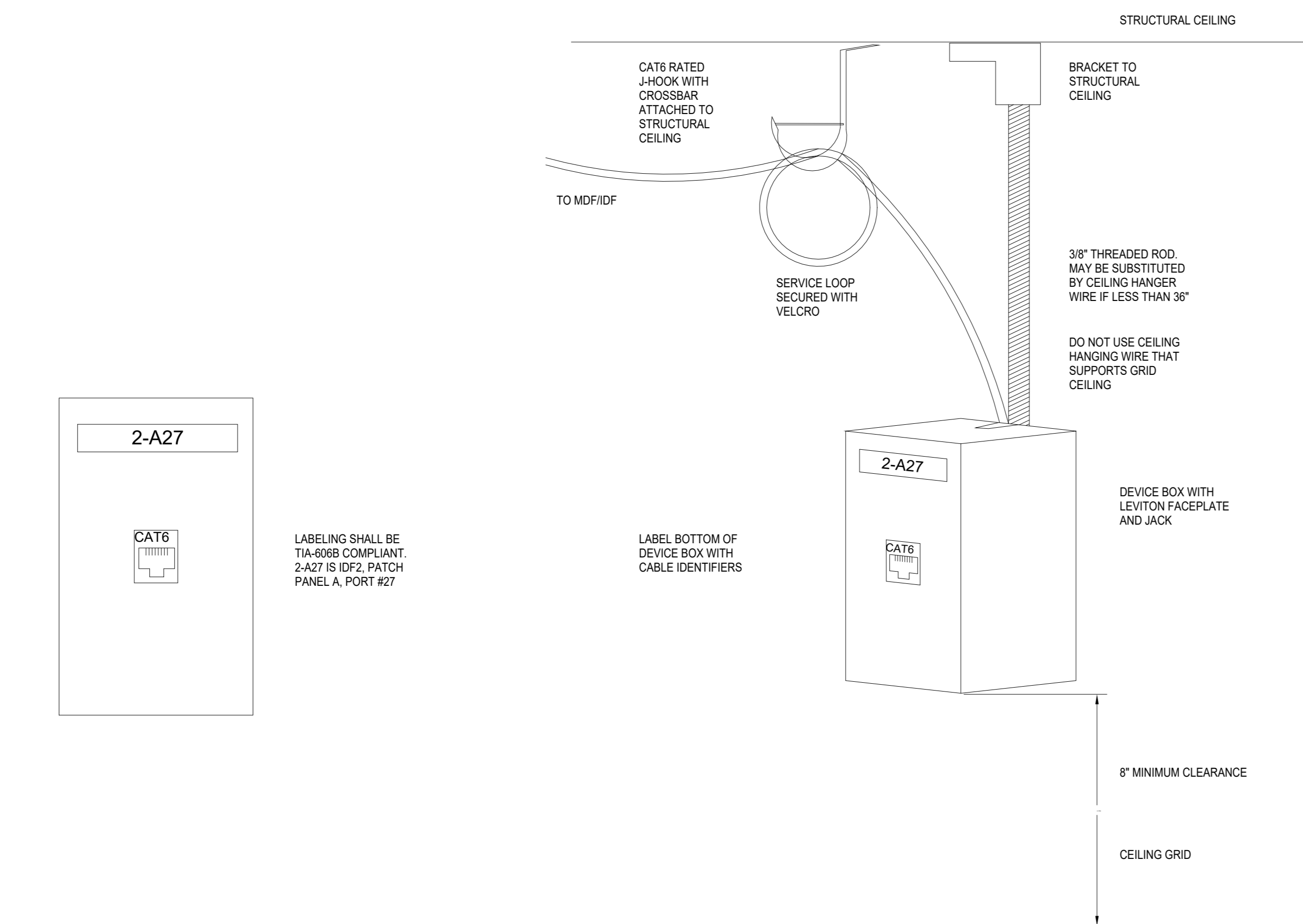


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONRY FASTENERS. DO NOT ANCHOR TO FACE BRICK. SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION INFORMATION.

**4 EXTERIOR SURFACE CEILING CAMERA MOUNTING**

N.T.S.



**NOTES:**

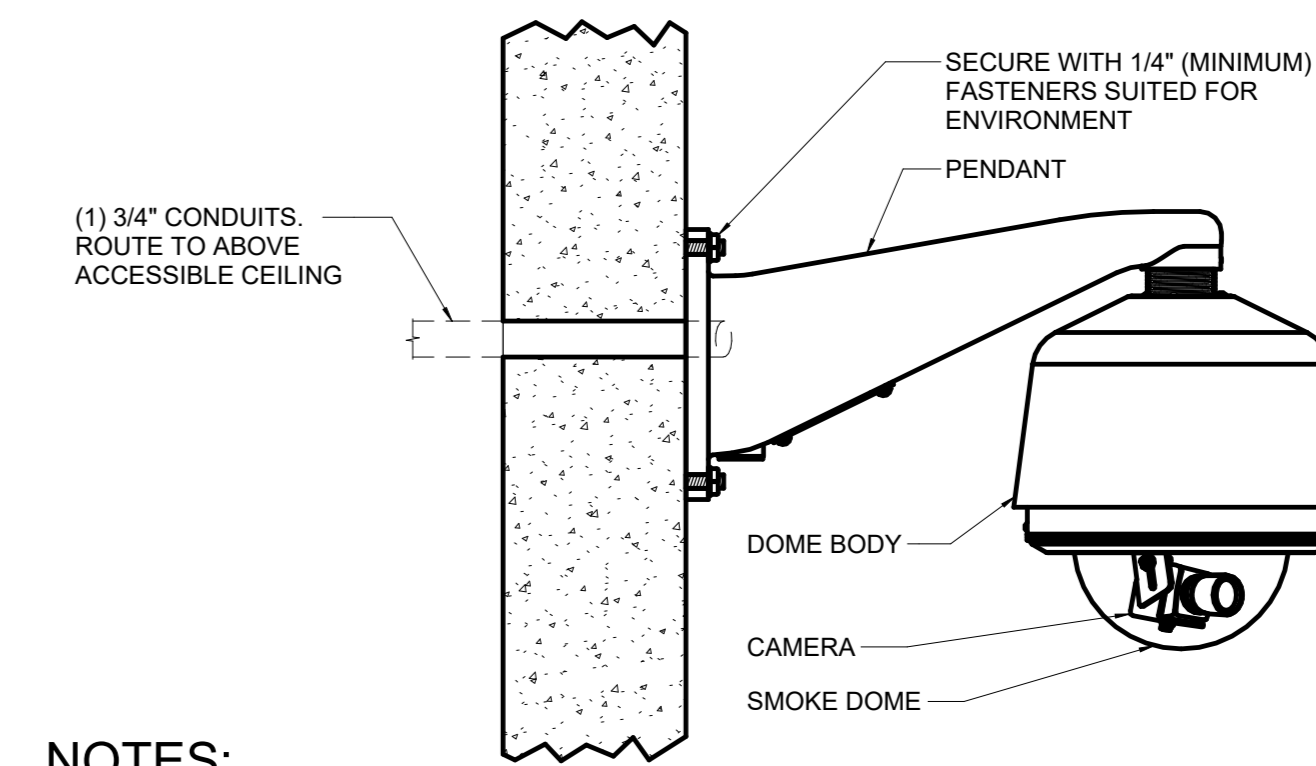
- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1" FROM THE END OF THE CABLE JACKET AT BOTH ENDS.
- CABLE LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THAN 1/8" IN HEIGHT.

**5 SINGLE PORT LABELING**

N.T.S.

**1 EXTERIOR CORNER MOUNT CAMERA DETAIL**

3" = 1'-0"

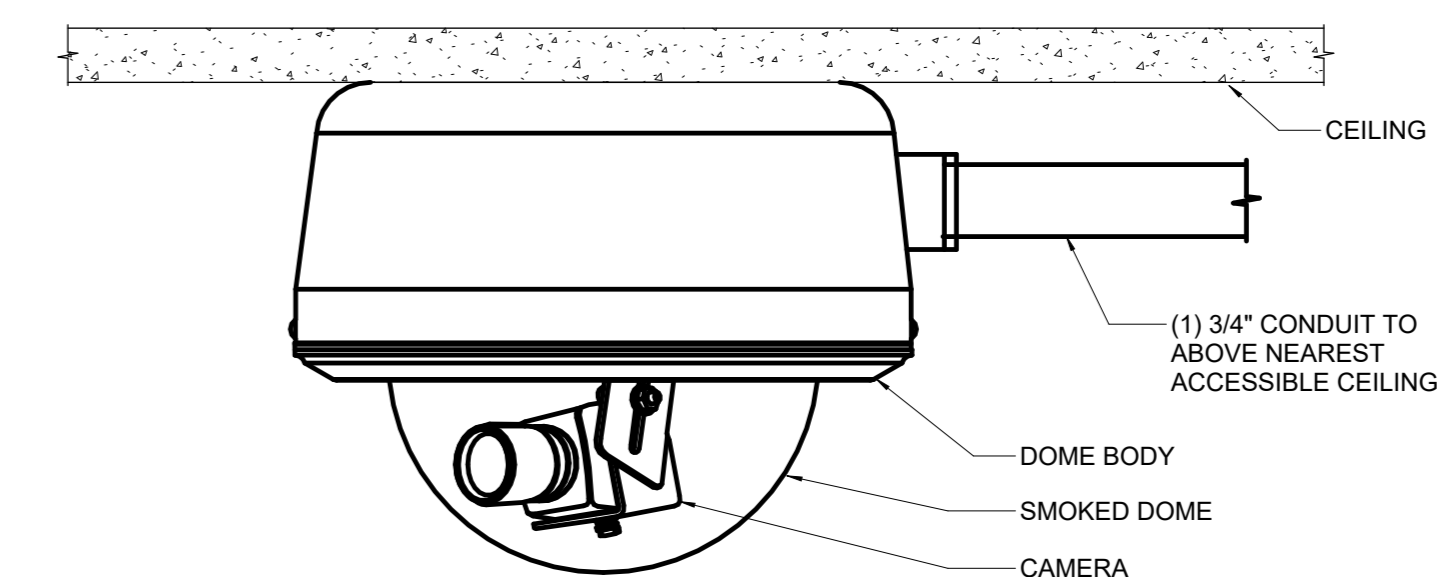


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONARY FASTENERS. DO NOT ANCHOR TO FACE OF BRICK.
- SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**2 EXTERIOR WALL MOUNTED CAMERA**

3" = 1'-0"



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3 EXPOSED MOUNT FIXED CAMERA CEILING**

6" = 1'-0"



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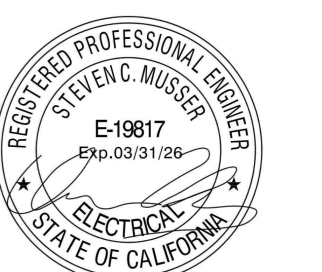
GRANITE HILLS ES SECURITY CAMERAS

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SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PAN/OUTLET J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSI/EIA/TIA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
###	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
—	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
- - -	UNDERGROUND/FLOOR CONDUIT	
○	CONDUIT UP	
●	CONDUIT DOWN	
↵	CONDUIT WITH CONTINUATION	
[ ]	CONDUIT SLEEVE	
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GENERAL NOTES:

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KEY NOTES:

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DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01H	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR.	DESCRIPTION
AFB	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
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INDIAN HILLS ES SECURITY CAMERAS

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 7750 LINARES AVE, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



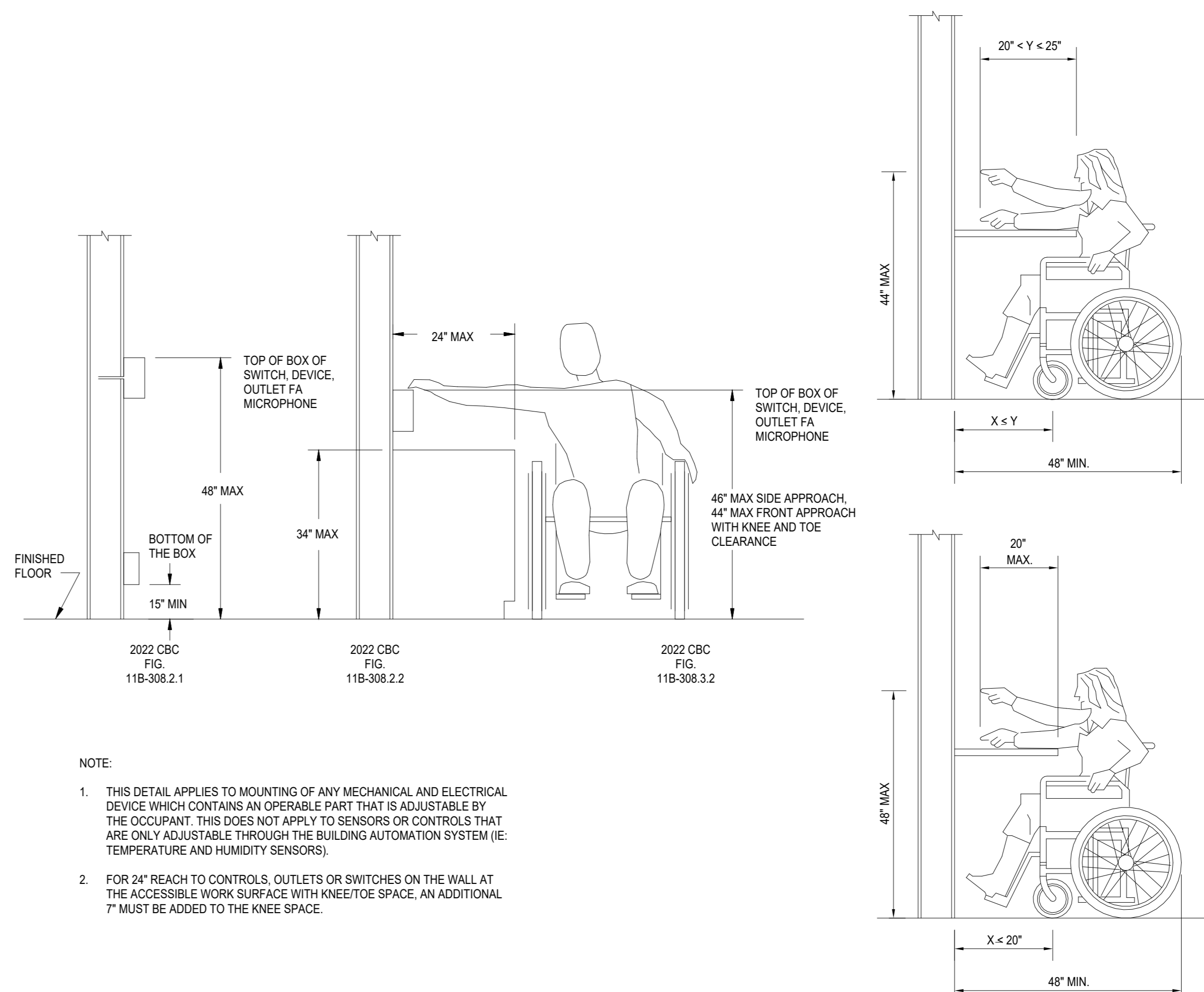
ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

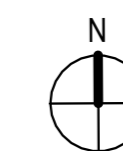
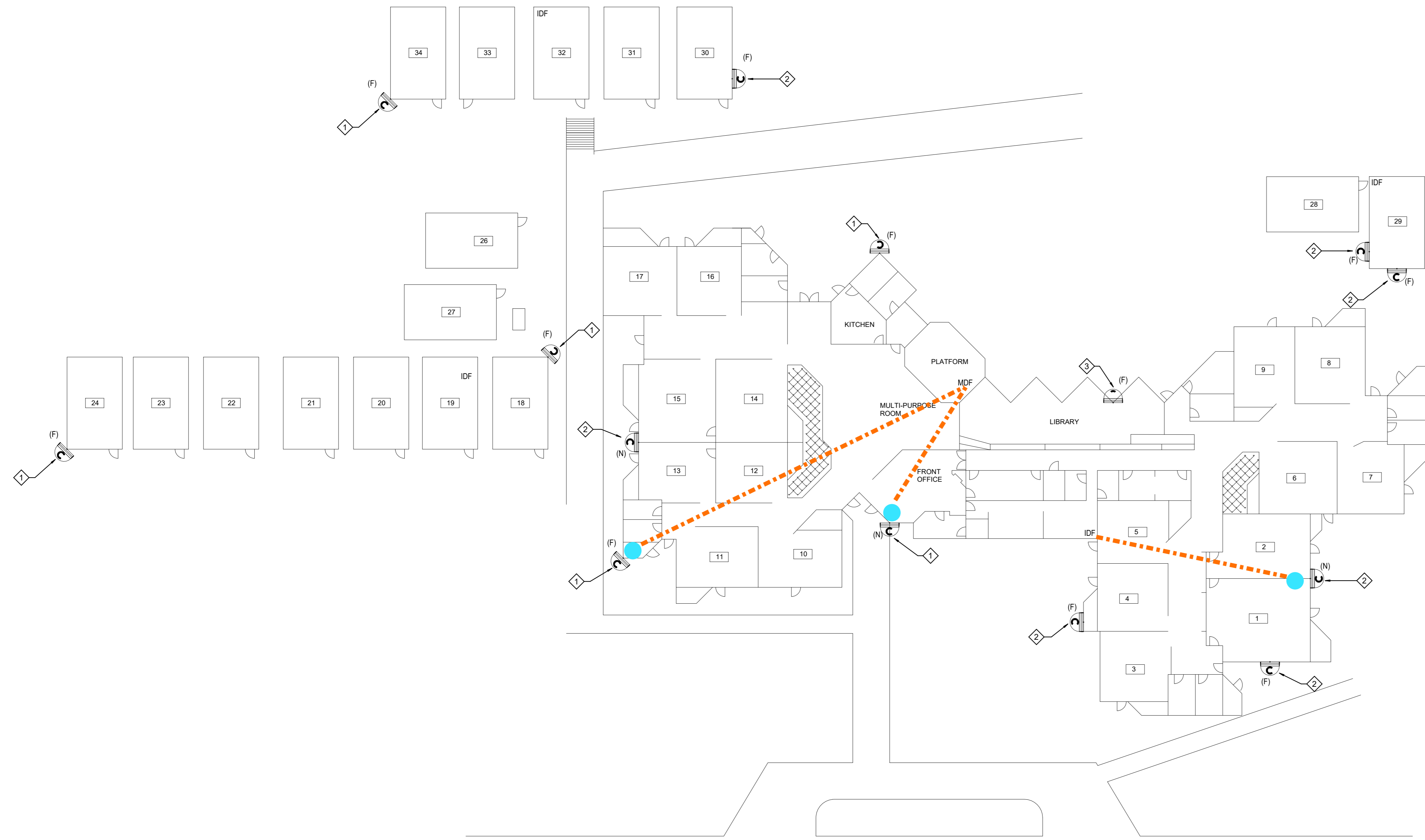
No.	Description	Date
1	ADDENDUM 01	9/18/24

TECHNOLOGY COVER SHEET

T0.00



- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
  - FOR 24" REACH TO CONTROLS, OUTLETS OR SWITCHES ON THE WALL AT THE ACCESSIBLE WORK SURFACE WITH KNEE/TOE SPACE, AN ADDITIONAL 7" MUST BE ADDED TO THE KNEE SPACE.



**KEY NOTES**

- 1 INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.
- 2 INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.
- 3 INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (90 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.

**GENERAL NOTES**

- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
  - 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
  - 3 ALL CAMERAS' HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
  - 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
  - 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
  - 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.
- CAMERA LOCATIONS FOR EXISTING PROJECT



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KEY PLAN



ENGINEER

ARCHITECT

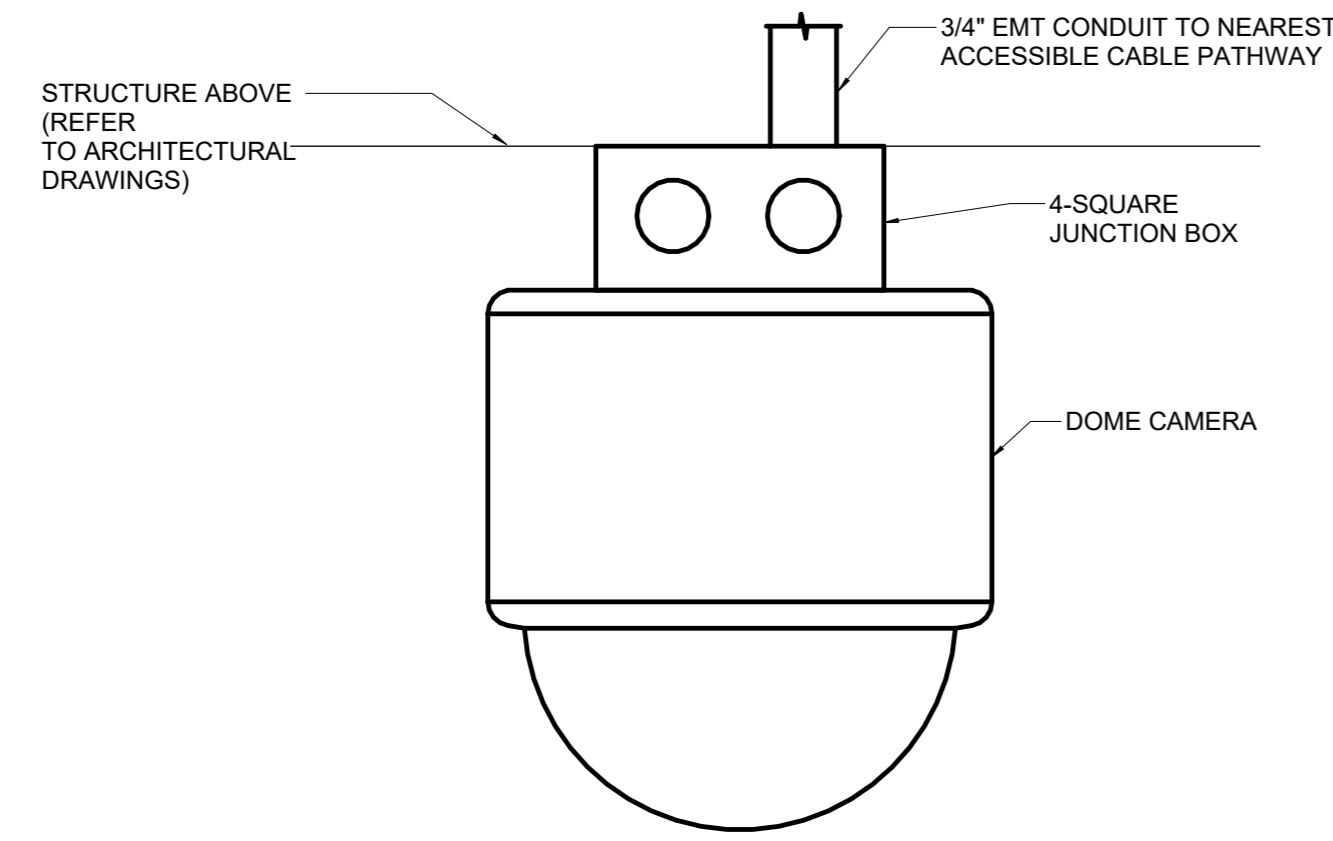
CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER  
DATE: 12/20/23  
DRAWN BY: Author  
CHECKED BY: Checker

REVISIONS		
No.	Description	Date
1	Addendum 1	9/12/24

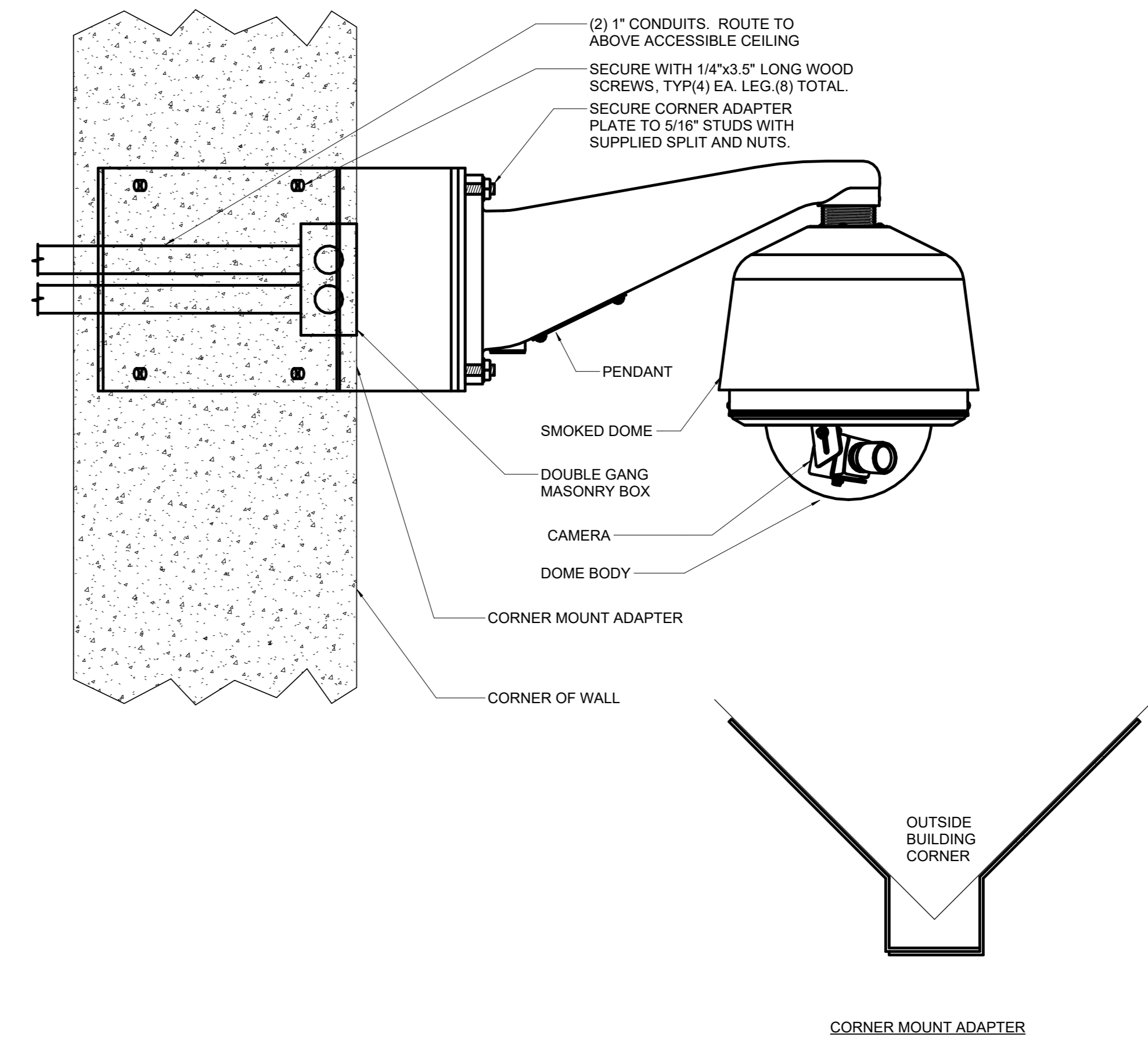
**TECHNOLOGY SITE PLAN**

**T1.01IH**



**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

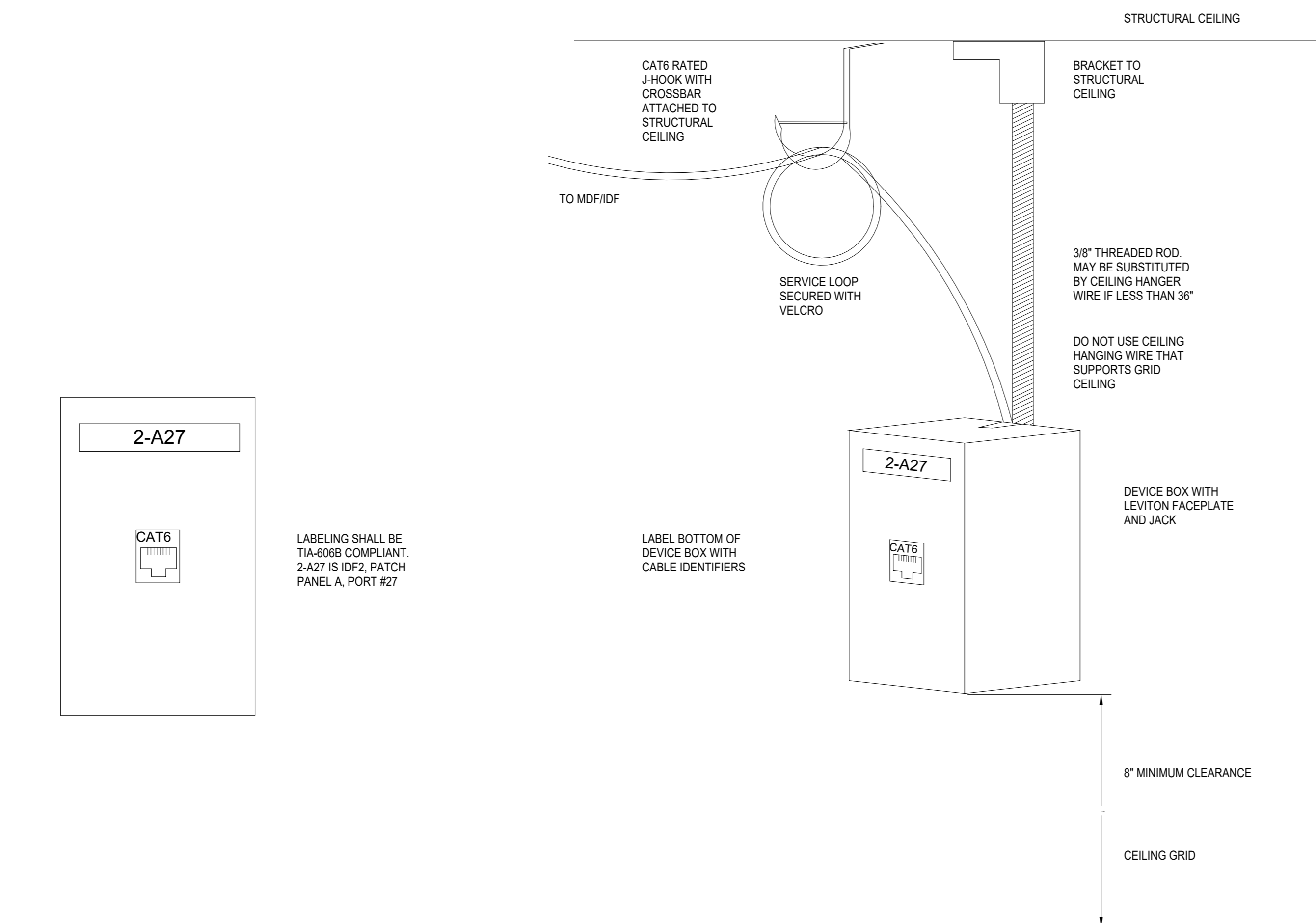


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**4 EXTERIOR SURFACE CEILING CAMERA MOUNTING**

N.T.S.

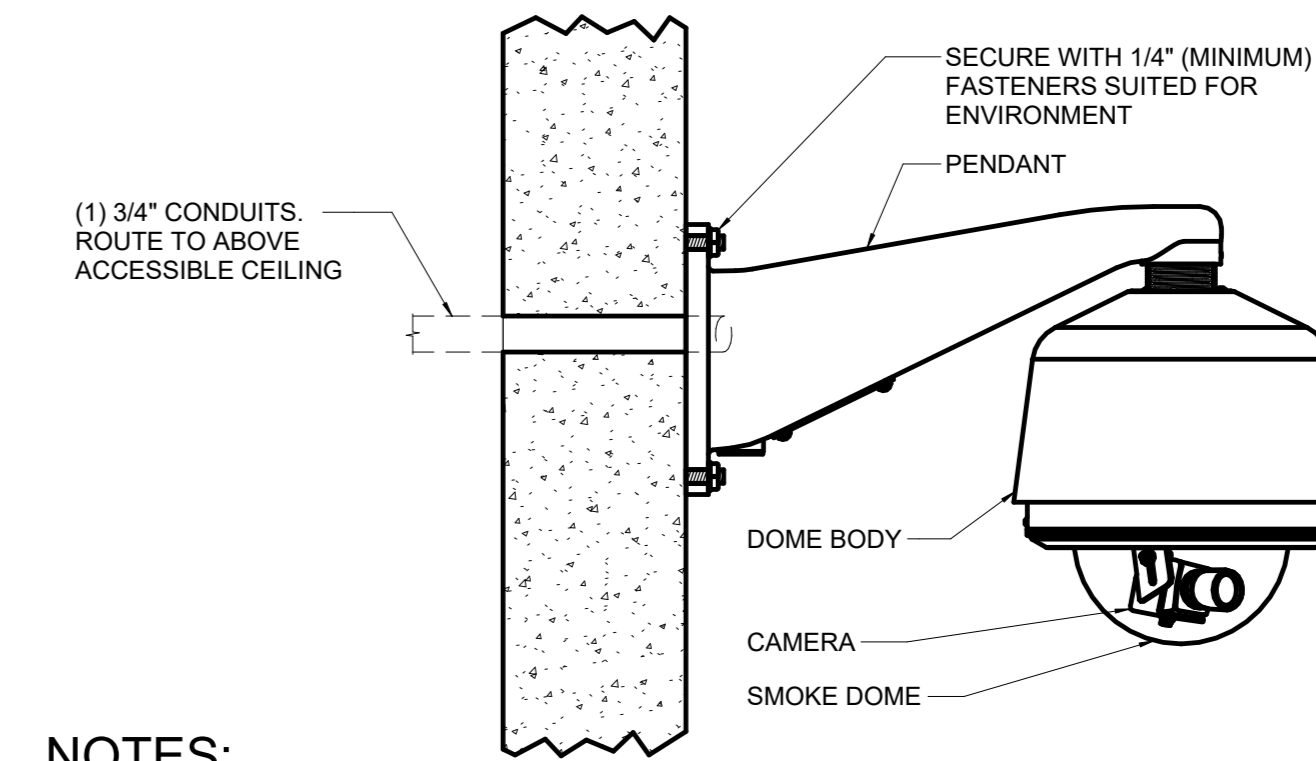


**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1\"/>

**1 EXTERIOR CORNER MOUNT CAMERA DETAIL**

3\"/>

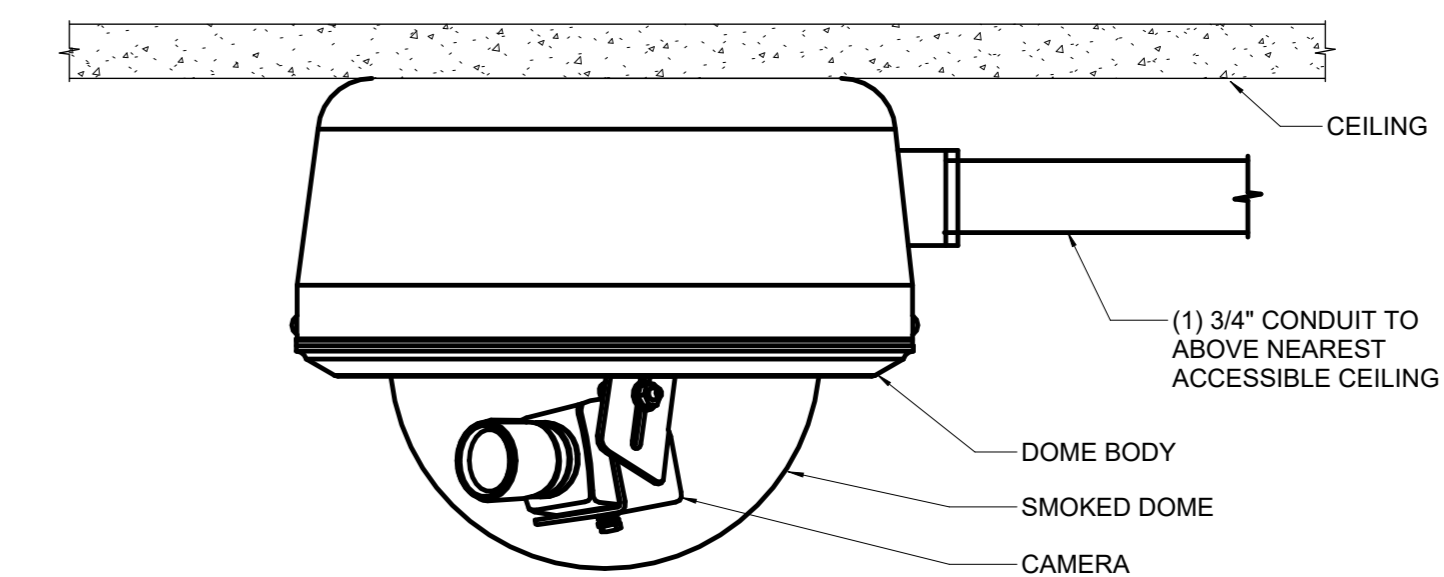


**NOTES:**

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**2 EXTERIOR WALL MOUNTED CAMERA**

3\"/>

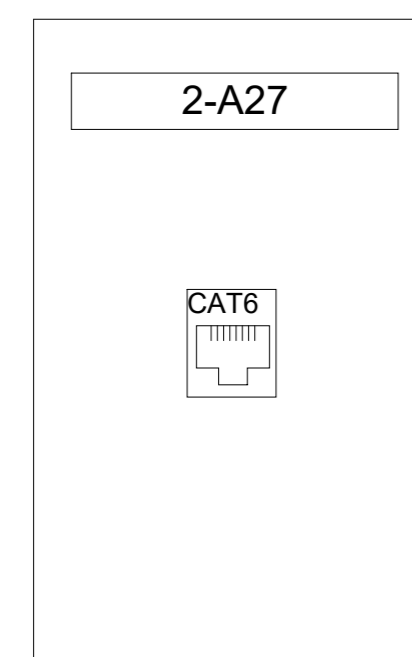


**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**5 SINGLE PORT LABELING**

N.T.S.



LABELING SHALL BE TIA-608B COMPLIANT. 2-A27 IS DF2 PATCH PANEL A, PORT #27

LABEL BOTTOM OF DEVICE BOX WITH CABLE IDENTIFIERS

DEVICE BOX WITH LEVITON FACEPLATE AND JACK

8\"/>

CEILING GRID



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KEY PLAN



ENGINEER



ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER  
DATE: 12/20/23  
DRAWN BY: Author  
CHECKED BY: Checker

No.	Description	Date

TECHNOLOGY  
DETAILS

T6.01

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PAN/OUTLET J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSI/ELECTRA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

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SHEET T0.00  
T1.01JV  
T6.01

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TECHNOLOGY SITE PLAN  
TECHNOLOGY DETAILS

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8163 Rochester Ave., Ste 100  
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909-987-5909

JURUPA VALLEY HIGH SCHOOL  
SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
10551 BELLEGRAVE AVE, JURUPA VALLEY, CA 91752

KEY PLAN



ENGINEER



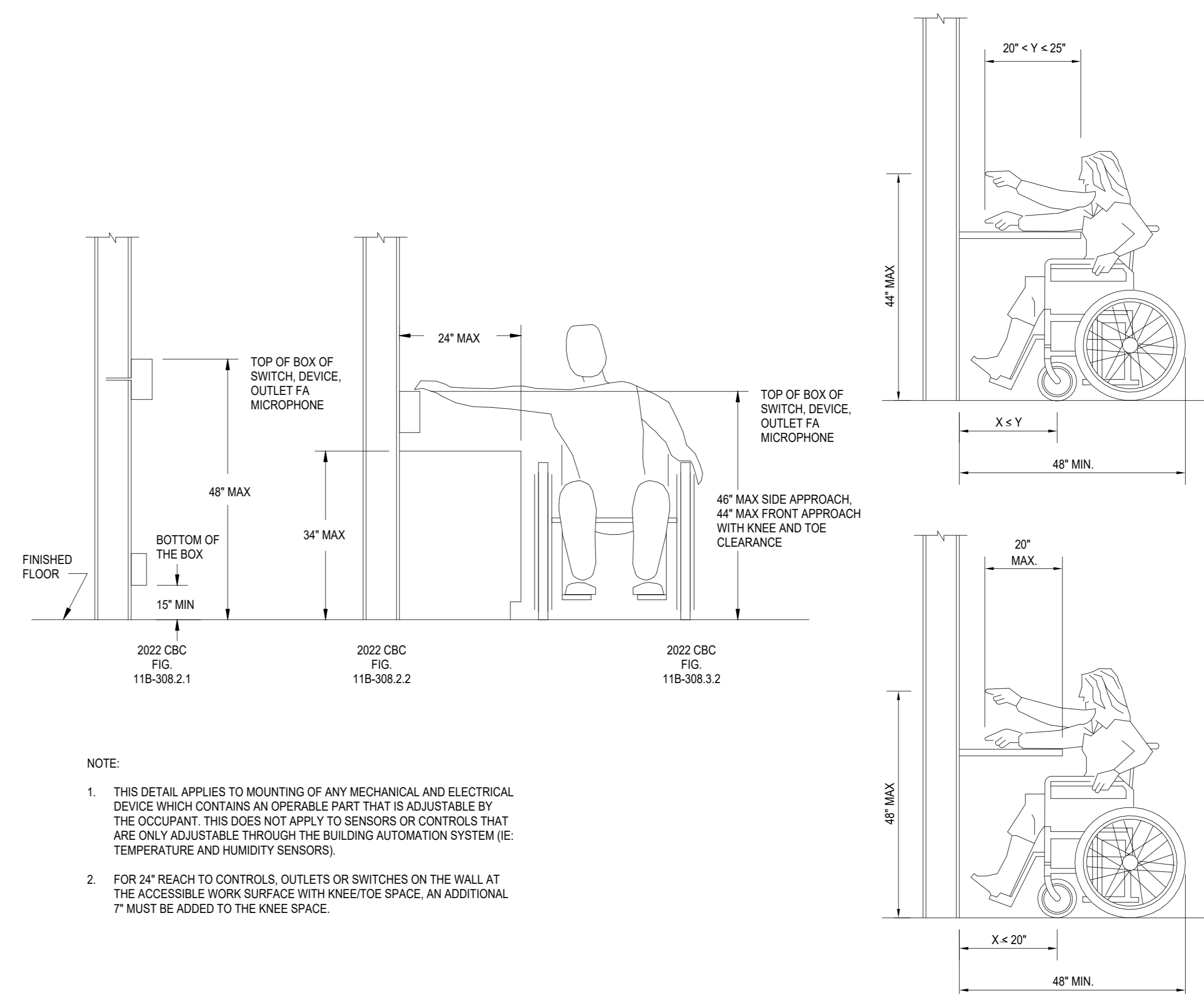
ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

No.	Description	Date
1	ADDENDUM 01	9/18/24

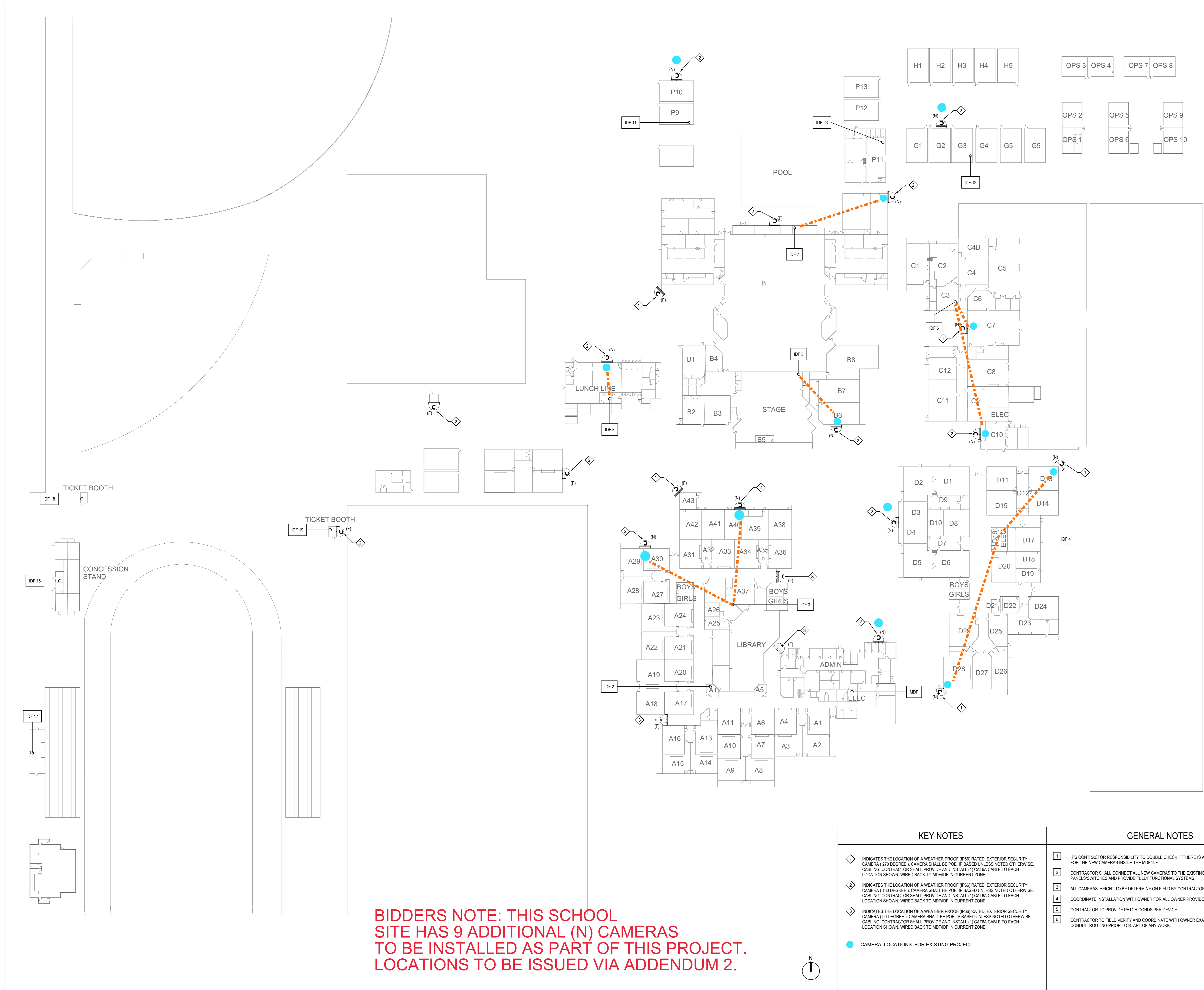
TECHNOLOGY COVER SHEET

T0.00

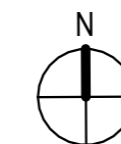


- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
  - FOR 24" REACH TO CONTROLS, OUTLETS OR SWITCHES ON THE WALL AT THE ACCESSIBLE WORK SURFACE WITH KNEE/TOE SPACE, AN ADDITIONAL 7" MUST BE ADDED TO THE KNEE SPACE.

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5/6/2024 6:04:31 AM



**BIDDERS NOTE: THIS SCHOOL SITE HAS 9 ADDITIONAL (N) CAMERAS TO BE INSTALLED AS PART OF THIS PROJECT. LOCATIONS TO BE ISSUED VIA ADDENDUM 2.**



KEY NOTES	
◇	INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA ( 270 DEGREE ). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.
◇	INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA ( 180 DEGREE ). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.
◇	INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA ( 90 DEGREE ). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO MDF/IDF IN CURRENT ZONE.
●	CAMERA LOCATIONS FOR EXISTING PROJECT

GENERAL NOTES	
1	IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
2	CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
3	ALL CAMERAS' HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
4	COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
5	CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
6	CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING/AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.



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KEY PLAN

ENGINEER

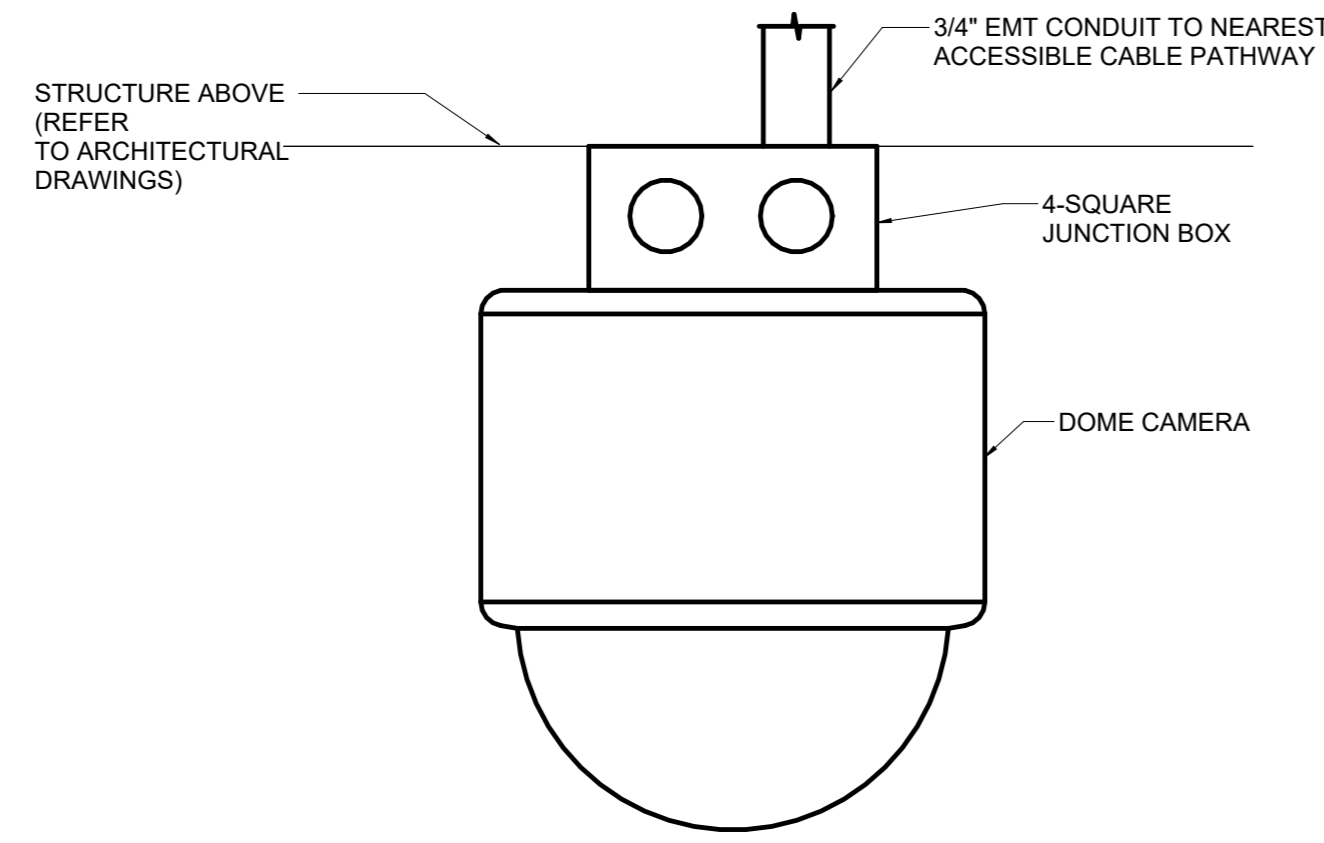
ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

REVISIONS		
No.	Description	Date
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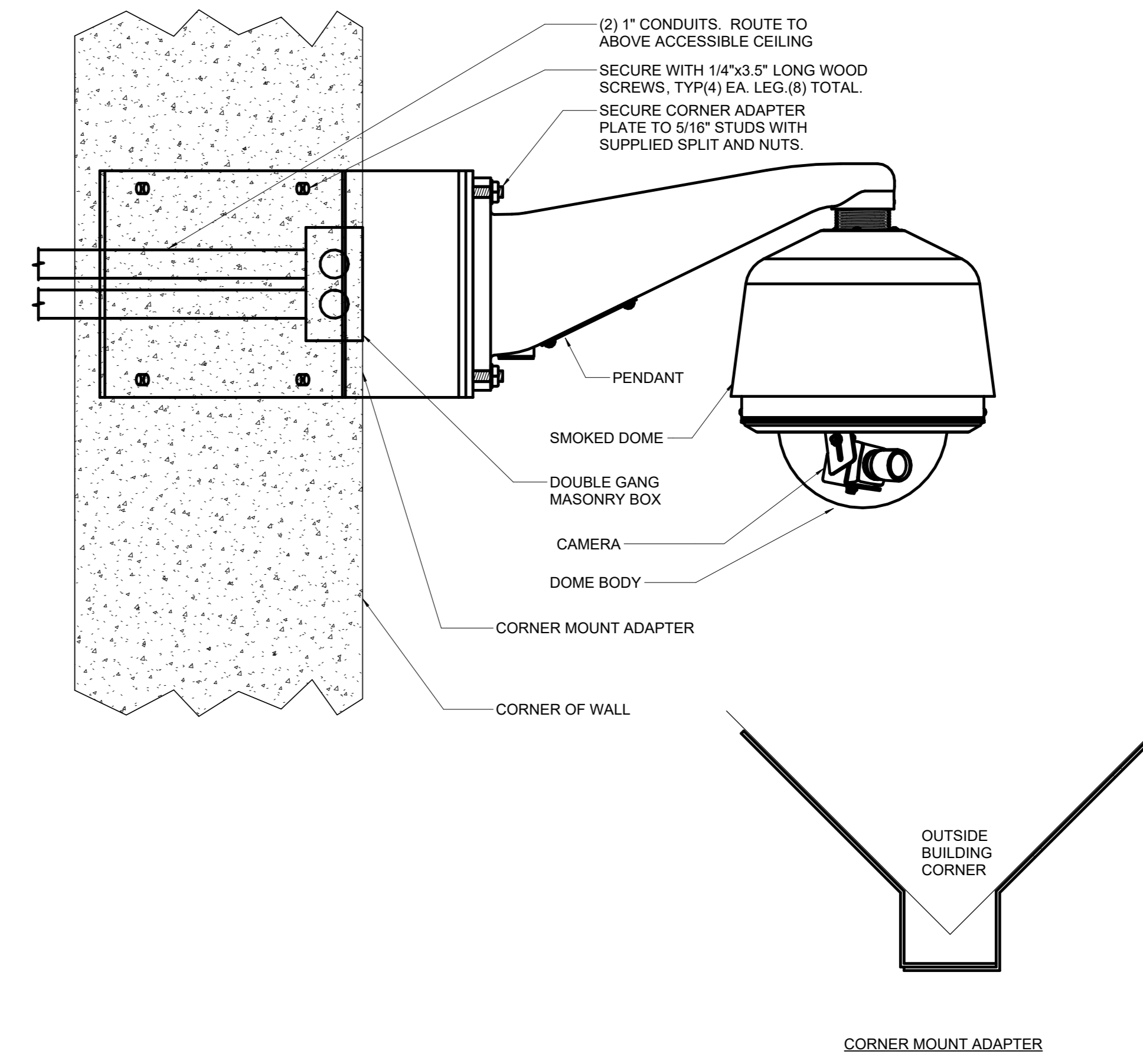
**TECHNOLOGY SITE PLAN**

**T1.01JV**



**NOTES:**

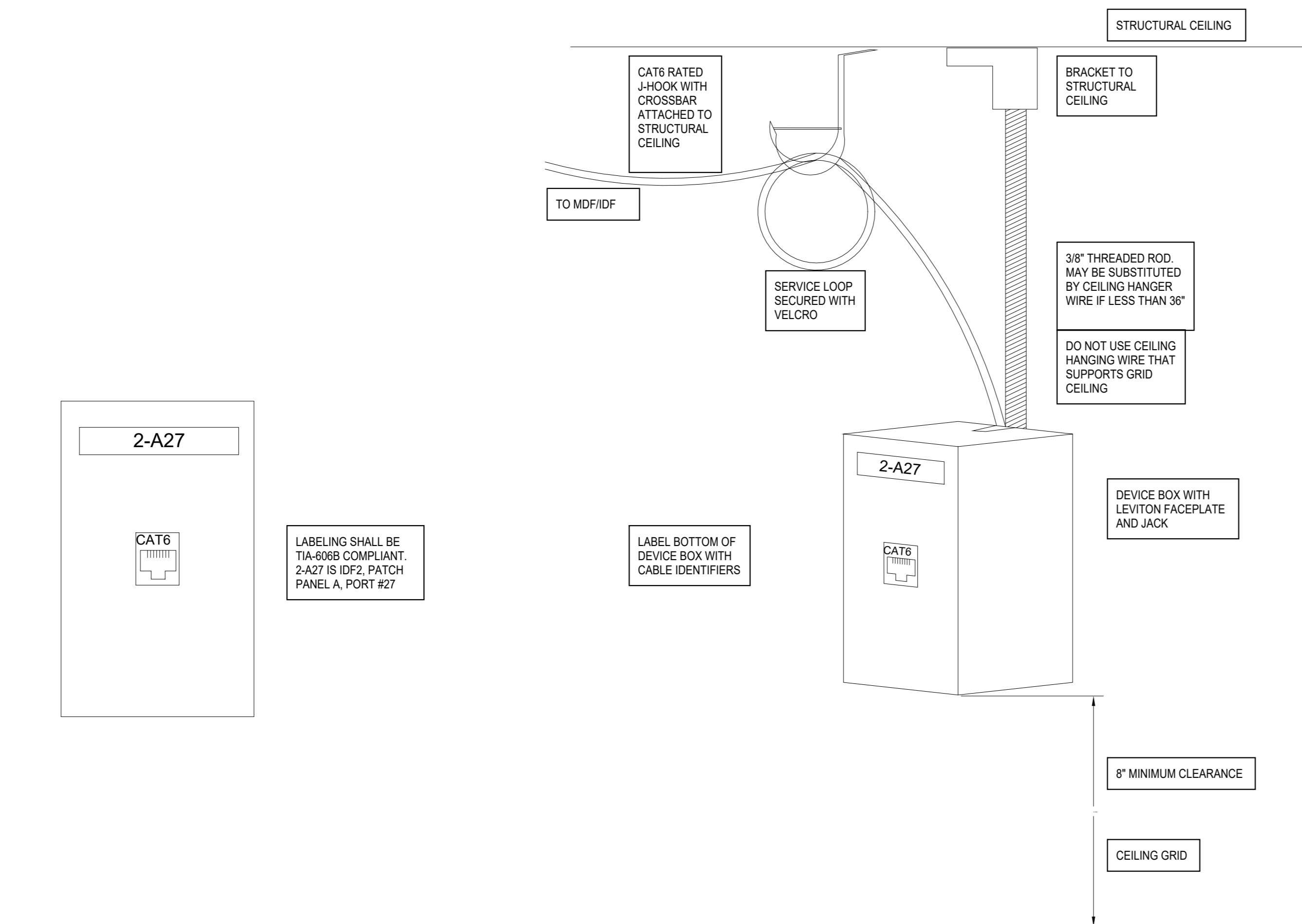
- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.



**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

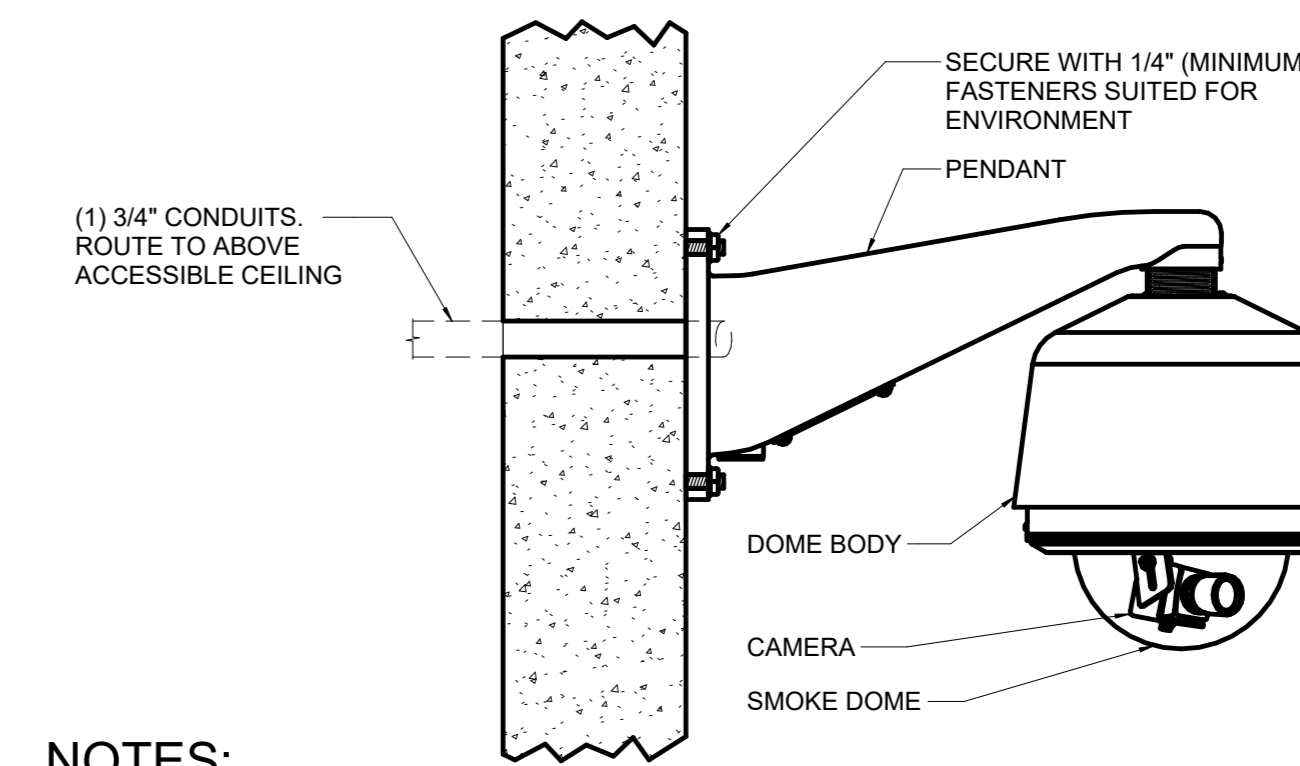
**4 EXTERIOR SURFACE CEILING CAMERA MOUNTING**  
N.T.S.



**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1\"/>

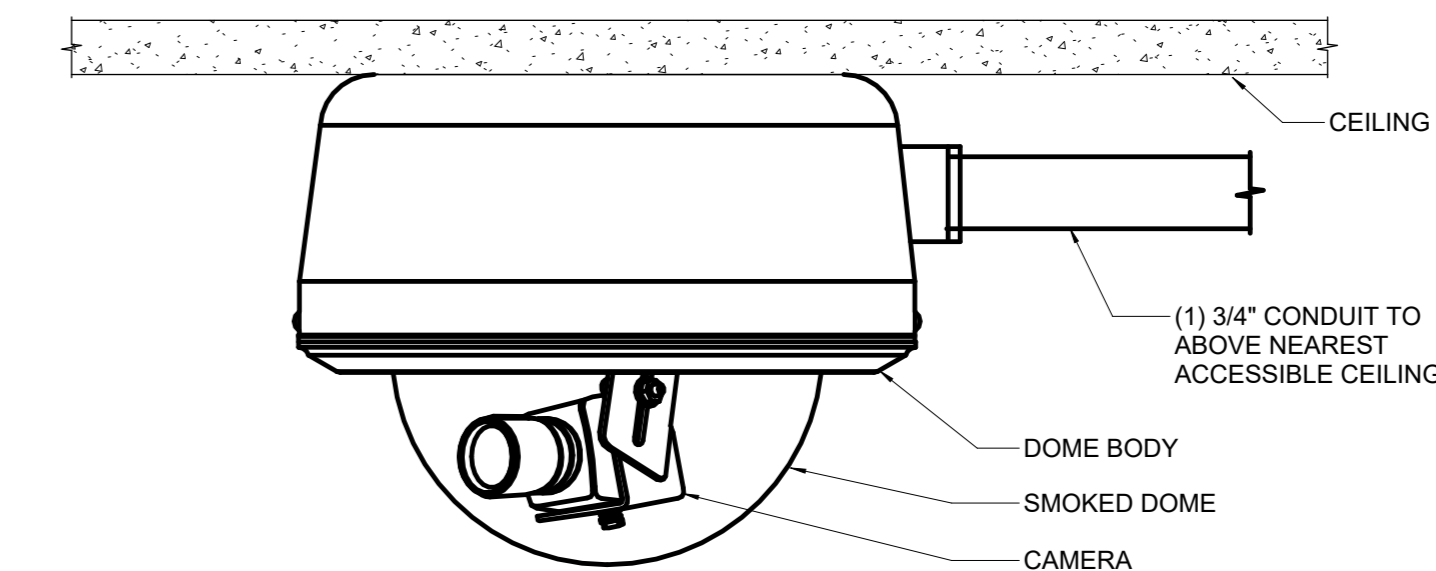
**1 EXTERIOR CORNER MOUNT CAMERA DETAIL**  
3\"/>



**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

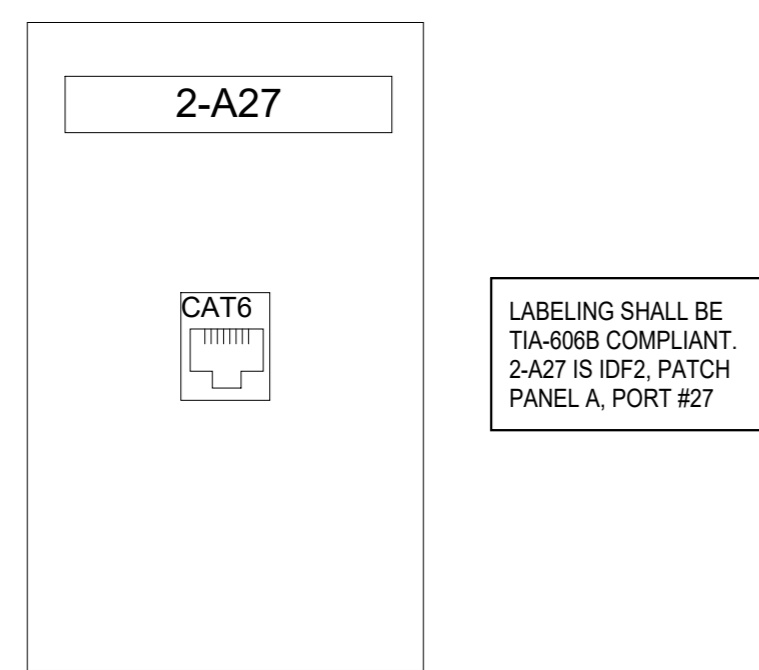
**2 EXTERIOR WALL MOUNTED CAMERA**  
3\"/>



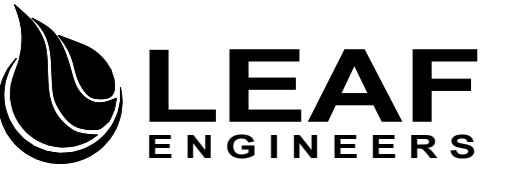
**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**5 SINGLE PORT LABELING**  
N.T.S.



**3 EXPOSED MOUNT FIXED CAMERA CEILING**  
6\"/>



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10551 BELLEGRAVE AVE, JURUPA VALLEY, CA 91752

KEY PLAN

ENGINEER



ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER		
DATE:	12/20/23	
DRAWN BY:	Author	
CHECKED BY:	Checker	
REVISIONS		
No.	Description	Date

**TECHNOLOGY  
DETAILS**

**T6.01**

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PAN-DUCT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSIFLUTIA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATIONS ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
###	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
—	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
- - -	UNDERGROUND/FLOOR CONDUIT	
○	CONDUIT UP	
●	CONDUIT DOWN	
↳	CONDUIT WITH CONTINUATION	
[ ]	CONDUIT SLEEVE	
≡	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "#\" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

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T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SIM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR-#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
+#	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR  
 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR  
 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR  
 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
 TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
 NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES, 2016 EDITION  
 UL 484 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION  
 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION  
 UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)  
 ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



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MAINTENANCE AND OPERATIONS  
 SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 4740 PEDLEY ROAD, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



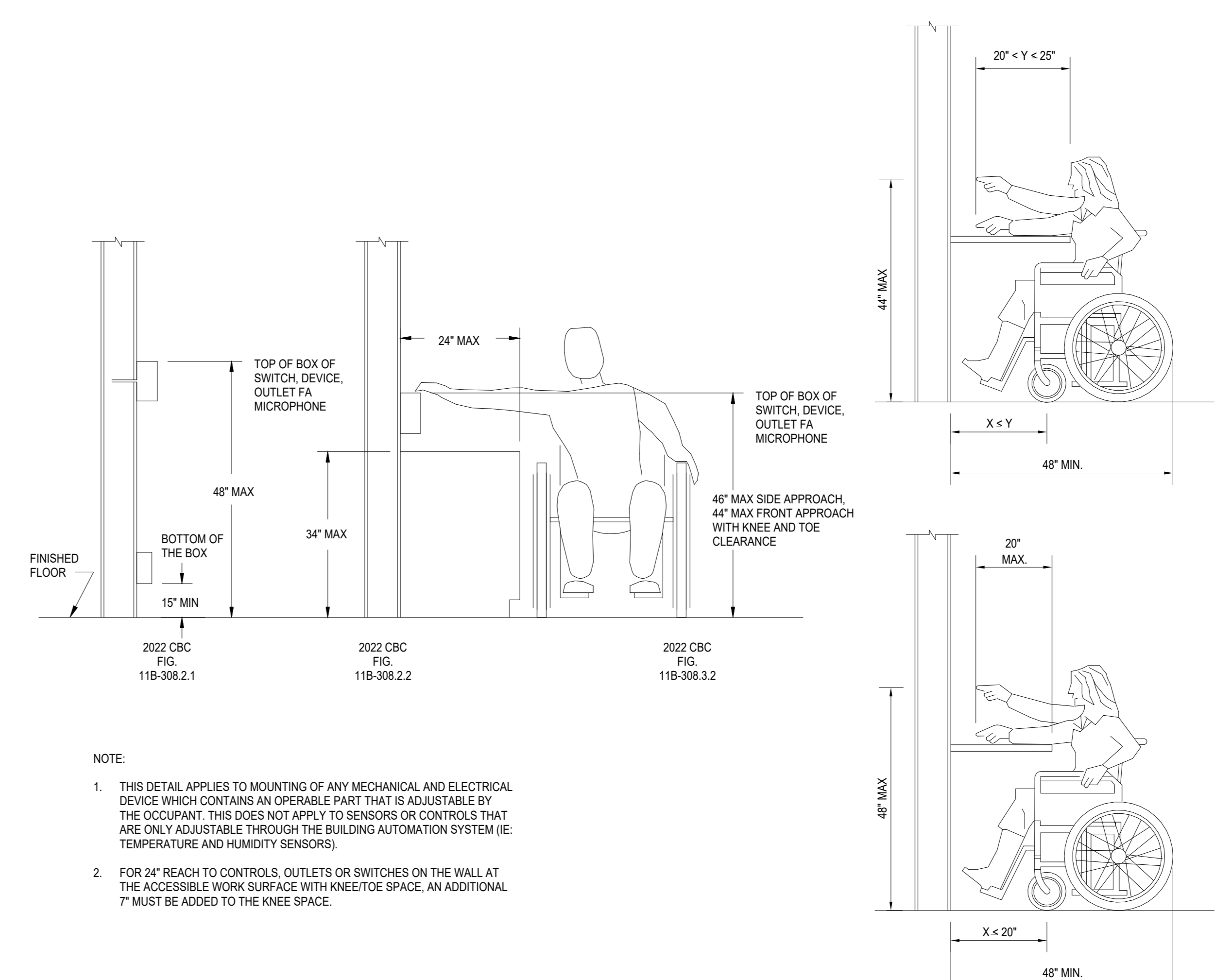
ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

REVISIONS		
No.	Description	Date
1	ADDENDUM 01	9/18/24

TECHNOLOGY COVER SHEET

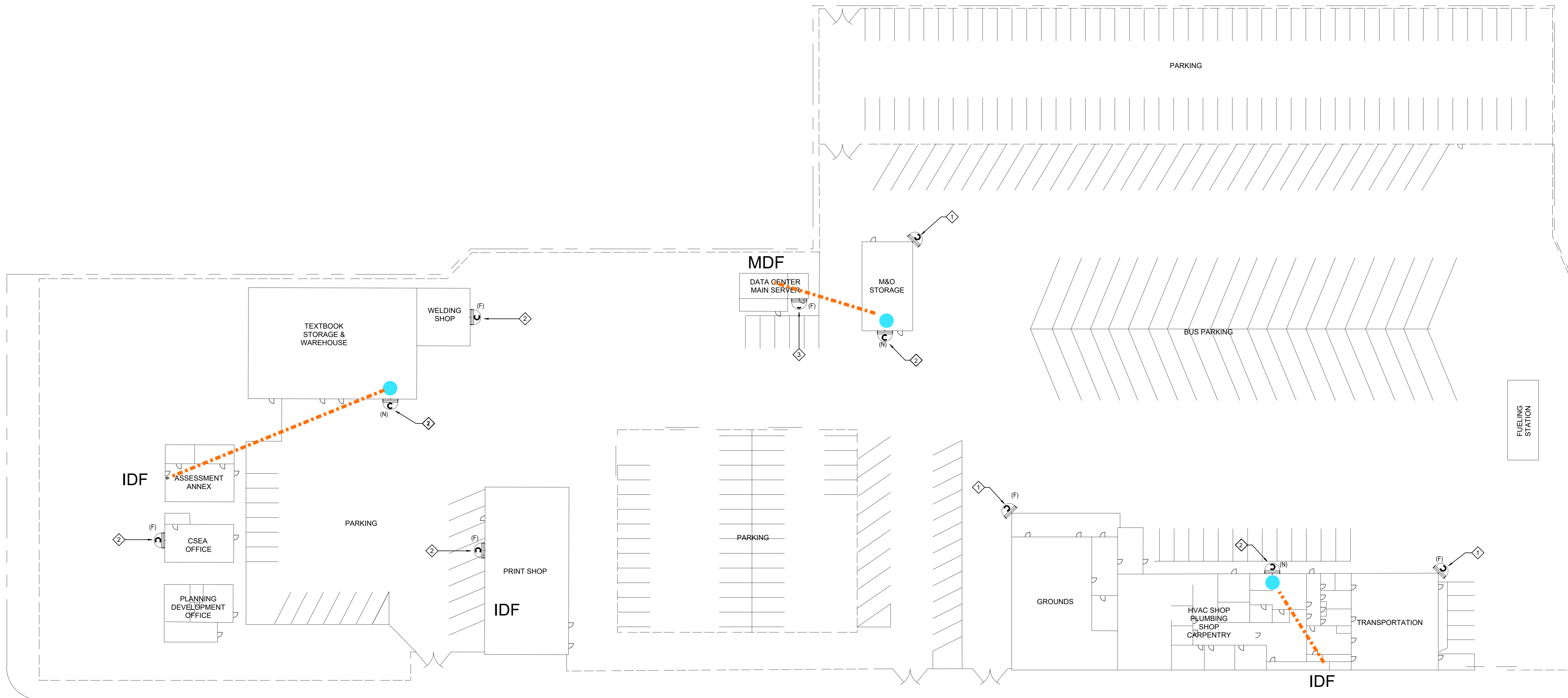
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- NOTE:
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  - FOR 24\"/>

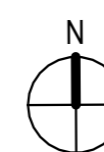


GALENA STREET



PEDLEY ROAD

KEY NOTES	GENERAL NOTES
<p>1 INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.</p> <p>2 INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.</p> <p>3 INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (90 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.</p> <p>4 CAMERA LOCATIONS FOR EXISTING PROJECT</p>	<p>1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.</p> <p>2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.</p> <p>3 ALL CAMERAS' HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.</p> <p>4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.</p> <p>5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.</p> <p>6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING/AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.</p>



KEY PLAN

ENGINEER

ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

CLIENT

PROJECT NUMBER

DATE: 12/20/23

DRAWN BY: Author

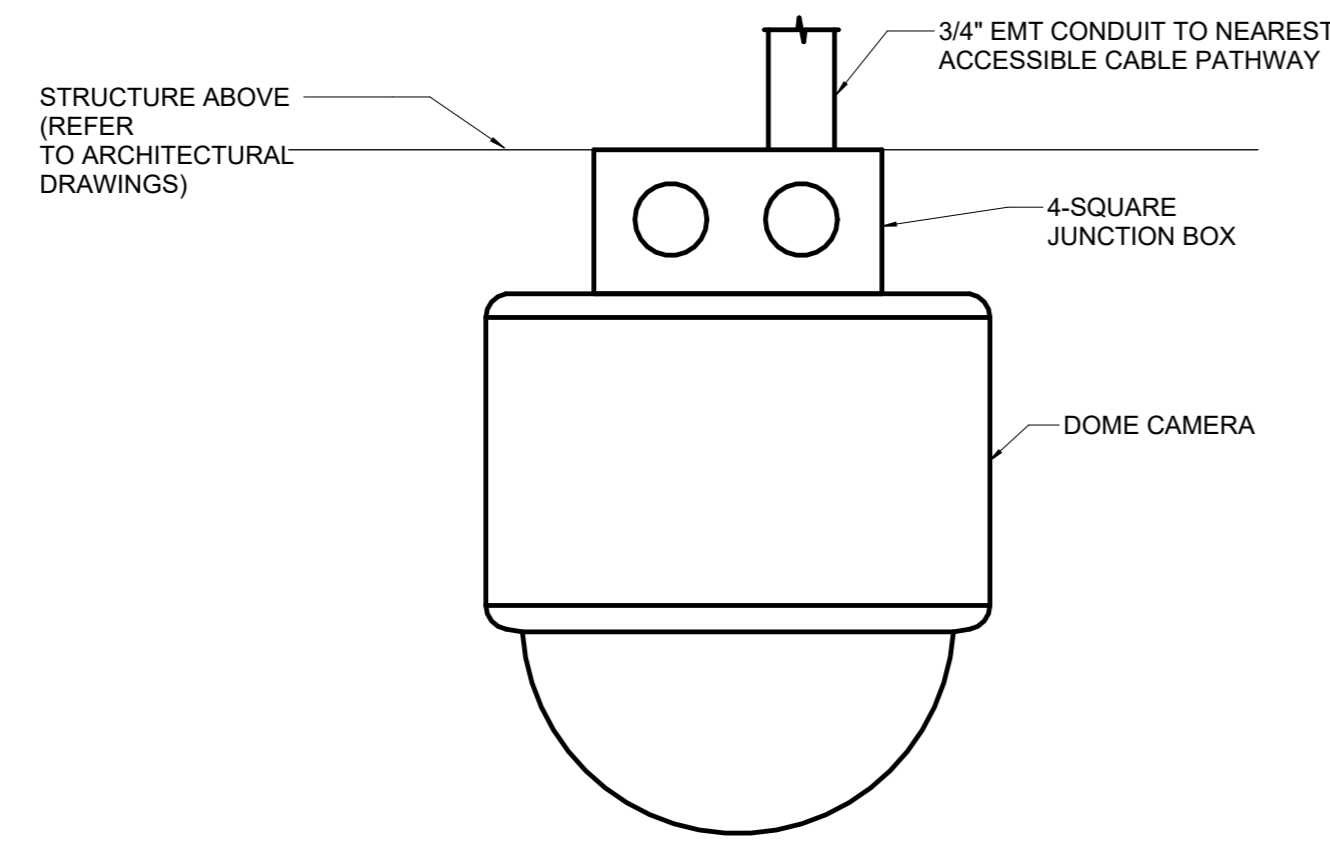
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REVISIONS

No.	Description	Date
1	Addendum 1	9/12/24

**TECHNOLOGY SITE  
PLAN**

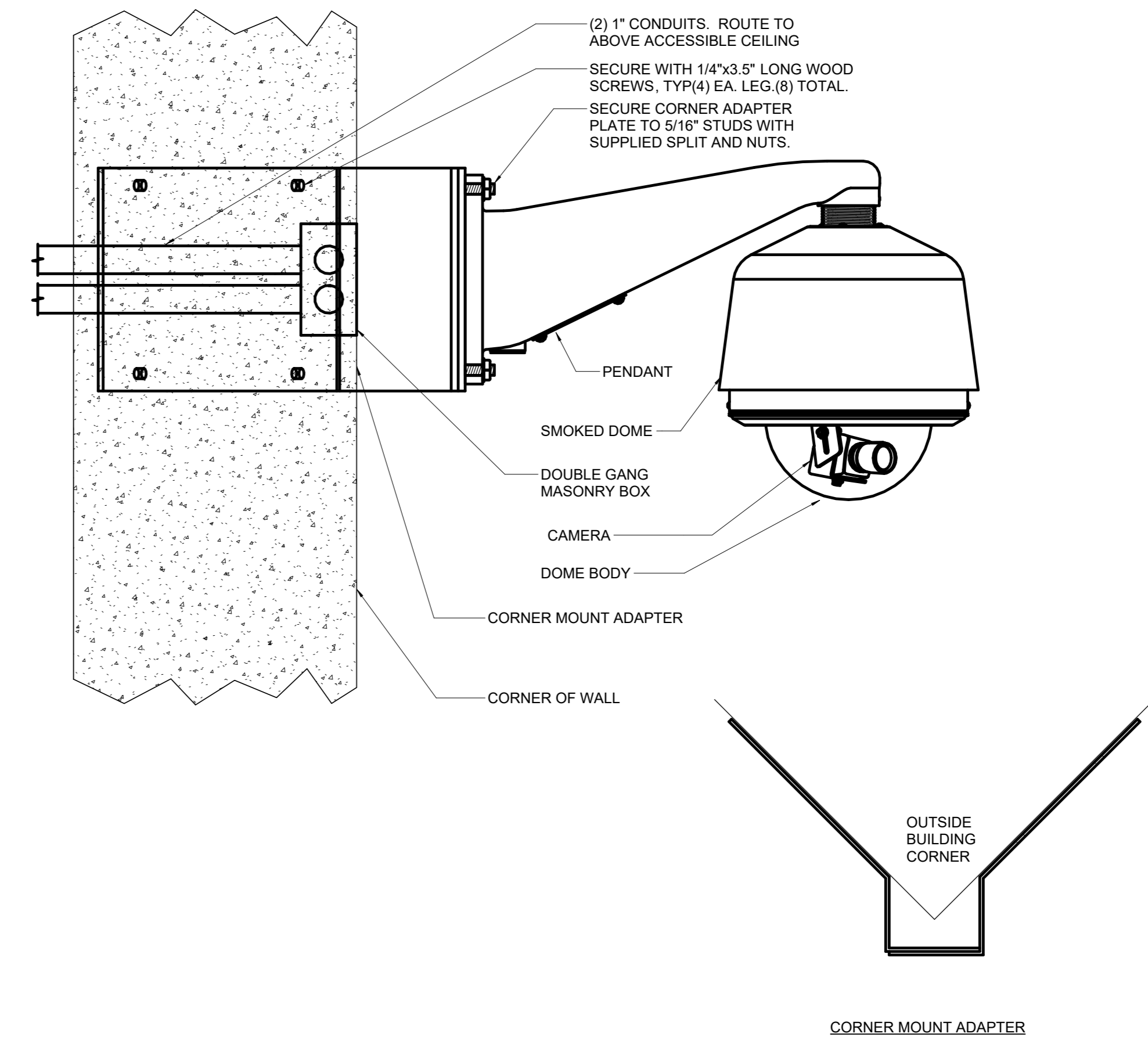
**T1.01**



**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

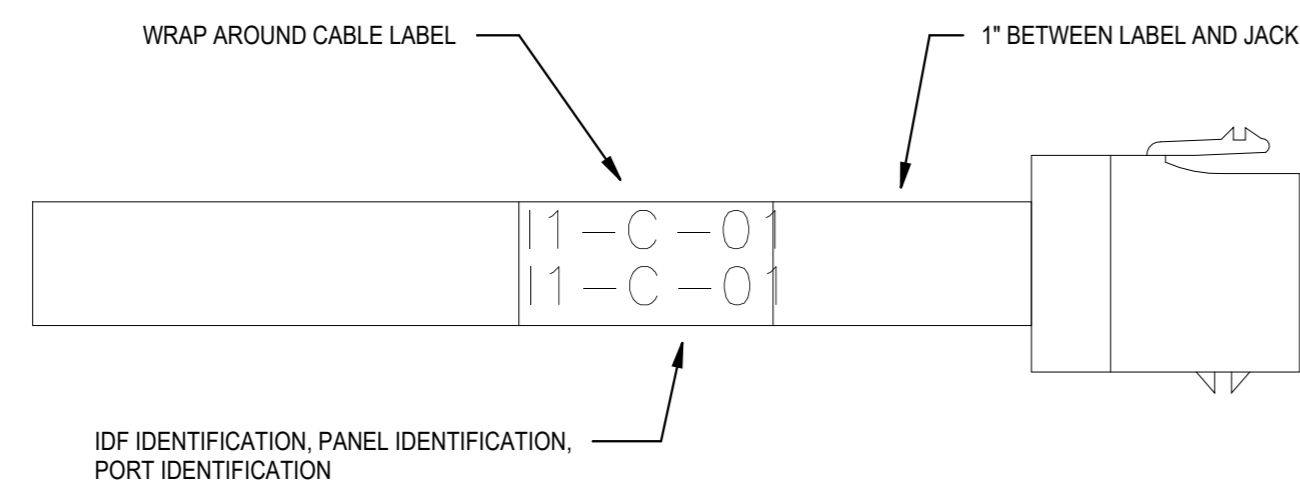
**4** EXTERIOR SURFACE CEILING CAMERA MOUNTING  
N.T.S.



**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

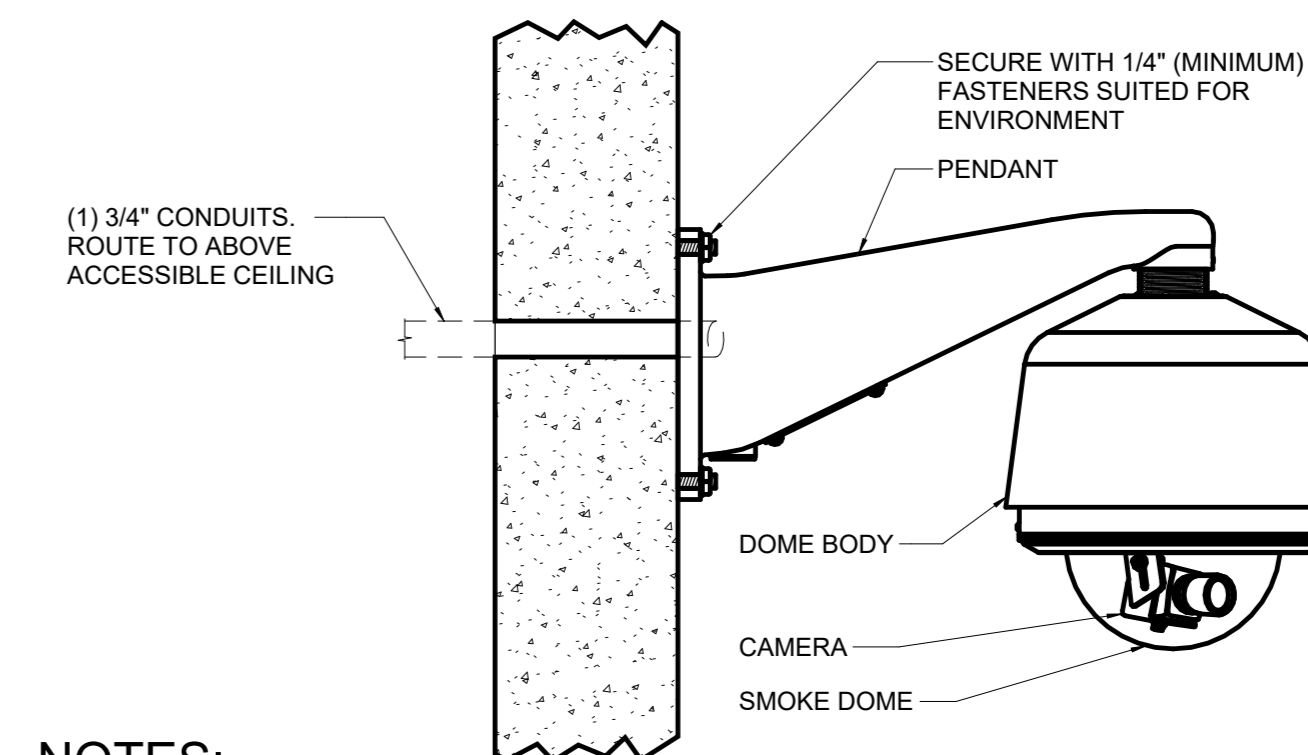
**1** EXTERIOR CORNER MOUNT CAMERA DETAIL  
3\"/>



**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1\"/>

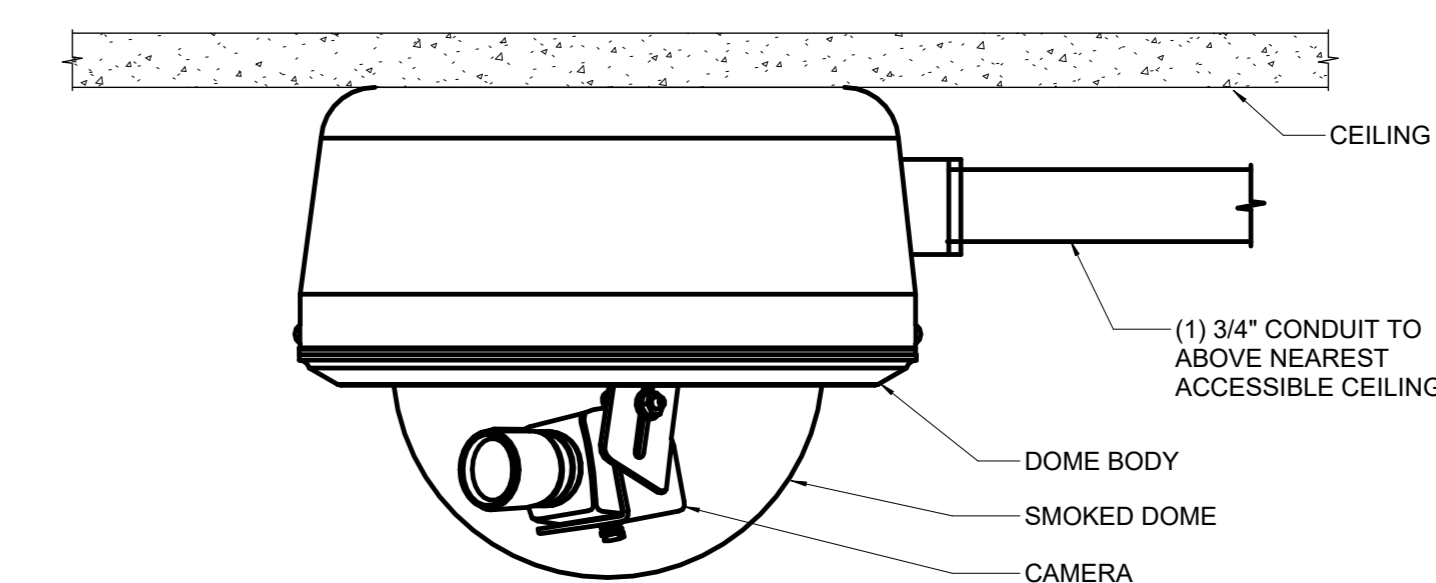
**5** SINGLE PORT LABELING  
3/4\"/>



**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**2** EXTERIOR WALL MOUNTED CAMERA  
3\"/>



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3** EXPOSED MOUNT FIXED CAMERA CEILING  
6\"/>



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**MAINTENANCE AND OPERATIONS  
SECURITY CAMERAS**

JURUPA UNIFIED SCHOOL DISTRICT  
4740 PEDLEY ROAD, JURUPA VALLEY, CA 92509

**KEY PLAN**



ENGINEER



ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER	
DATE	12/20/23
DRAWN BY:	Author
CHECKED BY:	Checker

REVISIONS		
No.	Description	Date

**TECHNOLOGY  
DETAILS**

**T6.01**

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PANDUIT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSIFLUTIA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATIONS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA #\"/>	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "R\"/>

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SIM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR-#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
+#	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR  
 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR  
 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR  
 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
 TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
 NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES, 2016 EDITION  
 UL 484 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION  
 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION  
 UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)  
 ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



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 909-987-5909

MIRA LOMA MIDDLE SCHOOL SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 5051 STEVE AVE, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



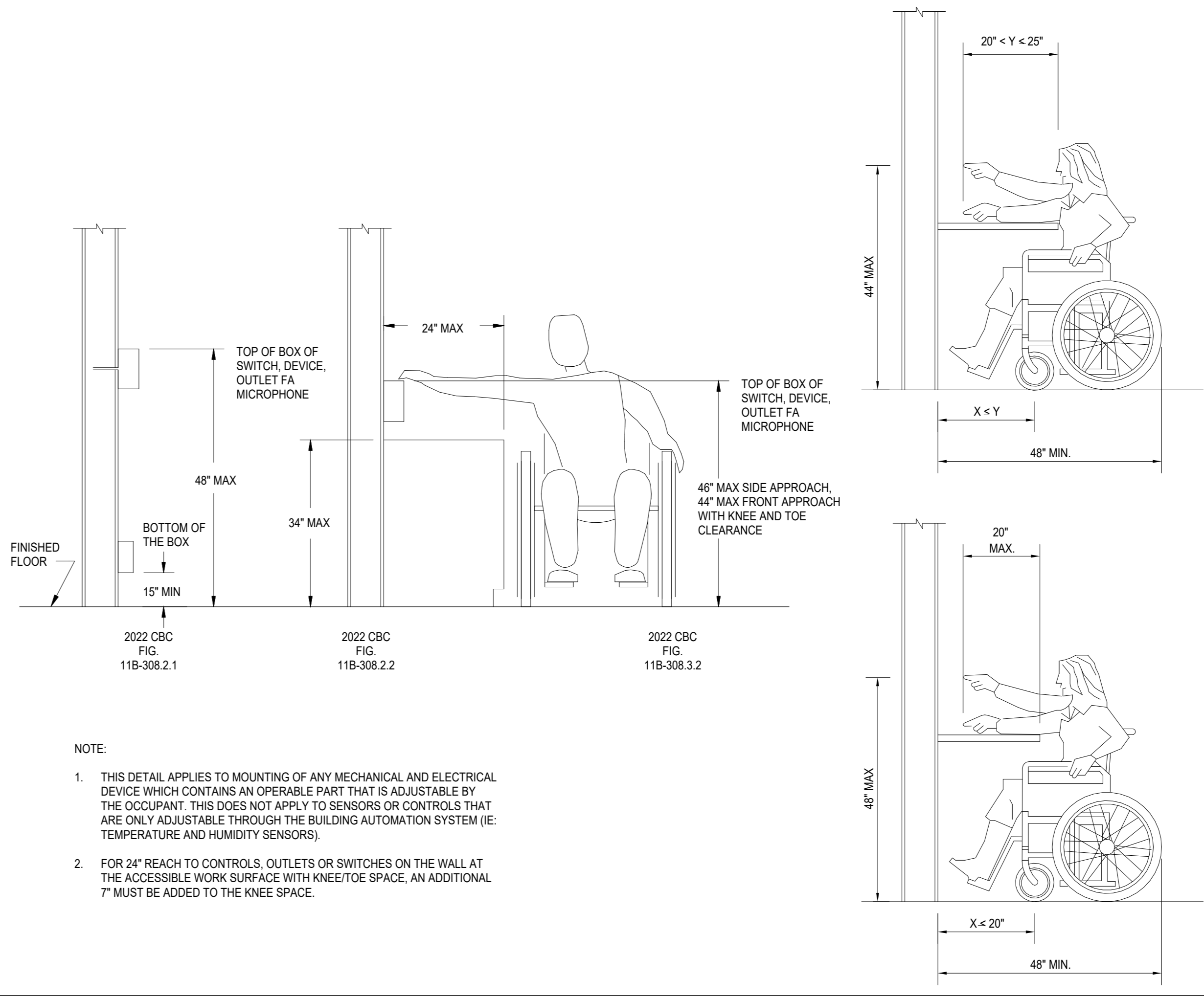
ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

No.	Description	Date
1	ADDENDUM 01	9/18/24

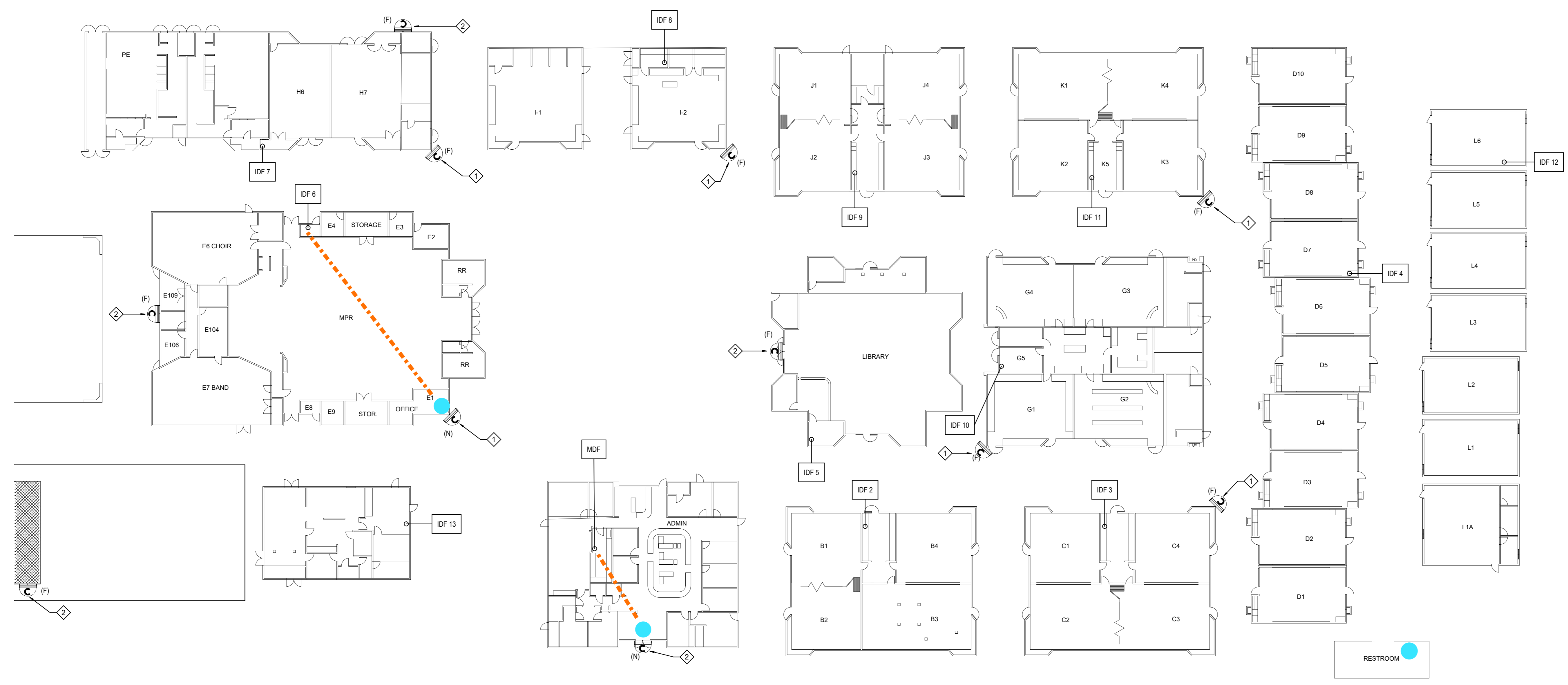
TECHNOLOGY COVER SHEET

T0.00



- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
  - FOR 24\"/>

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**KEY NOTES**

- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (90 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- CAMERA LOCATIONS FOR EXISTING PROJECT

**GENERAL NOTES**

- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
- 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
- 3 ALL CAMERAS HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
- 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
- 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
- 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.



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 909-987-5909

**MIRA LOMA MIDDLE SCHOOL SECURITY CAMERAS**  
 JURUPA UNIFIED SCHOOL DISTRICT  
 5051 STEVE AVE, JURUPA VALLEY, CA 92509

KEY PLAN

ENGINEER

ARCHITECT

CLIENT  
 JURUPA UNIFIED SCHOOL DISTRICT

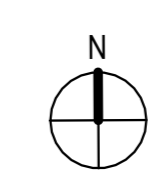
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 CHECKED BY: Checker

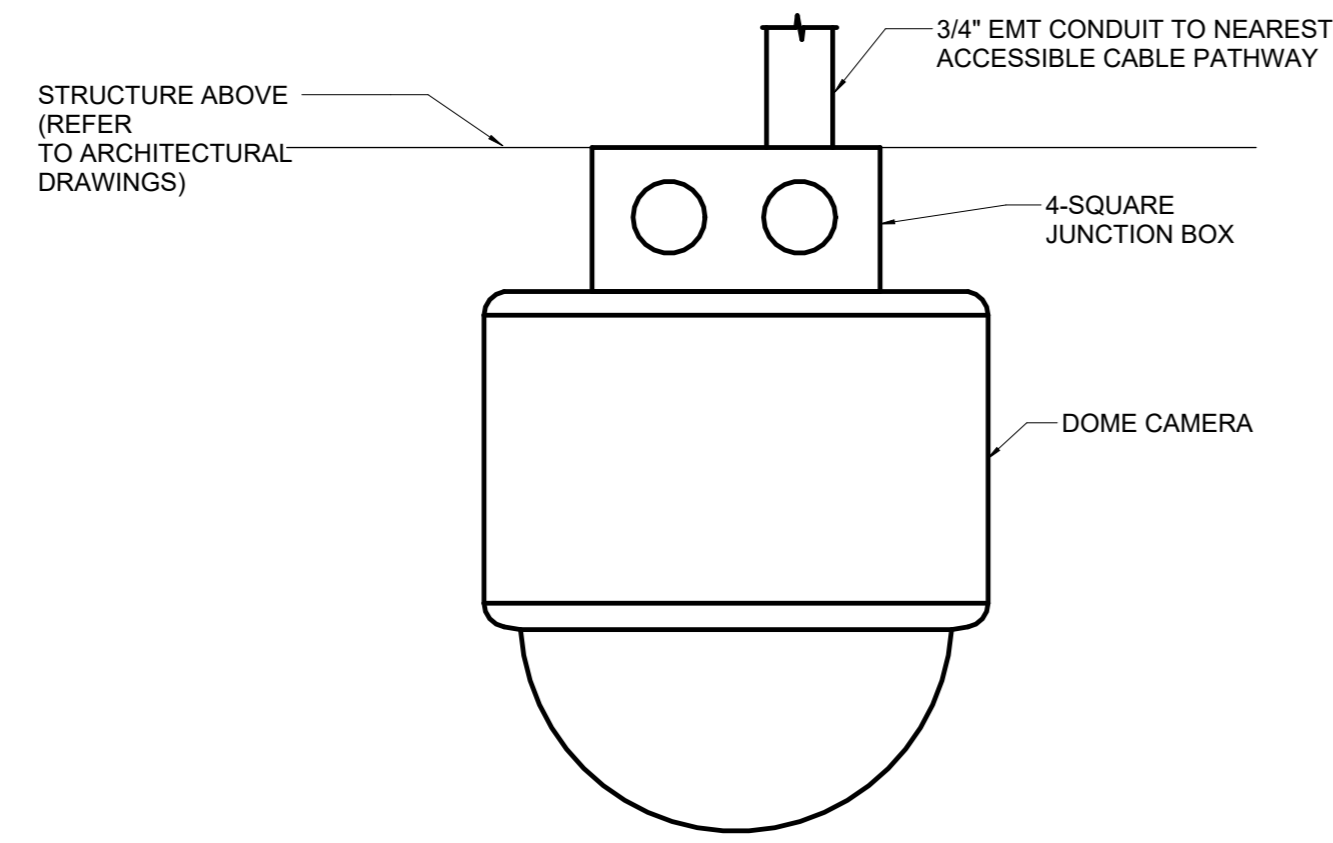
REVISIONS

No.	Description	Date
1	Addendum 1	3/12/24

**TECHNOLOGY SITE PLAN**

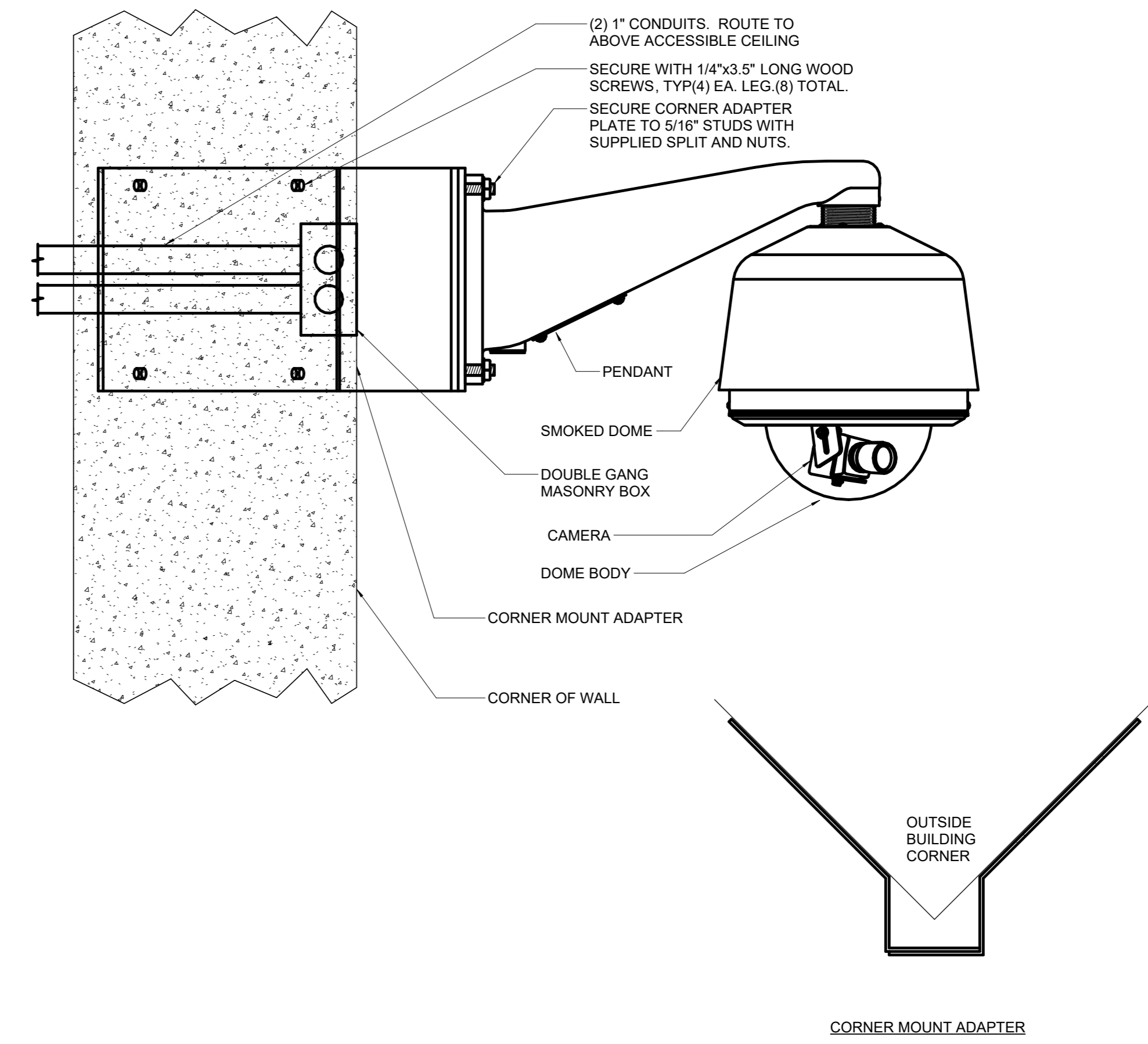
**T1.01**





**NOTES:**

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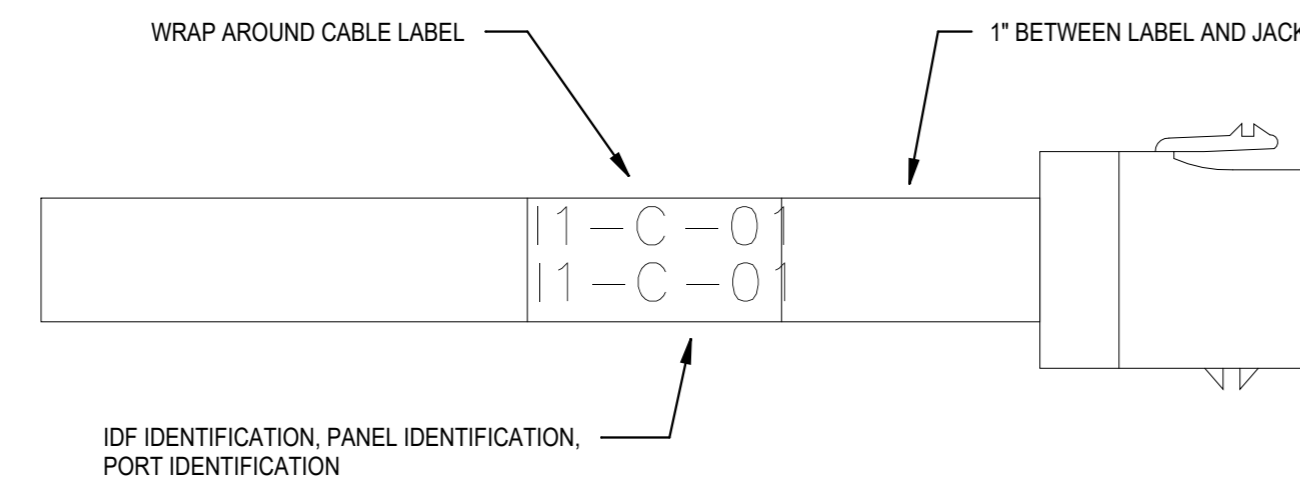


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**4** EXTERIOR SURFACE CEILING CAMERA MOUNTING

N.T.S.



**NOTES:**

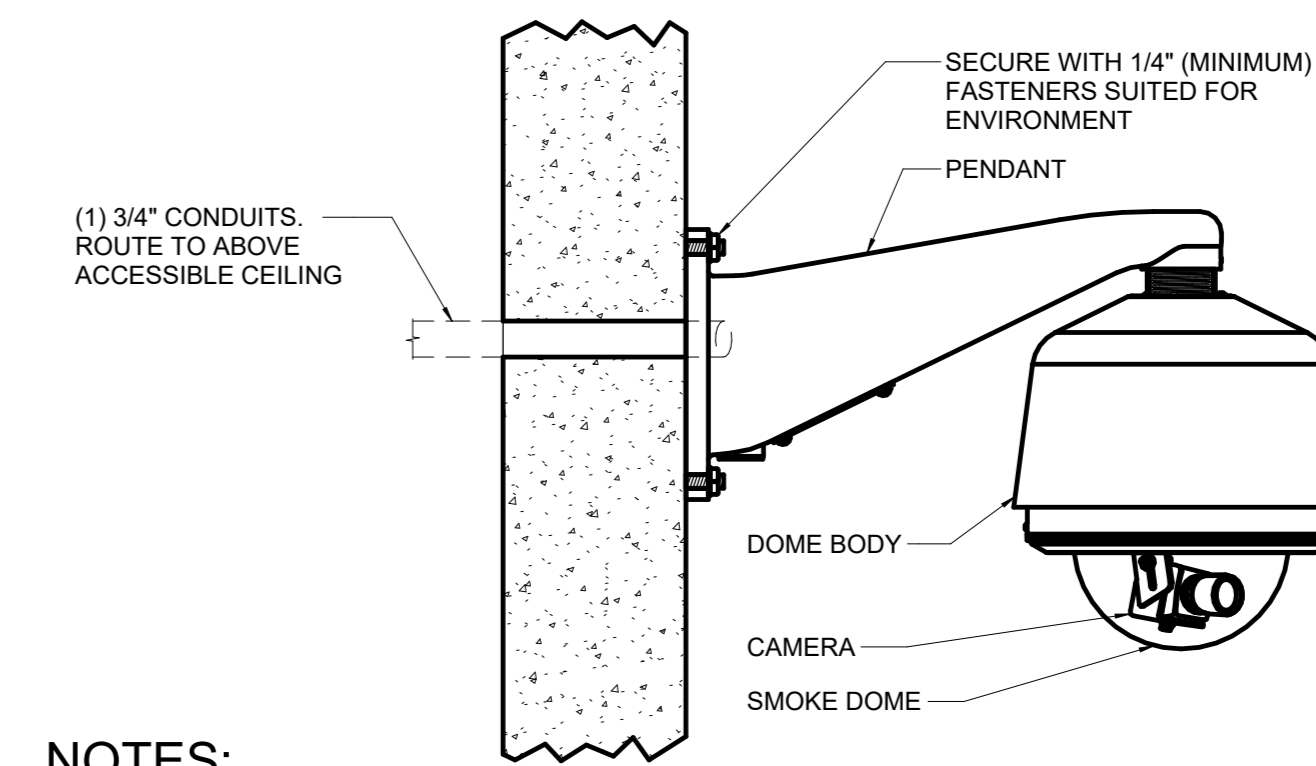
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**5** SINGLE PORT LABELING

3/4\"/>

**1** EXTERIOR CORNER MOUNT CAMERA DETAIL

3\"/>

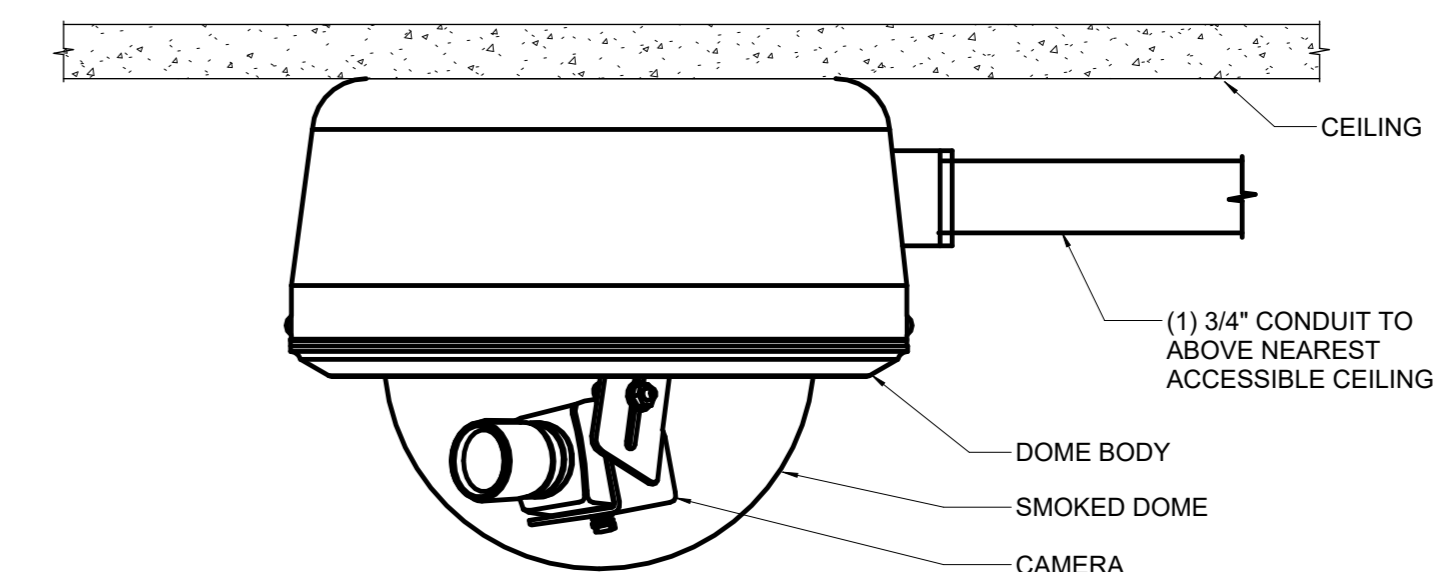


**NOTES:**

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**2** EXTERIOR WALL MOUNTED CAMERA

3\"/>



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3** EXPOSED MOUNT FIXED CAMERA CEILING

6\"/>



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MIRA LOMA MIDDLE SCHOOL SECURITY  
CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
5051 STEVE AVE, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

CLIENT	JURUPA UNIFIED SCHOOL DISTRICT
PROJECT NUMBER	
DATE:	12/20/23
DRAWN BY:	Author
CHECKED BY:	Checker

REVISIONS		
No.	Description	Date

TECHNOLOGY  
DETAILS

T6.01

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
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- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PANOUTLET J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSIBLTA, BICSI, AND THE IEC.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATIONS ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
###	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
—	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
—	UNDERGROUND/FLOOR CONDUIT	
○	CONDUIT UP	
●	CONDUIT DOWN	
—	CONDUIT WITH CONTINUATION	
[ ]	CONDUIT SLEEVE	
≡	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "#\" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR-#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
#8	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR  
 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR  
 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR  
 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
 TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
 NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES, 2016 EDITION  
 UL 484 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION  
 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION  
 UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)  
 ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



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MISSION BELL ES SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 4020 CONNING ST, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



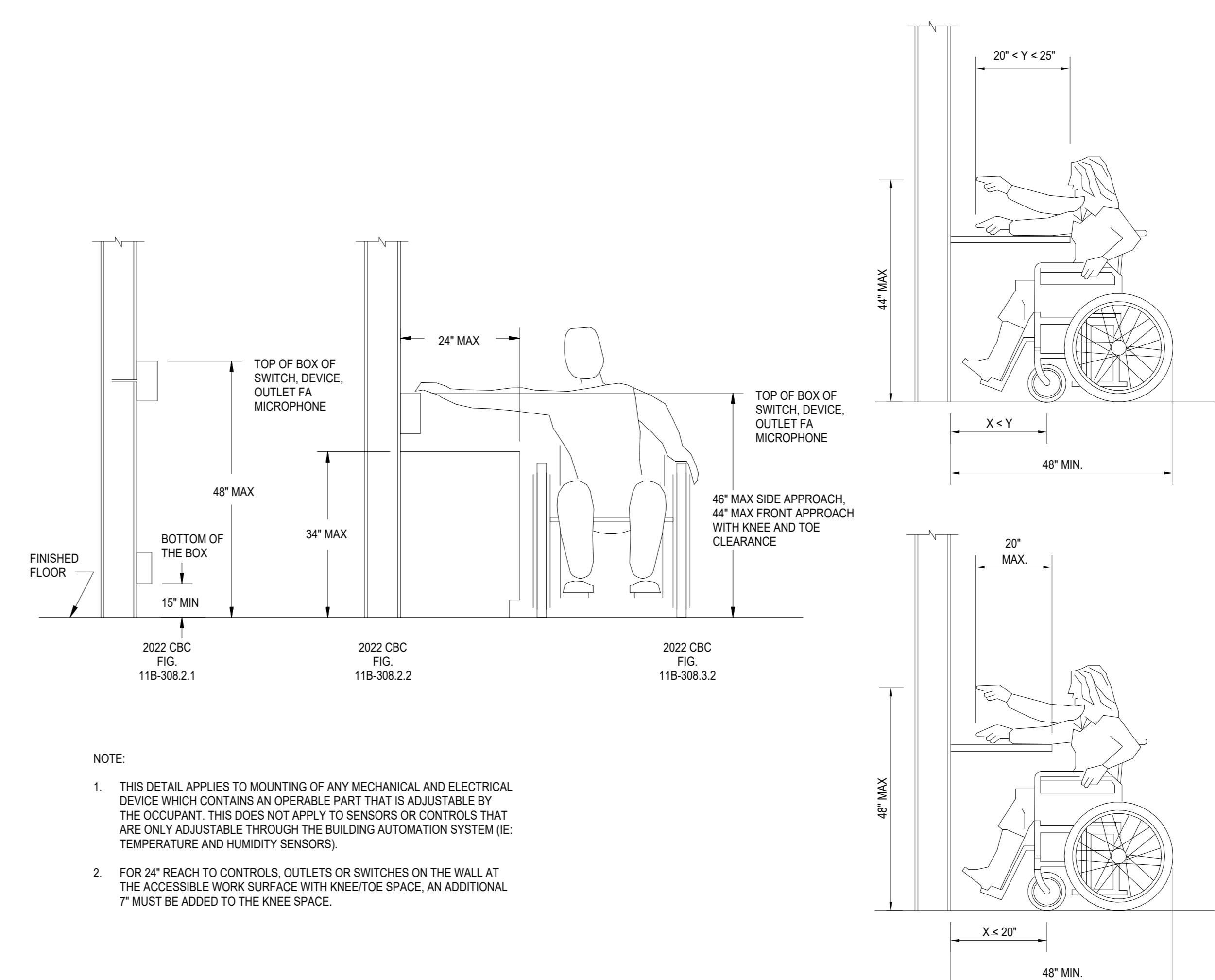
ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

REVISIONS		
No.	Description	Date
Δ	ADDENDUM 01	9/18/24

TECHNOLOGY COVER SHEET

T0.00



- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
  - FOR 24\" REACH TO CONTROLS, OUTLETS OR SWITCHES ON THE WALL AT THE ACCESSIBLE WORK SURFACE WITH KNEE/TOE SPACE, AN ADDITIONAL 7\" MUST BE ADDED TO THE KNEE SPACE.



KEY NOTES

- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (90 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- CAMERA LOCATIONS FOR EXISTING PROJECT

GENERAL NOTES

- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
- 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
- 3 ALL CAMERAS HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
- 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
- 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
- 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING/AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.



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MISSION BELLES SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 4020 CONNING ST, JURUPA VALLEY, CA 92509

KEY PLAN

ENGINEER

ARCHITECT

CLIENT  
 JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER

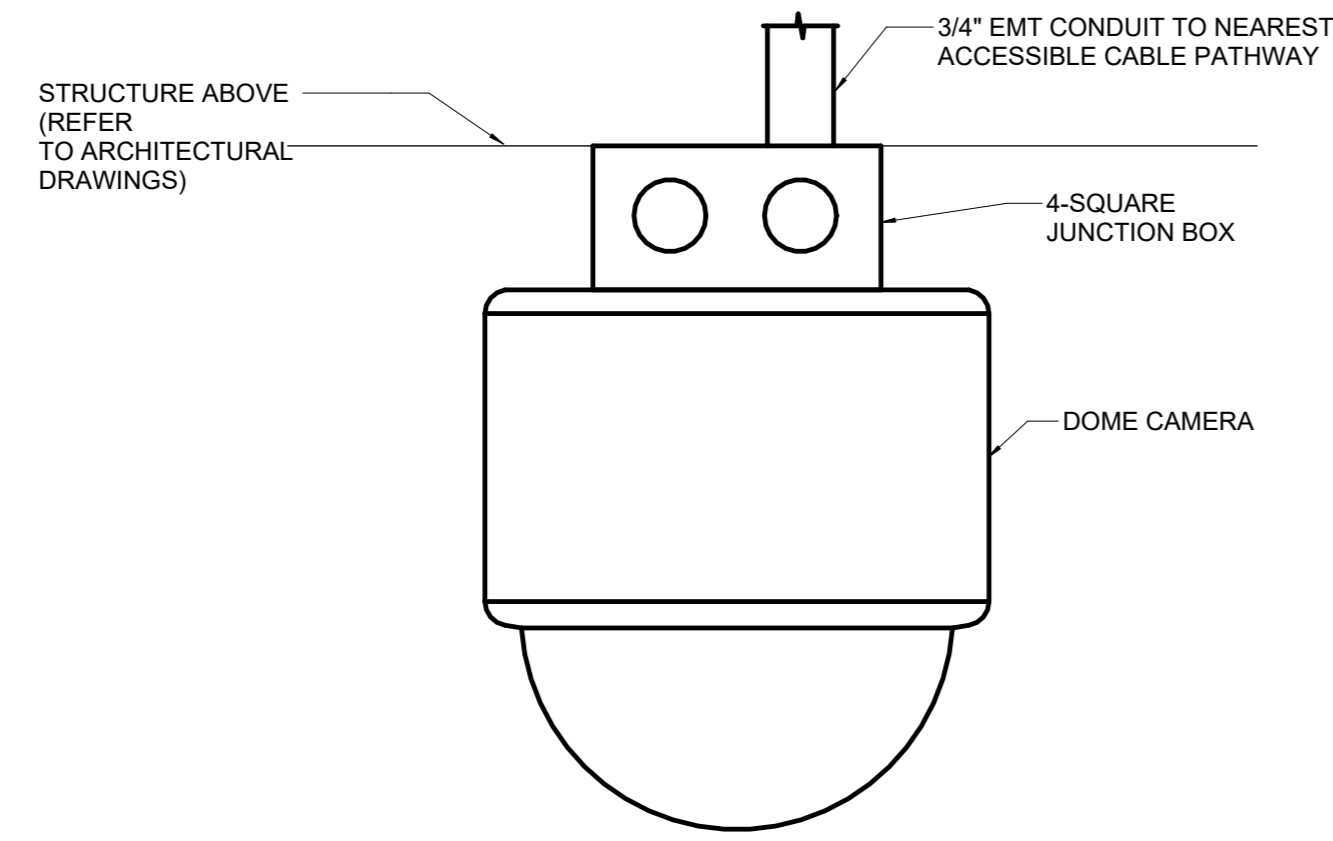
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 DRAWN BY: Author  
 CHECKED BY: Checker

REVISIONS

No.	Description	Date
1	Addendum 1	3/13/24

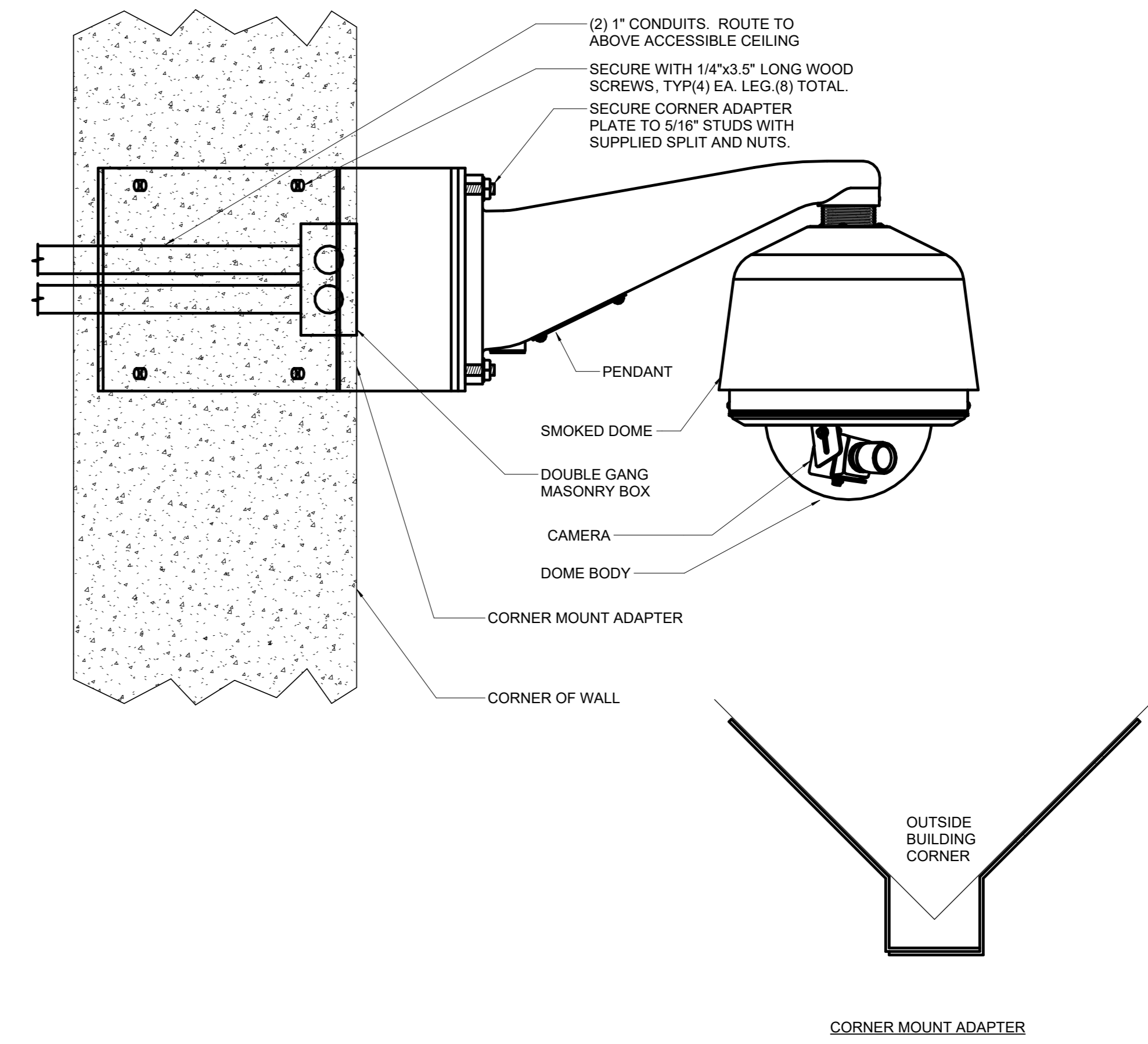
TECHNOLOGY SITE PLAN

T1.01



**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2.4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGHINGS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

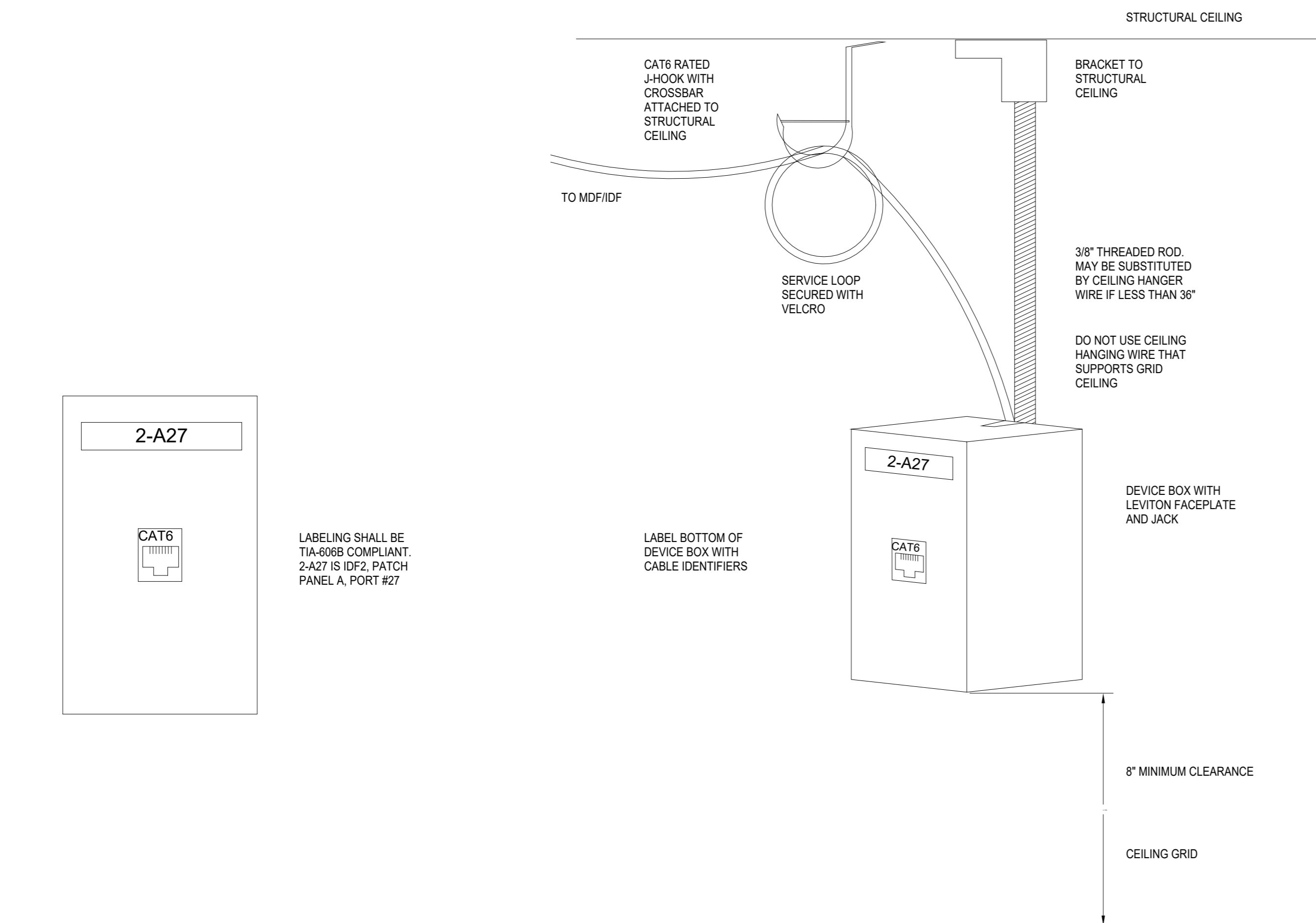


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONRY FASTENERS. DO NOT ANCHOR TO FACE BRICK. SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION INFORMATION.

**4 EXTERIOR SURFACE CEILING CAMERA MOUNTING**

N.T.S.



**NOTES:**

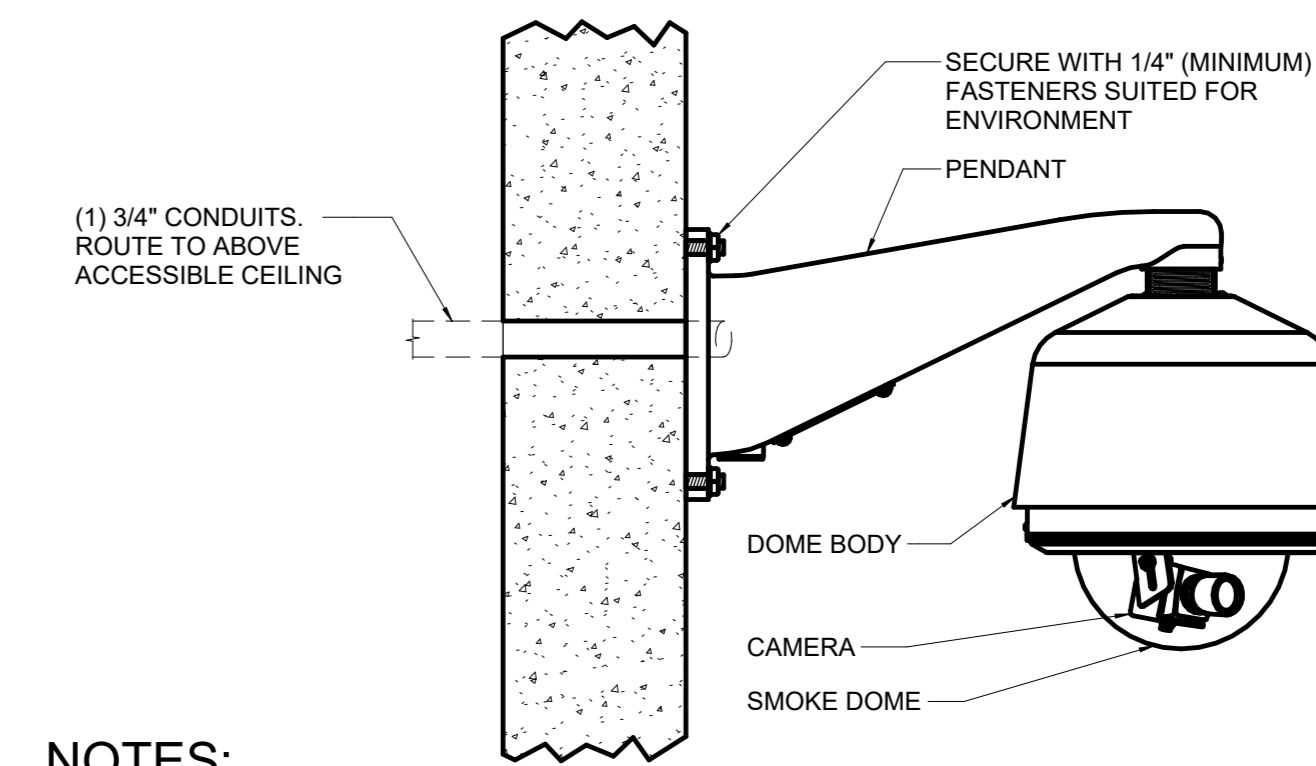
- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1" FROM THE END OF THE CABLE JACKET AT BOTH ENDS.
- CABLE LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THAN 1/8" IN HEIGHT.

**5 SINGLE PORT LABELING**

N.T.S.

**1 EXTERIOR CORNER MOUNT CAMERA DETAIL**

3" = 1'-0"

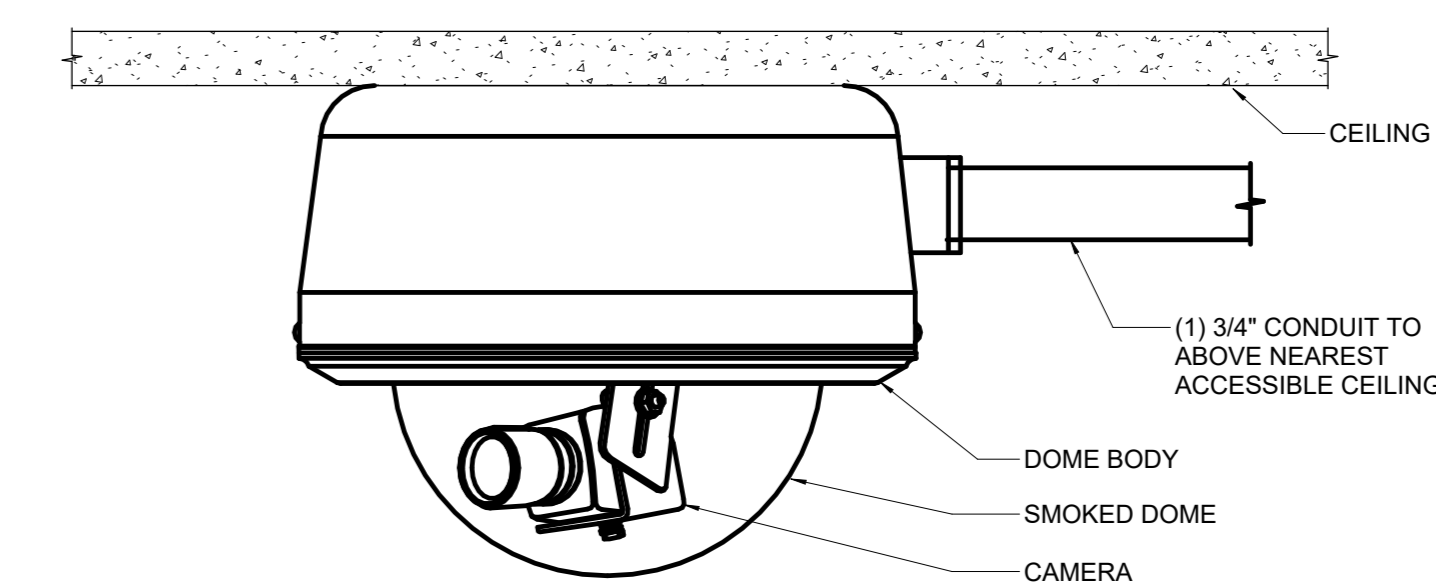


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONARY FASTENERS. DO NOT ANCHOR TO FACE OF BRICK.
- SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**2 EXTERIOR WALL MOUNTED CAMERA**

3" = 1'-0"



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3 EXPOSED MOUNT FIXED CAMERA CEILING**

6" = 1'-0"



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KEY PLAN



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TECHNOLOGY  
DETAILS

T6.01



SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PAN-DUIT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANS/NETA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRADES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 1" SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3" SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR COMMUNICATIONS ROOM 109, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN FBO BUILDING AND SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM INCLUDING INTEGRATION WITH ACCESS CONTROL SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA 270° FIELD OF VIEW (WALL)	
	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
	UNDERGROUND/FLOOR CONDUIT	
	CONDUIT UP	
	CONDUIT DOWN	
	CONDUIT WITH CONTINUATION	
	CONDUIT SLEEVE	
	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR-#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
+#	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR  
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 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR  
 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
 TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
 NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES, 2016 EDITION  
 UL 484 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION  
 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION  
 UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)  
 ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION  
 FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



RANCHO CUCAMONGA  
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MISSION MS SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 5961 MUSTANG LN, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



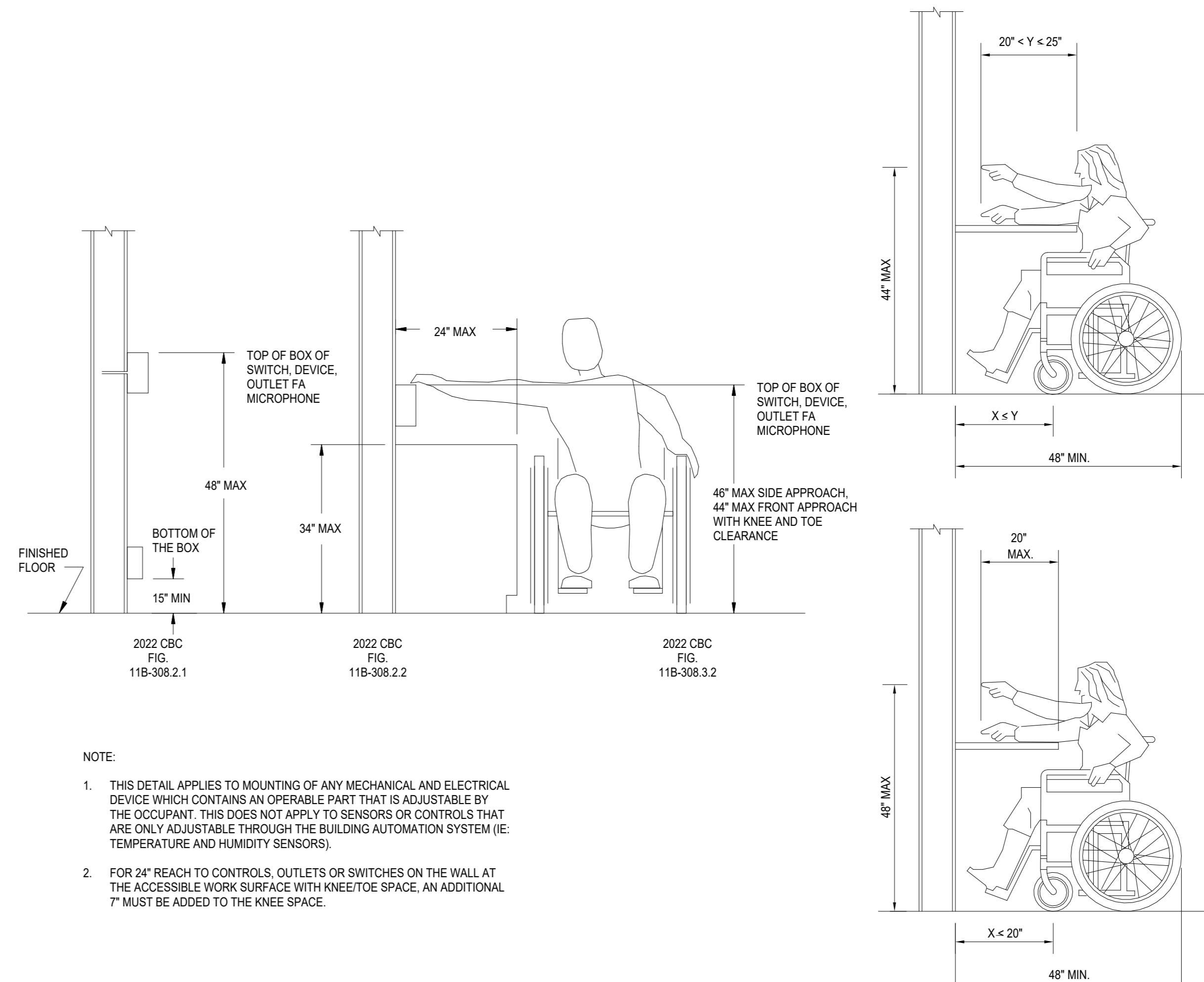
ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

CLIENT		
PROJECT NUMBER		
DATE:	12/20/23	
DRAWN BY:	TA	
CHECKED BY:	RDC	
REVISIONS		
No.	Description	Date
1	ADDENDUM 01	9/18/24

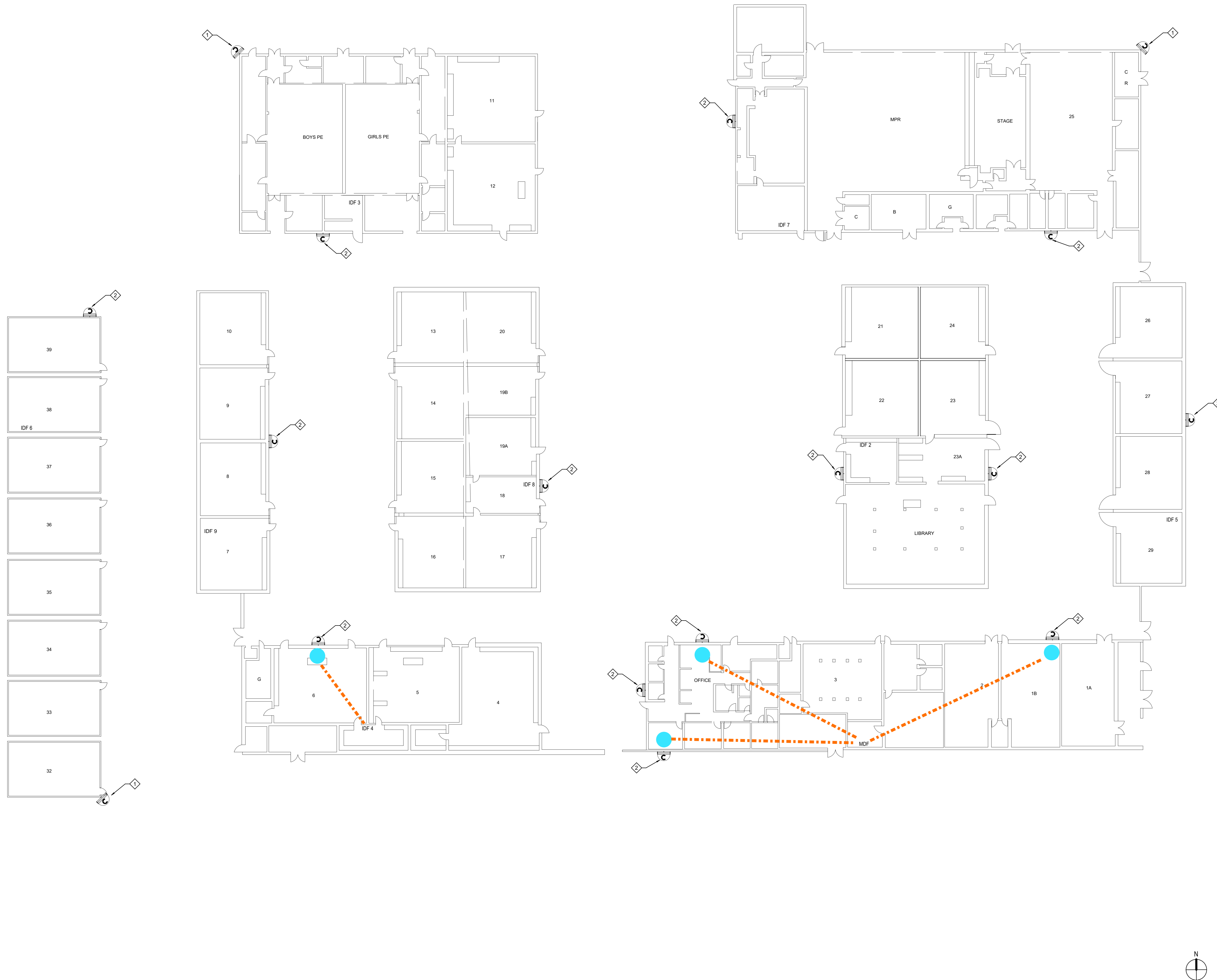
TECHNOLOGY COVER SHEET

T0.00



- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
  - FOR 24" REACH TO CONTROLS, OUTLETS OR SWITCHES ON THE WALL AT THE ACCESSIBLE WORK SURFACE WITH KNEE/TOE SPACE, AN ADDITIONAL 7" MUST BE ADDED TO THE KNEE SPACE.

**BIDDERS NOTE: THIS SCHOOL SITE HAS 10 ADDITIONAL (N) POLE-MOUNTED CAMERAS TO BE INSTALLED AS PART OF THIS PROJECT. LOCATION TO BE AT SOLAR FARM NORTH OF THE SCHOOL SITE. THESE CAMERAS MUST BE SOLAR POWERED, AS THERE IS NO PATHWAY OUT TO THE SOLAR FARM.**

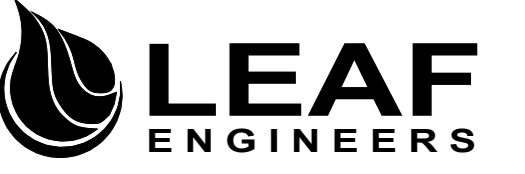


**KEY NOTES**

- ① INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE) CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- ② INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE) CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- CAMERA LOCATIONS FOR EXISTING PROJECT

**GENERAL NOTES**

- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
- 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
- 3 ALL CAMERAS HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
- 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
- 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
- 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING/AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.



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**MISSION MS SECURITY CAMERAS**

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5961 MUSTANG LN, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER

ARCHITECT

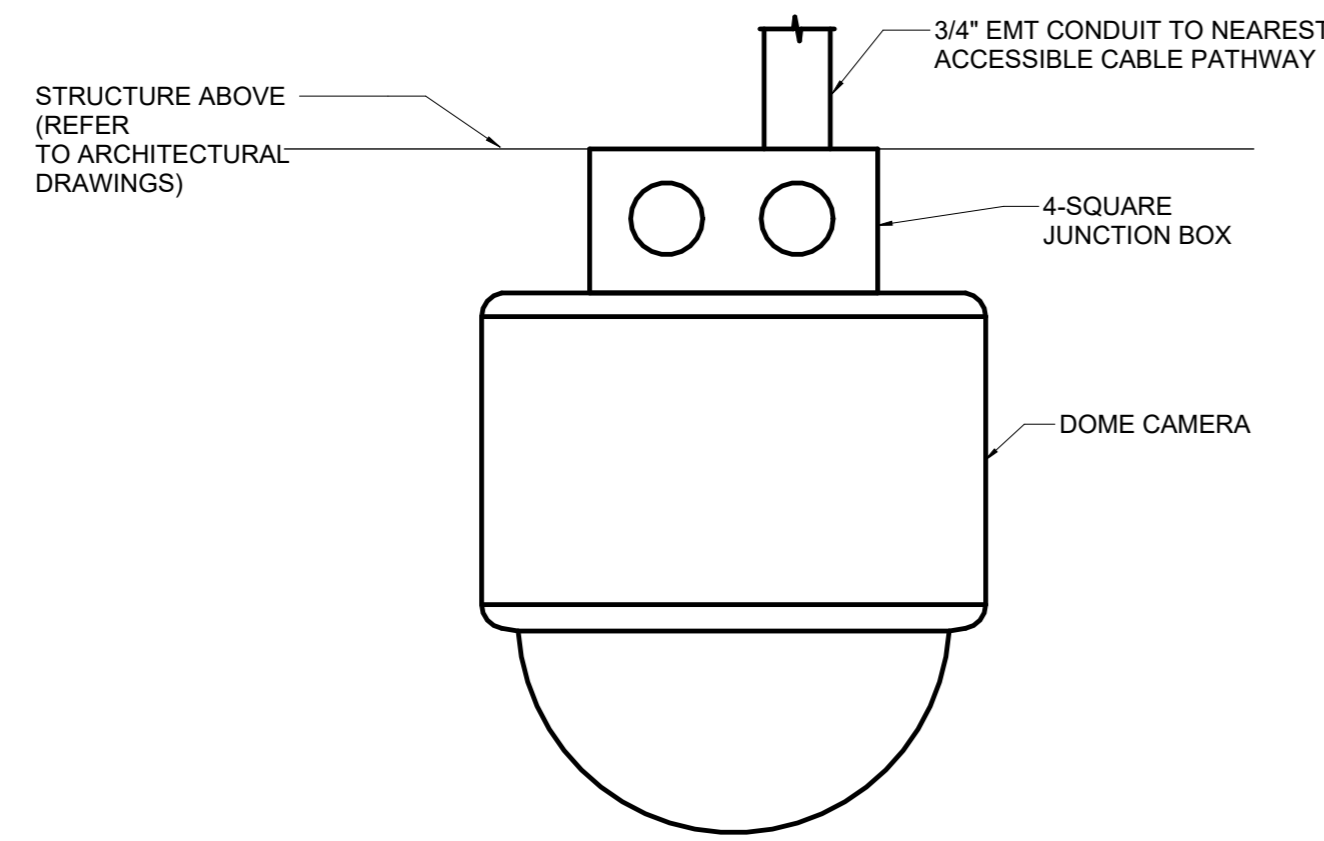
CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER  
DATE: 12/20/23  
DRAWN BY: Author  
CHECKED BY: Checker

REVISIONS		
No.	Description	Date
1	Addendum 1	9/12/24

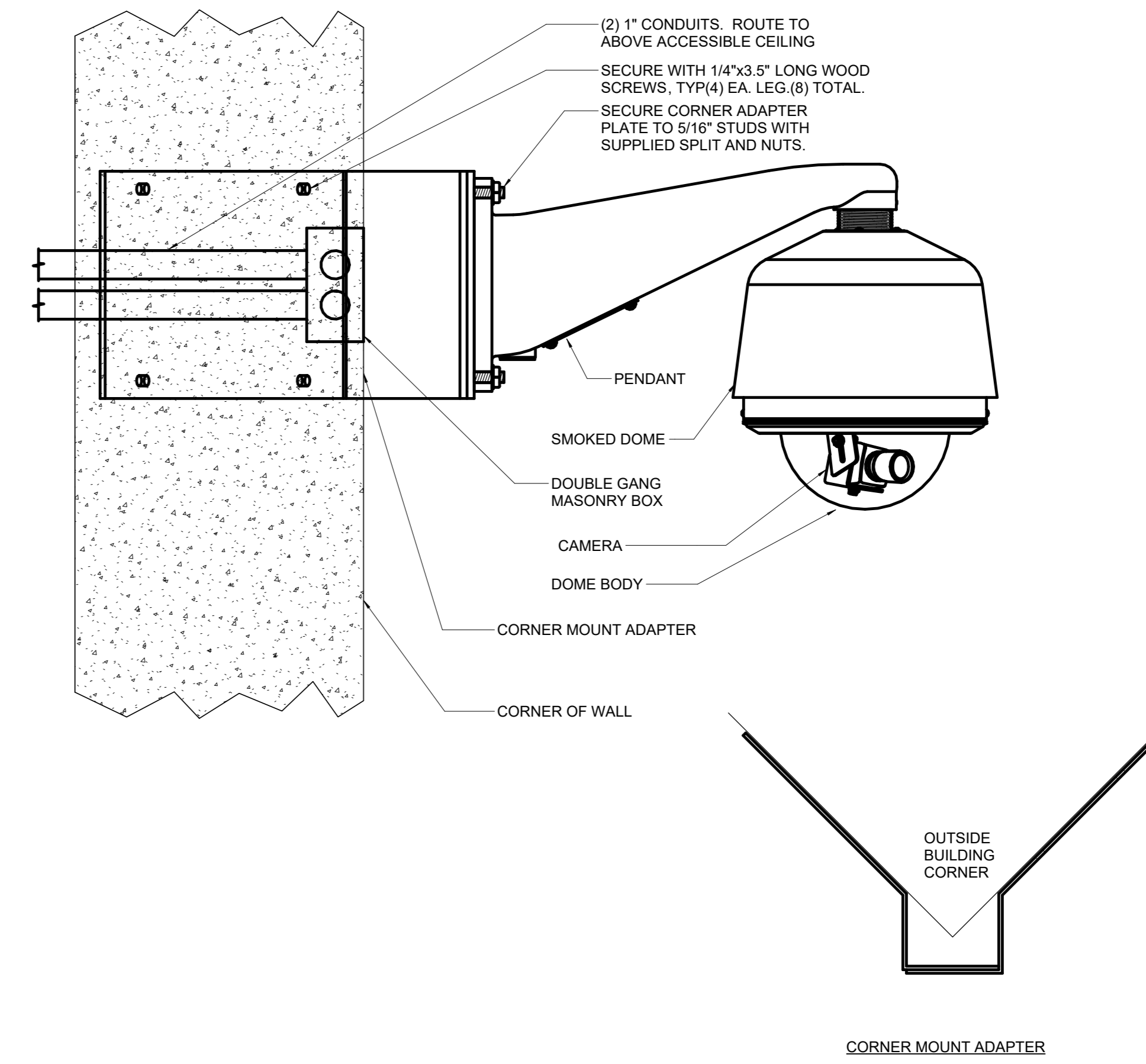
**TECHNOLOGY SITE PLAN**

**T1.01**



**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.



**NOTES:**

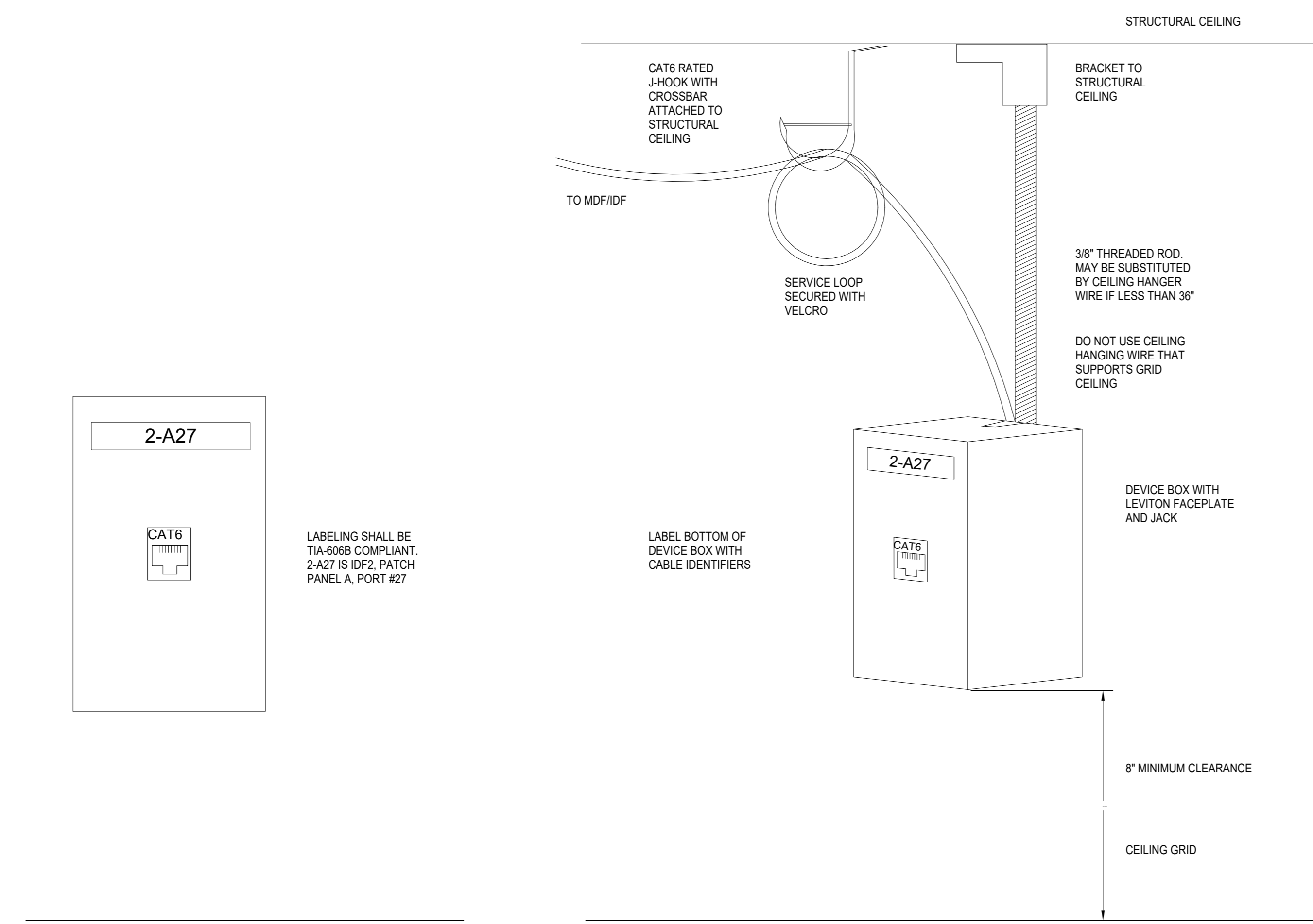
- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONRY FASTENERS. DO NOT ANCHOR TO FACE BRICK. SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION INFORMATION.

**4 EXTERIOR SURFACE CEILING CAMERA MOUNTING**

N.T.S.

**1 EXTERIOR CORNER MOUNT CAMERA DETAIL**

3" = 1'-0"

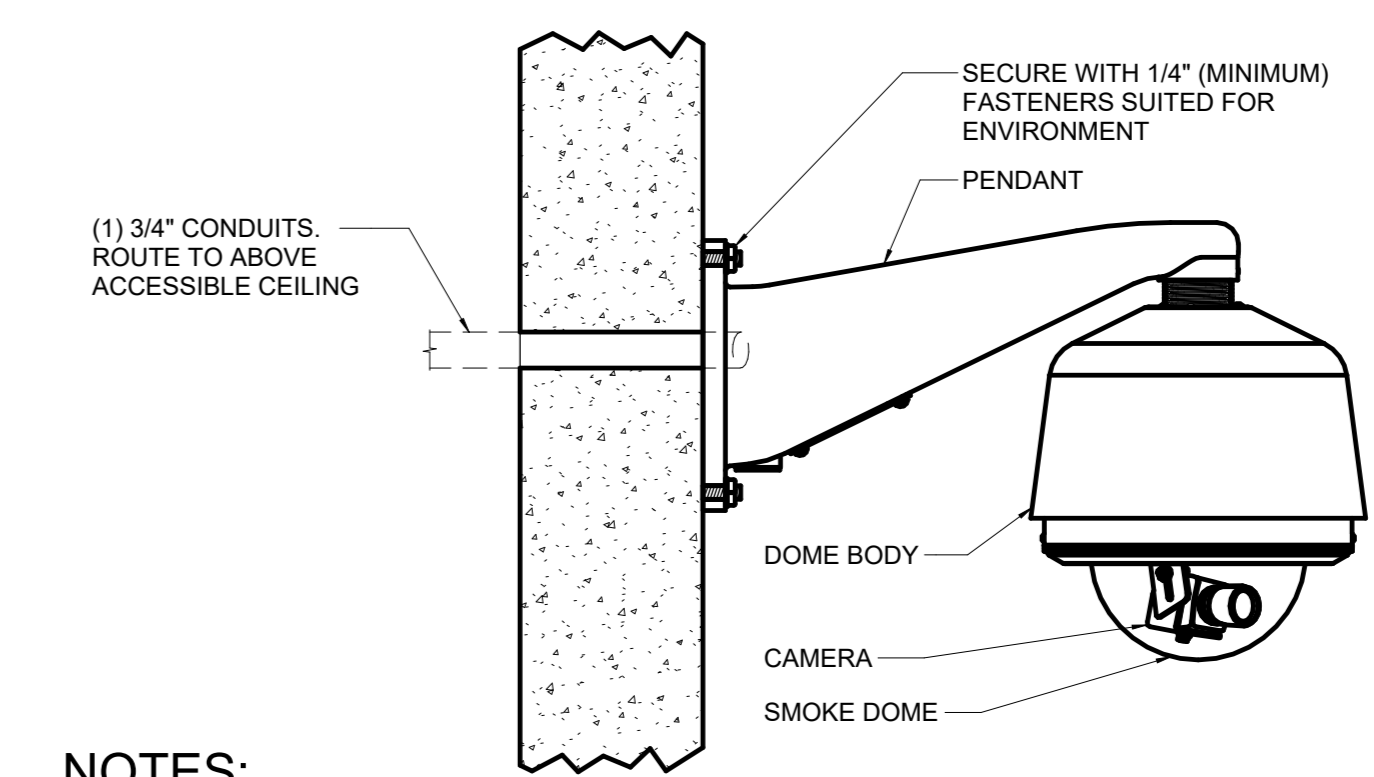


**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1" FROM THE END OF THE CABLE JACKET AT BOTH ENDS.
- CABLE LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THAN 1/8" IN HEIGHT.

**5 SINGLE PORT LABELING**

N.T.S.

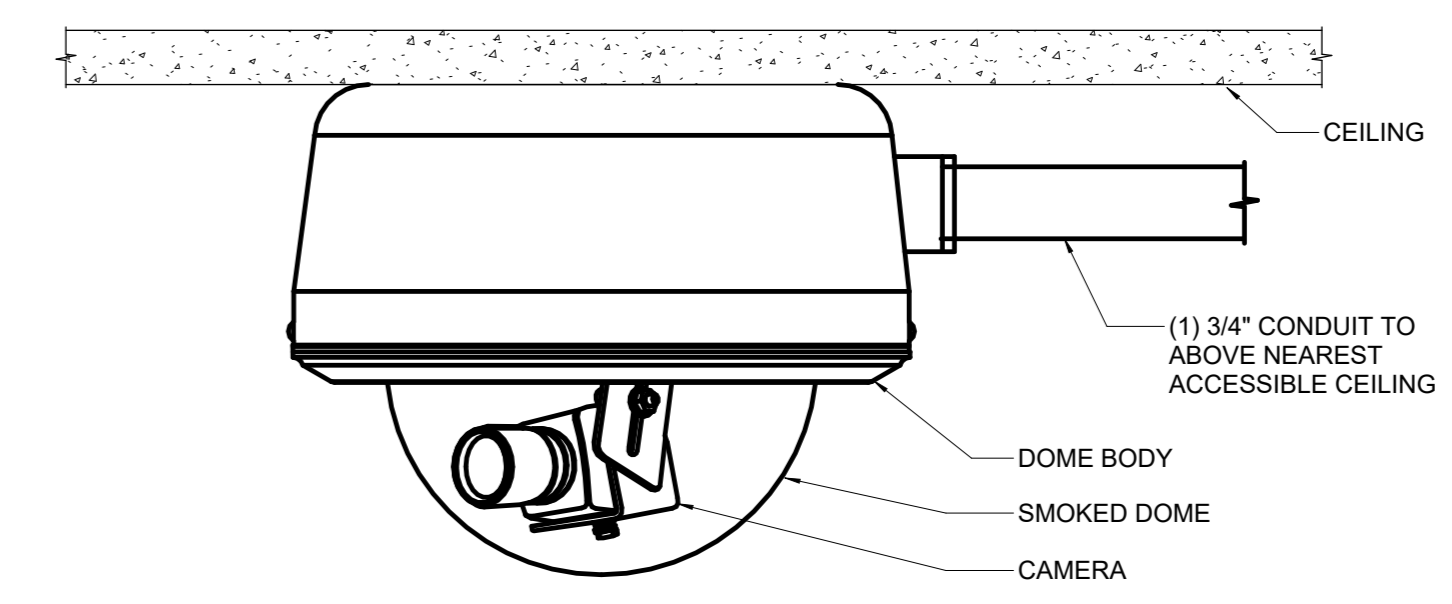


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONARY FASTENERS. DO NOT ANCHOR TO FACE OF BRICK.
- SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**2 EXTERIOR WALL MOUNTED CAMERA**

3" = 1'-0"



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3 EXPOSED MOUNT FIXED CAMERA CEILING**

6" = 1'-0"



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MISSION MS SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
5961 MUSTANG LN, JURUPA VALLEY, CA 92509

KEY PLAN

ENGINEER



ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

REVISIONS		
No.	Description	Date

TECHNOLOGY DETAILS

T6.01

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PANDUIT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSI/TIA, BICSI, AND THE IEC.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
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- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
	UNDERGROUND/FLOOR CONDUIT	
	CONDUIT UP	
	CONDUIT DOWN	
	CONDUIT WITH CONTINUATION	
	CONDUIT SLEEVE	
	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

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- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- \*# INDICATES THE LENS' ANGLE PER CAMERA.

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T0.00	TECHNOLOGY COVER SHEET
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T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR.	DESCRIPTION:
AFB	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M	CONSTRUCTION MANAGER
E.C	ELECTRICAL CONTRACTOR
F	FUTURE
G.C	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C	SECURITY CONTRACTOR
SIM	SIMILAR
T.C	TECHNOLOGY CONTRACTOR
TR-#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
#	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
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 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR  
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RANCHO CUCAMONGA  
 8163 Rochester Ave., Ste 100  
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 909-987-5909

NUEVA VISTA HS SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 6836 34TH ST, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



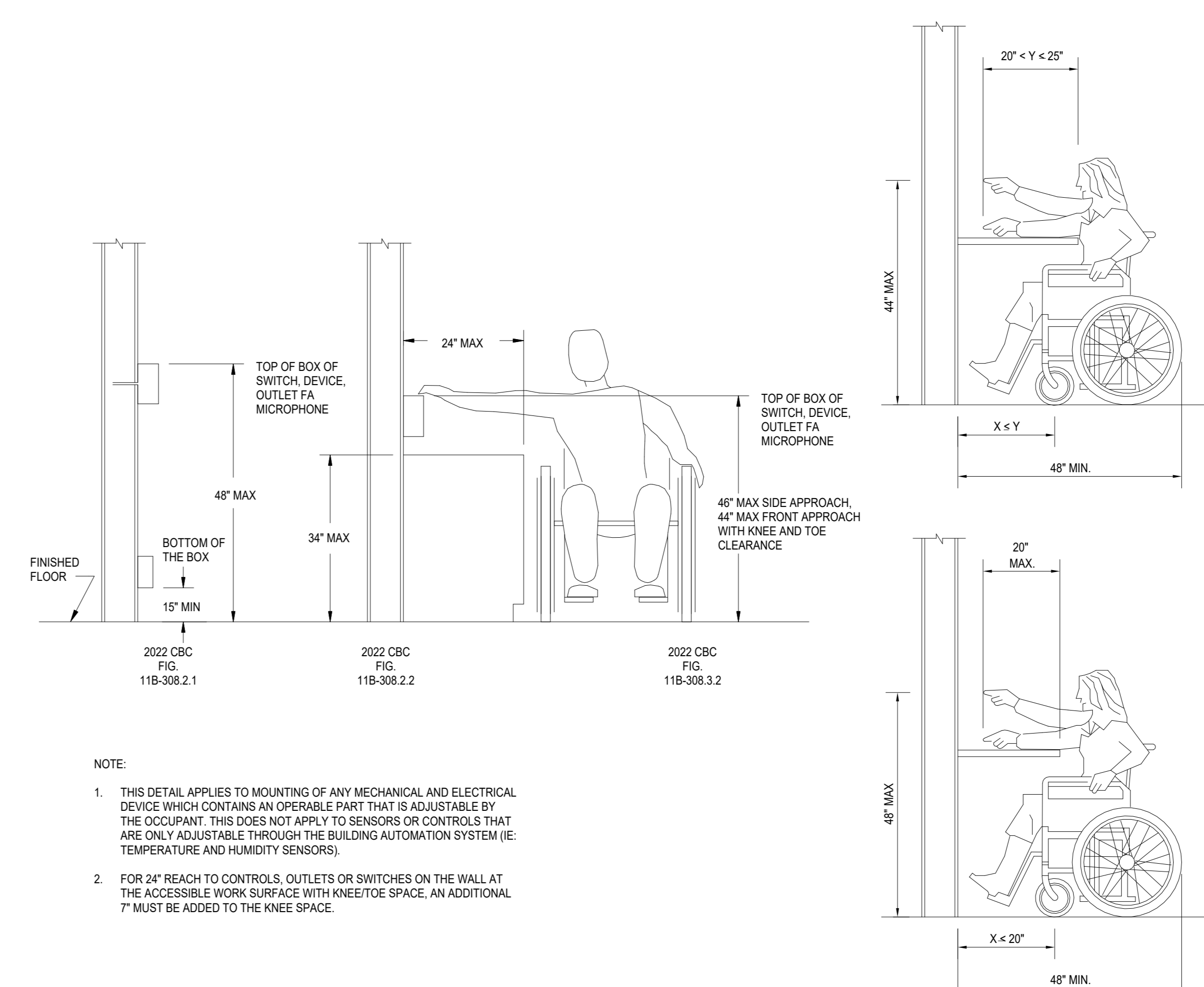
ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

CLIENT		
JURUPA UNIFIED SCHOOL DISTRICT		
PROJECT NUMBER		
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DATE:	12/20/23	
DRAWN BY:	TA	
CHECKED BY:	RDC	
REVISIONS		
No.	Description	Date
1	ADDENDUM 01	9/18/24

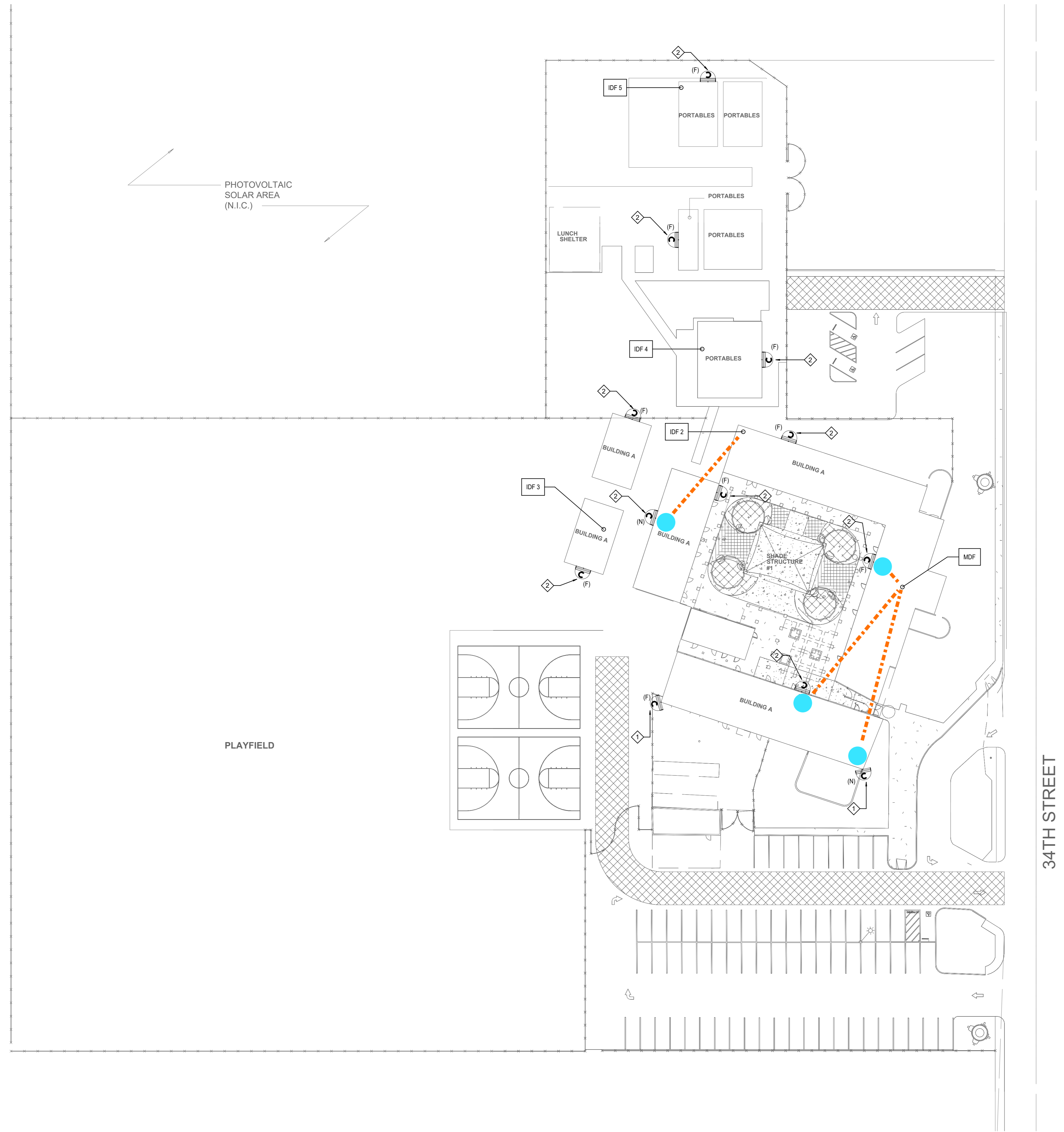
TECHNOLOGY COVER SHEET

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  - FOR 24" REACH TO CONTROLS, OUTLETS OR SWITCHES ON THE WALL AT THE ACCESSIBLE WORK SURFACE WITH KNEE/TOE SPACE, AN ADDITIONAL 7" MUST BE ADDED TO THE KNEE SPACE.

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KEY NOTES

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  - 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
  - 3 ALL CAMERAS HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
  - 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
  - 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
  - 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.
- CAMERA LOCATIONS FOR EXISTING PROJECT



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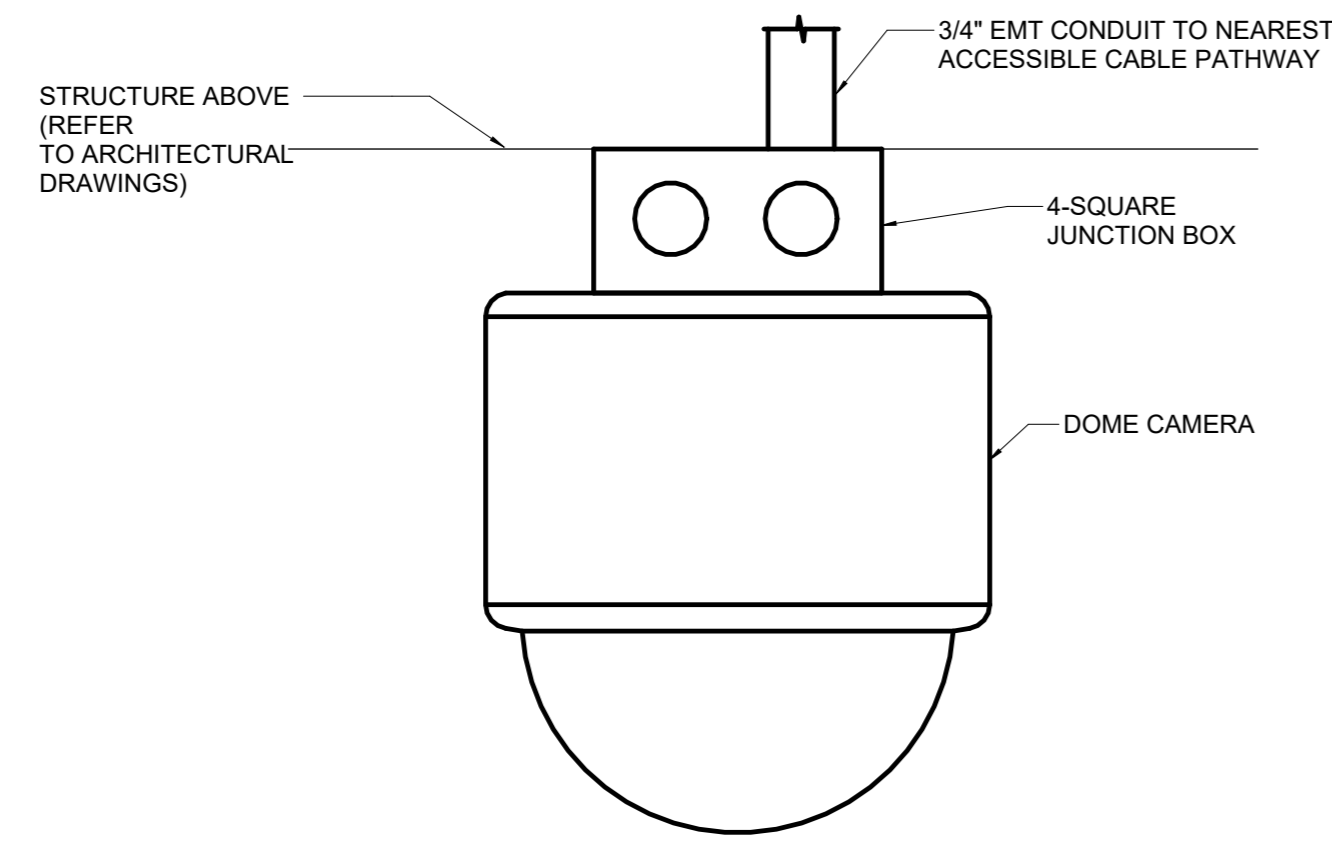
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CHECKED BY: Checker

REVISIONS

No.	Description	Date
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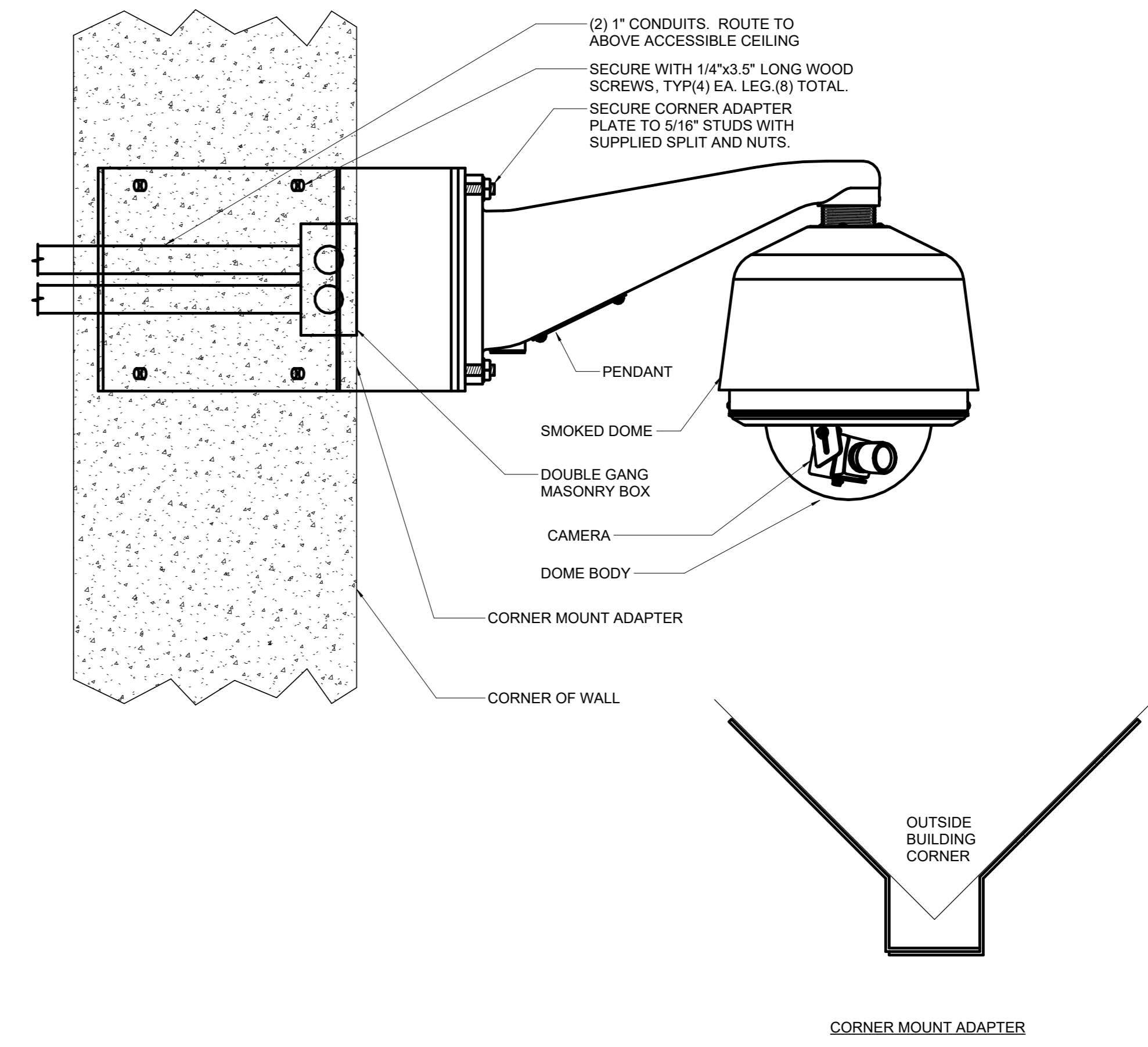
TECHNOLOGY SITE PLAN

T1.01



**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

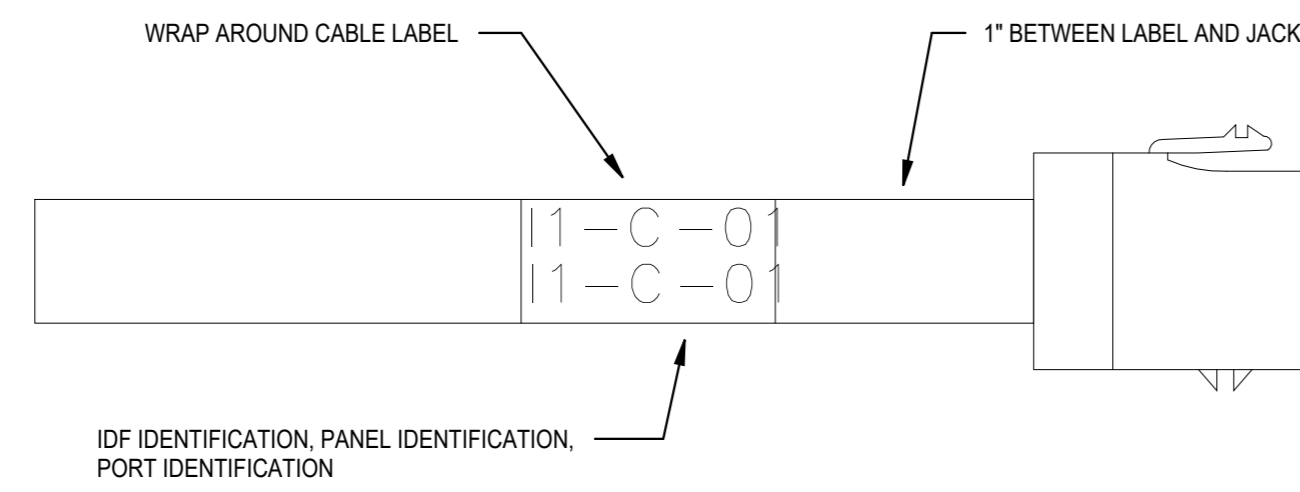


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

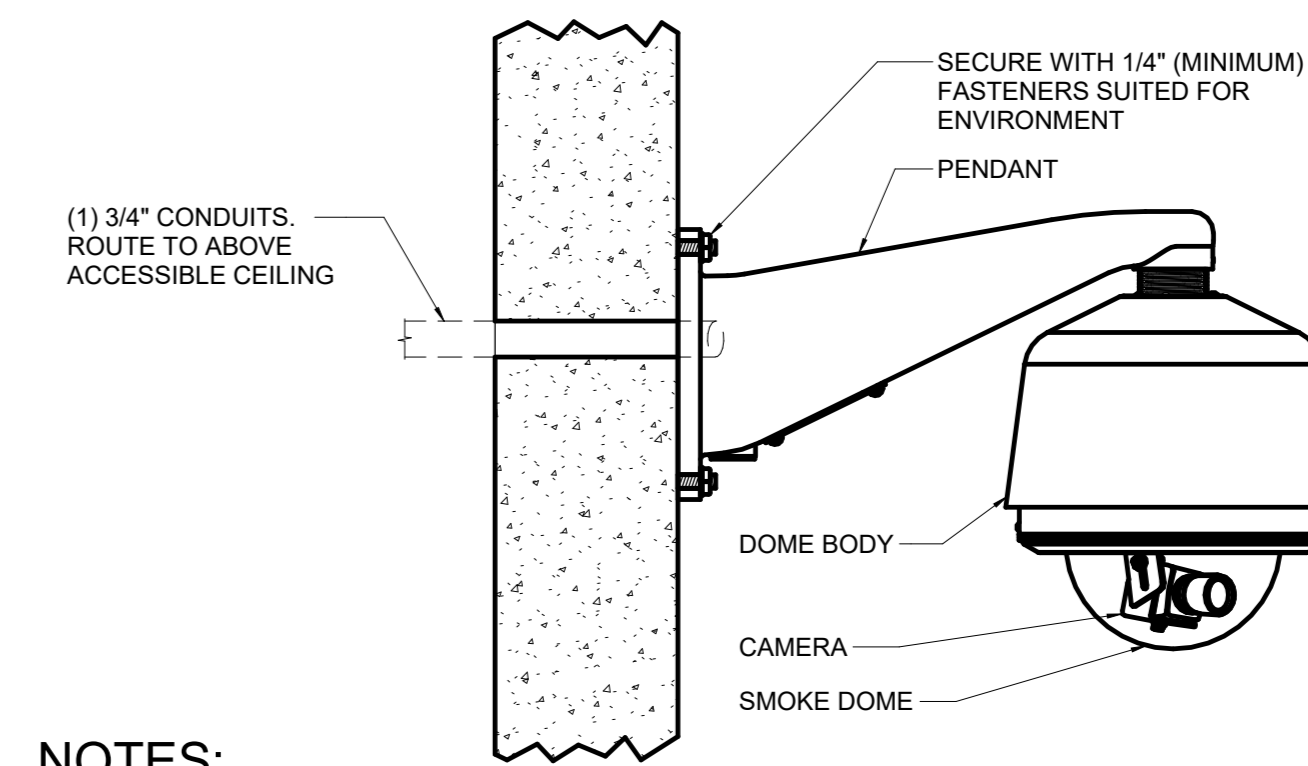
**4** EXTERIOR SURFACE CEILING CAMERA MOUNTING  
N.T.S.

**1** EXTERIOR CORNER MOUNT CAMERA DETAIL  
3\"/>



**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1\"/>

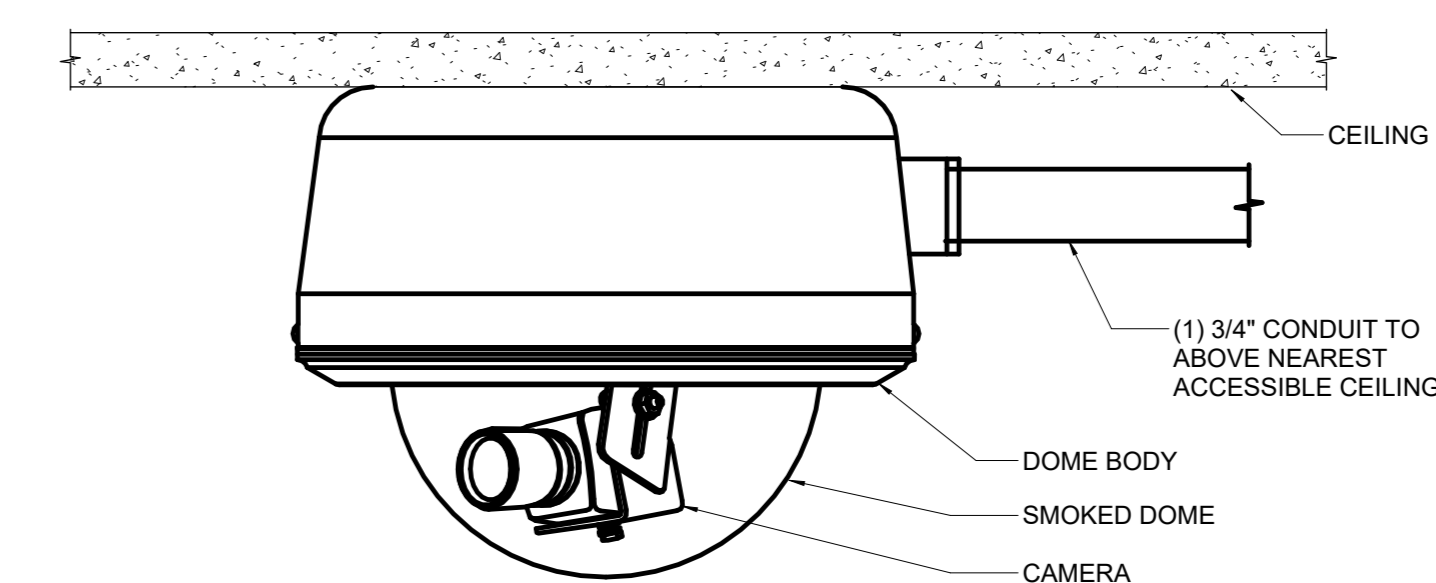


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**5** SINGLE PORT LABELING  
3/4\"/>

**2** EXTERIOR WALL MOUNTED CAMERA  
3\"/>



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3** EXPOSED MOUNT FIXED CAMERA CEILING  
6\"/>



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ENGINEER



ARCHITECT

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TECHNOLOGY  
DETAILS

**T6.01**

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PANDUIT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSIBLATA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING. THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATIONS ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
	UNDERGROUND/FLOOR CONDUIT	
	CONDUIT UP	
	CONDUIT DOWN	
	CONDUIT WITH CONTINUATION	
	CONDUIT SLEEVE	
	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "#\" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPDE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SIM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR-#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
+#	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
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PACIFIC ACADEMY OF MUSIC SECURITY CAMERAS

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 6110 45TH ST, JURUPA VALLEY, CA 92509

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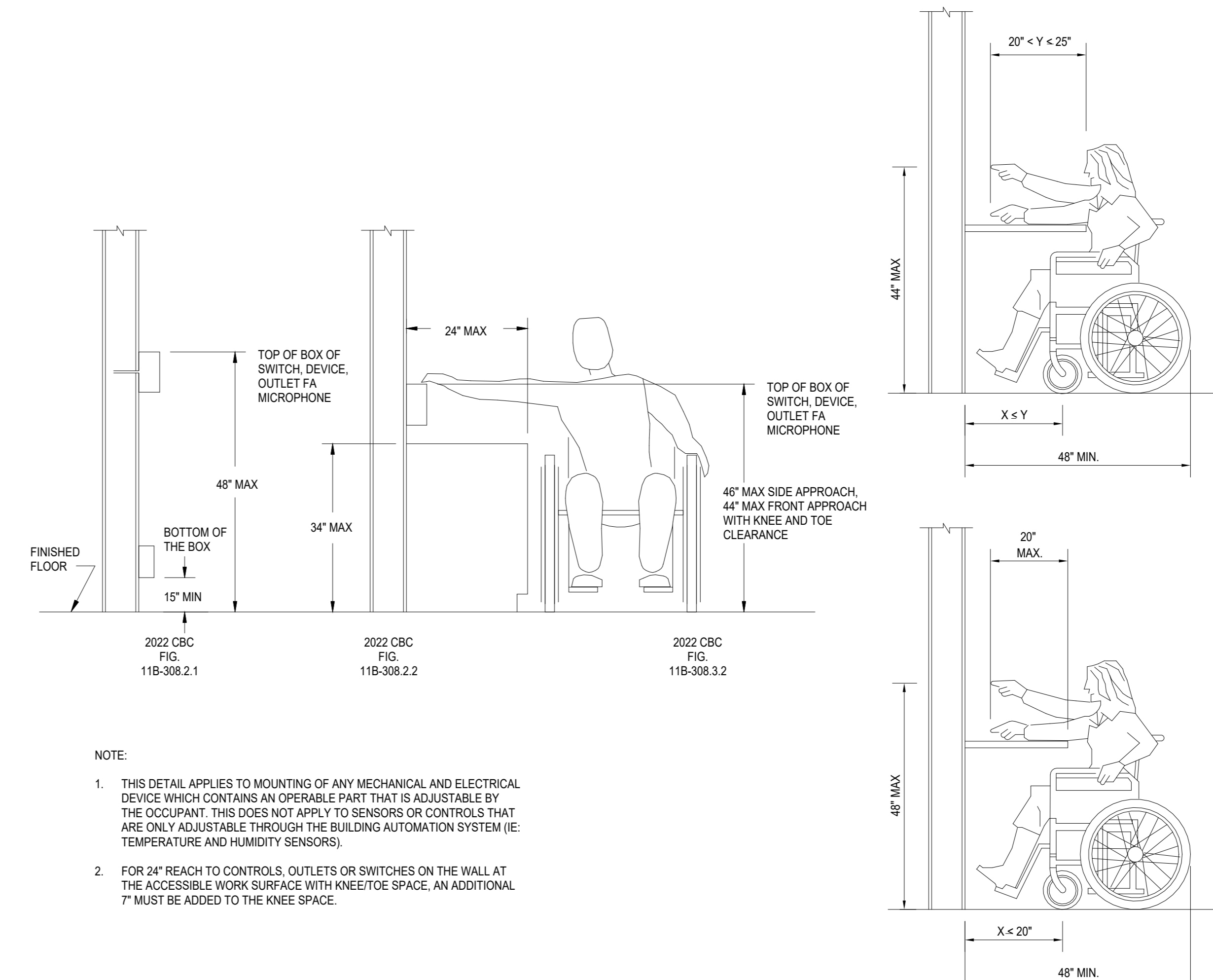
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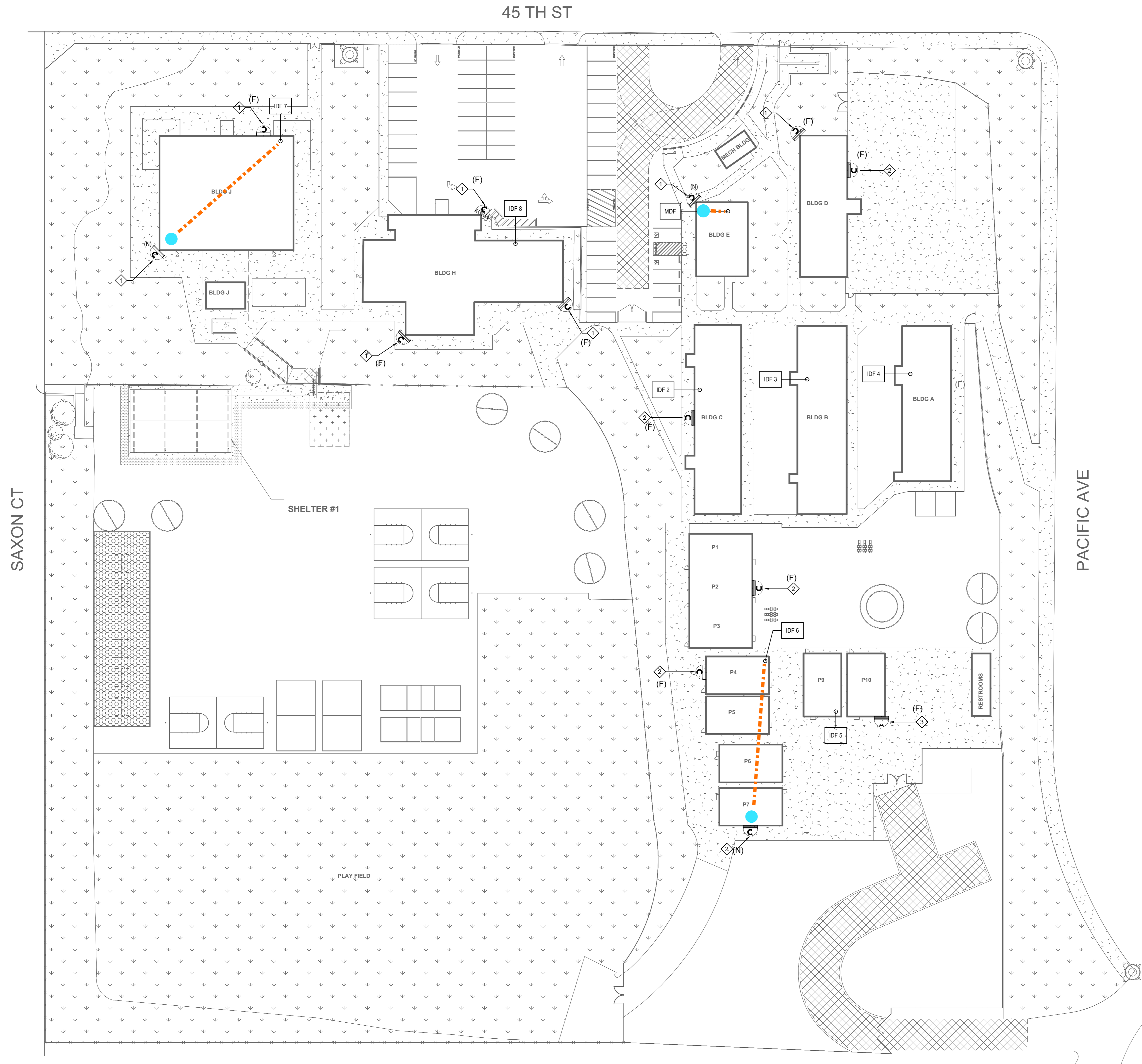
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 Rancho Cucamonga, CA 91730  
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**PACIFIC ACADEMY OF MUSIC SECURITY CAMERAS**

JURUPA UNIFIED SCHOOL DISTRICT  
 6110 45TH ST, JURUPA VALLEY, CA 92509

KEY PLAN

ENGINEER

ARCHITECT

CLIENT  
 JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER

DATE: 12/20/23  
 DRAWN BY: Author  
 CHECKED BY: Checker

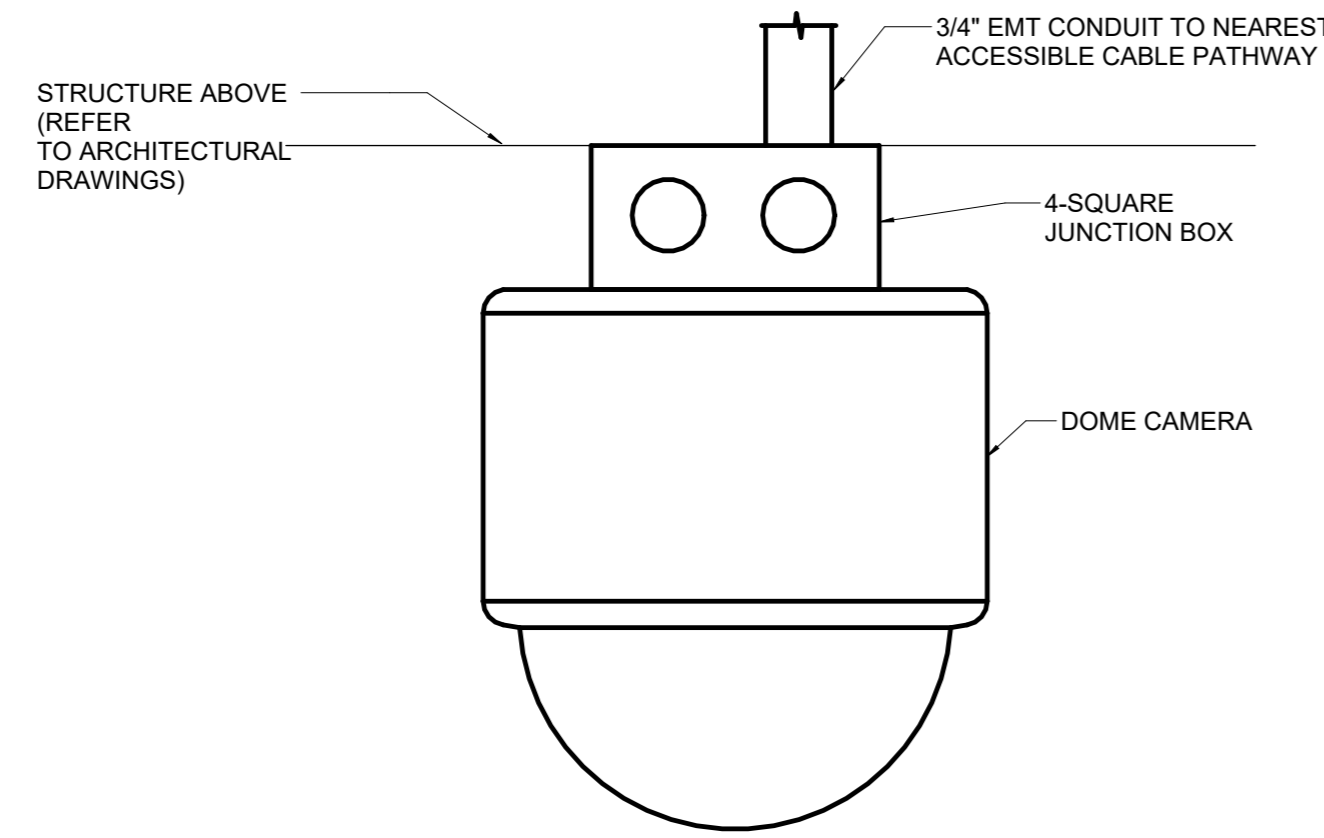
REVISIONS

No.	Description	Date
1	Addendum 1	9/12/24

**TECHNOLOGY SITE PLAN**

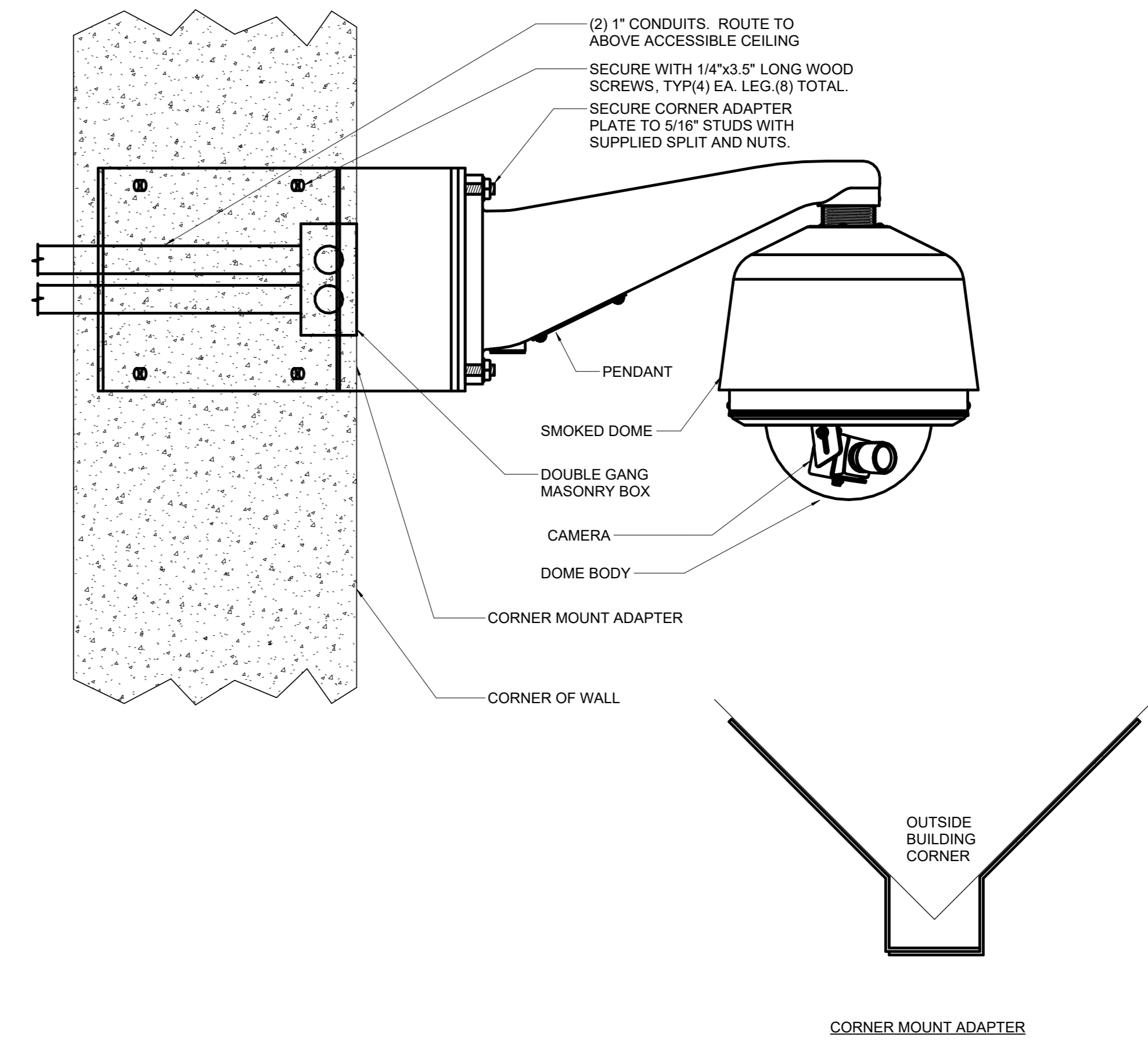
**T1.01**





**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

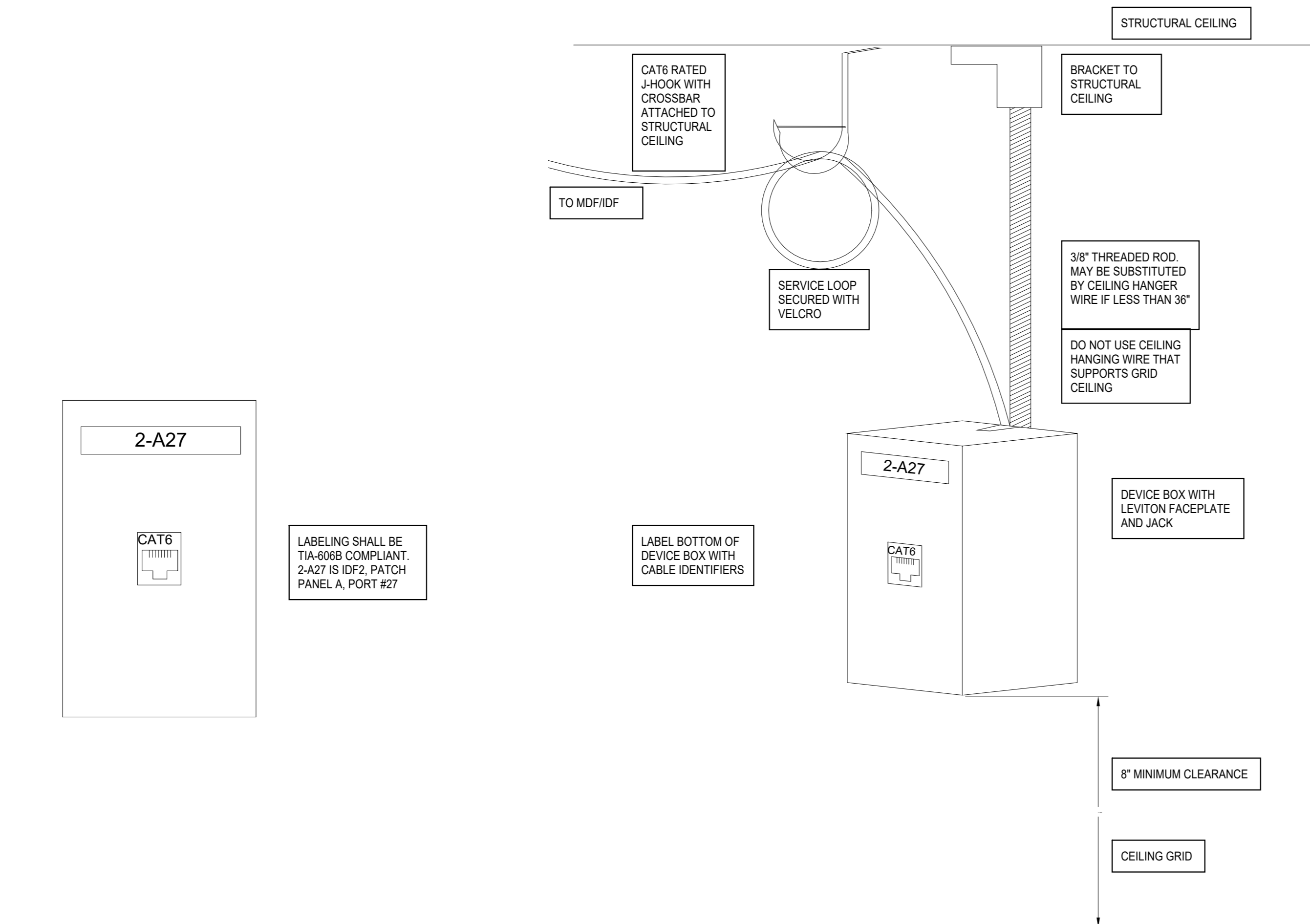


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONRY FASTENERS. DO NOT ANCHOR TO FACE BRICK. SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION INFORMATION.

**4 EXTERIOR SURFACE CEILING CAMERA MOUNTING**

N.T.S.

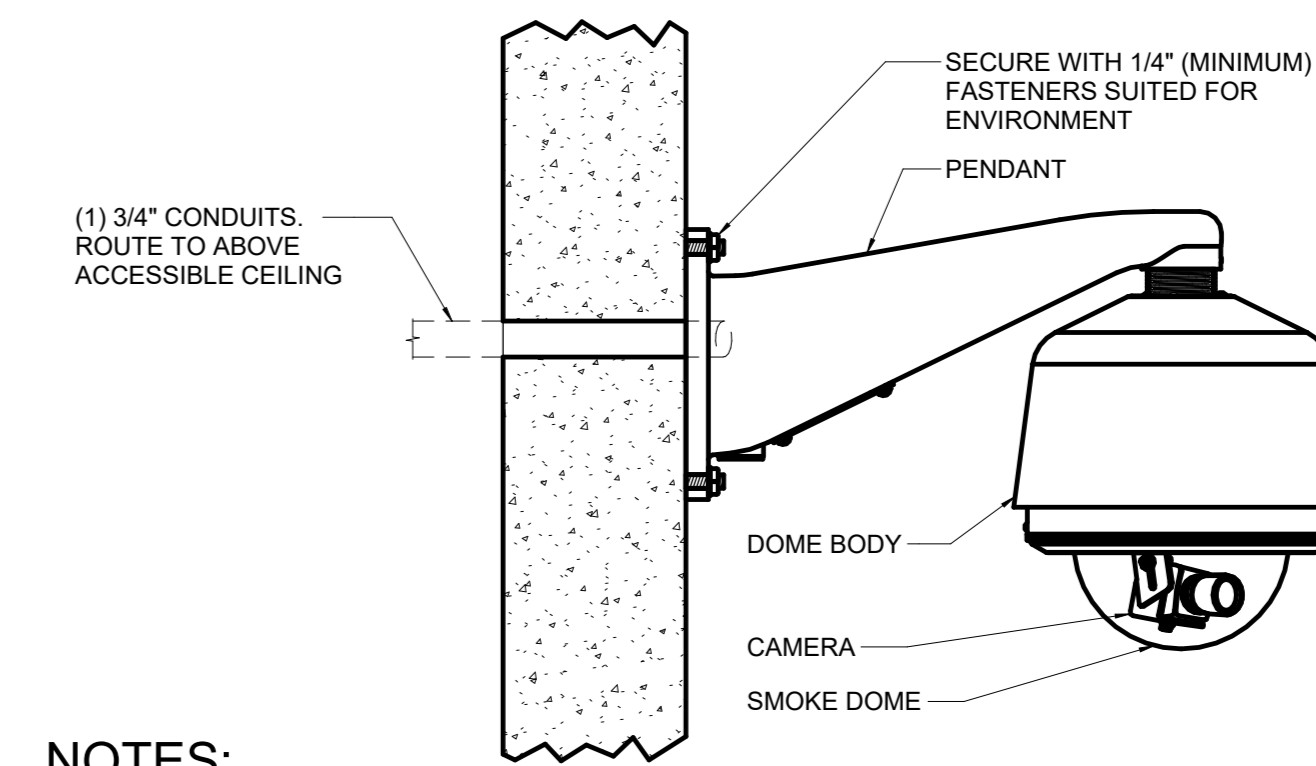


**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1" FROM THE END OF THE CABLE JACKET AT BOTH ENDS.
- CABLE LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THAN 1/8" IN HEIGHT.

**1 EXTERIOR CORNER MOUNT CAMERA DETAIL**

3" = 1'-0"

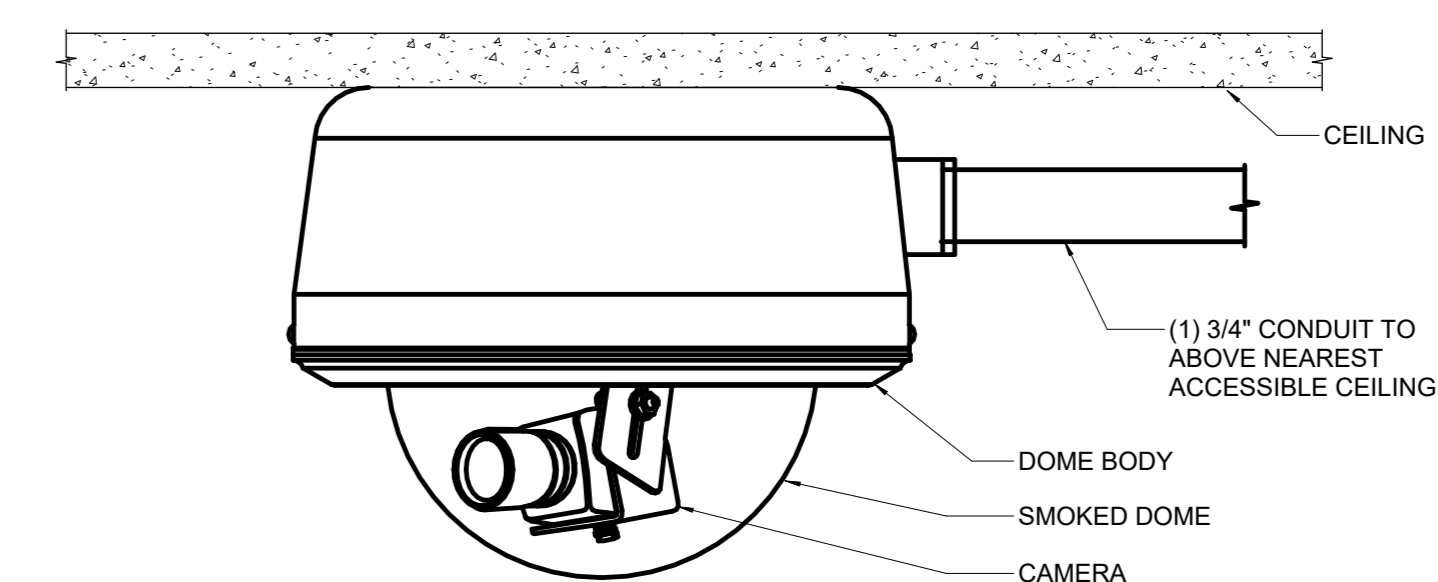


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONARY FASTENERS. DO NOT ANCHOR TO FACE OF BRICK.
- SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**2 EXTERIOR WALL MOUNTED CAMERA**

3" = 1'-0"



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**5 SINGLE PORT LABELING**

N.T.S.



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**TECHNOLOGY DETAILS**

**T6.01**

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PANDUIT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSI/EIA/TIA, BICSI, AND THE IEC.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATIONS ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
###	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
—	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
- - -	UNDERGROUND/FLOOR CONDUIT	
○	CONDUIT UP	
●	CONDUIT DOWN	
↳	CONDUIT WITH CONTINUATION	
[ ]	CONDUIT SLEEVE	
≡	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "# " INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T1.02	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SIM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR-#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
#	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR  
 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR  
 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR  
 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
 TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
 NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES, 2016 EDITION  
 UL 484 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION  
 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION  
 UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)  
 ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



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 909-987-5909

PATRIOT HIGH SCHOOL SECURITY CAMERAS

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 4355 CAMINO REAL, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



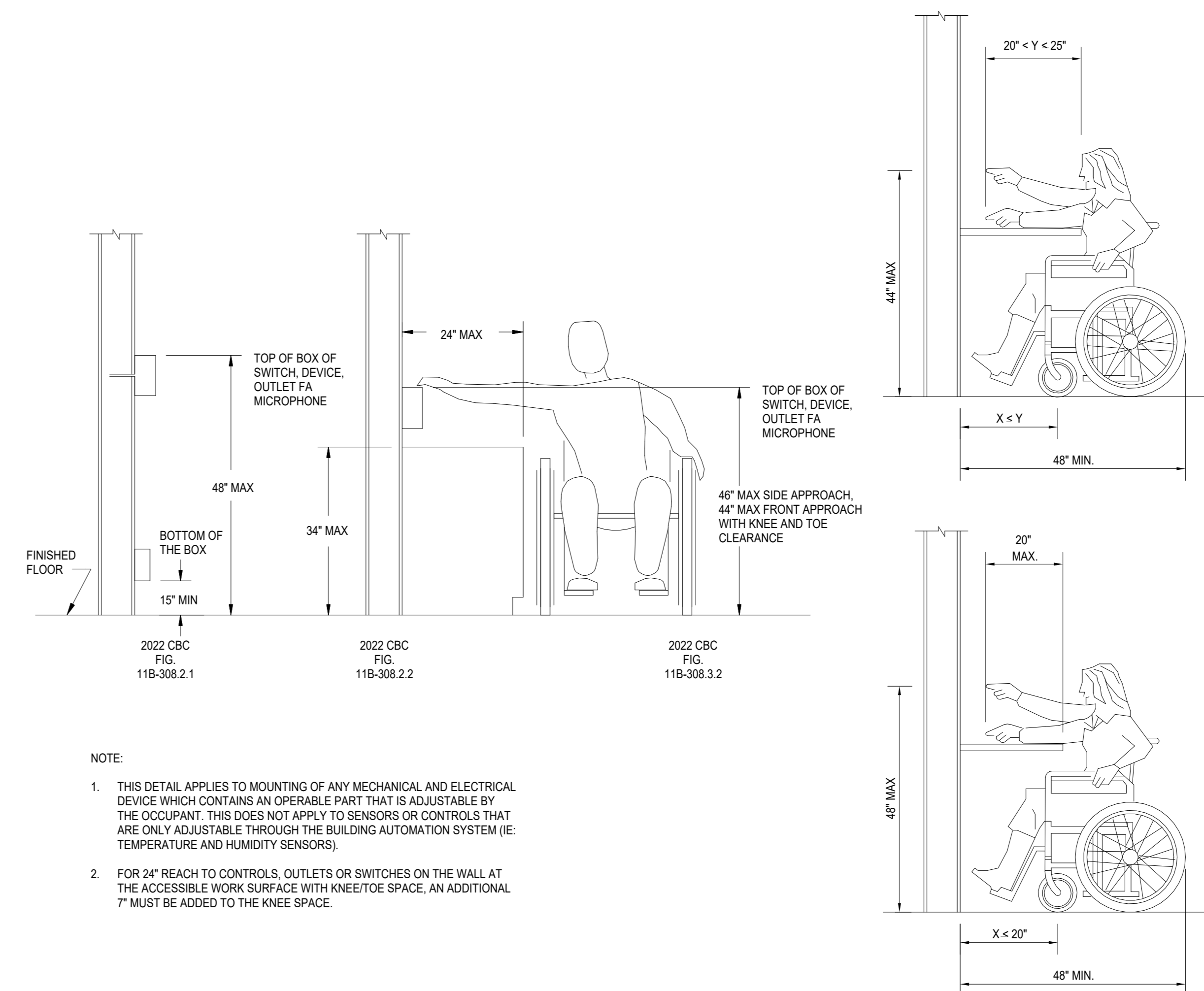
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JURUPA UNIFIED SCHOOL DISTRICT

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1	ADDENDUM 01	9/18/24

TECHNOLOGY COVER SHEET

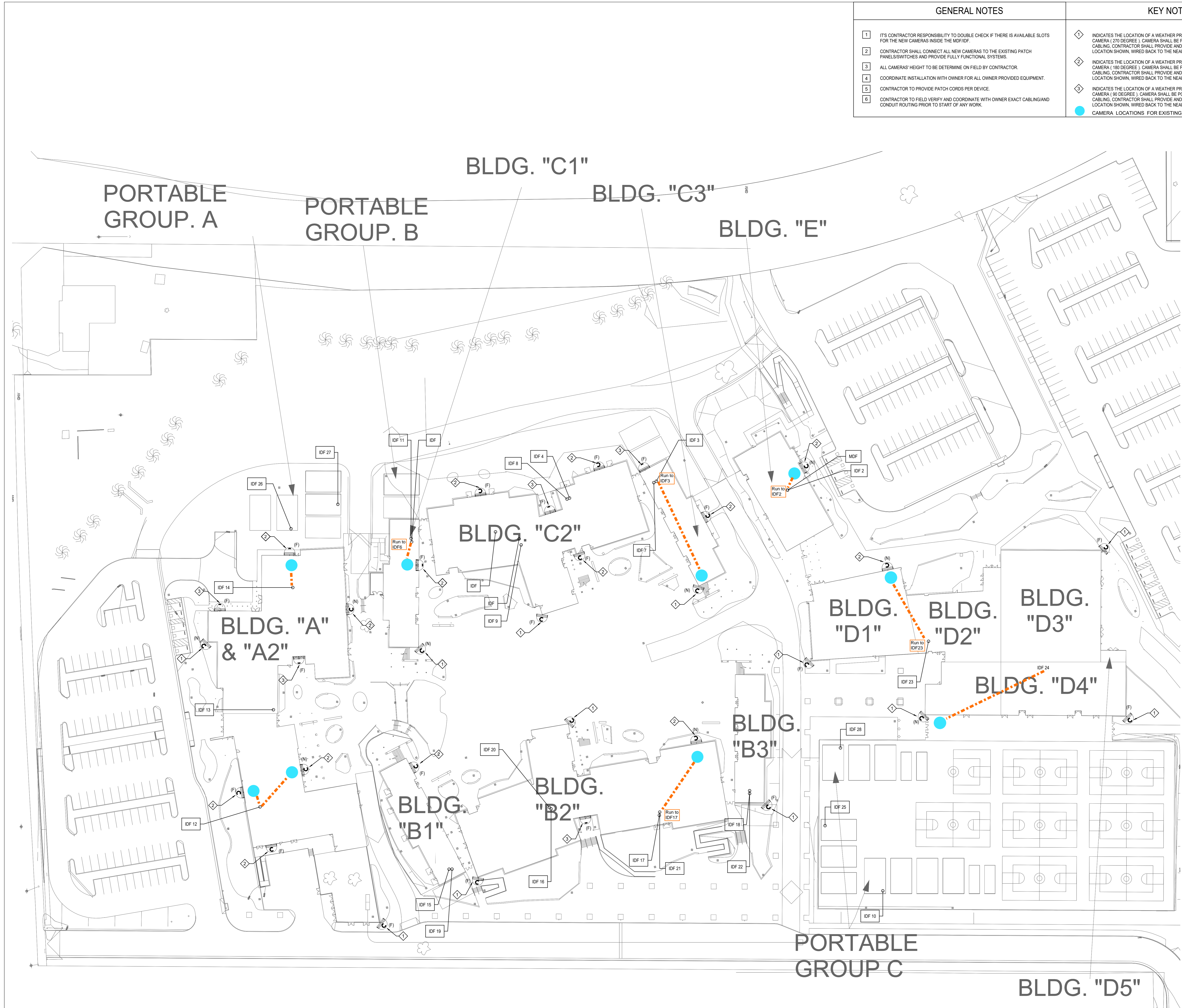
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- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
  - FOR 24" REACH TO CONTROLS, OUTLETS OR SWITCHES ON THE WALL AT THE ACCESSIBLE WORK SURFACE WITH KNEE/TOE SPACE, AN ADDITIONAL 7" MUST BE ADDED TO THE KNEE SPACE.

GENERAL NOTES	
1	IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE IDF/IDF.
2	CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
3	ALL CAMERAS' HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
4	COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
5	CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
6	CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING/AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.

KEY NOTES	
◇	INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST IDF/IDF.
◇	INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST IDF/IDF.
◇	INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (90 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST IDF/IDF.
●	CAMERA LOCATIONS FOR EXISTING PROJECT



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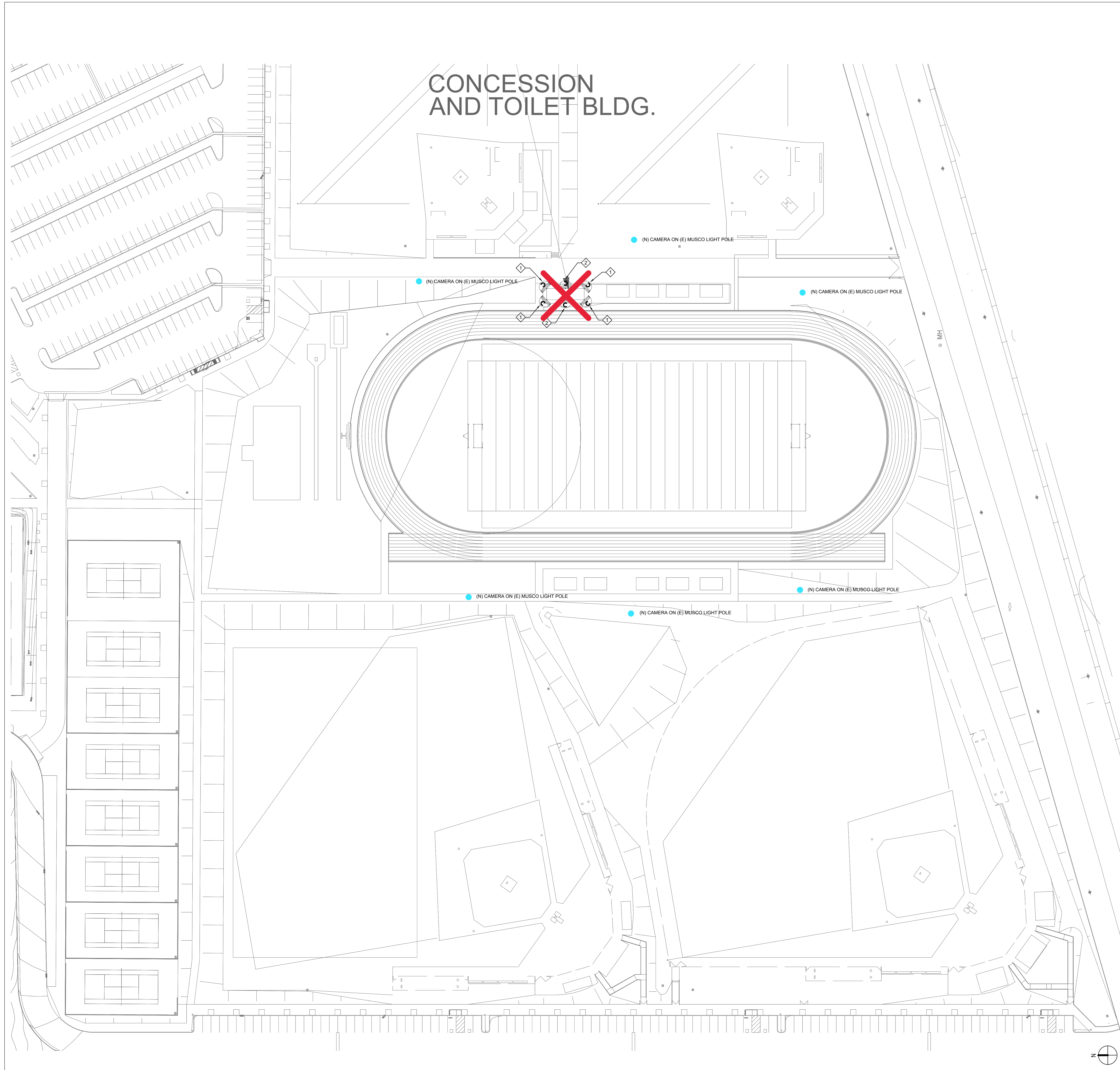
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TECHNOLOGY SITE PLAN

**T1.01**

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KEY NOTES

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- 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING/AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.



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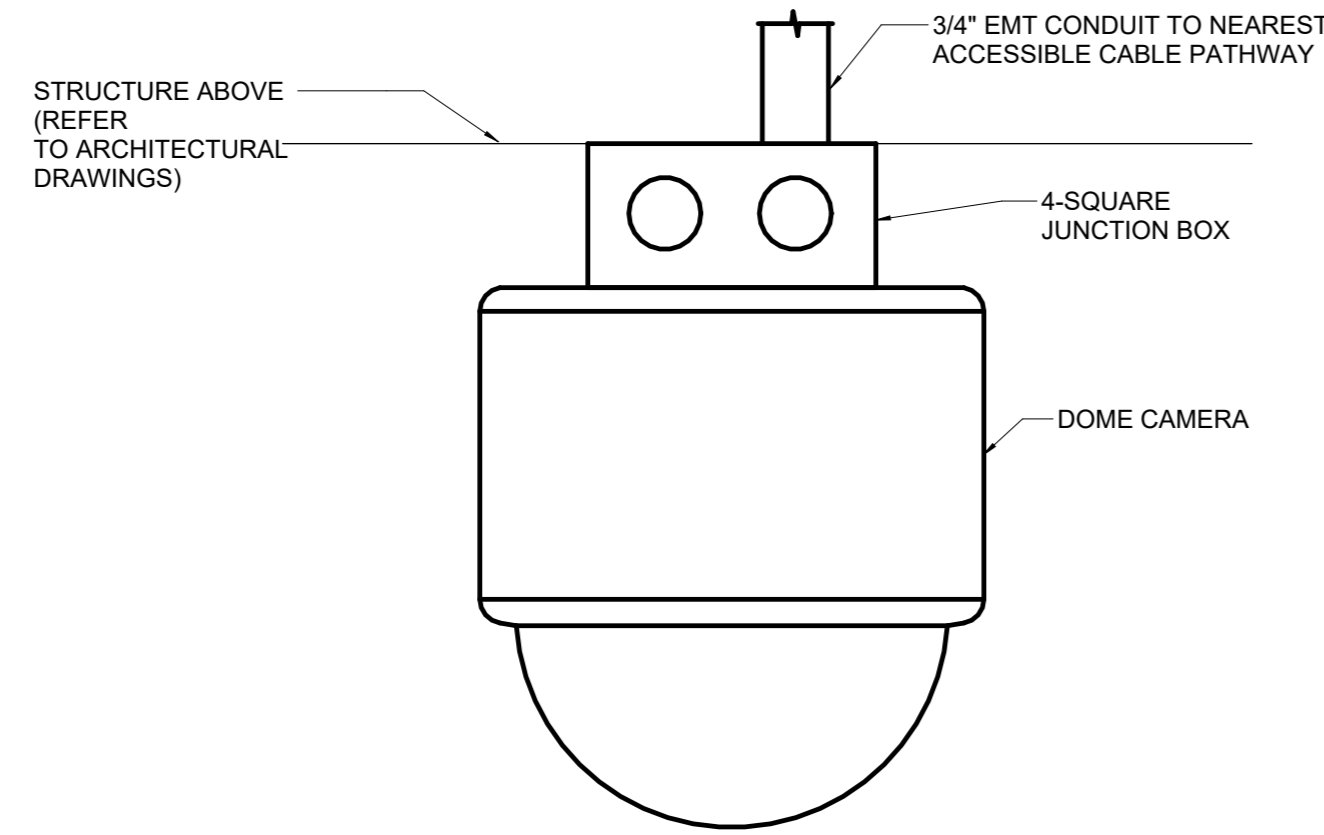
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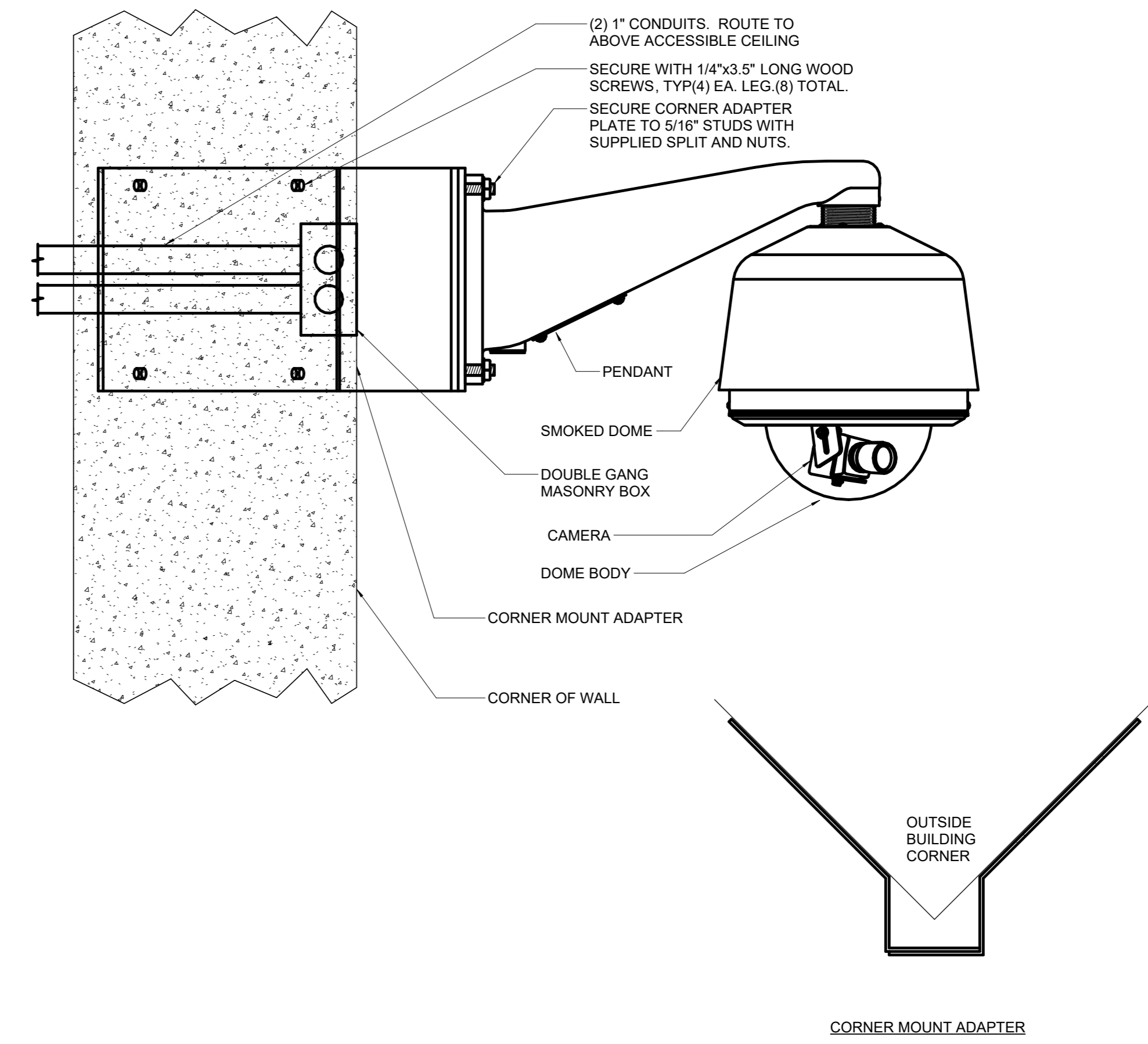
**TECHNOLOGY SITE PLAN**

**T1.02**



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- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGHINGS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

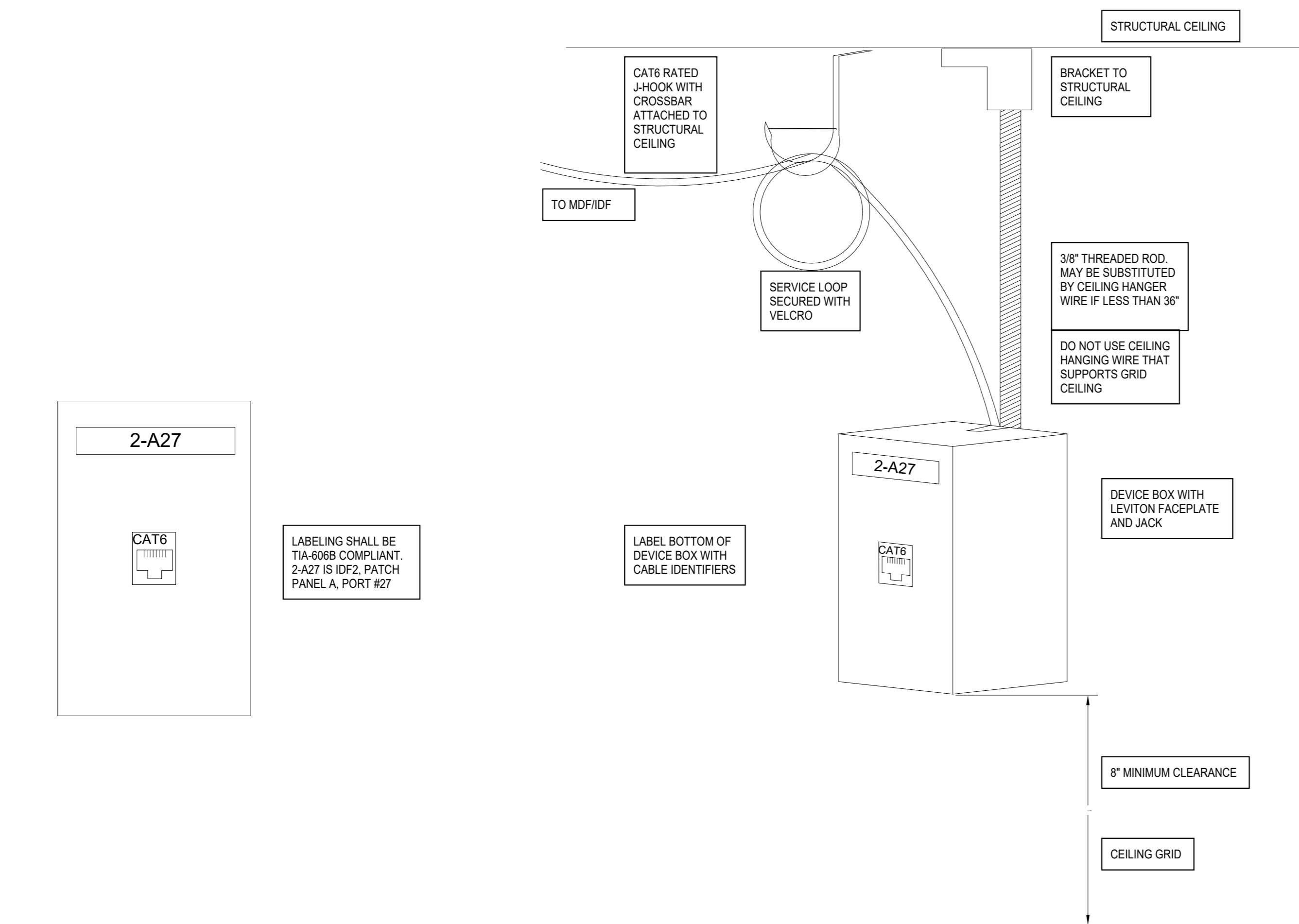


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**4 EXTERIOR SURFACE CEILING CAMERA MOUNTING**

N.T.S.

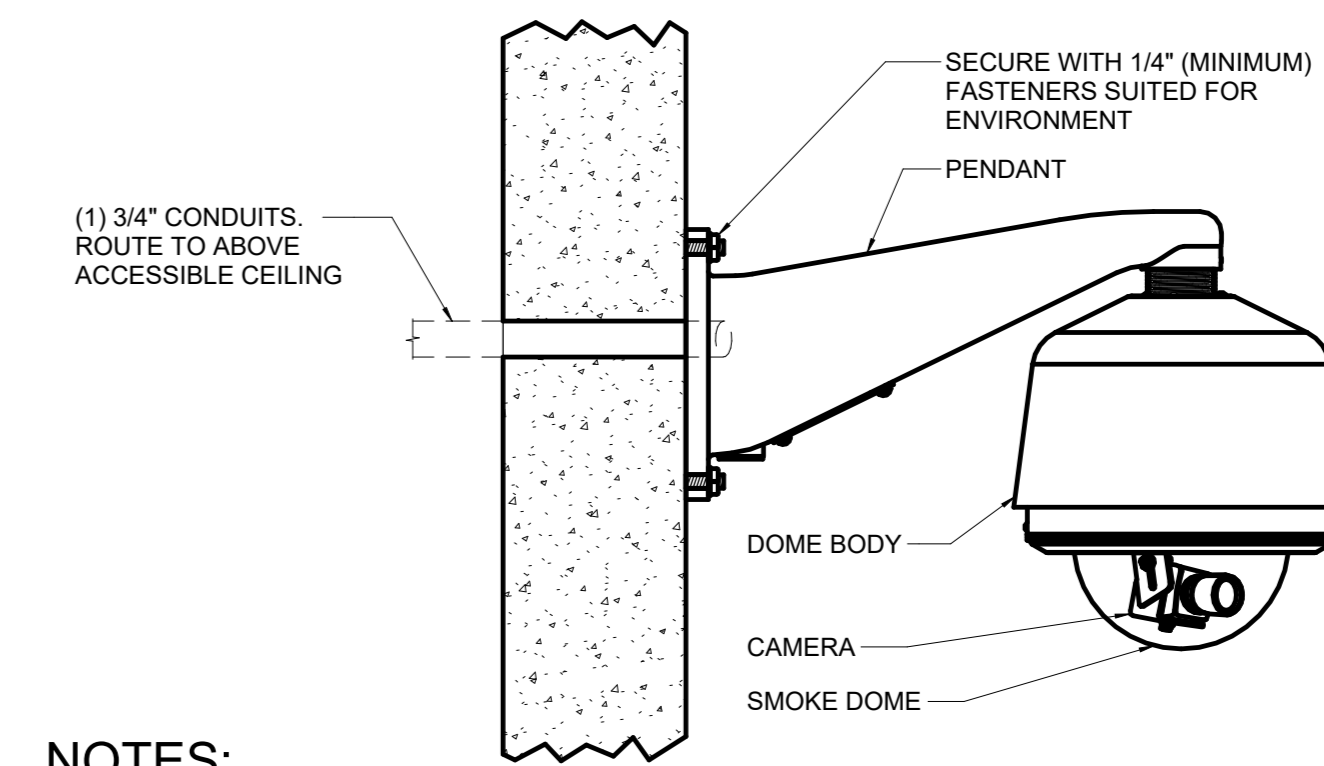


**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1\"/>

**1 EXTERIOR CORNER MOUNT CAMERA DETAIL**

3\"/>

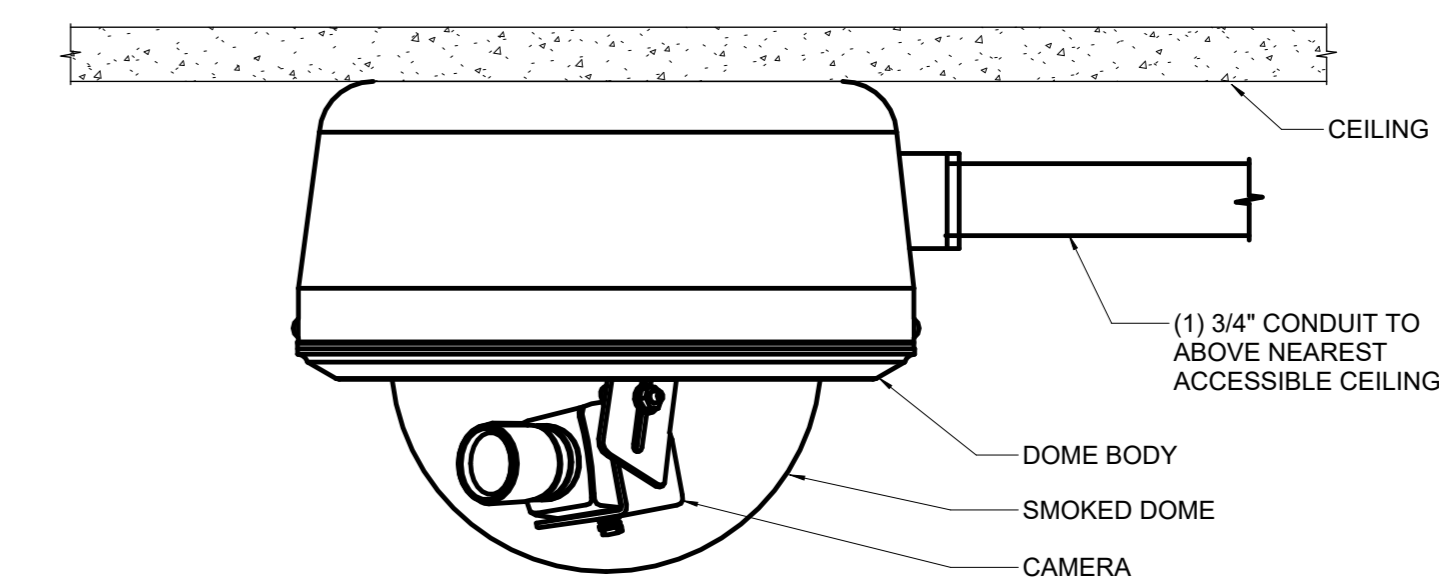


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**2 EXTERIOR WALL MOUNTED CAMERA**

3\"/>



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**5 SINGLE PORT LABELING**

N.T.S.



RANCHO CUCAMONGA  
8163 Rochester Ave., Ste 100  
Rancho Cucamonga, CA 91730  
909-987-5909

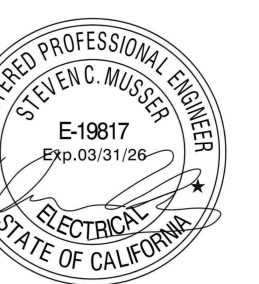
**PATRIOT HIGH SCHOOL SECURITY CAMERAS**

JURUPA UNIFIED SCHOOL DISTRICT  
4355 CAMINO REAL, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER		
DATE:	12/20/23	
DRAWN BY:	Author	
CHECKED BY:	Checker	
REVISIONS		
No.	Description	Date

**TECHNOLOGY DETAILS**

**T6.01**

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PAN-DUCT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSIFLUTIA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
	UNDERGROUND/FLOOR CONDUIT	
	CONDUIT UP	
	CONDUIT DOWN	
	CONDUIT WITH CONTINUATION	
	CONDUIT SLEEVE	
	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "#\" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SIM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
#	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR  
 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR  
 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR  
 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
 TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
 NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES, 2016 EDITION  
 UL 484 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION  
 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION  
 UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)  
 ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



RANCHO CUCAMONGA  
 8163 Rochester Ave., Ste 100  
 Rancho Cucamonga, CA 91730  
 909-987-5909

PEDLEY ES SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 5871 HUDSON ST., JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



ARCHITECT

CLIENT  
 JURUPA UNIFIED SCHOOL DISTRICT

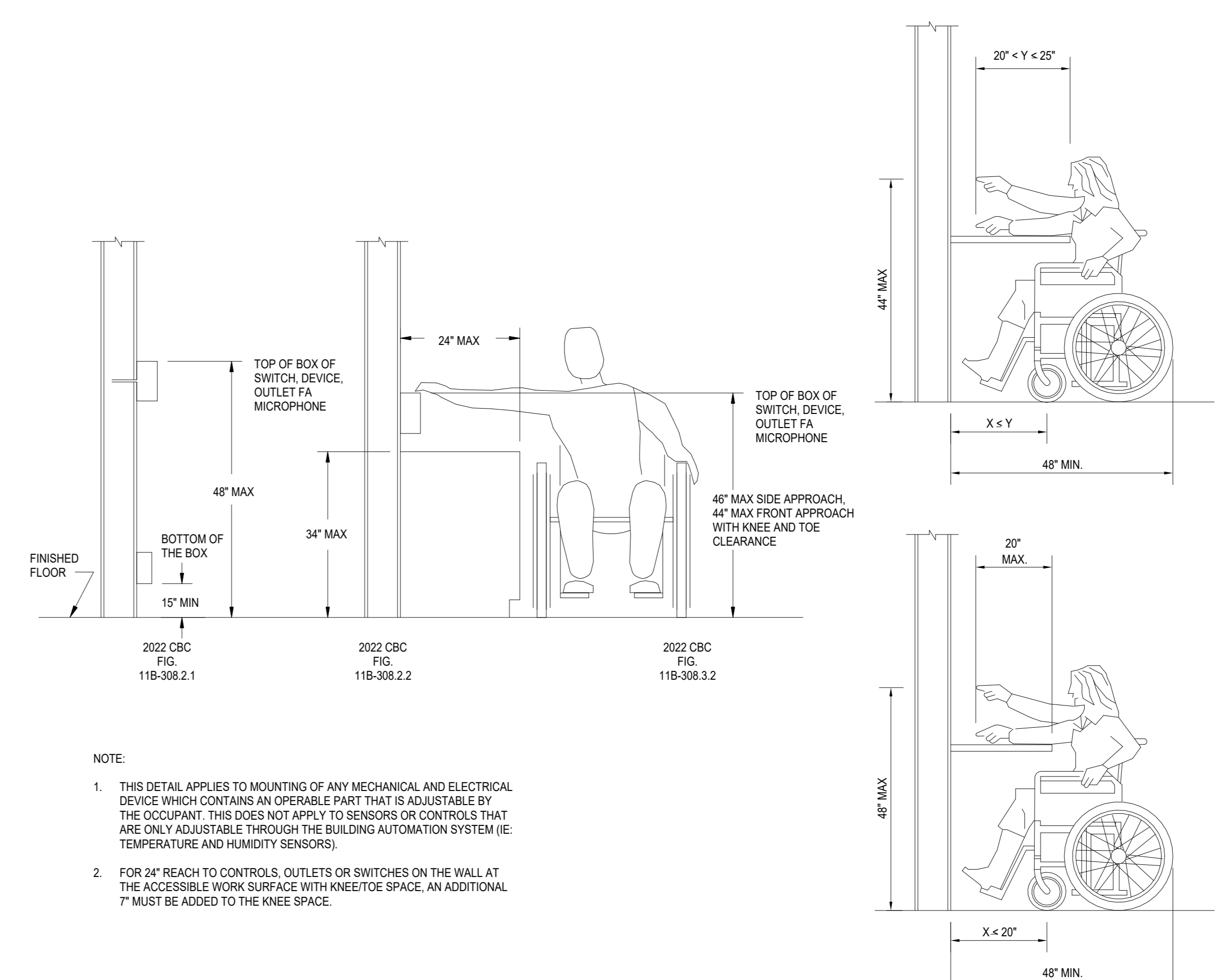
PROJECT NUMBER

DATE:	12/20/23
DRAWN BY:	TA
CHECKED BY:	RDC
REVISIONS	

No.	Description	Date
1	ADDENDUM 01	9/18/24

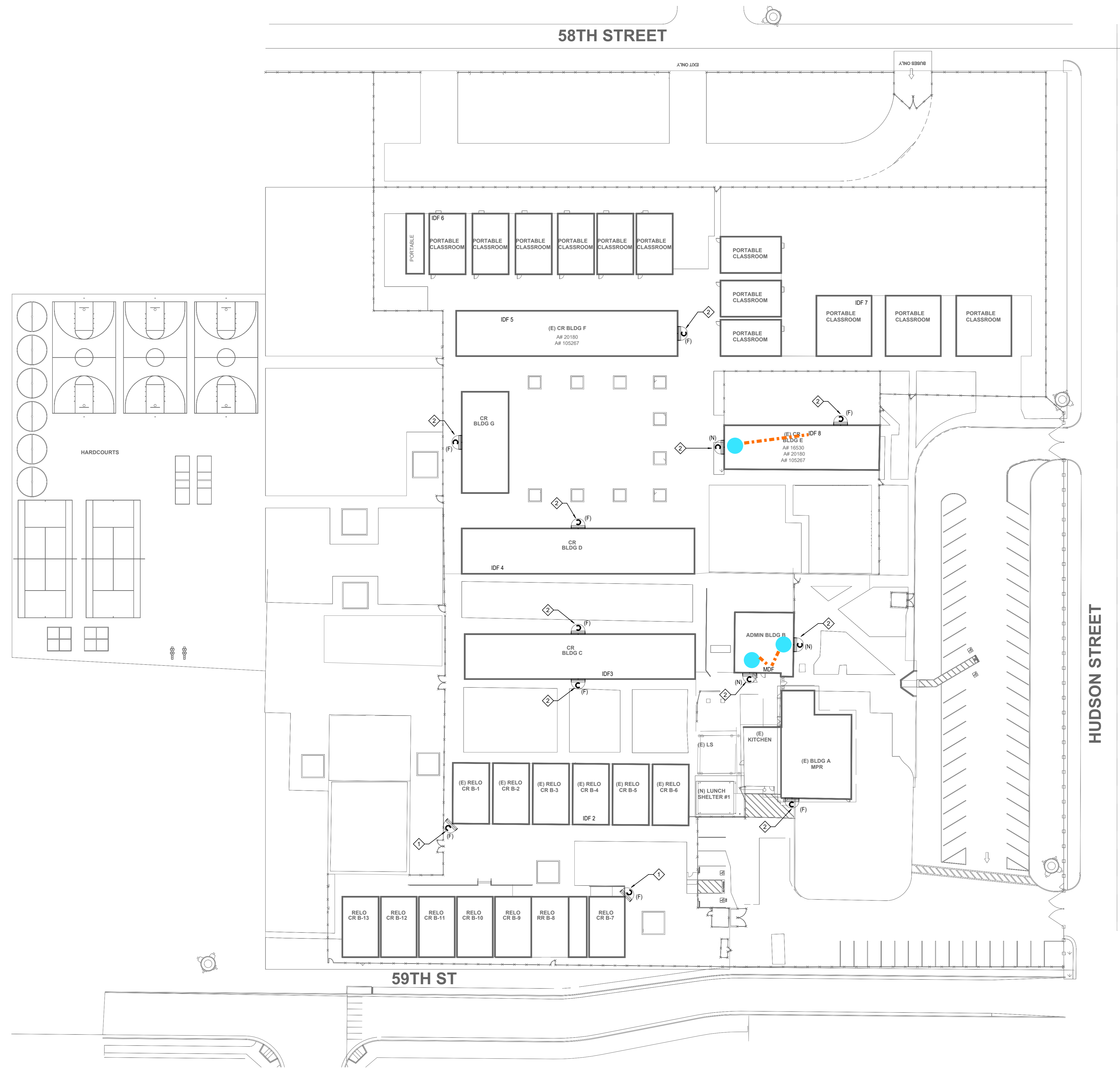
TECHNOLOGY COVER SHEET

T0.00



- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
  - FOR 24\" REACH TO CONTROLS, OUTLETS OR SWITCHES ON THE WALL AT THE ACCESSIBLE WORK SURFACE WITH KNEE/TOE SPACE, AN ADDITIONAL 7\" MUST BE ADDED TO THE KNEE SPACE.

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- ### KEY NOTES
- 1 INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE) CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
  - 2 INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE) CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
  - CAMERA LOCATIONS FOR EXISTING PROJECT

- ### GENERAL NOTES
- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
  - 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
  - 3 ALL CAMERAS HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
  - 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
  - 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
  - 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING/AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.



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**PEDLEY ES SECURITY CAMERAS**  
 JURUPA UNIFIED SCHOOL DISTRICT  
 5871 HUDSON ST, JURUPA VALLEY, CA 92509

KEY PLAN

ENGINEER

ARCHITECT

CLIENT  
 JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER

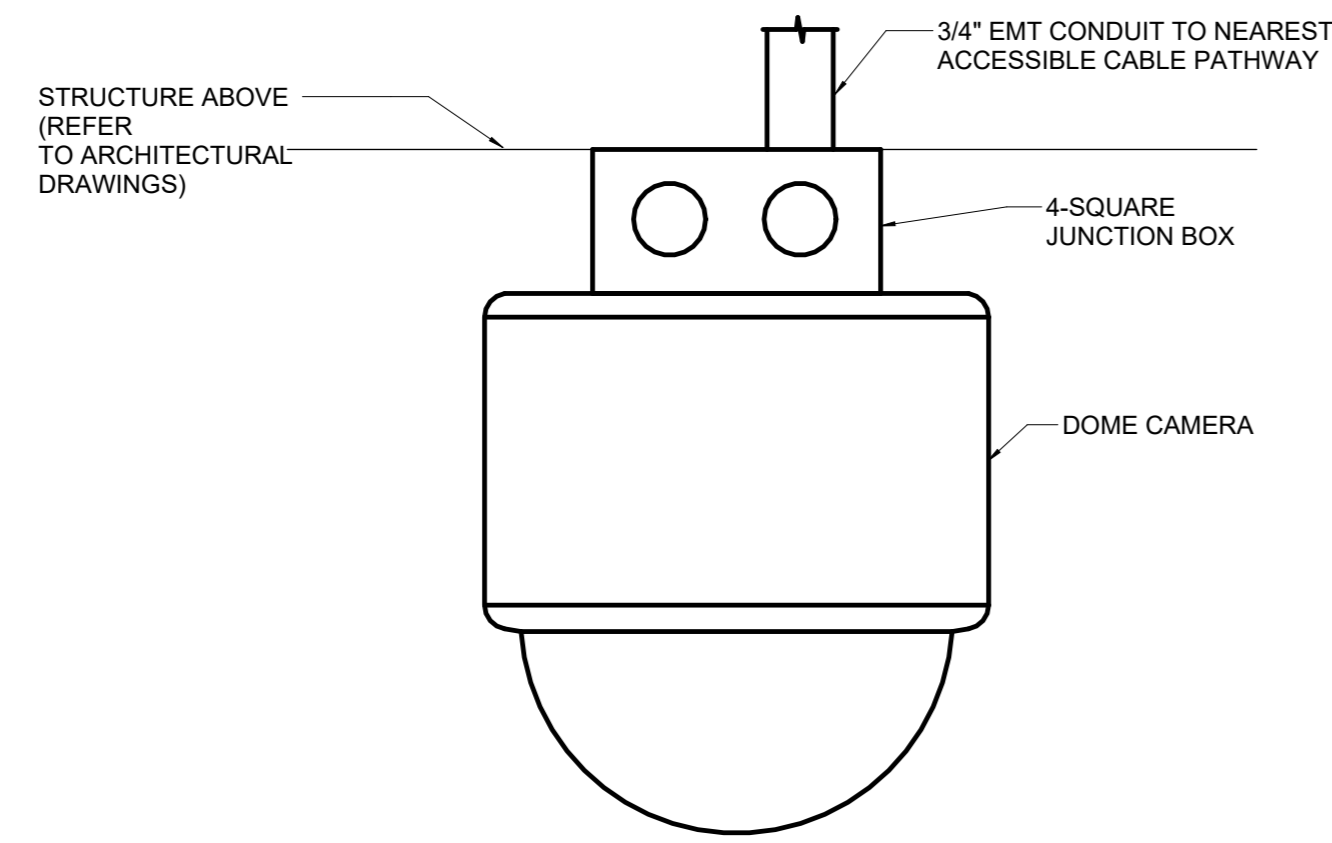
DATE: 12/20/23  
 DRAWN BY: Author  
 CHECKED BY: Checker

REVISIONS

No.	Description	Date
1	Addendum 1	3/12/24

**TECHNOLOGY SITE PLAN**

**T1.01**

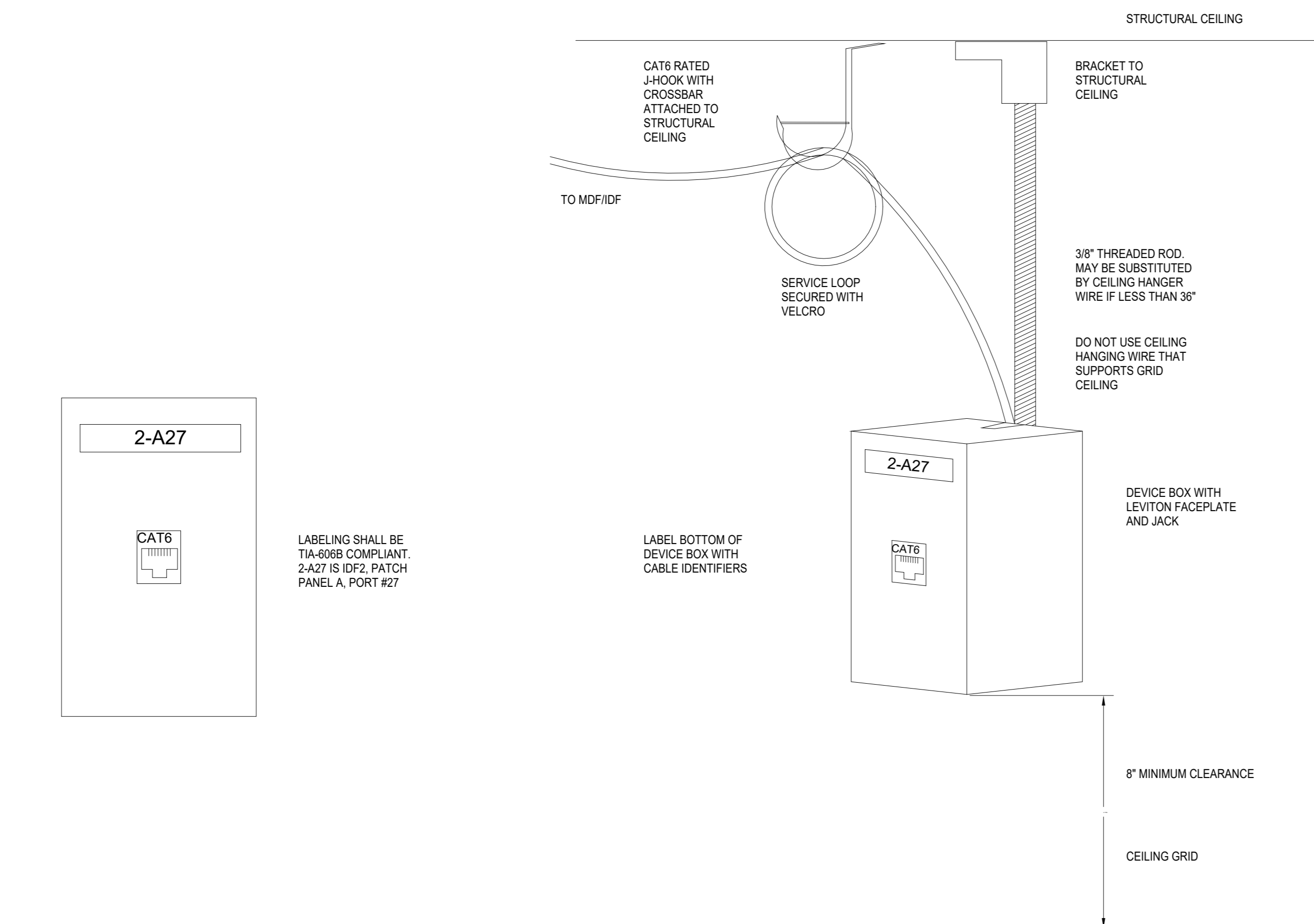


**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

**4** EXTERIOR SURFACE CEILING CAMERA MOUNTING

N.T.S.

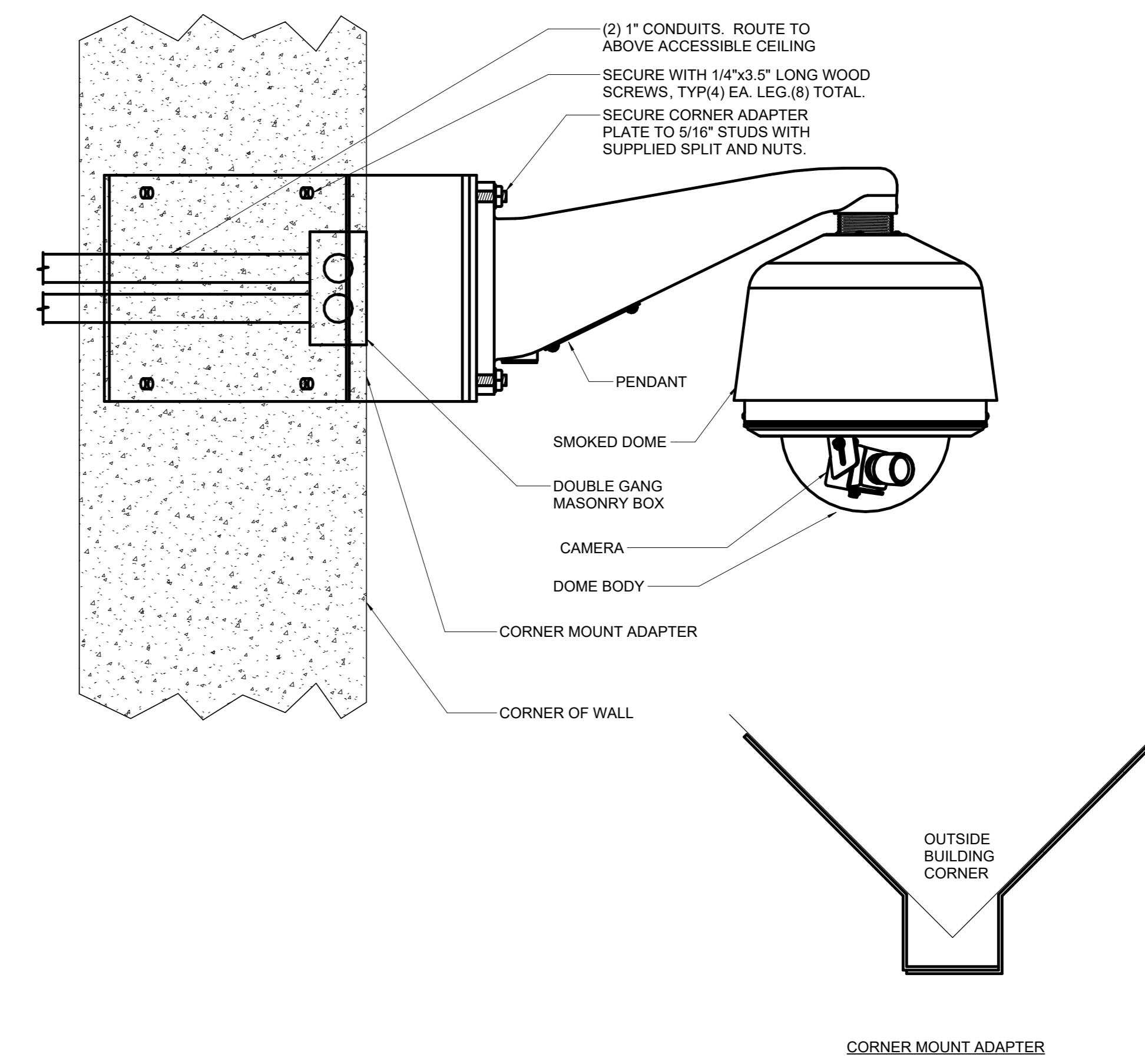


**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1" FROM THE END OF THE CABLE JACKET AT BOTH ENDS.
- CABLE LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THAN 1/8" IN HEIGHT.

**5** SINGLE PORT LABELING

N.T.S.

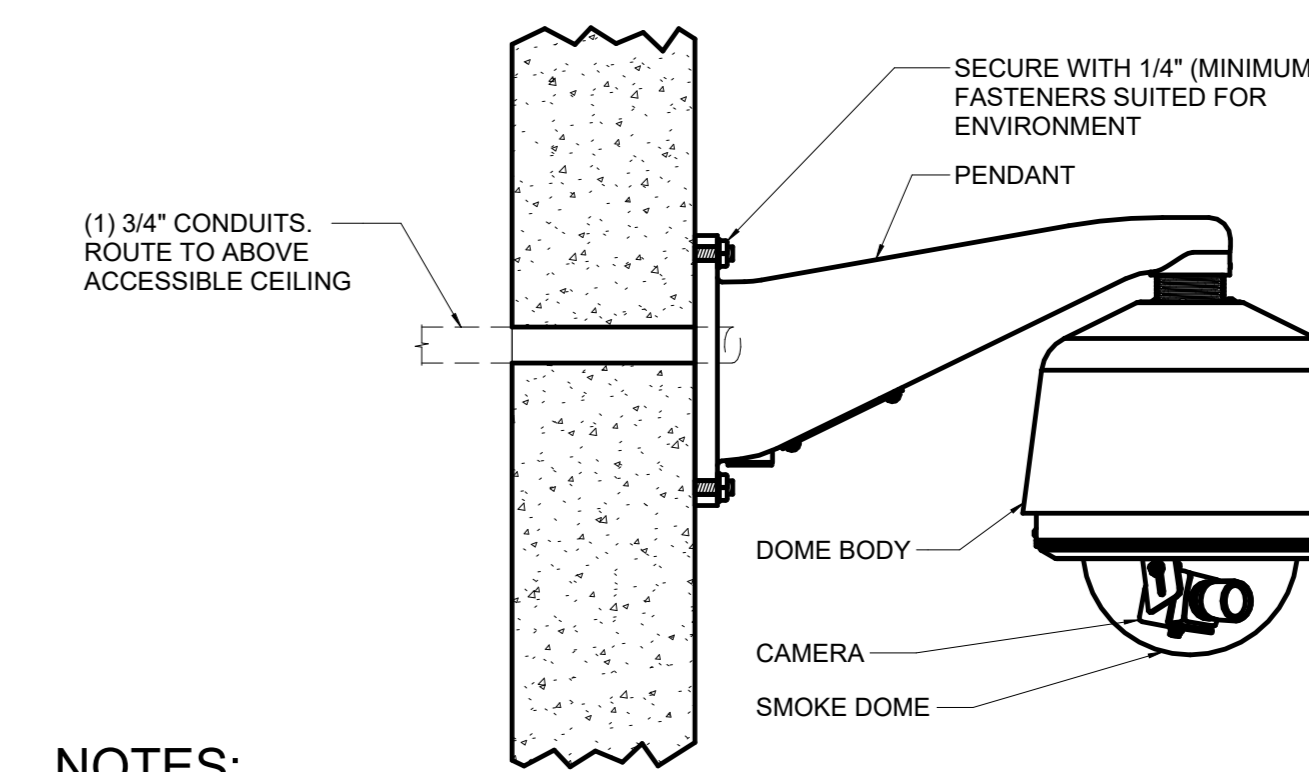


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONRY FASTENERS. DO NOT ANCHOR TO FACE BRICK. SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION INFORMATION.

**1** EXTERIOR CORNER MOUNT CAMERA DETAIL

3" = 1'-0"

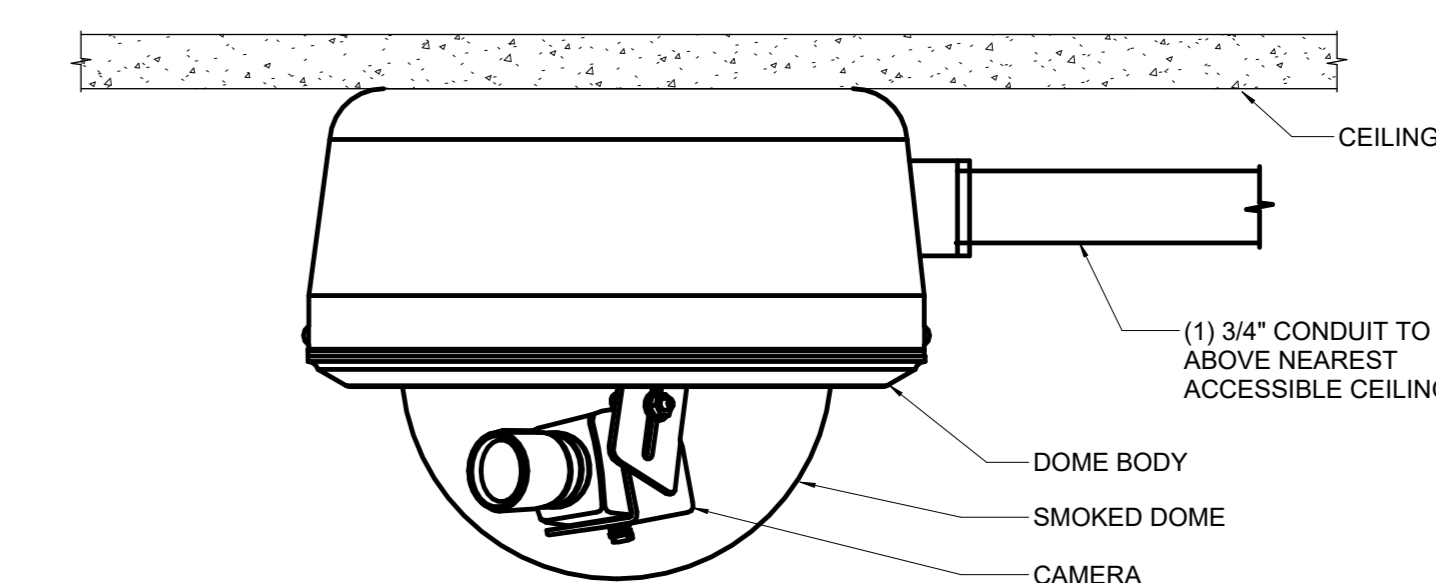


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONARY FASTENERS. DO NOT ANCHOR TO FACE OF BRICK.
- SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**2** EXTERIOR WALL MOUNTED CAMERA

3" = 1'-0"



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3** EXPOSED MOUNT FIXED CAMERA CEILING

6" = 1'-0"



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PEDLEY ES SECURITY CAMERAS

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5871 HUDSON ST, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

REVISIONS		
No.	Description	Date

TECHNOLOGY  
DETAILS

T6.01



SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PAN-DUCT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSIFULLIA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATIONS ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
###	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
—	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
---	UNDERGROUND/FLOOR CONDUIT	
○	CONDUIT UP	
●	CONDUIT DOWN	
↵	CONDUIT WITH CONTINUATION	
[ ]	CONDUIT SLEEVE	
≡	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "#\" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

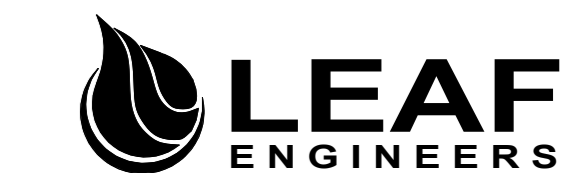
ABBR.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MP/DE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SIM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR-#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
+#	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR  
 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR  
 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR  
 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
 TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
 NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES, 2016 EDITION  
 UL 484 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION  
 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION  
 UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)  
 ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION

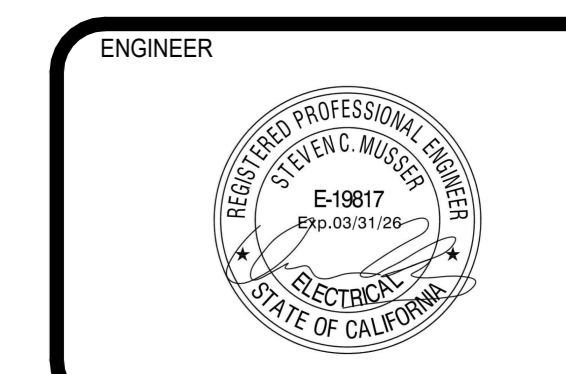
FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.  
 SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



RANCHO CUCAMONGA  
 8163 Rochester Ave., Ste 100  
 Rancho Cucamonga, CA 91730  
 909-987-5909

PERALTA ES SECURITY CAMERAS  
 JURUPA UNIFIED SCHOOL DISTRICT  
 6450 PERALTA PL, JURUPA VALLEY, CA 92509

KEY PLAN

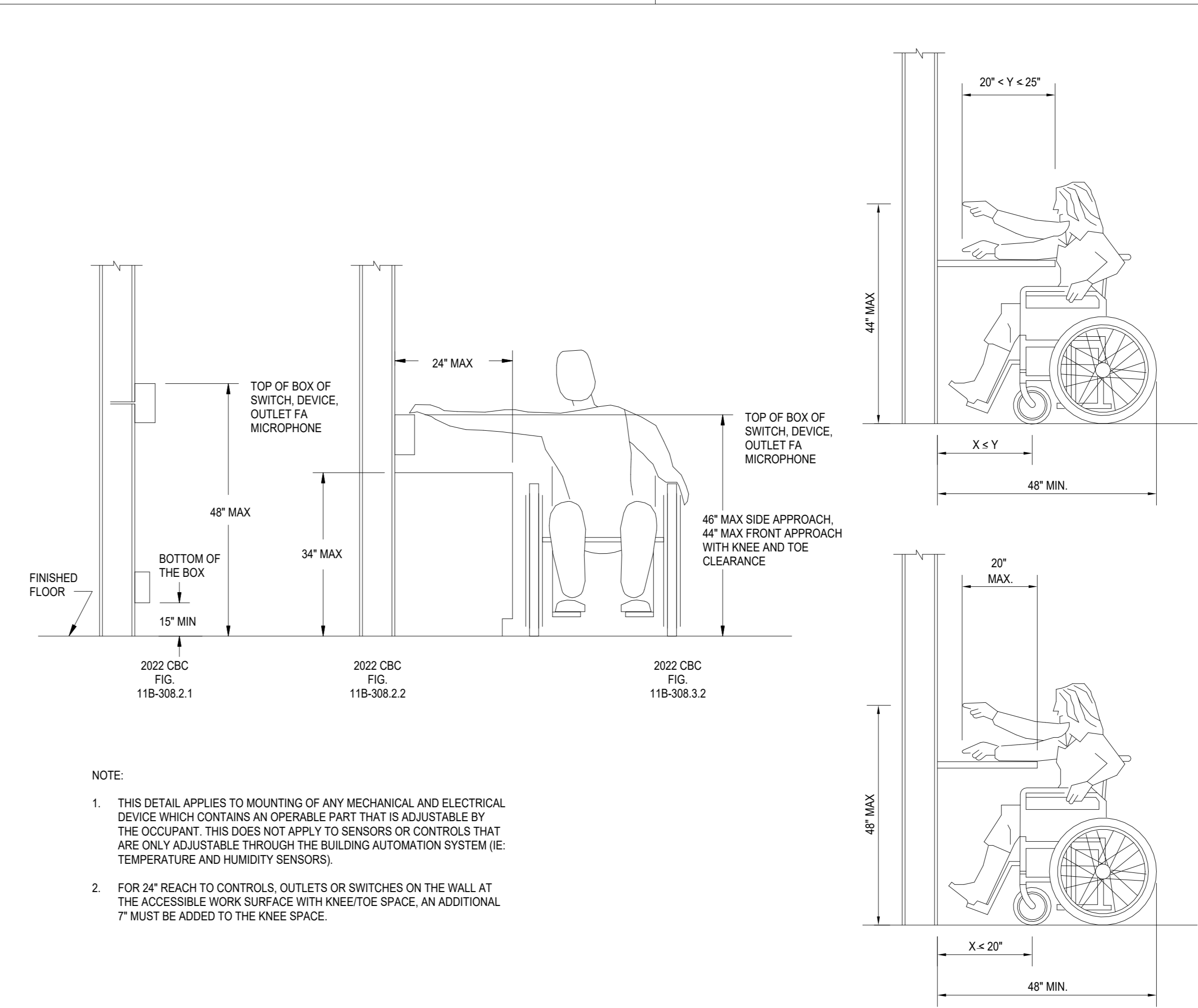


ARCHITECT

CLIENT		
JURUPA UNIFIED SCHOOL DISTRICT		
PROJECT NUMBER		
DATE:	12/20/23	
DRAWN BY:	TA	
CHECKED BY:	RDC	
REVISIONS		
No.	Description	Date
1	ADDENDUM 01	9/18/24

TECHNOLOGY COVER SHEET

T0.00



- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
  - FOR 24\"/>

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KEY NOTES

- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE) CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE) CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- CAMERA LOCATIONS FOR EXISTING PROJECT

GENERAL NOTES

- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
- 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
- 3 ALL CAMERAS' HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
- 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
- 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
- 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING/AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.



RANCHO CUCAMONGA  
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909-987-5909

PERALTA ES SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
6450 PERALTA PL, JURUPA VALLEY, CA 92509

KEY PLAN

ENGINEER

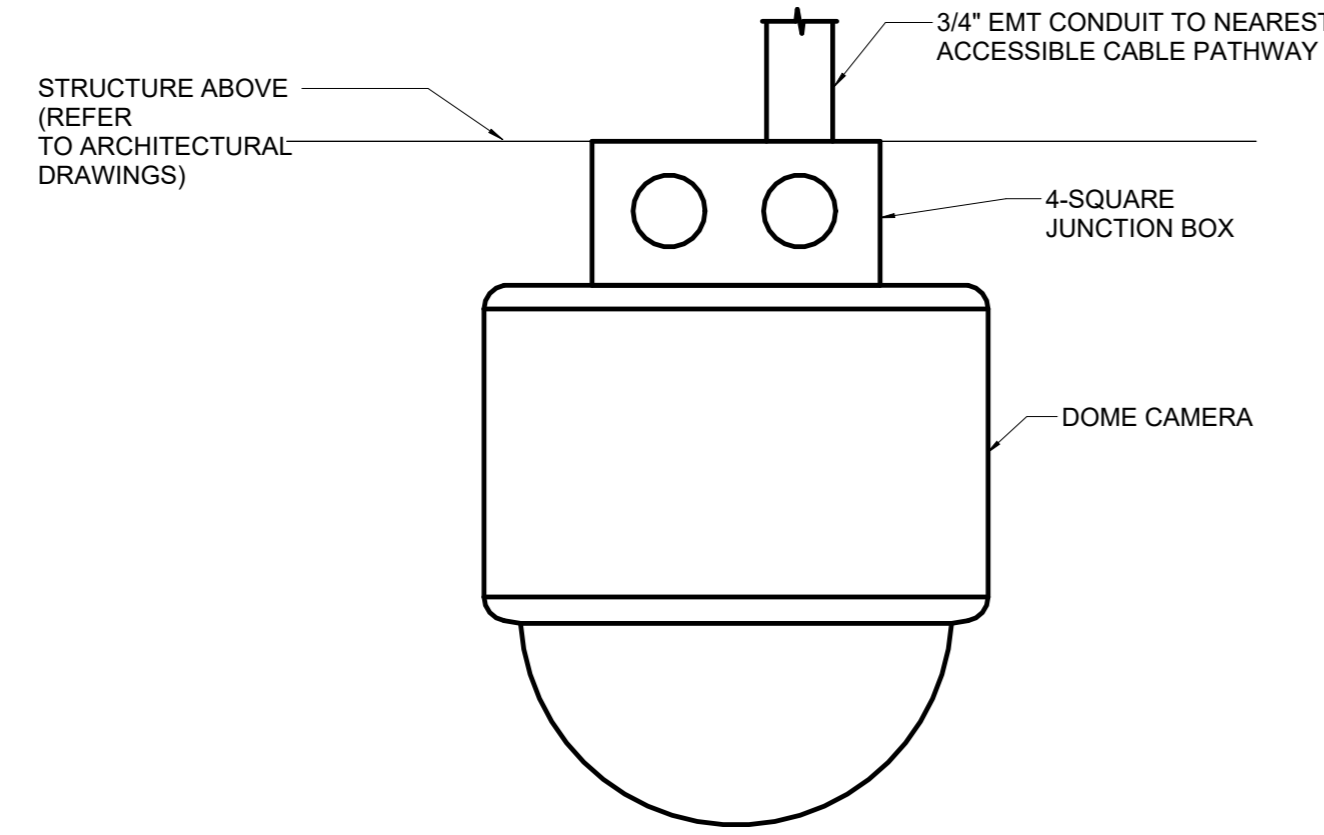
ARCHITECT

CLIENT	
JURUPA UNIFIED SCHOOL DISTRICT	
PROJECT NUMBER	
DATE:	12/20/23
DRAWN BY:	MM
CHECKED BY:	Checker

No.	Description	Date
1	Addendum 1	9/12/24

TECHNOLOGY SITE PLAN

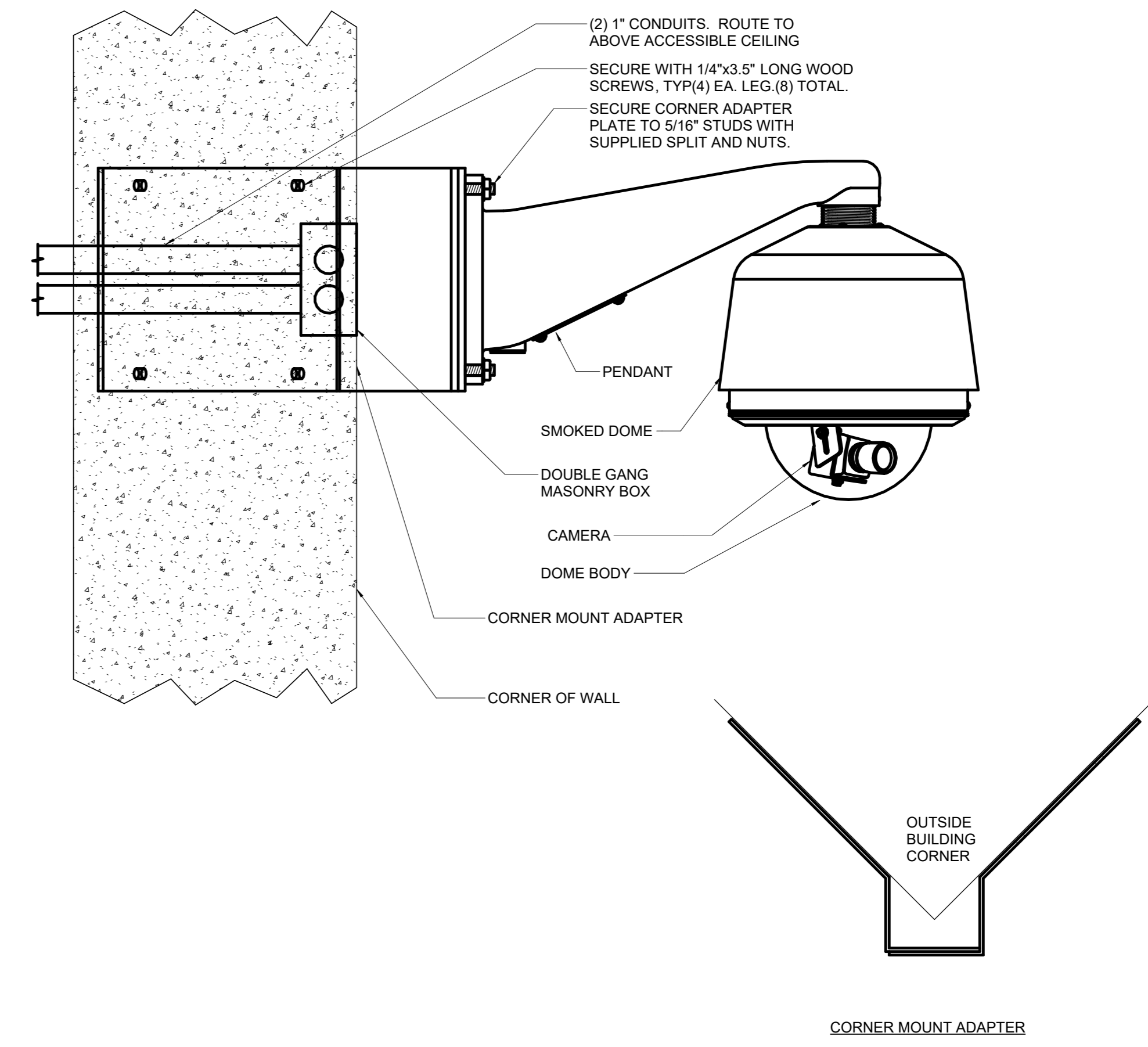
T1.01



**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

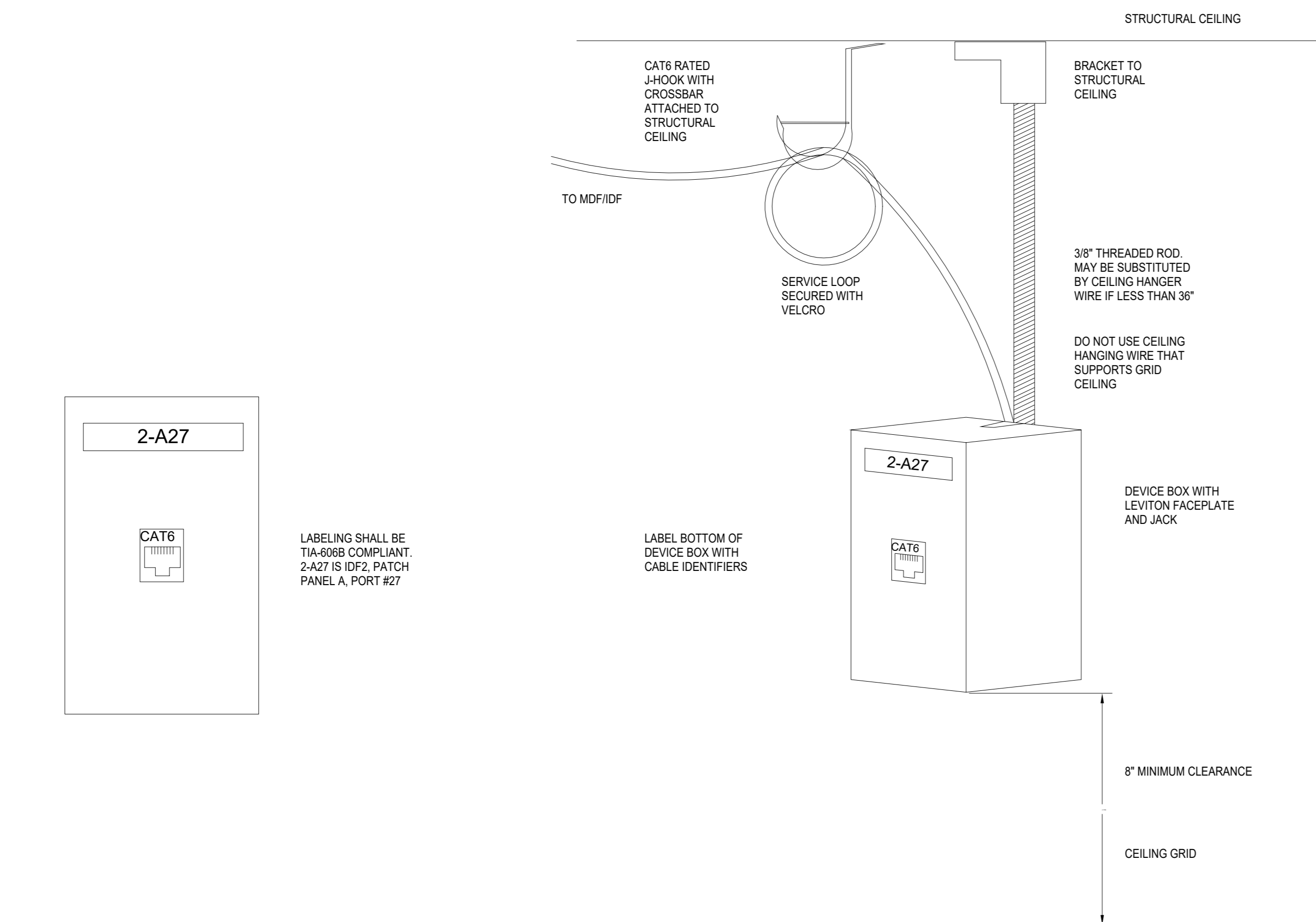
**4** EXTERIOR SURFACE CEILING CAMERA MOUNTING  
N.T.S.



**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

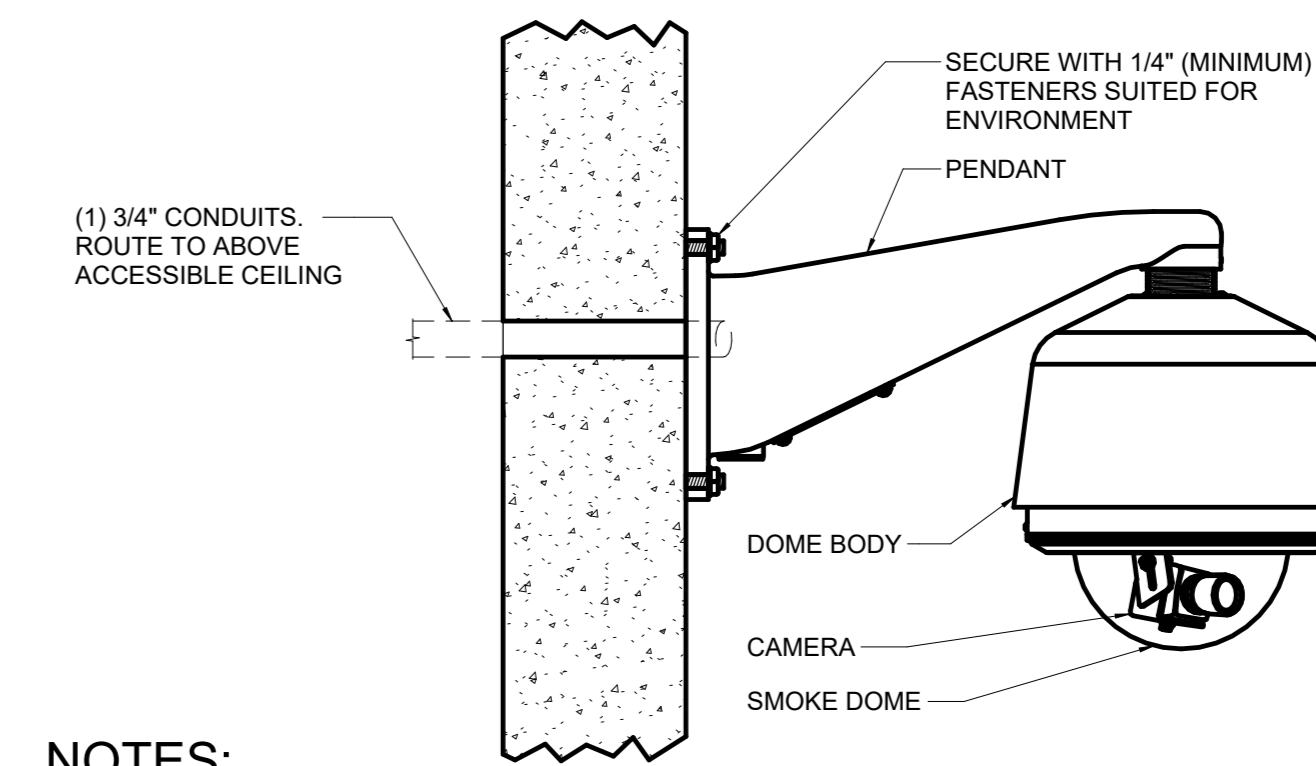
**1** EXTERIOR CORNER MOUNT CAMERA DETAIL  
3\"/>



**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1\"/>

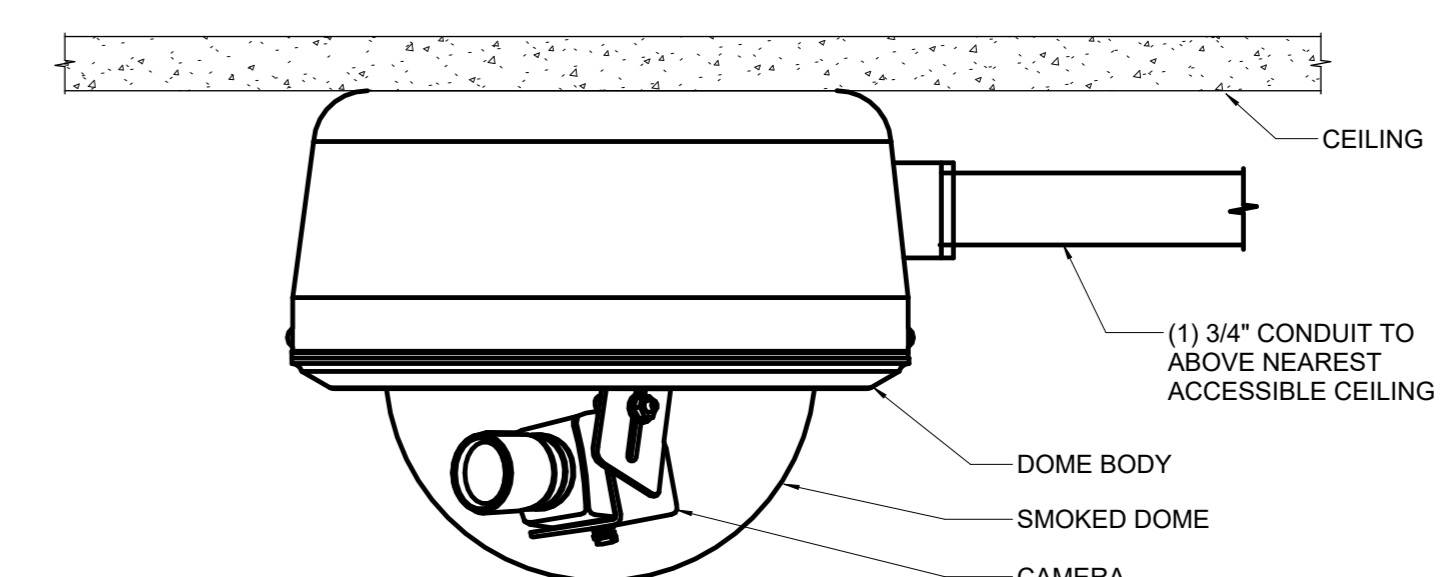
**5** SINGLE PORT LABELING  
N.T.S.



**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

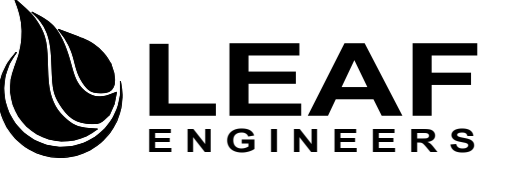
**2** EXTERIOR WALL MOUNTED CAMERA  
3\"/>



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3** EXPOSED MOUNT FIXED CAMERA CEILING  
6\"/>



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PERALTA ES SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
6450 PERALTA PL, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

REVISIONS		
No.	Description	Date

TECHNOLOGY  
DETAILS

T6.01

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PANDUIT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSIFLUTA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
	UNDERGROUND/FLOOR CONDUIT	
	CONDUIT UP	
	CONDUIT DOWN	
	CONDUIT WITH CONTINUATION	
	CONDUIT SLEEVE	
	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "R" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
#F	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR  
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 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
 TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

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 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
 NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES, 2016 EDITION  
 UL 484 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION  
 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION  
 UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)  
 ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



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PROFESSIONAL DEVELOPMENT CENTER  
 SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 10223 BELLEGRAVE AVE, JURUPA VALLEY, CA 91752

KEY PLAN



ENGINEER



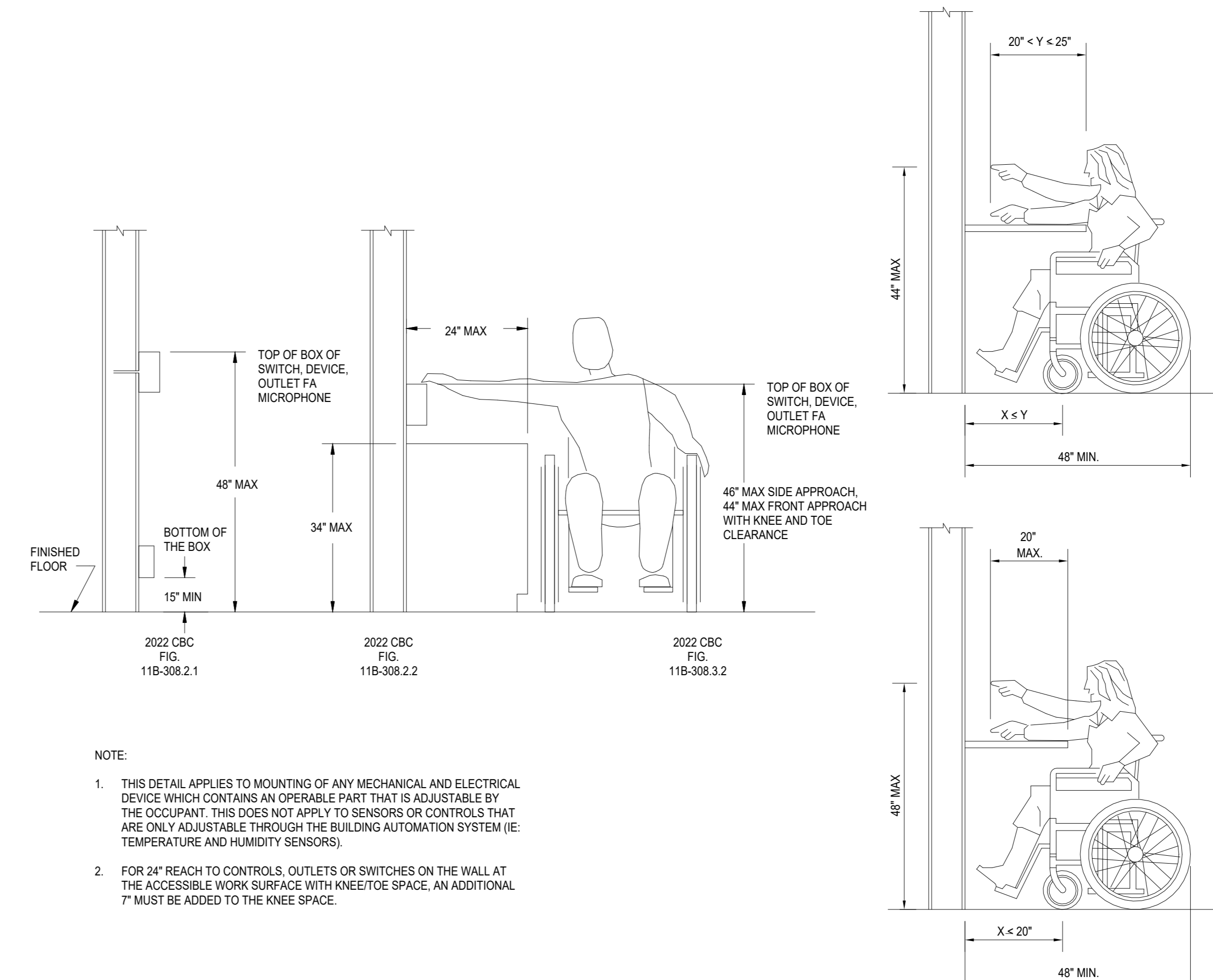
ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

No.	Description	Date
1	ADDENDUM 01	9/18/24

TECHNOLOGY COVER SHEET

T0.00



- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
  - FOR 24" REACH TO CONTROLS, OUTLETS OR SWITCHES ON THE WALL AT THE ACCESSIBLE WORK SURFACE WITH KNEE/TOE SPACE, AN ADDITIONAL 7" MUST BE ADDED TO THE KNEE SPACE.



KEY NOTES

- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MD/IDF.
- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (90 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MD/IDF.
- CAMERA LOCATIONS FOR EXISTING PROJECT

GENERAL NOTES

- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MD/IDF.
- 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
- 3 ALL CAMERAS' HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
- 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
- 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
- 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.



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**PROFESSIONAL DEVELOPMENT CENTER  
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 10223 BELLEGRAVE AVE, JURUPA VALLEY, CA 91752

KEY PLAN

ENGINEER

ARCHITECT

CLIENT  
 JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER

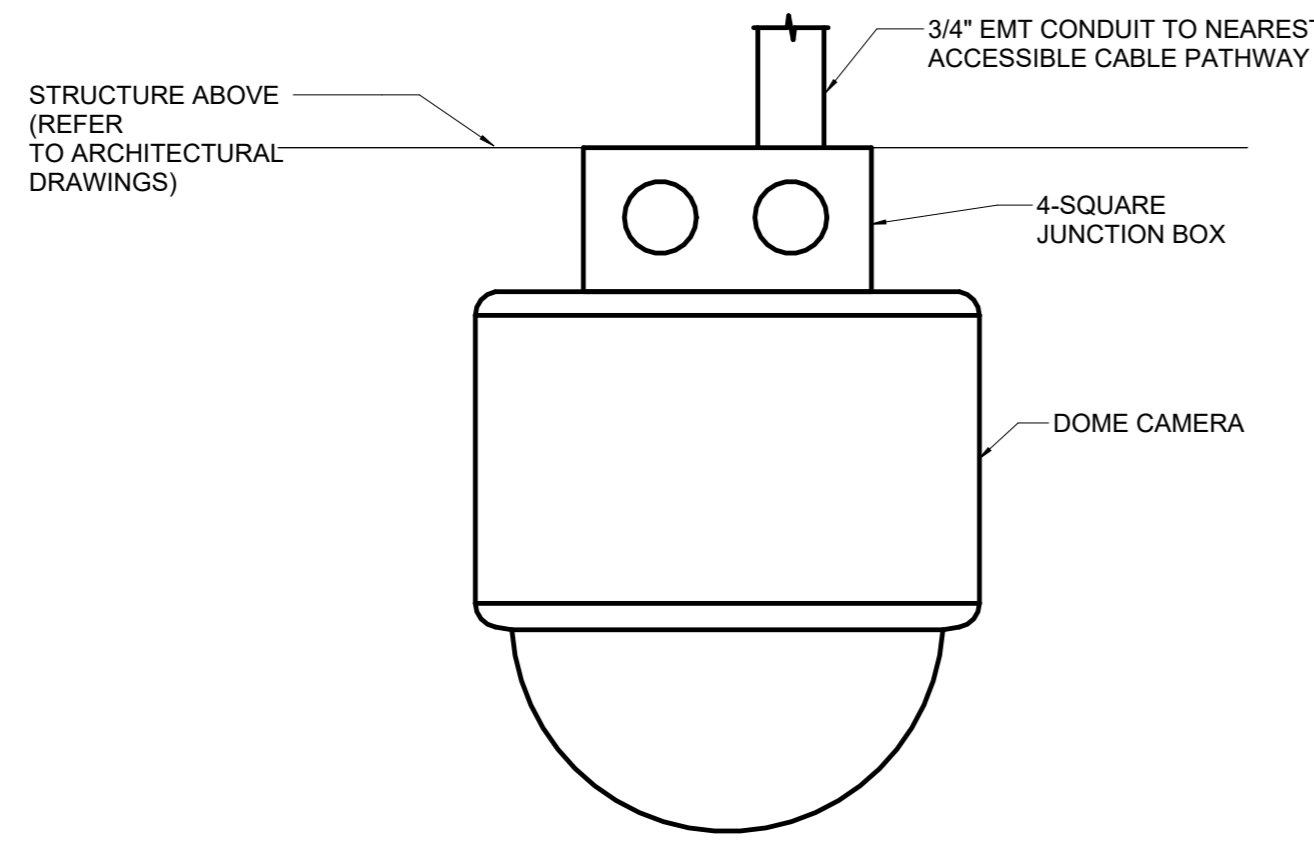
DATE: 12/20/23  
 DRAWN BY: MM  
 CHECKED BY: Checker

REVISIONS

No.	Description	Date
1	Addendum 1	9/12/24

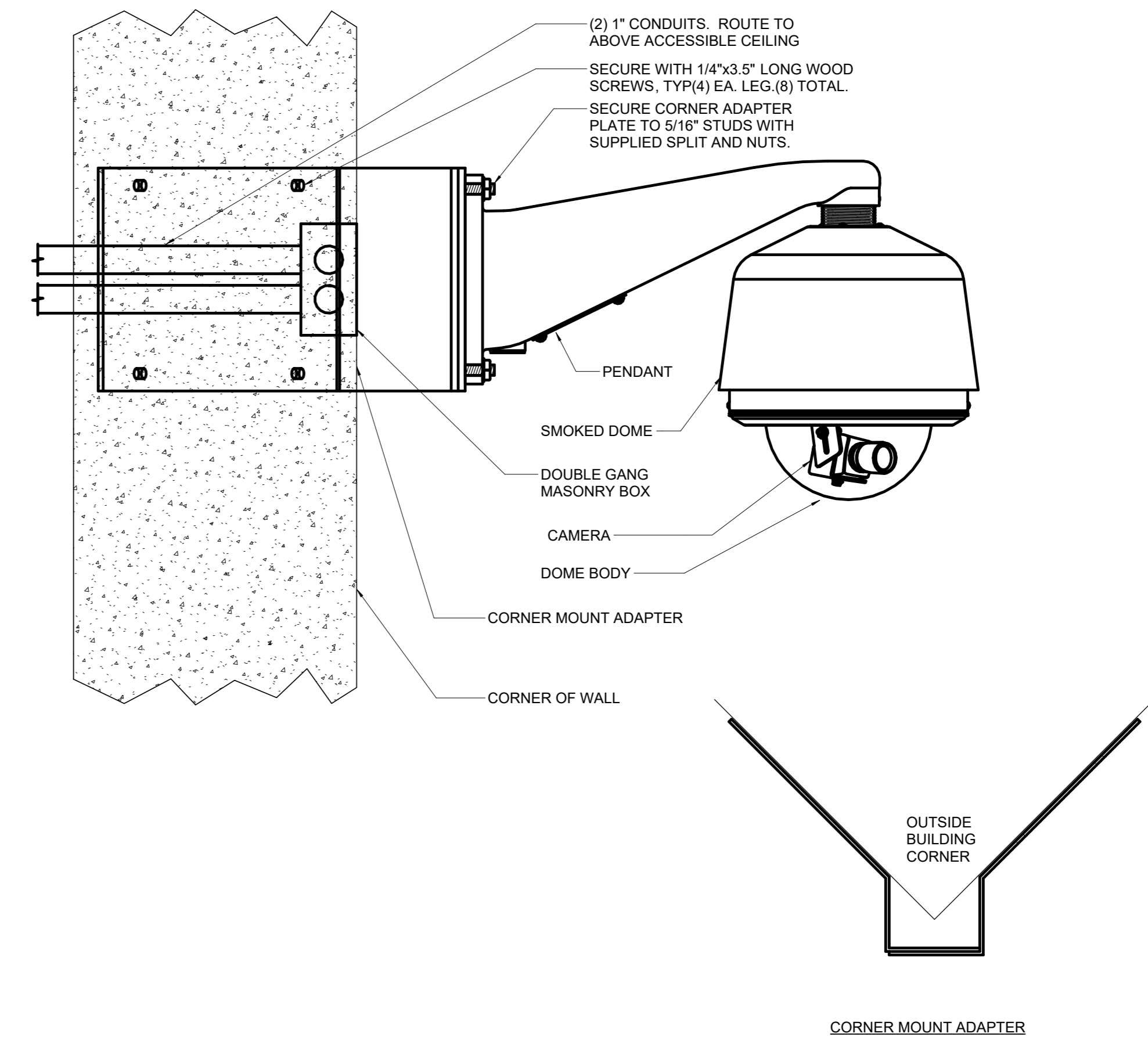
TECHNOLOGY SITE PLAN

**T1.01**



**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

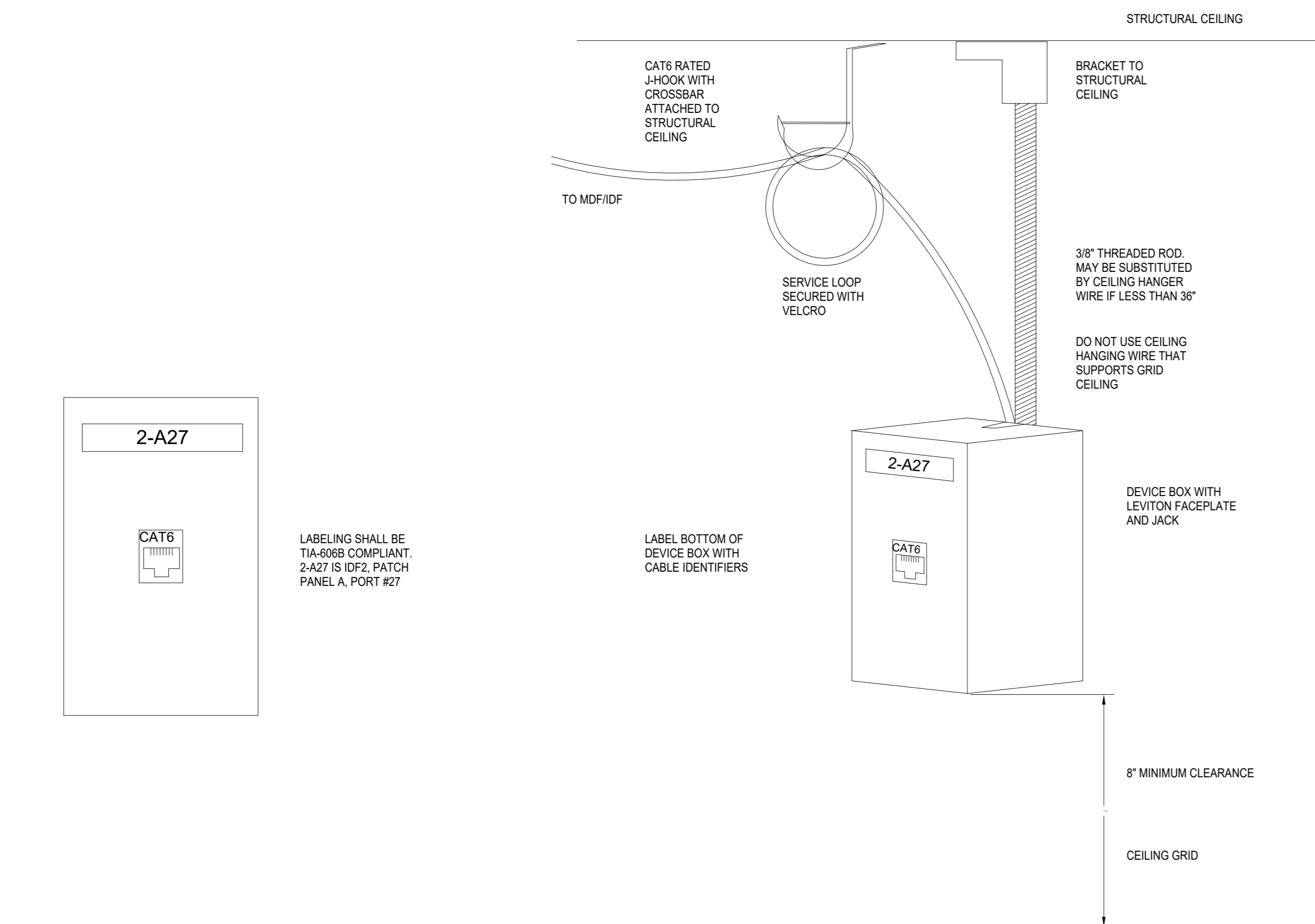


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**4 EXTERIOR SURFACE CEILING CAMERA MOUNTING**

N.T.S.

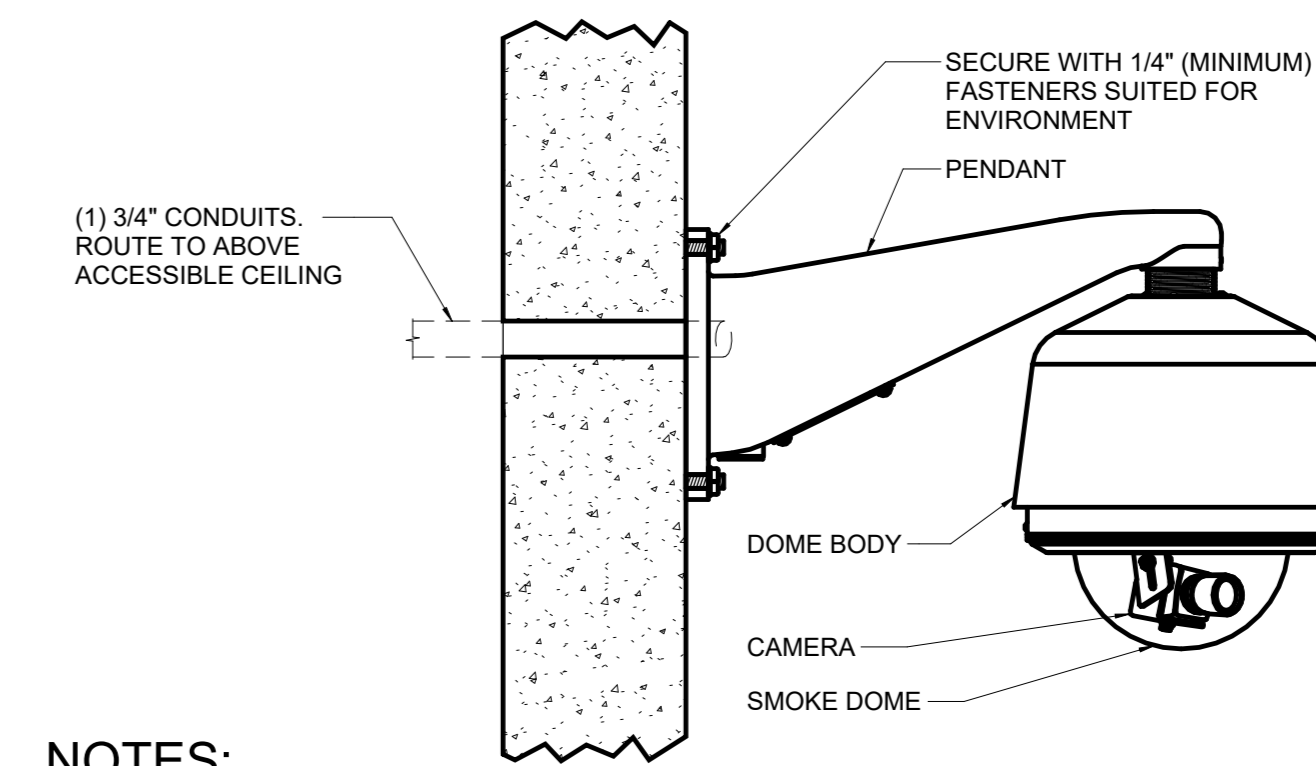


**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1\"/>

**1 EXTERIOR CORNER MOUNT CAMERA DETAIL**

3\"/>

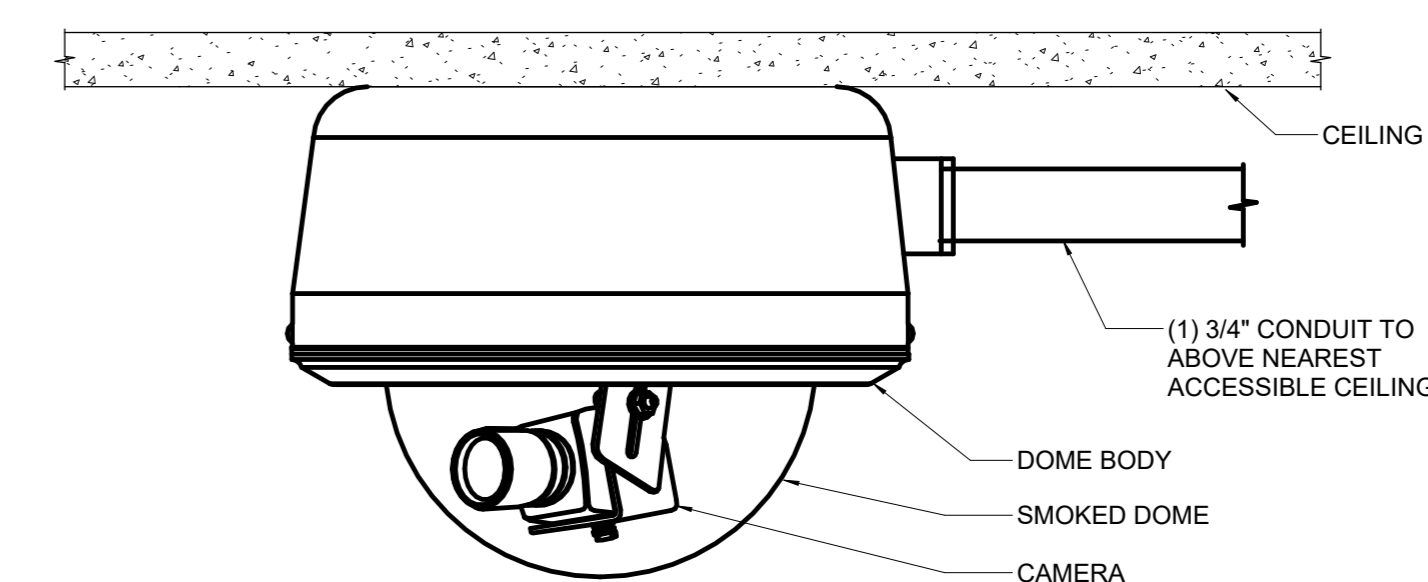


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**2 EXTERIOR WALL MOUNTED CAMERA**

3\"/>

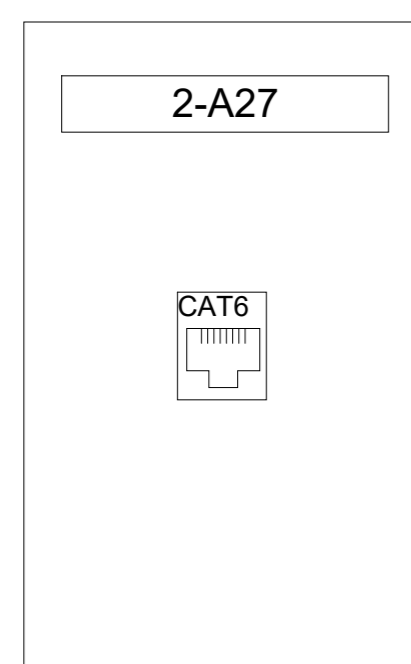


**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**5 SINGLE PORT LABELING**

N.T.S.



LABELING SHALL BE TIA-609S COMPLIANT. 2-A27 IS IDF2, PATCH PANEL A, PORT #27

LABEL BOTTOM OF DEVICE BOX WITH CABLE IDENTIFIERS

DEVICE BOX WITH LEVITON FACEPLATE AND JACK

8\"/>

CEILING GRID



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**PROFESSIONAL DEVELOPMENT CENTER  
SECURITY CAMERAS**

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KEY PLAN



ENGINEER



ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER		
DATE: 12/20/23		
DRAWN BY: MM		
CHECKED BY: Checker		
REVISIONS		
No.	Description	Date

**TECHNOLOGY  
DETAILS**

**T6.01**

SECURITY GENERAL NOTES

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS, BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
3. THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
4. ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILING SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
6. EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE ACCEPTED.
7. SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
8. ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
9. SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
10. SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
11. ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
12. CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT5A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 4'-2" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
13. PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- 1. NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
3. THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
4. THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
5. SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSINAVITA, BCS, AND THE CEC.
6. ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
7. ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
8. ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
9. ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
10. ALLS CROSSED OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
11. ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER ITS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P&K.
12. ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
13. NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILING UNLESS NOTED OTHERWISE.
14. TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHINGS ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRADES.
15. TECHNOLOGY CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
16. CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
17. CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
18. ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
19. THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER, J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER, J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
20. ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILING SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
21. ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE ACCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- 1. PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
2. PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
3. PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
5. PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

Table with 3 columns: SYMBOL, DESCRIPTION, NOTE. Includes symbols for VIDEO SURVEILLANCE CAMERA, CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE), UNDERGROUND/FLOOR CONDUIT, CONDUIT UP, CONDUIT DOWN, CONDUIT WITH CONTINUATION, CONDUIT SLEEVE, and FIRE RATED PATHWAY SLEEVE SYSTEM.

GENERAL NOTES:

- 1. ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
2. DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- 1. "F" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

Table with 2 columns: SHEET, DESCRIPTION. Lists sheets T0.00 through T6.01 and their corresponding descriptions like TECHNOLOGY COVER SHEET, TECHNOLOGY SITE PLAN, TECHNOLOGY DETAILS.

TECHNOLOGY ABBREVIATION KEY

Table with 2 columns: ABBR, DESCRIPTION. Lists abbreviations like AFF, BFC, C, C.M., E.C., F, G.C., J-BOX, MPOE, MC, N, N.C., S.C., SIM, T.C., TR#, TYP, UNO, +B and their corresponding descriptions.

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022
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2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
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UL 484 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION
UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION
UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)
ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.
SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.

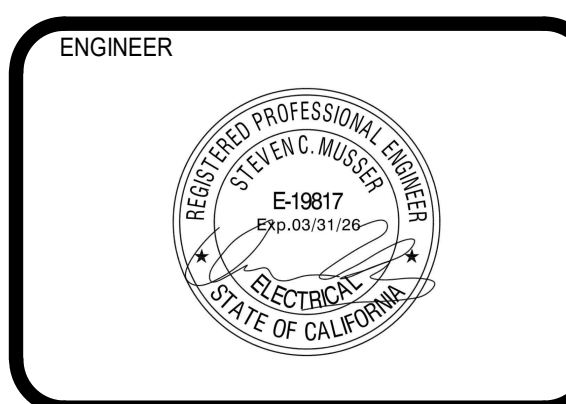


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8163 Rochester Ave., Ste 100
Rancho Cucamonga, CA 91730
909-987-6909

RUBIDOUX HIGH SCHOOL SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT
4250 OPAL ST. JURUPA VALLEY, CA 92509

KEY PLAN NORTH

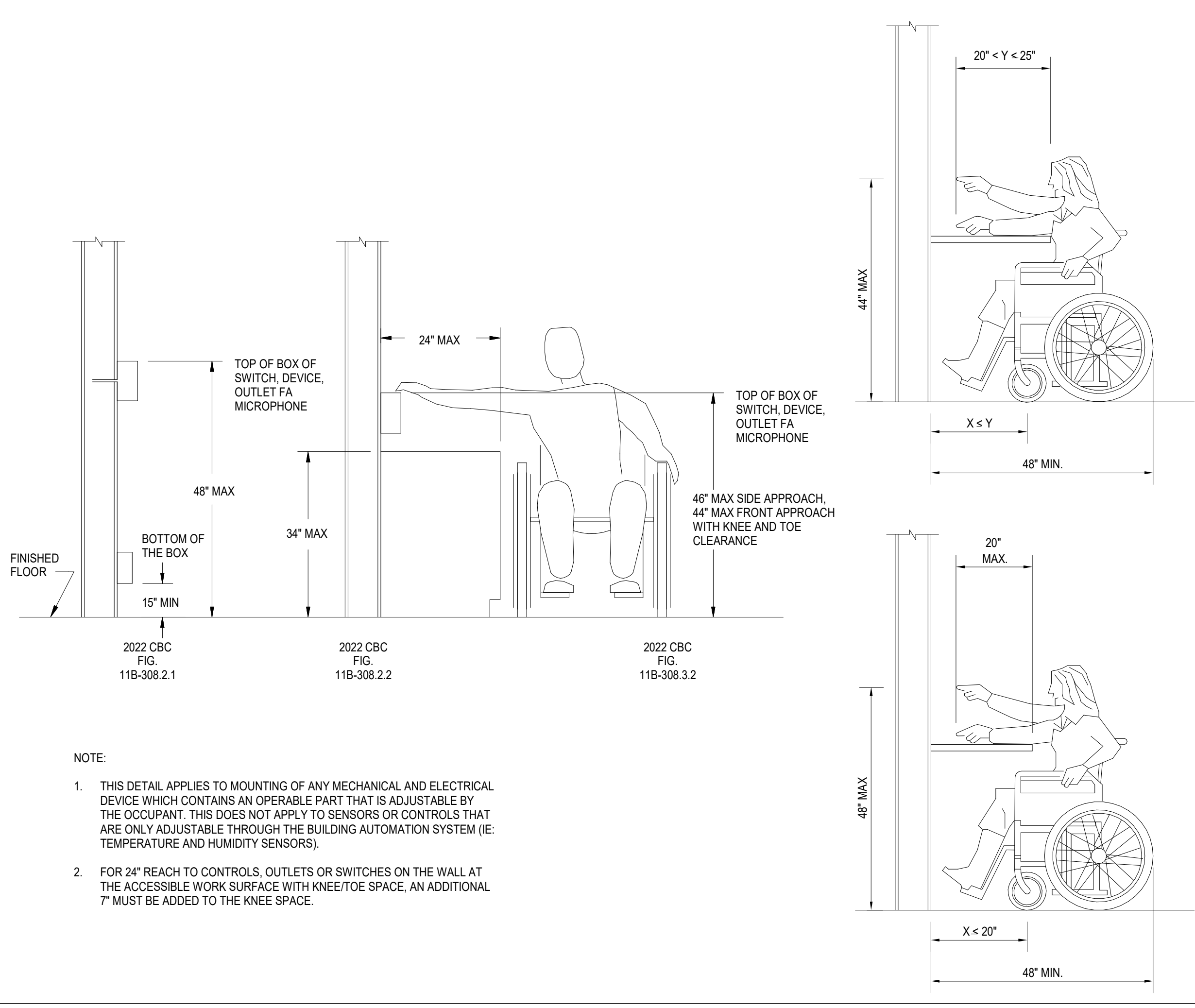


ARCHITECT

Project information table including Client (JURUPA UNIFIED SCHOOL DISTRICT), Project Number, Date (12/20/23), Drawn by (TA), Checked by (RDC), and a Revisions table.

TECHNOLOGY COVER SHEET

T0.00



- NOTE:
1. THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE: TEMPERATURE AND HUMIDITY SENSORS).
2. FOR 24\"/>

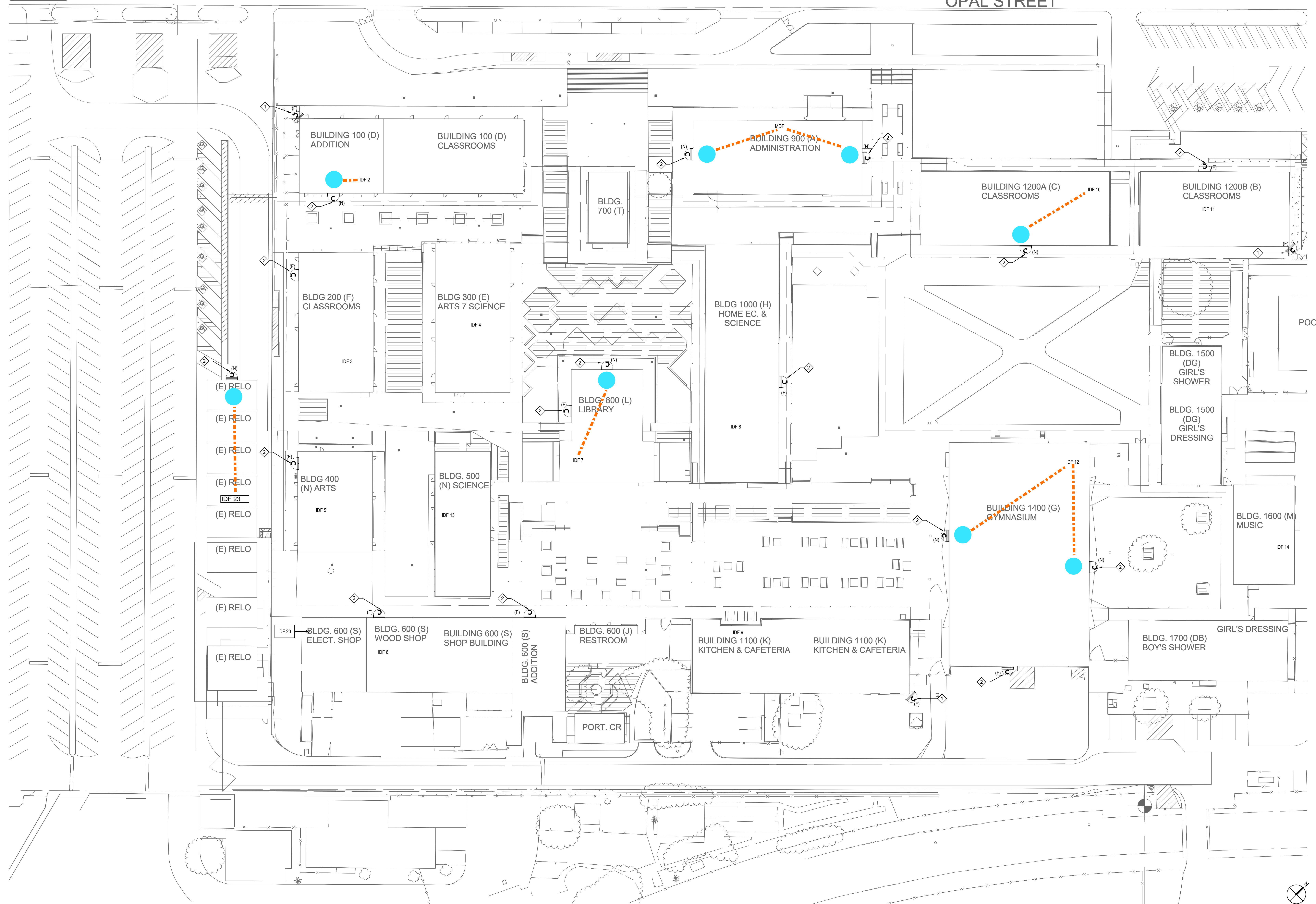
GENERAL NOTES

- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE IDF/IDF.
- 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
- 3 ALL CAMERAS HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
- 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
- 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
- 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING/AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.

KEY NOTES

- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE ) CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST IDF/IDF.
- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE ) CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST IDF/IDF.
- CAMERA LOCATIONS FOR EXISTING PROJECT

OPAL STREET



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RUBIDOUX HIGH SCHOOL SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
4250 OPAL ST., JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER

ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

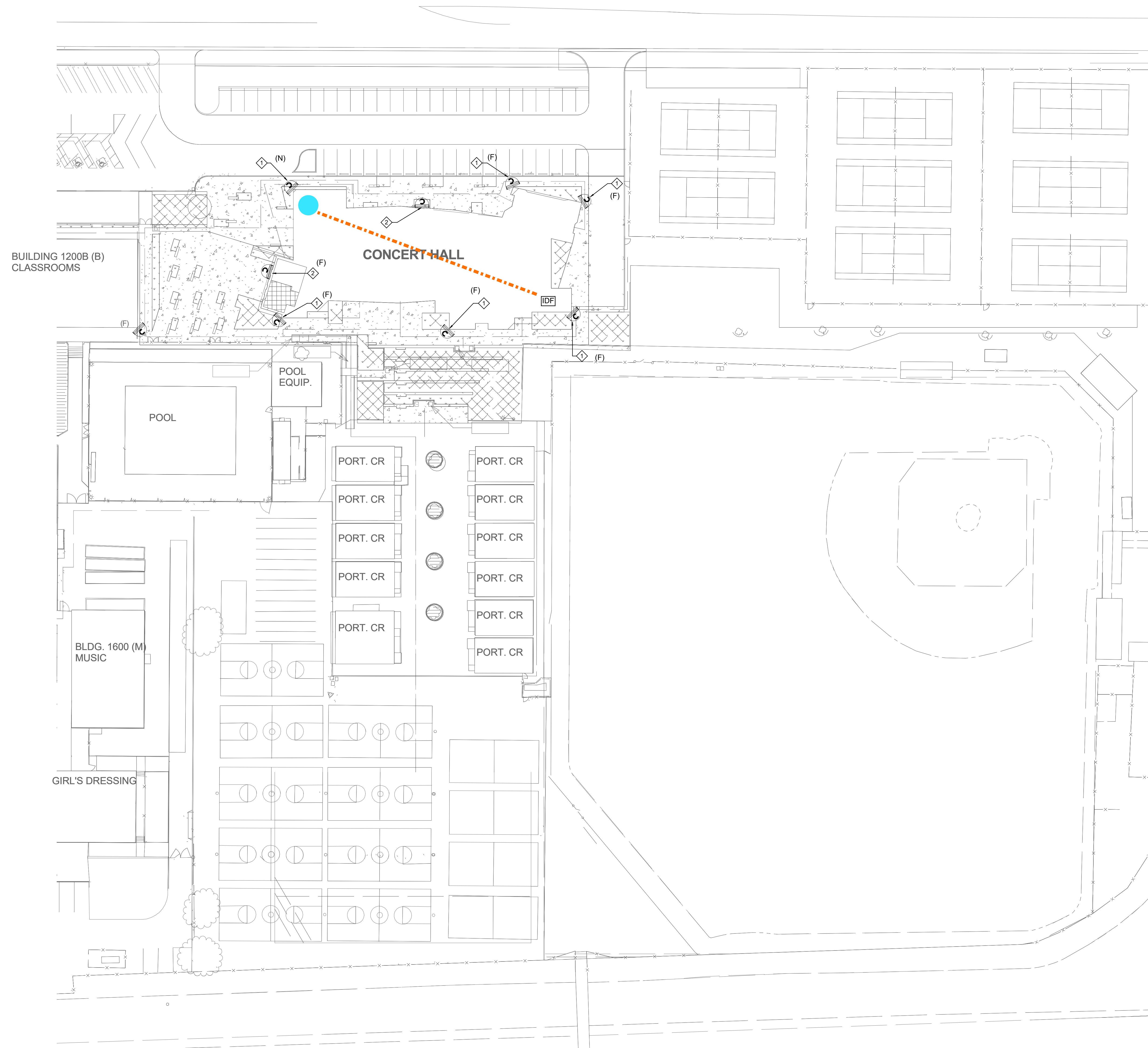
PROJECT NUMBER		
DATE:	12/20/23	
DRAWN BY:	Author	
CHECKED BY:	Checker	
REVISIONS		
No.	Description	Date
1	Addendum 1	9/12/24

TECHNOLOGY SITE PLAN

T1.01



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KEY NOTES

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- 3 ALL CAMERAS HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
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RUBIDOUX HIGH SCHOOL SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 4250 OPAL ST, JURUPA VALLEY, CA 92509

KEY PLAN

ENGINEER

ARCHITECT

CLIENT  
 JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER

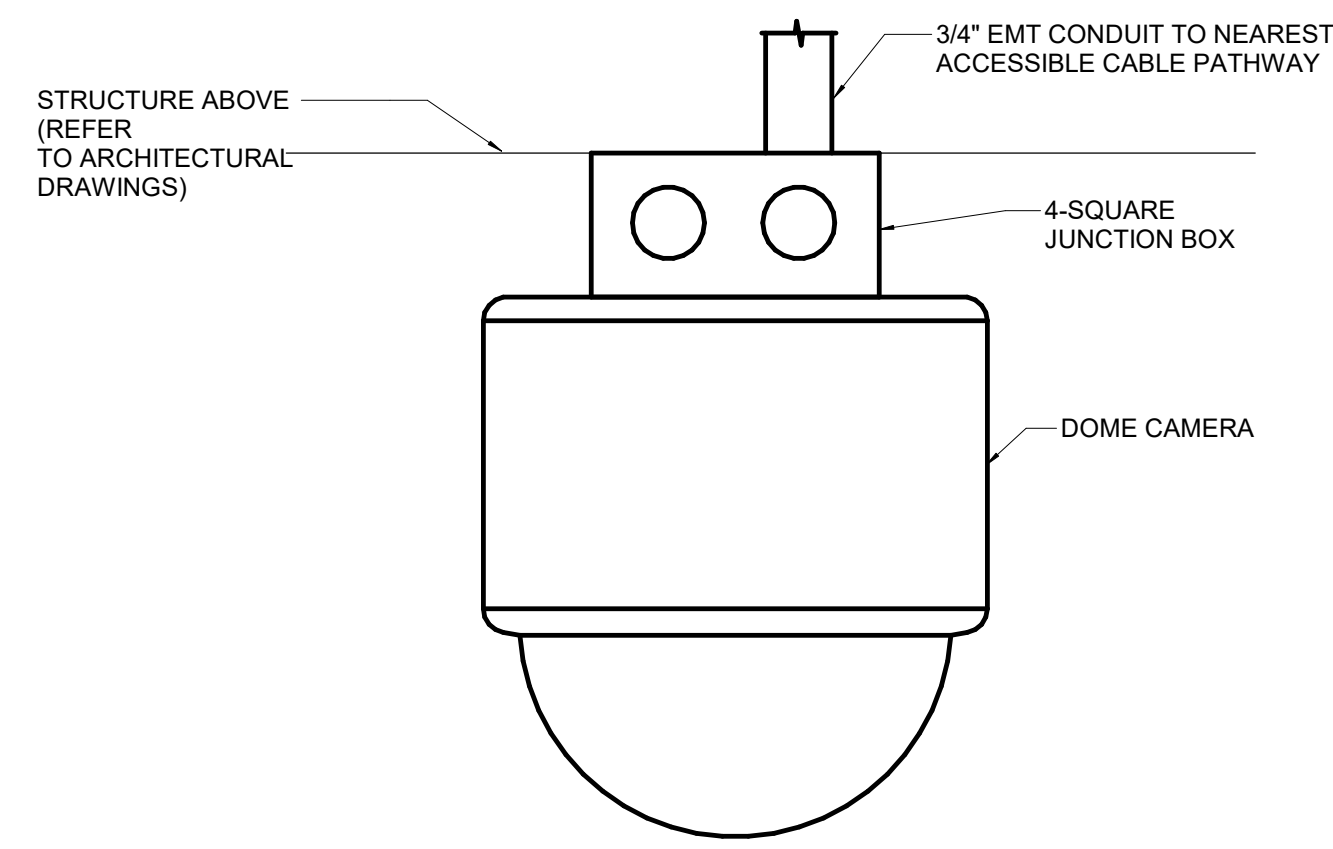
DATE:	12/20/23
DRAWN BY:	Author
CHECKED BY:	Checker

REVISIONS

No.	Description	Date
1	Addendum 1	3/12/24

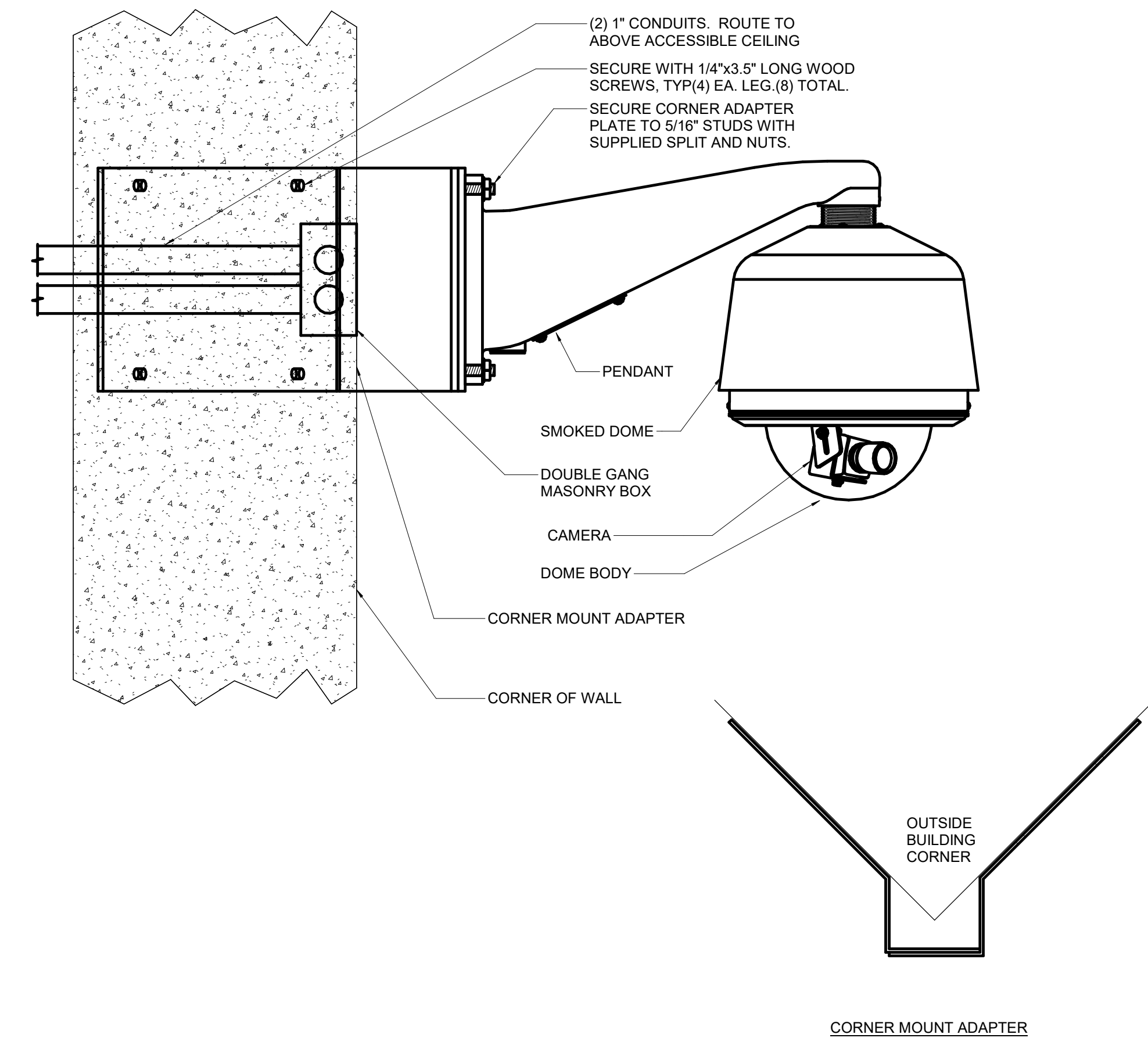
TECHNOLOGY SITE PLAN

T1.02



**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 24 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

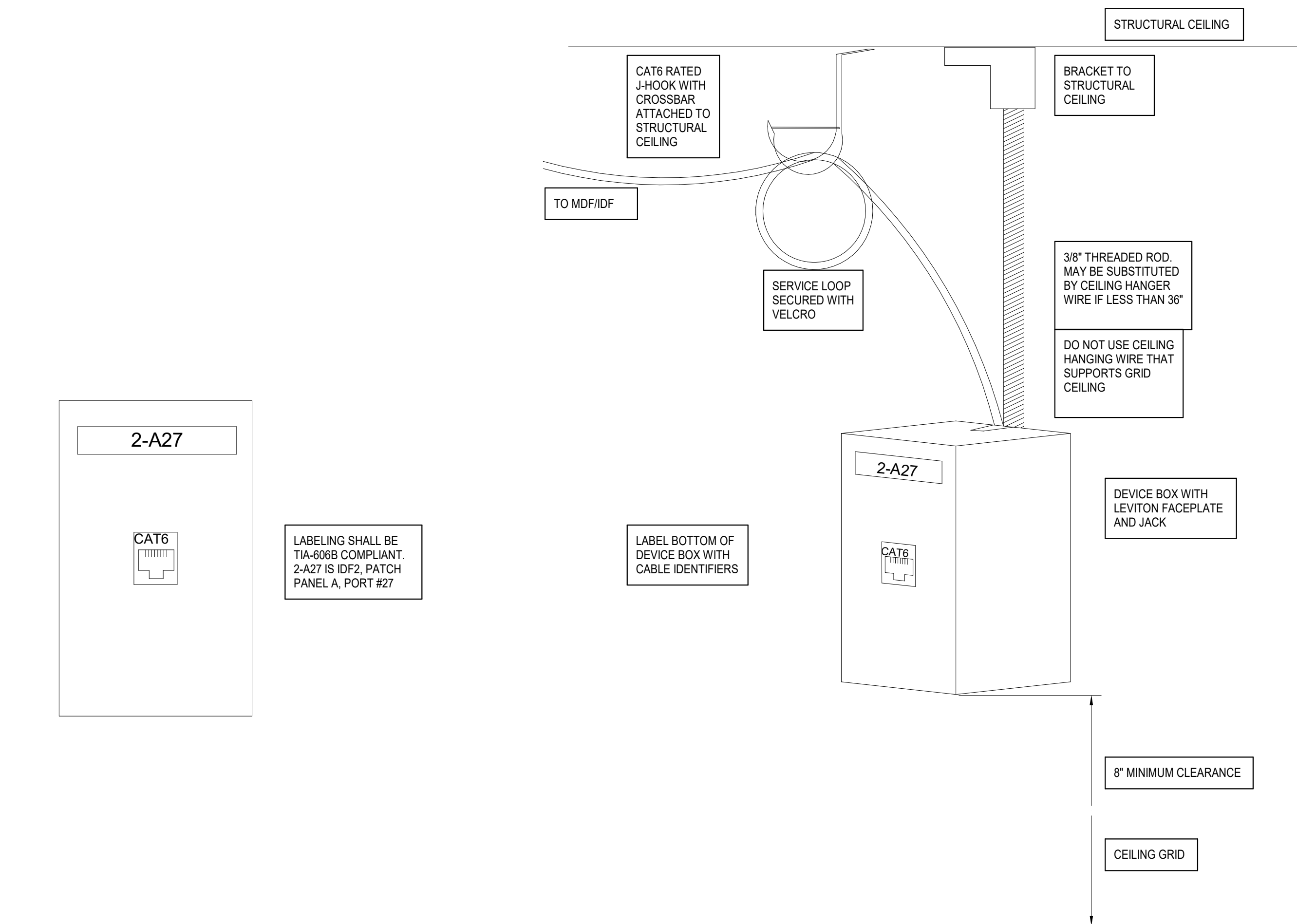


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**4 EXTERIOR SURFACE CEILING CAMERA MOUNTING**

N.T.S.



**NOTES:**

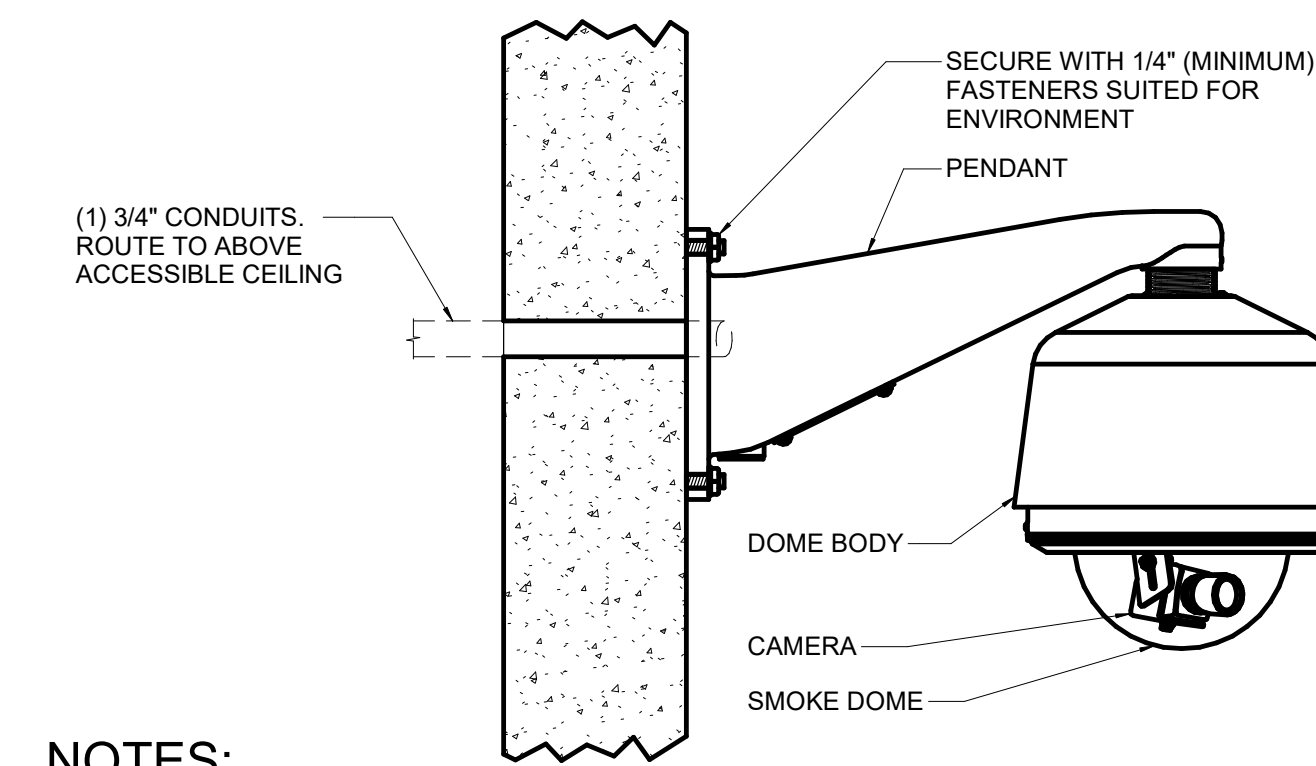
- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL, 1\"/>

**5 SINGLE PORT LABELING**

N.T.S.

**1 EXTERIOR CORNER MOUNT CAMERA DETAIL**

3\"/>

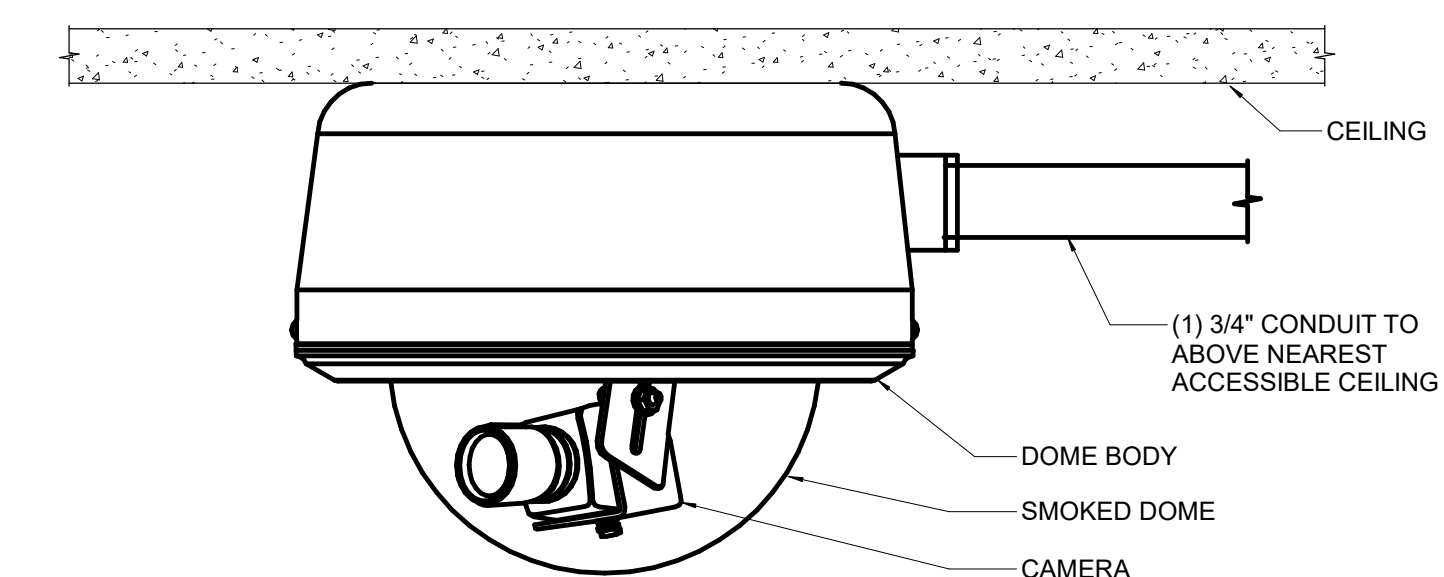


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**2 EXTERIOR WALL MOUNTED CAMERA**

3\"/>

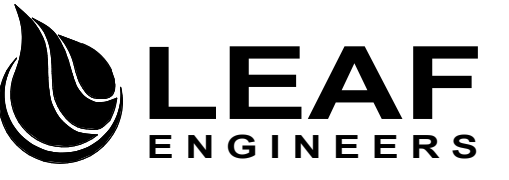


**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3 EXPOSED MOUNT FIXED CAMERA CEILING**

6\"/>



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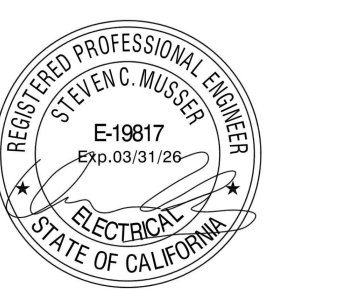
**RUBIDOUX HIGH SCHOOL SECURITY CAMERAS**

JURUPA UNIFIED SCHOOL DISTRICT  
4250 OPAL ST., JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

REVISIONS		
No.	Description	Date

**TECHNOLOGY DETAILS**

**T6.01**

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PANDUIT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSIFULLA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
	UNDERGROUND/FLOOR CONDUIT	
	CONDUIT UP	
	CONDUIT DOWN	
	CONDUIT WITH CONTINUATION	
	CONDUIT SLEEVE	
	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "#\" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SIM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR-#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
+#	MOUNTING HEIGHT ABOVE FINISHED FLOOR

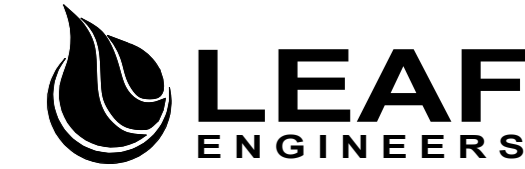
APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR  
 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR  
 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR  
 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
 TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
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 909-987-5909

RUSTIC LANE SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 6420 RUSTIC LN, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



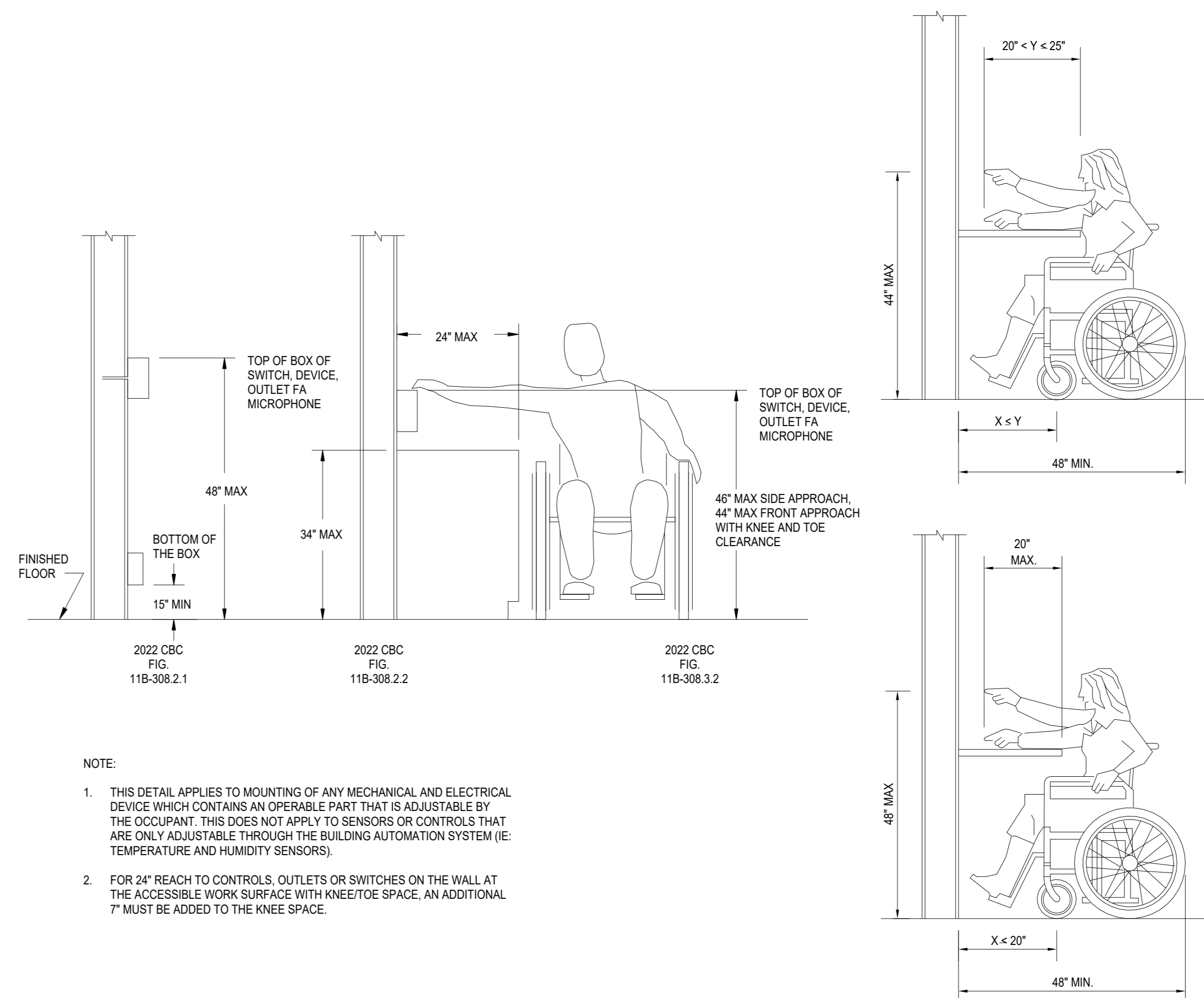
ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

No.	Description	Date
1	ADDENDUM 01	9/18/24

TECHNOLOGY COVER SHEET

T0.00



- NOTE:
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  - FOR 24\"/>

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- ### KEY NOTES
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- ### GENERAL NOTES
- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
  - 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
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RANCHO CUCAMONGA  
 8163 Rochester Ave., Ste 100  
 Rancho Cucamonga, CA 91730  
 909-587-5909

## RUSTIC LANE SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 6420 RUSTIC LN, JURUPA VALLEY, CA 92509

KEY PLAN

ENGINEER

ARCHITECT

CLIENT  
 JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER

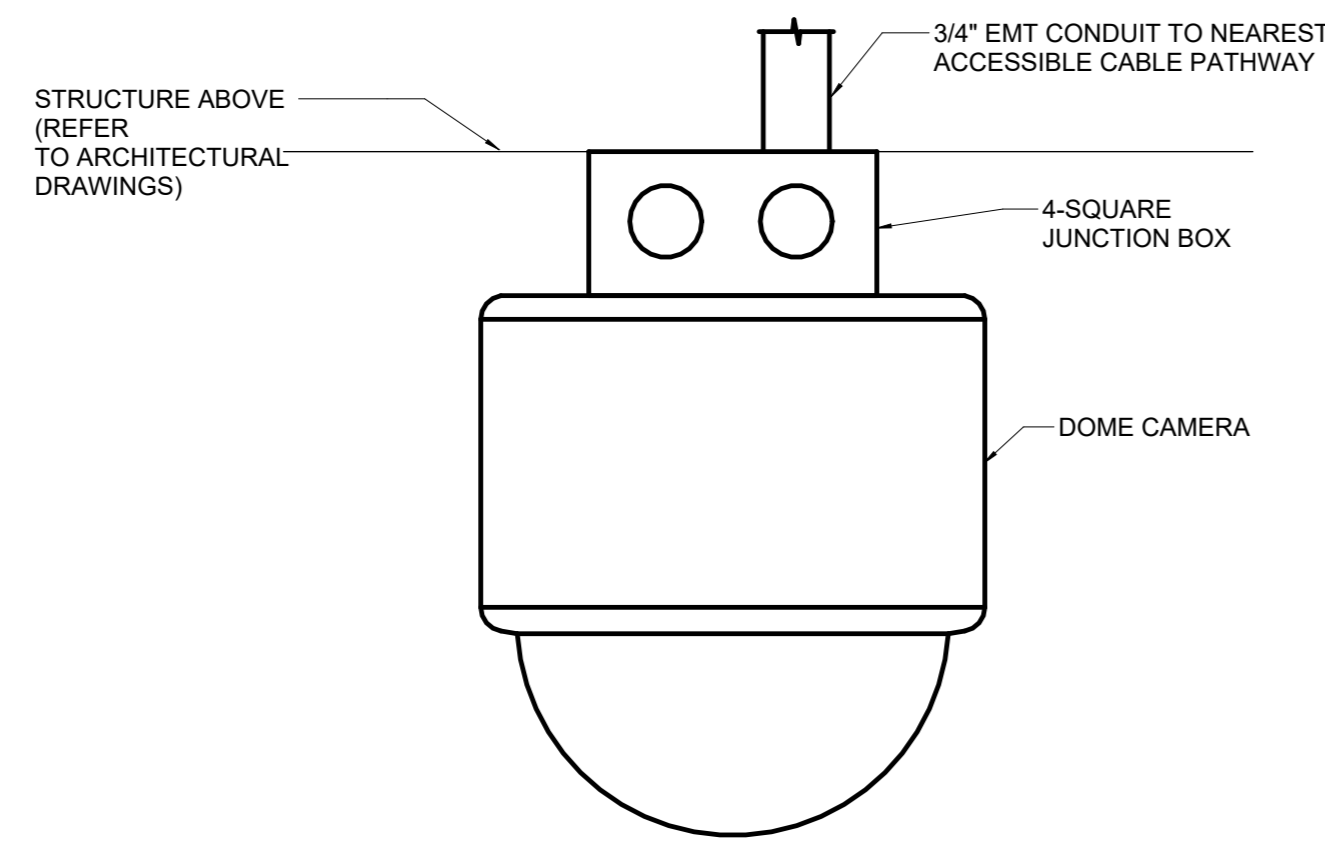
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 DRAWN BY: Author  
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REVISIONS

No.	Description	Date
1	Addendum 1	9/12/24

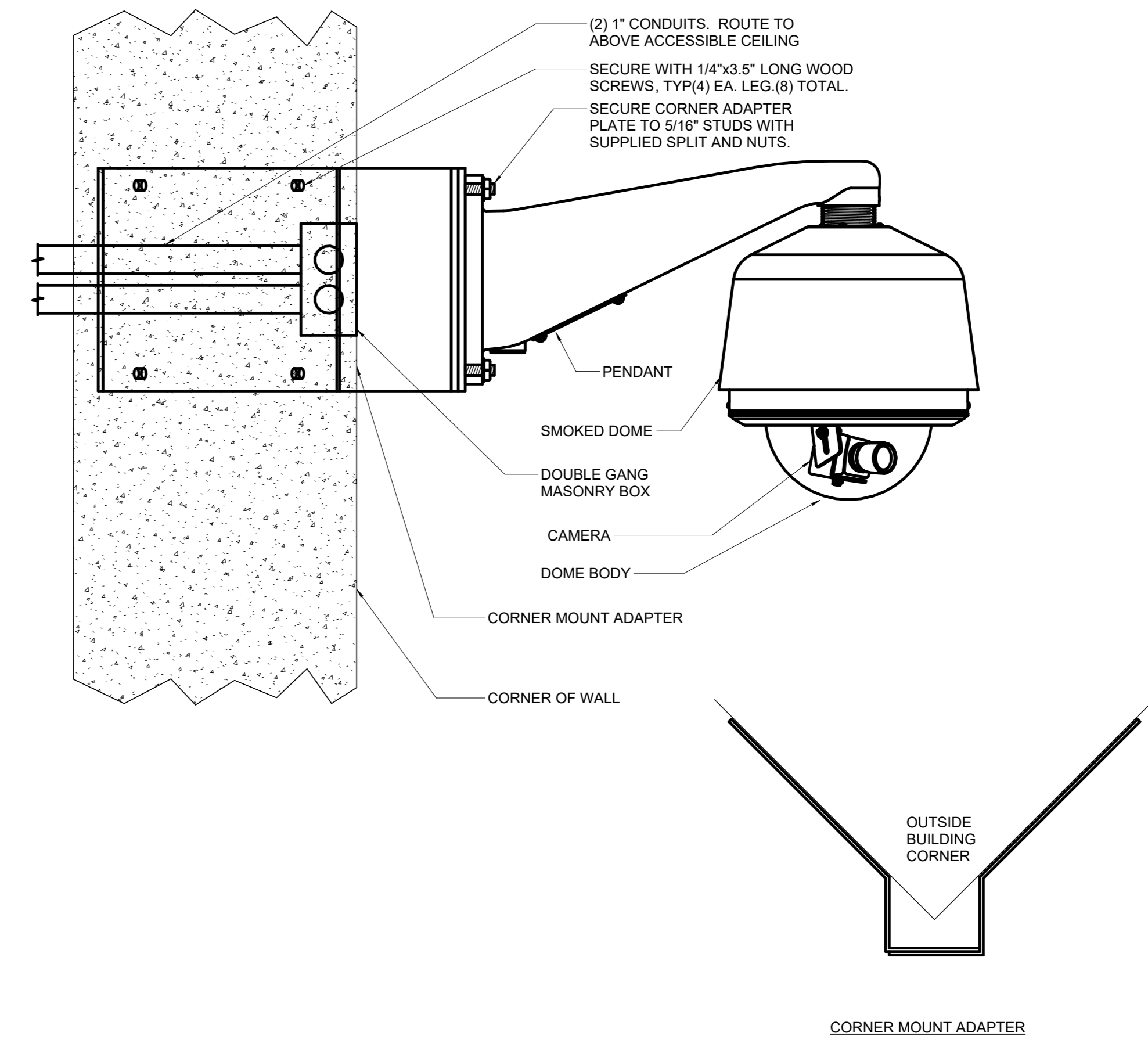
## TECHNOLOGY SITE PLAN

# T1.01



**NOTES:**

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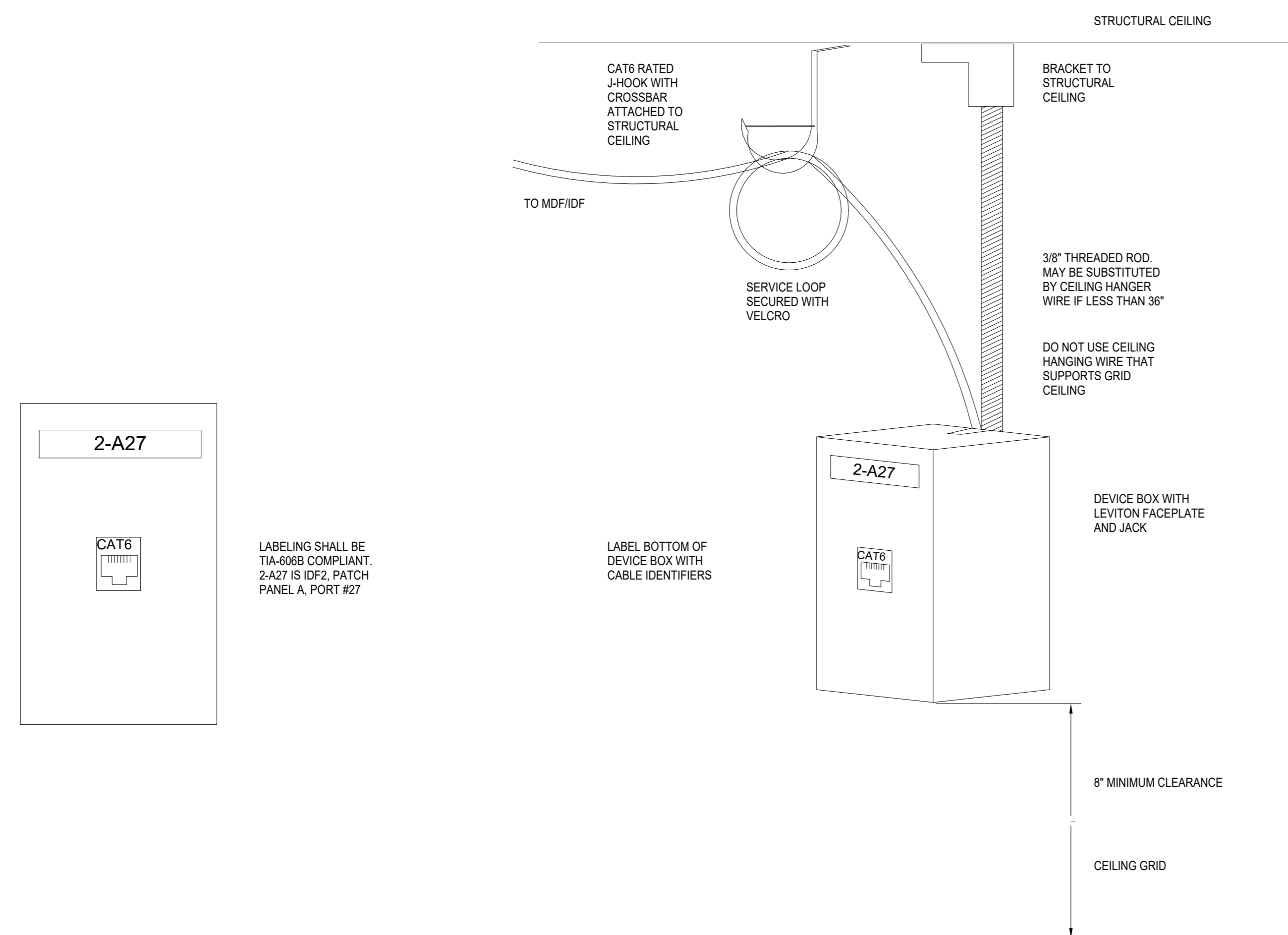
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**4 EXTERIOR SURFACE CEILING CAMERA MOUNTING**

N.T.S.

**1 EXTERIOR CORNER MOUNT CAMERA DETAIL**

3\"/>

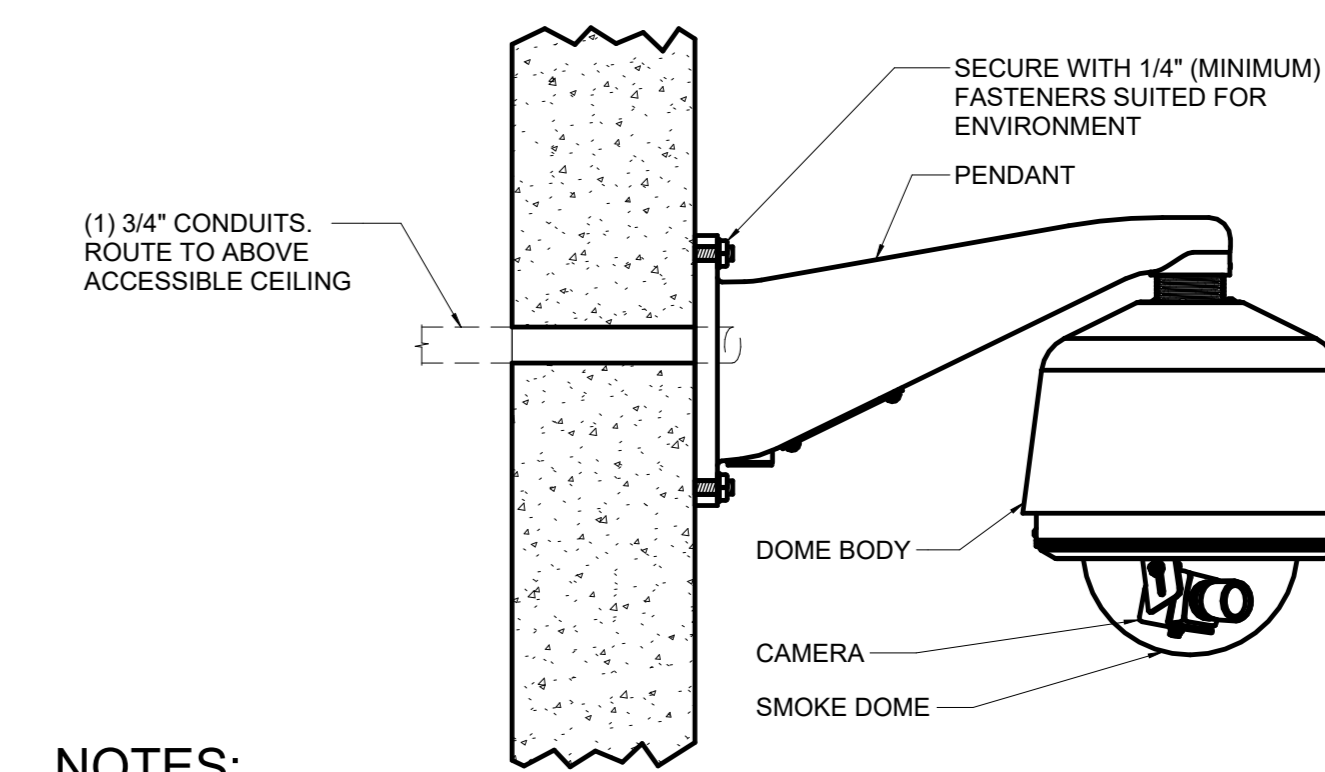


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**5 SINGLE PORT LABELING**

N.T.S.

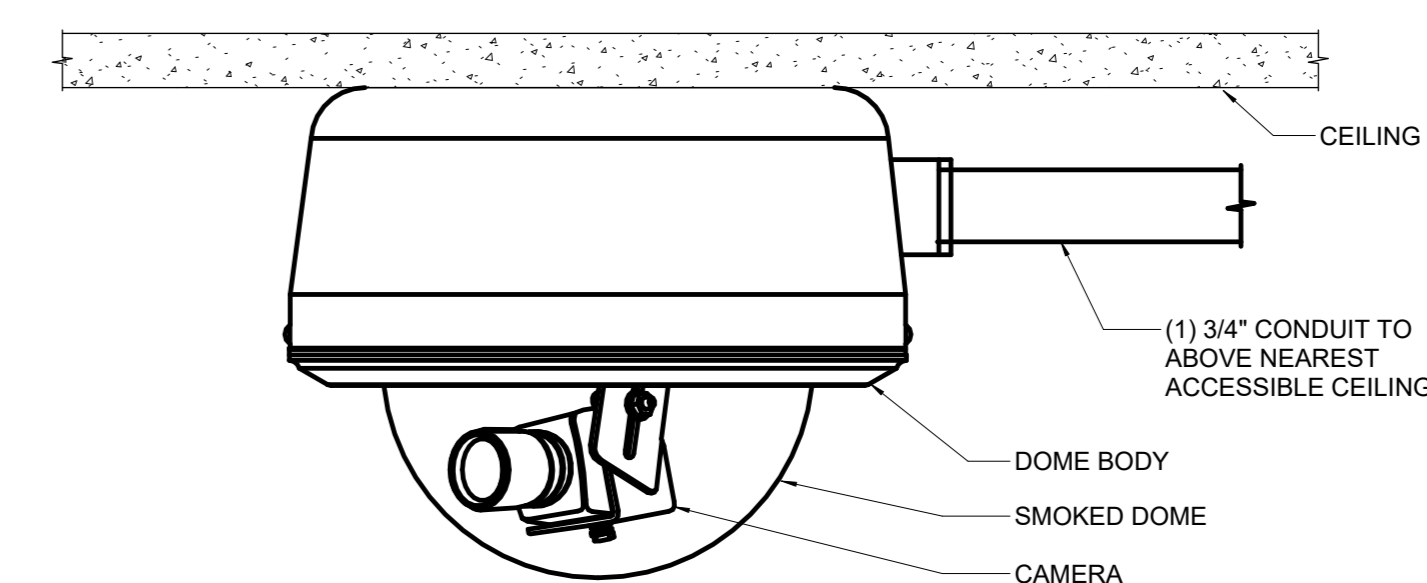


**NOTES:**

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**2 EXTERIOR WALL MOUNTED CAMERA**

3\"/>



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

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6\"/>



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KEY PLAN



ENGINEER



ARCHITECT

CLIENT  
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**TECHNOLOGY DETAILS**

**T6.01**

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PANDUIT J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSI/TIA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRADES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA #\"/>	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "#\"/>

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR.	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
#B	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR  
 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR  
 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR  
 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
 TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
 NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES, 2016 EDITION  
 UL 484 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION  
 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION  
 UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)  
 ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



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SKY COUNTRY SECURITY CAMERAS

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 5520 LUCRETIA AVE, JURUPA VALLEY, CA 91752

KEY PLAN



ENGINEER



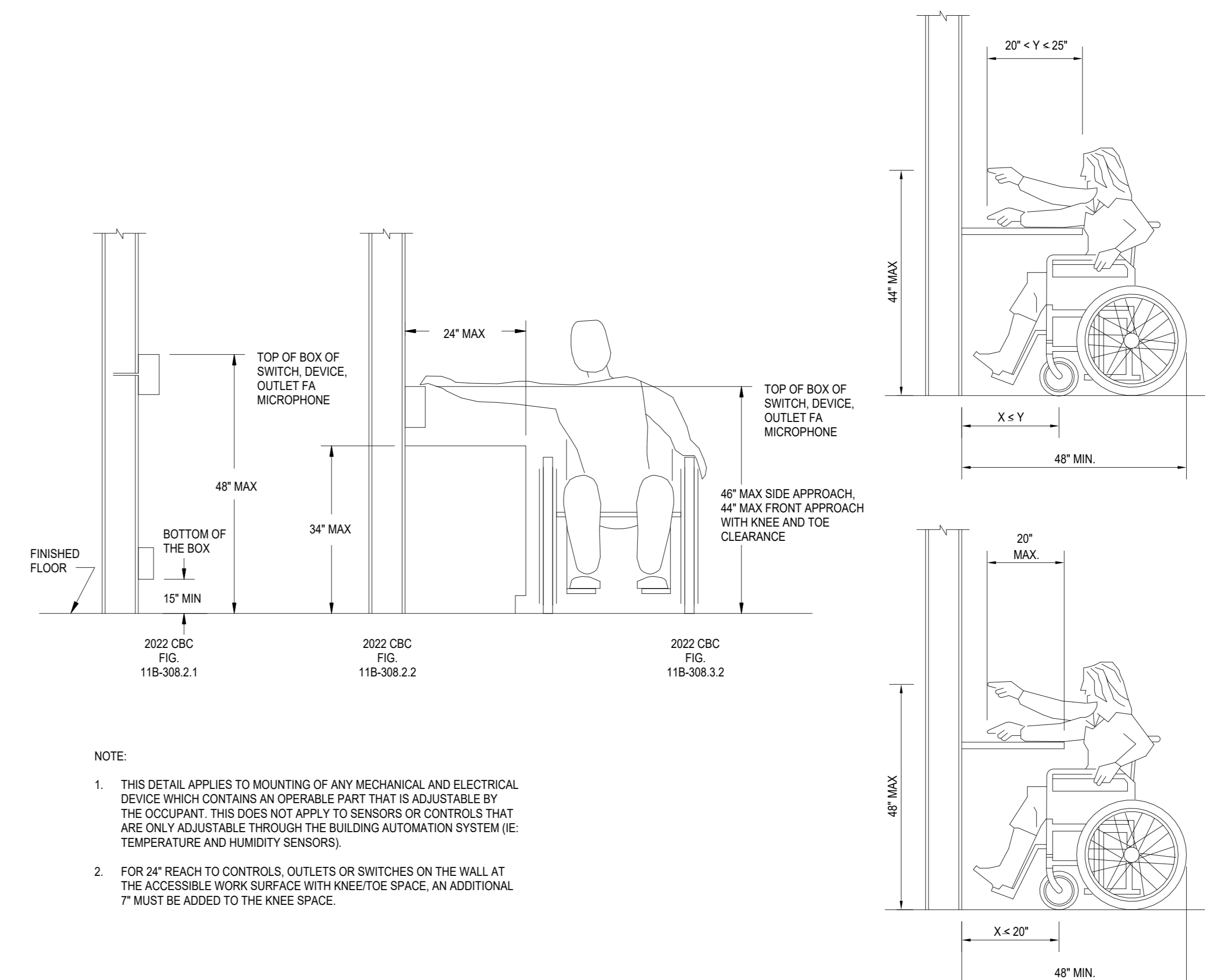
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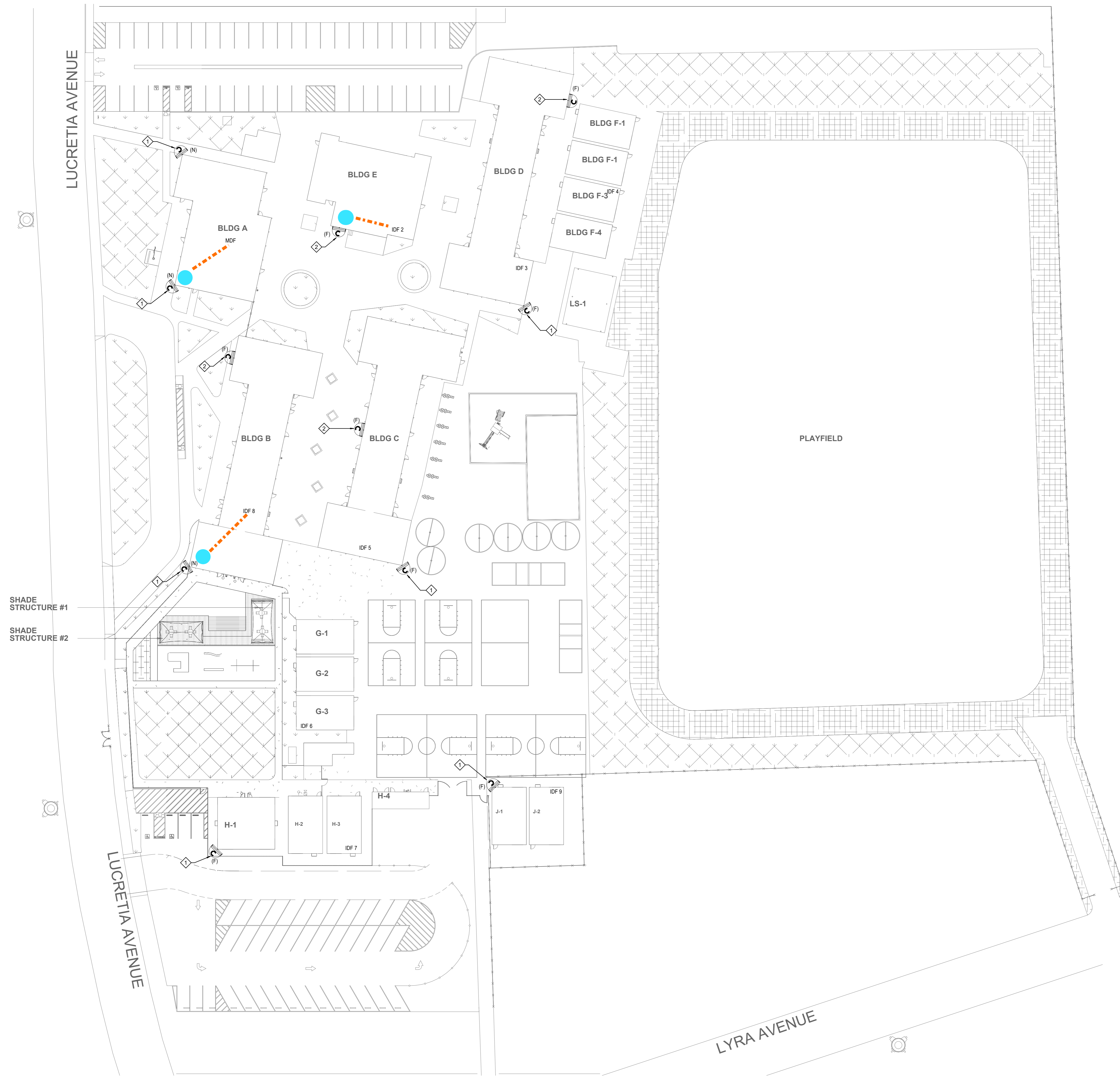
TECHNOLOGY COVER SHEET

T0.00



- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
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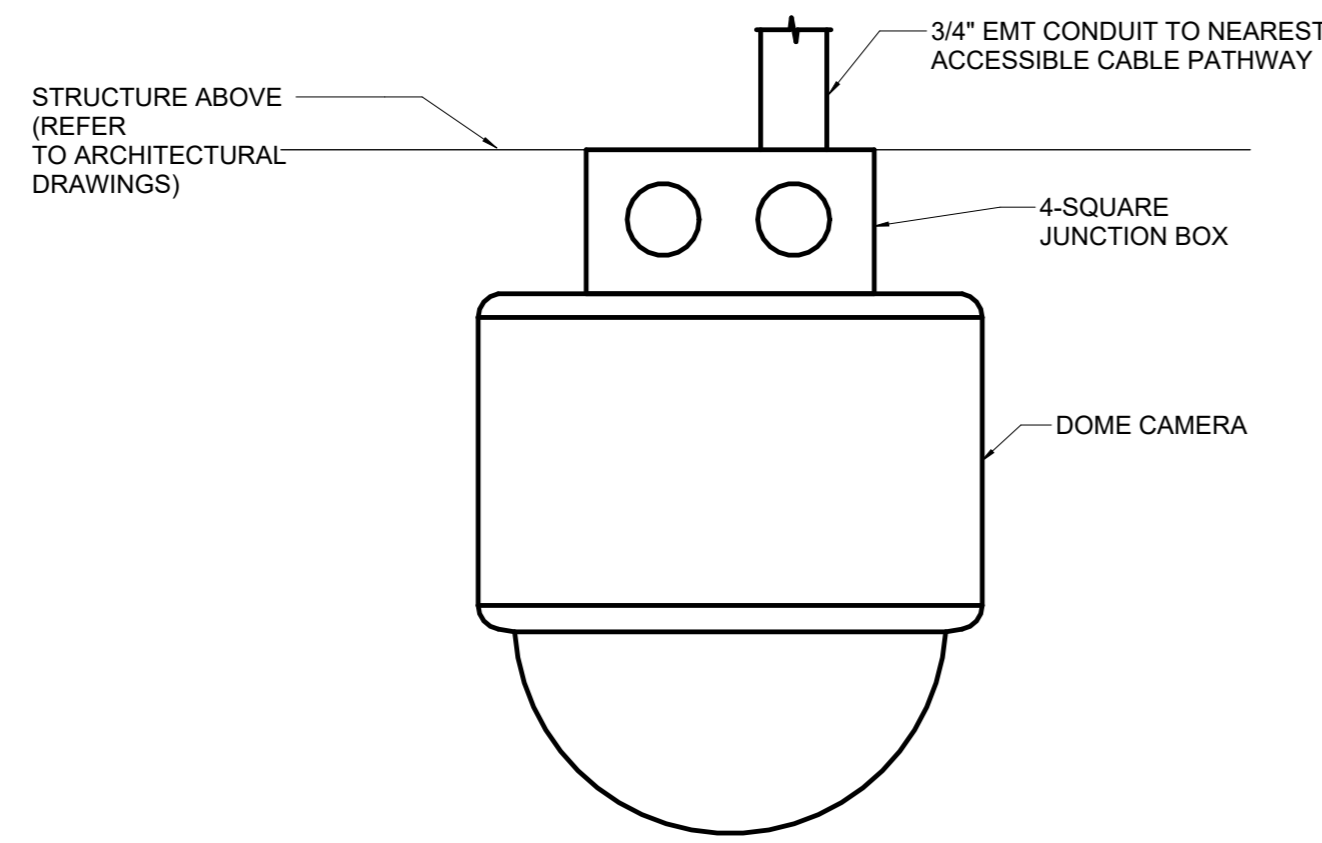
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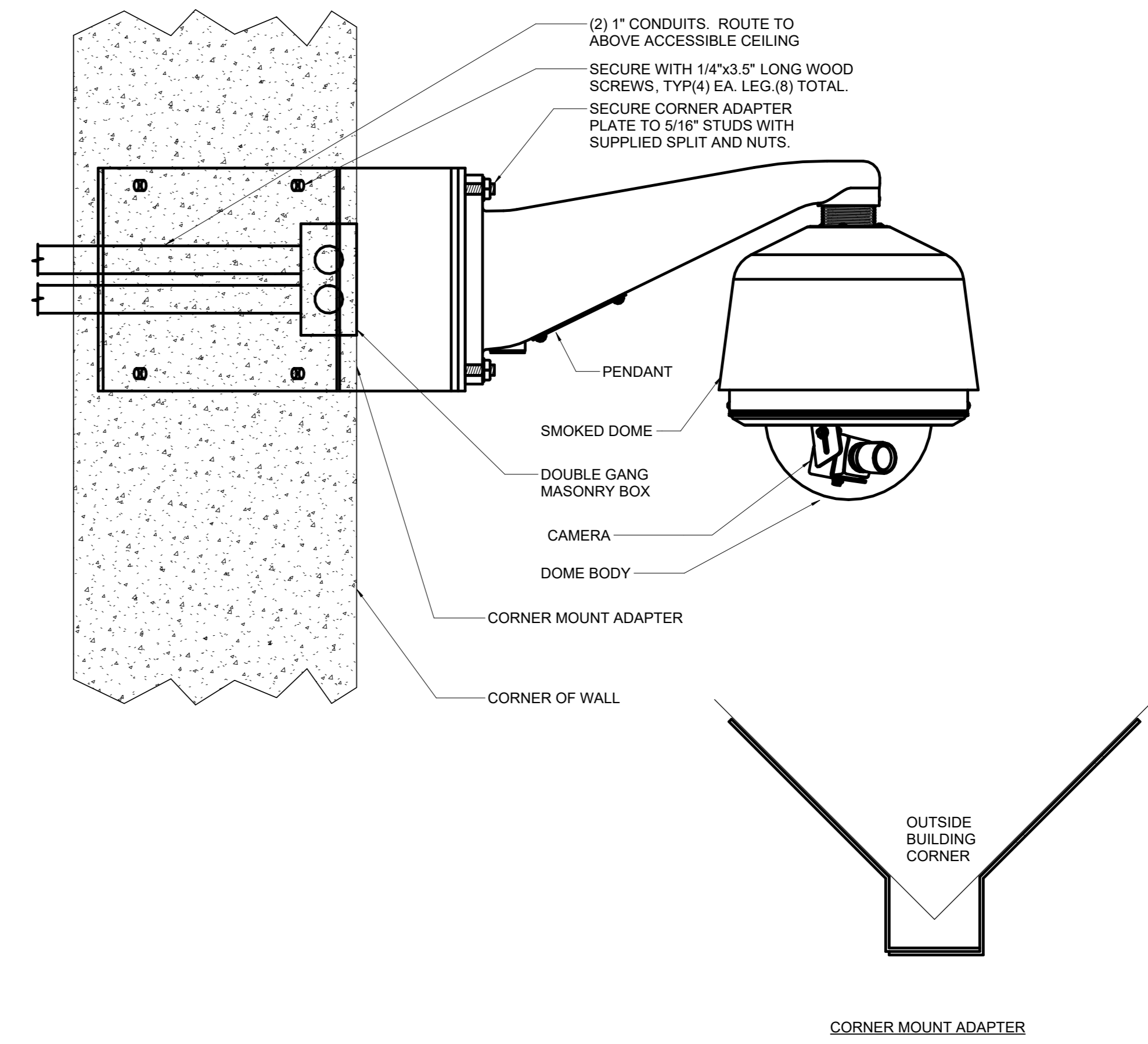
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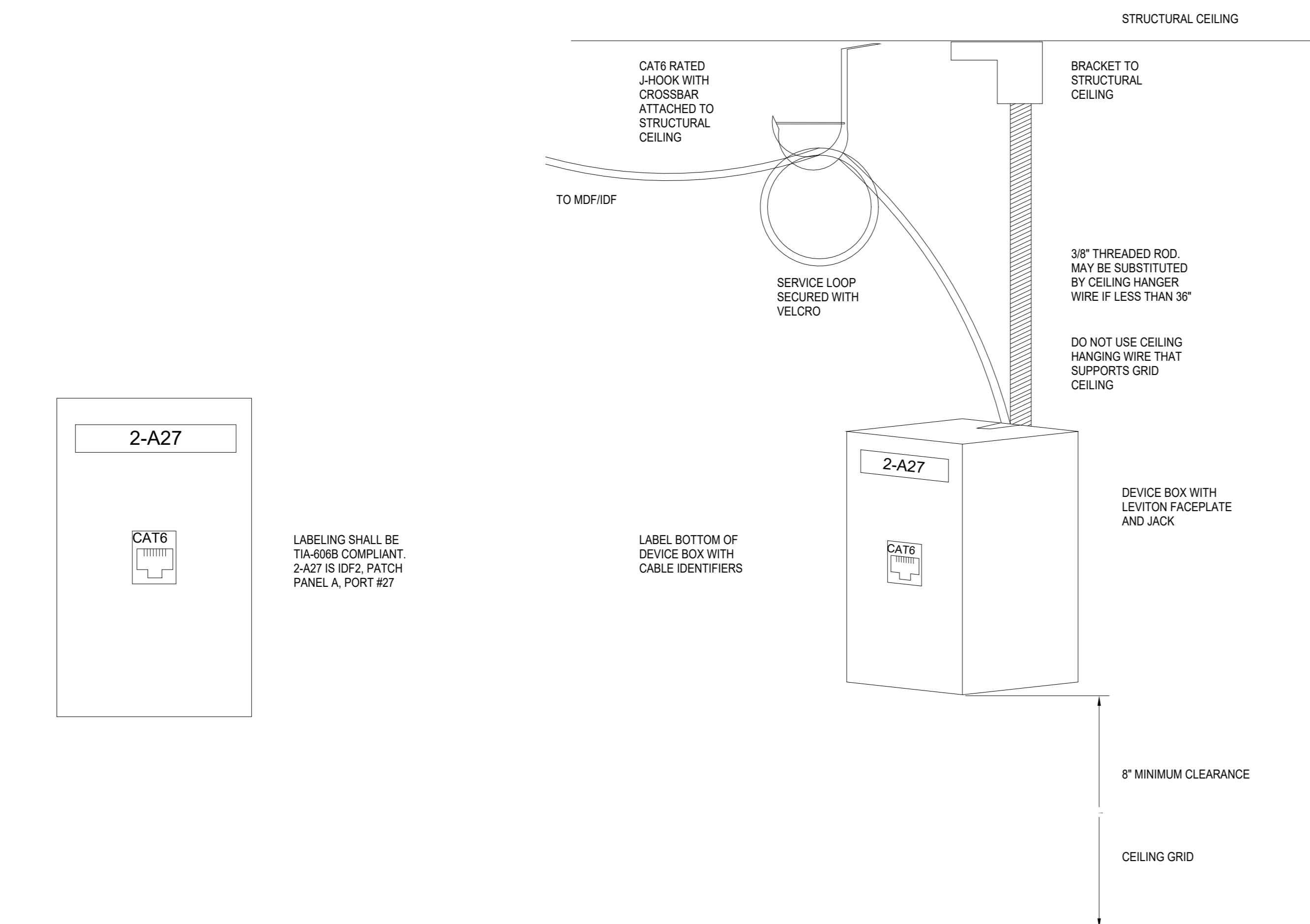


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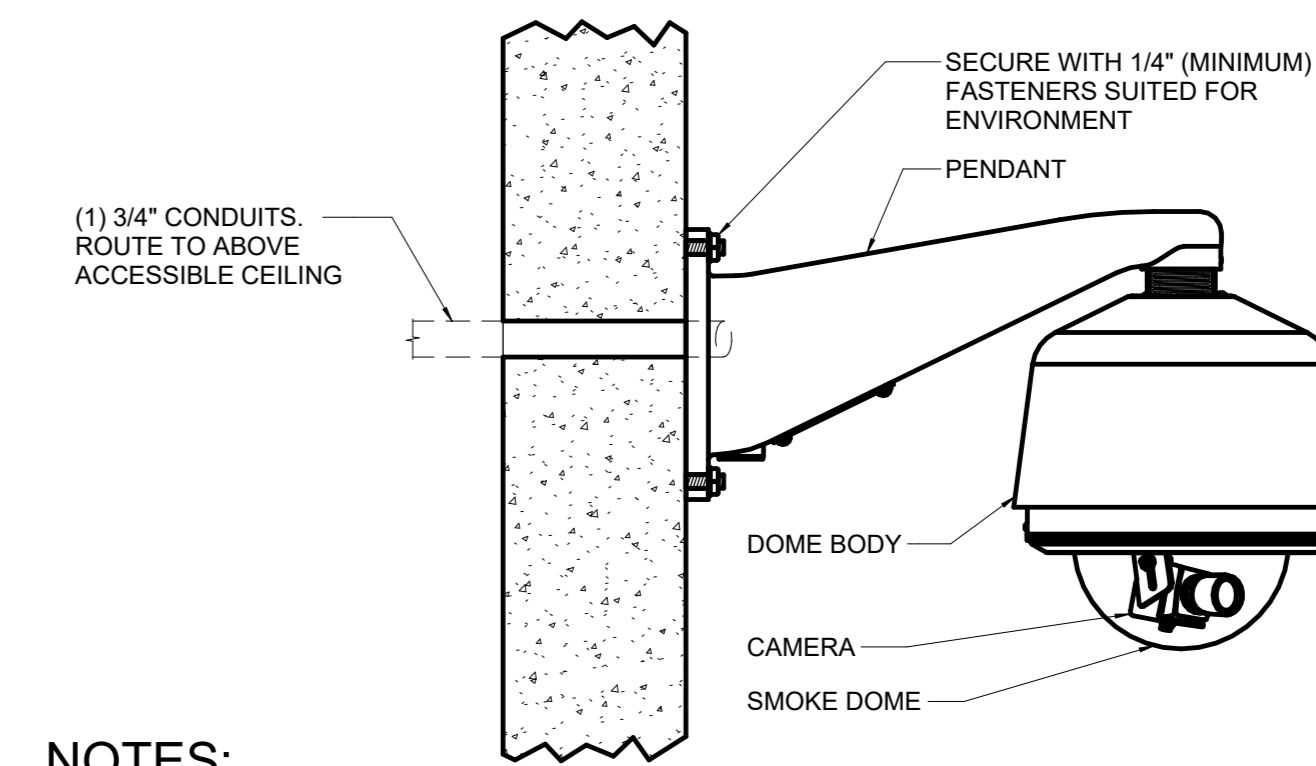
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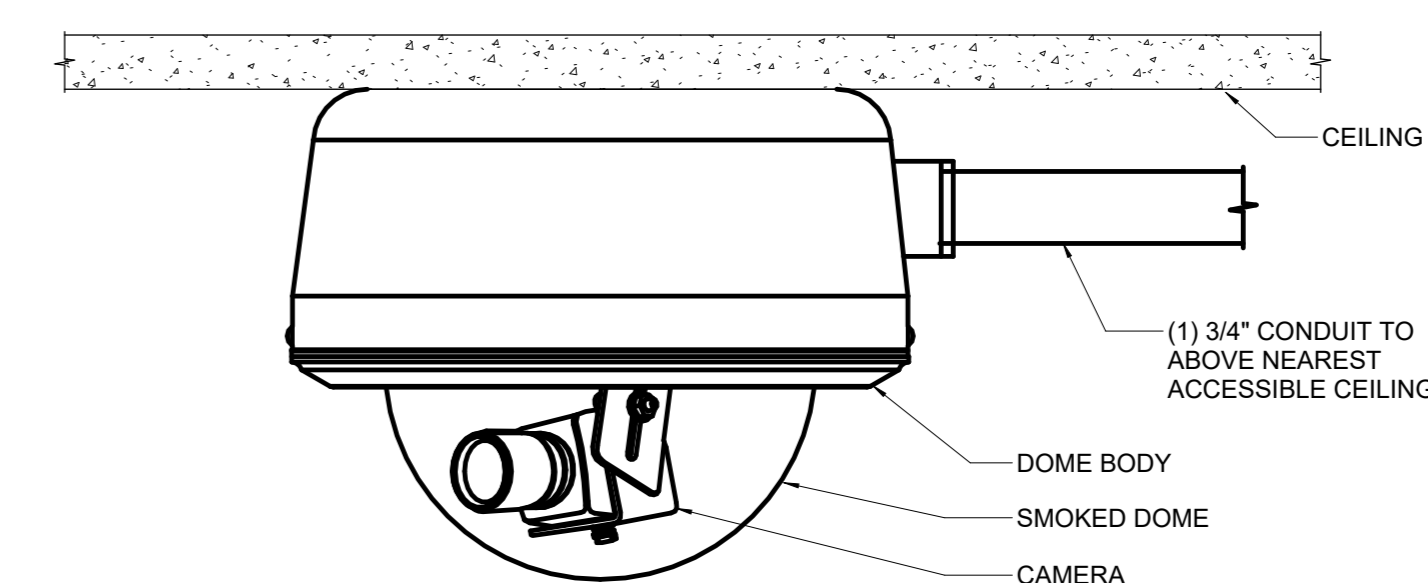


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**2 EXTERIOR WALL MOUNTED CAMERA**

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**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3 EXPOSED MOUNT FIXED CAMERA CEILING**

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KEY PLAN



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ARCHITECT

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No.	Description	Date

**TECHNOLOGY DETAILS**

**T6.01**



SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PAN/OUTLET J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSI/TIA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRADES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
###	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
—	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
---	UNDERGROUND/FLOOR CONDUIT	
○	CONDUIT UP	
●	CONDUIT DOWN	
⌋	CONDUIT WITH CONTINUATION	
⌈	CONDUIT SLEEVE	
≡	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "#\" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
#	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR  
 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR  
 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR  
 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
 TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
 NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES, 2016 EDITION  
 UL 464 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION  
 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION  
 UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)  
 ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



RANCHO CUCAMONGA  
 8163 Rochester Ave., Ste 100  
 Rancho Cucamonga, CA 91730  
 909-987-5909

STONE AVENUE ES SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 5111 STONE AVE, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

CLIENT

PROJECT NUMBER

DATE: 12/20/23

DRAWN BY: TA

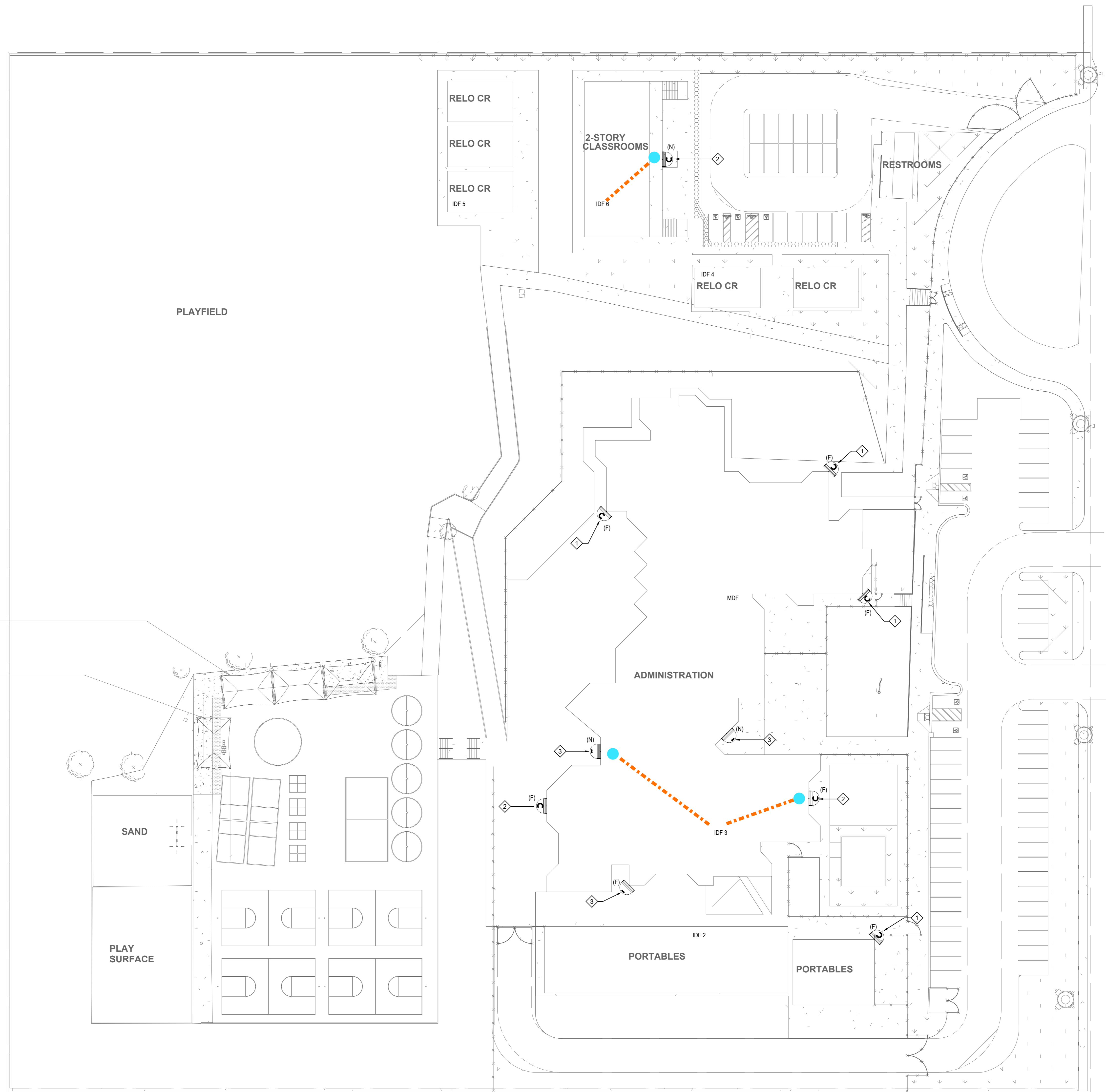
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REVISIONS

No.	Description	Date
1	ADDENDUM 01	9/18/24

TECHNOLOGY COVER SHEET

T0.00



KEY NOTES

- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (90 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- CAMERA LOCATIONS FOR EXISTING PROJECT

GENERAL NOTES

- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
- 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
- 3 ALL CAMERAS' HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
- 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
- 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
- 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING/AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.



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KEY PLAN

ENGINEER

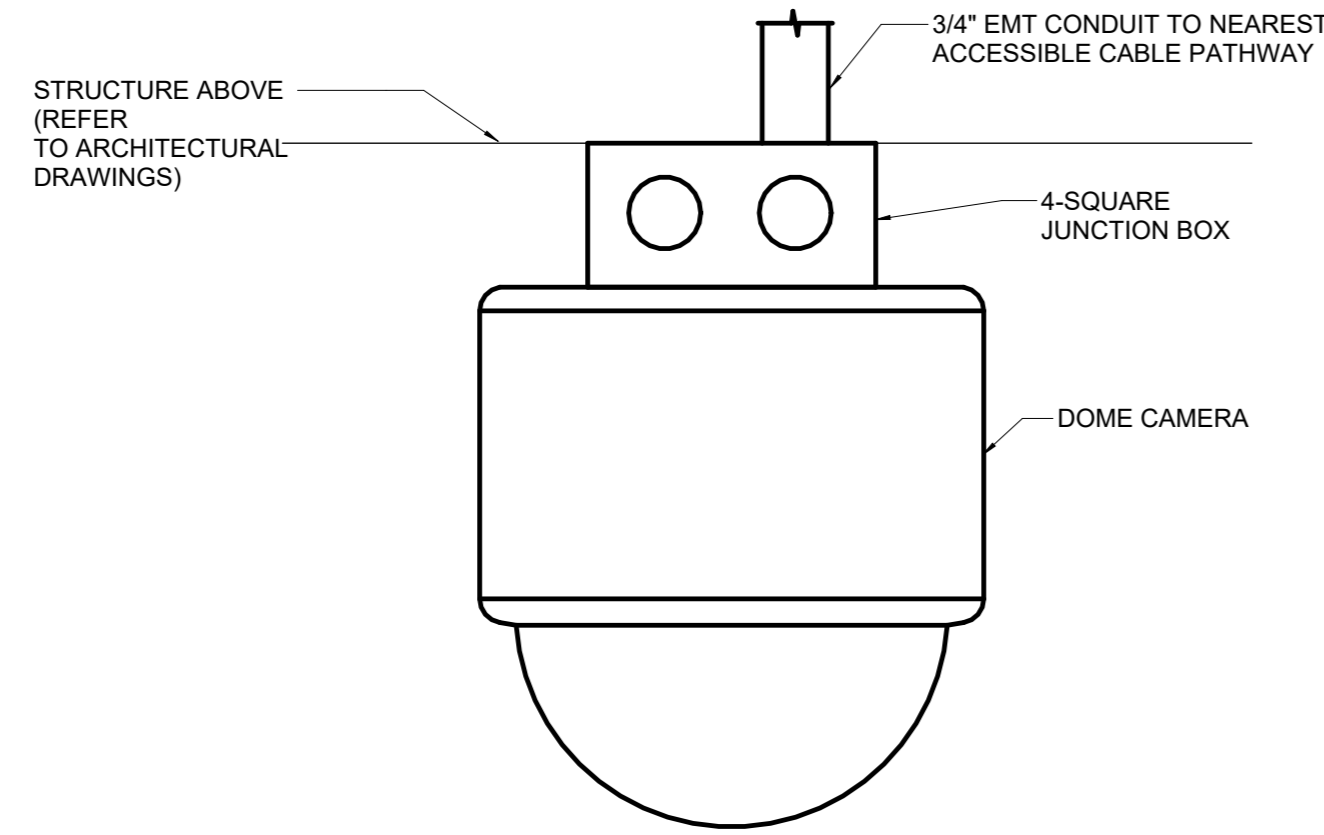
ARCHITECT

CLIENT  
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1	Addendum 1	3/12/24

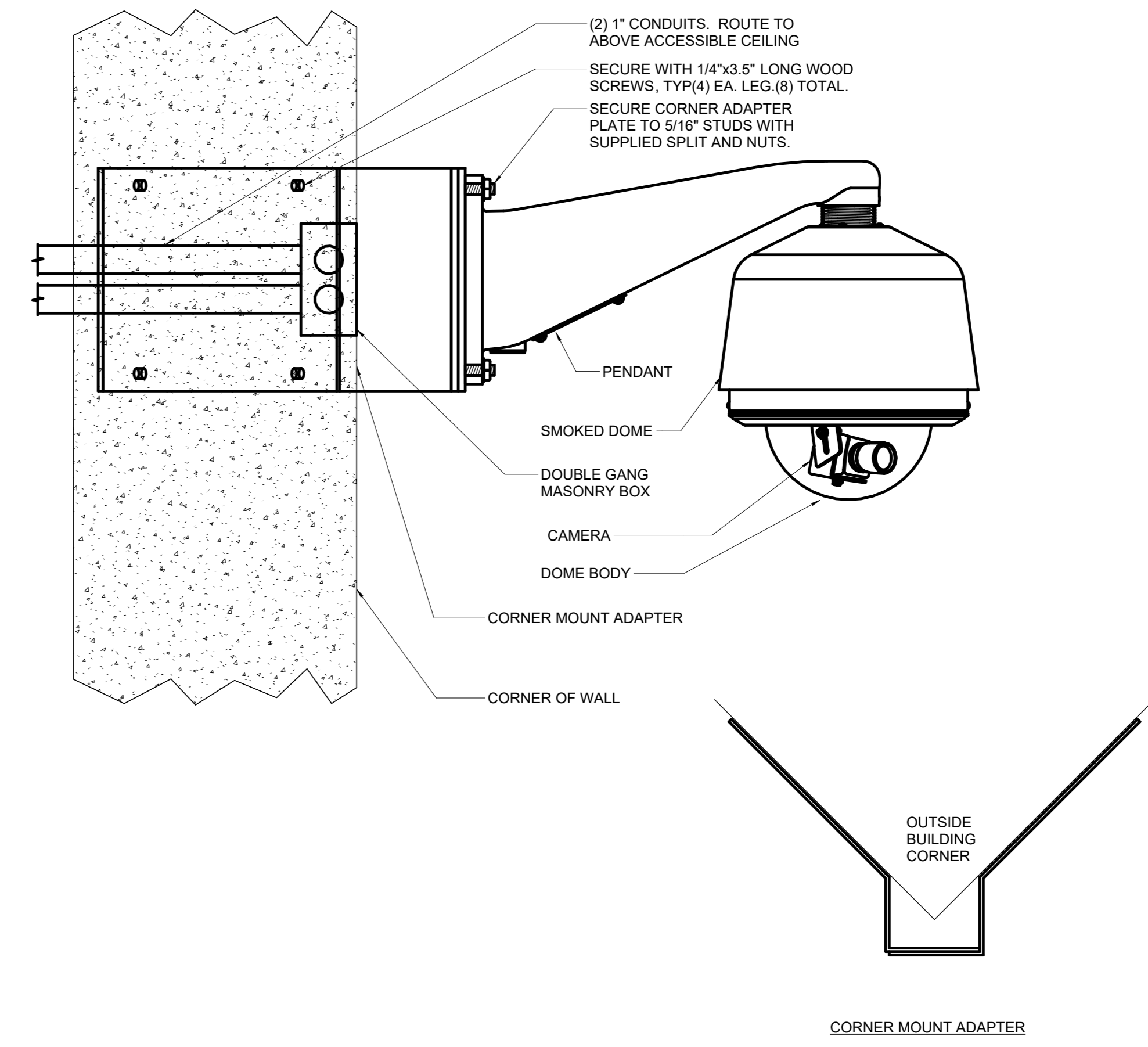
TECHNOLOGY SITE PLAN

T1.01



**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.



**NOTES:**

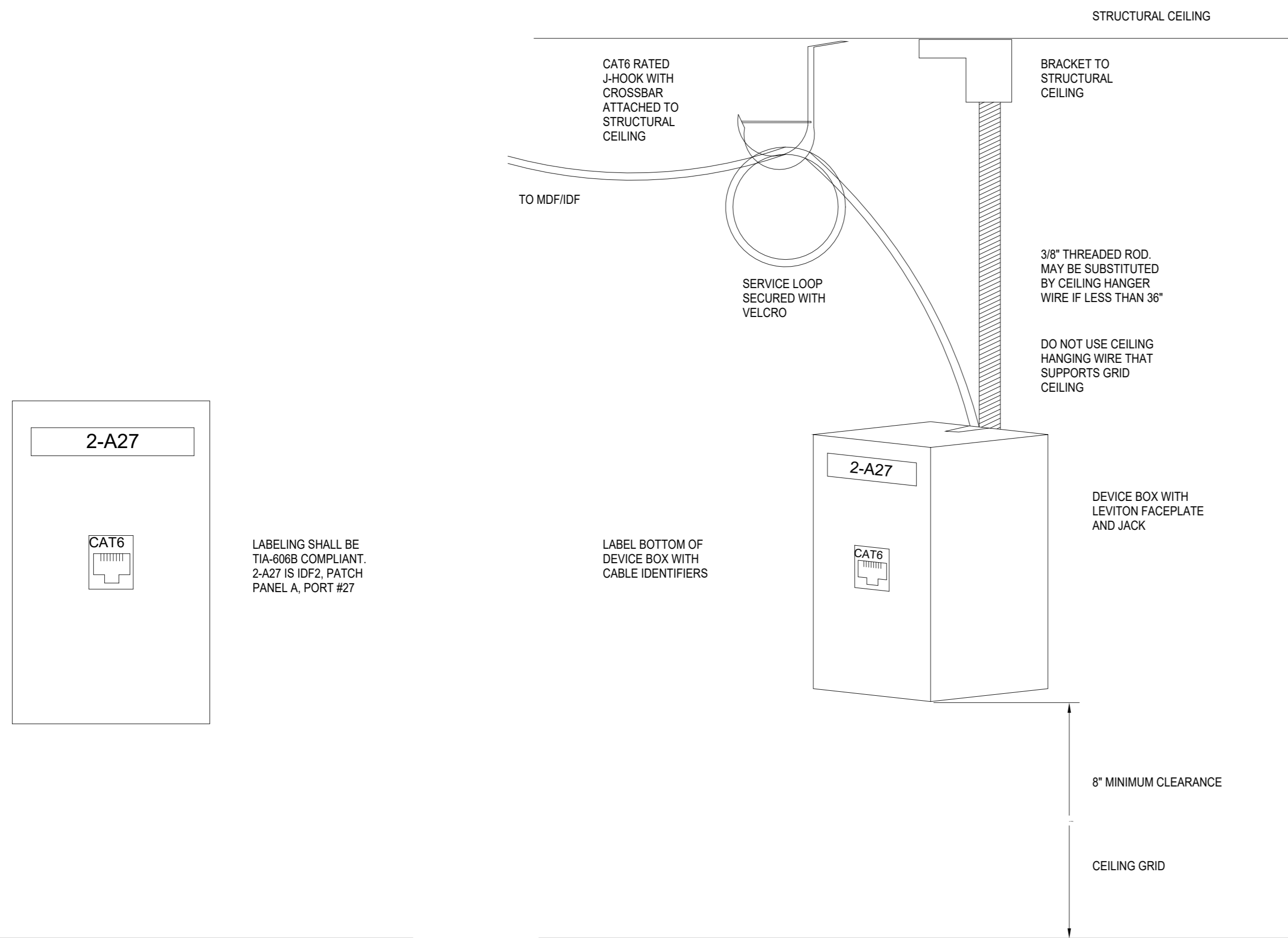
- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**4 EXTERIOR SURFACE CEILING CAMERA MOUNTING**

N.T.S.

**1 EXTERIOR CORNER MOUNT CAMERA DETAIL**

3\"/>

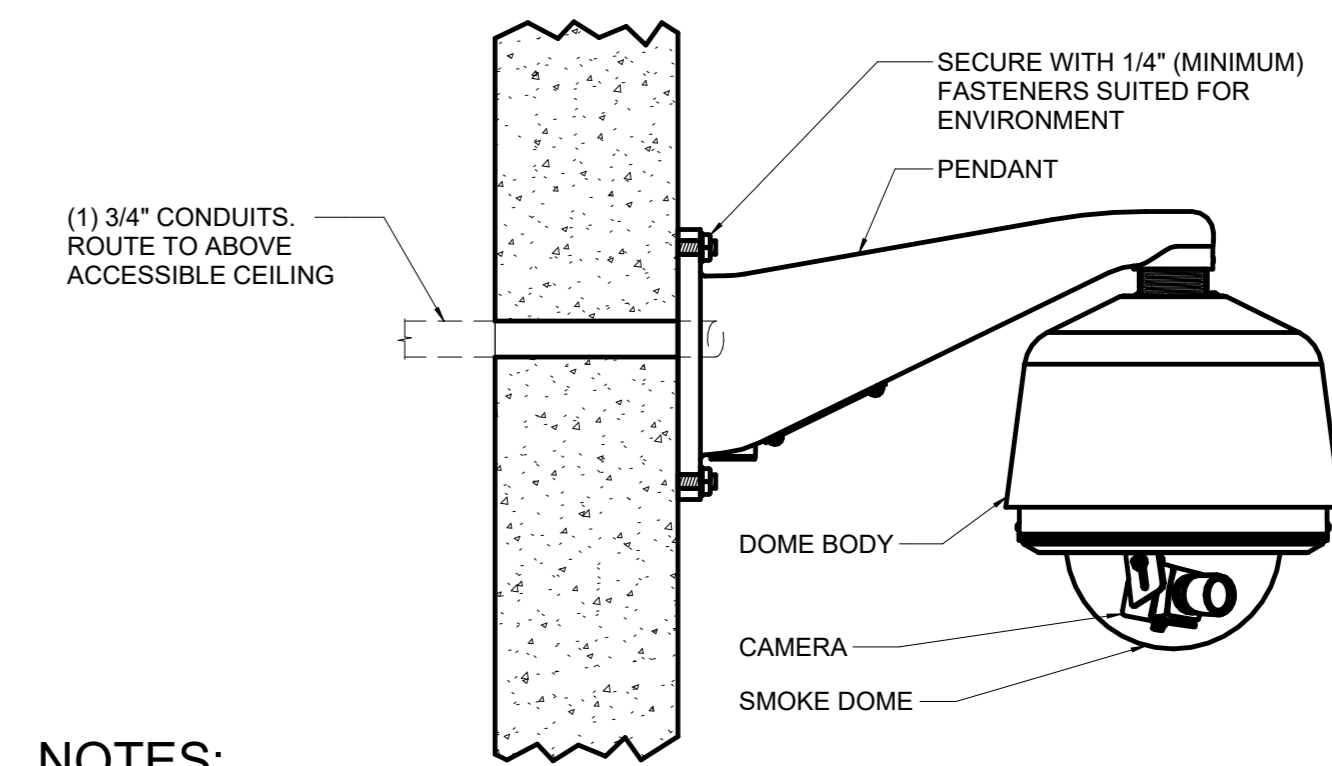


**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1\"/>

**5 SINGLE PORT LABELING**

N.T.S.

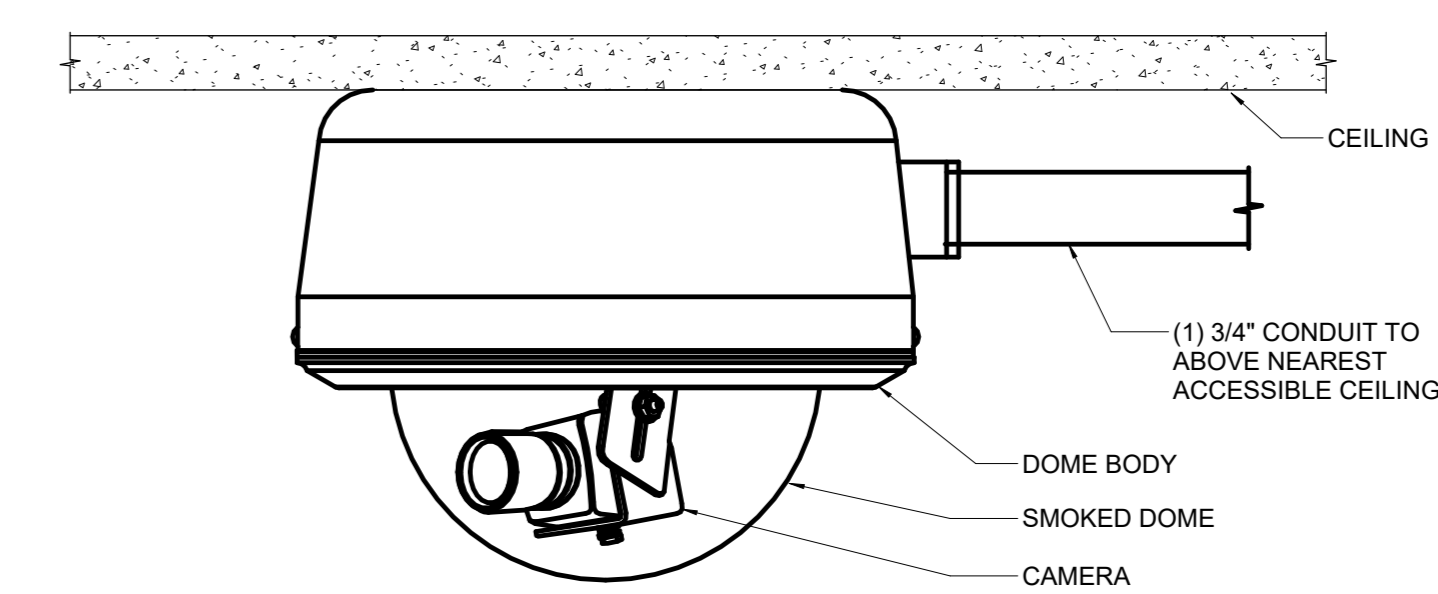


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**2 EXTERIOR WALL MOUNTED CAMERA**

3\"/>



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3 EXPOSED MOUNT FIXED CAMERA CEILING**

6\"/>



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KEY PLAN



ENGINEER



ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

CLIENT		
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DATE:	12/20/23	
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CHECKED BY:	Checker	
REVISIONS		
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**TECHNOLOGY DETAILS**

**T6.01**

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- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
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- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA # FIELD OF VIEW	1.
	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
	UNDERGROUND/FLOOR CONDUIT	
	CONDUIT UP	
	CONDUIT DOWN	
	CONDUIT WITH CONTINUATION	
	CONDUIT SLEEVE	
	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "R" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR-#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
+#	MOUNTING HEIGHT ABOVE FINISHED FLOOR

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
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 TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
 NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES, 2016 EDITION  
 UL 464 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES, 2003 EDITION  
 UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999 EDITION  
 UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED, 2002 EDITION (R2010)  
 ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS, 2017 EDITION  
 FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



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SUNNYSLOPE ES SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 7050 38TH ST, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



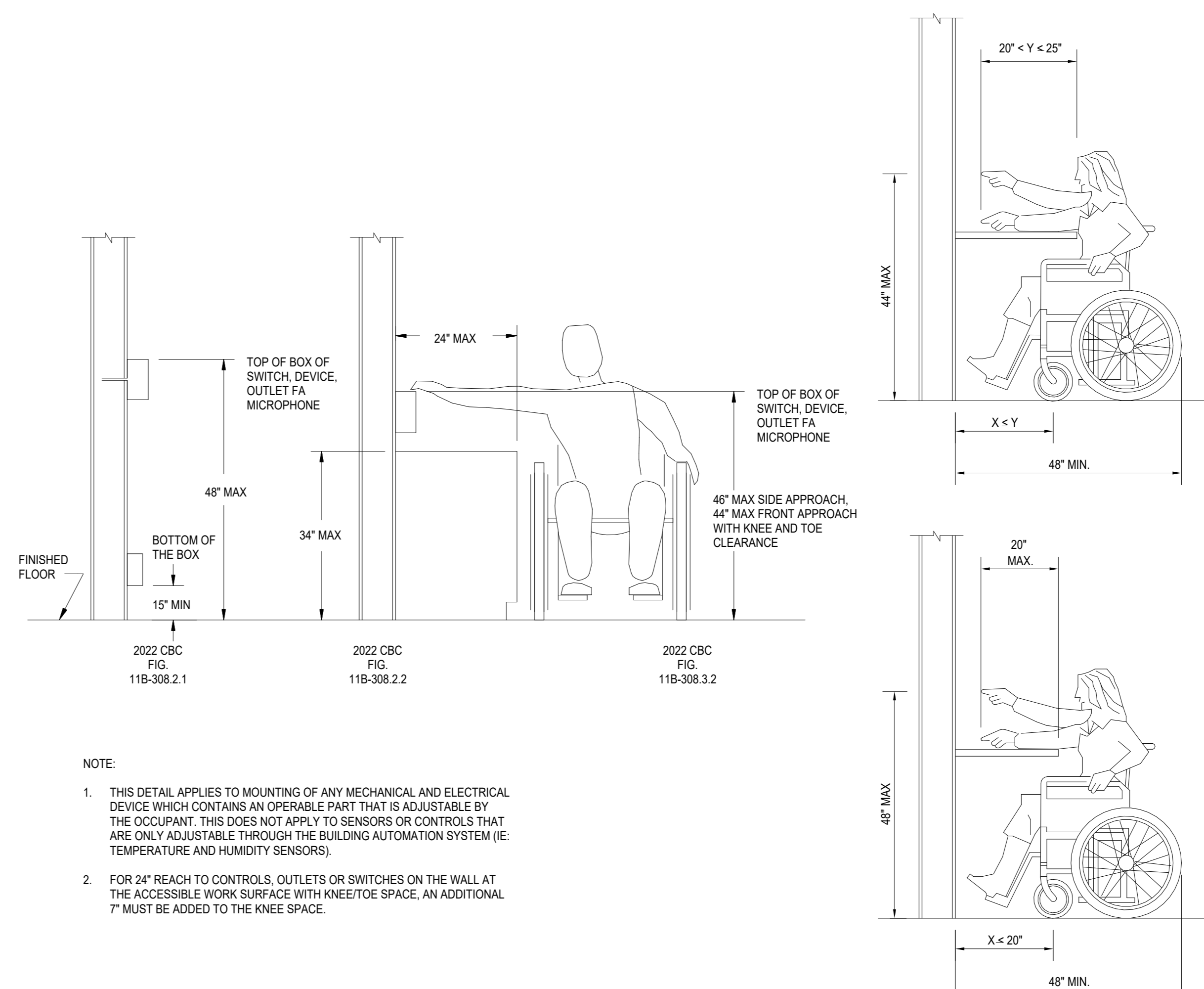
ARCHITECT

JURUPA UNIFIED SCHOOL DISTRICT

CLIENT		
PROJECT NUMBER		
DATE:	12/20/23	
DRAWN BY:	TA	
CHECKED BY:	RDC	
REVISIONS		
No.	Description	Date
1	ADDENDUM 01	9/18/24

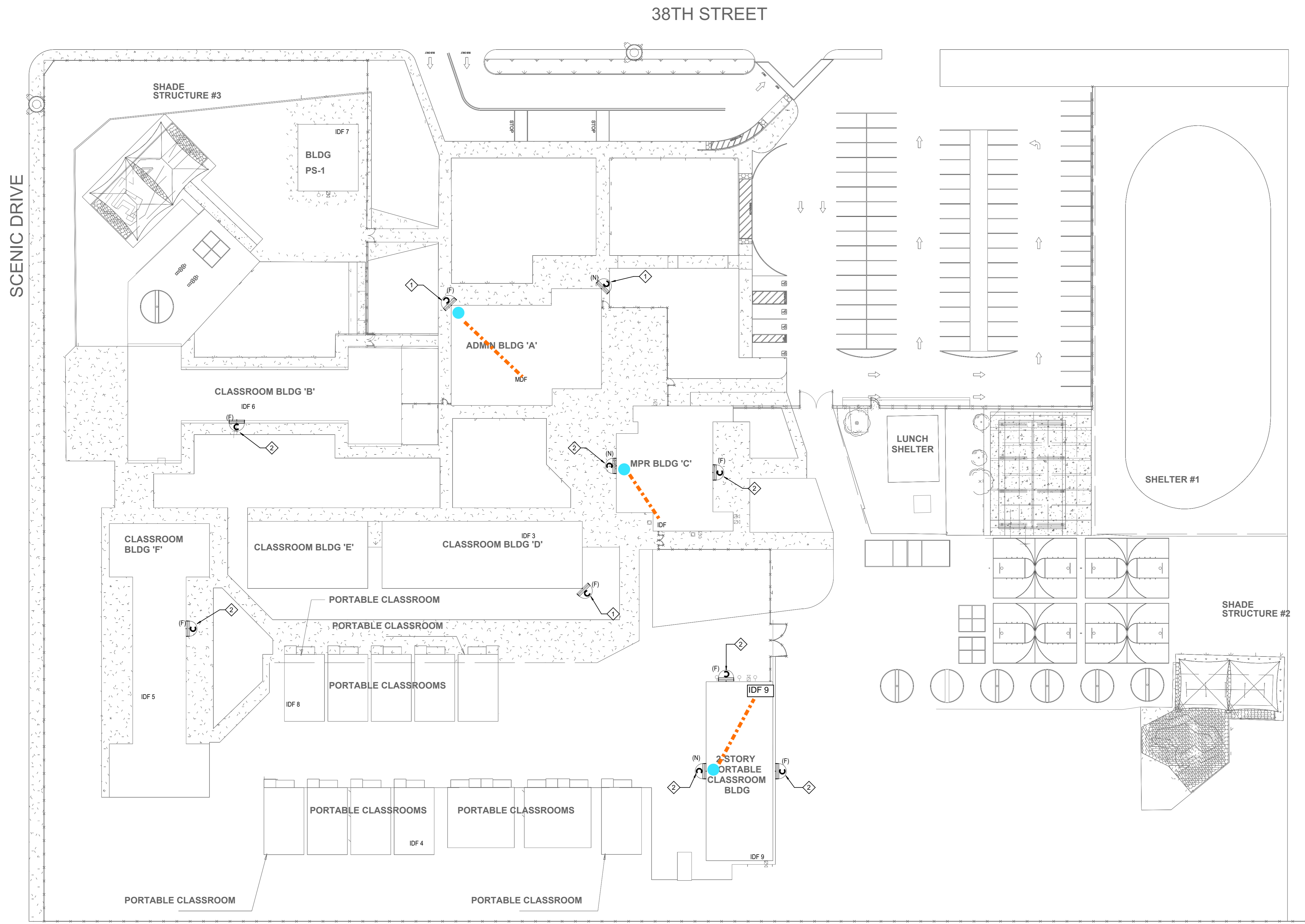
TECHNOLOGY COVER SHEET

T0.00



- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
  - FOR 24" REACH TO CONTROLS, OUTLETS OR SWITCHES ON THE WALL AT THE ACCESSIBLE WORK SURFACE WITH KNEE/TOE SPACE, AN ADDITIONAL 7" MUST BE ADDED TO THE KNEE SPACE.

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**KEY NOTES**

- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE). CAMERA SHALL BE POE, IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- CAMERA LOCATIONS FOR EXISTING PROJECT

**GENERAL NOTES**

- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
- 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
- 3 ALL CAMERAS HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
- 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
- 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
- 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.



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**SUNNYSLOPE ES SECURITY CAMERAS**

JURUPA UNIFIED SCHOOL DISTRICT  
 7050 38TH ST, JURUPA VALLEY, CA 92509

KEY PLAN

ENGINEER

ARCHITECT

CLIENT  
 JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER

DATE: 12/20/23

DRAWN BY: Author

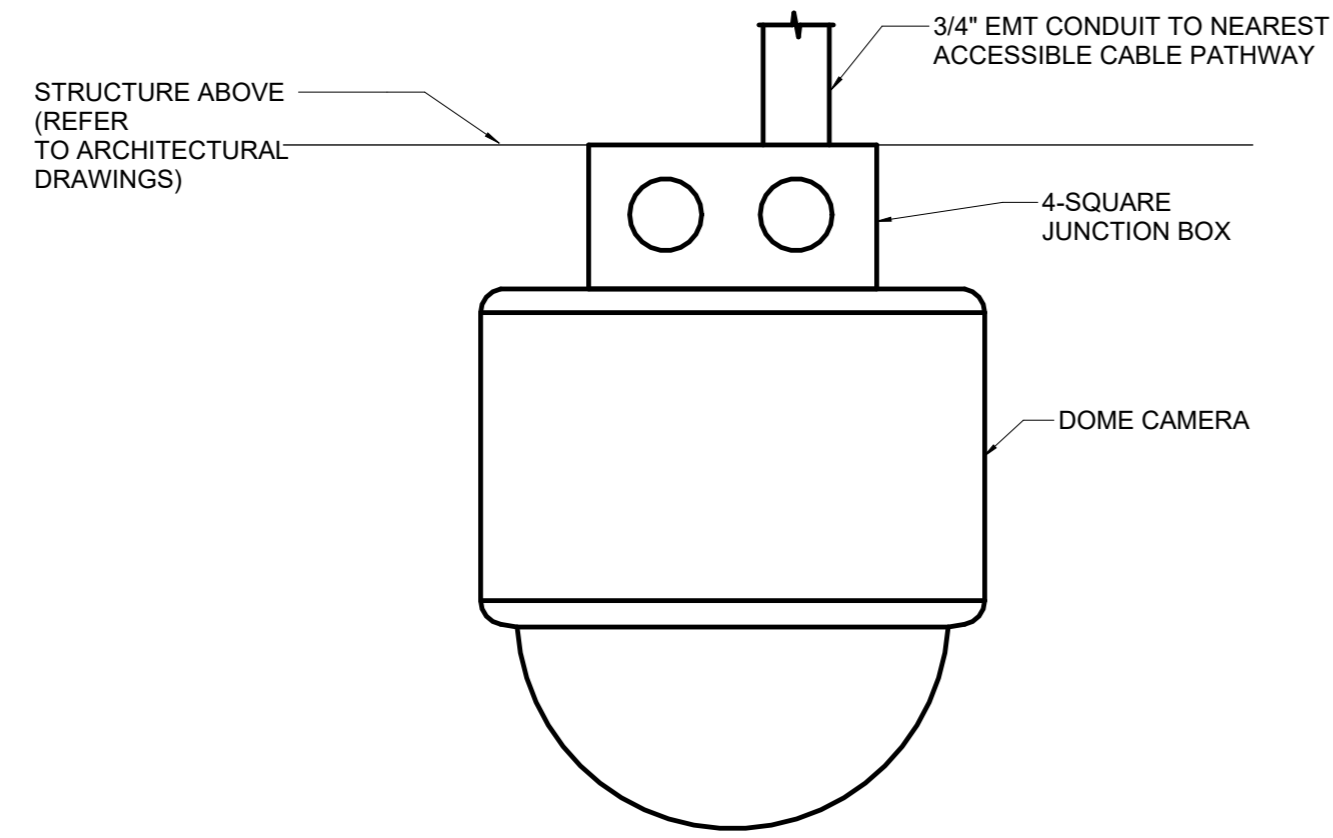
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REVISIONS

No.	Description	Date
1	Addendum 1	9/12/24

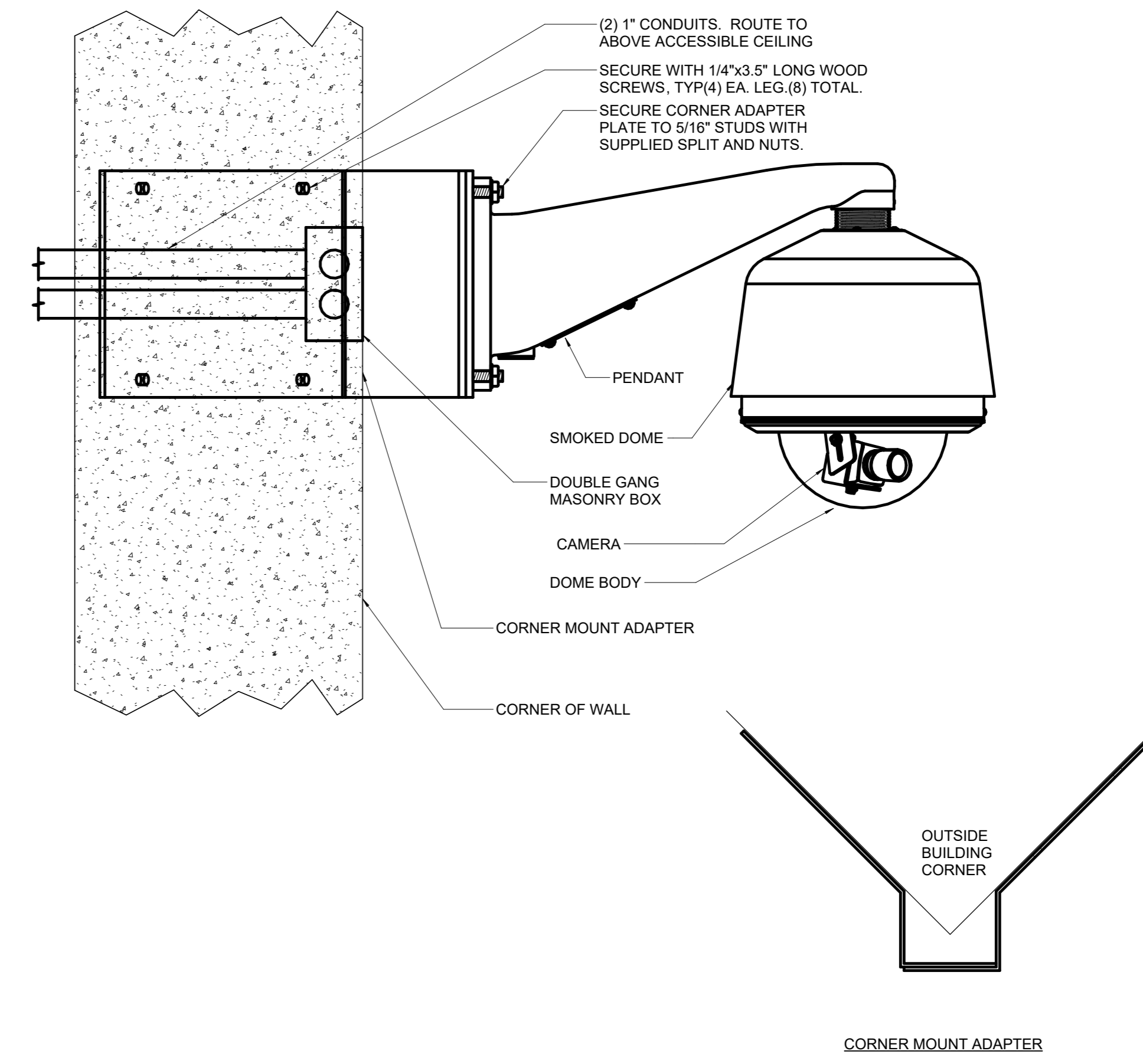
**TECHNOLOGY SITE PLAN**

**T1.01**



**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

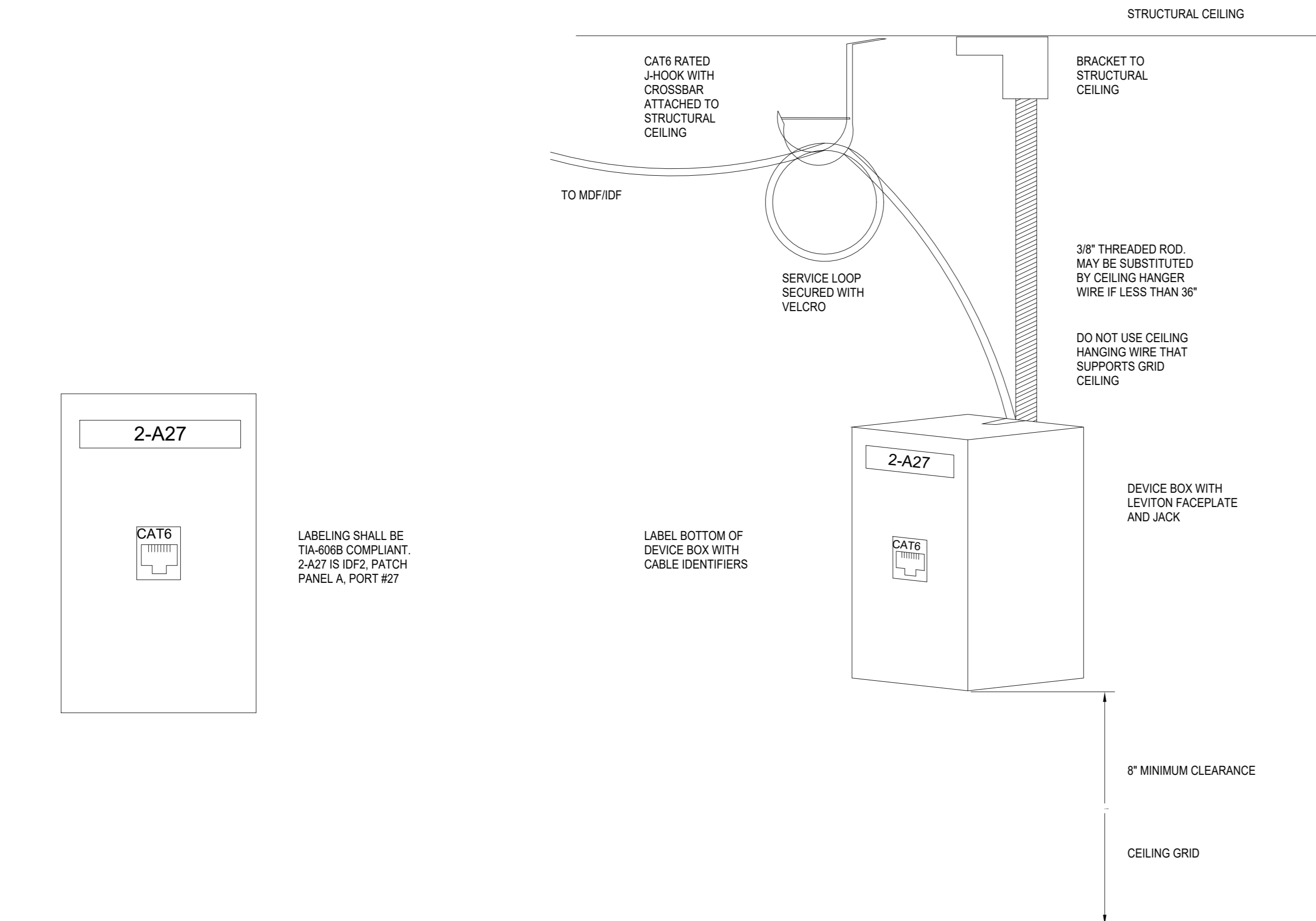


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONRY FASTENERS. DO NOT ANCHOR TO FACE BRICK. SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION INFORMATION.

**4** EXTERIOR SURFACE CEILING CAMERA MOUNTING

N.T.S.

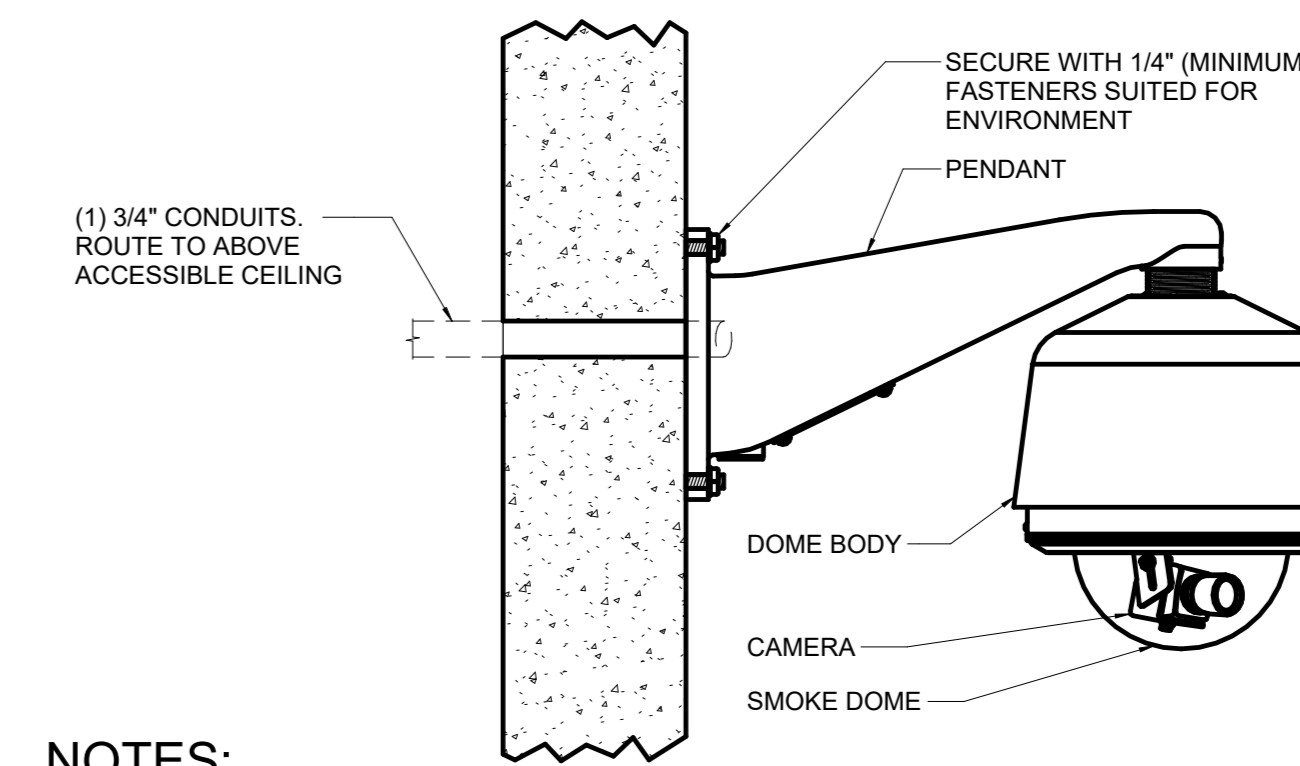


**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1" FROM THE END OF THE CABLE JACKET AT BOTH ENDS.
- CABLE LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THAN 1/8" IN HEIGHT.

**1** EXTERIOR CORNER MOUNT CAMERA DETAIL

3" = 1'-0"

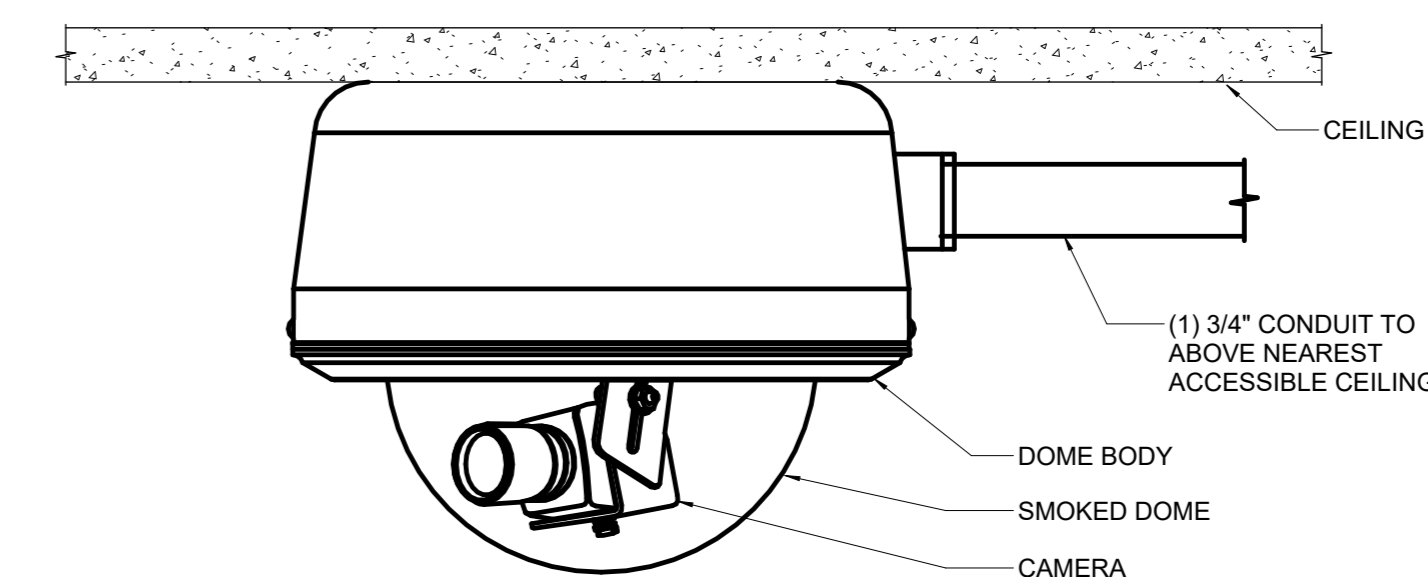


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4" MASONARY FASTENERS. DO NOT ANCHOR TO FACE OF BRICK.
- SEAL WALL MOUNT BASE PLATE TO FACE BRICK TO PREVENT WATER INFILTRATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**2** EXTERIOR WALL MOUNTED CAMERA

3" = 1'-0"



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**5** SINGLE PORT LABELING

N.T.S.



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SUNNYSLOPE ES SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
7050 38TH ST, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER	
DATE	12/20/23
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REVISIONS		
No.	Description	Date

TECHNOLOGY  
DETAILS

T6.01

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PAN/OUTLET J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSIFLUTIA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
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TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA #\"/>	

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- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "#\"/>

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 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
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PARTIAL LIST OF APPLICABLE STANDARDS  
 NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED), 2016 EDITION  
 NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT, 2016 EDITION  
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SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.



RANCHO CUCAMONGA  
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 Rancho Cucamonga, CA 91730  
 909-987-5909

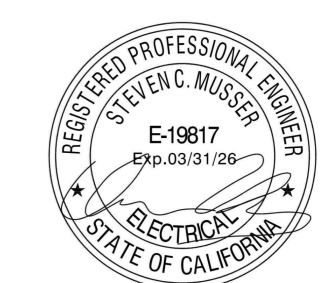
VAN BUREN ES SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
 9501 JURUPA RD, JURUPA VALLEY, CA 92509

KEY PLAN



ENGINEER



ARCHITECT

CLIENT

JURUPA UNIFIED SCHOOL DISTRICT

PROJECT NUMBER

DATE: 12/20/23

DRAWN BY: TA

CHECKED BY: RDC

REVISIONS

No.	Description	Date
1	ADDENDUM 01	9/18/24

TECHNOLOGY COVER SHEET

T0.00

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KEY NOTES

- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (270 DEGREE) CAMERA SHALL BE POE IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- ◇ INDICATES THE LOCATION OF A WEATHER PROOF (IP66) RATED, EXTERIOR SECURITY CAMERA (180 DEGREE) CAMERA SHALL BE POE IP BASED UNLESS NOTED OTHERWISE. CABLING, CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6A CABLE TO EACH LOCATION SHOWN, WIRED BACK TO THE NEAREST MDF/IDF.
- CAMERA LOCATIONS FOR EXISTING PROJECT

GENERAL NOTES

- 1 IT'S CONTRACTOR RESPONSIBILITY TO DOUBLE CHECK IF THERE IS AVAILABLE SLOTS FOR THE NEW CAMERAS INSIDE THE MDF/IDF.
- 2 CONTRACTOR SHALL CONNECT ALL NEW CAMERAS TO THE EXISTING PATCH PANELS/SWITCHES AND PROVIDE FULLY FUNCTIONAL SYSTEMS.
- 3 ALL CAMERAS' HEIGHT TO BE DETERMINE ON FIELD BY CONTRACTOR.
- 4 COORDINATE INSTALLATION WITH OWNER FOR ALL OWNER PROVIDED EQUIPMENT.
- 5 CONTRACTOR TO PROVIDE PATCH CORDS PER DEVICE.
- 6 CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH OWNER EXACT CABLING/AND CONDUIT ROUTING PRIOR TO START OF ANY WORK.



1 OVERALL SITE PLAN  
 1" = 30'-0"



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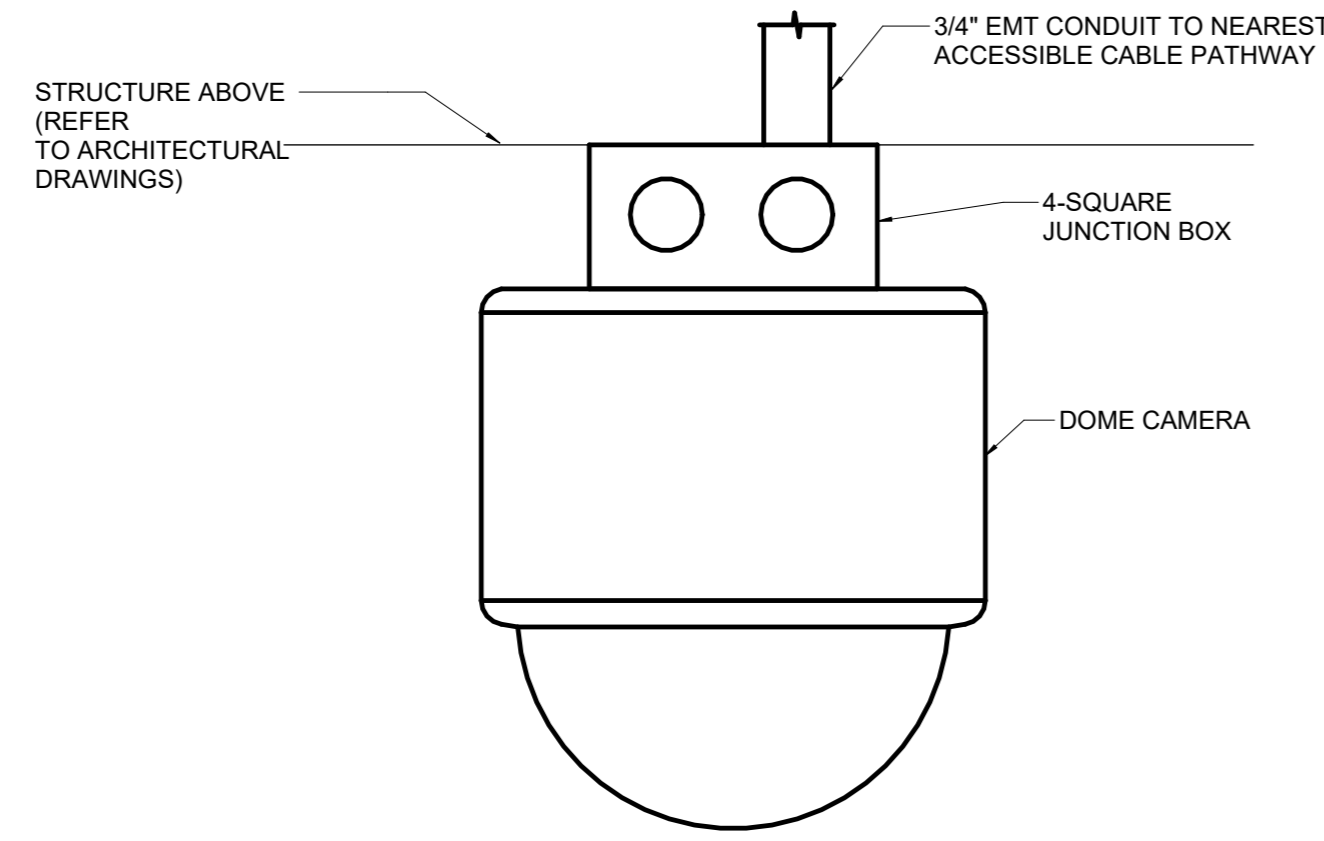
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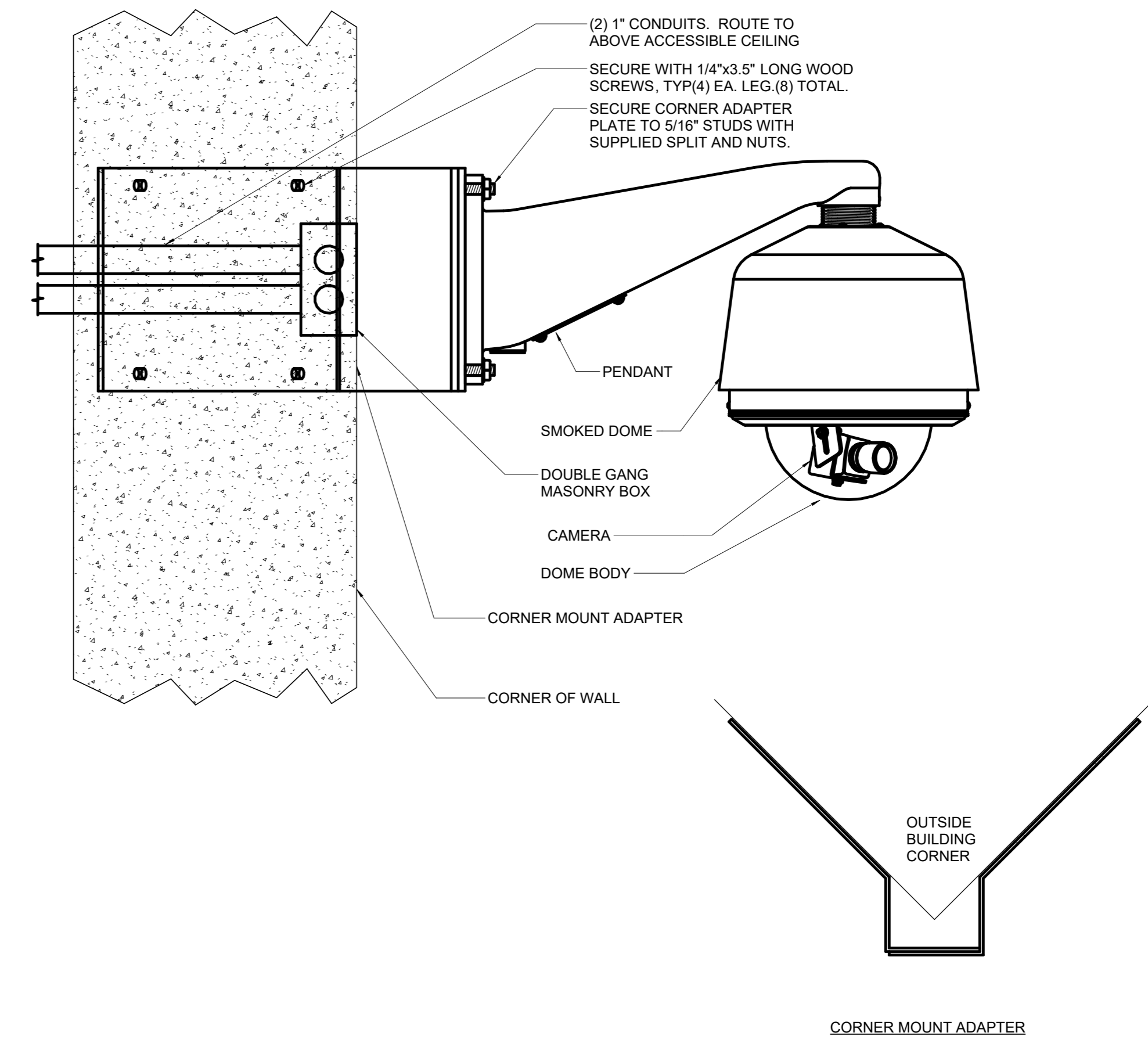
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**NOTES:**

- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2.4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGHINGS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

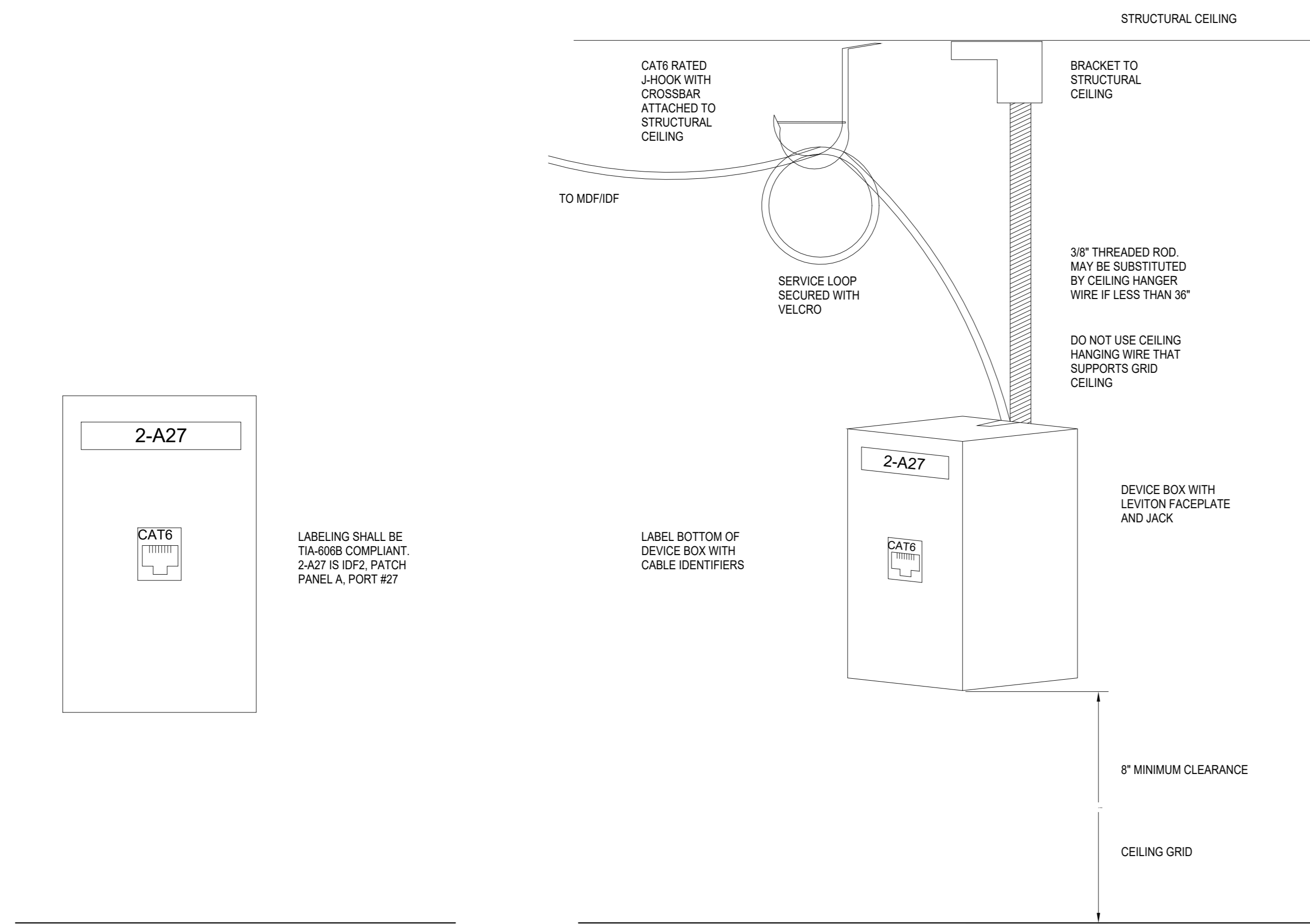


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**4** EXTERIOR SURFACE CEILING CAMERA MOUNTING

N.T.S.



**NOTES:**

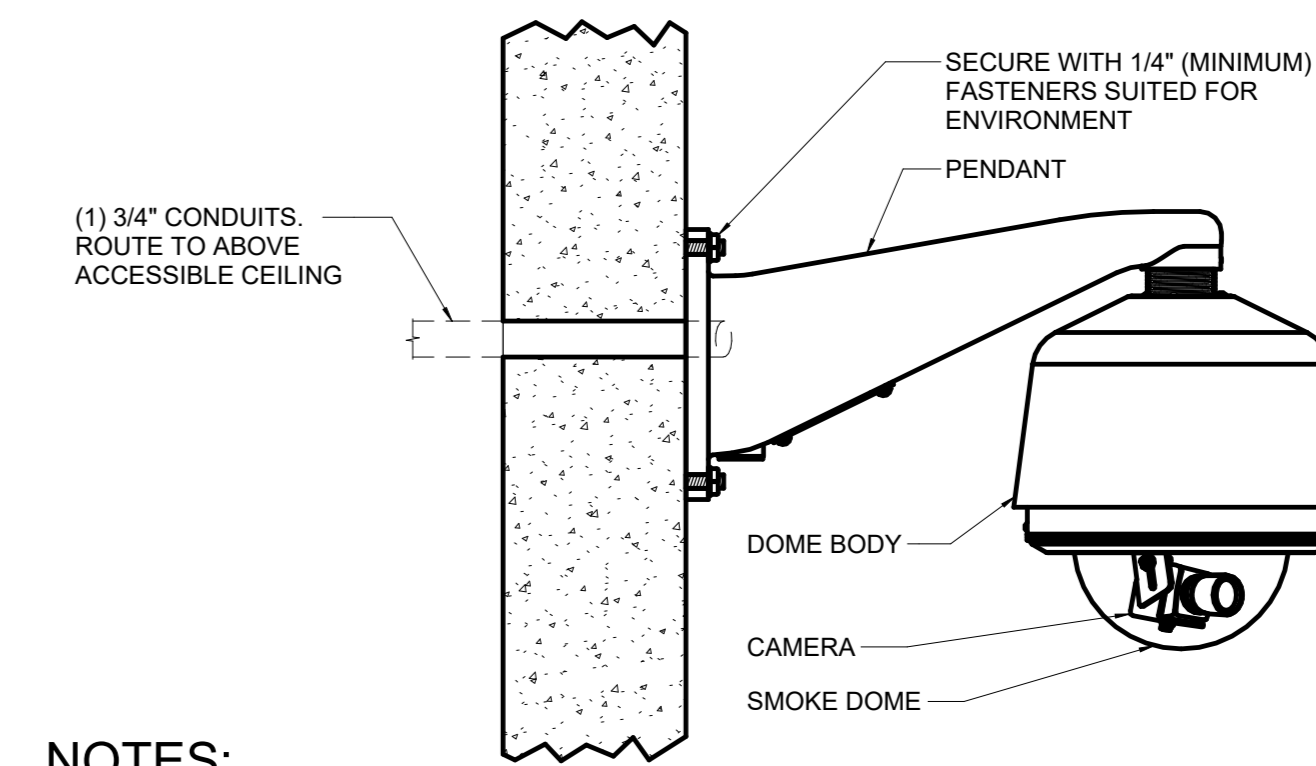
- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1\"/>

**5** SINGLE PORT LABELING

N.T.S.

**1** EXTERIOR CORNER MOUNT CAMERA DETAIL

3\"/>

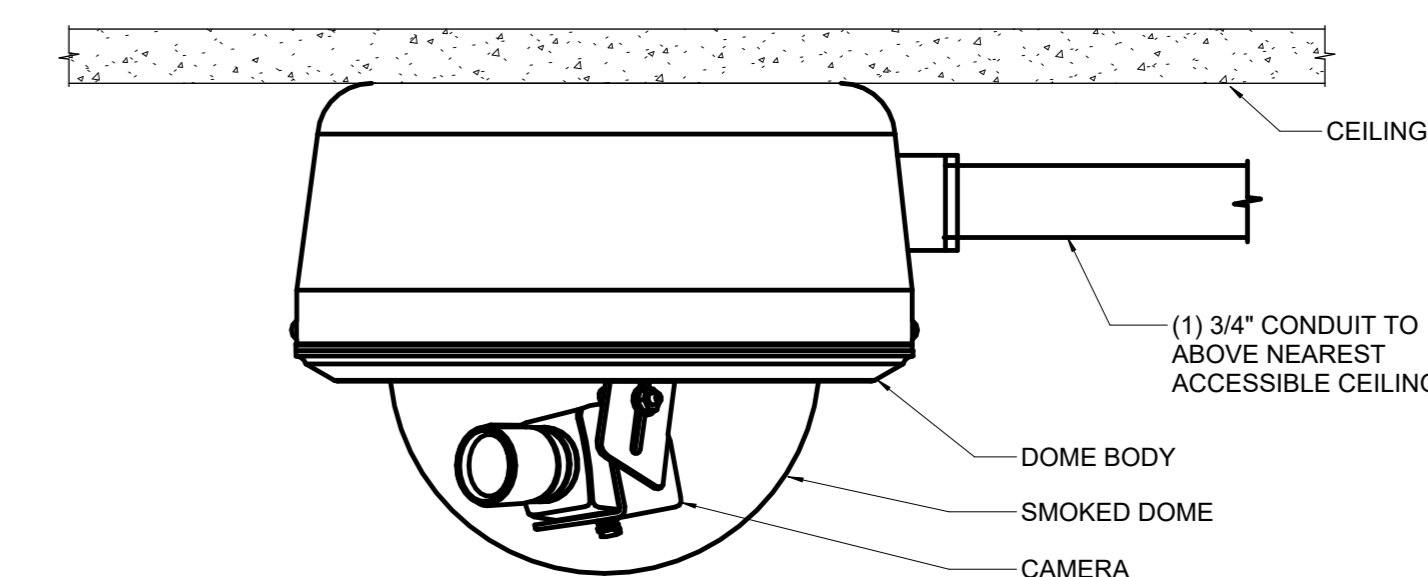


**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**2** EXTERIOR WALL MOUNTED CAMERA

3\"/>



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3** EXPOSED MOUNT FIXED CAMERA CEILING

6\"/>



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TECHNOLOGY  
DETAILS

T6.01

SECURITY GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IN WALL CONDUITS, BELOW GRADE CONDUITS, BELOW SLAB CONDUITS, CONDUITS ACROSS OPEN AREAS BACK BOXES, SLEEVES, AND OTHER RACEWAY REQUIRED FOR DEVICES AND PATHWAYS SHOWN ON THE FLOOR PLANS AND DETAIL SHEETS. ANY ADDITIONAL CONDUITS, SLEEVES, AND RACEWAY REQUIREMENTS FOR EACH SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE SECURITY CAMERA SYSTEM INSTALLER SHALL BE RESPONSIBLE FOR CONNECTING ALL APPLICABLE SYSTEM EQUIPMENT TO THE OWNER'S NETWORK.
- ALL EXPOSED SYSTEMS WIRING OR WIRING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH 40% CABLE FILL RATIO. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXTERIOR WALL PENETRATIONS ARE PROPERLY SEALED TO PREVENT ANY MOISTURE FROM ENTERING BUILDING.
- EACH SYSTEM CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE BUSHINGS ON ALL CONDUIT STUB OUTS AND SLEEVES TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED.
- ALL CABLE SHALL BE ROUTED DOWN CORRIDORS, PARALLEL AND PERPENDICULAR TO THE BUILDING WALLS AND STRUCTURE. CABLE TO EACH DEVICE SHALL BRANCH OFF OF A MAIN CORRIDOR TRUNK. ROUTING CABLES THROUGH CLASSROOMS, OFFICES, STORAGE ROOMS, RESTROOMS OR ANY TYPE OF ROOM OTHER THAN A CORRIDOR WILL NOT BE ACCEPTED. ENTER ALL ROOMS ABOVE THE ASSOCIATED ROOM DOORWAY.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A J-MOD CABLE SUPPORT HANGER SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. PAN/OUTLET J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDINGS STEEL JOIST. AT LOCATIONS WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- SECURITY CAMERA SYSTEM INSTALLER SHALL PROVIDE A CORNER OR WALL MOUNTED INSTALLATION KIT RECOMMENDED BY THE MANUFACTURER OF THE CAMERA. EACH MOUNTED CAMERA KIT SHALL HAVE A SUPPORT ATTACHED TO THE BUILDING'S STRUCTURE TO PREVENT THE CAMERA FROM DROPPING TO THE FLOOR AT ANY TIME.
- ALL EXTERIOR AND WALL MOUNTED CAMERA LOCATIONS MUST BE COORDINATED WITH THE OWNER PRIOR TO ROUGH-IN. ALL CAMERAS TO BE MOUNTED AT 12'-0" AFG. COORDINATION MEETINGS SHALL BE SCHEDULED THROUGH THE ARCHITECT'S PROJECT MANAGER.
- CONDUIT, BACK BOX AND CABLING REQUIREMENTS FOR IP SECURITY CAMERAS: EACH IP CAMERA SHALL BE EQUIPPED WITH (1) CAT6A CABLE BY CABLING CONTRACTOR. CONTRACTOR SHALL MOUNT THIS OUTLET AT 12" ABOVE THE CEILING IN A PLENUM RATED JACK AND COORDINATE ALL FINAL LOCATIONS WITH OTHER TRADES ON THE PROJECT TO VERIFY THAT THE LOCATION OF THE OUTLET MAINTAINS 12" OF CLEARANCE FROM THE FRONT OF THE FACEPLATE FOR OWNER ACCESS. ELECTRICAL CONTRACTOR SHALL ROUTE (1) 1" CONDUIT FROM THE BUILDING STRUCTURE TO A SINGLE GANG BACK BOX MOUNTED AT 5' OR LESS ABOVE THE FINISHED CEILING. SECURE CONDUIT AND BACK BOX TO INSURE MINIMAL SWAY MOVEMENT.
- PROVIDE LICENSES ONLY FOR NEW CAMERAS THAT ARE NOT REPLACING EXISTING CAMERAS.

TECHNOLOGY PLAN GENERAL NOTES

- NO RACKS SHALL BE PERMANENTLY INSTALLED WITHOUT WRITTEN APPROVAL OF THE PROPOSED LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK SHOWN ON FLOOR PLANS AND DETAIL SHEETS.
- THE SELECTED, INSTALLING CONTRACTOR MUST BE A CERTIFIED INTEGRATOR/INSTALLER AUTHORIZED BY THE SPECIFIED SYSTEM MANUFACTURER TO INSTALL THE CABLE PLANT AND CONNECTIVITY PRODUCTS. REFER TO SPECIFICATIONS FOR PRODUCT TYPE AND DESCRIPTION.
- SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH ENGINEERING BEST PRACTICES AS ESTABLISHED BY ANSIBETIA, BICSI, AND THE IEEE.
- ALL WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES.
- ALL TELECOMMUNICATIONS SYSTEMS EQUIPMENT AND MOUNTING LOCATIONS SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY STANDARDS.
- ALL INDUSTRY STANDARD CATEGORY 6A CABLING PRACTICES MUST BE FOLLOWED FOR ALL DATA CABLING.
- ALL DATA CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM AC POWER CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
- ALWAYS CROSS OTHER SYSTEM CABLES AT A 90 DEGREE ANGLE.
- ALL CABLES AND TERMINATION COMPONENTS SHALL BE MACHINE LABELED AT BOTH ENDS. LABEL ALL CABLES PER TS DRAWINGS AND/OR SPECIFICATIONS. FINAL CABLE/OUTLET IDENTIFICATION LABELS SHALL BE COORDINATED WITH THE OWNER AND P/BK.
- ALL EXPOSED CABLING ROUTED IN PLENUM SHALL BE PLENUM-RATED. ALL NON PLENUM-RATED CABLING INSTALLED IN PLENUM SPACES SHALL BE INSTALLED IN CONDUIT.
- NO TERMINATION OR SPLICES SHALL BE INSTALLED IN OR ABOVE CEILINGS UNLESS NOTED OTHERWISE.
- TECHNOLOGY CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH ALL CMU AND RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRACES.
- CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
- CONTRACTOR SHALL ROUTE ALL DATA AND CAT6A CABLING DOWN CORRIDORS, RACEWAYS AND PERPENDICULAR OR PARALLEL TO BUILDING WALLS ENTER INTO ALL ROOMS ABOVE THE MAIN DOORWAY.
- ALL COMMUNICATION CABLE INSTALLED SHALL ROUTE TO THE CENTER OF THE ROOM IN WHICH IT SERVES AND THEN TO THE OUTLET LOCATION IT IS INTENDED FOR. EACH CABLE SHALL HAVE A 10' SERVICE LOOP AT THE CENTER OF EACH ROOM AND A 3' SERVICE LOOP ABOVE EACH OUTLET LOCATION.
- THE SYSTEM INSTALLER SHALL PROPERLY SUPPORT ALL INSTALLED SYSTEM CABLING FROM A HANGER J-MOD CABLE SUPPORT SYSTEMS AS DETAILED IN SPECIFICATIONS. NO CABLING SHALL BE ROUTED AND TIED DIRECTLY TO BUILDING STEEL, CEILING GRID SUPPORT, CONDUIT, PIPING, OR DUCTWORK. HANGER J-MOD SUPPORT SYSTEM SHALL BE DIRECTLY CONNECTED TO THE BUILDING'S STEEL JOIST. IN LOCATION WHERE THE BOTTOM OF THE JOIST IS MORE THAN 5' ABOVE THE CEILING, THE SYSTEM INSTALLER SHALL PROVIDE AND INSTALL THREADED ROD AND ALL REQUIRED MATERIALS TO CONNECT THE THREADED ROD TO THE BUILDING STEEL AND THE CABLE SUPPORT SYSTEM TO THE THREADED ROD. CABLE PATHWAY SHALL NOT BE HIGHER THAN 5' ABOVE THE CEILING AT ANY LOCATIONS.
- ALL EXPOSED CABLING OR CABLING ROUTING ACROSS NON ACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE PROPERLY SIZED TO MAINTAIN THE 40% FILL RATIO.
- ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE EXCEPTED. CONTRACTOR TO MAINTAIN A 40% MAXIMUM FILL RATION ON ALL SLEEVES INSTALLED.

TECHNOLOGY SCOPE OF WORK

- PROVIDE COMPLETE TECHNOLOGY SYSTEMS EQUIPMENT WITH INSTALLATION AS REQUIRED FOR A COMPLETE WORKING SYSTEM PER DESIGN DRAWINGS AND SPECIFICATIONS FOR TELECOMMUNICATION ROOMS, AND OTHER SPACES REQUIRED TECHNOLOGY CONNECTIONS IN SITE PER THE DESIGN DRAWINGS.
- PROVIDE NEW CONDUITS, J-HOOKS ABOVE ACCESSIBLE CEILING SPACES TO SUPPORT NEW TECHNOLOGY WIRING AS REQUIRED BETWEEN END DEVICES AND TECHNOLOGY HEADEND EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL WIRING WITH TERMINATION AND TESTING AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
- PROVIDE COMPLETE INFRASTRUCTURE INCLUDING WIRING TO ALL SECURITY DEVICES PER PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TECHNOLOGY EQUIPMENT/DEVICES MOUNTING AS NOTED PER THE DESIGN DRAWINGS.
- PROVIDE VIDEO SURVEILLANCE SYSTEM AND SECURITY CAMERAS WITH REQUIRED LICENSING FOR A COMPLETE WORKING SYSTEM.

TECHNOLOGY SYMBOL LIST

SYMBOL:	DESCRIPTION:	NOTE:
	VIDEO SURVEILLANCE CAMERA #1 FIELD OF VIEW	1.
	CONDUIT (CONCEALED IN OR ABOVE CEILING/HORIZONTAL SURFACE)	
	UNDERGROUND/FLOOR CONDUIT	
	CONDUIT UP	
	CONDUIT DOWN	
	CONDUIT WITH CONTINUATION	
	CONDUIT SLEEVE	
	FIRE RATED PATHWAY SLEEVE SYSTEM	

GENERAL NOTES:

- ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION. REFER TO GENERAL TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DETAILS.
- DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

KEY NOTES:

- "#\" INDICATES THE LENS' ANGLE PER CAMERA.

DRAWING INDEX

SHEET	DESCRIPTION
T0.00	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY SITE PLAN
T6.01	TECHNOLOGY DETAILS

TECHNOLOGY ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
C	CONDUIT
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F	FUTURE
G.C.	GENERAL CONTRACTOR
J-BOX	JUNCTION BOX
MPOE	MINIMUM POINT OF ENTRY
MC	MAIN CROSS-CONNECT
N	NEW
S.C.	SECURITY CONTRACTOR
SIM	SIMILAR
T.C.	TECHNOLOGY CONTRACTOR
TR-#	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
#B	MOUNTING HEIGHT ABOVE FINISHED FLOOR

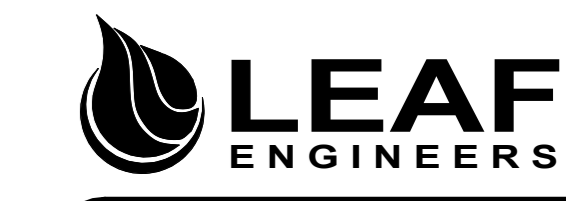
APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2022  
 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR  
 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR  
 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR  
 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR  
 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR  
 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR  
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WEST RIVERSIDE ES SECURITY CAMERAS

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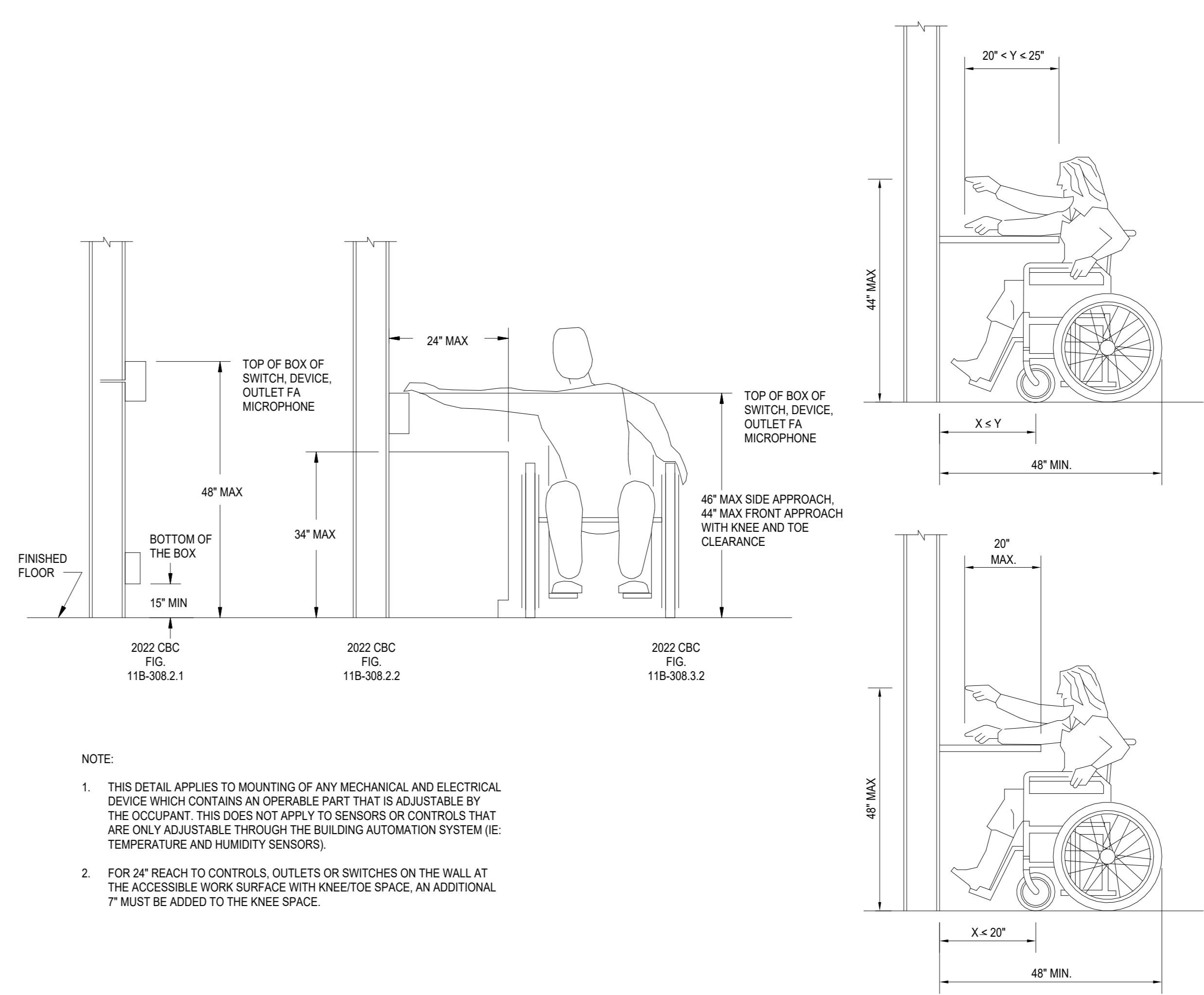
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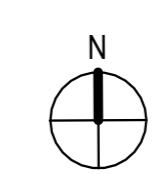
- NOTE:
- THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE TEMPERATURE AND HUMIDITY SENSORS).
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RIVERVIEW DR.



42ND STREET



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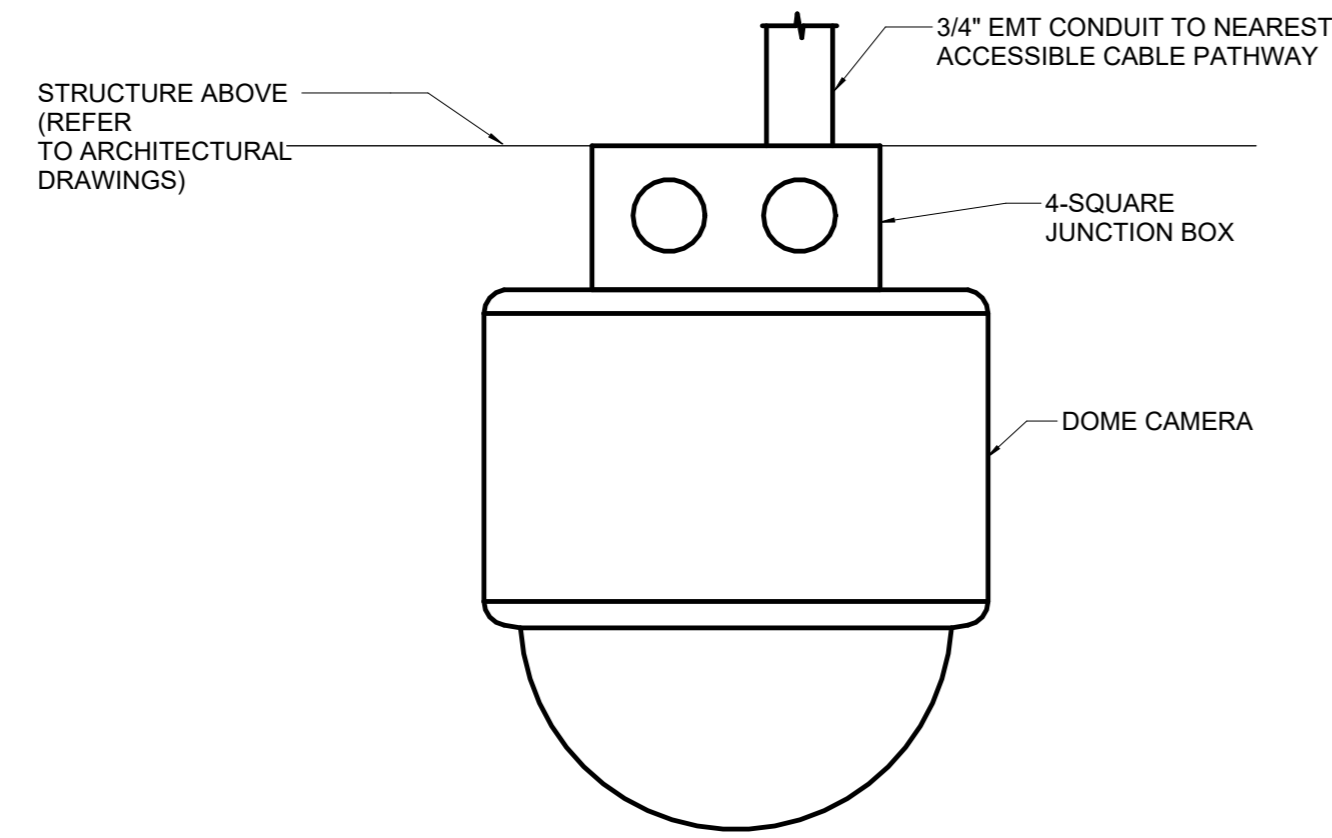
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TECHNOLOGY SITE PLAN

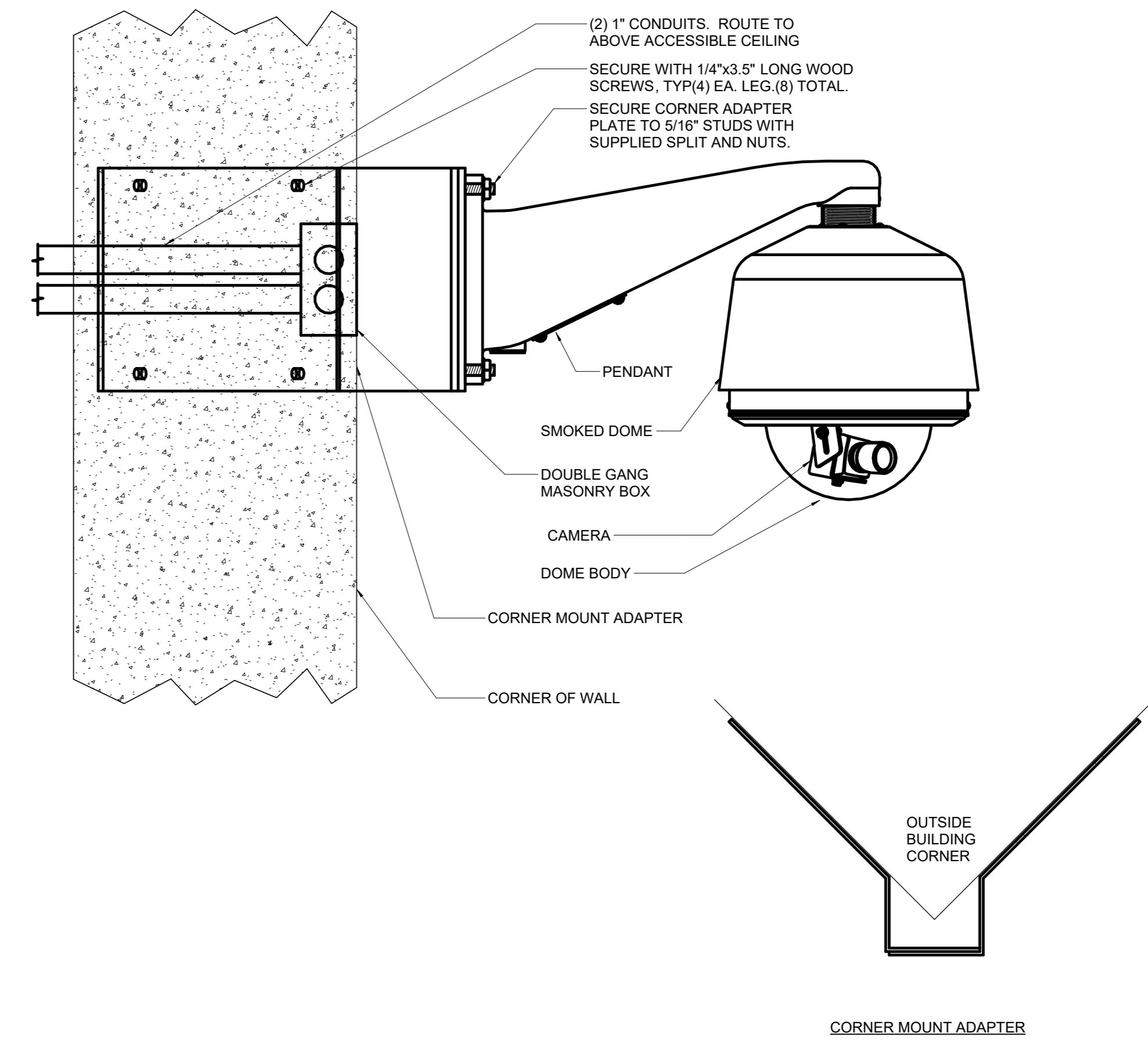
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- COORDINATE EXACT LOCATION OF CAMERA ON SITE TO ENSURE DESIRED VIEWING AREA AND SERVICE ACCESS AFTER COMPLETION OF PROJECT AND TO MINIMIZE ANY POSSIBLE DAMAGE TO INSTALLED CAMERA OR ASSOCIATED CABLING.
- CONDUIT SHALL STUB TO NEAREST ACCESSIBLE CEILING AND TERMINATE ORIENTED HORIZONTALLY AT THE HEIGHT OF THE ASSOCIATED CABLE TRAY OR J-HOOK ROUTE. CONDUIT RUN SHALL NOT CONTAIN MORE THAN 180 DEGREES OF BEND BETWEEN ACCESSIBLE JUNCTION BOXES OR BETWEEN JUNCTION BOX AND END OF CONDUIT. WHERE CONDUIT STUBS THROUGH A WALL IN TO A CORRIDOR AND TERMINATES AT AN ASSOCIATED J-HOOK ROUTE, THE CONDUIT SHOULD EXTEND NOT MORE THAN 2-4 INCHES IN TO THE CORRIDOR. WHERE CONDUIT STUBS TO AN ASSOCIATED CABLE TRAY, CONDUIT SHOULD EXTEND TO CABLE TRAY. ALL CONDUITS MUST BE FITTED WITH A NYLON BUSHING ON EACH END OF THE CONDUIT.
- INSTALLING CONTRACTOR SHALL FURNISH AND INSTALL FIRESTOP MATERIALS FOR CAMERA ROUGH-INS PER PROJECT REQUIREMENTS. REFER TO SPECIFICATIONS FOR FIRESTOP REQUIREMENTS.
- CAMERA MOUNTING ACCESSORY SHALL BE FROM THE SAME MANUFACTURER OF THE CAMERA AND APPROVED BY THE MANUFACTURER FOR USE WITH THE SPECIFIC MODEL NUMBER OF CAMERA INSTALLED. CONTRACTOR SHALL INSTALL CAMERA MOUNTING ACCESSORY AND CAMERA PER MANUFACTURER'S INSTRUCTIONS.

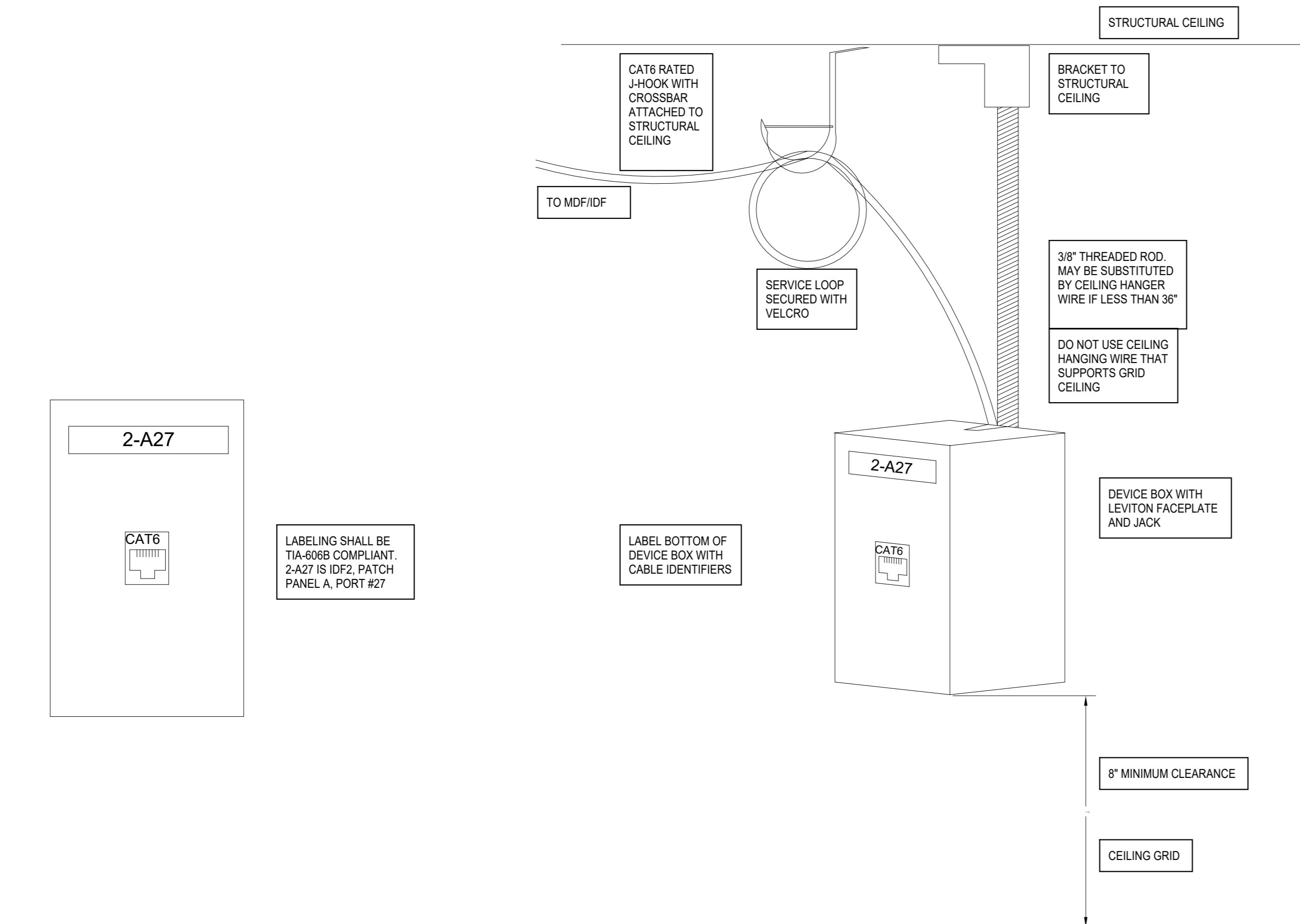
**4 EXTERIOR SURFACE CEILING CAMERA MOUNTING**  
N.T.S.



**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

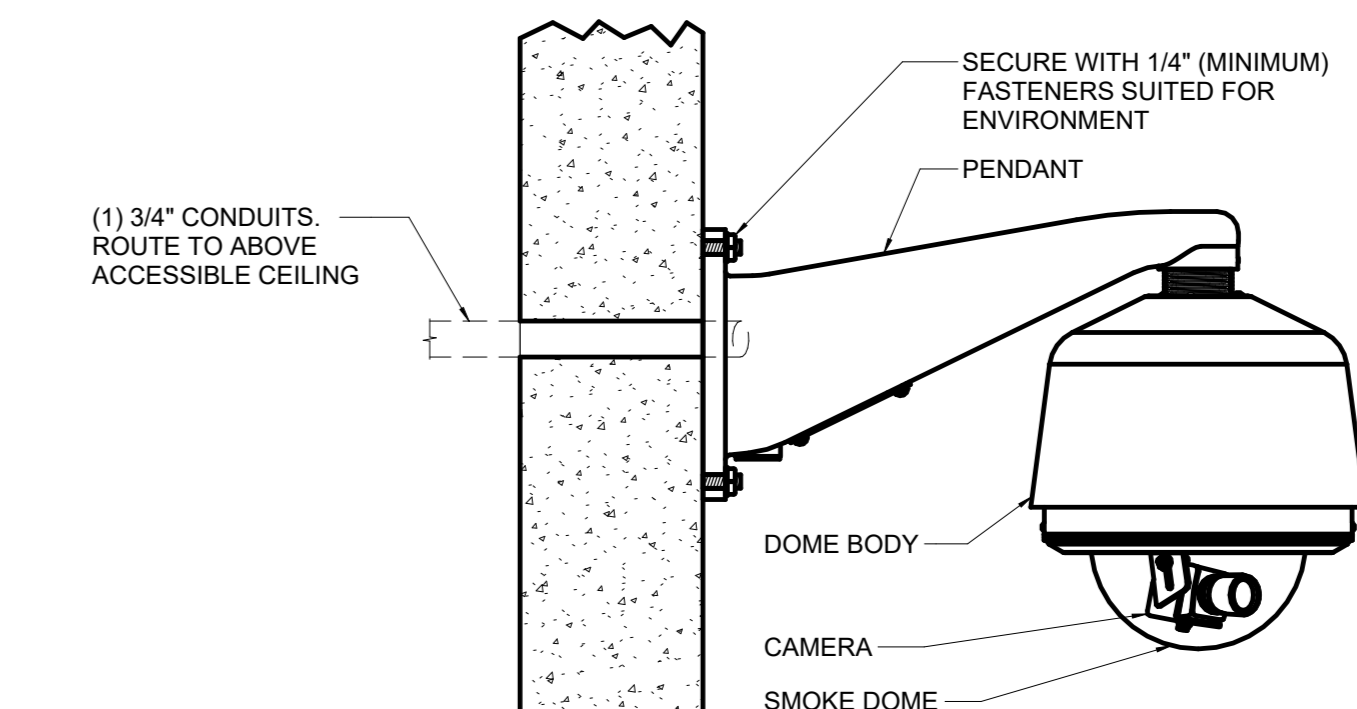
**1 EXTERIOR CORNER MOUNT CAMERA DETAIL**  
3\"/>



**NOTES:**

- WRAP AROUND CABLE TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1\"/>

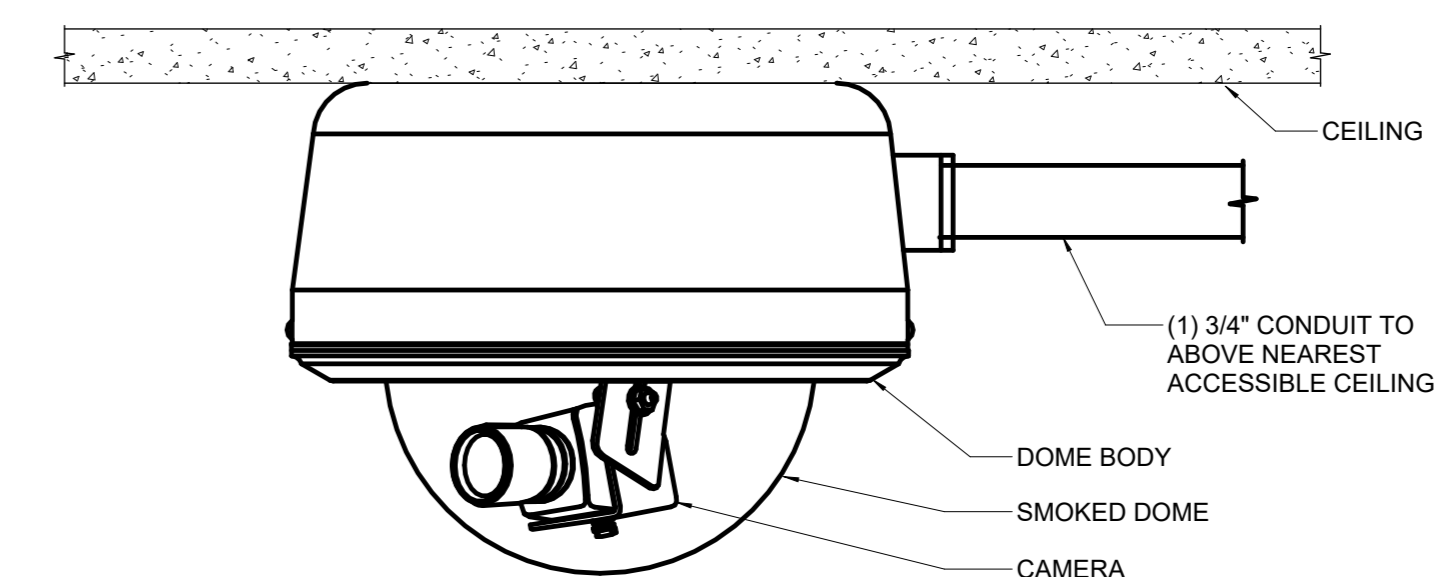
**5 SINGLE PORT LABELING**  
N.T.S.



**NOTES:**

- SECURE WALL MOUNT BASE PLATE TO CMU WITH MINIMUM 1/4\"/>

**2 EXTERIOR WALL MOUNTED CAMERA**  
3\"/>



**NOTES:**

- COORDINATE INSTALLATION WITH CEILING INSTALLATION.
- REFER TO MANUFACTURER SPECIFICATIONS FOR INSTALLATION.

**3 EXPOSED MOUNT FIXED CAMERA CEILING**  
6\"/>



RANCHO CUCAMONGA  
8163 Rochester Ave., Ste 100  
Rancho Cucamonga, CA 91730  
909-587-5909

WEST RIVERSIDE ES SECURITY CAMERAS

JURUPA UNIFIED SCHOOL DISTRICT  
5671 42ND ST, JURUPA VALLEY, CA 92509

KEY PLAN

ENGINEER



ARCHITECT

CLIENT  
JURUPA UNIFIED SCHOOL DISTRICT

REVISIONS		
No.	Description	Date

**TECHNOLOGY DETAILS**

**T6.01**

**SECTION 27 00 00 - BASIC MATERIALS AND METHODS****PART 1 – GENERAL****1.01 RELATED WORK**

- A. The entire drawing and specification package shall be complied with in every respect. The Contract Documents are comprised of the general conditions, contract, drawings and specifications. The CONTRACTOR shall examine these Contract Documents, and coordinate required work indicated in each.

**1.02 SCOPE OF WORK**

- A. The work covered by the specifications includes furnishing materials, labor, transportation, tools, permits, fees, utilities, and incidentals necessary for the complete installation of work required in the Contract Documents.
- B. The CONTRACTOR shall be responsible for coordination and proper relation of his work to the building structure and to the work of all sub-trades. The CONTRACTOR shall visit the premises and thoroughly familiarize himself with the existing site conditions, details of the work and the working conditions, and verify dimensions in the field. The CONTRACTOR shall advise the OWNER of any discrepancy prior to bidding. The submission of bids shall be deemed evidence of the CONTRACTOR's site visit; coordination of existing conditions and include consideration for existing conditions.
- C. Provide line-by-line specification review for each Division 27 and Division 28 section annotated to certify compliance or deviation.

**1.03 DRAWINGS AND SPECIFICATIONS**

- A. The drawings and these specifications are complementary to each other, and what is required by one shall be as binding as if required by both.
- B. If variations or departures from the drawings are deemed necessary by the CONTRACTOR, details of such departures and the reasons therefore shall be submitted to the OWNER for review. No departures shall be made without prior written acceptance of the OWNER.
- C. Should the drawings or specifications disagree in themselves or with their counterpart, the better quality or greater quantity of work or materials shall be estimated upon, and unless otherwise directed by the OWNER in writing, shall be performed or furnished. Figures indicated on drawings govern scale measurements and large-scale details govern small scale drawings.
- D. Items specifically mentioned in the specifications but not shown on the drawings and/or items shown on the drawings but not specifically mentioned in the specifications shall be installed by the CONTRACTOR under the appropriate section of work as if they were both specified and shown.

**1.04 CODES AND STANDARDS**

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- A. All work shall comply with the applicable articles of the National Electrical Code, the National Electrical Safety Code, the National Fire Codes (published by National Fire Protection Association), and City Codes and Ordinances, as well as any other authorities that may have lawful jurisdiction pertaining to the work specified. None of the terms or provisions of this specification shall be construed as waiving any of the rules, regulations, or requirements of these authorities.
- B. CONTRACTOR is responsible for knowledge and application of current versions of all applicable standards and codes. In cases where listed standards and codes have been updated, CONTRACTOR shall adhere to the most recent revisions, including all relevant changes or addenda at the time of installation.
- C. ANSI/TIA:
1. ANSI/TIA-526-7-A (July 2015) Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant
  2. TIA-526.2-A (July 2015) Effective Transmitter Output Power Coupled into Single-Mode Fiber Optic Cable - Adoption of IEC 61280-1-1 ed. 2 Part 1-1: Test Procedures for General Communication Subsystems – Transmitter Output Optical Power Measurement for Single-Mode Optical Fiber Cable
  3. ANSI/TIA-4994 (March 2015) Standard for Sustainable Information Communications Technology
  4. ANSI/TIA-526-14-C (April 2015) Optical Power Loss Measurements of Installed Multimode Fiber Cable Plant
  5. ANSI/TIA-568.0-D (September 2015) Generic B (supersedes TIA-568-C.0 and TIA-568-C-1)
  6. ANSI/TIA-568.1-D (September 2015) Commercial Building Infrastructure Standard (supersedes ANSI/TIA-C.1) ANSI/TIA-568.2-D (September 2018) Balanced Twisted-Pair Cabling and Components Standard
  7. ANSI/TIA-568.3-D (June 2016) Optical Fiber Cabling Components Standard
  8. ANSI/TIA-568.4-D (August 2020) Broadband Coaxial Cabling Components Standard
  9. ANSI/TIA-569-E (May 2019) Pathways and Spaces
  10. ANSI/TIA-598-D (July 2014) Optical Fiber Cable Color Coding
  11. ANSI/TIA-570-C (August 2012) Residential Infrastructure Standard
  12. ANSI/TIA-606-C (June 2017) Administration Standard for Infrastructure
  13. ANSI/TIA-607-D (July 2019) Generic Bonding and Grounding (Earthing) for Customer Premises
  14. ANSI/TIA-758-B (March 2012) Customer-Owned Outside Plant Telecommunication Infrastructure Standard
  15. ANSI/TIA-862-B (February 2016) Structured Cabling Infrastructure Standard for Intelligent Building Systems
  16. ANSI/TIA-942-B (July 2017) Infrastructure Standard for Data Centers
  17. ANSI/TIA-1005-A (May 2012) Infrastructure Standard for Industrial Premises
  18. ANSI/TIA-1005-A-1 (January 2015) Infrastructure Standard for Industrial Premises, Addendum 1- M12-8 X-Coding Connector - Addendum to TIA-1005-A
  19. ANSI/TIA-1183 (August 2012) Measurement Methods and Test Fixtures for Balun-Less Measurements of Balanced Components and Systems
  20. ANSI/TIA-1183-1 (January 2016) Measurement Methods and Test Fixtures for Balun-Less Measurements of Balanced Components and Systems, Extending Frequency Capabilities to 2 GHz - Addendum to TIA-1183
  21. TIA-1152 (November 2016) Requirements for Field Test Instruments and

## Measurements for Balanced Twisted-Pair Cabling

22. TIA-1179-A (September 2017) Healthcare Facility Infrastructure Standard
23. ANSI/TIA-4966 (May 2014) Infrastructure Standard for Educational Facilities
24. TIA-455-104-B (February 2016) FOTP 104- Fiber Optic Cable Cyclic Flexing Test (supersedes TIA-455-104-A)
25. TIA/EIA-455-25-D (February 2016) FOTP-25 Impact Testing of Optical Fiber Cables
26. TIA-604-18 (November 2015) FOCIS 18 Fiber Optic Connector Intermateability Standard – Type MPO-16
27. TIA-604-5-E (November 2015) FOCIS 5 Fiber Optic Connector Intermateability Standard-Type MPO
28. TIA-5017 (March 2016) Physical Network Security Standard
29. TIA-TSB-155-A (Reaffirmed 10-6-2014) Guidelines for the Assessment and Mitigation of Installed Category 6 Cabling to Support 10GBASE-T
30. TSB-184 (July 2009) Guidelines for Supporting Power Delivery Over Balanced Twisted-Pair Cabling
31. TSB-4979 (August 2013) Practical Considerations for Implementation of Multimode Launch Conditions in the Field
32. TSB-190 (June 2011) Guidelines on Shared Pathways and Shared Sheaths
33. TIA-TSB-162-A (November 2013) Cabling Guidelines for Wireless Access Points
34. TSB-5018 (July 2016) Structured Cabling Infrastructure Guidelines to support Distributed Antenna Systems
35. TIA-492AAAE (June 2016) Detail Specification for 50- $\mu\text{m}$  Core Diameter/125- $\mu\text{m}$  Cladding Diameter Class 1a Graded-Index Multimode Optical Fibers with Laser-Optimized Bandwidth Characteristics Specified for Wavelength Division Multiplexing
36. TIA-492AAAB-A (November 2009) Detail specification for 50- $\mu\text{m}$  core diameter/125- $\mu\text{m}$  cladding diameter class 1a graded-index multimode optical fibers
37. TIA-455-243 (March 2010) FOTP-243 Polarization-mode Dispersion Measurement for Installed Single-mode Optical Fibers by Wavelength-scanning OTDR and States-of-Polarization Analysis
38. TSB-172-A (February 2013) Higher Data Rate Multimode Fiber Transmission Techniques

## D. ISO/IEC:

1. ISO/IEC TR 11801-99-01 Information technology – Generic cabling for customer premises: Guidance for balanced cabling in support of at least 40 GBit/s data transmission: Parts 1 and 2
2. ISO/IEC TR 29106 AMD 1 Information technology -- Generic cabling -- Introduction to the MICE environmental classification
3. ISO/IEC 24764 AMD 1 Information technology – Generic cabling for data centers
4. ISO/IEC 11801 AMD 1 AMD 2 Information technology – Generic cabling for customer premises
5. ISO/IEC 15018 AMD 1 Information technology – Generic cabling for homes
6. ISO/IEC 24702 AMD 1 Information technology – Generic cabling – Industrial premises
7. ISO/IEC 14763-1 AMD 1 Information technology – Implementation and operation of customer premises cabling – Part 1: Administration
8. ISO/IEC 14763-2 Information technology – Implementation and operation of customer premises cabling – Part 2: Planning and installation
9. ISO/IEC 14763-2-1 Information technology – Implementation and operation of customer premises cabling – Part 2-1: Planning and installation – Identifiers within administration systems
10. ISO/IEC 14763-3 Ed 2.0 Information technology -- Implementation and operation of customer premises cabling -- Part 3: Testing of optical fiber cabling

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11. ISO/IEC TR 24704 Information technology – Customer premises cabling for wireless access points
  12. ISO/IEC TR 24750 Information technology – Assessment and mitigation of installed balanced cabling channels in order to support 10GBASE-T
  13. ISO/IEC TR 29125 IT cabling requirements for remote powering of terminal equipment
- E. BICSI – Building Industry Consultative Services International – Published Standards
1. ANSI/BICSI 001-2009, Information Transport Systems Design Standard for K-12 Educational Institutions
  2. ANSI/BICSI 002-2014, Data Center Design and Implementation Best Practices
  3. ANSI/BICSI-003-2014 Building Information Modeling (BIM) Practices for Information Technology Systems
  4. BICSI 004-2012, Information Technology Division Systems Design and Implementation Best Practices for Healthcare Institutions and Facilities
  5. ANSI/BICSI 005-2016, Electronic Safety and Security (ESS) System Design and Implementation Best Practices
  6. BICSI 006-2015 Distributed Antenna System (DAS) Design and Implementation Best Practices
  7. ANSI/NECA/BICSI 568-2006, Standard for Installing Commercial Building Cabling
  8. NECA/BICSI 607-2011, Standard for Bonding and Grounding Planning and Installation Methods for Commercial Buildings
  9. BICSI – Building Industry Consultative Services International – Manuals
  10. Distribution Methods Manual, 14th Edition (2020)
  11. Information Transport Systems Installation Methods Manual (ITSIMM), 6th Edition
  12. Outside Plant Design Reference Manual, 5th Edition
  13. BICSI's ICT Terminology Handbook, Version 1.0
  14. Project Management Manual (TPMM), 1st edition
  15. Project Management Reference Document (TPMRD), 2nd Edition
  16. BICSI's Special ICT Design Considerations, Version 1.0
  17. Essentials of Bonding and Grounding, Version 1.0
- F. National Electric Codes
1. National Electrical Safety Code (NESC) (IEEE C2-2012)
  2. NFPA 70-2020, National Electrical Code<sup>®</sup> (NEC<sup>®</sup>)
  3. ANSI/IEEE C2-207, National Electrical Safety Code<sup>®</sup>
  4. National Electrical Code (NEC) (NFPA 70)
  5. NFPA 72 National Fire Alarm and Signaling Code
- G. ASHRAE
1. ASHRAE Standard 90.4P, Energy Standard for Data Centers and Buildings
- H. OSHA Standards and Regulations – all applicable
- I. Local Codes and Standards – all applicable
- J. Anywhere cabling standards conflict with one another or with electrical or safety codes, CONTRACTOR shall defer to the NEC and any applicable local codes or ordinances, or default to the most stringent requirements listed by either.
- K. Knowledge and execution of applicable standards and codes is the sole responsibility of the CONTRACTOR.



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- L. Any violations of applicable standards or codes committed by the CONTRACTOR shall be remedied at the CONTRACTOR's expense.
- M. In any instance where these Specifications call for materials for construction of a better quality or larger size than required by the codes, the provisions of these Specifications shall take precedence. The codes shall govern in case of direct conflict between the Codes and the Drawings.

**1.05 EXISTING UTILITIES**

- A. The Contract Documents reflect the general location and routing for all services known to exist on this project.

**1.06 BUILDING CONSTRUCTION AND LAYOUT OF WORK**

- A. General: It shall be the responsibility of the CONTRACTOR to consult the Drawings and Details to thoroughly familiarize himself with the type and quality of construction to be provided on this project.
- B. The drawings are diagrammatic in nature and do not show every connection in detail or every line or conduit in its exact location. These details are subject to the requirements of all codes and ordinances as well as all structural and architectural conditions. The CONTRACTOR shall carefully investigate structural and finish conditions and shall coordinate the separate sub-trades to avoid interference between the various phases of work. Work shall be laid out so that it will be concealed in furred chases unless specifically noted or indicated to be exposed. Work shall be installed to avoid crippling of structural members; therefore, inserts to accommodate conduit hangers shall be set before concrete is poured, and proper openings through floors, walls, beams, etc. shall be provided as hereinafter specified or as otherwise indicated or required before concrete is poured. All work shall be run parallel or perpendicular to the lines of the building unless otherwise noted.
- C. The approximate location of equipment items is indicated on the drawings. Exact locations are to be determined by coordination of dimensions from approved equipment submittals and site-verified field measurements and will in all cases be subject to the approval of the OWNER. The OWNER reserves the right to make any reasonable changes in the indicated locations prior to installation for no additional cost.
- D. In areas of existing special ceiling construction, the removal and restoration must be carefully planned such that the existing condition of the ceilings is maintained. It may be necessary for the CONTRACTOR to procure a Subcontractor familiar with this work to achieve this requirement.

**PART 2 – PRODUCTS**

**2.01 GENERAL MATERIALS AND EQUIPMENT REQUIREMENTS**

- A. Materials, in general, shall conform to the National Electrical Code requirements and shall be listed, inspected, and approved by the Underwriters Laboratories and shall bear the UL label where labeling service is available. The label or listing of the Underwriters Laboratories, Inc. will be accepted as evidence that the materials or equipment conform to the applicable standards of that agency. In lieu of this listing, the CONTRACTOR may submit a statement from a nationally recognized, adequately equipped testing agency, indicating that the items have been tested in accordance with required procedures, and that the materials and equipment comply with all Contract requirements.

**2.02 STANDARD PRODUCTS**

- A. Materials and equipment shall be the standard catalog products of manufacturers regularly engaged in the manufacture of products conforming to these specifications and shall essentially duplicate materials and equipment that have been in satisfactory use at bid opening. Where custom or special items are required, these shall be fully described using drawings, material lists, etc., which fully describe in detail the item proposed for use on this project.

**2.03 MANUFACTURER'S INSTRUCTIONS**

- A. The CONTRACTOR is responsible for furnishing the proper equipment and/or material and for seeing it is installed as intended by the manufacturer. The CONTRACTOR shall, wherever necessary, request advice and supervisory assistance from equipment manufacturers as required for the proper installation, operation, or start-up. The CONTRACTOR shall notify the OWNER in writing of any conflict between the Contract Documents and the manufacturer's recommendations and shall obtain from the OWNER instructions/direction before proceeding with the work. The CONTRACTOR shall pay for all costs resulting from deficiencies created by installation not in accordance with the manufacturer's recommendations or the instructions of the OWNER.

**2.04 RUST PREVENTION**

- A. Metallic materials shall be protected against corrosion. Exposed metallic parts of equipment exposed to the elements shall be given a rust inhibiting treatment and standard finish by the manufacturer. Components such as boxes, bodies, fittings, guards, and miscellaneous parts shall be protected in accordance with the ASTM A123 or A153, except where other equivalent protective treatment is specifically approved in writing.

**2.05 STORAGE AT SITE**

- A. The CONTRACTOR shall not receive material or equipment at the job site until ready for installation or until there is suitable space provided to properly protect equipment from rust, weather, humidity, dust, or physical damage.

**2.06 CONDITION OF MATERIALS**

- A. All materials required for the installation of the systems shall be new and unused. Any material or equipment damaged in transit from the factory, during delivery to premises, while in storage on premises, while being erected and installed, or while being tested, until time of final acceptance, shall be replaced by this CONTRACTOR without extra cost to OWNER.

**2.07 NAMEPLATES**

- A. Factory assembled components and equipment shall be provided with embossed nameplates, securely attached to the equipment with rivets or screws. Nameplates will have information required to specifically identify the equipment in the future such as the manufacturer's name, address, catalog number, serial number, etc. All data on nameplates shall be legible at the time of final inspection.

**PART 3 – EXECUTION**

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**3.01 ACCEPTABLE MANUFACTURERS**

- A. The CONTRACTOR shall provide equipment and material which meet all detailed requirements of the Project specifications.
- B. The drawings and specifications represent the equipment scheduled. The CONTRACTOR must ensure that the equipment provided will meet all project requirements prior to submitting data on that equipment.

### **3.02 SPACE AND EQUIPMENT ARRANGEMENT**

- A. Equipment and components shall be installed in a manner to permit access to parts requiring service. Equipment shall be installed in such a manner as to allow removal for service without disassembly of adjacent equipment.
- B. Large equipment or apparatus which is to be installed in the building, and which is too large to permit access through stairways, doorways, or shafts shall be brought to the job and placed in the space before the enclosing structure is completed. Following placement in the space, such apparatus shall be thoroughly protected from damage.
- C. Equipment shall have working clearances as required by applicable codes and standards.

### **3.03 SUBMITTAL AND REVIEW OF MATERIALS**

- A. After the Contract is awarded, but prior to proceeding with the Work, the CONTRACTOR shall obtain, check, certify, and submit complete Shop Drawings and Brochures from Manufacturers, Suppliers, Vendors, etc., for all materials and equipment specified herein. Submit Shop Drawings and Brochures in sufficient time so as not to impede the progress of work. Two weeks will be required for the processing of Shop Drawings and Brochures in the OWNER's office, exclusive of transmittal time. This time shall be considered by the CONTRACTOR when scheduling submittal data. After the Contract is awarded, the CONTRACTOR will advise the OWNER in writing of the schedule for submission of shop drawings and product data and the persons authorized to sign submittal data on behalf of the OWNER.
- B. The OWNER's review of Shop Drawings and Brochures shall not relieve the CONTRACTOR of the responsibility for dimensions, errors that may be contained therein, or deviations from Contract Document requirements. It shall be clearly understood that the OWNER's noting some errors but overlooking others does not grant the CONTRACTOR permission to proceed in error. Regardless of any information contained in the Shop Drawings, the requirements of the Contract Documents shall govern and are not waived or superseded in any way by the submittal data review.
- C. Before submission of Shop Drawings and Brochures, the CONTRACTOR shall certify that each Shop Drawing and each item of material or equipment complies with the Contract Documents for this Project. Such certification shall be made by the OWNER, a Partner, a Corporate Officer of the CONTRACTOR, or by a person duly authorized to sign for the CONTRACTOR.

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Unless so certified, Shop Drawings and/or Brochures will be returned for resubmittal. Certifications shall be in the form of rubber stamp impressions or typed letter which states:

I hereby certify that this Shop Drawing and/or brochure and the equipment and material shown on this Shop Drawing and/or Brochure complies in all aspects (except as noted\*) with the requirements of the Contract Documents for this Project. I further certify that all data shown herein as to performance, dimensions, construction, materials, and other pertinent items are true and correct.

Name of CONTRACTOR\_\_\_\_\_

Signed\_\_\_\_\_

Position\_\_\_\_\_

Date\_\_\_\_\_

\*Refer to exception requirements herein.

D. Each Shop Drawing shall indicate in the lower right-hand corner and each Brochure shall indicate on the front cover the following: Title of the Sheet or Brochure; name and location of the building; names of the OWNER, CONTRACTOR, Manufacturer, Supplier, Vendor, etc., the date of submittal; and the date of each correction and revision. So far as is practical, each Shop Drawing and/or Brochure shall bear a cross-reference note to the sheet number or numbers of the Contract Drawings and Specifications showing the same work. Shop Drawings and Brochures shall be prepared electronically as follows:

1. Shop Drawings: Drawings shall be newly prepared and not reproduced from the Contract Documents, drawn to a scale that can be easily read and shall contain sufficient plans, elevations, sections, and isometrics to describe clearly the items in question. Drawings shall be prepared by a draftsman skilled in this type of work. All equipment layouts and similar Shop Drawings shall be drawn to at least 1/4-inch = 1'-0" scale.
2. All Shop Drawings shall indicate the equipment actually purchased. The elevation, location, support points, load imposed on the structure at support and anchor points, shall be indicated. All beam penetrations and slab penetrations shall be indicated and sized and shall be coordinated. All Design Drawing space allocations shall be maintained, such as ceiling height, chase walls, equipment room size, etc., unless proper written authorization is required from the OWNER to change them. All associated equipment shall be coordinated and clearly shown on the Shop Drawings.
3. Brochures: Brochures submitted to the OWNER shall be published by the Manufacturers and shall contain complete and detailed engineering and dimensional information to show that the equipment will fit into the allotted space.
4. Brochures submitted shall contain only information which is relevant to the particular equipment or materials to be furnished. Do not submit catalogs that describe several different items other than those items to be used unless all irrelevant information is marked out or relevant information is clearly marked.

E. The submittal format shall follow the Specifications format with a submittal required for each required section. The submittal shall be electronic format. Provide one digital copy of updated TABLE OF CONTENTS and progressive-tabbed index sheets also for the OWNER's

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filing convenience.

- F. Submittal data for each section must be complete. Partial submittals will not be reviewed. To the greatest extent possible all sections shall be submitted with the first submission. No more than three additional submissions will be allowed to complete the submittal package.
- G. Submit one (1) digital copy of all brochures for review. Submit one (1) reproducible and one (1) blueprint of shop drawings for review. Comments will be made on the reproducible to facilitate copying.
- H. Any submittal that is disapproved must be resubmitted within one (1) week following notification of such disapproval. If no satisfactory material is submitted within the one-week period, the OWNER reserves the right to require the CONTRACTOR to furnish items exactly as described in the Contract Documents.
- I. No allowances will be made for submittals which are not made in a timely fashion or which are turned down because they do not meet the specifications. Should delivery problems arise due to the above, affecting the completion time of the project, the CONTRACTOR will furnish and install acceptable alternates until the proper materials arrive and then replace the alternate materials with the approved materials, all at no cost to the OWNER. If the CONTRACTOR is not able to furnish an acceptable alternate until the proper materials arrive, he will assume all costs for furnishing and installing all alternates as directed by the OWNER.

#### **3.04 SUPERVISION**

- A. A competent certified foreman or superintendent, approved by the OWNER, shall be maintained at the project site to receive instructions and to act for the CONTRACTOR. Once this superintendent has been approved, no change shall be made without approval of the OWNER or his authorized representative. The OWNER and his authorized representative shall have the right to observe the work at any time. The CONTRACTOR shall have a representative present when his work is being observed, and he shall give assistance as required.

#### **3.05 CUTTING AND PATCHING**

- A. Where it is necessary to cut through walls, floors, or ceilings to permit installation of work under this section of the Contract, or to repair any defects that may appear, up to the expiration of guarantee period, such cutting shall be done under the supervision of the OWNER. The CONTRACTOR shall not be permitted to cut or modify any structural members without the written permission of the OWNER.
- B. Patching of all openings and repairing of any damage to the work of other trades occasioned by cutting operations or occasioned by the failure of any part of work installed under this Contract, shall be performed by the trade whose work is involved, and shall be paid for by the CONTRACTOR.
- C. Openings cut through exterior walls or roofs shall be provided with suitable covers to protect the property or materials involved. Openings cut through walls below grade shall be properly protected to prevent entrance of water or other foreign elements. Openings cut between fire zones or plenums shall be sealed to maintain the fire integrity of the wall or floor. Conduits and cable tray through plenum wall shall be sealed using materials complying with UL 1479, NEC 300-21, and NEC 800-3(C), and shall be UL classified.

#### **3.06 HOISTING, SCAFFOLDING, AND TRANSPORTATION**

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- A. Provide hoisting and scaffolding facilities as required to set materials and equipment in place.

**3.07 CLEANING**

- A. The CONTRACTOR shall at all times keep the premises free from accumulations of waste material or rubbish. Debris shall be removed from the site and from any street or alley adjacent to the site.
- B. At completion of the project, the CONTRACTOR shall remove all tools, scaffolding, and surplus materials. CONTRACTOR shall leave the area "broom clean". Before final acceptance, vacuum all panels, cabinets, racks and other equipment enclosures. Wipe clean all fixture lenses and reflectors, all panelboard and switchboard interior and exterior surfaces, being careful to remove all stray paint, construction materials, dust, and particles. Touch-up all marred surfaces to restore existing conditions to those provided by the manufacturer.

**3.08 CONDUIT SLEEVES**

- A. Existing conduit pathways being reused shall reseal using firestopping sealant.
- B. For conduits passing through outside walls, provide and install galvanized steel sleeves having an inside diameter at least 4 inches greater than the outside diameter of contained conduit. Where these occur in walls having a waterproof coating applied, the sleeves shall have welded flanges to build into waterproofing. When conduits are installed, the annular space between pipe and sleeve shall be effectively sealed, using shredded lead hammered in place or an approved mastic sealer.
- C. Pipe and duct sleeves, pitch pockets, and flashings compatible with the roofing installation shall be provided for roof penetrations.

**3.09 GROUNDING**

(Existing)

**3.10 RECORD DRAWINGS**

- A. The CONTRACTOR shall keep a set of Drawings on the job, noting daily all changes made in these Drawings in connection with the final installation, including exact dimensioned locations of all new and uncovered existing active and inactive utilities outside the building, and shall turn over a clean, neatly marked set of mylar reproducible Drawings showing "as-installed" work to the OWNER for delivery to the OWNER. All underground utilities, services, and systems shall be accurately located by the CONTRACTOR and dimensioned on the "as-installed" Drawings.

**3.11 OPERATING AND MAINTENANCE MANUAL**

- A. The CONTRACTOR shall furnish indexed operating and maintenance manuals with complete technical data for each system, piece of equipment, and material installed under this Contract.
- B. Electronic copies of the manual shall be provided. One copy shall be completed and delivered to the OWNER prior to the time that system and equipment tests are performed.



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- C. Provide one (1) electronic operation and maintenance manual for each building. Provide one (1) electronic as-built floor plan for each building. As built to be turned over prior to punch walk.
- D. The manual shall include the following information
  - 1. Manufacturer's installation instructions.
  - 2. Manufacturer's local representative and/or distributor's name and address.
  - 3. Manufacturer's operating and maintenance instructions.
  - 4. Manufacturer's internal wiring diagrams.
  - 5. CONTRACTOR's installation wiring diagrams.
  - 6. Replacement part number listings and descriptions.
  - 7. Framed operating instructions, when required, in individual Specification sections.
  - 8. Warranties and guarantees.
  - 9. Provide an approved submittal at the front of each section.
- E. The manuals shall be identified on the cover as "Operating and Maintenance Manual" with additional cover display of the name and location of project, the OWNER, the General CONTRACTOR, and the Subcontractor's installing equipment represented in the brochure.
- F. The manual shall have a Table of Contents and shall be grouped in sections according to the sections of Division 27 and Division 28. Each section shall have a copy of the pages of the Specifications covered within the section. Sections shall be organized as follows:
  - 1. Each section in the manual shall identify the grouping of all literature required for the system or equipment included.
  - 2. The contents of each section shall be arranged in the following sequence: First, the approved engineering submittals with complete performance and technical data; second, the manufacturer's installation brochure; third, the manufacturer's operating and maintenance brochure; fourth, the manufacturer's installation wiring diagram; fifth, the CONTRACTOR's field wiring diagram, if different; and sixth, the manufacturer's brochure listing replacement part numbers and description.
  - 3. Provide a final section entitled, "Warranties and Guarantees", for all equipment, etc.

### 3.12 EXISTING FACILITIES

- A. The CONTRACTOR shall be responsible for loss or damage to the existing facilities and shall be responsible for repairing or replacing such loss or damage. The CONTRACTOR shall send proper notices and receive written permission from the OWNER to enter existing areas. Before beginning work in existing areas, the CONTRACTOR shall make necessary arrangements and perform other services required for the care, protection, and in-service maintenance of all electrical, communication, plumbing, heating, air condition, and ventilating services for new and existing facilities. The CONTRACTOR shall erect temporary barricades with necessary safety devices to protect personnel from injury, removing all such temporary protection upon completion of the work.
- B. The CONTRACTOR shall provide temporary or new services to existing facilities as required to maintain their proper operation when normal services are disrupted as a result of the work being accomplished under this project.
- C. Where existing construction is removed to provide working and extension access to existing

utilities, the CONTRACTOR shall remove doors, piping, conduit, outlet boxes, wiring, light fixtures air condition ductwork, and equipment, etc. to provide this access and shall reinstall same upon completion of work.

- D. Where partitions, walls, floors, or ceilings of existing construction are indicated to be removed, the CONTRACTOR shall remove and reinstall in locations approved by the OWNER all devices required for the operation of the electrical systems installed in the existing construction. This is to include, but is not limited to, temperature control system devices, electrical switches, relays, fixtures, piping, conduit, etc.

### **3.13 DEMOLITION AND RELOCATION**

- A. The CONTRACTOR shall modify, remove, and relocate all materials and items so indicated on the drawings or required by the installation of new facilities. All removals and/or dismantling shall be conducted in a manner as to produce maximum salvage. Salvage materials shall remain as directed by the OWNER. Materials and items scheduled for relocation and which are damaged during dismantling or reassembly operations shall be repaired and restored to the approval of the OWNER. The CONTRACTOR may substitute new materials and items of like design and quality in lieu of materials and items to be relocated, if approved by the OWNER.
- B. All items scheduled for relocation and/or reuse shall be inspected by the CONTRACTOR and the OWNER or his authorized representative. A written report of the condition of each item shall be made and provided to the OWNER. Where items scheduled for relocation and/or reuse are considered unsuitable for reuse, the CONTRACTOR shall so notify the OWNER and await reinstallation instructions before proceeding with removal. Items damaged in reinstallation shall be repaired or replaced by the CONTRACTOR as directed by the OWNER at not additional cost to the OWNER or the OWNER.
- C. All items which are to be relocated shall be carefully removed in reverse to original assembly or placement and protected until relocated. The CONTRACTOR shall clean, repair, and provide all new materials, fittings, and appurtenances required to complete the relocation and to restore the items to good operative order. All relocations shall be performed by workmen skilled in the work and in accordance with standard practice of the trades involved.
- D. Service lines and wiring to items to be removed, salvaged, or relocated shall be removed to points as indicated on the drawings, specified, or acceptable to the OWNER. Service lines and wiring not scheduled for reuse shall be removed to the points at which reuse is to be continued or service is to remain. Such services shall be sealed, capped, or otherwise tied off or connections into the existing facilities in such a manner as to result in minimum interruption of services to adjacent occupied areas. Services to existing areas or facilities which must remain in operation during the construction period shall not be interrupted without prior specific written approval of the OWNER.

### **3.14 OUTAGES**

- A. Outages of services as required by the project will be permitted, but only at a time approved by the OWNER. The CONTRACTOR shall notify the OWNER in writing two (2) weeks in advance of the requested outage to schedule required outages. No outages shall be taken unless written approval has first been received from the OWNER. The time allowed for outages will not be during normal working hours unless otherwise approved by the OWNER. All costs of outages, including overtime charges, shall be included in the Contract amount.

### **END OF SECTION**

## **SECTION 27 15 00 COMMUNICATIONS HORIZONTAL CABLING**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Horizontal (distribution) communications wiring and connecting hardware from Telecommunications Room (TR) to Telecommunication Outlets (TO).

#### **1.2 REFERENCE STANDARDS**

- A. ANSI/TIA-568.0-D – Generic Communications Cabling for Customer Premises.
- B. ANSI/TIA-568.1-D – Commercial Building Communications Cabling Standard Part 1: General Requirements.
- C. ANSI/TIA 568-C.2 – Balanced Twisted-Pair Telecommunications Cabling and Components Standards
- D. ANSI/TIA-569-D – Commercial Building Standard for Telecommunications Pathways and Spaces.
- E. ANSI/TIA-606-B – Administration Standard for the Commercial Telecommunications Infrastructure.
- F. ANSI/JSTD-607-C – Commercial Building Bonding and Grounding (Earthing) Requirements for Telecommunications.
- G. NFPA 70 – National Electrical Code (NEC).
- H. BICSI – TDMM, Building Industries Consulting Services International, Telecommunications Distribution Methods Manual

#### **1.3 PRE-INSTALLATION MEETINGS**

- A. Convene pre-installation meeting 2 weeks before start of installation of communications horizontal cabling. Should occur with OWNER representatives, Engineer, and contractor project manager and project foreman.
- B. Review materials, installation, field quality control, labeling, protection, and coordination with other work.

**1.4 SUBMITTALS**

- A. Comply with Section 27 00 00 – Submittal Procedures.
- B. Product Data: Submit manufacturer's product data sheets, including installation instructions verifying that materials comply with specified requirements and are suitable for intended application.
- C. Installer's Project References: Submit installer's list of successfully completed communications horizontal cabling projects, including project name and location, name of architect, and type and quantity of communications horizontal cabling installed.

**1.5 QUALITY ASSURANCE**

- A. Manufacturer's Qualifications: Manufacturer regularly engaged, for past 10 years, in manufacture of communications horizontal cabling of similar type to that specified.
- B. Installer's Qualifications:
  - 1. Approved Leviton Optimized Installer or Berk-Tek Oasis Optimized Integrator Optimized before, during, and through completion of the system installation. Supporting documentation will be required as part of the submittal.
  - 2. Responsible for workmanship and installation practices in accordance with Leviton Optimized Installer Program and Berk-Tek Oasis Program.

**1.6 DELIVERY, STORAGE, AND HANDLING**

- A. Delivery and Acceptance Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage and Handling Requirements:
  - 1. Store and handle materials in accordance with manufacturer's instructions.
  - 2. Keep materials in manufacturer's original, unopened containers and packaging until installation.
  - 3. Store materials in clean, dry area indoors.
  - 4. Protect materials during storage, handling, and installation to prevent damage

**1.7 WARRANTY**

- A. The horizontal communications cabling system installed shall be eligible for coverage by a Limited Lifetime Warranty to the end user.
  - 1. Horizontal channels shall be completed with Leviton Network Solutions factory-terminated copper and/or fiber optic patch cords in order to be eligible for the applicable Berk-Tek or Leviton Warranty with channel performance guarantees.
  - 2. Approved product shall be listed on the most recent version of the applicable Berk-Tek Leviton Technologies data sheets for each Berk-Tek Leviton Technologies solution.

- B. The horizontal communications cabling system installed shall be eligible for coverage by a Limited Lifetime Warranty to the end user.
  - 1. Horizontal channels shall be completed with Leviton Network Solutions factory-terminated copper and/or fiber optic patch cords in order to be eligible for the applicable Berk-Tek or Leviton Warranty with channel performance guarantees.
  - 2. Approved product shall be listed on the most recent version of the applicable Berk-Tek Leviton Technologies data sheets for each Berk-Tek Leviton Technologies solution.
- C. Optimized Installer/Optimized Integrator shall provide labor, materials, and documentation in accordance with Berk-Tek and Leviton Network Solutions requirements necessary to ensure that the Owner will be furnished with a Limited Lifetime Warranty.
- D. The installed structured cabling system shall provide a warranty guaranteeing installed channel performance above the ANSI/TIA 568-C requirements for Cat 6A cabling systems or ISO 11801 requirements for Class D, Class E, and/or Class E<sub>a</sub>.
  - 1. Standards-compliant channel or permanent link performance tests shall be performed in the field with a Berk-Tek Leviton Technologies approved certification tester in the appropriate channel or permanent link test configuration. See 1.8 A.1 above for channel requirements.
- E. Necessary documentation for warranty registration shall be provided to the manufacturer by the installer (within 10 days) following 100 percent testing of cables.
  - 1. Submit test results to Leviton Network Solutions or to Berk-Tek, in the certification tester's original software files. A copy of test results must be submitted to the district.
  - 2. Installer shall ensure that the warranty registration is properly submitted, with all required documentation within 10 days of project completion.
  - 3. Optimized Contractor/Optimized Integrator must adhere to the terms and conditions of the respective manufacturer's warranty programs.
- F. Installer shall ensure that the Owner receives the manufacturer issued project warranty certificate within 60 calendar days of warranty registration.

## **PART 2 PRODUCTS**

### **2.1 MANUFACTURERS**

- A. Leviton Network Solutions, 2222 222<sup>nd</sup> Street SE, Bothell, Washington 98021. Phone 425-486- 2222. Fax 425-485-3373. Website [www.leviton.com](http://www.leviton.com).  
  
Berk-Tek, A Nexans Company, 132 White Oak Road, New Holland, PA 17557 Phone: 717-354- 6200. Fax 717-354-7944. Website [www.berktek.com](http://www.berktek.com).

## 2.2 SYSTEM DESCRIPTION

- A. Horizontal Distribution Subsystem: Intra-building twisted-pair and fiber optic communications cabling connecting Telecommunication Rooms (TRs) to Telecommunication Outlets (TOs) located at individual work areas.
- B. Horizontal Cabling: Combination of the following types of cables from TR to TO:
  - 1. Category 6A, cables from TRs to Surveillance Cameras TOs
  - 2. Category 6, (100-Ohm, 4-pair, unshielded twisted pair) cables from TRs to remaining TOs.
- C. Communications Horizontal Cabling System: Includes cables, jacks, patch panels, connecting blocks, patch cords, jumpers, and necessary support systems, such as cable managers and faceplates.
- D. Cables: Route through conduit, cable trays, spaces below raised floors, open ceiling areas, non-ventilated spaces above ceiling tile, and through plenum air-handling spaces above ceiling tile.
- E. Furnish and install all materials necessary for a complete and working communications horizontal cabling system.

## 2.3 STATION CABLING

- A. Category 6A Unshielded Twisted Pair: **CX6650 Cat 6A Enhanced UTP System**
  - 1. 100 ohm, Category 6A, 23 AWG, 4-pair unshielded twisted pair, LANmark-10G2, CMP rated.
    - a. Color: Blue.
    - b. Part Numbers: Reel: 10130484                      Reel in Box: 11085339
    - c. Electrical Characteristics: Characterized to 750 MHz.
    - d. Cable: Third-party verified by ETL.
    - e. Maximum Cable Diameter: 0.300 inch.
    - f. Berk-Tek LANmark-10G2 CMP
    - g. All category cabling manufacturers must be able to provide documentation from an independent third-party testing agency that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.
  - 2. Channel margin guarantees for a **CX6650 Cat 6A Enhanced UTP System** (margin vs. ANSI/TIA-568-C.2 and margin guarantees are for a 4-connector channel).
    - a. Insertion Loss                      3 %
    - b. NEXT                                      4 dB
    - c. PSNEXT                                  5 dB
    - d. ACR-F (ELFEXT)                      7 dB
    - e. PSACR-F (PSELFEXT)                8 dB
    - f. Return Loss                            3 dB
    - g. ACR-N                                    6 dB
    - h. PSACR-N                                7 dB
    - i. PSANEXT                                1 dB
    - j. PSAACR-F                               1 dB

## 2.4 MODULAR JACKS AND FIBER ADAPTERS FOR WORKSTATION OUTLETS

- A. Category 6A Modular Jacks: **CX6650 Cat 6A Enhanced UTP System**,
1. 8-position modular jack, Category 6A, IDC terminals, T568A/B wiring scheme.
  2. The modular connector shall exceed all component performance requirements in the ANSI/TIA-568-C.2 standard for Augmented Category 6 from 1 MHz to 500 MHz to support the IEEE 802.3an standard for 10GBASE-T network performance.
  3. The Modular Connector shall be terminated without the need for any punch down tool or other specialized or proprietary termination tool.
  4. The Connector Module shall feature a termination wire manager that holds individual conductors in place during termination.
  5. The Category 6A Modular Connector termination method shall be consistent with the termination method available for Category 5e and Category 6 UTP modules from the same manufacturer. The same termination method shall also be consistent with Category 5e, 6 and 6A shielded modules from the same manufacturer.
  6. The Modular Connector shall be reusable and support multiple termination and re-termination cycles and be facilitated by simple termination release levers.
  7. The modular connector shall be independently tested and verified by Intertek (ETL) to exceed Category 6A component performance.
  8. The eight-position connector module shall utilize a method of fine tensioning that prevents six-position modular plug insertion from damaging either the cord or the module.
  9. The connector body shall be made of die-cast zinc and all plastic components shall be made of high-impact, fire-retardant plastic rated UL 94V-0.
  10. The connector shall also be in compliance with all National Electrical Codes; compliant with ANSI/TIA-1096-A (formerly FCC Part 68); cULus Listed; and independently tested for component compliance.
  11. In addition to Category 6A component compliance, the connector shall have the ability to support high megabit and shared sheath applications.
  12. Connector wiring shall be universal and will accommodate both T568A and T568B pair/pin assignments.
  13. The connector shall incorporate a triple-stage compensation design with integrated flexible circuit design that enhances link and channel performance.
  14. The modular connector shall fit a range of telecommunications faceplates, outlets, and field-configurable patch panels.
  15. The modular connector shall be available in 13 TIA 606-A compatible colors.
  16. Connector Module shall be supplied with interchangeable icons (voice, data, A/V, and blank, color coded to match the connector face) for easy identification and tracking of data, voice, or other functions.
  17. Additional bulk Icons for the connector shall be available in 13 colors to facilitate a broad range of connector marking/identification options.
  18. Connector Modules shall be available with an internal shutter to protect against dust and debris.
  19. Connector Module shall have a maximum depth of 1.31”.
  20. Each connector shall be identified on its face as CAT 6A.
  21. Basis for design: Leviton Atlas-X1 UTP Cat 6A Connector.
  22. Color: blue.
  23. Part Numbers: Standard version: 6AUJK-RL6 (blue).

## 2.5 WORK AREA OUTLETS

### A. Faceplates

1. Flush-Mounted Faceplates
  - a. 1-port single-gang plastic wallplate with ID windows.
  - b. Colors: white
  - c. Part Number: Leviton 42080-1WS (white)
2. 2-port single-gang plastic wallplate with ID windows.
  - a. Colors: white
  - b. Part Number: Leviton 42080-2WS (white)
3. 3-port single-gang plastic wallplate with ID windows.
  - a. Colors: white
  - b. Part Number: Leviton 42080-3WS (white)
4. 4-port single-gang plastic wallplate with ID windows.
  - a. Colors: white
  - b. Part Number: Leviton 42080-4WS (white)
5. Flush-Mounted Stainless Steel Faceplates
  - a. 1-port single-gang stainless steel with ID windows.
    - 1) Part Number: Leviton 43080-1L1
  - b. 2-port single-gang stainless steel with ID windows.
    - 1) Part Number: Leviton 43080-1L2
6. Surface-Mounted outlet boxes:
  - a. 1-port QuickPort surface-mount box, plastic, with ID window
    - 1) Color: white
    - 2) Part Number: Leviton 41089-1WP
  - b. 2-port QuickPort surface-mount box, plastic, with ID window
    - 1) Color: white
    - 2) Part Number: Leviton 41089-2WP
7. Cabling that is ran exterior or through underground conduits shall be indoor/outdoor rated CAT6A. Berk-Tek reel P/N: 11142753.

## 2.6 PATCH PANELS

- a. EXISTING

## 2.7 PATCH CORDS/JUMPERS

- A. Jurupa Unified School District has a standardized color scheme for all patch and station cords.
- B. High-Flex Category 6A Modular Patch Cords: **CX6650 Cat 6A Enhanced UTP System**
  1. Slim-Line style, Category 6A, shielded cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.
  - b. Color: 9 colors available.
  - c. Part Numbers:



- 1) Leviton H6A10-1Y (1 foot, RED). Patch
- 2) Leviton H6A10-10Y (length determined in field condition, RED). Station/Device

### **PART 3 EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine areas to receive communications horizontal cabling.
- B. Notify OWNER of conditions that would adversely affect installation or subsequent use.
- C. Do not begin installation until unacceptable conditions are corrected.

#### **3.2 INSTALLATION – GENERAL**

- A. The CAT 6A cabling shall be manufactured by Berk-Tek Leviton. Such cabling to each camera location shall be provided and installed by cabling contractor certified by Berk-Tek Leviton and authorized to install the cable plant and connectivity products. All CAT 6A cable shall be Blue.
- B. Provide all penetrations and all conduits as necessary for complete system installation. Provide three-sided pre-finished metal hood and seal to wall where conduit penetrates exterior wall. Sheer/fire wall penetrations shall be pre-approved by OWNER. All pre-approved Sheer/fire wall penetrations shall be properly caulked.
- C. All exterior penetrations require necessary weatherproofing to avoid moisture penetration.
- D. Install new conduit on portable pipe supports – (low profile type), as manufactured by Portable Pipe Hangers or Advanced Support Products. Provide roof protection pads under each support. Coordinate location and routing with OWNER prior to rough-in or installation of system.
- E. All outdoor cable runs underground shall be rated for underground use. Each camera shall carry a minimum of 25' of conduit and one wall penetration of additional cabling routing.
- F. CONTRACTOR shall not run any power cabling for any security equipment on rack tray system due to EMI considerations. CONTRACTOR shall provide individual cabling support for all low voltage power cabling.
- G. All cabling for entire project shall be installed at 5'-00" intervals in dedicated support system using a j-hooks support system. Cable supports will be securely attached directly to building structure. Do not attach cabling or supports to ductwork, piping, grid hangers, conduit, or equipment. Cabling shall run collocated on existing j-hook infrastructure and use existing conduit sleeves.
- H. Cable Placement: Cable installation in the wiring closet must conform to OWNER standards. All cabling shall be routed so as to avoid interference with any other service or system, operation, or maintenance location. Avoid crossing areas horizontally just above or below any riser conduit. Lay and dress cables to allow other cables to enter the conduit/riser without difficulty at a later time by maintaining a working distance from these openings.
- I. Cable shall be routed as closely as possible to the ceiling, floor or corners to ensure that adequate wall or backboard space is available for current and future equipment. All cable runs within the wiring closet shall be horizontal or vertical within the constraints of minimum cable

bending radii. Minimum bend radius shall be observed. Cables shall not be tie- wrapped to electrical conduit or other equipment.

- J. All incoming cables shall be routed on the cable tray and neatly dressed down to the patch panels. New CAT6A cabling needs to go to the existing Leviton CAT6A patch panel at the bottom of the serving distribution frame.
- K. Install communications horizontal cabling in accordance with manufacturer's instructions, ANSI/TIA-568-C.0, ANSI/TIA-568-C.1, ANSI/TIA-569-C, BICSI TDMM, and NFPA 70.
- L. Field Terminated Copper Patch Cords and Jumpers: Not allowed.
- M. Copper Patch Cords: Manufactured by Leviton Network Solutions.
- N. Install cables after building interior has been physically protected from weather and mechanical work likely to damage cabling has been completed.
- O. Ensure cable pathways are completely and thoroughly cleaned before installing cabling.
- P. Inspect installed conduit, wireway, cable trays, and innerduct.
- Q. Clean additional enclosed raceway and innerduct systems furnished.
- R. Provide protection for exposed cables where subject to damage.
- S. Abrasion Protection:
  - 1. Provide abrasion protection for cable or wire bundles which pass through holes or across edges of sheet metal.
  - 2. Use protective bushings to protect cables.
- T. Cable Ties and Other Cable Management Clamps:
  - 1. No more than hand tightened.
  - 2. Fit snugly, but not compress, crimp, or otherwise change physical characteristics of cable jacket or distort placement of twisted-pair components.
  - 3. Replace cables exhibiting stresses due to over tightening of cable management devices.
  - 4. Use plenum-rated cable ties in plenum spaces.
  - 5. Velcro wraps are to be used for cable bundle management. Plenum-rated Velcro wraps are available from Leviton. Nylon cable ties should not be used during installation or for finishing.
- U. Where possible, route cables in overhead cable trays and inside wire management systems attached to equipment cabinets and racks.
  - 1. Use Velcro or ducts to restrain cabling installed outside of wire management systems on racks or in cabinets.
  - 2. Cable Trays: Do not exceed 50 percent fill.
- V. Pull Cord:
  - 1. Nylon, 1/8-inch minimum.
  - 2. Co-install with cables installed in conduit.
- W. Cable Raceways: Do not fill greater than ANSI/TIA-569-B maximum fill for particular raceway type.

## 27 15 00 Communications Horizontal Cabling – Addendum 01

- X. Support horizontal cables at a maximum of 48-inch (1.2 to 1.5-m) irregular intervals, if J-hook or trapeze system is used to support cable bundles.
- Y. Do not allow cables to rest on acoustic ceiling grids, plumbing pipes, or electrical conduits.
- Z. Bundle horizontal distribution cables in groups of no more than amount of cables designed for by cable support manufacturer, based on cable OD and weight.
- AA. Fire-Sprinkler System:
  - 1. Install cables above fire-sprinkler system.
  - 2. Do not attach cables to fire-sprinkler system or ancillary equipment or hardware.
  - 3. Install cable system and support hardware so that it does not obscure valves, fire alarm conduit, boxes, or other control devices.
- BB. Do not attach cables to ceiling grid or lighting fixture wires. Any supports needed above the ceiling shall be independent of the ceiling grid system.
- CC. Install appropriate carriers to support cabling, where support for horizontal cables are required.
- DD. Replace before final acceptance, cables damaged or exceeding recommended installation parameters during installation.

**3.3 INSTALLATION – UNSHIELDED TWISTED-PAIR CABLES**

- A. Install unshielded twisted-pair cables in accordance with manufacturer's instructions.
- B. Install cables in continuous lengths from origin to destination, without splices, except for transition points or consolidation points. These locations must be approved in writing, or specified explicitly in construction documents.
- C. Where transition points or consolidation points are allowed, they shall be located in accessible locations and housed in enclosure intended and suitable for the purpose.
- D. Cable Minimum Bend Radius and Maximum Pulling Tension:
  - 1. Do not exceed bend radius for UTP = 4 X Cable OD, FTP = 4 X Cable OD.
  - 2. Install unshielded twisted-pair cables so that there are no bends smaller than 4 times cable outside diameter at any point in the run and at the termination field.
  - 3. Pulling Tension on 4-Pair UTP Cables: Do not exceed 25 ft.lb. for 4-pair UTP cable.
- E. Separation from Power Lines: Provide following minimum separation distances between pathways for copper communications cables and power wiring of 480 volts or less:
  - 1. Open or Nonmetal Communications Pathways:
    - a. Electric motors, fluorescent light fixtures, and unshielded power lines carrying up to 3 kVA: 12 inches.
    - b. Electrical equipment and unshielded power lines carrying more than 5 kVA: 36 inches.
    - c. Large electrical motors or transformers: 48 inches.
  - 2. Grounded Metal Conduit Communications Pathways:
    - a. Electrical equipment and unshielded power lines carrying up to 2 kVA: 2-1/2 inches.
    - b. Electrical equipment and unshielded power lines carrying from 2 kVA to 5 kVA: 6 inches.
    - c. Electrical equipment and unshielded power lines carrying more than 5 kVA: 12 inches.

- d. Power lines enclosed in grounded metal conduit (or equivalent shielding) carrying from 2 kVA to 5 kVA: 3 inches.
- e. Power lines enclosed in grounded metal conduit (or equivalent shielding) carrying more than 5 kVA: 6 inches.

### 3.4 INSTALLATION – UNSHIELDED TWISTED-PAIR TERMINATION

- A. Coil cables to house cable coil without exceeding manufacturer's bend radius.
  - 1. In hollow wall installations where box eliminators are used, store excess wire in wall.
  - 2. Store no more than 12 inches of UTP and 36 inches of fiber slack.
  - 3. Loosely coil excess slack and store in ceiling above each drop location, when there is not enough space present in outlet box to store slack cables.
- B. Dress and terminate cables in accordance with ANSI/TIA-568-C.0, ANSI/TIA- C.1, BICSI TDMM, and manufacturer's instructions.
- C. Terminate 4-pair cables on jack and patch panels using T568-B or T568-A wiring scheme.
- D. Pair Untwist at Termination: Do not exceed 12 mm (1/2 inch).
- E. Bend Radius of Horizontal Cables:
  - 1. Not less than 4 times OD of UTP cables.
  - 2. Not less than 4 times OD of FTP cables.
- F. Maintain cable jacket to within 25 mm (1 inch) of termination point.
- G. Neatly bundle cables and dress to their respective panels or blocks.
  - 1. Feed each panel or block by individual bundle separated and dressed back to point of cable entrance into rack or frame.

### 3.5 FIELD QUALITY CONTROL

- A. Cables and Termination Hardware: Test 100 percent for defects in installation and verify cabling system performance under installed conditions in accordance with ANSI/TIA-568-C.0.
  - 1. Verify all pairs of each installed cable before system acceptance.
  - 2. Defects in cabling system installation, including but not limited to cables, connectors, patch panels, and connector blocks shall be repaired or replaced to ensure 100 percent useable conductors in all cables installed.
- B. Test all cables in accordance with this specification section, ANSI/TIA-568-C.2, and ANSI/TIA- 568-C.3 standards, and Berk-Tek and Leviton Network Solutions instructions
  - 1. If any of these are in conflict, bring discrepancies to the attention of the Construction manager for clarification and resolution.
- C. Cables, Jacks, Connecting Blocks, and Patch Panels:
  - 1. Verify all pairs of each installed cable before system acceptance.
  - 2. Defects in cabling system installation, including but not limited to cables, connectors, patch panels, and connector blocks shall be repaired or replaced to ensure 100 percent useable conductors in all cables installed.
- D. Testing Unshielded Twisted-Pair Cables: **(NOTE: Permanent Link Test results are required.)**

1. Test twisted-pair copper cable links for continuity, pair reversals, shorts, opens, and performance as specified.
  - a. Additional testing is required to verify Category performance.
  - b. Test horizontal cabling using approved certification tester for Category 6A, Category 6, and Category 5e performance compliance in accordance with ANSI/TIA-568-C.2. (NOTE: Appropriate Fluke, Agilent, Ideal, or JDSU certification testers may be used).
  - c. Category 6A shall conform to ANSI/TIA-568-C.2 for augmented Category 6 to 500 MHz
2. Follow ANSI/TIA-568-C.2.
3. Basic Tests Required:
  - a. Wire map.
  - b. Length (feet).
  - c. Insertion loss (dB), formerly attenuation.
  - d. NEXT (Near end crosstalk) (dB).
  - e. Return loss (dB).
  - f. ELFEXT (dB).
  - g. Propagation delay (ns).
  - h. Delay skew (ns).
  - i. PSNEXT (Power sum near-end crosstalk loss) (dB).
  - j. PSELFEXT (Power sum equal level far-end crosstalk loss) (dB).
4. Test Category 6A by auto test to 500 MHz.
  - a. Alien Crosstalk (AXT) testing and AXT test results are NOT required by Leviton or Berk-Tek for warranty of a Category 6A system. (**Note:** AXT testing may be required by the customer, in which case these tests WOULD have to be performed).
5. Test Category 6 by auto test to 250 MHz.
6. Provide test results in approved certification testers original software format on CD, with the following minimum information per cable:
  - a. Circuit ID. Final circuit ID as identified by labeling and as-builts.
  - b. Information from specified basic tests required.
  - c. Test Result: “Pass” or “Fail”.
  - d. Date and time of test.
  - e. Project name.
  - f. NVP.
  - g. Software version.
7. An occasional asterisk-Pass (\*Pass) will be accepted by Leviton or Berk-Tek at the manufacturer’s discretion, but rework of these links should be done in an attempt to achieve clean “Pass” results prior to submission of test results.
8. To receive Manufacturer’s Warranty for the project, submit software copy of test results, in original tester software format, to the Owner and to the Manufacturer (either Berk-Tek or Leviton).
9. Submit fully functional version of tester software for use by the Owner in reviewing test results.
10. Report in writing to the Owner immediately, along with copy of test results, failed test results that cannot be remedied through re-termination (as in the case of reversed or split pairs).

### 3.6 LABELING

- A. All labeling is to be in accordance with ANSI/TIA-606-B and manufacturer’s instructions.
- B. Label horizontal cables using machine-printed label at each end of cable at approximately 12 inches from termination point.
  1. Sharpie and handwritten Labels: Not acceptable.
- C. Label patch panel ports and TO ports with cable identifier.

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- D. Labels: Denote TO ID and unique cable number for that TO, i.e. 2-A43 for telecommunications zone 2, patch panel A, cable number 43. The MDF is zone 1, IDF 2 is zone 2.
  - 1. Owner may provide specific labeling requirements. Coordinate with the Owner.

- E. Note labeling information on shop drawings, redlines, and final as-builts.

**3.7 PROTECTION**

- A. Protect installed communications horizontal cabling from damage during construction.

**END OF SECTION**

## **SECTION 28 05 00 - GENERAL ELECTRONIC SAFETY SYSTEMS REQUIREMENTS**

### **PART 1 – GENERAL**

#### **1.1 WORK INCLUDES**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 0, apply to this Section.
- B. Furnishing of all required materials, equipment, tools, scaffolding, labor, and transportation necessary for the complete installation of the Electronic Safety Systems as shown on the drawings and as specified herein.
- C. Coordinate wireway, raceway, power, and outlet requirements.
- D. Cable pathways, conduit, boxes and cable support systems shall be complete with bushings, de-burred, cleaned, and secure prior to installation of cable.
- E. Provide and install prior to cable installation plastic snap in bushings at each box opening, passage through a metal stud, and at the end of all open conduit stubs or sleeves to protect the cabling from damage.
- F. Supply backboxes for installation as required.
- G. Connect all back-up batteries per manufacturer's instructions.
- H. It is the intent of the Contract Documents to provide complete installations although every item necessary may not be specifically mentioned or shown.
- I. Provide line-by-line specification review for each Division 27 and Division 28 section annotated to certify compliance or deviation.

#### **1.2 WORK TO BE INCLUDED BY THE CONTRACTOR IN BASE CONTRACT PROPOSAL**

- A. Provide utility services conduit as outlined on Drawings and Specifications as required.
- B. All required conduit for accessibility to attic space.
- C. Furnishing and installation of all required standard back boxes and conduit.
- D. Installation of special back boxes as necessary.
- E. Furnishing and installation of all surface raceways, and other wireways which are detailed or specified under Division 27.
- F. Provide equipment-mounting boards as required.

#### **1.3 CODES, STANDARDS, AND THEIR ABBREVIATIONS**

- A. General:
  - 1. Perform all work in strict accordance with the requirements and recommendations stated in the codes and standards except when requirements are exceeded by the contract



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documents.

2. In addition to the requirements outlined in other sections of the specifications the following standards are imposed as applicable to the work in each instance:
  - a. OSHA Safety and Health Regulations for Construction.
  - b. NFPA No. 70 National Electrical Code.
  - c. NESC National Electrical Safety Code, ANSI Standard C2.
  - d. NEIS National Electrical Installation Standards.
  - e. Local Codes and Ordinances.
  
- B. Where local codes or practices exceed or conflict with the NEC, it shall be the Contractor's responsibility to perform the work in accordance with the local code prevailing and local interpretations thereof. Any such additional work shall be performed at no additional cost to the Owner.
  
- C. Materials and components shall be UL listed and labeled by Underwriters Laboratories, Inc. for the intended use under the latest appropriate testing standard.

#### 1.4 LIST OF ASSOCIATIONS AND STANDARDS:

ADA:	Americans with Disabilities Act.
ANSI:	American National Standards Institute, 1430 Broadway; New York, NY 10018.
ASTM:	American Society for Testing and Materials, 1916 Race Street; Philadelphia, PA 19103.
BICSI:	(RCDD5 Standards), 8610 Hidden River Parkway, Tampa, FL 33637
CBM:	Certified Ballast Manufacturers Association, 2116 Keith Building; Cleveland, Ohio 44115.
IEEE:	Institute of Electrical and Electronics Engineers, 345 East 47th Street; New York, NY 10017.
ICEA:	Insulated Cable Engineers Association, P.O. Box P, South Yarmouth, MA 02664.
NEC:	National Electrical Code; NFPA No. 70.
NECA:	National CONTRACTORs Association, Inc., 7315 Wisconsin Ave.; Washington, DC 20014.
NEMA:	National Electrical Manufacturers Association, 155 East 44th Street; New York, NY 10017.
NESC:	National Electrical Safety Code, ANSI Standard C2.
NFPA:	National Fire Protection Association, 60 Batterymarch Street; Boston, MA 02110.
OSHA:	Occupational Safety and Health Administration, US Department of Labor; Washington, DC 20402.
UL:	Underwriters Laboratories, Inc., 333 Pfigsten Road; Northbrook, IL 60062.

- A. Nothing in the Contract Documents shall be construed to permit work not conforming to these codes.
  
- B. When two or more codes or standards are applicable to the same work, then the stricter code or standard shall govern.
  
- C. The date of the code or standard is that in effect on the date of issue stated on the contract documents, except when a particular publication date is specified.
  
- D. The Contractor shall comply with all State, Federal, NFPA, local codes and ordinances that may alter any part of the plans or specifications. The Contractor shall bear all costs for

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correcting any deficiencies due to non-compliance.

- E. Where local codes and ordinances are not in writing or on record but local precedence have been set, the Owner shall pay for any additional resulting cost.

## 1.5 DEFINITIONS

- A. Approval: It is understood that approval must be obtained from the OWNER in writing before proceeding with the proposed work. Approval by the OWNER of any changes, submitted by the Contractor, will be considered as general only to aid the Contractor in expediting his work.
- B. If the Contractor, engaged to execute said work, employs Sub-Contractors to perform various portions of the work included under a particular Section, they shall be held responsible for the execution of this work, in full conformity with Contract Document requirements. The Contractor shall cooperate at all times and shall be responsible for the satisfactory cooperation of his Subcontractors so that all of the various sections and phases of work may be properly coordinated without unnecessary delays or damage.
- C. PDF file or .pdf: The filename extension associated with “Portable Document Format” files, which are multi-platform computer files in the ISO 32000-1:2008 open standard format developed and licensed by Adobe Systems. These files are a digital electronic representation of text, documents, images, and technical drawings in a font and color-accurate fixed-layout format that is platform and display resolution independent. PDF files can be electronically transmitted, viewed, or printed with various free PDF reader application programs, and may allow markups/comments with various PDF editing application programs.
- D. Provide: Defined as requiring both the furnishing and installation of the item or facility indicated, complete in all respects and ready for operation unless otherwise specifically noted.

## 1.6 SCHEDULE OF VALUES, APPLICATION FOR PAYMENT

- A. The Contractor shall in accordance with the General Provisions of the Contract, including General and Supplementary Conditions, and Division 0, complete a Schedule of Values and Applications for Payment.

## 1.7 WARRANTY

- A. The Contractor shall warranty his work against defective materials and workmanship for a period of five (5) years from date of acceptance of the job.
- B. Neither the final payment nor any provisions in Contract Documents shall relieve the Contractor of the responsibility for faulty materials or workmanship.
- C. He shall remedy any defects due thereto and pay for any damage to other work resulting there from, which shall appear within a period of five (5) years from date of substantial completion.
- D. The Owner shall give notice of observed defects with reasonable promptness.
- E. This Warranty shall not be construed to include the normal maintenance of the various components of the system covered by these specifications.

## 1.8 SITE VISIT

- A. No consideration will be granted for any alleged misunderstanding of the materials to be furnished or the amount of work to be done, it being fully understood that the tender of a

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proposal carries with it the agreement to all items and conditions referred to herein, or indicated on the accompanying plans or required by nature of the site of which may be fairly implied as essential to the execution and completion of any and all parts of the work.

## 1.9 SUBMITTALS

- A. Provide a complete submittal for each section as specified.
- B. Submit complete submittal package within 15 calendar days after award of this work for approval. Equipment is not to be ordered without approval. Partial submittals are not acceptable for review. Each submittal shall include a dated transmittal.
- C. A submittal will be electronically transmitted in PDF file format.
- D. Each Product data submittal shall include:
  - 1. A cover sheet with the name and location of the project, the name, address, and telephone number of the Contractor, and the name, address, and telephone number of the submitting sub-contractor. Include on or after the cover sheet sufficient space for review stamps.
  - 2. An indication of any deviations from Contract Document requirements, including variations and limitations. Show any revisions to equipment layout required by use of selected equipment.
  - 3. A product data index and complete equipment list including for each product submitted for approval the manufactures name and part number, including options and selections.
  - 4. Cut-sheets or catalog data illustrating the physical appearance, size, function, compatibility, standards compliance, and other relevant characteristics of each product on the equipment list. Indicate by prominent notation (an arrow, circle, or other means) on each sheet the exact product and options being submitted.
  - 5. Submit design data, when the scope of work requires, including calculations, schematics, risers, sequences, or other data.
  - 6. When the contract requires extended product warranties, submit a sample of warranty language.
  - 7. Any resubmittal shall include a complete revised equipment list and any product data that is revised.
- E. Submit shop or coordination drawings, when specified or the required for the scope of work, which include information that will allow to the Contractor to coordinate interdisciplinary work and when necessary guide the manufacturer or fabricator in producing the product. Shop or coordination drawings shall be specifically prepared to illustrate the submitted portion of work, this may require diagrams, schedules, details, and accurate to scale equipment and device layouts prepared using a CAD or BIM engineering drawing program.
- F. The Engineer's and OWNER's review of submittals is only for confirmation of adherence to design of project and does not relieve the Contractor of final responsibility for furnishing all materials required for a complete working system and in complying with the Contract Documents in all respects.

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**1.10 PROJECT RECORD DOCUMENTS**

- A. The Contractor shall keep a set of plans on the job, noting daily all changes made in connection with the final installation including exact dimensioned locations of all new and uncovered existing utility piping outside the building.
- B. Legible redlines are required to be turned over prior to the Owner punch walk. Upon submitting request for final payment, Contractor shall turn over to the Owner, revised and final as built drawings showing “as installed” work.
- C. In addition to the above, the Contractor shall accumulate during the jobs progress the following data in electronic PDF file format to be turned over to the OWNER for checking:
  - 1. All warranties, guarantees, and manufacturer's directions on equipment and material covered by the Contract.
  - 2. PDF file of all Shop Drawing prints and CAD or BIM engineering drawing program files.
  - 3. Any software programs, data/programming files, passwords, special interface cables, or keys that may be needed to maintain or access equipment.
  - 4. Set of operating instructions. Operating instructions shall also include recommended maintenance and seasonal changeover procedures.
  - 5. Any and all other data and/or plans required during construction.
  - 6. Repair parts lists of all major items and equipment including name, address, and telephone number of local supplier or agent.
  - 7. The first page, or pages, shall have the names, addresses, and telephone numbers of the following:
    - a. Contractors.
    - b. Major Equipment Suppliers
    - c. Submit systems warranties

**1.11 TRAINING**

- A. See other Specification sections for requirements.

**1.12 PLANS AND SPECIFICATIONS**

- A. The intent of the project drawings is to establish the types of systems and functions, but not to set forth each item essential to the functioning of the system.
- B. Electrical drawings are generally diagrammatic and show approximate location and extent of work.
- C. Install the work complete including minor details necessary to perform the function indicated. Provide Electronic Safety Systems (including all hook-ups) complete in every respect and ready to operate.
- D. If clarification is needed, consult the OWNER/Engineer.
- E. Review pertinent drawings and adjust the work to conditions shown. Where discrepancies occur between drawings, specifications, and actual field conditions, immediately notify the OWNER/Engineer for his interpretation.
- F. The OWNER/Engineer reserves the right to make any reasonable change in the location of any part of this work without additional cost to the Owner.

**1.13 PRODUCT SUBSTITUTIONS:**

- A. Descriptions and details, and Basis of Design manufacturers' names listed indicated in the plans and specifications shall establish a standard of quality, function, and design. Otherwise, where a specific manufacturer's product is indicated, products of other manufacturers listed as acceptable may be submitted for approval based on the substitute product being, in the opinion of the OWNER and Engineer, of equivalent or better quality than that of the product specified.
- B. Bid opening contractors wishing to propose systems which differ in manufacturer, features, functions, or operating characteristics from those outlined in these specifications must do so in writing using the Request for Substitution at Time of Bid form, and following the procedures outlined in Section 19 of the Instructions to Bidders.
- C. For manufacturers equipment or models other than that specified, the proposed contractor shall supply proof that such substitute equipment equals or exceeds the features, functions, performance, and quality of the specified equipment. Proposals must include detailed information showing all deviations from the system as specified and include relevant technical and cost data. This shall include a complete description of the proposed substitution, drawings, catalog cuts, performance data, test data, or any other data or information necessary for evaluation.
- D. The Engineer will consider all such submittals and the OWNER will issue an addendum listing items that the Engineer considers acceptable. Only such items as specified or approved as acceptable will be installed on this project.
- E. Substitute products for which the proposed contractor does not obtain prior approval will not be considered acceptable for this project. Final approval of the alternate system shall be based on the decision of the Owner and OWNER. Prior approval to make a proposal for this project does not automatically ensure the system will be an acceptable equivalent.
- F. The Contractors' proposal represents that the contract proposal price is based solely upon the materials, equipment, and labor described in the Contract Documents (including addenda, if any) and that he contemplates no substitutions or extras.
- G. The manufacturer of the proposed substitute unit shall provide samples for evaluation, when required, at no charge and non-returnable.
- H. Requests for substitution are understood to mean that the Contractor:
  - 1. Has personally investigated the proposed substitution and determined that it is equivalent or superior in all respects to that specified.
  - 2. Will provide the same guarantee for the substitution that he would for that specified.
  - 3. Will, at no cost to the Owner, replace the substitute item with the specified product if the substitute item fails to perform satisfactorily.
  - 4. After Award of the Contract, substitutions will be considered only under one or more of the following circumstances:
    - a. The substitution is required for compliance with subsequent interpretations of code or insurance requirements.
    - b. The specified product is unavailable through no fault of the Contractor.
    - c. The manufacturer refuses to warranty the specified products as required.
    - d. Subsequent information indicates that the specified product is unable to perform properly or to fit in the designated space.
    - e. In the Engineer's sole judgment, the substitution would be in the Owner's best interest.

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- f. Revisions to the electrical system caused by substitutions shall be under the supervision of the Engineer, at a standard hourly rate charged by the Engineer. Charges from the Engineer, OWNER, and CONTRACTOR shall be paid by the Contractor originating the changes.

#### 1.14 FUTURE USE CABLING

- A. When cabling is installed for future use, it shall be identified with a tag of sufficient durability to withstand the environment involved.
- B. Locations and Existing Conditions:
  1. Location and condition of any existing equipment or services, when shown, have been obtained from substantially reliable sources, are shown as a general guide only, without guarantees as to accuracy.
  2. The Contractor will examine the site, verify all requirements, service points, and availability of all services required to complete this project. No consideration will be granted for any alleged misunderstanding of the materials and labor to be provided as necessitated by nature of the site including those items that may be fairly implied as essential to the execution and completion of any and all parts of this project.

#### 1.15 PROTECTION OF EQUIPMENT AND MATERIALS

- A. The Contractor shall take such precautions as may be necessary to protect his apparatus from damage.
- B. This shall include the creation of all required temporary shelters to protect any apparatus above the floor of the construction and the covering of apparatus in the completed building with tarpaulins or other protective covering.
- C. Failure to comply with the above to the satisfaction of the Owner's inspector will be sufficient cause for the rejection of the equipment in question and its complete replacement by the Contractor.

#### 1.16 FINAL OBSERVATION

- A. It shall be the duty of the Contractor to make a careful observation trip of the entire project, assuring themselves that the work on the project is ready for final acceptance before calling upon the OWNER/Engineer to make a final observation.
- B. To avoid delay of final acceptance of the work, the Contractor shall have all necessary bonds, warranties, receipts, affidavits, et cetera, called for in the various articles of these specifications, prepared and signed in advance, together with a letter of transmittal, listing each paper included, and shall deliver the same to the OWNER/Engineer at or before the time of said final observation. The Contractor is cautioned to check over each bond, receipt, et cetera, before preparing for submission to verify that the terms check with the requirements of the specifications.
- C. The following will be required at time of final completion:
  1. Final clean up completed.
  2. All systems are fully operational, all material and devices installed.
  3. As built (as installed) drawings and operations manuals.

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**1.17 PROHIBITED MATERIALS**

- A. No new asbestos, lead, or materials containing these substances shall be permitted in this project. The Contractor shall consult the OWNER concerning these materials if their presence is suspected. All work in or around existing asbestos or lead materials is at the sole risk of the Contractor and his personnel.

**1.18 CUTTING AND PATCHING**

- A. Notify the OWNER sufficiently ahead of construction of any floors, walls, ceiling, roof, etc., of any openings that will be required for his work.
- B. The Contractor shall see that all sleeves required for his work are set at proper times to avoid delay of the job.
- C. All necessary cutting of walls, floors, partitions, ceilings, et cetera, as required for the proper installation of the work under this Contract shall be done at the Subcontractor or at the Subcontractor's expense in a neat and workmanlike manner, and as approved by the OWNER/Engineer.
- D. Patching of openings and/or alterations shall be provided by the Electronic Safety Systems Subcontractor or at the Subcontractor's expense in an approved manner.
- E. No joists, beams, girders, or columns shall be cut by any Contractor without first obtaining written permission of the OWNER/Engineer.
- F. All openings in firewalls and floors shall be completely sealed after installation for a completely airtight installation. Sealing material shall be non-combustible and UL approved. The installed sealing assembly shall not cause the fire rating of the penetrated structure to be decreased.
- G. All openings in exterior walls shall be sealed watertight.
- H. Seal voids around conduits penetrating fire-rated assemblies and partitions using fire stopping materials and methods in accordance with NFPA and local codes.

**1.19 MANUFACTURERS' INSTRUCTIONS**

- A. All equipment and devices shall be installed in accordance with the drawings and specifications, manufacturer's instructions, and applicable codes.
- B. Where specifications call for installation of a product to be in accordance with manufacturer's instructions and/or where manufacturer's instructions are required for installation of a product, it shall be the contractor's responsibility to obtain the necessary applicable manufacturer's instructions and install the product in accordance with the manufacturer's instructions.
- C. It shall be the Contractor's responsibility to install all equipment, materials, and devices shown on the plans and as called out in these specifications even if manufacturer's instructions are absolutely unattainable.

**1.20 INSTALLATION**

- A. Conduit, innerduct, track, or raceway shall conceal and protect wiring in exposed areas, within walls, through in-accessible areas, floors, chases, under slab, crawlspaces, or underground.

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- B. All conduit, duct, track, and raceway runs shall be spaced apart to allow for maintenance, such as the installation of couplings, without disturbing adjacent pathways.
- C. All work must be performed by workers skilled in their trade. The installation must be complete whether the work is concealed or exposed.
- D. Provide stainless screw/bolt hardware wherever stainless devices are used and in potentially wet areas.

**1.21 ADDITIONAL MATERIALS: INCLUDE IN THE BASE CONTRACT PROPOSAL**

- A. Not Applicable

**PART 2 – PRODUCTS**

- A. Not Applicable

**PART 3 – EXECUTION**

- A. Not Applicable

**END OF SECTION**



**SECTION 28 23 00 VIDEO SURVEILLANCE SYSTEM (VSS)****PART 1 – GENERAL****1.01 SUMMARY/DESCRIPTION OF WORK**

- A. Provide a complete and tested IP-based digital video surveillance system (VSS) including cameras, cabling, digital image cloud-based storage and video management system (VMS), integration and accessibility with Owner's Local/Wide Area Network (LAN/WAN), Internet accessibility through remote view application software and simultaneous user access capability. Provide fully terminated unshielded twisted pair (UTP) cable, UTP terminations, racks, raceways, conduit, and other incidental and miscellaneous premises wiring system hardware as required for a complete and usable system. CONTRACTOR is responsible for providing a complete turnkey system to the owner and is responsible for the complete installation of all required components of the IPVSS. The installation shall comply with applicable codes and standards in effect at the job site and as indicated in the Specifications and drawings.
- B. Provide OWNER with 5-year camera licenses.
- C. The system shall be Non-Proprietary in nature and be available through multiple distribution channels in the nearest metropolitan marketplace. Systems that are manufactured and installed by a factory office and are not available through multiple distribution channels will not be accepted.
- D. Provide all electronic hardware and coordinate with the buildings' LAN/WAN. CONTRACTOR shall coordinate with other system vendors, where appropriate, to facilitate equipment installation, scheduling, protection of equipment and access to the project site in order to provide the Owner a substantially complete project in a timely manner.
- E. The VSS manufacturer shall have products that provide the ability to tie existing footage from non-cloud-based video surveillance system equipment owned and operated by Owner into the new video management system and use analytics from the new system on the existing cameras.
- F. If the VSS camera system submitted includes microphones or other audio capabilities, those features shall have the ability to be permanently or temporarily disabled.

**1.02 RELATED SECTIONS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1, apply to this Section.

**1.03 REGULATORY REQUIREMENTS**

- A. Standards: All work shall be performed in accordance with the latest revisions of the following standards and codes:
  1. Local Building Code
  2. Local Electrical Code
  3. NEC National Electrical Code
- B. VSS shall be NDAA compliant. Cameras and/or VSS (camera system) must not be included in the FCC or NDAA Prohibited manufacturers list.
- C. Other references:
  1. TIA/EIA-568-A - Commercial Building Telecommunications Wiring Standard
  2. EIA/TIA-569 - Commercial Building Standard for Telecommunications Pathways and Spaces.

3. TIA/EIA-606 - The Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
  4. TIA/EIA-607 - Commercial Building Grounding and Bonding Requirements for Telecommunications
  5. TIA/EIA TSB 67 - Transmission Performance Specification for Field Testing of Unshielded Twisted-Pair Cabling Systems.
  6. ISO/IEC 11801 - Generic Cabling Standard
  7. EN 50173 - Generic Cabling Standards for Customer Premises
- D. Governing Codes and Conflicts: If the requirements of these specifications or the Project Drawings exceed those of the governing codes, regulations, and manufacturer installation requirements, then the requirements of these specifications and the drawings shall govern. However, nothing in the drawings or specifications shall be construed to permit work not conforming to all governing codes, regulations, and manufacturer installation requirements.

#### **1.04 SUBMITTALS**

- A. List of Materials: Submit a complete list of proposed materials in a single consolidated submittal.
- B. Specification Compliance: A letter shall be provided stating, by section and subsection, that the installer complies with the ENTIRE specification section. If the installer intends to deviate from any portion of the specifications, a detailed explanation of reason in which the installer would like to deviate shall be provided in addition to the specification compliance letter. NO DEVIATIONS SHALL BE ACCEPTABLE UNTIL THEY HAVE BEEN ACCEPTED BY THE PROJECT'S TECHNOLOGY CONSULTANT AND THE PROJECT'S OWNER.

#### **1.05 SHOP DRAWINGS**

- A. Samples: Complete manufacturer's product literature and samples (if requested) for all pre-approved substitutions to the recommended products made during the course of the Project.
- B. Permits: The Contractor shall obtain all required permits and provide copies to the Owner/Architect/Engineer.
- C. Product Literature: Complete manufacturer's product literature for all electronics, cable, cable supports, cable labels, outlet devices, and other products to be used in the installation. In addition, whenever substitutions for recommended products are made, samples (when requested by the Owner/Architect/Engineer) and the manufacturer's supporting documentation demonstrating compatibility with other related products shall be included.
- D. Testing: Proposed Contractor test result forms, a list of instrumentation to be used for systems testing.
- E. A complete point-to-point floor plan wiring and cabling diagram indicating camera locations and all required cabling to connect systems.

#### **1.06 PROJECT COMPLETION**

- A. As a condition for project acceptance, the Contractor shall submit the following for review and approval:
  1. Inspection and Test Reports: During the course of the Project, the Contractor shall maintain an adequate inspection system to ensure that the materials supplied and the work performed, conform to contract requirements. The Contractor shall provide written documentation that indicates that materials acceptance testing was conducted as specified. The Contractor shall also provide documentation, which indicates that all cable termination testing was completed and that all irregularities were corrected prior to job completion.
  2. Field of View determination for fixed camera locations shall be made by CONTRACTOR

at no additional cost to OWNER, as necessary to provide the view desired by the OWNER. CONTRACTOR shall coordinate all final camera views and locations with OWNER for final approval prior to project acceptance.

3. Operating and Maintenance Instructions for all devices within the system. These instructions shall reflect any changes made during the course of construction, and shall be provided to the Owner, for their use, submitted electronically.
4. All training sessions with district staff and training media shall be complete.
5. As-built Drawings shall include cable pathways, mac addresses, cable ID's, additional pathways added, camera locations with correct labeling and MDF/IDF locations. The as-built drawings shall be prepared using AutoCad V. 14 or later. Provide the Owner with electronic versions of the as-builts via electronic link.

## **PART 2 - PRODUCTS**

All video surveillance equipment is CFCI (Contractor Furnished, Contractor Installed).

### **2.01 GENERAL**

- A. The cabling to each camera location on this project shall be provided and installed by the CONTRACTOR.
- B. CONTRACTOR is responsible for providing all incidental and/or miscellaneous hardware not explicitly specified below as required for a complete and operational system.
- C. Materials shall be as listed. No alternate products will be allowed without prior consent of the District's technology consultant. Any items proposed as equivalent products shall be submitted five days prior to proposal for OWNER review.
- D. All equipment and materials used shall be standard components, regularly manufactured, regularly utilized in the manufacturer's system.
- E. All systems and components shall have been thoroughly tested and proven in actual use.
- F. All systems and components shall be provided with the availability of a toll free 24-hour technical support phone number from the manufacturer. The phone number shall allow for immediate technical assistance for either the dealer/installer or the end user at no charge.
- G. All systems and components shall be provided with an explicit manufacturer warranty.

### **2.02 SUBSTITUTIONS**

- A. Equipment and materials that deviate from these requirements shall not be accepted without written approval from OWNER. When deviating or proposing material substitutions the following information shall be submitted:
  1. Substitution request form substantiating reasons and benefits to OWNER, and all necessary documents to validate the claims made in the substitution form.
  2. Submittals must comply with contract general provisions.
- B. The CONTRACTOR assumes all responsibility for additional costs, directly or indirectly, associated with proposing and installing an approved substitution products. All substituted products must meet the intent of form and function identified in the specification.

**2.03 QUALITY ASSURANCE**

- A. The CONTRACTOR or sub-CONTRACTOR shall be a licensed security CONTRACTOR with a minimum of five (5) years' experience installing and servicing systems of similar scope and complexity, and show evidence that CONTRACTOR has completed at least three (3) projects of similar scope, and is currently engaged in the installation and maintenance of systems herein described.
- B. All installation, configuration, setup, program and related work shall be performed by electronic technicians thoroughly trained by the manufacturer in the installation and service of the equipment provided.
- C. The CONTRACTOR or designated sub-CONTRACTOR shall submit installer's third party verified credentials of completion of manufacturer certification. The CONTRACTOR system programmer shall have attended manufacturer training and obtained the highest level certifications for the IPVSS and VMS.
- D. The CONTRACTOR shall provide four (4) current references from clients with systems of similar scope and complexity that became operational in the past three (3) years. At least three (3) of the references shall be utilizing the same system components, in a similar configuration as the proposed system.
- E. The video surveillance system shall be in compliance with applicable industry standards listed under article 1.03 Regulatory Requirements.
- F. The OWNER reserves the right to reject all or a portion of the work performed, either on technical or aesthetic grounds.

**2.04 WARRANTY**

- A. Minimum manufacturer warranty for cameras shall be ten (10) years.
- B. CONTRACTOR shall warranty that all work executed and materials furnished shall be free from defects in materials and workmanship for a minimum period of five (5) years from date of installation acceptance. Immediately upon receipt of written notice from the OWNER, the CONTRACTOR shall repair or replace at no expense to the OWNER, any defective material or work that may be discovered before final acceptance of work or within the warranty period; any material or work damaged thereby; and adjacent material or work that may be displaced in repair or replacement. Examination of, or failure to, examine work by the OWNER shall not relieve CONTRACTOR from these obligations.
- C. Warranty shall provide the OWNER direct access to manufacturer Technical Assistance Center (TAC), software updates, and defect support.
- D. Manufacturer of provided equipment shall guarantee availability of parts common to provided system and/or full replacement units, for a period not less than 10 years. Parts for the supplied systems shall be available within 30 calendar days during the 10 year period.
- E. Installation CONTRACTOR shall install all equipment in accordance with manufacturer's specifications and recommendations necessary to ensure continuation of the manufacturer's warranty. If the installation CONTRACTOR cannot install manufacturer's equipment in such a manner, it is the responsibility of the installation CONTRACTOR to provide written, timely notification to OWNER.
- F. The CONTRACTOR is responsible for replacement of any failed equipment provided by the CONTRACTOR, during the warranty period or the extended warranty period.

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- G. In the event of a “mass failure” the CONTRACTOR shall replace all units and/or components affected within 60 days of written notification from the OWNER.
- H. Upon replacement of each unit or component, the replaced unit warranty shall continue as if the original equipment were still in service.
- I. The warranty shall cover the complete system including fan assembly, power supplies, and the device itself.
- J. The warranty shall include onsite 48-hour advanced part replacement.
- K. The warranty shall include all labor to service and/or replace warranted system(s).
- L. In the event any Supplier or manufacturer offers additional warranty, at no additional cost, beyond that specified herein, CONTRACTOR shall state the terms of such warranty or warranties in writing and shall extend the same to the OWNER without additional cost.
- M. Equipment manufacturers shall have E-mail trouble reporting and response mechanisms in place and a toll free 24-hour help center to assist with troubleshooting and operation of the equipment at no additional cost to the OWNER, or as part of the warranty.

## 2.05 SYSTEM AND CAMERA CAPABILITIES

Basis of Design for the VSS system are Cisco Meraki and Verkada.

- A. General Requirements:
  - 1. System overall shall be capable of intelligent edge-based video analytics, trigger actions based on programming requirements, advanced motion-based insights either as a camera option or an option on the management interface, including people heatmaps showing live and historical views of where activity is taking place, crowd detection alerts, live alerts and notifications when Persons of Interest are detected by any camera.
  - 2. System shall provide ability to share live links, floor plans, or historical footage of a single camera or group of cameras with a set of external contacts (e.g., first responders). System shall allow export of any footage in MP4 format and allow recipients to verify its authenticity.
  - 3. System shall provide ability to filter video based on date range, time range, and attributes.
  - 4. System shall provide ability to archive video footage with unlimited storage and to be saved on the cloud indefinitely.
  - 5. System shall include standard features such as onboard storage, and local video storage via MicroSD/SDXC.
  - 6. System shall have the ability to support AES128 and AES256 encryption standards.
  - 7. System shall be scalable, with no added equipment needed to support additional cameras. Camera vendor shall offer unlimited cloud storage at no additional cost with no expiration for duration of storage.
  - 8. System shall provide either email or SMS notification of critical system events (e.g., camera failure, tampering, etc.).
  - 9. System shall have capability to audit account usage.

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10. System shall provide multiple levels of system administration to accommodate different staff who will have varying roles viewing or managing cameras, and option for mobile app for entrance to access control secure sites.
11. System shall include multi-factor authentication.
12. Cameras shall include a minimum storage capacity of 256GB on the camera itself.
13. Cameras shall include up to 365 days of retention in standard quality.
14. Cameras shall be bandwidth friendly, operating between 20-50kbps per camera at rest.
15. Cameras shall include automatic firmware updates, and new features and enhancements with no additional cost to OWNER.
16. Cameras shall support true day/night vision and recording modes using IR cut filters, and infrared illumination for night visibility with a minimum 30 IR.
17. Cameras shall include a built in solid state hard drive.
18. Camera enclosure shall be contain the following ratings: FCC, ICES, CE, UL, CB, NOM, KCC, 1P67 rating, and minimum 1K8 impact rating.
19. All cameras shall have standard RJ45 connectivity including PoE capability to receive power. Primary power source of cameras shall be PoE++ injector, capable of converting a power cable and an Ethernet cable to a single PoE++ port with up to 60W of power. **Primary power source for cameras shall be CFCI (Contractor Furnished, Contractor Installed).** Power source equipment shall be installed at designated IDF/MDF rack or cabinet.
20. Video at minimum 24 FPS.
21. Image stabilizing to reduce blurring.
22. Environmental operational requirements:
  - a. Operate in a minimum temperature range of -10 °C to +50 °C (14°F to 122 °F).
  - b. Operate in a humidity range of 0-90%.
23. Cameras identified as 270 degree cameras must have a 5MP or greater resolution. Cameras identified as 180 degree cameras must have a 3MP or greater resolution. Cameras identified as 90 degree cameras must have a 1.5MP or greater resolution.
24. Camera system must be capable of recognition of faces and objects. The ability to upload an image of a facial picture for searching through video is necessary. Objects must be able to be searched by colors and descriptions.
25. Camera system must be capable of detecting and alerting on loitering in areas determined by Owner.
26. Camera system must be capable of accepting and processing application program interface (API) calls to perform tasks and get information.

**PART 3 - EXECUTION****3.01 INSTALLATION**

- A. The CONTRACTOR or subcontractors main resources within the project shall carry proper professional certification issued by the manufacturer to confirm sufficient product and technology knowledge.
- B. The CONTRACTOR shall carefully follow instructions in documentation provided by the manufacturer to ensure all steps have been taken to provide a reliable, easy-to-operate system.
- C. Camera mounts shall be per camera manufacturer.
- D. Do not install wall mounted cameras into metal fascia. Ensure they are mounted on proper materials, and sealed top and sides (not bottom).
- E. All equipment shall be tested and configured in accordance with instructions provided by the manufacturer prior to installation.
- F. All firmware found in products shall be the latest and most up-to-date provided by the manufacturer.
- G. Field of View determination for fixed camera locations shall be made by CONTRACTOR at no additional cost to OWNER, as necessary to provide the view desired by the OWNER. CONTRACTOR shall coordinate all final camera views and locations with OWNER for final approval prior to project acceptance.
- H. The password for each camera will be changed to a strong password and given to the district project manager.
- I. Contractor will use a spreadsheet hosted by the district to track which cables have been patched over at which schools. District staff will identify and configure network ports for use. Contractor to turn over MAC addresses of equipment prior to installation.

**3.02 NAMING CONVENTIONS**

- A. Coordinate all camera naming conventions with OWNER representative.
- B. Weather proof labels showing the corresponding camera number shall be applied to each camera's housing.

**3.03 TESTING**

- A. The VSS system shall be tested in accordance with the following:
  - 1. Conduct a complete inspection and test of all installed video surveillance equipment.
  - 2. Provide staff to test all devices and all operational features of the system for witness by the Owner's representative and authorities having jurisdiction as applicable.
  - 3. Correct deficiencies until satisfactory results are obtained.
- B. Submit written copies of test results.

**3.04 PROTECTION**

- A. Protect the Work until Substantial Completion, which is established by OWNER.

**3.05 OWNER ORIENTATION (TRAINING)**

- A. Before contract closeout provide the following training and orientation:
1. Provide a minimum 48 hours training for OWNER designated representatives. The content of the training is advanced instruction on the use, programming, maintenance and troubleshooting of the video surveillance system, devices and components.
    - a. Materials shall include training manuals.
    - b. The training shall be provided at OWNER facility.
      - 1) Training shall consist of classroom instruction including intensive course work covering the following topics:
        - a. Product Features and Technical Specifications
        - b. Implementation and Design as-built documentation, including familiarization with drawing sets, symbols and notation as well as other record documents.
        - c. Complete understanding of the system architecture and design of implemented solution.
        - d. Complete function and feature analysis on implemented solution including programming, operation, trouble shooting, error messages, etc.

**3.06 CLEANUP**

- A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

**END OF SECTION**