



TO: Lieutenant Jeff Emmitt  
Alameda Police Department  
1555 Oak St, Alameda CA, 94501  
510-337-8392  
jemmitt@alamedaca.gov

## Project: Alameda Police Department

Dear Lieutenant Jeff Emmitt,

As requested, we are submitting this proposal to provide, installation and configuration for a new Surveillance System for Alameda Police Department and Offsite Evidence Storage. This system will consist of Avigilon Video Management System (Software), Cameras and recording devices.

ICU Technologies, Inc will provide and install the new Avigilon Video Management System as detailed within this proposal and complete the system configuration, programming, and commissioning.

## Scope of Work:

ICU Technologies will provide the following Video Management System and wireless network link along with installation services:

Derived from the meetings and discussions preceding this proposal, we have designed a new Avigilon Video Management System. We will implement these designs by performing the system installation. ICU Technologies will configure and test the system as described within this document.

## Network Video Recorder(s):

The proposed design shall be configured into two sites.

Site 1: Alameda Police Department

Site 2: Office Site Evidence Storage.

Site 1: Alameda Police Department shall require three (3) Avigilon NVRs (192 TB each) to maintain one-year retention of video archive (per Regulation). Based on scene activity within a 24hour period for each camera location, as noted during site visit and input from customer. NVR-1, NVR-2 and NVR-3 Shall be installed at Alameda Police Department located in the new MDF.

Site 2: Alameda Police Department, Off Site Evidence Storage. One (1) Avigilon HD Recorder (4TB) configured for 20 days, shall be installed, and configured with latest version of ACC 7 Software.

The following calculation were used to derive storage and bandwidth calculations.

Name	Model	Storage	# Cameras	Used Bandwidth	Record Time
▼ NVR-1	HD-NVR4-PRM-192TB-NA	182.4 TB	3	127.35 Mbps (max 800)	
▶ C1 -Entry Gate and back	15C-H4A-3MH-270	79.136 TB	1	51.193 Mbps	369 days 2 hours
▶ C2 - Front Gate and Public Par...	15C-H4A-3MH-270	79.136 TB	1	51.193 Mbps	369 days 2 hours
C3 - Monument	8.0C-H5A-BO1-IR	24.128 TB	1	24.965 Mbps	369 days 2 hours ⓘ
Name	Model	Storage	# Cameras	Used Bandwidth	Record Time
▼ NVR-2	HD-NVR4-PRM-192TB-NA	182.4 TB	7	173.19 Mbps (max 800)	
C4-Garage Bay 1	8.0C-H5A-DO1-IR	22.506 TB	1	24.965 Mbps	362 days 23 hours ⓘ
C5-Garage Bay 2	8.0C-H5A-DO1-IR	22.506 TB	1	24.965 Mbps	362 days 23 hours ⓘ
C6-DNA Evidence Cage	12.0-H4F-DO1-IR	7.404 TB	1	11.066 Mbps	362 days 23 hours
C7-Middle Room Evidence	8.0C-H5A-DO1-IR	11.253 TB	1	24.965 Mbps	362 days 23 hours ⓘ
C8-Motor Cage	12.0-H4F-DO1-IR	7.404 TB	1	11.066 Mbps	362 days 23 hours
C9-Main Public Entry	8.0C-H5A-DO1-IR	37.51 TB	1	24.965 Mbps	362 days 23 hours ⓘ
▶ C10-PD Front Lincoln & Oak	15C-H4A-3MH-270	73.817 TB	1	51.193 Mbps	362 days 23 hours
Name	Model	Storage	# Cameras	Used Bandwidth	Record Time
▼ NVR-3	HD-NVR4-PRM-192TB-NA	182.4 TB	4	104.56 Mbps (max 800)	
▶ C11-PD Lincoln Vehicle Gate	15C-H4A-3MH-270	99.906 TB	1	51.193 Mbps	491 days 5 hours
C12-Main Lobby 1	8.0C-H5A-DO1-IR	40.614 TB	1	24.965 Mbps	491 days 5 hours ⓘ
C13-Main Lobby 2	8.0C-H5A-DO1-IR	40.614 TB	1	24.965 Mbps	491 days 5 hours ⓘ
C14-Sally Port	ENC-4P-H264	1.267 TB	1	3.433 Mbps	491 days 5 hours
Name	Model	Storage	# Cameras	Used Bandwidth	Record Time
▼ NVR-4	VMA-RPO-4P4-NA	3.93 TB	3	74.9 Mbps (max 80)	
C15 - Evidence Offsite - 1	8.0C-H5A-BO1-IR	1.473 TB	1	24.965 Mbps	23 days 17 hours ⓘ
C16 - Evidence Offsite - 2	8.0C-H5A-BO1-IR	1.473 TB	1	24.965 Mbps	23 days 17 hours ⓘ
C17 - Evidence Offsite - Insid	8.0C-H5A-DO1-IR	0.982 TB	1	24.965 Mbps	23 days 17 hours ⓘ

Figure 1: System Calculations: Avigilon System Design Tool (v2.76.0)

## Camera Installation and Configuration Details:

### Site 1: Alameda Police Department

#### Camera 1 - Police Parking (behind gate)

**MFG:** Avigilon **Model:** (15C-H4A-3MH-270)

**Description:**

3x 5 MP, WDR, LightCatcher, 2.8mm, Camera Only

**Mount Location:**

Avigilon Multisensor camera shall be corner mounted on main building near existing cameras.

**Field of View:**

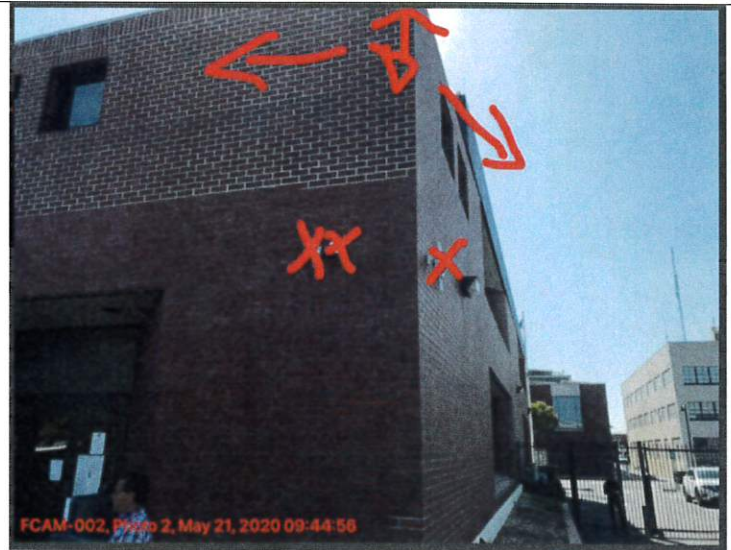
Police Parking and Gate entry/exit.

**Scene Objective(s):**

Record activities within Police Parking and Entry Gate.

**Installation and Configuration Note(s):**

Remove existing cameras and replace with new Avigilon Multisensor. Install new CAT6 cable from camera to IDF. The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event based notification of people and vehicles.



#### Camera 2 - Public Parking (front gate)

**MFG:** Avigilon **Model:** (15C-H4A-3MH-270)

**Description:**

3x 5 MP, WDR, LightCatcher, 2.8mm, Camera Only

**Mount Location:**

Avigilon Multisensor camera shall be corner mounted on main building.

**Field of View:**

Police Parking and Gate entry/exit.

**Scene Objective(s):**

Record activities within Public Parking, Entry Gate and Monument.

**Installation and Configuration Note(s):**

Install new CAT6 cable from camera to IDF. The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event based notification of people and vehicles.





### Camera 3 - Monument

**MFG:** Avigilon **Model:** (8.0C-H5A-BO1-IR)

**Description:**

8.0 MP (4K) WDR, LightCatcher, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Next-Generation Analytics

**Mount Location:**

Avigilon Bullet camera shall be wall mounted on main building.

**Field of View:**

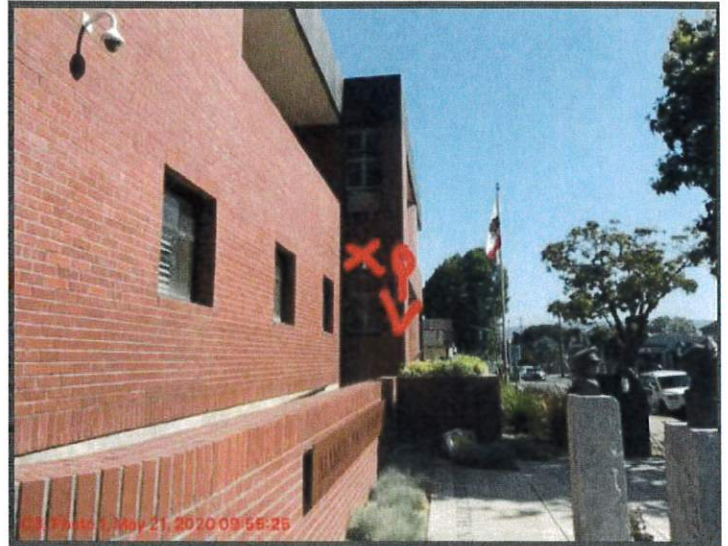
Monument Area

**Scene Objective(s):**

Record activities within Monument.

**Installation and Configuration Note(s):**

Remove existing camera and Install new CAT6 cable from camera to IDF. The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event based notification of people and vehicles.



### Camera 4 – Garage Bay 1

**MFG:** Avigilon **Model:** (8.0C-H5A-DO1-IR)

**Description:**

8.0 MP (4K) WDR, LightCatcher, Day/Night, Outdoor Dome, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Analytics

**Mount Location:**

Avigilon dome camera shall be wall mounted on main building.

**Field of View:**

Front of Garage Bay.

**Scene Objective(s):**

Record activities within Garage Bay.

**Installation and Configuration Note(s):**

Remove existing camera and replace with new Avigilon camera. Install new CAT6 cable from camera to New IDF, located in adjacent storage closet located in Garage Bay. The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event based notification of people and vehicles.



### Camera 5 – Garage Bay 2

**MFG:** Avigilon **Model:** (8.0C-H5A-DO1-IR)

**Description:**

8.0 MP (4K) WDR, LightCatcher, Day/Night, Outdoor Dome, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Analytics

**Mount Location:**

Avigilon dome camera shall be wall mounted on main building.

**Field of View:**

Back of Garage Bay.

**Scene Objective(s):**

Record activities within Garage Bay.

**Installation and Configuration Note(s):**

Remove existing camera and replace with new Avigilon camera. Install new CAT6 cable from camera to New IDF, located in adjacent storage closet located in Garage Bay. The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event based notification of people and vehicles.



### Camera 6 – DNA Evidence Cage

**MFG:** Avigilon **Model:** (12.0-H4F-DO1-IR)

**Description:**

12.0 MP, Fisheye Camera, Day/Night, 1.45mm f/2.2, Integrated IR

**Mount Location:**

Avigilon Fisheye camera shall be surface mounted (to beam) within Evidence Cage.

**Field of View:**

360 view located within Evidence Cage.

**Scene Objective(s):**

Record activities within Evidence Cage.

**Installation and Configuration Note(s):**

Install new Avigilon Fisheye camera. Install new CAT6 cable from camera to New IDF, located in adjacent storage closet located in Garage Bay. The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with motion recording.





### Camera 7 – Middle Evidence Room

**MFG:** Avigilon **Model:** (8.0C-H5A-DO1-IR)

**Description:**

8.0 MP (4K) WDR, LightCatcher, Day/Night, Outdoor Dome, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Analytics

**Mount Location:**

Avigilon Dome camera shall be wall or ceiling with in Evidence Room.

**Field of View:**

Everything in Evidence Room.

**Scene Objective(s):**

Record activities within Evidence Room.

**Installation and Configuration Note(s):**

Install new Avigilon dome camera. Install new CAT6 cable from camera to New IDF, located in adjacent storage closet located in Garage Bay. The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event based notification of people.



### Camera 8 – Motor Cage

**MFG:** Avigilon **Model:** (8.0C-H5A-DO1-IR)

**Description:**

8.0 MP (4K) WDR, LightCatcher, Day/Night, Outdoor Dome, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Analytics

**Mount Location:**

Avigilon Dome camera shall be wall or ceiling within back of Motor Cage..

**Field of View:**

Everything in Motor Cage.

**Scene Objective(s):**

Record activities within Motor Cage.

**Installation and Configuration Note(s):**

Install new Avigilon dome camera. Install new CAT6 cable from camera to New IDF, located in adjacent storage closet located in Motor Cage. The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event-based notification of people.



### Camera 9 – Main Entry Exterior

**MFG:** Avigilon **Model:** (8.0C-H5A-DO1-IR)

**Description:**

8.0 MP (4K) WDR, LightCatcher, Day/Night, Outdoor Dome, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Analytics

**Mount Location:**

Avigilon Dome camera shall be wall mounted near existing entry camera.

**Field of View:**

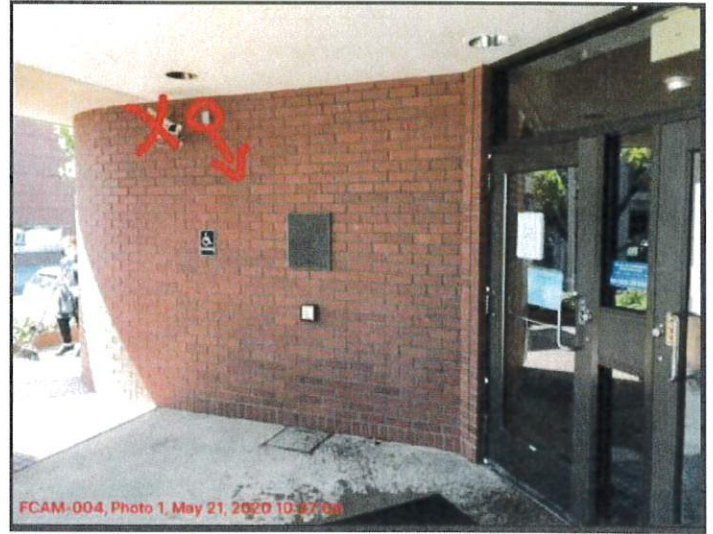
Main Entry of PD.

**Scene Objective(s):**

Record activities through Main Entry of PD.

**Installation and Configuration Note(s):**

Remove existing camera and Install new Avigilon dome camera. Install new CAT6 cable from camera to MDF, The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event-based notification of people.



### Camera 10 – PD Front Lincoln & Oak

**MFG:** Avigilon **Model:** (15C-H4A-3MH-270)

**Description:**

3x 5 MP, WDR, LightCatcher, 2.8mm, Camera Only

**Mount Location:**

Avigilon Multisensor camera shall be corner mounted on main building.

**Field of View:**

Main Entry of PD and sidewalks.

**Scene Objective(s):**

Record activities Main Entry of PD and along building perimeter.

**Installation and Configuration Note(s):**

Install new Avigilon multisensor camera. Install new CAT6 cable and conduit from camera to MDF, The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event-based notification of people.





### Camera 11– Lincoln Vehicle Gate

**MFG:** Avigilon **Model:** (15C-H4A-3MH-270)

**Description:**

3x 5 MP, WDR, LightCatcher, 2.8mm, Camera Only

**Mount Location:**

Avigilon Multisensor camera shall be corner mounted on main building.

**Field of View:**

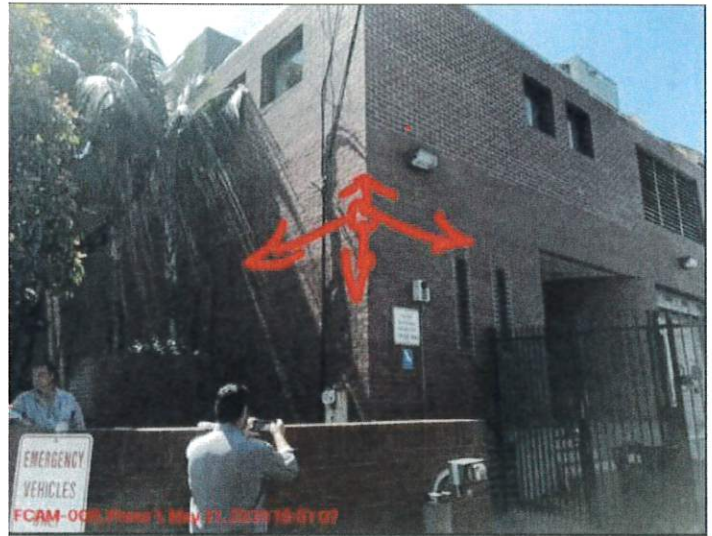
Lincoln Vehicle Entry Gates.

**Scene Objective(s):**

Record activities of people and vehicle entering and exiting gate.

**Installation and Configuration Note(s):**

Install new Avigilon multisensor camera. Install new CAT6 cable and conduit from camera to MDF, The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event-based notification of people.



### Camera 12– Main Lobby 1

**MFG:** Avigilon **Model:** (8.0C-H5A-DO1-IR)

**Description:**

8.0 MP (4K) WDR, LightCatcher, Day/Night, Outdoor Dome, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Analytics

**Mount Location:**

Avigilon Dome camera shall be wall mounted near existing entry camera.

**Field of View:**

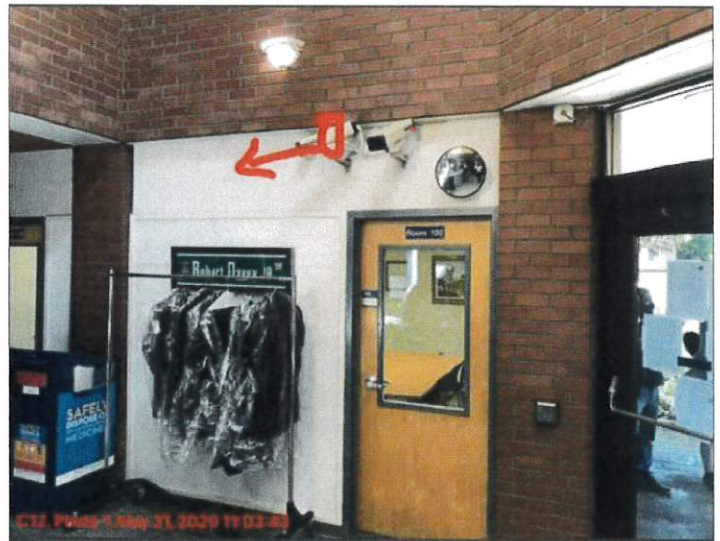
Main Entry Lobby.

**Scene Objective(s):**

Record activities through Main Entry of PD.

**Installation and Configuration Note(s):**

Remove existing camera and Install new Avigilon dome camera. Install new CAT6 cable from camera to MDF, The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event-based notification of people.





### Camera 13 – Main Lobby 2

**MFG:** Avigilon **Model:** (8.0C-H5A-DO1-IR)

**Description:**

8.0 MP (4K) WDR, LightCatcher, Day/Night, Outdoor Dome, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Analytics

**Mount Location:**

Avigilon Dome camera shall be wall mounted near existing entry camera.

**Field of View:**

Main Entry Lobby.

**Scene Objective(s):**

Record activities through Main Entry of PD.

**Installation and Configuration Note(s):**

Remove existing camera and Install new Avigilon dome camera. Install new CAT6 cable from camera to MDF, The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event-based notification of people.



### Camera 14 – Sally Port

**MFG:** Avigilon **Model:** (ENC-4P-H264)

**Description:**

4-Port H.264 Analog Video Encoder with 4 audio support

**Mount Location:**

Encoder shall be installed under desk at existing NVR. Analog feed from Sally Port camera shall be encoded with Avigilon Encoder and recorded to NVR.

**Field of View:**

Main Entry Lobby.

**Scene Objective(s):**



Record activities through Main Entry of PD.

**Installation and Configuration Note(s):**

Existing analog camera shall remain in Sally port and Analog feed from Sally Port camera shall be encoded with Avigilon Encoder and recorded to NVR. Install new CAT6 cable from Encoder to MDF, The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with motion recording.



## Site 2: Offsite Evidence Storage

<p><b>Camera 15 – Offsite Evidence Storage 1</b></p> <p><b>MFG:</b> Avigilon <b>Model:</b> (8.0C-H5A-BO1-IR)</p> <p><b>Description:</b> 8.0 MP (4K) WDR, LightCatcher, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Next-Generation Analytics</p> <p><b>Mount Location:</b> Avigilon Bullet camera shall be wall mounted on main building.</p> <p><b>Field of View:</b> Side of building and Main Entry into Offsite Evidence.</p> <p><b>Scene Objective(s):</b> Record activities around building and Main Entry into Offsite Evidence.</p> <p><b>Installation and Configuration Note(s):</b> Install new Avigilon bullet camera and CAT6 cable from camera to wall mounted Avigilon HD Recorder. The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event based notification of people and vehicles.</p>	 A photograph showing the side of a blue corrugated metal building. A red circle with an arrow points to a specific location on the upper part of the wall, indicating where the camera is to be installed. The sky is clear and blue.
<p><b>Camera 16 – Offsite Evidence Storage 2</b></p> <p><b>MFG:</b> Avigilon <b>Model:</b> (8.0C-H5A-BO1-IR)</p> <p><b>Description:</b> 8.0 MP (4K) WDR, LightCatcher, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Next-Generation Analytics</p> <p><b>Mount Location:</b> Avigilon Bullet camera shall be wall mounted on main building.</p> <p><b>Field of View:</b> Side of building and Main Entry into Offsite Evidence.</p> <p><b>Scene Objective(s):</b> Record activities around building and Main Entry into Offsite Evidence.</p> <p><b>Installation and Configuration Note(s):</b> Install new Avigilon bullet camera and CAT6 cable from camera to wall mounted Avigilon HD Recorder. The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event based notification of people and vehicles.</p>	 A photograph showing the side of a blue corrugated metal building. A red circle with an arrow points to a specific location on the upper part of the wall, indicating where the camera is to be installed. The sky is clear and blue.



### Camera 17 – Offsite Evidence Storage (Inside)

**MFG:** Avigilon **Model:** (8.0C-H5A-DO1-IR)

**Description:**

8.0 MP (4K) WDR, LightCatcher, Day/Night, Outdoor Dome, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Analytics

**Mount Location:**

Avigilon Dome camera shall be wall ceiling mounted in back of room

**Field of View:**

Main Room and Entry Door of Offsite Evidence Storage.

**Scene Objective(s):**

Record activities in Main Room and Entry Door of Offsite Evidence Storage.

**Installation and Configuration Note(s):**

Install new Avigilon Dome camera and CAT6 cable from camera to wall mounted Avigilon HD Recorder. The cabling shall be terminated at the camera with RJ-45 as well as at the head-end. Camera shall be configured with analytics for event based notification of people and vehicles.



### Wireless Back-haul:

A wireless back-haul will be installed to provide 1GB Network connectivity from the Evidence Garage to Main Building Security Network at Alameda Police Department.

Location 1, Alameda Police Department, one (1) Siklu 1 GB Wireless Radio Base Unit (MH-B100-CCS-PoE-MWB) to receive camera connections from the Evidence Garage. The Wireless Radio shall be installed on the side of the building at the same elevation as the Transmitting Radio located at Evidence Garage, to obtain good line of sight.

Location 2, Evidence Garage (1) Siklu 1 GB Wireless Radio Terminal Unit (MH-T201-CCC-PoE-MWB) to back-haul video to Alameda Police Department and connect to Network, to establish connection to NVRs.

### Networking:

ICU Technologies installation team will work with Alameda PD IT Department to establish the network configuration for new camera system. All camera traffic on the network shall be separate from the existing Alameda PD Network. Finalized details of the network will be discussed with IT prior to installation. All incoming (recording) traffic and outgoing (client) traffic shall be isolated on different networks through the use of VLANs.

Networking at the Offsite Evidence Storage shall remain as an isolated (private) network. Currently, there is not any internet service available.

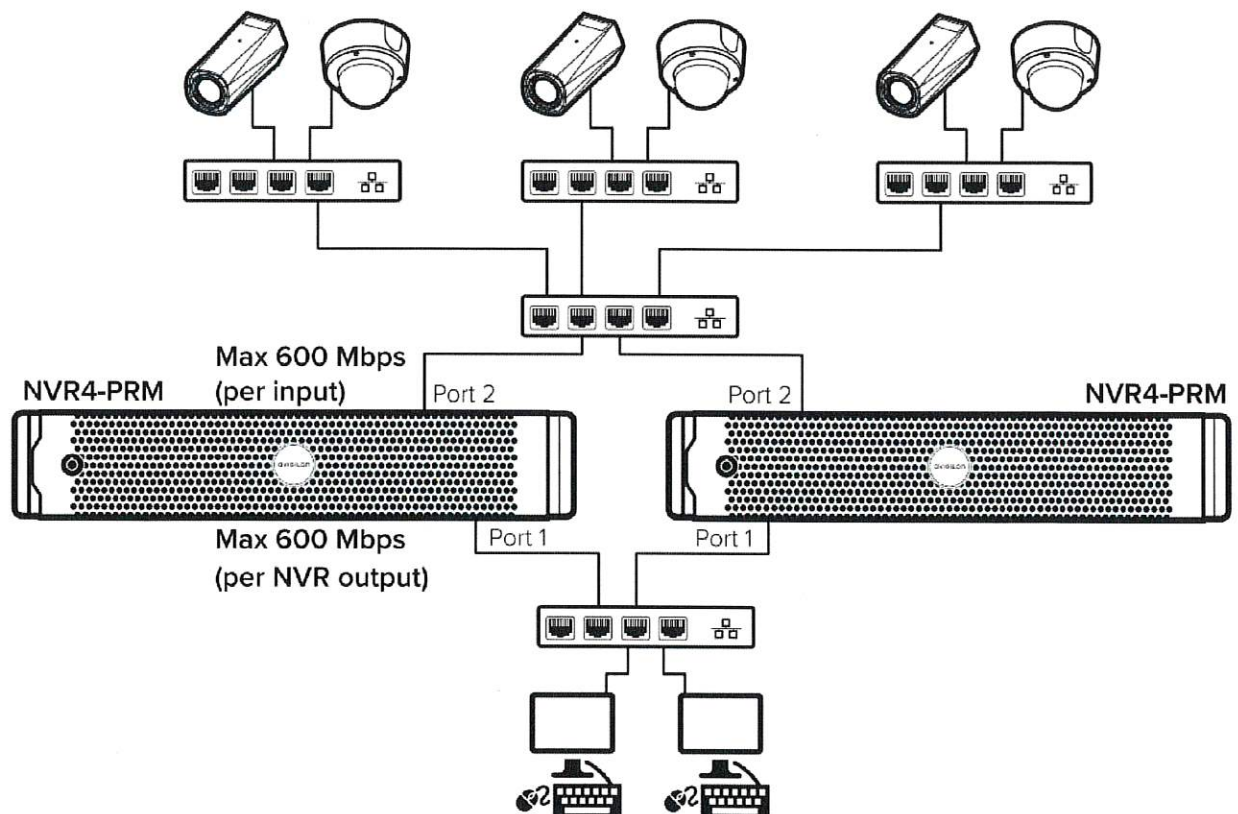


Figure 2: Example 1G Network Topology with Multiple NVRs.



## Invoicing / Payment Terms:

ICU Technologies, Inc. will invoice at certain project milestones, including but not limited to the following:

- Delivery of Equipment
- Completion of Installation
- Bi-weekly and Monthly Progress Invoices

Invoices are due upon receipt of invoice. If payments are not received within 30 days, services may be suspended and ICU Technologies, Inc will not be held responsible for any damages due to delays from such suspension.

## Special requirements:

ICU Technologies, Inc will require the following to be provided by Alameda Police Department:

- New MDF construction has not been completed. Final location for NVRs shall be provided prior to installation as well as network infrastructure for network connectivity.
- Any back-up power shall be provided by others.

## Assumptions & Exclusions:

ICU Technologies, Inc. services under this proposal are limited to those expressly specified. The following enhanced services may be desired or required, and if performed at City of Alameda or Alameda Police Department direction, will be charged at fees as mutually agreed:

- Changing or re-designing any project aspect or element previously submitted by ICU Technologies Inc. in compliance with this proposal, or previously approved, including but not limited to project description, scope, requirements, equipment, capabilities, facilities, contractors, plans, or designs.
- Design, specification, procurement, or project management of temporary security technology controls or security services staffing for the active construction site.
- Preparation of operation and maintenance manuals (O&M's) or construction as- built drawings.
- Production of security staffing and security services policies and procedures, standard operating procedures, response protocols, communication protocols, post orders, and RFP development and bidding support.
- Updating or enhancing existing design standards, including the construction standards and master specifications.
- Updating or enhancing existing policies and procedures including security services contracts and post orders.
- Providing or procuring system permits, bonds and approvals including Professional Engineering stamp.
- Design beyond what is shown on the designs that accompany this proposal shall be subject to additional compensation.
- This proposal does not include engineering, provisioning, or installation of electrical circuits. Where required, this work shall be performed by others.
- This proposal does not include site utility coordination, site utility surveys, vault investigation, or discovery of existing underground site utilities.
- This proposal does not include construction permits or agency fees.
- This proposal does not include structural engineering.
- If services beyond the above scope of work are required, additional service fees will also be required.
- Wireless link is rated at 1Gbps; actual speed of data across wireless link will vary.

Send this PDF to Sales at Avigilon (sales@avigilon.com) or your local Avigilon representative to receive a quote on this design.

**Design Comments**

AvigilonDesign-Alameda Police Department-04JUN2020



## HD NVRs

NAME	MODEL	EXPANSIONS	STORAGE	TOTAL DATA	STORAGE TIME	STATUS
NVR-1	HD-NVR4-PRM-192TB-NA	n/a	182.4 TB	127.35 Mbps	389 days 2 hours	Valid
NVR-2	HD-NVR4-PRM-192TB-NA	n/a	182.4 TB	173.19 Mbps	362 days 23 hours	Valid
NVR-3	HD-NVR4-PRM-192TB-NA	n/a	182.4 TB	104.56 Mbps	491 days 5 hours	Valid
NVR-1	VMA-RPO-4P4-NA	n/a	3.926674 TB	74.90 Mbps	23 days 17 hours	Valid

**Cameras**

NAME	MODEL	NVR	QTY	LENS	FL. (MM)	IPS	DUTY CYCLE	COMPRESSION	BITRATE
C14-Sally Port	ENC-4P-H264	NVR-3	1	N/A		30	4	Quality 6	3.43 Mbps



### -IDSM Smart Cameras

NAME	MODEL	STORAGE	QTY	LENS	FL. (MM)	IMAGE RATE	DAILY RECORDING CYCLE	IMAGE QUALITY	MAX BANDWIDTH	HDSM SMARTCODEC		
										ENABLED	STRENGTH	MIN IMAGE RATE
C1 -Entry Gate and back	15C- H4A- 3MH-270	NVR-1	1	Built-In Lens, 2.8mm, f/1.2					51.19 Mbps			
↳ Head 1					2.8	15	10	Quality 6		X		
↳ Head 2					2.8	15	10	Quality 6		X		
↳ Head 3					2.8	15	10	Quality 6		X		
C2 - Front Gate and Public Parking	15C- H4A- 3MH-270	NVR-1	1	Built-In Lens, 2.8mm, f/1.2					51.19 Mbps			
↳ Head 1					2.8	15	10	Quality 6		X		
↳ Head 2					2.8	15	10	Quality 6		X		
↳ Head 3					2.8	15	10	Quality 6		X		
C3 - Monument	8.0C- H5A- BO1-IR	NVR-1	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	7.8	30	6	Quality 6	24.97 Mbps	X		
C4-Garage Bay 1	8.0C- H5A- DO1-IR	NVR-2	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	7.8	30	6	Quality 6	24.97 Mbps	X		
C5-Garage Bay 2	8.0C- H5A- DO1-IR	NVR-2	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	7.8	30	6	Quality 6	24.97 Mbps	X		

C6-DNA Evidence Cage	12.0-H4F-DO1-IR	NVR-2	1	Built-In Lens, 1.45mm, Fish Eye	1.45	20	5	Quality 6	11.07 Mbps	X	
C7-Middle Room Evidence	8.0C-H5A-DO1-IR	NVR-2	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	7.8	30	3	Quality 6	24.97 Mbps	X	
C8-Motor Cage	12.0-H4F-DO1-IR	NVR-2	1	Built-In Lens, 1.45mm, Fish Eye	1.45	20	5	Quality 6	11.07 Mbps	X	
C9-Main Public Entry	8.0C-H5A-DO1-IR	NVR-2	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	7.8	30	10	Quality 6	24.97 Mbps	X	
C10-PD Front Lincoln & Oak	15C-H4A-3MH-270	NVR-2	1	Built-In Lens, 2.8mm, f/1.2					51.19 Mbps		
↳ Head 1					2.8	15	10	Quality 6		X	
↳ Head 2					2.8	15	10	Quality 6		X	
↳ Head 3					2.8	15	10	Quality 6		X	
C11-PD Lincoln Vehicle Gate	15C-H4A-3MH-270	NVR-3	1	Built-In Lens, 2.8mm, f/1.2					51.19 Mbps		
↳ Head 1					2.8	15	10	Quality 6		X	
↳ Head 2					2.8	15	10	Quality 6		X	
↳ Head 3					2.8	15	10	Quality 6		X	
C12-Main Lobby 1	8.0C-H5A-DO1-IR	NVR-3	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	7.8	30	8	Quality 6	24.97 Mbps	X	



C13-Main Lobby 2	8.0C-H5A-DO1-IR	NVR-3	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	7.8	30	8	Quality 6	24.97 Mbps	X	
C15 - Evidence Offsite - 1	8.0C-H5A-BO1-IR	NVR-1	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	7.7	30	6	Quality 6	24.97 Mbps	X	
C16 - Evidence Offsite - 2	8.0C-H5A-BO1-IR	NVR-1	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	7.7	30	6	Quality 6	24.97 Mbps	X	
C17 - Evidence Offsite - Inside	8.0C-H5A-DO1-IR	NVR-1	1	Built-In Lens, 4.9-8mm, f/1.8, P-Iris, Vari Focal	7.7	30	4	Quality 6	24.97 Mbps	X	

## Scene Details

NAME	MOUNTING HEIGHT (FT)	TARGET HEIGHT (FT)	TARGET DISTANCE (FT)	SCENE WIDTH (FT)	MOUNTING ANGLE	MAXIMUM DISTANCE (FT)	PX/FT
C1 - Entry Gate and back	15						
↳ Head 1		6	16.5	34.4	41.8	27.5	75.4
↳ Head 2		6	16.5	34.4	41.8	56.1	75.4
↳ Head 3		6	16.5	34.4	41.8	56.1	75.4
C2 - Front Gate and Public Parking	15						
↳ Head 1		6	16.5	34.4	41.8	27.5	75.4
↳ Head 2		6	16.5	34.4	41.8	56.1	75.4
↳ Head 3		6	16.5	34.4	41.8	27.5	75.4
C3 - Monument	15	6	35	35	59.8	58.3	109.7
C4-Garage Bay 1	15	6	35	35	59.8	58.3	109.7
C5-Garage Bay 2	15	6	35	35	59.8	58.3	109.7
C6-DNA Evidence Cage	15	6	35	70	46.6	58.3	12
C7-Middle Room Evidence	15	6	35	35	59.8	58.3	109.7
C8-Motor Cage	15	6	35	70	46.6	58.3	12
C9-Main Public Entry	15	6	35	35	59.8	58.3	109.7
C10-PD Front Lincoln & Oak	15						
↳ Head 1		6	16.5	34.4	41.8	27.5	75.4
↳ Head 2		6	16.5	34.4	41.8	56.1	75.4



↳ Head 3		6	16.5	34.4	41.8	27.5	75.4
C11-PD Lincoln Vehicle Gate	15						
↳ Head 1		6	16.5	34.4	41.8	27.5	75.4
↳ Head 2		6	16.5	34.4	41.8	56.1	75.4
↳ Head 3		6	16.5	34.4	41.8	27.5	75.4
C12-Main Lobby 1	15	6	35	35	59.8	58.3	109.7
C13-Main Lobby 2	15	6	35	35	59.8	58.3	109.7
C14-Sally Port	15	6	35	35	52.8	58.3	20.6
C15 - Evidence Offsite - 1	12	6	35	35	64.2	70	109.7
C16 - Evidence Offsite - 2	12	6	35	35	64.2	70	109.7
C17 - Evidence Offsite - Inside	12	6	35	35	64.2	70	109.7

**NVR-1**

Model: HD-NVR4-PRM-192TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
15C-H4A-3MH-270	1	389 days 2 hours	389 days 2 hours			0 days 0 hours
15C-H4A-3MH-270	1	389 days 2 hours	389 days 2 hours			0 days 0 hours
8.0C-H5A-BO1-IR	1	389 days 2 hours	389 days 2 hours			0 days 0 hours



**VVR-2**

Model: HD-NVR4-PRM-192TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
8.0C-H5A-DO1-IR	1	362 days 23 hours	362 days 23 hours			0 days 0 hours
8.0C-H5A-DO1-IR	1	362 days 23 hours	362 days 23 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	362 days 23 hours	362 days 23 hours			0 days 0 hours
8.0C-H5A-DO1-IR	1	362 days 23 hours	362 days 23 hours			0 days 0 hours
12.0-H4F-DO1-IR	1	362 days 23 hours	362 days 23 hours			0 days 0 hours
8.0C-H5A-DO1-IR	1	362 days 23 hours	362 days 23 hours			0 days 0 hours
15C-H4A-3MH-270	1	362 days 23 hours	362 days 23 hours			0 days 0 hours

**NVR-3**

Model: HD-NVR4-PRM-192TB-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
15C-H4A-3MH-270	1	491 days 5 hours	491 days 5 hours			0 days 0 hours
8.0C-H5A-DO1-IR	1	491 days 5 hours	491 days 5 hours			0 days 0 hours
8.0C-H5A-DO1-IR	1	491 days 5 hours	491 days 5 hours			0 days 0 hours
ENC-4P-H264	1	491 days 5 hours	491 days 5 hours			0 days 0 hours



**NVR-1**

Model: VMA-RPO-4P4-NA

Record Times

MODEL	QTY	TOTAL DAYS	FULL DAYS	HALF DAYS	QUARTER DAYS	LOW RES. DAYS
8.0C-H5A-BO1-IR	1	23 days 17 hours	23 days 17 hours			0 days 0 hours
8.0C-H5A-BO1-IR	1	23 days 17 hours	23 days 17 hours			0 days 0 hours
8.0C-H5A-DO1-IR	1	23 days 17 hours	23 days 17 hours			0 days 0 hours





**Reference Image**



Reference images are captured under ideal conditions. Poor lighting, increased compression, or use of a lower quality lens will affect the quality of the images captured.



## GSA ESTIMATE

### ADDRESS

Lt. Jeff Emmitt  
City of Alameda  
1555 Oak St  
Alameda, CA 94501  
United States

### SHIP TO

Lt. Jeff Emmitt  
City of Alameda  
1555 Oak St  
Alameda, CA 94501  
United States

### ESTIMATE

1188

### DATE

06/08/2020

### EXPIRATION

08/07/2020

### DATE

### SALES REP

Mark

SIN	ITEM	QTY	PRICE	AMOUNT
426 4S	15C-H4A-3MH-270 3X5 MP, WDR, LightCatcher, 2.8mm, Camera Only	4	1,458.00	5,832.00T
426 4S	IRPTZ-MNT-WALL1 Mount, Pend wall, IR PTZ	4	76.95	307.80T
426 4S	H4AMH-AD-PEND1 Outdoor pendant mount adapter, must order one of IRPTZ-MNT-WALL1 or IRPTZ-MNT-NPTA1 and one of H4AMH-DO-COVR1 or H4AMH-DO-COVR1-SMOKE.	4	162.00	648.00T
426 4S	H4AMH-DO-COVR1 Dome bubble and cover, for outdoor surface mount or pendant mount, clear.	4	129.60	518.40T
426 4S	H4-MT-CRNR1 Corner mount adapter for use with H4A-MT-WALL1, H4-BO-JBOX1, H4SL, H4F and H4 PTZ cameras.	4	72.90	291.60T
426 4S	H4AMH-AD-IRIL1 Optional IR illuminator ring, up to 30m (100ft), for use with H4AMH-DO-COVR1.	4	267.30	1,069.20T
426 4S	8.0C-H5A-BO1-IR 8.0 MP (4K) WDR, LightCatcher, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Next-Generation Analytics	3	1,215.00	3,645.00T
426 4S	H4-BO-JBOX1 Junction box for the H4A or H4SL HD Bullet cameras.	3	72.90	218.70T
426 4S	8.0C-H5A-D1-IR 8.0 MP (4K) WDR, LightCatcher, Day/Night, Indoor Dome, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Next-Generation Analytics	5	1,093.50	5,467.50T
426 4S	8.0C-H5A-DO1-IR 8.0 MP (4K) WDR, LightCatcher, Day/Night, Outdoor Dome, 4.9-8mm f/1.8 P-iris lens, Integrated IR, Next-Generation Analytics	1	1,215.00	1,215.00T
426 4S	12.0-H4F-DO1-IR 12.0 MP, Fisheye Camera, Day/Night, 1.45mm f/2.2, Integrated IR	1	874.80	874.80T
426 4S	ENC-4P-H264 4-Port H.264 Analog Video Encoder with 4 audio support	1	279.45	279.45T
426 4S	VMA-RPO-4P4-NA	1	1,688.85	1,688.85T



	ACC ES HD Recorder 4-port 4TB, PRO-NA			
426 4S	HD-NVR4-PRM-192TB-NA HD NVR4 PRM 192TB 2U Rack Mnt, Windows Server 2016	3	57,915.00	173,745.00T
426 4S	HD-NVR4-PRM-WARR-EXTEND-2YR 2 Year Extended Warranty for HD-NVR4-PRM	3	3,397.95	10,193.85T
426 4S	ACC7-ENT ACC 7 Enterprise Edition camera license	11	234.90	2,583.90
84 1000	MRQ301S12 Black Hawk Labs MiniRaq 12RU Vertical M	1	1,188.60	1,188.60T
84 500	ICU-MISC-GSA L-Com 20x16x11 Inch 120VAC Weatherproof Enclosure with Dual Cooling Fans	1	738.00	738.00T
84 500	ICU-MISC-GSA Laird Technologies 4G/3G Multiband No Ground Plane Phantom Antenna – Black	1	73.00	73.00T
84 500	ICU-MISC-GSA TRAB24003NP   Phantom Antenna- 2.4 GHz WIFI/WLAN - N Female - No Ground Plane Req'd	1	65.00	65.00T
84 500	ICU-MISC-GSA RF Pigtail Cable SMA Male to N Male RG58 3M	1	23.00	23.00T
84 500	ICU-MISC-GSA Sierra Wireless AirLink GX450 1102360 Rugged, Secure Mobile 4G LTE Wi-Fi Gateway Modem - Verizon - DC Cable (SIM Card NOT Provided)	1	1,088.00	1,088.00T
426 4S	S8 Switch, Gigabit POE+ 124W, 8 Port	2	591.30	1,182.60T
	PD-9512G Microsemi 12 Port PoE+ Midspan Power Supply	1	1,876.58	1,876.58T
426 4S	MH-B100-CCS-PoE-MWB MultiHaul™ Base Unit	1	1,353.20	1,353.20T
426 4S	MH-T201-CNN-PoE-MWB MultiHaul CTU, Base 100 mbps, UPG to 100 mbps, 1 RJ45 MK PoE injector IP 65 WHT	1	557.78	557.78T
426 1000	SR-EW-3Y-MH-B SikluCare "Silver" Service&Support Plan	1	231.83	231.83T
426 1000	SR-EW-3Y-MH-T SikluCare "Silver" Service&Support Plan	1	109.416	109.42T
426 4S	MH-UPG-TU-100-1000 MultiHaul™ Software Upgrades	1	145.50	145.50T
426 4S	MH-UPG-BU-500-1800 MultiHaul™ Software Upgrades	1	194.00	194.00T
84 500	ICU-MISC-GSA Misc Installation materials, including cabling, conduit, fittings, blocks, connectors, and patch cables	1	5,009.47	5,009.47T
246 1000	ICU-TECH1 Installation and service of access control and video surveillance field devices/systems.	195	115.70	22,561.50
246 1000	ICU-TECH1 Installation Supervision	24	115.70	2,776.80
246 1000	ICU-PM Manage and set schedule, coordinate with others, communicate system status.	12	146.85	1,762.20
246 1000	ICU-SE	6	155.75	934.50

Design and system integration, software set up, oversight of installation by technicians.

				Subtotal:
				250,450.03
	GSA-IFF	250,450.0	0.007556	1,892.40
	Industrial Funding Fees	3		
N/A	ICU-SHIPPING	1	300.00	300.00T
	Freight to customer location			

Estimate Notes:  
1. Email orders@icu-techinc.com  
2. CMAS# 3-18-84-0054D  
3.DIR# 1000064885

SUBTOTAL	252,642.43
TAX	21,433.54
TOTAL	<b>\$274,075.97</b>

Accepted By  
  
Accepted Date